### ALFRED NOBEL UNIVERSITY

### **DEPARTMENT OF THE GLOBAL ECONOMICS**

**Master's Thesis** 

# «OIL RESOURCE WEALTH: IMPACTS ON NIGERIA'S ECONOMIC GROWTH»

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#### ABSTRACT

In this paper we analyze the studies on natural resource and how its ampleness has proven that countries rich in resource tend to not perform great in terms of economic growth; an enigma which is known as the 'resource curse'. Much of the research uses econometric figures to assume the economic performance of a collection of countries rich in resource. Therefore, we build on earlier literatures to consider the effectiveness of resource wealth on Nigeria's economic growth as a case study.

We will be examining the channels through which resource curse infiltrates, and latest surveys that tests for impact in a cross-country setting. Our reflection of earlier claims and correlation tests shows that oil resource wealth affects growth negatively. Using expenditure figures as measure of human capital accumulation, a downward trend in budgetary quota is visible compared to administrative expenditure and debt stock. Secondly, increasing natural resource simultaneously attracts more foreign direct investment than traded sectors.

Thirdly, in trade barter terms, commodity exports indicate heavy reliance on primary commodities (agriculture and fuels) making the economy prone to price fluctuation. We document a volatile real exchange rate (appreciating and depreciating) when oil price/revenue adjusts. Finally, we test for institutional analysis and record considerable negative impact evidenced in recent growth performances due to the system's corruption, instability and institutional inefficiency.

Keywords: Resource wealth, Resource curse, Dutch disease, Economic Growth

### АНОТАЦІЯ

У цій роботі ми аналізуємо дослідження природних ресурсів та те, як його обсяг довів, що країни, багаті ресурсами, як правило, не мають високих показників з точки зору економічного зростання; загадка, яка відома як "прокляття ресурсів". Значна частина досліджень використовує економетричні показники, щоб припустити економічні показники сукупності країн, багатих ресурсами. Тому ми спираємось на попередні літератури, щоб розглянути ефективність багатства ресурсів на економічне зростання Нігерії як конкретний приклад.

Ми будемо вивчати канали, через які проникає прокляття ресурсів, та останні дослідження, які перевіряють вплив на ситуацію, що склалася в різних країнах. Наше відображення попередніх вимог та тестів на кореляцію показує, що багатство нафтових ресурсів негативно впливає на зростання. Використовуючи показники видатків як міру накопичення людського капіталу, помітна тенденція до зменшення бюджетних квот порівняно з адміністративними видатками та запасом боргу. По-друге, збільшення природних ресурсів одночасно залучає більше прямих іноземних інвестицій, ніж торгувані сектори.

По-третє, з точки зору бартерної торгівлі, експорт товарів свідчить про значну залежність від первинних товарів (сільське господарство та паливо), що робить економіку схильною до коливань цін. Ми фіксуємо мінливий реальний обмінний курс (зростаючий та знецінюючий), коли ціна / дохід нафти коригується. Нарешті, ми перевіряємо інституційний аналіз і фіксуємо значний вплив, який виявляється в останніх показниках зростання.

Ключові слова: багатство ресурсів, прокляття ресурсів, голландська хвороба, економічне зростання

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# **CHAPTER 1: INTRODUCTION**

The exploration of a natural resource usually molds a mindset of positive economic encounter, and eventual creation of real sectors (financial and manufacturing) for increased growth. As a result, natural resource and economic growth becomes highly arguable in experimental researches and pegged as 'curse' or exploitation of opportunities (Auty 1993).

To be more specific, natural resource (oil) discovery in Nigeria, brings about critical economic and management threat for long-term development. however, more evidence suggests destitute and untenable growth results (declining human capital growth, increased poverty in the society, declining amplitude in real sectors and institutional extortion) compared to some other resource rich SSA countries e.g. Congo (Sala-i-Martin and Subramanian 2003). For this reason, our attention is drawn to really examine the influences and level of resource wealth effect on the macroeconomy for the period 2001-2015.

To further explore the above, economic and political approach of communication through which the resource curse permeates are considered – contraction of the trade sector, exchange rate appreciation, institutions and human capital accumulation.

Nigeria's economy is massively supported by the oil industry in revenue terms accounting for about 85% of government revenue and 95% of export earnings. This is an exact contrast to the subsectors share to real GDP of almost 6.3% and 8% in 2015 and 2016 compared to other sectors. Although in 2010 the GDP increased, achieving its highest in 2014 toping the South Africa nation. The documented growth

in the past years, put Nigeria amongst the Emerging Economies despite its incompetent infrastructure and economic activities in the non-oil sectors to boost economic growth (Igberaese 2013: 2).

Fig 1.1



### Oil Revenue and Real GDP Growth 2001–2015

Note: Oil revenue is the income gotten from upstream activities (mining and exploration) of the oil subsector. This is excluding revenue from gas sales.

### Annual GDP Growth Rate



The figure above shows that Nigeria's growth outcome in 2016 was in the negative. Annual GDP growth rates continued to decrease since 2014 shrinking to about 0.5% in first quarter of 2017.

#### **PROBLEM ACCOUNT AND RATIONALE**

Revenues from the oil and gas sector are the backbone of Nigeria's economy. According to the IMF, the sector accounted for about \$86 billion i.e. 58% of government revenue for 2014. Because it is the major foreign exchange earner, it accounted for about 94% of total exports in 2014 (IMF cited in EIA 2017).

Crude oil export revenue for 2015 was roughly \$52 billion, this figure was short by \$35 billion from the 2014 remuneration. The oil revenues for the periods of 2015 - 2016 has been less than \$60 p/b due to the decrease in oil prices. Oil price

flow determines a great deal of government revenue and Nigeria's national budgets benchmarked on US dollar price of crude for example. The figure above shows forcible evidence that other economic activities strongly depends on the resource sector for growth. By implication, there is a procyclicality effect carried out into the macroeconomy through investment, exchange rate mechanisms, non-accumulation human capital and uncompetitive traded sector. Moreover, impact is evident on the quality and effectiveness of public institutions in managing the resource wealth.

### **OBJECTIVE OF THE THESIS AND RESEARCH QUESTIONS**

The primary objective of this thesis is to analyze in details the impact of oil resource wealth on the economic growth in Nigeria as a case study. The paper will also focus on ongoing efforts at economic diversification. Our study will be guided by the following research questions:

- Do oil resource wealth affect Nigeria's economic growth?
- What conveyance routes encourages oil resource wealth impact on economic growth?
- What is the basis for recent economic performance?

#### LIMITATIONS OF THE RESEARCH

The sample period for this study 2001–2015 is of importance because of major economic events at the time, for example the global financial crisis, falling oil prices. Its major limitation however, is that the research is not able to accurately examine oil and non-oil states in Nigeria correctly to understand the impact of oil resource at the local levels. This is basically due to time within which the research was carried out.

The thesis is going to include quantitative secondary data. To more or less limit data quality compromise, we derive data from possible reliable international and national sources. These include;

- World Governance Indicators
- World Development Indicators
- Central Bank of Nigeria
- ➤ World Trade Organization
- ➤ U.S. Energy Information Administration

### **ORGANIZATION OF THESIS**

This thesis is arranged in several parts in the following order:

Chapter One - gives a brief background to the research, focusing on trends in oil resource wealth. This section also presents the research objectives, study questions, limitations and scope.

Chapter Two - detailed discussions on the theories of which this research is built. We'd also be reviewing resource curse literatures and the channels of conveyance.

Chapter Three - continues on the previous chapter by providing an overview of the Nigerian economy while also taking into account recent growth performances.

Chapter Four - further explains the methodology and data applied. Application of correlation and exploratory data analysis, macroeconomic data are analyzed for Nigeria to form a relationship between independent, dependent and explanatory variable. Chapter Five - here we present the results of the analysis and interpret them to draw up the conclusions. This chapter will also link the paper through findings, revised literature and theory.

### FRAMEWORK OF NIGERIAN ECONOMY

#### THEORITICAL STRUCTURE

While it might be difficult to argue that the discovery of primary resource slows the economic growth rather than improving it, certain systems has been identified to explain this phenomenon. The two main ideas to this include; economic and political factors which is made up of the channels upon which the curse is perpetuated. Firstly, resource dependency constricting the tradable sectors are some of the negative economic effects leading to Dutch disease, erratic commodity prices, and unequal expenditure in human capital (health wise and education). The spending effects are however escorted by resource allocation effect too as the non-tradable clears out all factors of production to raise their rewards (Sandbu 2006: 1155, Badeeb et al 2017: 125).

Internally, factors of production move to the resource sector as the nonresource sectors contract, thereby increasing their individual prices. This method further debunks the effect of specializing in resource dynamic sectors, Matsuyama (1992), Krugman (1987) argue that increasing returns to scale thrive in the manufacturing sector and therefore is a genuine outlet for quick economic growth. Commodity price fluctuations cause cyclical fluctuation in revenue, which as a result makes public expenditure difficult. The economic ferocious circle effects of resource wealth on the tradable sector are shown below;



Secondly, the negative political effects are excessive tariff seeking among the political class and weakening policies that prevents wastage of public goods. Based on this, reward in the public domain do not reflect the work rate of individual contributions to the economy but rather political suggestions inform the distribution of national revenue. This pushes scarce entrepreneurial bodies from producing exportable goods into "tariff seeking" activities.

### The Resource Curse Theory

As much as the Curse theory has been researched, there is no general compliance on how the curse of economic growth and natural resource should be

Fig. 1.3

explained, but recent discussions point to explanations of crowding-out effect thus, x resource(s) crowds-out y activity(ies). The divergent views however, reflect most in academic literatures with more detailed explanations from the structuralist economists. Although there is a convincing motion in the discussion, it does not suggest any loss of welfare or incompetence in the sector however, it makes for specialization in less dynamic sectors without increasing revenue to scale as in the production of traded goods.

Certain reasons refer to natural resources as a curse rather than a blessing. In the first case, prices are set in the international market and subject to fluctuation. Secondly, resources tend to crowd-out the traded sectors. And lastly, institutional failures shadows mineral wealth booms as opposed to economies built on moderate tax systems (Frankel 2010: 4). Specialization in non-tradable affects the economy in the long-term through declining terms of trade i.e. the Dutch disease. The phenomenon of natural resource emphasizes the possibilities for countries rich in resources to underperform economically while depending mostly on the non-tradable sector because of increasing income in the short run. In the forefront of this idea are notable researches that have established the uncompetitive nature of primary resources in international market (Auty 1993, Frankel 2010 and Krugman 1987), all proved the immiserating characteristics of primary resource sector on the macroeconomy.

Political and economic issues usually come with abundance of natural resource e.g, the oil boom periods of 1979 -1981 which was characterized by the extinction of the tradable sectors which in turn contributed to Dutch disease for most primary resource countries. Krugman in his articles mentioned the competition that was lost during mineral windfalls and also how they usually are never regained faily (Krugman 1987: 49). In a different article by Manzano and Rigobon, they plotted economic growth on vertical axis and GDP on horizontal. They explained that prices of non-renewables in the 70's was mostly on the high side resulting in an increase in massive borrowing and rising debt profile. The article also confirmed negative correlation of resource wealth and growth. (Manzano and Rigobon 2001: 5). Countries like Indonesia and Mexico are popular examples of countries that ended up borrowing in the boom days. Furthermore, a macro scale studies also supported this argument that discovery of primary products like precious metals oil, undermine investment and savings for the future (Papyrakis and Gerlagh 2006: 118 and Rafiq et al 2009: 122).

The works of Prebisch and Singer 1950 was still being built by the The United Nations in pressing home that resource rents does not guarantee justifiable levels of economic growth. It also confirms that prices of primary goods to finished goods would tend to decline over longer period; therefore growth is not always guaranteed (Prebisch and Singer 1950). Price of non-fuel commodities have been on the decline year-onyear since the 1900s with an average cumulative fall of 40 percent while fuel products falls at 36 percent (Grilli and Yang 1988: 9).

Alternative explanations has been given by another group of economists however, that could give rise to resource curse citing policy as reason. This route studies interactions in an economy specializing in developments in the financial sectors and primary products respectively. This benchmark model however assumes three sectors in the economy (oil, traded and non-traded sectors). The REER becomes volatile in specializing the non-tradable sector because increasing revenue is associated with increasing fiscal expenditure of shocks to resource income. These changes however, do not adjust with the division in the distribution of labour and capital but instead by switching the expenditure. The financial sector will experience frictions as a result in high interest rate. Overall, a continued volatile interest rate in the traded sector would ultimately lead to a declining profit and output than in non-tradable sector (Sachs and Warner 2001: 833).

Further analysis to the specialization schemes and underdeveloped financial sectors shows that there is an obvious need to develop both traded and non-traded sectors to same levels to allow for the movement of labor when shocks arise both ways. Hence, according to the benchmark model, specialized economies with fluctuating rent will see fluctuating REER while an economy balanced on both will ultimately not.

### **Political Resource Curse**

Recent studies have argued albeit without connected discourse that mineral windfalls tended to negatively influence the relationship among groups, political institutions, democratic and may give in to armed conflict such as the Niger Delta conflict (Brollo et al 2010: 1). This exemplifies situations where resource rents are centrally pulled before allocation to sub units. Democratic tendencies decline as politicians make a rush to the centre and prolonged their stay in government. In these cases, the rule of law and people's right to property becomes absent (Ross 2004: 338, Badeeb 2017: 127).

Distinctions have been made to the kinds of political systems existent in resource rich countries as autocratic. Evidence is found by poelhekke and Gylfason (2011) for 29 Sub-Saharan African countries. Meanwhile, in their novel study, Salai-Martin and Subramanian (2003: 13) established that Nigeria's oil wealth exerts negative effects on economic growth via the institutional channel. The motivations that engineer institutional failures are endogenously crafted through the political agency model (see Persson and Tabellini 2000, and Brollo et al 2010: 1). The model

highlights competition between the incumbent and oppositions politicians leaving the incumbent on using resource wealth to achieve longer stay in power.

There are channels of permeation through which resource rents impacts the political system. First, moral hazard effect. Power brokers access huge budgets facilitated by most times absence of constraining regulations on expenditure of public fund. Secondly, the selection effect tends to increase the number of political office seekers who is incapable to run for office but do so because of the common wealth.

This means that most government officials are severally incapable but elected to answer to the call of their principals. Using a combination of three datasets (federal transfers to municipal, audit of municipals and biography and electoral information of sitting mayors) of municipalities in Brazil, 10 percent increase in federal transfers induces corruption by 12 percent, it also undermines the value of candidates with college degree contesting against the incumbent by 7 percent (Brollo et al 2010). In support of the above, Ross (2006), Gilberthorpe and Papyrakis (2015) argue that countries with natural resource endowments have high tendency for underdeveloped bureaucratic system.

Yet in another setting, the New Institutions Economists, see growth as endogenous amidst natural resource wealth arguing ex-ante that good institutions are prerequisites. The NIEs establish examples of mineral rich countries with at least stable functioning institutions as Norway, Botswana, and Australia gaining enhanced economy because they have facilitated sectoral linkages (Larsen 2005: 81). Larsen established the impact of governance reflected in the way Norway managed its resource rents between 1999-2000. Norwegian policies were multidimensional and public-centric to resist compact formulation. He observed manufacturing hours increasing yearly by 0.3 percent compared to other Scandinavian neighbours. Consequent upon these policies, governing interventions became successful when entrusted officials do so without being deficient (Weil 2013: 355). Hence, they affirm that resource wealth's are double-edged sword that creates winners (Norway, Australia, and Botswana) and losers (Venezuela, Nigeria, Angola, and Saudi Arabia).

We would like to consider briefly trends in crude oil price volatility to be able to ascertain how much effect it exacts on the economy.

#### LITERATURE REVIEW

The history of crude oil is not without incidences of price volatility as pointed out in the curse theory. Price is demand driven and fluctuation of market price is the outcome of supply and demand forces therefore, increased levels of fluctuation signifies the interplay of market variables. We can deduct from above that price volatility is a common feature of commodity markets.

To be precise, fuel commodities have been found to have high volatility than nonfuel commodities over time. Although, structuralists conclude that primary product countries are more of price takers in the global market than industrialized countries (Poelhekke and Van der Ploeg 2009: 727).

The susceptibility of the phenomenon, reawakens a shift away from primary products. The 2008 trade and development report show that primary commodity export share fell to 33 from 77 percent because of the new industrializing economies (NIEs). However, 51 percent of world primary commodities still come developing world and Africa accounted for 79 percent between 2003-2006 (UNCTAD 2008: 28).

Fig 1.4





Figure 1.4, highlights price movement of primary commodities over time in developing countries. The picture reflects uncontrolled price movement which are politically and economically motivated as revealed by significant literatures. Hence, in the foregoing accounts of oil shocks are presented to show significance in revenue generation.

#### **RECENT GROWTH PERFORMANCE**

Nigeria's economy is primary commodity dependent for revenue and foreign exchange earnings. The economy also leans heavily on importing intermediate goods and most raw materials as feedstock for local industries and consumption of cheap foreign goods. Crude oil basically drives the economy in revenue terms but despite its much-talked importance, it contributes an average of 10 % to GDP, 62 percent of total government revenue and whooping 94% of export earnings.

Although being challenge by infrastructure inadequacy, ineffective and inefficient policies that undermine growth, the economy seem to have made pockets of successes toward diversification. As we may know, global growth trend is rapidly changing with declining growth in major emerging economies leading to fall in oil prices. Thus, in the face of these events, Nigeria's economy remained strong before GDP contracted in 2016 to about 0.36 percent in quarter one, 2.1 and 2.2 % in quarter two and three respectively.

GDP growth hovered around 6.58 % in 2012 against world GDP growth of 3.1%. Based on this, 2013 growth was estimated at 6.5 % with the aim of reaching 6.75 % by 2014 with agricultural sector, wholesale and retail, construction and real estate sectors as drivers. The recorded performance represents about 6.5 % growth for 2001-2010 and 6.8 for 2006-2012. Overall, the outcome of the millennial economic growth has been impressive compared to previous decades.

At the return of civil principle in May 1999, significant strategies were pointed toward broadening the economy with wholesale and trade, agriculture and media transmission administrations driving the economy at a normal development of 28.4, 27.6, and 24.4 percent. Manufacturing became 7.6% while contributing about 4.5% to real GDP between 2011-2012. Development in the solid minerals subsector arrived at the midpoint of 12.5% adding 0.37% to GDP. Immediately, the developing tradable areas connotes a move away from oil despite the fact that the recorded advancement appear to be little.

In the following table, we show that 2011-2012 growth rate meant that growth is sustainable looking backward to 2001-2010 records;

### Table 1.1

#### 2011 - 2012 2001 - 2010 **Real GDP Growth** 6.70 7.01 Sectoral Contribution to GDP 41.70 Agriculture 39.70 Industry 22.60 18.80 Wholesale & Trade 17.10 19.60 Building & Construction 1.80 2.10 Services 16.80 19.70 Sectoral Growth 6.51 Agricultural 4.80 Industry -0.06 1.50 Wholesale & Trade 13.44 10.50 Building & Construction 12.58 12.30 Services 10.43 13.50

### Growth Performance by Sector

# **CHAPTER 2: STRUCTURE AND ANALYSIS**

This sector explains the theoretical means of how natural resource wealth impacts economic development from two perspectives. The political-economy and growth in the ideology are explained. The former speaks on how other resource rich countries grow slowly despite a dysfunctional infrastructure in the political field. The feeling of moving to better living standard, health care, education and technology is a discovery of a natural resource.

However, there are well-argued opinions in the academic and rulemaking scene disproving earlier idea that such propositions are provided because resources impair institutions thereby slowing economic growth. The main argument is divided into economic and political. The former leans towards the idea that resource rich countries are more vulnerable to cyclical effect in commodity price, spike in exchange rate, interest rate and dispositioned for speculative investment; the later explains that resource wealth impairs the quality of institutions and a possibility for civil war, and a rentier state.

#### STRUCTURE AND PERFORMANCE OF THE ECONOMY

Historically, Nigeria is a middle-income country with a blended economy in the association of developing market. Nigeria positioned 21st in nominal GDP terms all around the world because of its growing film, financial, communications and resource sectors with a rebased genuine GDP in 2014. Agriculture utilizes over 30% of Nigerians and as indicated by 2011-2015 figures, it added about 23% to genuine GDP which is most elevated contrasted with different areas. Farming items for export range from cassava, corn, cocoa, millet, palm oil, wood and elastic, sorghum, sweet potato, and livestock rearing. The area suffers from labor shift prompting low efficiency and to support nearby request, its fares share diminished by its proven reserves, oil and gas remains Nigeria's major export product for foreign exchange earnings. The sub-sector basically accounts for about 85% of government total revenue and determines the part of fiscal policy. The types of crude exported are Qua Ibo, Bony Light, Forcados and Brass River crude oil respectively. Over the years, poor attention, ecological damages continually raise tension between government, international oil companies (IOCs) and host communities.

The era heralding civilian rule in 1999 witnessed influx of resource FDIs and a few others producing low-end non-resource goods just for local market (Iwuagwu 2009 cited in Igberaese 2013: 23). Cashed in on various diversification programmes, the new administration, attained substantial results in trade, agro-processing and telecommunication. The three sectors averaged growth of 28.4, 27.7, and 24.4% to real GDP in 2011-2012. Real GDP in PPP term rose to \$387 billion in 2012 while real GDP expanded by 7.01% in 2011-2012 representing a shift from the 2006-2010 trend. Based on that, analysts believe that growth rate has been impressive compared to 1.3% in 1981-1990 and 2.8% in 1991-2000 (MBNP 2017).

The economy showed signs of progressively moving towards intermediate and finished goods, but it is still primary resource driven now than in the 1960s. Value added in the building and construction subsector is insignificant considering 2.14 GDP contribution in 2011-2012. In 2011-2012 the telecommunications sector added 24.4 to real GDP growth, financial institutions 2.01 percent, real estate 2.65%, and transport, other services and utilities recorded 2.59, 2.25, and 2.65% respectively (MBNP 2017). Impressive how the economy has fared until 2012, but further insight is required about the year 2016 when the economy was hit with deep recession, inflation, rising unemployment rate, and high foreign exchange rates. With the rising

price of basic food items, the government is concerned about raising the supply chains of rice, cassava and tomato. The Agric sector alone in 2016 added 24.4 percent of value to the GDP of which crop production accounts for 87.7 and livestock 8.7%.

Many analysts believe the industrial sector (manufacturing and extractive) is undeniably key to Nigeria's economic growth perhaps because it is responsible for about 85 percent of foreign exchange earnings. This sector is important because it accounts for company income tax, excise duties and revenue from oil. Manufacturing subsector is gaining more grounds with 47.5%, 18.3% above oil and gas subsector as a shift is imperative in the face of dwindling oil revenue. The subsector is however, not without challenges; high interest rate, tax rates and volatile exchange rate systems.

Available records from the NBS show that the services sector was the biggest for 2016 with 54% contribution to GDP. Year end 2016 saw individual subsector raking in 55.8% for trade and 19.1% for telecommunication which is expected to drive the country's economy in the future.

Apart from natural crude, Nigeria is endowed with other natural resources that are also traded at the global market but their contributions towards economic growth differ perhaps because of infrastructural development and government policies. By 1960 Nigeria's economy was predominantly agro-led with 63.5%, while manufacturing mere gave in 5%. The oil and gas contributed 0.3%, services, and trade made 14, 13% each. The industrialization activities in the west caused oil price to rise and by 1970 manufacturing was down with oil sector leading (BudgIT 2017: 14). Also, in less than a decade, agro sector was casualty with 11.8% contribution to GDP in 1980.

Indicators	1985	1990	1995	2000	2005	2010	2015
Agriculture	17.81%	21.34%	27.29%	21.87%	27.09%	23.89%	20.86%
Industry	23.17%	17.99%	14.45%	12.09%	8.08%	6.65%	9.65%
Crude Oil	3.43%	11.62%	15.34%	18.36%	14.73%	15.39%	6.36%
Build and Construction	3.17%	3.47%	1.90%	1.77%	1.86%	2.88%	3.69%
Trade	9.24%	13.87%	22.73%	31.12%	32.01%	34.73%	40.29%
Services	43.18%	31.17%	22.73%	31.12%	32.01%	34.73%	40.29%

Sectoral Composition and their Contribution to GDP 1985 – 2015

Note: The real GDP calculation is a 5-year average. Also, Industry comprises solid minerals and manufacturing.

Table 1, highlights individual contribution to GDP by sector over 5-year periods. The data shows falling contribution from oil as against increases in other sectors. Services so far, made the highest contribution followed by agriculture and trade. The periods 2006-2010 saw two historical events (Financial crises and soaring oil price). In those periods, the petroleum sub-sector recorded substantial decline attributable to a 25% fall in quantity produced due to attacks on oil installations. By the next five years 2011-2015 oil revenue contribution dropped by 6 percent. This invariably signals a fall in government budget benchmarked on US dollar.

The service sector by 2015, grew in the share of 53% to the GDP making it the biggest contributor to the economy with average growth rate of 5.8% per annum 2010-2015 (MBNP 2017: 75). The telecommunication as part of the service sector,

recorded commendable improvements despite slow penetration and subscription which calls for medium-term growth. The sector remains key predicator for a diversified and sustained economy. The MBNP (2017: 75), reported the telecommunications adding 4.4% by Q3 2016 to the GDP. The above is a pointer that ICT is required for expansion of economic frontiers. Still on services, the financial sub-sector grew by 11% between 2010-2015. Nigeria could not have achieved this much without a strong insurance market, though the growth has been marginal.

Apart from the service sector, agriculture dominates the primary commodities production in Nigeria. It accounts for majority share of 2015 GDP figure by 23.1% and employs about 38% of the working population. The sub-sectoral GDP share includes forestry (1% of agricultural production; 4.3% growth in 2010-2015), livestock (8%, 3.3% growth), fishery (2%, 7.5% growth) and crop production (89%, 4.1% growth) respectively (MBNP 2017: 66). Despite these welcomed achievements production remain mostly primary are challenged by access to finance, farm inputs, access to market especially for perishables goods and climate change threats.

Manufacturing in Nigeria is dominated by micro, small, medium enterprises (MSMEs). This group employed about 5.3 million of working population in 2010 alone mainly in agro-processing and textiles. By 2015, the manufacturing sector put in 9.5% to GDP with growth rate of 13.3%. The sector remains small when compared to economies like South Africa, UAE, Indonesia and Brazil with commendable increase. Impressively, the sub-sectors have maintained consistent increase in a five-year period; agro-processing includes food, beverage and tobacco put in 45% of 2015 GDP, light manufacturing – textile and wood production 31% and resource

processing – basic metals and cement 18% (MBNP 2017: 70). On the other hand, the sector contracted by 7% in 2016 when the economy entered recession.

Solid minerals sector, have not grown tremendously as oil and manufacturing. According to the MBNP (2017: 73), the sub-sectors doubled in 2015 from N52 billion to N103 billion. Quarrying made the largest contribution of 89%, coal 7%, and metal ores 4%.

Unlicensed individuals, small entrepreneurs predominantly dominate the solid minerals sub-sector. Hence, the slow growth is due to how capital intensity and inventories required; also, the demand follows it pricing in the international market. Nigeria's minerals vary in size and mixes and are geographically concentrated. Between 2010-2015, the construction sector recorded considerable contribution to GDP by 11.4 percent and employing about 1 million of the active population in the period. the year 2016 was not a good outing however because of recession although, 2017-2020 projection is on the average of 5.39 percent championed by public and private investments respectively (MBNP 2017: 79).

The oil sector in 1956, was producing about 5, 100 b/pd. The sector has grown in leaps and bound and today produces in the capacity of 2.5 million b/pd putting Nigeria top in Africa and sixth in the globe. Although, according to Nigeria National Petroleum Corporation (NNPC) statistics, the country has more proven gas reserves than oil reserves. The upstream (crude exploration and mining) and downstream (refining, and marketing) sub-sectors make the oil and gas sector. The upstream in 2015 accounted for 94% of total export earnings, 62% of government revenue and mere 10% to the GDP, while the downstream sector added a low 0.3%.

Nigeria have suffered crude oil volatility in two forms – price and production. In 2012-2015 production averaged 2.2 mb/pd, by quarter 1 of 2016 attack on oil installation reduced production to 1.1 mb/pd. With the large chunk of government revenue coming from oil, Nigeria's fiscal policy remain influenced by international price of oil and activities in the sector. Because of that, government expenditure patterns follow similar trend. For example, in the periods 1979-1982, 1991-1992 and 2000-2002, and 2005-2009 Nigeria witnessed positive and negative price fluctuation, quantity produced fluctuated too. According to BudgIT (2017: 6), additional States were created escalating bureaucracy at all levels which intensified spending figures.

Fig 2.1



Nigeria's Fiscal Trends 2001 – 2015

Figure 2.1, above shows revenue from oil constituted the bulk of total revenue within the period of study. But between 2001-2010, government expenditure was on continuous increase with minimal fluctuation, however, it dropped sharply in 2011 following oil price and revenue decline. Moreover, the inability of the government to tenaciously develop other sectors placed a burden on oil revenue for public

expenditure financing; this means volatile budget figures or deficit financing for Nigeria.

Within the study focus, oil accounted for 90 percent of total revenue collected. Non-oil revenue (customs and excise duties, VAT, NITDF, EDT, corporation tax, and CGT) contribution is on year-on-year increase even though it is not considerable. Using a 5-year moving average, the 2015 and 2016 national budgets have been benchmarked on \$53 pb, oil production of 2.2782 mb/pd at N190/\$ exchange rate and \$38 pb, oil production of 2.2 mb/pd at N197/\$ exchange rate.

However, outcomes of the estimates vary depending on oil price. But certain reasons account for this according to MBNP "The 2015 budget was undermined by major setbacks, particularly in the oil sector: oil production was short of projection due to oil pipeline vandalism and theft, in addition to falling oil price below budget reference price" (MBNP 2016: 9).

Looking from another angle (see appendix 1), oil revenue for most periods 20012011 recorded pockets of fluctuation in response to global oil prices. The slope from 2012 onward was a continuous one. On the reverse, non-oil revenue did not record encouraging height but with minimal volatility because oil price effect on public expenditure translates to other economic activities.

#### ECONOMY BEFORE THE DISCOVERY OF OIL

Nigeria's Economy before the Discovery of Crude Oil The climatic factor is significant, not only in relation to its effect on the character of the vegetation, but it also plays a dominant role in the ways of life, including the pattern of economic activities of the various people. As in other part of the tropics, rainfall is the most important element of climate in so far as agriculture, the main occupation of Nigeria's people. The rhythm of economic activity which is revealed in the farming calendar of the various parts of the country is controlled by the incident and distribution of rainfall as well as the rainy season, which decreases from south to north. Mangrove region of the southern Nigeria with high rainfall per annum supports the growth of palm trees, rubber, coffee and cocoa etc.

The savannah grassland to the north supports the planting of cereal and leguminous crops such as sorghum, millet, ground nuts as well as animal rearing mostly for hide and skin ( Ekundare 1973:56-56; Ake 1985:102-106). Agriculture was the mainstay of Nigeria's economy from the earliest time up to 1950s. Indeed, Nigerians had an enviable record of food sufficiency but the era did not last beyond the 1960s when its economy began a descent into an abysmal dependence on imports.

As part of the efforts to integrate Nigeria into global economy, cash crops were introduced to Nigeria by the Europeans from South America and India (Oluwasanmi 1960: 34-36). Palm oil became an export commodity in Nigeria as far back as 1558; and by 1830, the Niger Delta, which now produces crude oil, had become the major source of palm oil which dominated Nigeria's export list for more than 50 years (Olukoju 2009:105-125). Cotton joined the export list in 1856, while cocoa was introduced and became an export crop in 1895 (Olukoju 2009:117). Together with rubber, groundnut, palm kernel and Bennie-seed in later years formed the major valuable crops. These cash crops formed the main source of revenue, export and foreign exchange for the government (Udo 1967: 18). It is very important to note that the economy generally recorded tremendous self-sustaining growth and expansion before crude oil became the mainstay. Nigeria boasted of its groundnut pyramids in the north and Cocoa in the west.

Palm oil also existed in commercial quantity in the east. Revenue from agriculture was appropriately used to build landmark social and economic infrastructure, providing basic services like education, health, water and electricity supply. This enhanced farm settlements and cottage industries to service agriculture, providing vast employment opportunities for the people. In respect of food, the nation was self-sufficient before the era of crude oil. Agriculture provided 95% of the food needed to feed Nigerians, contributed 64.1% Gross Domestic Product (GDP) and employed over 70% of Nigerian population before oil began to be exported (Oluwasanmi 1960: 23-29).

#### **INDUSTRIALIZATION PLANS**

Shortly after attaining independence from Britain and grappling with the political landscape, inadequate and coherent economic policy, past Nigerian governments kick-started National Development Plans (NDP) to set the part for economic development. Although an agro-led economy, regional governments made contribution to the centre with enough surplus to for recurrent expenditures. So, between 1962-1985, Nigeria had had four NDPs with varying time lines.

#### 1960 – 1968 First National Development Plan

The primary NDP 1962-1968 filled in as platform for labor, industrial and human resources advancement past what provincial organization left. All districts sought after the import substitution industrialization system (ISI) pointed toward lessening merchandise importation prompting foundation of businesses in material and clothing, tires, concrete, cowhide and footwears.

To drive this technique further, the Nigeria Industrial Development Bank (NIDB) was made to give long-term loans to large and small organizations. Likewise, capital activities were not forgotten about as Kanji Dam and Port Harcourt processing plant. The Western district for instance ran a substantial intermittent use on wellbeing and training plentifully financed from outside borrowings. By 1966, the Federal spending plan was £18 million in excess. Yet, most importantly, the arrangement

recorded praiseworthy achievement yet not without deficiency of contributions to take care of the ventures and the Nigeria civil war.

#### 1970 – 1974 Second National Development Plan

Just coming out of a civil war that left the country bereaved of human and industrial capacities, a second NDP was instituted to reconstruct and rehabilitate the economy. The purpose was genuine that governments investment attracted foreign investors in different areas and the establishment of the petrochemical company, fertilizer, paper and pulp companies. Some of the foreign companies like Volkswagen and Peugeot and Mercedes Benz moved in to different regions and established assembly plants even though much of their inputs were imported. Part of the success recorded at those periods, was due to the oil windfall. To encourage usage of local content and indigenous participation, the Federal government enact Nigeria Enterprise Promotion Act 1972 objectively to transfer equity holdings to local firms.

By 1972, a new economic dawn was imminent because oil revenue became significant and government focus shifted. The Arab-Israeli war quickened the move from agriculture to oil when price rose from \$4.73 pb in 1973 to \$12.21 pb in 1975. Interestingly, the end of 1975 saw crude oil leading the economy with about 77.5 percent in revenue (BudgIT 2017: 4).

#### 1975 – 1980 Third National Development Plan

This NDP was not in any way significantly different from the second because it focused on capacity building especially in human and physical to feed local firms. R&D in agriculture, rural electrification, livestock farming and free education at the primary level and further industrialization was paramount (Ekhosuehi and Ibietan 2013: 302). This period coincided with the increasing oil rents given global political and economic events that characterized soaring oil price, but it did leave a handful of achievements like the Ajaokuta steel company to make steel locally, Kaduna and Warri refineries respectively. Significant growth was recorded in the short-run with manufacturing sector averaging 18.1% and GDP at 5% annually (Ekhosuehi and Ibietan 2013: 303).

#### **1981 – 1990 Fourth National Development Plan**

Facilitated by growing demand for Nigeria's sweet crude blend by industrializing countries, crude oil raked in more revenue for the government from N631mn in 1970 to N5.5bn in 1975. On the advice of the IMF, Structural Adjustment Program (SAP) came to be aimed at deregulating and liberalizing the economy and making government less participatory.

These efforts made little or no headway because depreciating naira worsened exchange rate and of course local firms were unable to purchase inputs for manufacturing. In a bid for solution, the World Bank SME II Loan Scheme, Peoples Bank (1989), Nigeria Export-Import Bank (1991), and Community Banks (1991) were set up.

Many projects started at the period and financed with oil proceeds were not completed and termed "abandoned projects". But according to notable scholars (see Hausman et al., 2004 and Rodrik 2003), the falling price of primary commodities are usually the cause of failure to industrialize however, they aver that beginning a growth process is at the disposal of every country, but sustenance is the case because of the feeling of safe arrival in the short-run. By and large the above suggests that the second and third NDP growth successes did not make impact on the fourth plan because the government even though had implementation plans, but lacked sustainability plans.

### CASE FOR INDUSTRIAL TRANSFORMATION

Trends in the international oil market signals threat to oil revenue for Nigeria's fiscal policy. Specifically, the US, Nigeria's major trade partner in oil has reduced purchases thanks to shale oil. Brazil and China too hold substantial deposits which makes them probable to reducing dependence on crude oil import in the future. The take home here is that government might not be able to deliver on its responsibility in the future if demand for the Brent falls.

Poverty remains high in the population and active workforce unemployed despite impressive growth records. Given the unprecedented growth in population, there are fears that a "Nigeria Spring" is imminent if the menace is not tackled. According to Bloom et al., (2015), 15 million jobs are estimated to be created by 2020 to keep unemployment at 2010 rate. The recorded growth was raked in from the agricultural and trade sectors due to the presidential initiative. This also, created labour shift and rising earnings which did not improve productivity but rather enabled factor accumulation (Haywood and Teal 2010).



### External Debt Stock 1960 -2015

With short-term gains consolidated and Nigeria's Vision 20:2020 in mind, it is pertinent to sustain and improve the successes recorded towards high-end goods for export. Having said that, sectors responsible for moving the economy forward need take advantage of available resource to achieve growth that is inclusive. The NV20:2020 is unattainable without reflecting on structural changes and drawing on other countries' experiences.

The call for industrialization is a strong one in the face of declining primary commodity prices. However, in decomposing Nigeria's growth trend shows huge physical capital formation over periods of oil boom while recording negative total factor productivity.

#### SOCIAL AND ECONOMIC CONSEQUENCES

It is essential to underscore the social and economic difficulties of destitution, joblessness and the lack of social foundation which defy Nigeria, the greatest oil exporter with the biggest natural gas reserves in Africa and one of the biggest on the planet. Industry records show that Nigeria has "an expected 159 trillion cubic feet of proven natural gas holds", which is generally erupted because of an intense absence of usage infrastructure. Factual data identified with gas erupting is problematic, however it is assessed that Nigeria loses US\$ 18.2 million day by day because of gas erupting. This is notwithstanding the ecological harm related with the practice. As per the World Bank, Nigeria represents around 12 percent of the complete gas erupted on the planet. One projection by the United States (US) Energy Information Administration puts Nigeria's oil reserves somewhere in the range of 16 and 22 billion barrels. However, Nigerian policy makers keep on going about like oil resource will endure for eternity.

The social and economic challenges confronting the Nigerian society have been attributed largely to the unsustainable management of the revenues from oil resource. The end of the civil war in 1970 coincided with the rise in global oil price. However, Nigeria failed to use the revenues from the so-called 'oil boom' efficiently. As this article argues in section 5, government's expenditures (not on social and economic infrastructure) continue to expand significantly faster than the economy. This inverted process is encouraged, for example, by the unnecessary expansion of the bureaucracy which results in bloated administrative centres with little or no corresponding social and economic development to show for it, and the mismanagement, waste, and corruption in the governing process. It has been argued that the increase.

### **OIL RESOURCE WEALTH & ECONOMIC GROWTH**

Oil resource wealth can become negative or positive for economic growth. High oil prices tended to be positive in the short-term because it raises government revenue both at the central and regional levels. However, its immiserating tendencies shows up in the long-term when windfalls decline.

Depending on its management, oil resources pose varied impacts on the economy. It might be sensible to say that resource wealth effect is same for all countries, but recent macroeconomic studies confirm significant difference between exporting countries since the post-World War periods. Despite the differences, oil resources add more in revenue than the real sectors for economic growth in resource rich countries. Amidst these short-term outcomes, other bidirectional effects impede growth - rent seeking, inflation, REER appreciation, immobility of factors of production and investment uncertainty.

In another study, short-term monetary effects on REER was confirmed. Edward (1985: 2) agreed with (Prebisch and Singer 1950) that resource booms have short run benefits but are short-lived as monetary effects sets in. His argument is on the fact that unsterilized boom outcomes add pressure on money supply i.e. available foreign exchange resulting to inflation. Hence, the inflation will surpass equilibrium levels appreciating the exchange rate beyond real factors. This effect has been seen in a pocket of resource dependent countries including Indonesia and Colombia. In another work, long-run relationship of oil price and exchange rate was tested. This paper used panel data of G7 countries and recorded cointegration effects between oil price and exchange rates between 1972M1–2005M10 (Chen and Chen 2007).

Resource allocation is critical to the economy because it ensures movement of factors across sectors. Using a multi-sector model, Hamilton demonstrated that long-

run oil earnings increases aggregate unemployment. It is not out of place to say that higher production cost leads to delayed production because of fallen demand in this case thus, firms are forced to stop production pending economic recovery. Lee and Ni, established that oil price substantially impedes growth tendencies when slightly stable than when it is highly erratic. This by no means indicates a weak relationship between economy-oil price (Lee and Ni 1995: 3).

With further reference to developing oil producing countries, Moshiri 2015, investigates whether nonlinearity relationship exist for GDP growth and oil price. He found a relationship using endogenous variables in the VAR model for nine major oil exporting countries. That oil prices exert direct and indirect outcomes on GDP through demand and supply channels.

The direct outcomes are that rising oil rent adds to government revenue translating to investment and consumption. It's a major source of foreign reserve used to purchase manufactured goods. Indirect effects include inflation, REER appreciation and interest rate. The study found that developing country governments expend heavily during windfalls beyond capacity and as a result unable to cut back expenditure when revenue falls (Moshiri 2015: 227).

What we can take home from Moshiri is that most oil producing countries monetize budget deficits in the bust periods which keep inflation. Secondly, reserves are converted to local currency adding up to the money stock, aggregate demand and price levels. Thirdly, as part of monetary policy, exchange rate is not allowed to depreciate when oil prices come low; this leads to asymmetric effects

# **CHAPTER 3: METHODOLOGY AND DATA ANALYSIS**

This chapter explain the data sources and strategies for their collection. Also, the variables deployed in the research are explained and show support why they qualify for the research work. Lastly, an overview of methodology employed for data analysis.

### DATA

A set of yearly recorded data set was analyzed basically to discuss the impact on economic growth due to the boom in crude oil resources wealth. These data are not prioritized and are taken from local reliable and international sources –the World Development Indicators (WDI), the Central Bank of Nigeria (CBN), U.S Energy Information Administration (EIA), World Governance Indicators (WGI) and World Trade Organization (WTO).

Real GDP taken at 2010 constant basic prices in (Naira Million), crude oil revenue and government budgetary expenditures were taken from the CBN's annual statistical bulletins. GDP figures are real as such they have been adjusted for inflation purposes.

Spot oil prices were drawn from the EIA for Brent crude. Accordingly, the EIA method of calculating price movement is adopted i.e. percentage change in daily or monthly price of crude oil. Data for oil price is indexed in daily, weekly, monthly, and yearly figures, but due to large amount of data to be handled, the annualized spot price index is adopted (see appendix table 1). Trade figures for three parameters were taken from the World Trade Organization.

#### VARIABLES

A few variables which include key dependent variable, key explanatory variable, and control variables were utilized. We use resource wealth proxied by crude oil revenue from exploration and mining activities as independent variable.

The use of this is in line with Sachs and Warner (1995), who in "natural resource abundance and economic growth" used share of natural resource to measure contribution to GDP, while Hussin and Saidin (2012: 12) adopted rate of growth as a measure for economic growth. (Manzano and Rigobon 2001: 35) used share of primary exports and GNP figures from the WB.

The dependent variable employed is economic growth proxied by real GDP. The share of all sectoral activities put together are responsible for growth measured by real GDP figures. Gylfason (2000) in his study 'resources, agriculture and

economic growth in economies in transition' adopted growth proxied by GDP. The real GDP is at 2010 constant prices.

To understand how the former impacts the later, a few explanatory variables that predicate long-term economic growth were introduced. These variables were adopted because of their ability to sustain accelerated growth in the long-term. Government expenditures tends to grow as resource rent increase. These two variables are important aspects of a sustainable growth process hence, they are employed to establish what trade-offs there is in government expenditure patterns to foster growth.

The explanatory variables are;

### Explanatory variables: description and data source

Variable	Description	Data source
Human Capital (health and education) accumulation	Against the parameters adopted by other literatures – primary school enrolment (Baro 1991, Chen and Feng 2000), secondary school enrolment Manzano and Rigobon (2001), this study as in Dao (2012) used health and education expenditures for primary, secondary and tertiary education.	Central Bank of Nigeria Statistical Bulletin

Trade Bata Terms	Trade values in exports and imports for the study period 2001-2015.	World Trade Organization
Foreign Direct Investment (FDI)	Foreign direct investment measures investment equity flows into the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital	World Development Indicators
Real Effective Exchange Rate (2010 = 100)	Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.	World Development Indicators
Institutional Quality	Measures the quality of bureaucracy that predicates growth. These records are obtained from CPIA of the World Bank and WGI as prepared by Kaufmann et al 2017.	CountryPolicy&InstitutionalAssessmentandWorldGovernanceIndicators

### METHODOLOGY

Exploratory data analysis (EDA) is used to analyze the data sets. Each analysed data aims to establish a relationship between identified variables. If a Successful relationship is established, we then can provide explanations with regards to the extent oil resource impacts economic growth in Nigeria. The choice for EDA hinges on the basic principles of skepticism and openness to applicable variables. EDA will give the researcher opportunity to explore data in varied possibilities without being placed in a confirmatory mode existent in other methods (Hartwig and Dearling1979: 10-11). In that case, a model is not constructed a priori living outcomes open to unexpected possibilities. They further stated that one invariant procedure does not exist for the EDA to generate results hence, different EDA techniques can derive different outcomes with same data set (Hartwig and Dearling1979: 76). Above all, skepticism and openness permeate EDA methodology.

### **RESULTS AND ANALYSIS**

This chapter will be analyzing data for the different variables - resource growth, economy wealth, and select explanatory variables in two parts.

In the first part we will look for and analyze relationships amongst recognized variables on economic growth using descriptive statistics. With EDA, we analyzed explanatory variables that determine long-term growth. And in the second part, we discuss how institutional analysis is considered given their roles in fostering long-term economic growth.

We utilize dataset of 15 years and 7 variables as stated in the scope of study. Data for institutional analysis has missing values for 2001 due to its unavailability from WGI. The variables remain the same for the correlation and exploratory data analysis. However, in the EDA we eliminated the main dependent variable allowing the independent and explanatory variables to interact.

While previous studies explored cross country effects of resource abundance, we examine whether the reported effects apply to Nigeria. We focused on several questions aimed at explaining the effects of resource wealth on growth using correlation and exploratory analysis. First, we explored the relationship between resource wealth and growth variables. Secondly, using EDA, we examined resource wealth with real GDP, extent of dependence on oil resource at the expense of manufacturing, oil resource and FDI and exchange rate, and finally, the performance of political institutions.

# SUMMARY OF DESCRIPTIVE STATISTICS

# Correlation of Independent and Explanatory Variables

	Oil							
	Revenue	Real GDP	REER	FDI	IA	HCE	Exports	Imports
Oil Revenue	1							
Real GDP	-0.35142	1						
REER	0.647758	0.955924	1					
FDI	0.261158	0.508747	0.388696	1				
ΙΑ	0.176829	0.292349	0.241918	0.247795	1			
HCE	-0.54306	0.939484	0.916716	0.458518	0.28082	1		
Exports	-0.08279	0.768554	0.711989	0.742287	0.32275	0.786462	1	
Imports	-0.12463	0.89202	0.799066	0.74918	0.218323	0.843447	0.855208	1

### **Descriptive Statistics**

	Oil Revenue	Real GDP	REER	FDI	IA	HCE	Exports	Imports
Mean	481.8	46.73	96.39	4989.6	13.80	300.87	61234.62	29574.27
Standard Deviation	229.9	14.3	17.9	2549.4	4.7	199.9	31418.0	15132.5
Minimum	123.0	25.0	73.2	1190.0	0.0	64.4	17968.7	7354.2
Maximum	887.0	69.0	127.1	8841.0	19.5	582.9	114172.1	55171.1
Count	15	15	15	15	15	15	15	15

We have tested all concerned variables and the correlation result in table 3.2, indicates that increasing crude oil revenue negatively correlated with real GDP at - 0.35 percent confirming MBNP's statement that oil revenue does not add to the GDP but only in money terms (MBNP 2017) which can be considered a large effect. There is also symmetric result for REER and oil revenue in the negative at 0.64 percent. This affirms earlier findings especially for Nigeria. A negative relationship also exists for terms of trade – export and import with a value of -0.08 and -0.12 respectively.

Our expectation ex ante contrasts the result for imports because periods of revenue boom indirectly makes domestic goods expensive paving way for foreign manufactured goods although, this is visible in the next method. Expenditure on human capital negatively correlates with oil revenue at -0.54 percent. Higher real GDP figures positively correlated with other explanatory variables – REER, FDI, IA, HCE. Conversely, oil revenue recorded strong positive relationship with FDI at 0.26 percent and IA at 0.17 percent. In confirmation of this, the CBN accordingly, reported symmetric progress in resource FDI inflow between 2000-04 at 40.47 percent than non-resource FDIs. In same vein, institutional quality strongly correlated with increasing resource wealth meaning that the 'curse' may disappear if country studies are done properly (Badeeb et al; 2017: 132).

#### **RESOURCE WEALTH AND ECONOMIC GROWTH**

Ab initio, resource windfalls are found to impair sustainable growth in host countries. However, this paper considers in detail, the impact of oil revenue on economic growth from an exporting country perspective.

The above narrative informed the analysis and as such we look for a relationship between resource wealth and growth. Oil revenue is considered a positive endogenous factor for growth, but its distortionary mechanism transcends variables that control for economic growth. Data for a spanned period of 2001–2015 is used but other years are also incorporated for reference purposes. Although, some major characteristics of this period is 2008 oil price increase, global financial crisis, and major steps towards economic diversification.

We first start with the data looking for significant correlation between oil revenue and real GDP.

Fig 3.1





Figure 3.1, analyses government crude oil revenue and Real GDP to establish the extent of relationship that exist. The variables co-moved for most part of the period even when the oil revenue contribution is meagre. Take for instance, real GDP constantly rose throughout the study period. Oil revenue fluctuated due to global price movements but also exerted disproportionate impact on GDP as the figures show. Our a priori expectation of a relationship is confirmed in fig 8 and evidenced in Poelhekke and Van der Ploeg (2009: 732), that resource rents display erratic tendencies than food, and metals.

Obviously, government revenue rose in 2008 however, a decline afterwards impacted fiscal policy negatively. To confirm how bad revenue fluctuation is Aghion et al (2006), shows in his seminal work that volatile revenue resulting from resource sector could be bad for growth (firms' inability to invent because of liquidity constraints) especially if financial institutions are underdeveloped

### **RESOURCE & NON-RESOURCE SECTOR PERFORMANCE**

In the foregoing, we analyze data to establish the extent resource wealth impacts diversification away from primary product and its translation into economic growth.

### Fig 3.2



Export Composition of Primary and Manufactured good (US \$'Million)

Note: Data was not found for exported fuel between 1980-1989, 1991-1995 not available.

The figure above depicts Nigeria's ToT in agricultural, fuels and manufactured exports. For agricultural and manufactured commodities, 1981-1995 show less than minimal growth and fuel products in receipt of \$13,191million in 1990. Somewhat increase started in 1996 with fuel commodity values growing strength to strength.

The variables co-moved recording disproportionate swings most of the time from 2006-2015 with fuel at the top with \$93,492million.

It is obvious that agriculture recorded \$16,570million earning value because of government policies in on agricultural diversification from 2010 even though they were mostly unprocessed commodities. So, un a cursory view, the value of agriculture and manufactured commodities worth \$95,457 million compared to fuels \$915,955 million to show the extent of specialization in crude oil. However, export of manufactures after 2010 were not sustained due to laxity in the import substitution policy.

The above analysis tells of the results from industrialization plans coupled with political stability. These results were realised mainly through learning-by-doing in the textile, agricultural and intermediate goods which had competition elsewhere. Matsuyama (1992: 330), in 'agricultural productivity, comparative advantage, and economic growth' opined that as engine of growth, industrialization through learning-by-doing presents a positive link to a small open economy like Nigeria. To support the above statement, Chen and Feng (2000: 10), affirm that an export oriented economy is bound to raise factor outputs, efficiency in resource use and innovate technologically. This way, the local economy integrates into the global market, increasing capacity utilization and returns to scale.

Unlike Norway that reinforced and sustained gains from its resource sector, Nigeria's political climate impedes policy frameworks from permeating institutions and eliminate institutional inefficiency and corruption (see Rodrik 2003). In SalaiMartin and Subramanian (2003), politics rather than macroeconomic factors are responsible for poor growth. The MBNP acknowledged this in its economic blue print that "Nigerian economy is characterized by structural challenges that limit its ability to sustain growth, create jobs and achieve real poverty reduction" (MBNP 2017:29).





Note: Between 1980-1995 Nigeria refined for its domestic use, so these dates remain zero.

The above analysis describes the pattern of importation of manufactures, agricultures, and fuels. 1982-1990 recorded constant declines in the value of imported manufactures from \$12,796million to \$4,918million. We could deduce from the result that earlier national development plans achieved minimal results in only import of intermediate goods to produce finished goods. Hardly was manufactures capacity sustained after the 90s due to structural adjustment programme (SAP) in the mid-1980s which shaped the sectors capacity

disadvantageously due to inability to obtain FOREX for importation of intermediate goods. So now because the importation of intermediate goods depends on availability of foreign exchange, local finished goods become expensive and the result is rush for cheap imported finished goods.

This is obvious from the period 1996 up to 2010 with highest value of \$38,270million. Agricultural intermediate imports also recorded constant rise through 1986-2011 to a high of \$14,251million. However, a sharp and further decline ensued because consistent agricultural policies were intensified by past administrations.

The above figures, depicts heavy specialization pattern in primary commodities as advocated by neoclassicals that countries should produce goods they have absolute advantage over hence, it suggests near total dependence on crude oil for revenue. Though, other strands of literature argue for divergent production lines away from volatile features of primary goods (see Poelhekke and Van der Ploeg 2009). Collier and Goderis (2012: 1240), using panel error correction of sampled countries found that higher primary goods prices negatively impact long-term growth.

While explaining the case with Nigeria and Zambia, they recorded that primary commodities constituted about 35 percent GDP in 1990s and that rising prices added to real income offsetting output decline in revenue terms but even so, the rise does not equal long-term declines. Having established a negative correlation in specialization patterns, we expand further to look for a relationship between oil revenue and GDP growth. To understand how resource windfalls, impact the backward-forward linkages in the manufacturing sector, we scrutinize the quality of investment of which substantial part is owned by the government. Therefore, in the following diagram, we expose the average manufacturing capacity utilization for prior years and study period.

Figure 3.4





Figure 3.4, analysis shows a five-year fall in capacity utilization from 73.3 percent in 1981 to 43.8 percent in 1989. It deepened further to reach average of 30.4 percent in 1997, but not without upward trend that settled at 56.5 percent in 2003. Between 2004 and 2015, capacity utilization averaged around 55.7–54.9 percent,

almost making a stagnant line below 60 percent average. The outcome of the above is that physical capital exceeds productivity. In other words, industries make more of quantity than quality in product output (Sala-i-Martin and Subramanian 2003: 13). To cap it all, Bevan et al (1999: 67) states that "This conjunction of a powerful political impetus to public investment and lack of civil service skill is what makes Nigeria's economic history spectacular in this period: almost all entire windfall was invested, and yet...there was nothing to show for it".

# GOVERNMENT EXPENDITURE (HEALTH, EDUCATION & DEBT) & GROWTH

Budgeting as a part of government statutory responsibility, is subdivided into recurrent and capital expenditures and with several subheads. These allocations account for strategic development policies and projects which endogenously drive the economy in the long-term. According to available literatures, government expenditures and debt stocks tended to increase with resource wealth over time. The Nigerian factors is indicative of the stylized fact in resource curse literatures, though without specific mention of the extent to which there is trade-offs.

In the foregoing, a dataset is investigated to establish correlation in expenditure patterns in critical predicators of growth such as human capital development in the face of rising oil revenue.



Government Expenditure on Education and Health (Percentage)

**Human Capital Expenditure** 



To start with, we would like to explore the budgetary patterns and trade-offs in public expenditure in critical sectors. A close look at figure 10, expenditure on health reveals a sluggish rise. Between 2001-2015, total government health expenditure was almost stagnant for the study period with an average of 6 percent in 2011 and 2015. As a percentage of total public expenditure, the graphics show inadequacies in public health funding. Year 2015 received the highest budgetary allocation of 6.12 percent and lowest in 2004, 2009 and 2010 as percentage of total government expenditure. On its real GDP calculation, health expenditure disappeared as it recorded a percentage below 0.05. Arguably, these are important signs that allocation to the health sector does not correlate resource revenue for sustained growth.

The WEF 2016 report ranked Nigeria 127 out 130 countries on education, health and workforce opportunities. Hence, it confirms that "investment in human capital can make a difference to a nation's human capital endowment regardless of where it belongs on income scale" (WEF 2016: 13). This is critical as WHO reported that government health expenditure for 2014 averaged 25 percent while households spending was 72, and others by 3 percent (WHO 2017: 1).

Now let's critically asses the importance of accumulating human capital as a measure for diversifying away from the resource sector. Health and education are complementary and predicates growth. Put simply, increased resource windfalls cannot make for economic growth except through investment in an educated and healthy labour force. It was in this vein that Todaro and Smith (2009:369) emphasized that good health is needed for productive activities and education that is successful hinges on adequate health systems; hence both are basic for development and growth. More so, considerable number of literatures advocate for greater allocation to human capital development.

Secondly, for its greatest contribution to economic growth, allocation to education from analysis marginally increased in 2001 and 2003 with 21 percent in 2004. The figure steeped continuously in 2009-2015 and became very low compared to figures of general administration.

Our results show that allocation to education as percentage of total government expenditure has been erratic though, not in line with oil revenue but perhaps due to the priority and policies that guide its provision. The 2004 figures were 21 percent, but it lost 5 in 2005, by 2006-09 it had steady decline and a sharp fall resulted in 201-

15. On the other hand, percentage of education expenditure to real GDP was not commensurate to TGE as percentage of GDP.

The facts are not encouraging from the analysis hence, because expenditure on human capital accumulation is practically low, sustaining short-term growth outcomes become impracticable thereby explaining evidence of the resource curse. To corroborate our results, Saint et al; (2003: 3), noted low investment in education and research, explaining why industrial capacity utilization maintains abysmal growth as shown in figure 11. Nigeria is one developing country yet to articulate and formulate policies for a knowledge-based economy as evidenced in the educational structure – lack of autonomy and responsiveness for the university system to meet demands of modern industries. Norway, with the highest human development index (HDI) did not trade-off investment in education in the face resource windfalls. As such, human capital investment, property rights, finance in R&D, and strong institutions forms the fundamentals of an innovative system (Saint et al., 2003: 3).

Against this backdrop, empirical evidences confirm the need for knowledgedriven economy that spurs technological innovations or even the scale effect. For instance, Romer (1990), states that countries with greater inventory of human capital achieve efficiency and grow faster. Also, using primary school enrolment rate as proxy for HC reveals a positive correlation between education and growth (Barro: 1991). In Chen and Feng (2000: 2) among critical determinants of growth, human capital is the first followed by a system that retains the best labour for developing countries.

Following the above also, Dao (2012: 81), finds increasing health and education expenditure against income stimulate economic growth. Also, that total

expenditure as a percentage of GDP tended to raise GDP per capita of developing countries. In Todaro and Smith (2009: 370-371), "the distribution of health and education within countries is important as income hence, they have to be undertaken with equity and efficiency to achieve potential effects on income".

These budgetary allocations seem to be one-sided against priority areas for longterm growth. Hence, to further establish our claim, we consider the budgetary patterns and trade-offs among growth predicators.

#### Figure 3.6



Administration and Economic Services Expenditure (% of TGE)

Note: Administration expenditures are – general admin., defence, internal security and national assembly. Economic Service expenditure include – agriculture, construction, communication and transport. TGE (Total Government Expenditure).

Arguments in favor of human capital expenditure fill many literatures as stated earlier, but figure 3.6, evidence is obvious that government administrative expenditures rise in tandem with revenue increase even though it is with minimal fluctuations. Maintaining minimal fluctuation, administrative expenditures recorded 26.2 percent of total government expenditure in 2002. It rose in 2004-2006 (22.1, 24.9 and 28.3 percent) almost equals a slope of (26.6, 23.7 and 21.7 percent) as at 2007-2009. On the other hand, allocations to economic service (agriculture, construction, transport and communication) is not substantial in the period considering its strategic role in economic diversification. Its lowest was 3.6 percent in 2005 although a push was visible around 2006-2010, but a decline followed the global financial crisis.

A stock of the allocations for figure 3.6 so far, is suggestive of budgetary tradeoffs between administration, economic services, education and health. Although, certain other reasons that our data did not present, might be responsible for the trends. On the surface, the disparity seems normal but allocations to administration tends to crowd out education and social services the long-run. It is in our understanding that the Federal structure makes increasing administration expenditure possible. Many arguments support reducing administrative expenses (defence and the National Assembly) in favour of health and education, but others claim the vulnerability of these areas. In Looney (1993:587), military expenditures mostly are autonomous of government financial limitations, indicating their relative independence. Most developing countries like Nigeria, tends to adjust their education and health budgets more frequently than defence (McKinlay 1989).

Our observation additionally is that administration obligation follows same direction as figure 3.6. Between 1965-70, government debt multiplied hitting N175 million in 1970, the increment got alarming in the 80's and beyond as each income boom was a method to protect unfamiliar credits with projections of future bounce back (Manzano and Rigobon 2001: 22). On the opposite side, investment funds went into non-gainful endeavors against building genuine areas as did United Arab

Emirate and Oman (Looney 1990, 1993). Most importantly, the repeating relationship between administration spending and real GDP is inescapable because of expanding taxes and royalties from non-renewables nonetheless, very much picked financial and money related policies can alleviate the effects. Having perceived the limitations of an obligation overhang on the current record, we are propelled to see FDI execution because of receptiveness to unfamiliar interests during the 80's.

#### FOREIGN DIRECT INVESTMENT & ECONOMIC GROWTH

Foreign direct investments (FDI), and resource factors have become critical factors for economic growth while it facilitates technology advancement, but remains against normal expectation, countries with abundant sources tend to attract more resource FDI than the traded sectors – institutions are said to be responsible. However, the idea that exist for both concepts draws series of debates as to the rational and conditions that facilitates FDI location in most resource rich countries. In the following table, we show FDI inflow trend and benefiting sectors.

Figure 3.7



FDI Inflow and Oil Revenue 1970-2015

Figure 3.7, firstly reveals the FDI trend before the study period between 1970-2000. The period was characterized by low FDI probably due to rising debt (see appendix for fig 13), negative capital account, political instability and less return on investments. Also, the indigenization policy of the 1970s helped capital flight resulting to nonparticipation in Nigerian enterprises (CBN 2013: 13-14). In this vein empirical findings claim that countries with substantial risk of expropriation, loss of fund, and political tensions tended to witness FDI loss (Hajzler 2014: 139). In sum, political than economic factors determined pre-1990 FDI flows.

As a follow-up, the 1990s showed signs of progress at an average of 1.07 percent because of agreements on the oil prospecting licenses as compensation for willing investors. The CBN's sectoral analysis of foreign assets and liabilities in 200004, proves that the extractive industry attracted more FDIs ultimately with a

share of 40.47 percent, the manufacturing sector with 26.7 percent while storage, transport, and communication accounted for 12.8 percent respectively (Doguwa et al., 2014: 150). Nigeria and Brazil also found themselves in the top ten FDI destinations in 2002 against 1984 receipts but interestingly, however, China's resource FDI was lower than Nigeria's. Non-resource FDI for countries with early resource discovery tend to contract by 12.4 percent but in other countries with late resource discovery, it contracts in the short-term by 16 percent and 68 percent long-term (Poelhekke and Van der Ploeg 2012: 9).

Most literatures proves asymmetric relationship even as evident as it is, that strategic assets and efficiency rather than natural resource significantly drive inflow of FDI in resource rich SSA countries (Okafor et al; 2015: 876). But based on what we know about the strategic role oil plays globally, we assume that it constitutes a strategic asset hence, prospects are driven by the rationale for investment in the sector.

The political turning points on return to presidential amnesty and democracy program boosted flow of foreign assets, increasing credit ratings and external reserves. Also, this period featured economic openness and regulatory frameworks intensified, fiscal policies (tax holidays, exchange rate policies) and export processing zone (EPZ). However, the dilemma here is that rising resource wealth correlates with FDI than it does for real GDP over the study period as shown in the table below (CBN 2013).

Year	US\$ p/b						
1960	1.63	1975	10.43	1990	22.26	2005	50.59
1961	1.57	1976	11.6	1991	18.62	2006	61
1962	1.52	1977	12.5	1992	18.44	2007	69.04
1963	1.5	1978	12.79	1993	16.33	2008	94.1
1964	1.45	1979	29.19	1994	15.53	2009	60.86
1965	1.42	1980	35.52	1995	16.86	2010	77.38
1966	1.36	1981	34	1996	20.29	2011	107.46
1967	1.33	1982	32.38	1997	18.86	2012	109.45
1968	1.32	1983	29.04	1998	12.28	2013	105.87
1969	1.27	1984	28.2	1999	17.44	2014	96.29
1970	1.21	1985	27.01	2000	27.6	2015	49.49
1971	1.7	1986	13.53	2001	23.12		
1972	1.82	1987	17.73	2002	24.36		
1973	2.7	1988	14.24	2003	28.1		
1974	11	1989	17.31	2004	36.05		

### **REAL EFFECTIVE EXCHANGE RATE (REER)**

Demand and supply principles is reflected by the Exchange rate movement in the foreign and local markets. Theories suggest a strong relation between oil price, reserves, and exchange rate. It is also a major policy variable in the measurement of currencies and relative prices. For local markets and competitiveness of traded goods these interactions can be positive or negative. Which is why we consider REER and oil revenue (OR) interaction. This specification underlines the issue of maintaining stable exchange rate as resource wealth increase.

Figure 3.8

### Real Effective Exchange Rate and Oil Revenue



We take account of pre-study periods to fully familiarize ourselves and understand the interactions that exist. The figure above shows symmetrical movement of and that the contemporaneous variable impacts positively on REER in consistency with economic theory. Oil revenue and REER moved proportionately for all time periods of 2001-2015, with attending exchange rate appreciation or depreciation. Significant sources record evidences for the short-term deterioration of REER (Turhan et al 2012). Nikbakht (2009) a long-term linkage exists for REER and oil revenue.

Accordingly, the CBN, in late 2014, devalued the naira moving the official window of the foreign exchange market from N155/\$ to N168/dollar (Eromosele 2016). Hence, the foregoing is suggestive that REER and oil revenue maintain negative relationship against a-priori expectations. Lastly, our result is in harmony with stylized facts.

#### **INSTITUTIONAL ANALYSIS**

We will introduce exogenous variables that measure bureaucracy performance and quality in Nigeria. They have standard measurements from WGI hence, in table 4 we present result from the data. Also included is figure 15 all from WGI and prepared by Kaufmann et al. Many studies base institutional assessment on how corrupt public institutions are. But we need not forget that being corrupt is an integral feature of every human given the opportunity thus, a well organised system is possible with corruption existent. In this context, we examine institutions from performance, fiscal management, rule of law and governance effectiveness perspectives (see appendix for table 3).

Institutions make policies become workable. Hence, strong institutions act as precursor for policy formulation and implementation and this make the difference between countries rich in resource or not – Norway, Nigeria. Whatever geographical location that may exist, sustainable economic growth follows certain preconditions (openness, human capital accumulation) which developed countries share as a feature and endorsed by the endogenous growth theory (Auty 2001 cited in Larsen 2005: 78, Romer 1990). Windfall resource mismanagement is the result of governance issues that leads to the "paradox of poverty from plenty". The political institutions of Nigeria and most SSA countries are characterized by ineptitude, nepotism and corruption breeding a rentier state and dependence on the central government. For example, oil producing countries of SSA score below average in Government Performance Index and rank below on Transparency International's Corruption Perception Index (Shaxson 2007: 1124).

Furthermore, institutional assessment is done to establish whether effectiveness and performance correlates oil resources windfalls. We illustrate, with six parameters from Kaufmann et al (2017), capturing voice and accountability, rule of law, regulatory quality, government effectiveness, political stability and control of corruption.

Figure 3.9 Institutional Performance and Effectiveness Ranking 2001-2015





The analysis of figure 3.9, estimates that rule of law, regulatory quality and government effectiveness determines the effectiveness of public institutions, control of corruption, and stability of the political climate.

In our preview, rule of law barely rose between 2002-2008 and fluctuated in the leftover period. REGQUA kept up considerable levels from 2009 after wretched advancement ex risk. In view of the presentation of RULLAW and REGQUA, GOVEFF performed inadequately under 20%. In spite of the fact that our information couldn't decipher the motivation behind why REGQUA is high and RULLAW is low.

The CONCORR made great ascent in 2008, yet in addition declined at same rate. Somewhere in the range of 2008 and 2014, defilement control declined to 7.2 percent in 2014 nonetheless, with the new administration rule to bring mental stability slow ascent is recorded to about 11.05 percent.

It concludes that nations with feeble and poor system become defenseless during resource discovery (Shaxson 2007). In any case, supported development results are results of positive political changes (Hausman et al; 2004: 21). Larsen likewise archived how Norway's solid establishments reverted the resources curse, preventing the imperfect over-extension of the asset area over the tradable area (Larsen 2005: 82). All in all, multifaceted strategies opposed reduced detailing causing a co-development among tradable and non-tradable areas.

Conclusively, we would aver that resource wealth has had varied impact on Nigeria's economic growth in harmony with earlier studies. Exposition of our institutional variables REGQUA, RULLAW and GOVEFF show considerable rankings. More so, institutions matter the most for accelerated growth as they correlate in several ways surpassing everything else such that macroeconomic stability is the outcome of virile institutions.

## CONCLUSION

It is believed that asset abundance drive economic development in resource abundant nations. In any case, this instinct keeps on escaping policy makers in these nations; for instance, Nigeria. Between 1960-1990, Nigeria's public formative plans failed to meet expectations against the measure of resource applied. Hence, crude oil actually represents around 85 percent of government income.

The integration of oil revenue and real GDP affirms that expanding resource bonuses hinders economic development after some time; all in all, oil resource are irrelevant to real GDP increment rather, it adds to income only. Our outcomes for the logical factors like human resources use, export of local merchandise and import remained contrarily corresponded and we believe such impact to be enormous. The correlation test for genuine conversion scale turned fundamentally certain with expanding oil wealth confirming from the earlier information. Likewise, a test for unfamiliar direct venture and institutional investigation, is interesting that asset abundance drives the two factors to record huge positive relationship.

Using exploratory data analysis in the absence of main dependent variable substituted by explanatory variables we confirm the above outcomes. Our test of export and import terms of trade did not confirm total contraction of the traded sector in anyway due to recent fluctuating economic performance however, a declining capacity utilization in manufacturing is evident uncompetitive to foreign goods.

In sum, this study affirms the resource curse empirics as reflected in the channels. Nigeria's economic growth is heavily impacted by oil rents in the shortterm while it remains unsustainable in the long-term due to institutional inefficiency. We expect that these results will spur further cross-country study on rethinking natural resource curse from the political and cultural perspectives in resource abundance countries.

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