

ALFRED NOBEL UNIVERSITY
THE DEPARTMENT OF GLOBAL ECONOMICS

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The Impact of Oil Industry on the Economic Development of Nigeria

By: Sandra Emachone

Specialty: International Economic Relations

Supervised by Assoc. Prof. Alisa Mahdich, PhD

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SANDRA EMACHONE

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- i. Characterize Nigeria oil industry, economic growth and market
- ii. Expose how global oil prices have impacted on Nigeria economic development
- iii. Identify how foreign exchange earnings have driven Nigeria's economic development
- iv. Investigate how Nigeria's volatile oil prices has affected Nigeria foreign earnings and revenue
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2	Chapter 2		
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Student

signature

last name, initials

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signature

last name, initials

Abstract

Sandra Emachone. The Impact of Oil Industry on The Economic Development of Nigeria

The paper investigates the oil industry contribution to the economic development of Nigeria over the decades. Although exploration and production of crude oil started in Nigeria before the discovery of crude oil in commercial quantity in Oloibiri and Afam oil field in the Niger Delta region in 1956, Nigeria economic development before the oil boom in terms of Gross Domestic Output and foreign earnings was dominated by Agriculture and manufacturing sector. The oil boom in 1970s led to over reliance of Nigeria economy on crude oil as there were increase in its export and an increase in international price of crude oil. In recent time however, the steep-slope in the supply and price of crude oil globally has affected foreign export earnings of Nigeria, reduced Nigeria's external foreign reserves, depreciated and weakened the naira against the dollar due to the dominance of oil in Nigeria export trade.

The onward exploration, production and dependence of Nigeria economy on oil today contribute less to the GDP of the economy which has a great impact on its economy measured by GDP. Therefore, this study exposes the activities of the oil industry and the extent of its effect on Nigeria economy as the country has not fully diversify into the non-oil sector, particularly the agricultural and manufacturing sector despite the country's potential to operate and develop the sectors. The study engages exploratory data analysis (EDA) adopting secondary data and statistics from international and national data sources to articulate and describe the important of oil revenue to Nigeria economy development from 1970s oil boom to recent decline in oil export and earnings. The findings demonstrate how oil dependency and revenue determine Nigeria economic development as affected by the fluctuations of international oil prices.

Keywords: *Nigeria oil Industry, oil trade, economic development, economic growth, oil revenue*

Анотація

Сандра Емашон. Вплив нафтової промисловості на економічний розвиток Нігерії

У роботі досліджується внесок нафтової промисловості в економічний розвиток Нігерії протягом останніх десятиліть. Хоча розвідка і видобуток сирої нафти почалися в Нігерії до відкриття сирої нафти в комерційній кількості на нафтовому родовищі Олоїбірі і Афам в регіоні дельти Нігеру в 1956 році, економічний розвиток Нігерії до нафтового буму з точки зору валового внутрішнього видобутку і іноземних доходів обумовлювався переважно сільським господарством і виробничим сектором. Нафтовий бум у 1970-х роках призвів до надмірної залежності економіки Нігерії від сирої нафти, оскільки спостерігалось значне збільшення її експорту та зростання міжнародних цін на сиру нафту. Однак останнім часом різкий спад у обсягах постачання та цін на сиру нафту в усьому світі вплинув на зовнішні експортні доходи Нігерії, скоротив золотовалютні резерви Нігерії, знецінив і послабив найра по відношенню до долара через домінування нафти в експортній торгівлі Нігерії.

Поточна розвідка, видобуток і залежність економіки Нігерії від нафти сьогодні мають все менший внесок у ВВП. Таким чином, це дослідження аналізує нафтову промисловість Нігерії та ступінь її впливу на економіку Нігерії, оскільки країна не повністю диверсифікується в ненафтовий сектор, особливо сільськогосподарський та виробничий сектори, незважаючи на потенціал країни працювати та розвивати сектори. Дослідження залучає до аналізу дані розвідки (EDA) та вторинні дані та статистику з міжнародних та національних джерел даних, щоб оцінити та описати важливість доходів від нафти для розвитку економіки Нігерії, починаючи з 1970-х років нафтового буму і до сьогодні, коли спостерігається зниження експорту нафти та доходів. Отримані результати демонструють, як нафтова залежність і доходи від нафти під впливом коливань міжнародних цін на нафту визначають економічний розвиток Нігерії.

Ключові слова: *Нафтова промисловість Нігерії, торгівля нафтою, економічний розвиток, економічне зростання, доходи від нафти.*

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INTRODUCTION

Crude oil is currently Nigeria major export relegating agricultural products that was before the discovery of crude oil, Nigeria's major foreign exchange earnings and revenue. Although it is obvious that petroleum has contributed to the growth of Nigeria economy but there is a continuous reliance on crude oil as major source of export earnings and revenue for Nigeria. Earlier before the discovery and onward exploration of crude oil in Nigeria, 95% of the country's foreign exchange earnings were gotten from agriculture which generates over 60% of employment capacity in Nigeria and approximately 56% to the country's gross domestic earnings (World Bank, 2013). Aside Agriculture also, the country experienced growth in the manufacturing sector. However, the major exportable crops were cocoa, palm products, cotton, ground nut, timber and rubber. With these products contributing most of Nigeria's export, agriculture was the mainstay of the Nigerian economy as oil foreign earnings and revenue from crude oil before oil boom in 1970 was very low.

According to an oral interview of Nigeria's former Minister of Petroleum who also duals as the former President, Organization of Petroleum Exporting Countries (OPEC), petroleum has tremendously brought good and evil **things** to Nigeria (Rilwan, 2010). The minister narrated further that:

“although oil has provided for the country enormous resources used to execute various projects and to sustain the economy. Which for instance, it has led the birth of more states and local governments, construction of roads, air and sea ports. Nigeria with the oil revenue was meshed in two and half a year civil war without incurring debt

from any nation. Revenue from oil was used to build schools; primary, secondary, colleges of education, polytechnics and universities across the nation. He concluded, bemoaning the discovery of oil and its poor management as being responsible for the decline of agriculture in Nigeria” (Rilwan, 2010).

The above narrative therefore suggests that the Nigeria economy development is solely driven by the oil sector of the Nigeria since the oil boom in 1970s till present. Revenue from crude oil informs states revenue distribution through the derivative formula of the federal government and determines the country’s fiscal budget, revenue distribution and capital redistribution. Aside its economy growth potentials, it has also shaped Nigeria’s political landscape. Due to her oil reserves and for opportunity to explore for foreign exchange, the country has enjoyed bilateral political-economy relationship with other countries of the world.

The relationship between Nigeria oil revenue and the country’s economy is that Nigerian state is a rentier state (Usman, 2016), as nearly most of its national revenue are from the rents generated from the licensed multinational oil companies like Shell, Mobil, Agip and other indigenous oil companies. Presently, the Oil and Gas sector as the mainstay of Nigeria’s economy, contribute over 90% of Nigeria’s foreign exchange earnings (Nwoba and Abah, 2017; Ogbeifun, 2014) and 8.73% crude oil revenue to GDP ratio. In 2018, Nigerian Liquefied Natural Gas (NLNG) paid approximately \$398 million (N120.61 billion) in income tax to the FGN (SPDC, 2019). However, the fall in the oil prices in 2014 warranted a steep drop in oil revenue for the Federal Government, which has reduced Nigeria’s external foreign reserves, depreciated and weakened the naira against the dollar. Currently, the weakening of the Naira contributed to cost-push inflation resulting in recession

(Teriba, 2018). It is against this background that this study investigates the Impact of Oil Industry on the Economic Development of Nigeria.

The aim of this study is to investigate the impact of Nigeria's dependency on oil revenue on the economic development of the country. Therefore, this study will achieve the following objectives:

- vii. Characterize Nigeria oil industry, economic growth and market
- viii. Expose how global oil prices have impacted on Nigeria economic development
- ix. Identify how foreign exchange earnings have driven Nigeria's economic development
- x. Investigate how Nigeria's volatile oil prices has affected Nigeria foreign earnings and revenue
- xi. Revenue growth
- xii. Inflation

The Nigeria Oil Industry dominates the Nigerian economy as regards foreign earnings and revenue. According to the Organization of the Petroleum Export Countries (OPEC) recent report, Nigeria currently occupies the world's tenth largest crude oil reserves and is the world's thirteenth-largest producer of crude oil. The industry generates for the country according to national statistics over 95 per cent of the country's foreign revenue, and about 80 per cent of government revenue. Also, International Labour Organisation estimated that the industry provided over 65,000 direct jobs in Nigeria with above 250,000 contracts or non-direct employment. Most of the exploration and production of crude oil is from the Niger Delta Region where oil was reportedly first discovered in commercial quantity in Bayelsa State, Niger Delta, in 1956.

The economic development of Nigeria is measured by Real GDP growth estimated at 2.3% in 2019, marginally higher than 1.9% in 2018

according to African Development Bank. The growth is investigated to be influenced by transport, an improved oil sector, and information and communications technology. Agriculture revenue is badly affected and dwindles due to aggressive flooding and conflicts between herdsmen and local farmers, armed banditry and Boko Haram activities in food producing states of the country. Manufacturing industry persistently suffers from a lack of internal funding despite the accumulated oil revenue while insecurities and the depreciation value of the naira is discouraging local and foreign investment. However, the real GDP growth is projected to rise to 2.9% in 2020 and 3.3% in 2021 as project by the Economic Recovery and Growth Plan (2017–20), of the Central Bank of Nigeria.

Therefore, this study engaged both qualitative and quantitative approach. Exploratory data analysis (EDA) approach will be engaged to articulate and describe the important of oil revenue to Nigeria economy development. Quantitative approach engaged macroeconomic Nigeria oil revenue data from 1970 oil boom to 2020 and the quantitative method engaged secondary data and statistics that indicate oil revenue and Nigeria economy development. The quantitative secondary data and statistics engaged from international and national data sources while the qualitative findings sourced reputable journal articles. **Objective one will be discussed using qualitative data while the remaining objectives will engage macroeconomic Nigeria oil revenue data from 1970 oil boom to 2020.**

CHAPTER ONE: NIGERIA OIL INDUSTRY: AN OVERVIEW

1.1. Nigeria Oil Industry

Colonial rule in Nigeria started the exploration of oil in Nigeria. This was motivated by the onward demand for oil and lubricants for the use of combustion engine in 1890's (Udosen, Etok & George, 2009). This development also has a relationship with the 18th Century industrial revolution in Britain when the use of small and heavy machine for manufacturing started. The period also increased military demand for military ships to protect the island after World War I (Collins, 2018), as the British government decided to explore the present independent of British government colonies of oil resources for their industrial and military use.

However, it was not until 1903 during the military invasion that the crude oil exploration and petroleum products in Nigeria started under the British Mineral Survey Company (Collins, 2018). Subsequently, also in 1908 the German surveyors of the Nigerian Bitumen Corporation began the testing for Tar Sand deposit in Araromi in the present Ondo State (Aniefiok, Udo, Margaret, & Sunday, 2013; Udosen, Etok & George, 2009). In the administration of the oil fields in 1914, the British government enacted the first mineral oil ordinance that confer them the sole right of exploration in Nigeria and excluded non British ownership (Collins, 2018). However, these pioneering efforts collapsed due to the outbreak of the World War I in 1914, although this was only reported at a later date in 1958 (Bodo, 2019; Aniefiok, Udo, Margaret, & Sunday, 2013)

In 1938, that Shell Petroleum Development Company (a consortium of Iranian Oil Company that later became British Petroleum and Royal Dutch Shell) was licensed with the independent ownership to explore (Aniefiok, Udo, Margaret, & Sunday, 2013; Udosen, Etok & George, 2009). After a year of exploration, the World

War II that spanned between 1939 to 1945 suspended the oil exploration activities by Shell Petroleum Development Company. It was until 1946 that Shell Petroleum Development Company had the opportunity to resume oil exploration in Nigeria's Niger Delta Region in 1946. And, in 1956, investing over \$30 million by Shell Petroleum Development Company, in Oloibiri and Afam oil field in the Niger Delta region the first recorded commercial quantity of petroleum (Bodo, 2019; Udosen, Etok & George, 2009). In 1958, SPDC started oil production and export from the Oloibiri field in Rivers State at the rate of 5,100 barrels per day and about 10,500 barrels the following year (Udosen, Etok & George, 2009)

SPDC successful also discover oil in other settlements like Bomu oil field in Ogoniland. Bomu oil field was reported as having an estimated ultimate recovery (EUR) of 0.311 billion of barrels (BB) of oil and a total of 0.608 billion of barrels of oil equivalent (BBOE) including gas, making this oil field a massive treasure to SPDC and the Nigerian government (Aniefiok, Udo, Margaret, & Sunday, 2013). Although before the dissolution of the sole ownership by British government, Mobil Producing (Nigeria) Ltd, a subsidiary of American Socony– Mobil Oil Company, were already penetrating Nigeria to oil fields. Thus, in 1955 Mobil obtained was also licensed to explore for oil and began operations the same year under the name Mobil Exploration Nigeria and on June 16, 1969, Mobil Exploration Nigeria was incorporated as Mobil Producing Nigeria (Aniefiok, Udo, Margaret, & Sunday, 2013).

Nonetheless of the oil revenue, at independence in 1960 agricultural export was topping Nigeria export earnings and the Naira steadily appreciate against the dollar. This has been altered by the dependency on oil revenue since Nigeria experience oil boom in Nigeria in 1970. Nigeria foreign export and revenue shifted to crude oil relegating agriculture and other type of natural resources.

Nigeria's petroleum industry is known for successful exploration from the start of the first large quantity of crude oil deposits at Oloibiri in the Niger Delta Region of Nigeria in 1956, with a modest production rate of 5,100 barrels per day. Currently, reserves of crude oil are estimated to hold a revocable crude oil of 28.2 billion barrels. Natural gas reserves total 165 trillion standard cubic feet (scf), including 75.4 trillion scf of nonassociated gas according to Nigerian National Petroleum Commission. In total, the country has around 606 oil fields in the Niger Delta region wherein 355 are on-shore while the rest are offshore. In extension, 28 exploratory oil wells that have been drilled outside of the Niger Delta; two discovery wells in Anambra State, one discovery well each in Edo State and Benue State each and twenty-four wells in the Chad Basin. However, production is yet to commence from any of the wells (NNPC, 2016). The oil wells accounts for around 22 different types crude oils, which could be classified as “sweet and light” crude oils.

1.2. Nigeria Oil Industry and Economy

The estimate of Nigeria's oil reserves in the mid-2000s was estimated to have been 4,635 million metric tons of oil equivalent (*mtoe*) of petroleum oil, almost half of the total reserves in all of the world's low-income states. This recorded increase subsequently which ranked the country as the sixth largest oil exporter in the Organisation of Oil Exporting Countries, OPEC, and for the country gas reserve that rose from 2,260 billion cubic feet in 1958 to 187 trillion cubic feet in 2013, Nigeria's occupied the 10th position worldwide (Dosumu, 2013). A ten years trend analysis of crude reserve shows that Nigeria has at about 37.2 billion barrels of oil as at January 2012 (Iledare, 2013), which in 2018, Nigerian National Petroleum Corporation (NNPC) forecasted the Nigeria will increase crude oil reserves by one billion barrels yearly to meet 40 billion barrels target by 2020.

As one of the largest oil producers in Africa the earnings from crude oil contribute approximately 90 percent of Nigeria total foreign exchange earnings and accounts for over 70 percent of government revenues (NNPC, 2016; Adegbite, 2015, pp. 18-19; Onwe, 2012, pp. 66-71). In addition, the contribution of Nigeria petroleum industry to the country's Gross Domestic Product compared with other oil-based economies shows that some countries as member of Organization of the Petroleum Exporting Countries contribute more than Nigeria 10% GDP contribution. 50 percent of Kuwait's GDP is generated from petroleum, at about the same percentage for Qatar, 42 percent for Saudi Arabia and 30 percent for The United Arab Emirates (UAE) (Agency Central Intelligence, nd). Nigeria oil revenue contributing less to Gross Domestic Product is due to the lack of working refineries in Nigeria which makes Nigeria loose most of the useful petroleum product through exports to foreign countries.

As shown on Table 1, apart from the increased share of oil in GDP ratio between 1960 and 2009, total oil exports increased exponentially over the period. In 1961 total oil exports in barrels was N23.1 million which increased to N13, 632.1 million in 1980. Rapidly, the declined in the early 80s to N11, 223.7 million in 1985 due to the global economic depression in the industrial nations and reduced energy use among other factors. However, the foreign earning accrued an upward trend in the 1990s. In U.S dollar, it increased from N106,623.5 million in 1990 to N1,920,900.4 million, N7,140,578.9 million and N8,543,261.2 million in 2000, 2005 and 2009 respectively (Table 1.1).

Table 1.1

Oil output, exports and revenue in Nigeria, 1960-2009

Year	Production (bm)	Oil Revenue	Oil/Total Revenue (%)	Oil/GDP (%)	Oil Export (₦m)	Oil Export/ Total Export (%)
1961	16.80	nil	Nil	0.9	23.1	6.65
1965	150.3	nil	Nil	3.43	136.2	25.37
1970	395.7	166.4	26.3	9.27	509.6	57.54
1975	660.1	4271.5	77.5	19.37	4563.1	92.64
1980	760.1	12353.2	81.1	28.48	13632.1	96.09
1985	507.5	10923.7	72.6	16.75	11223.7	95.76
1990	660.6	71887.1	73.3	37.46	106623.5	97.03
1995	712.3	324547.6	70.6	39.65	927565.3	97.57
2000	797.9	1591675.8	83.5	47.72	1920900.4	98.72
2005	919.3	4762400	85.8	38.87	7140578.9	98.53
2009	759.2	3191938	78.7	37.44	8543261.2	96.73

Source: (a) Central Bank of Nigeria, Statistical bulletin, various years

In addition, Figure 1 below shows that revenue minus production cost of oil, percent of GDP from 1970 to 2018 shows that the average value for Nigeria during that period was 12.51 percent with a minimum of 0 percent in 1970 and a maximum of 38.55 percent in 1979 during the oil boom. The recent estimates of oil revenue despite the large oil and gas reserves oil rents (% of GDP) in Nigeria was reported at 9.0253 % in 2018, according to the World Bank collection of development indicators.

The large oil reserves and revenue made from the export of oil, positions Nigeria as a member of the Organization of the Petroleum Exporting Countries (OPEC) and was Africa's largest of oil producer until Libya 's oil production surpassed Nigeria's by the end of 2019 due to the crude oil production disruptions in the Niger Delta region which is Nigeria oil-rich area bordering the Gulf of Guinea. Since the beginning of 2016, the Niger Delta Avengers (NDA) have claimed the many attacks on oil and natural gas infrastructure throughout the region (Fig. 1.1).

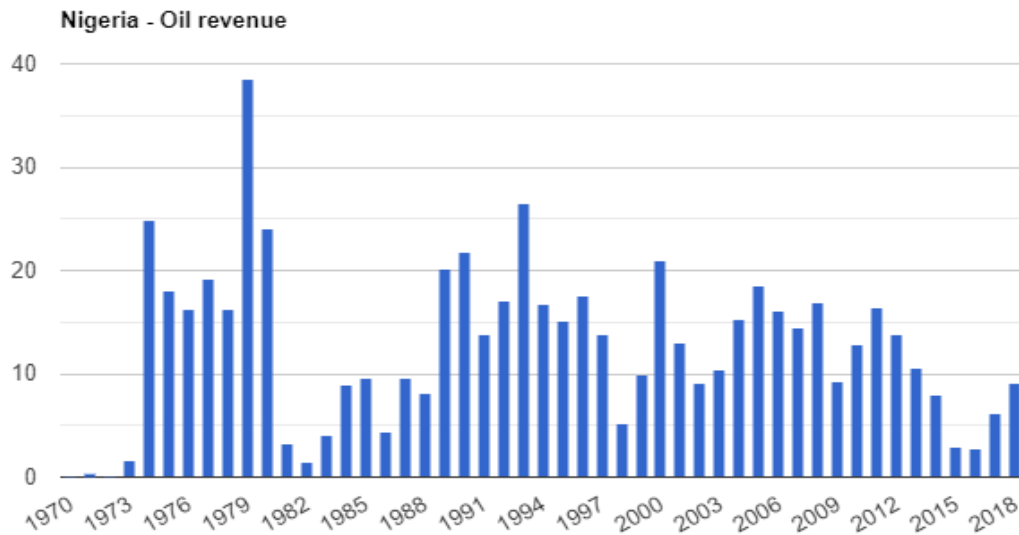


Figure 1.1 Nigeria Oil Revenue to GDP Ratio

Source: The World Bank

Although, there are other militant group conducting attacks in the region, the NDA is currently the most active. Even with the continuous oil production disruption in the Niger Delta Region of Nigeria, the country reached 750,000 barrels per day (b/d) in May 2016, the highest level since at least January 2009 as shown in Figure 1.2.

Nonetheless, the tremendous oil deposits and wealth, the country oil reserves contribute nearly all of state revenues and the oil sector remains important as a source of government revenues. However, the revenue is inadequate to sustain the country's overall economy. The oil industry contributes more of consumption opportunities for Nigeria's economy which after the discovery of oil. Nigeria economy is largely determined by the consumption of refined petroleum product imported into the country from United States of America after the crude oil has been refined into petroleum products. 30 percent of Nigeria foreign exchange demand in

Nigeria is from the importation of refined petroleum products (Punchng.com, 2016), which places enormous threat on the Naira and deleterious to the country's economy.

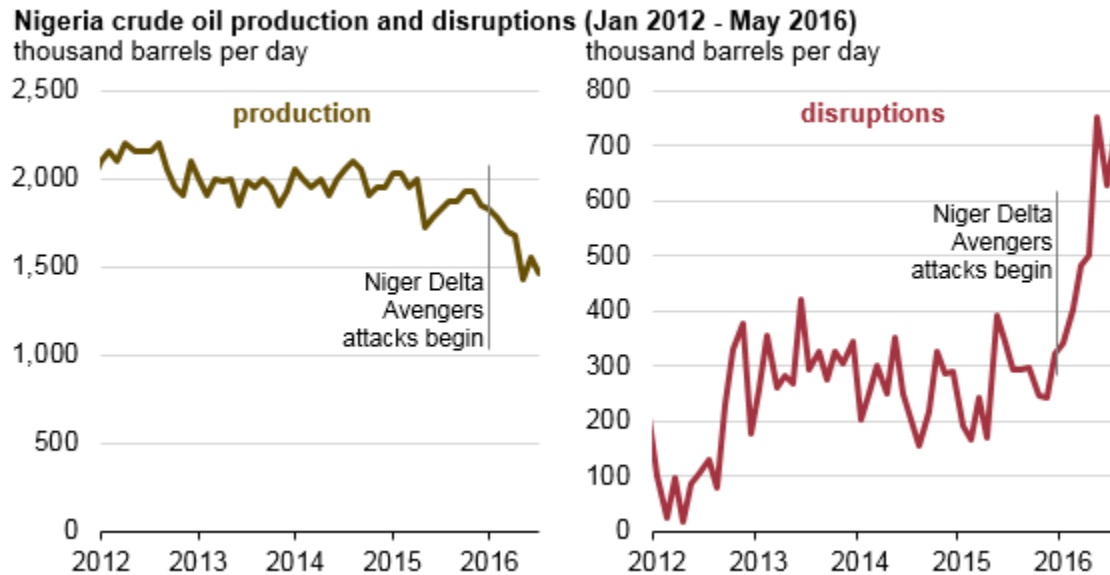


Fig.1.2 Nigeria crude oil production and disruptions

Source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, August 2016

International Monetary fund noted that for over a decade, Nigeria's revenue and expenditures followed a similar pattern to oil prices due to Nigeria economy growth is dependent on the oil industry. Recently, Nigeria's economy shrinks after the oil price plunge and by 2016 the GDP ranking fell to 26th (World Bank, 2019). In 2016, the economy entering recession with GDP contracting by 0.36% in the first quarter, 2.1% in the second quarter and 2.2% in the third quarter and made inflation soar to 18.5% in November 2016 from 9.5% in December 2015. Foreign exchange reserves depreciated from USD32 billion in January 2015 to USD25 billion in November 2016 (www.proshareng.com, 2017). This decline therefore depreciated the value of the naira steep-slope against the dollar.

Unescapably, the dwindling of the country's oil revenues enlarged the Federal Government experience deficit from N1.2 trillion in 2013 to N1.4 trillion in 2015, and an estimated N2.2 trillion in 2016 (www.proshareng.com, 2017). Aside the federal government coffers, States governments revenue allocation from the federal government has dwindle due to the oil price shock. Fiscal sustainability has therefore become difficult to attain in Nigeria due to high dependency on oil and lack of other export goods to compete with the dollar and therefore the country experience persistent inflation due to lack of proportional export earnings to appreciate the value of the naira. Presently, the over reliance on oil as source of revenue as put more than half of Nigeria's population of over 170 million in poverty as most of the population live on less than a dollar per day

In the Niger Delta region, which is the Nigeria's center of oil exploration and production, there is high rate of poverty and unpalatable living conditions despite the crude oil wealth drilled from their lands and waters. According to Amnesty International, 70 per cent of the over six million people in the Niger Delta live on less than US\$ 1 per day. The region due to oil spillage and pollution caused by exploration provides for the villages with the crude oil deposits lack clean drinkable water and arable land for cultivation. The villages lack electricity, schools and medical facilities e.t.c. To the region disadvantage due to absence of required work skills to become employed by the domicile oil multinational companies in Nigeria Delta, most of the rewarding jobs in the oil industry are done expatriate and non-indigenes.

1.3. Nigeria Crude Oil Trade and market structure

In Nigeria, the price of the crude oil is not determined by the actors and production cost of exploring the oil but international global oil price which is fixed by power of supply and demand. Presently the price of the oil per barrel is according to the preliminary average annual OPEC oil price stood at 40.47 U.S. dollars per barrel as of October 2020, a decline from 64.04 U.S. dollars in 2018. The decline is due to the to lower demand for crude oil in Europe, America and China, coupled with a steady supply of crude oil from OPEC. For example, OPEC in 2015 noted that USA which is one of the leading imports of West African crude oil exploration had reduction from 29.5% in 2011 to 7.7% in 2014. This is due to the abundance of oil reserves of the USA and alternatives of energy that has substituted the use of crude oil.

However, the Nigeria crude oil market is an oligopoly economy whereby only selected and licensed few actors operates in the market. The oligopoly market is also factored by the high entry costs in the industry. The licensed oil companies work in joint venture through foreign direct investment with the Nigeria government. The Bonny Light crudes in the beginning of exploration of oil in the Nigeria Delta region of Nigeria were explored by a joint venture between Chevron, Shell and the Nigerian Government (NNPC – Nigerian National Petroleum Corporation). In Nigeria, therefore there are numbers of licensed multinationals companies that are granted the right under the watch of Nigeria government in accordance to NNPC Act to explore and produce crude oil. Among these licensed multinationals companies, the biggest producers are Shell, AGIP, Chevron and Total. The major players are the biggest licensed multinationals companies' as they have a larger market share compared to others (Cole, Tanya, Gasser, Chantal Schenkel & Nicholas, 2015)

The production of crude oil by other producers in African region and other regions as the Middle East, Eastern Europe, South America and now, recently the United States of America determines the supply and demand of crude oil and in 1960 , Iran, Iraq, Kuwait, Saudi Arabia and Venezuela created the Organization of the Petroleum Exporting Countries (OPEC) with the sole aim to control and unify members countries oil producing policy to secure the stability of the crude oil price. Due to the large crude oil reserves and market share. OPEC subsequently accepted Qatar, Nigeria, and Angola as member countries wherein the OPEC countries produce most of the oil production globally but experienced a decline from 2004 as they generate around 45% of the world production (Cole, Tanya, Gasser, Chantal Schenkel & Nicholas, 2015).

In Nigeria, the exploration and production of the oil is carried out by NNPC upstream sector in joint operation with the major oil licensed multinational companies in the country. The multinational oil companies operate in partnership with NNPC under Joint Operating Agreements (JOAs) or Production Sharing Contracts (PSCs). There are also other oil companies especially the indigenous oil companies that operate in partnership with international companies under sole risk or as independents. Like many other crude oil exploring and producing countries, the multinationals in Nigeria operated with the NNPC as concessionaire operate under a concession system. NNPC is responsible for management of the exploration bidding rounds for oil and gas on behalf of the Nigeria government. However, exploration and production (E & P) is carried out in the Nigeria Delta region on-shore, coastal offshore areas and recently in the deep waters

Nigeria had an estimated 37.0 billion barrels of revocable crude oil reserves by the end of 2019—the second—largest amount in Africa after Libya according to the 2019 Worldwide Reserves Survey. The majority of reserves are along the country's Niger River Delta and offshore in the Bight of Benin, the Gulf of Guinea, and the

Bight of Bonny. Also, the U.S, Energy Information Administration identified that Nigeria crude oil exporting countries are Asia countries after European countries which before 2019 were the largest importer of Nigerian crude oil. In 2015, the European countries imported 41% of total in 2015, followed by Asia (28%), Americas (16%), and Africa (15%). Presently India was the largest importer of Nigeria's crude oil and condensate, purchasing about 420,000 b/d in 2019. Spain and the Netherlands were the next largest importers of Nigeria's crude oil and condensate, each importing about 238,000 and 208,000 b/d in 2019.

CHAPTER 2. STRUCTURE OF THE NIGERIA ECONOMY

2.1. Overview of Nigeria Economy

Nigeria overall economy is controlled by local and international trade, credit creation, exchange rates and inflation as the growth of the economy is associated to revenues primarily derived from sales of crude oil, petroleum profit tax and returns. Nigeria gaining independence in 1960, with approximately 45 million people operated before the over reliance on crude oil, an agro-based and manufacturing economy and for over six decades of the country's present economy now a service-driven economy. The growth of the economy has survived economic both local and international calamities such as civil war, great depression, economic recession, political unrest among all other social and economics calamities.

The historical materialism economy of Nigeria traces that throughout the 1960s, the agricultural and manufacturing sector dictated the pace and drive government's economic policies. However, the subsequent massive investment in crude oil discovery and exploration which its revenue earnings became profitable during the oil boom era Nigeria and onward from the 1970s dominated Nigeria economy with subsequent resultant effect on the value of the naira. Till present, Nigeria crude oil sector is predominant of Nigeria economy despite the significant contributions of service sector, agricultural sector and manufacturing sector. Nonetheless agriculture, the manufacturing and the service sector remains the biggest employer of labour in Nigeria till date and contributes to the country's GDP ahead of oil and gas sector.

In 2019, the agricultural sector contributed around 21.91% to Nigeria's GDP, the manufacturing industry had 27.38% and 49.73% came from the services sector (Plecher, 2020). While, Nigeria's oil contributed only between 8 to 10% of the country's GDP. This is demonstrated in the diagram below (Fig. 2.1).

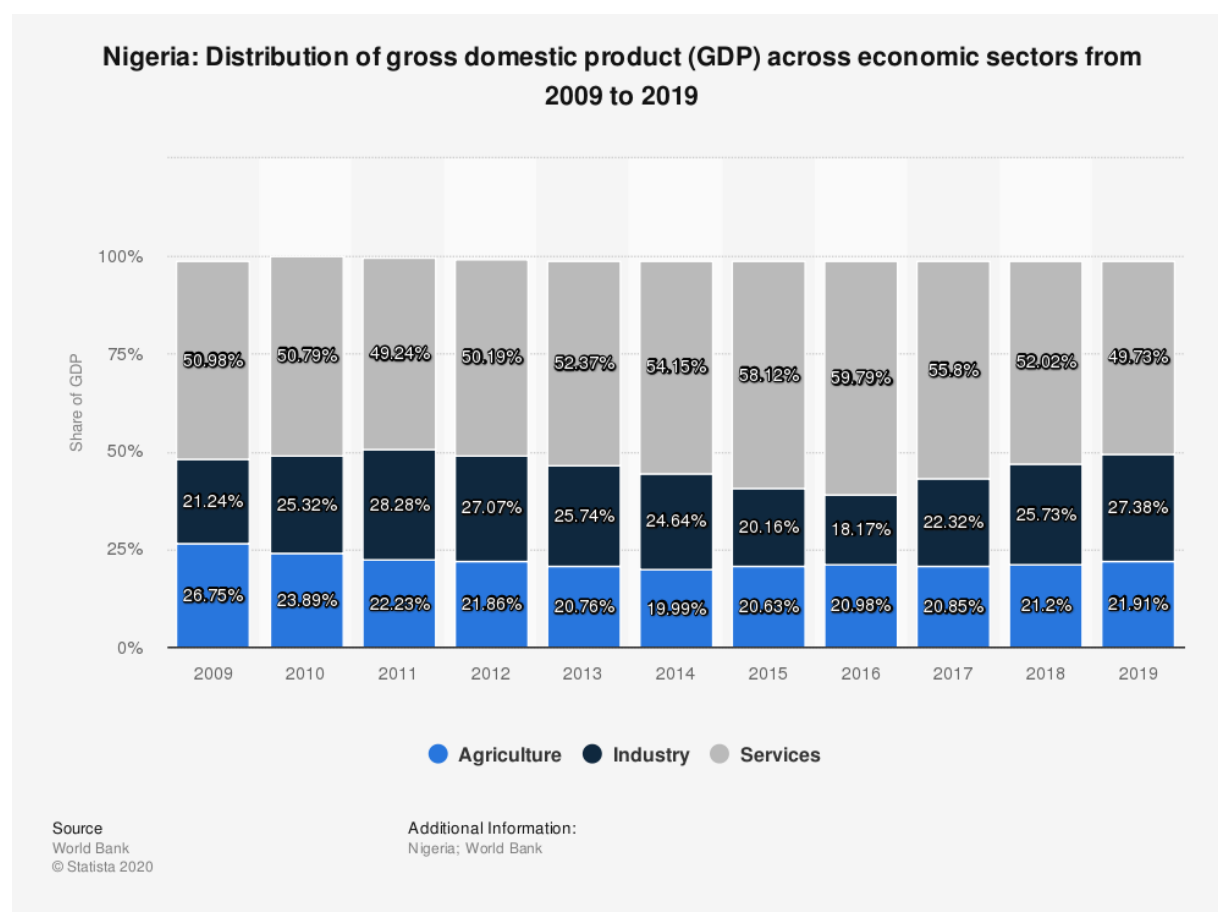


Fig. 2.1 Nigeria: distribution of GDP across economic sectors, 2009-2019

Oil and gas contribution to the overall economic growth has fell behind other sectors of the economy which is owed to a diversified economy. The fall in oil and gas contribution to Nigeria economy in recent years is due to the price cycles and volatility of crude oil market price since the 1980s and by extension, currently has affected Nigeria's national revenues.

Nigeria as a wealthy nation owing to its enormous oil wells and recently diversity of the economy in her well-educated population and an agricultural sector, which provides 35% of the national gross domestic product (GDP) (African Economic Outlook 2013), specifically from 2000 to 2014, grew at an average rate of 7% per year and from 2014 to 2016, the oil price experience a significant drop combined with global economy recession that affected industries, Nigeria growth rate nosedived to 2.7% in 2015. During the 2016 recession, the economy shrank by 1.6% (Word Bank 2019) as shown in (Figure 3) and fast-forward to 2019, before the COVID-19 pandemic, the economy was experiencing a growth rate of 2.2% (World Bank 2020), which contracted by 3.4% in 2020 and projected to experience a growth increase of 2.37% in 2021 (Plecher, 2020).

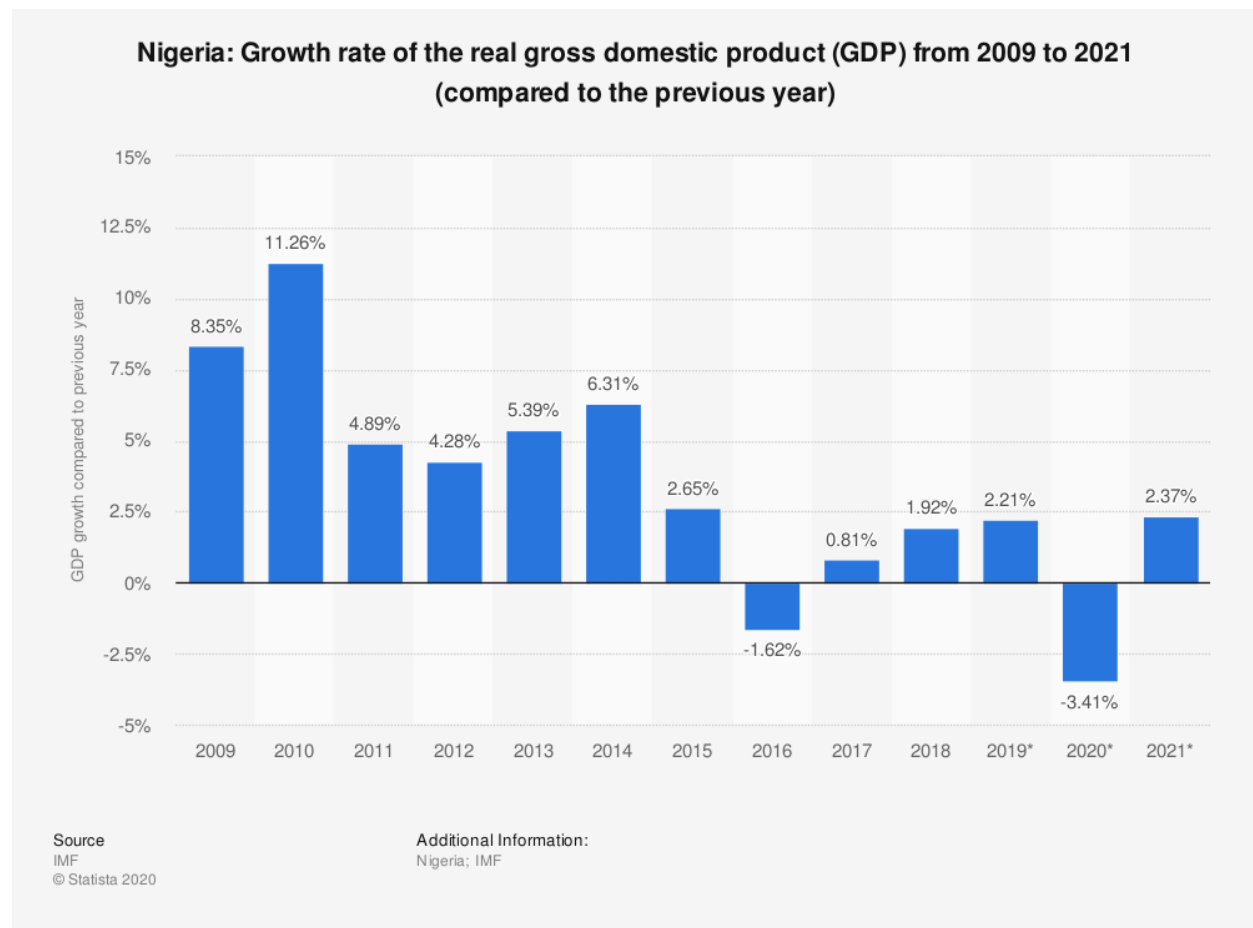


Fig. 2.2. Nigeria: growth rate of GDP, 2009-2021

The growth rate amounted to 410 billion US dollars, recording the highest gross domestic product in Africa (Varrella, 2020), which makes Nigeria one of the fastest growing economies in the world. However, the oil and Gas (O&G) industry less than 10% of the country's GDP contributes about 65% of Government revenue and 88% of Nigeria's foreign exchange earnings (KPMG, 2019).

The country occupying an area of 9,323, 768 square kilometers bounded east by Republic of Benin, south by Niger and Chad Republic; west by Cameroun and north by Gulf of Guinea is considered globally the most populated country in Sub-Sharan African countries with an average annual growth rate of 2.58 according to world Bank in 2020 exhibit her economy prowess in her population. Regarding social-economic indicators, Nigeria records low indicator with a Human development index (HDI) of 0.539 ranking 161 out of 189 countries (United Nations Development Programme, 2020). Ranking as the 26th largest economy in the world regarding nominal GDP and the 24th largest in terms of purchasing power parity (World Bank, 2020), Nigeria owns the largest economy in Africa and currently, it is regarded as an emerging market, projected be according to its potential feature in the global GDP ranking by 2050, if it can diversify its economy.

Sadly, once a large exporter of raw materials and development in her production economy, Nigeria has become an importing nation which is factored by the largely neglect of the abundance agricultural and manufacturing industry. However, as the country's population increase geometrically and leveraging on her potential of population growth, increasing mechanization, entrepreneurship and diversification of the economy, Citigroup reported February 2011, that Nigeria will have the highest average GDP growth in the world between 2010 and 2050 (Casade, 2015). In specific, the revamped manufacturing sector in 2013 became the largest on the continent, and it produces a large proportion of goods and services for the

West African states (KPMG, 2015). Also, Nigeria is one of two countries from Africa among 11 Global Growth Generators countries (Business Insider , 2011) and in 2019 Nigeria ranked among most improved in ease of doing business according to the World Bank Group.

2.2. Oil Dependency and Economic Growth

Nigeria as an oil dependent country economic growth is measured by the amount of export earnings. Since the oil discovery, Nigeria economic growth has been fueled majorly by revenue from petroleum which funds large chunk of the government fiscal budget for years. As the economy solely depend on oil export revenue, the economy growth of Nigeria is affected by the fluctuation of oil price in the international market. The current price of oil is pegged at \$65per barrel, Nigeria crude oil exports records 2.2 million b/d per day as shown in figure 2.3 and fig. 2.4.

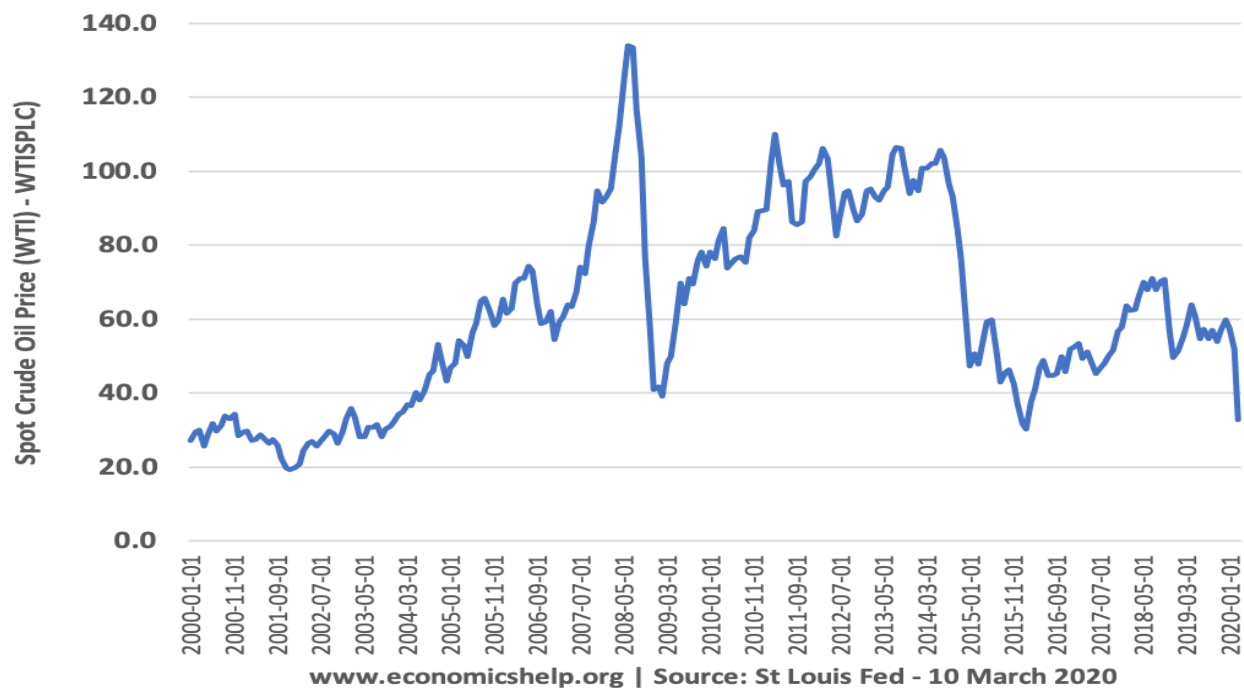


Fig. 2.3. The current Nigeria price of oil in the international market

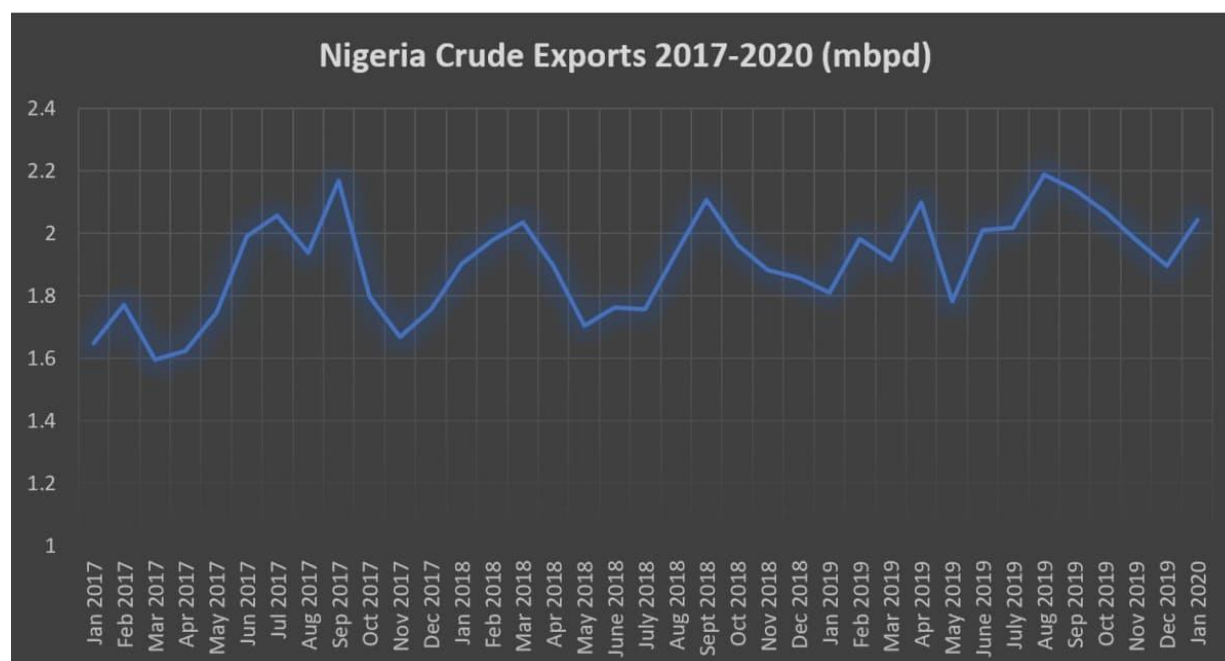


Fig. 2.4. Nigeria crude oil exports, 2017-2020

Source: Thomson Reuters, 2020

Also considering Nigeria export wherein crude oil accounted for more than 90% of the total exports, recent estimates of 2018 to 2020 shows that Nigeria in 2018, Nigeria ranked number 29 economy in the world as per GDP (current US\$), the number 50 in total exports, the number 53 in total imports, the number 151 economy in terms of GDP per capita (current US\$) and the number 134 most complex economy according to the Economic Complexity Index (ECI) (Observatory of Economic Complexity, 2018). The top export of Nigeria is crude petroleum (\$44.8B), petroleum gas (\$621M), Cocoa Beans (\$621M) and Gold (\$577M) while foreign exchange earnings from crude oil are from India (\$10B), Spain(\$6.12B), United States (\$5.74B), France (\$4.02B), and South Africa(\$3.87B).

Due to sole reliance on crude oil to boost Nigeria economic growth, the economy during the periods of global increase in oil price is for Nigeria a favorable

trade balance, increase in foreign reserves, and exchange rate appreciate and increase in the value of the naira. On the opposite, Nigeria economy growth suffers decline when the global oil price is experiencing decline. As the foreign earnings from crude oil decline amounting to a significant drop in the foreign reserve, the country experiences budget deficit and slower economic growth. The naira suffers depreciation as the exchange rate of dollar to the naira becomes unfavorable.

The global oil price crises in 2008 and subsequently, the global oil glut in 2014, has for Nigerian economy rising inflation and declining output, berthing a severe economic recession in the country in 2016. The country's growth trajectory has been assumed a downward trend since the economy eventually slipped into recession in 2016 and recording a negative economy growth Nigeria currently position as the biggest economy in Africa. Also, from 2014 till present, oil revenue nosedive by more than 70 percent heralding increase in government budget deficit which has made it difficult for government to achieve it fiscal years obligations. States government become incapacitated to pay workers' salary or remuneration and execute developmental projects. Owing to the reduction in global crude oil amid serious surplus of crude oil culminated by Niger Delta attacks on oil facilities in the oil rich region of Nigeria, Nigeria suffers trade deficit which has a disastrous for the country external reserves which current stood at 35430 USD Million as at November 2020 according to Central Bank of Nigeria.

Nigeria continues to experience trade deficit despite the several import control measures initiated to revive the country's trade balance as the demand for crude oil globally continues to drop. The economy persistently experiences foreign exchange scarcity, diminishing the exchange rate and value of the naira. Notably, official dollar to naira exchange rate increased from N168/US\$ in 2015 to N380.4/US\$ and presently at 394.7/US\$ which has led to the rise in the price of imported goods with attendant effects on domestic prices. As such Nigeria experience pass-through

effects of inflation in the economy as price of imported goods is also reflective of location production of goods and services. Although the country has continued to witness decline in inflation rate since 2017 and the country presently has 12.69% inflation rate.

The service sector has therefore proved ahead of oil sector to increase economic growth in Nigeria, diversify the economy and reduce Nigeria's over-reliance on the oil sector. The innovation in the service sector fundamentally increase both the country's productivity levels and also economic growth through innovation expenditures and innovation exercise in general.

2.3. Oil Price and Economy Growth

Nigeria is heavily dependent on the oil sector for the majority of government expenditure and economic development. Recent data have shown that Nigeria recorded a total of 37.0billion barrels of proved crude oil reserves which makes the country the second largest oil producing country after Libya (Worldwide Reserves Survey , 2019). As shown in the figure2.5 also Nigeria produces an average of 2.18 million barrels per day. The major oil reserves are found along the Niger River Delta and offshore in the Bight of Benin, the Gulf of Guinea and the Bight of Bonny.

However, the terminal crises in Nigeria-Delta region of Nigeria further contribute to decline in oil production as shown in fig. 2.5 6 due to notably several attacks by insurgents ranging from oil pipelines vandalism, bunkering and kidnappings of oil workers for ransom amongst other factors has reduced the number of oil barrels produced per day. In addition, the increase in the volatility of oil prices, instability of international economy and supply of oil by non-OPEC exporting

country in, oil imports from Nigeria by leading economies in the world has reduced crude oil production in Nigeria. Oil revenue has consistently declined due to negative relationship between revenue from oil exports and Nigeria GDP due to the reduction in the demand of oil by exporting countries of Nigeria crude oil i.e Britain and USA.

million barrels per day

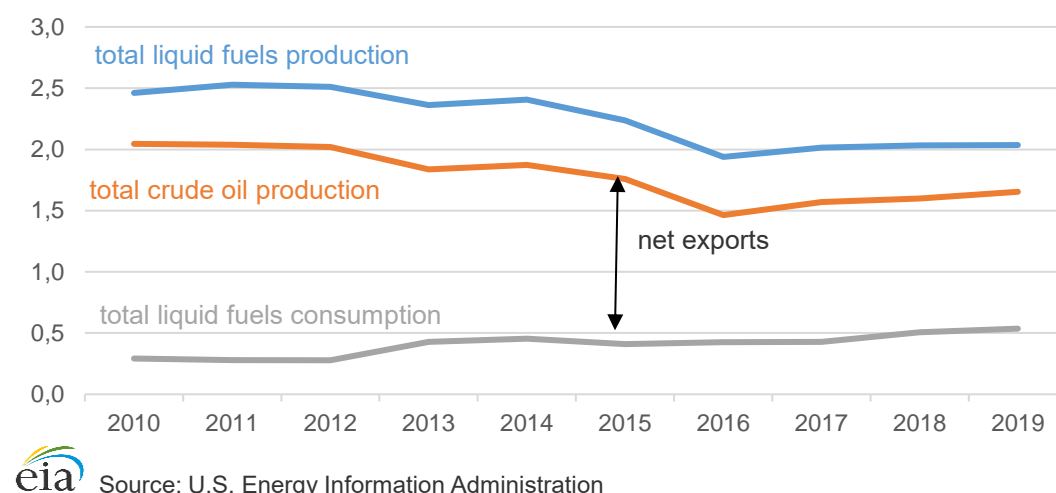


Figure 2.5. Total annual liquid fuels production and consumption in Nigeria

Nigeria aside the oil boom in the 1970s, Nigeria economy has experienced higher crude oil prices in 1980 to 1990, 2000 to 2010 as shown in figure 7 which eventually increased Nigeria oil revenue and economy growth despite the reduction in the number of oil barrels produced per day and exported for foreign earnings. As shown in the figure 7 below Nigeria price of crude oil started to be experiencing decline in 2011. In the international market decline range position between 14.0% and 59.0%. In 2012 the fall in crude oil production - 2.0% - outweighed the 0.6% rise in the price of crude. This decline as therefore amounted for the country a revenue loss and budget deficits. In 2016, the revenue shortfall was more severe at N1.1 trillion – 19.0% of the 2016 budget of N6.1 trillion which was reported to be

induced by the “election” effect and the drastic drop in the price of crude in the international market (Fig. 2.6).

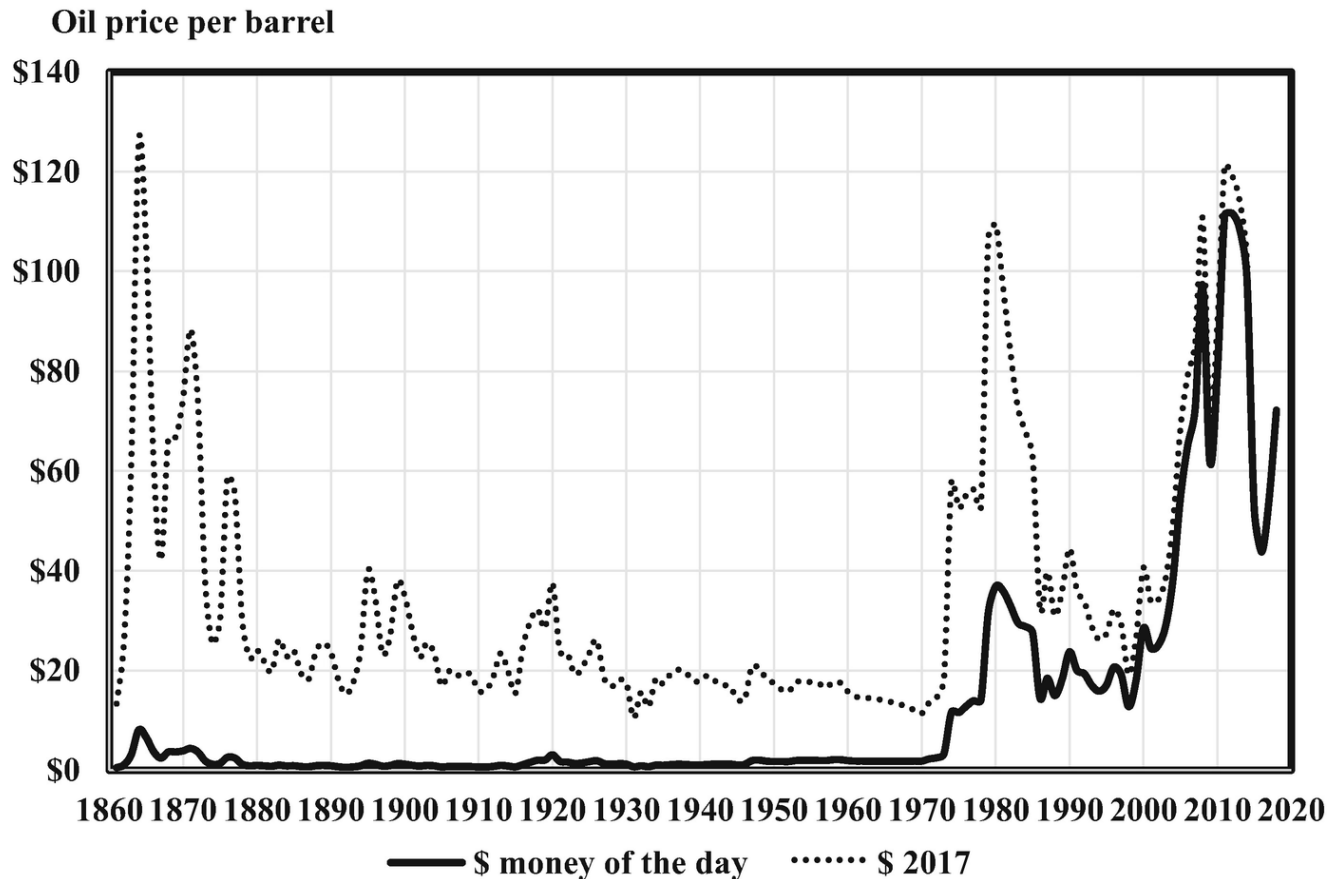


Fig. 2.6. Oil price, per barrek

The persistent fall in the global price of crude oil continues to enlarge the fiscal deficit of the federal budget. In 2017, Nigeria experience a monumental increase in their fiscal deficit which rose to N3.8 trillion from N2.2 trillion in 2016. Present the budget deficit has risen to ₦5.20 trillion in the 2021 proposed budget. To boost the Nigeria economy growth, the government has resulted to accumulate more debts from the international community i.e IMF and World Bank, AfDB and countries i.e USA.

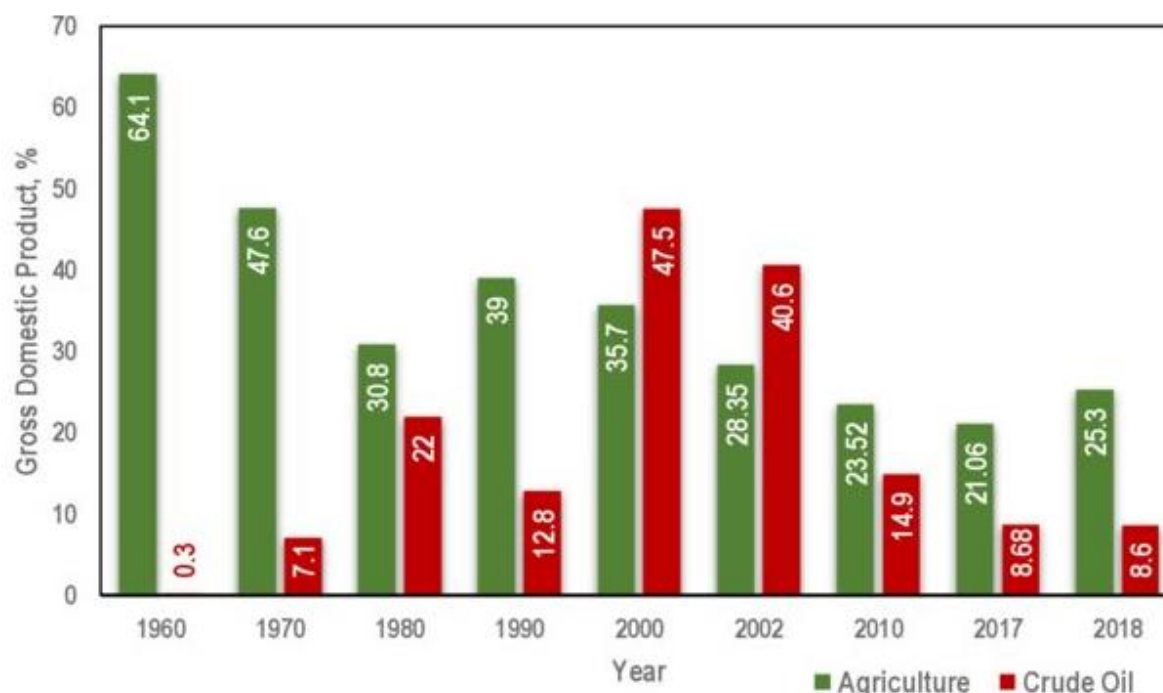


Fig. 2.7. Comparative contribution of Agriculture and Crude Oil to Nigeria's GDP from 1960-2018

The drastic fall in the oil price and revenue since the 1980s has persistently decrease the performances of the economy considering Nigeria domestic product. The contribution of the crude oil industry to the national economy measured in its GDP in trending analysis as shown in figure 7 comparative contribution of Agriculture and Crude Oil to Nigeria's GDP from 1960-2018 shows that oil accounted for just 0.3% of Nigeria GDP in 1960. In the 1970s it increased from 7.1% to an exponential increase of 22% in the 1980s. In 1990, there was a decrease in the contribution of oil to Nigeria GDP to 12.8% due to fall in oil price but between 1989 to 1990 due to rise in the oil price. However, in the year 2000, due to favourable oil price there was an increase to 47.5%, 40.6% in 2002 and due to oil price volatility, in 2010 the contribution drastically reduced to 14.9%, 8.68% in 2017 and 8.6% in 2018.

CHAPTER 3. NIGERIA OIL SECTOR AND ECONOMIC DEVELOPMENT

3.1. Oil Exports and Nigeria Economic

The relationship between the oil exports earnings of the Nigeria oil sector with regards to economic development shows that the revenue from oil has potentials drivers for economic growth. In Figure 8, Crude oil export in Nigeria has enjoyed a relatively upward trends until 2011, when it experienced a downward trend, reaching its nadir in 2016, and has since improved, reaching its highest point in 2019 (Fig. 3.1).

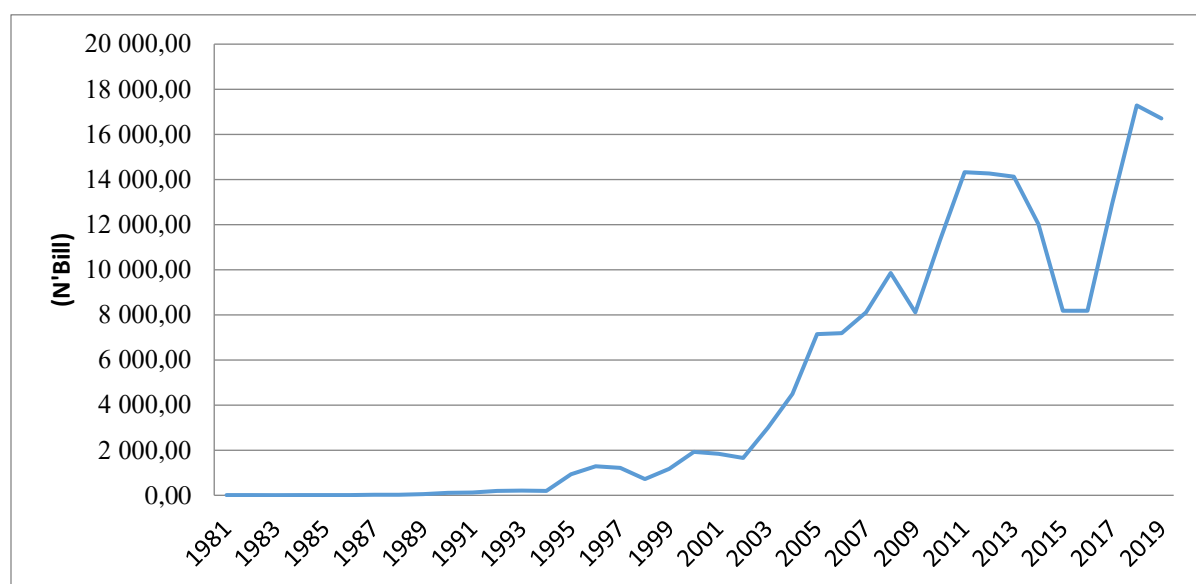


Fig.3.1 Crude oil export

Nonetheless, as petroleum production and exports earnings dominate Nigeria total export, Nigeria economy growth according to OEC in 2016 was 49th in the world with a net export of \$8.3 billion and GDP of \$6 billion per capital. Nigeria crude oil industry account for over 90% of the its gross exports earnings at a production level of 2.5 million barrels of crude oil per day. Nigeria makes enormous wealth from oil production and exports with 37.2 billion of crude oil barrels in reserves.

However, the economy of Nigeria has suffered decline in recent years due to decline in oil production and exports. The period of decline in oil production and revenue was factored by the high level of coordinated attacks on oil reserves due to the high level of militancy in the oil rich Nigeria Delta of Nigeria agitating for proper oil returns in forms of clean up of land and water bodies that were damaged due to oil exploration, provision of employment for Niger Delta youths by the international oil companies, provision of social infrastructures i.e health care and schools and other forms of basic amenities that the oil rich region among other oil spill-effect problems. As shown in Figure 9 Nigerian oil revenue from 1981 to 2019 shows a relatively upward trend until 2007 to 2009 where a major downturn is observed (Fig. 3.2).

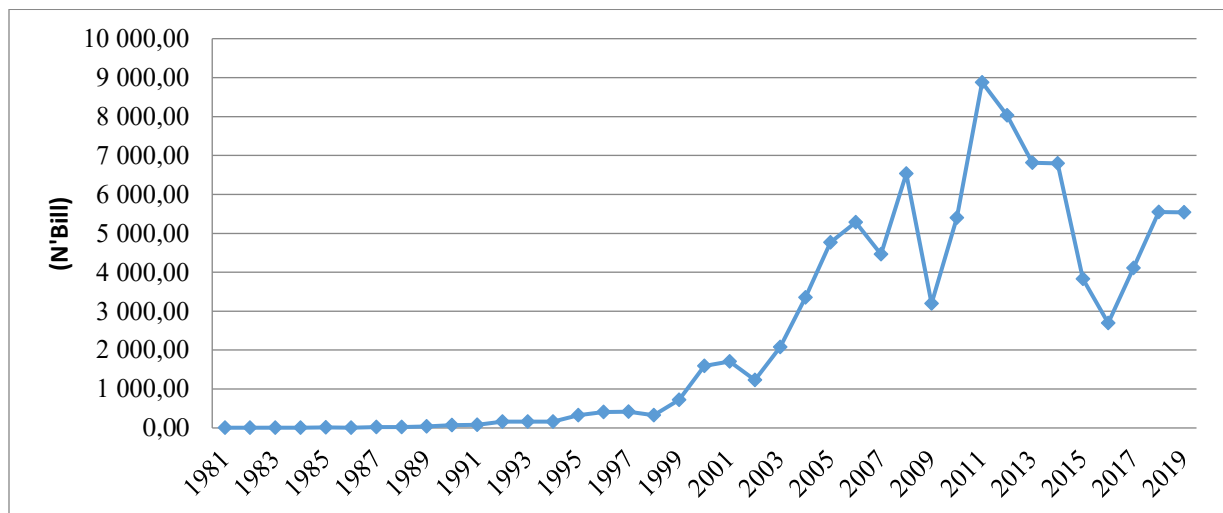


Fig.3.2. Oil revenue

This period is associated with the period of global financial crises. There was an improvement in the oil revenue between 2009 and 2011, afterwards, it continues to decline up until 2016. This period of decline is associated with high level of insecurity and militancy in the NIGER Delta region – The region where crude is extracted in Nigeria. From 2017, revenue generated from crude oil has since improve.

3.2. Oil Revenue and Nigeria Economy

Evidences from historical records have shown during favorable global oil prices, revenue from Nigeria oil sector has provided for exact 2/3 of government budget and expenditure which cut across the three tiers of government expenditure, and has claimed 90 percent of the country's export income. Culminated with the weakened oil demand globally, Nigeria experience from the first quarter of 2014 of global oil price shock hit, global demand for Nigerian crude had been weakening. Nigeria experience from the first quarter of 2014, oil revenue that nosedived by almost one third, from 1.3 trillion to 839 billion naira (US\$6.6 billion to \$4.3 billion) (The Economist Intelligence Unit, 2015). One of the contributing factors is the Crude-oil production that declined by 7 percent, from 2.21 million barrels per day (bpd) in the second quarter of 2014 to 2.05 million bpd in the second quarter of 2015 (The Economist Intelligence Unit, 2015).

Before and since 2014 Nigeria has continued to sell roughly below or 1 million barrels of crude oil per day, but have in cooperation with the OPEC have achieved an increase in price of crude oil from 2017 till present as indicated in the figure below. One of the militating factors in the drop of crude oil revenue in Nigeria is tied to international factors such as the Brent crude—the benchmark against which Nigerian oil is priced—is now traded at between \$36 and \$44 a barrel which was higher compared to the price per barrel was commonly \$100 or higher from 2011 to 2014 even as the country witness drop in their oil production and export. The increase in the US shale oil production is one major cause of lower global oil prices, and of the less demand for Nigerian oil.

The United States that were the top exporter of Nigerian oil since the 2000s which in 2006, U.S importation of oil from Nigeria peaked at peaked at 1.3 million bpd (around 9 percent of total US oil imports). Subsequently between 2010 and 2014, average daily exports of Nigerian oil to the United States reduced by almost 96 percent at an estimate of 58,000 bpd (US Energy Information Administration, n.d). Nigeria crude oil revenue during the year in review also slumped due to the fast-tracked development of US shale oil, referred to also as “light tight oil” (LTO) which recorded around 4 million bpd of domestically sourced crude to the US energy mix (Fig.3.3).

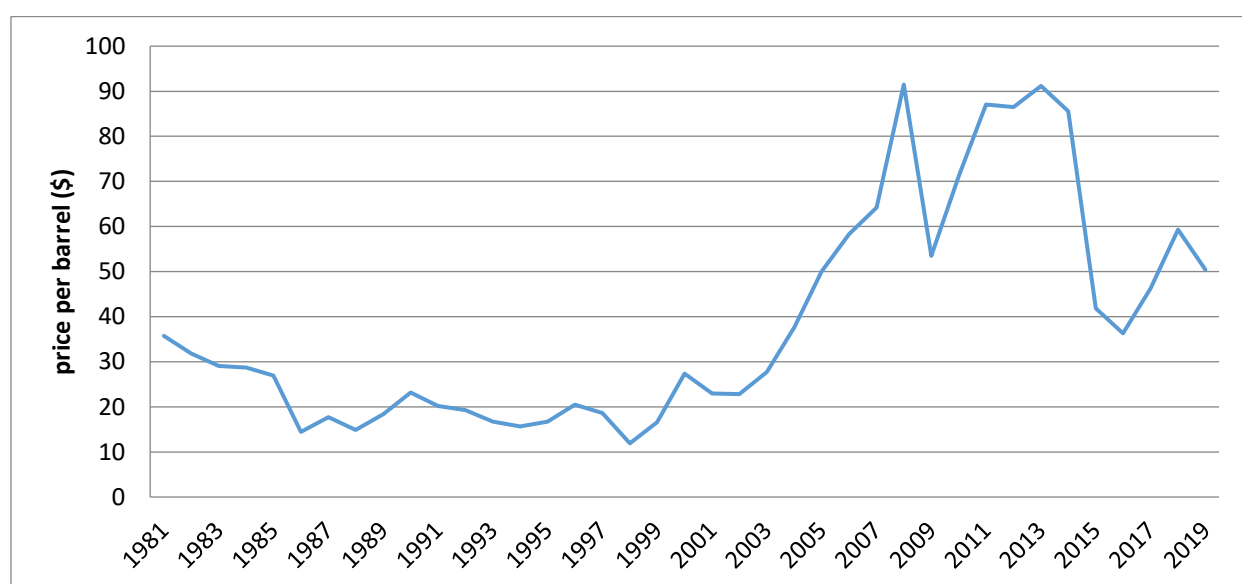


Fig. 3.3. Crude oil price

The light tight oil compared to Nigeria light sweet crude oil is similar in quality, competitively priced, and very cheaper to transport to the East Coast refineries that process light sweet barrels. As such Nigeria has suffered shortage in their supply in of oil to the United States Outside the United States, a glut of light sweet crude in the Atlantic market, volatile refining margins, and the return of more Libyan light sweet crude to the market have also reduced global demand for Nigerian oil (Aaron, Alexandra, and Christina, 2015). Therefore, the price of crude oil has

been relatively unstable in the international market. As shown in figure 9 It reached its nadir point in 2008 and its zenith in 2007 and 2013. This unstable movement in price has affected revenue from crude oil in Nigeria, as the trend of crude oil price mimick the trend of revenue generated from crude oil in the country.

3.3. Oil Returns and Nigeria Economic Development

In 1970, Nigeria had just become a member of OPEC and their annual GDP began being recorded. Nigeria Gross Domestic Product grew at an increasingly steady rise and a very, steady and fast rise throughout the 1970s at an average of almost \$5 billion per year during the oil boom as shown in figure 10 below:

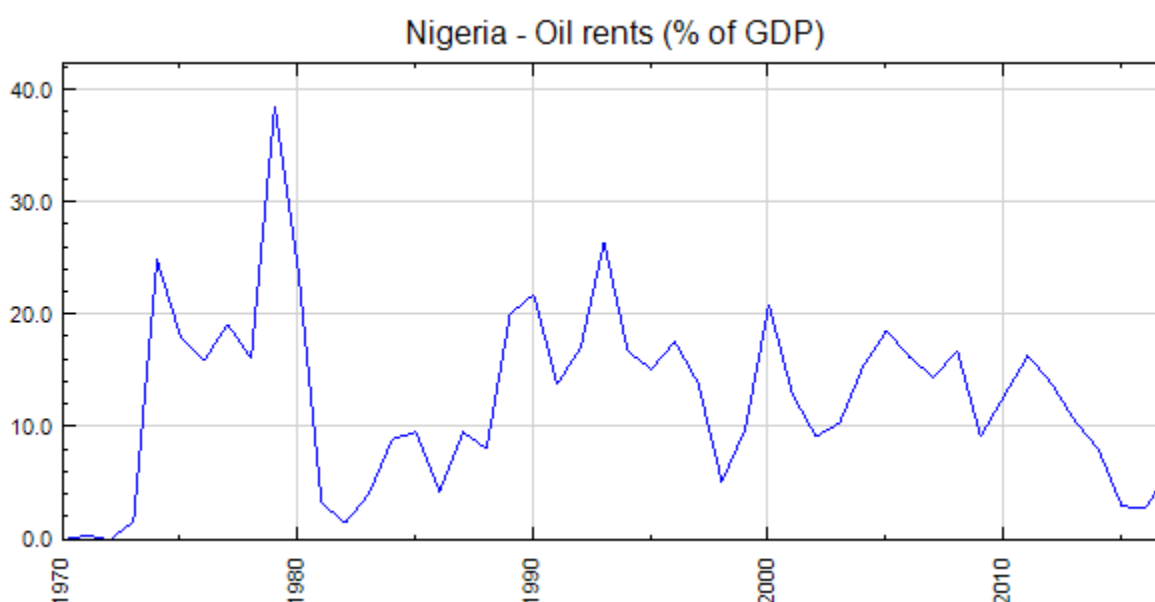


Fig. 3.4. Nigeria Oil rent to GDP

However, from 1980 after a peak in 1981, the global recession hit and the prosperity of oil boom became to decline till present. Illustrated in the graph above after almost a decade of decline, Nigeria oil economy rose steadily in in 1996, due

increased oil exploration and production by Shell in shallow water southeast of Warri and Exxon-Mobil in the shallow water off Akwa Ibom state in the southeastern delta and averaged production of 632,000 barrels per day (100,500 cubic metres per day) in 1997, making Nigeria the second largest producer of oil among the OPEC countries as against 543,000 barrels per day (86,300 cubic metres per day) in 1996. The oil prosperity also experiences decline in 1999 with during the transition from a military government to a civilian government as the oil multinationals were skeptic about their investments because of the calculated risk of political instability which was surmounted by the government and began a rise again in 2000, growing at a very similar rate to that of the rise in 1970 but from 2011 due to less demand for and the crash in price of crude oil, Nigeria oil revenue to GDP as continued to decline.

However, the impact of oil Investments, returns on Nigeria Economic Development is shown in the tested variables such as GPD per capita growth (adopted to proxy development), crude oil price, crude oil revenue, Foreign Direct Investment (FDI) and crude oil export, in the tables below. Data were adopted from the World Development Indicator (WDI) and the Central Bank of Nigeria statistical bulletin.

The study adopts the Auto-Regressive Distributive Lag (ARDL) model. The model was developed by Pesaran and Shin (1999) and adjudged efficient in capturing relationships among variables of different order of integration, that is, estimating a model with a mixture of $I(0)$ and $I(1)$ variables. It has the advantages of being just a single-equation model, making it simple to interpret and implement, also, different variables can be assigned different lag length and they enter the mode (Pesaran et al., 2001). Because of its ability to accommodate and estimate variables of different order of integration (i.e. mixture of $I(0)$ and $I(1)$), it can estimate efficiently both short-run and long-run relationships in a given model. The ARDL

as specified by Pesaran and Shin (2001) is presented below, using two variables x and y ;

$$y_t = \sum_{k=1}^p \gamma_k y_{t-k} + \sum_{j=0}^q \varphi_j x_{t-j} + \varepsilon_t \quad (1)$$

Where y_t represent the dependent variable, γ_k , the coefficient of the auto-regressive function of the model, φ_j , the coefficients of the distributed lags of the dependent variables and x_{t-j} the lags of the dependent variables.

Model specification

The model for the study is specified as follow;

GDPPCG = f (crude oil export, crude oil price, fdi, oil revenue); where GDPPCG represents GDP per capita growth and fdi, foreign direct investment

Pre-estimation test

Table 3.1

Unit root test

	ADF		PP		
Variables	Level	first difference	Level	first difference	I(d)
Gdppcg	-3.386*	-10.226***	-3.885**	-12.048***	I(0)
crude oil export	-2.633	-5.723***	-1.258	-2.889	I(1)
crude oil price	-2.449	-6.179***	-2.470	-6.207***	I(1)
Fdi	-3.212	-8.437***	-3.107	-22.277***	I(1)
oil revenue	-2.665	-6.082***	-2.729	-6.129***	I(1)

***, **, * represent significance level @ 1%, 5% and 10% respectively.

Table 1 above shows the stationarity properties of the series. The Augmented Dickey-Fuller (ADF) and Philip-Peron (PP) test were adopted. The test helps to

know the stability and predictability level of the series. It was found that only Gdppcg was stationary, while the other series in the model were stationary only after the first difference. The mixed order of stationarity of the series suggests an estimation technique that accommodates both short-run and long-run variables.

Table 3.2

Granger causality test			
Pairwise Granger Causality Tests			
Sample: 1981 2018			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
CRUDEPRICE does not Granger Cause CRUDEOILEXPORT	36	13.368***	0.0000
CRUDEOILEXPORT does not Granger Cause CRUDEPRICE		9.026***	0.0008
FDI does not Granger Cause CRUDEOILEXPORT	36	0.00856	0.9915
CRUDEOILEXPORT does not Granger Cause FDI		0.74506	0.483
OILREVENUE does not Granger Cause CRUDEOILEXPORT	36	11.903***	0.0001
CRUDEOILEXPORT does not Granger Cause OILREVENUE		16.174***	0.0000
GDPPCG does not Granger Cause CRUDEOILEXPORT	36	0.03778	0.963
CRUDEOILEXPORT does not Granger Cause GDPPCG		0.42525	0.6574
FDI does not Granger Cause CRUDEPRICE	36	0.27959	0.758
CRUDEPRICE does not Granger Cause FDI		0.70092	0.5038
OILREVENUE does not Granger Cause CRUDEPRICE	36	3.598**	0.0393
CRUDEPRICE does not Granger Cause OILREVENUE		0.86235	0.4321
GDPPCG does not Granger Cause CRUDEPRICE	36	0.50278	0.6097

CRUDEPRICE does not Granger Cause GDPPCG		0.79371	0.4611
OILREVENUE does not Granger Cause FDI	36	0.63098	0.5388
FDI does not Granger Cause OILREVENUE		0.15823	0.8543
GDPPCG does not Granger Cause FDI	36	0.42612	0.6568
FDI does not Granger Cause GDPPCG		0.29146	0.7492
GDPPCG does not Granger Cause OILREVENUE	36	0.56353	0.5749
OILREVENUE does not Granger Cause GDPPCG		0.07955	0.9237

Table 3.2 above shows the granger causality test of the model. It helps to identify variables that are important in predicting changes in the other. The result shows a bi-directional causality between crude oil price and crude oil export as well as crude oil export and crude oil revenue. A uni-directional relationship is recorded between oil revenue and crude oil price, flowing from oil revenue to crude oil price. No causality is recorded among other variables in the model and GDPPCG.

Table 3.3

ARDL model estimation of crude oil price, crude oil revenue, crude oil export and FDI on economic development

ARDL Cointegrating And Long Run Form				
Dependent Variable: GDPPCG				
Selected Model: ARDL(2, 0, 0, 0, 0)				
Sample: 1981 2018				
Short run coefficients				
Included observations: 36				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPPCG(-1))	-0.3880	0.1588	-2.4428	0.0209
D(CRUDEOILEXPORT)	-0.0003	0.0004	-0.6832	0.4999
D(CRUDEPRICE)	0.0970	0.0957	1.0131	0.3194
D(FDI)	-0.7314	0.5550	-1.3179	0.1978
D(OILREVENUE)	-0.0005	0.0013	-0.3747	0.7106
CointEq(-1)	-0.3391	0.1898	-1.7872	0.0844
Cointeq = GDPPCG - (-0.0007*CRUDEOILEXPORT + 0.2860				
*CRUDEPRICE -2.1566*FDI -0.0014*OILREVENUE + 2.1727)				

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CRUDEOILEXPORT	-0.0007	0.0010	-0.7203	0.4771
CRUDEPRICE	0.2860	0.3773	0.7579	0.4546
FDI	-2.1566	2.2497	-0.9586	0.3457
OILREVENUE	-0.0014	0.0043	-0.3312	0.7429
C	2.1727	6.1908	0.3510	0.7282

Table 3.3 above shows the model estimation result. It presents both short-run and long-run effect of crude oil price, crude oil revenue, crude oil export and FDI on economic development in the country. Crude oil export, fdi and oil revenue negatively influence economic development in the country, while crude oil price contributes positively to development in the short-run. A percent point increase in Crude oil export, fdi and oil revenue result in about 0.003%, 0.73%, 0.0005% respectively decline in the level of development in the country, while a percent point increase in crude oil price result in about 0.097 percent increase in the level of development in the country. Almost the same result is reported in the long-run. Crude oil export, fdi and oil revenue influenced development negatively with coefficients of 0.0007%, 2.16%, and 0.0014% respectively, while crude price contributes about 0.29% for every one percent increase in crude price. Some of the possible explanations of the negative contribution of crude oil resources to national development are well explained in the concept DUTCH DISEASE.

Table 3.4

Serial correlation test (Post estimation test) of crude oil price, crude oil revenue, crude oil export and FDI on economic development

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.424653	Prob. F(2,27)	0.2581
Obs*R-squared	3.43643	Prob. Chi-Square(2)	0.1794

Table 3.4 shows the serial correlation post-estimation result for the model. The result shows that the null hypothesis on no serial correlation in the model should be accepted. Hence, the model is free from the problem of serial correlation.

Table 3.5

Heteroscedasticity test of crude oil price, crude oil revenue, crude oil export and FDI on economic development

Heteroskedasticity Test: Breusch-Pagan-Godfrey				
F-statistic	1.322044	Prob. F(6,29)		0.2791
Obs*R-squared	7.732032	Prob. Chi-Square(6)		0.2584
Scaled explained SS	8.189334	Prob. Chi-Square(6)		0.2246

Table 3.5 shows the heteroscedasticity test result for the model. The result shows there is not heteroscedasticity in the model.

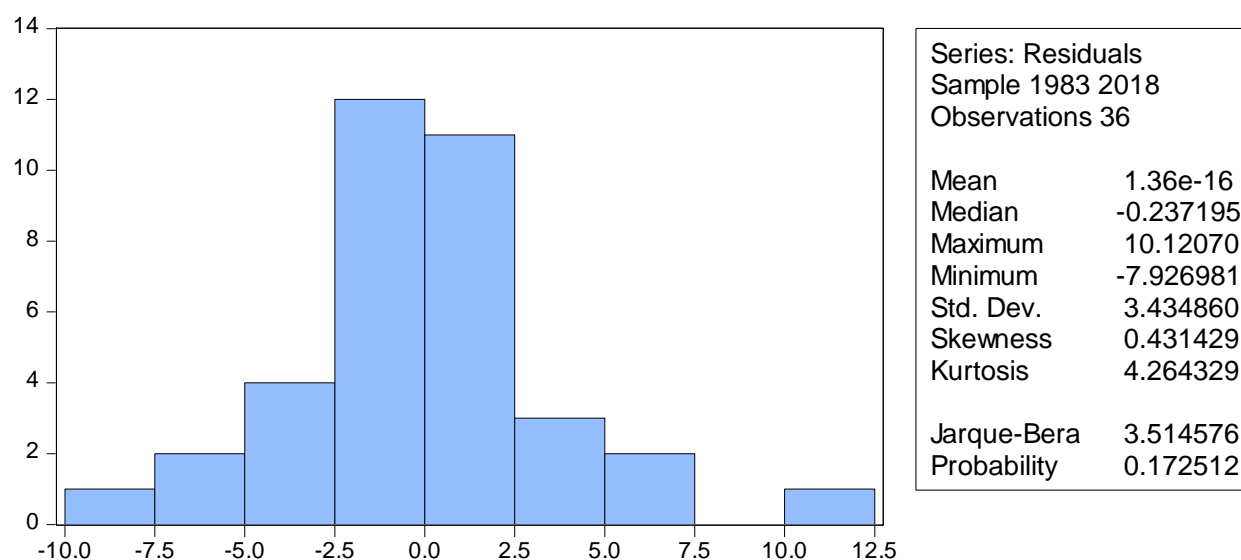


Fig. 3.5. Normality test of crude oil price, crude oil revenue, crude oil export and FDI on economic development.

Figure 3.5 shows the normality test result for the model. The result shows that the variables are normally distributed.

CONCLUSION

The results and outcomes of this study was based on the based on the time series data of oil price from World Development Indicator (WDI) and the Central Bank of Nigeria statistical bulletin with measured variable such as GPD per capita growth (adopted to proxy development), crude oil price, crude oil revenue, Foreign Direct Investment (FDI) and crude oil export from 1981 to 2018. It was observed that the time series data of variables (GPD per capita growth (adopted to proxy development), crude oil price, crude oil revenue, Foreign Direct Investment (FDI) and crude oil export) have a trend with a mixed order of stationary of the series that suggests an estimation technique that accommodates both short-run and long-run variables. After using unit root test (ADF) it is found that only Gdppcg was stationary, while the other series in the model were stationary only after the first difference. Granger causality test of the model identified variables that are important in predicting changes in the other. As such there is a significant causality between crude oil price and crude oil export as well as crude oil export and crude oil revenue. Model estimation result shows that crude oil export, fdi and oil revenue negatively influence economic development in the country, while crude oil price contribute positively to development in the short-run.

RECOMMENDATION

It is obvious that the impact of crude oil returns as regards crude oil export, crude oil price, fdi and oil revenue impact greatly Nigeria economic development. Especially the less demand and volatility of oil price anticipates continuous unfavorable balance of payments, exchange rate and consequential contraction of the economies. There as shown in this study, specically in the chapter two culminated with the analysis of crude oil returns in chapter three, that the

government should diversify more in Agriculture, service, and manufacturing sector which will steadily lessen the impact of the less export of oil and oil price volatility on Nigeria economic growth and development. Meanwhile, government of Nigeria should work with stakeholders in Nigeria crude oil industry to revitalize Nigeria oil refinery to reduce its import bill of refined crude oil which has negative impact on the contribution of the crude oil industry on Nigeria economy and also, in Agriculture, service, and manufacturing sector to boost its export which will reduce inflation in the economy and lead to a steady rise in the country's real gross domestic product.

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