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THE EFFECT OF OIL DEPENDENCE ON ECONOMIC GROWTH OF NIGERIA

Bachelor's thesis

International business administration Marketing

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LIST OF ABBREVIATIONS

ADF Augment Dickey-Fuller

AEO African Economic Outlook

ARDL Autoregressive Distributed Lag

BNP Banque Nationale de Paris

ECM Error Correction Mechanism

HO Heckscher Ohlin

GDP Gross Domestic Product

GMM Generalized Method of Moments

NPC National Planning Commission

OLS Ordinary Least Squares

RGDP Real Gross Domestic Product

UNSTAT United Nations Statistical Database

WTO World Trade Organisation

WDI World Bank Development Indicators

ABSTRACT

The primary aim of this study is not just to examine the effect oil price levels has on countries economy but also the effect oil price volatility as on counties economy. Nigeria, the largest exporter of oil in Africa as recorded a rapid period of economic growth in the 80's due to the proceeds generated from the sales of oil, however, growth has deteriorated in recent times. The world market price of oil has experienced fluctuations and volatility so as the economy of Nigeria going from fair to bad and presently just recovering from the recession with a negative real GDP growth for two consecutive quarters. Nigeria being considered the giant of Africa with mast and vast resources with the readily available workforce has struggled in recent times with inflation. The level of countries export has been on the downside compared to import thus creating an unfavorable balance of payment over time. The primary aim of this study is to examine the relationship that exists between the recent fall in oil price and the present economic state of the country. For this study, the country's GDP will be implored as the key variable while exploratory data analyses will be used as the secondary data in examining the relationship between oil fluctuations and economic growth of the country. Also, an autoregression analysis is conducted comparing the economy of Nigeria against UAE, Indonesia, and China.

Keywords: Devaluation, Natural Resource Curse, Inflation, Commodity Goods, Recession, Oil Price, Oil Dependency, GDP, Nigeria, Comparative Advantage.

INTRODUCTION

In the world economy today, oil generally is believed to be one of the most important macroeconomic factor and the crude oil market is one of the largest commodity markets in the world. Resource endowed countries are generally believed to be characterized by fast growth and economic development. However, recent studies reveal countries with relatively low level natural endowed performs better in comparison to the oil-rich economies. Poverty, high level of corruption, inequality and slow growth rate are some of the shortcomings characterizes with most oil-rich economies in developing countries.

According to the Energy Information Administration (EIA), a strong correlation exists between global economic performance and oil prices. Increase in oil-price results in a shift in terms of trade i.e transfer of wealth from importing to exporting countries. The impact of oil price increment is determined relative to the cost of oil on national income, the level of reliance on imported oil and the ability of oil consumers to decrease it utilization (Energy Information Administration, 2006). Since the discovery of Crude Oil in the 1800's, it's important to exporting and importing countries cannot be undermined (Nwanna & Eyedayi, 2014). Oil price volatility and the Oil-GDP relationship turned into a prominent research topic and have been an extremely questionable subject among different scholar due to immense effect volatility as on economic growth and development.

According to (Africanvault, 2015), Nigeria is listed to be the largest oil producer in the Sub-Sahara African, its economy heavily depended on oil which contributed to almost 85 percent of its total export and 90 percent of its foreign exchange earnings (OnlineNigeria, 2017). The economic development and earnings afforded the government great increase in revenue also created a serious structural problem in the economy.

The Agriculture sector of the country drove the economy before the discovery of oil in the early 1960's .1n the 1960's agricultural sector contributed 43.23 percent to the country GDP, but in the early 70's, its contribution dropped dramatically to 20.7 and reduced to 5.71 in the late 70's (Cadoni, 2013). Oil discovery in the mid-1950's contributed to the neglect of the agricultural and mining sector resulting in an attention shift from agriculture and mining to the energy sector. The agro-sector of countries economy collapsed, leading to increasing rural-urban migration, people sorting through white-collar job to get a windfall from the booming oil sector. Export of

agricultural product declined greatly, production of locally consumed food also because of a problem. In the mid-1970's the economy imported a great number of its locally consumed food. Since 1960, Nigeria oil revenue as generated about 600 billion USD. In the quest for quick economic growth, the government imported machinery, raw materials, technological know-how, and equipment. Which resulted in an unfavorable balance of payment, its imports were greater than its exports.

The growth the country experienced was soon short lived and stood at a stagnancy rate of 7 percent. With the recent volatility in oil prices and its effect on countries economy birthed the topic, looking into what can be done in ensuring economic growth regardless of the stagnancy in the global market. This volatility has originated from strikes; international shocks decreased oil production and financial crises. Concern has been raised by different economists due to the volatility in oil prices and Nigeria's reliance on oil. As oil importing countries beginning to discover oil deposits also alternatives to fuel has become more popular, there is a need for the Nigerian economy to focus on another sector in other to ensure economic sustainability and growth.

Problem statement and Justification

Estimations show that Nigeria has a natural gas reserve totaling to about 165 Trillion standard cubic feet (SCF), this includes a 75,4 trillion sec of non-associated gas with its reserves of crude oil standing at 28.2 billion barrels (Nigerian National Petroleum Corporation, 2016). The energy sector accounts for more than 75% of the total revenue generated by the federal government. From this figure, we can conclude that Nigeria relays heavily on its oil sector for a bigger part of government expenditure. With the recent volatility in the price of oil across the world also with recent findings of oil in other countries of the world, the aggregate demand for oil has fallen in recent times. Oil exportation from Nigeria to major economies like the US has fallen over the last few years. Import from Nigeria by the USA in 2011 was at USD 1.9 billion, which was cut down by almost 50% in 2016 (International Trade Administration, 2016).

Nigeria and most developing counties adopt the resource-based growth strategy, but over last decade, the effectiveness of this strategy has been questioned. With developed countries embracing industrialization, most African and Latin American countries still struggle with development. The present trend of globalization and commodity pricing is closely related to the present issue Nigeria is going through by its dependence on the oil sector. Inevitably globalization has come to stay,

Nigeria and countries affected must find an alternative solution to protect its economy from the shock resulting from globalization.

Research Question and Objectives.

The research process will be built around the following research questions.

What is the effect of over-reliance of oil on the economic growth of Nigeria?

Other objectives include

1. What has been the basis of the countries recent economic growth?
2. Can resource-based growth strategy sustain an economy?

The objective of this paper is to examine the role of Nigeria's dependency on the energy sector and its impact on economic growth.

Hypothesis

The over-reliance of the federal government of Nigeria on the energy sector will continually cause a volatility in the growth of the country's economy. In other to actualize a sustainable economy, the government must shift its attention towards industrialization.

The intent of this research is to argue that:

1. The main cause of volatility in the economy of Nigeria is because of its over-dependence on the oil sector.
2. Industrialization and diversification of countries economy are keys to sustaining economic growth in Nigeria.

The paper organization as follows:

Section one majorly anatomizes literature of structural and mainstream economists on topics such as economic growth and industrialization, natural resource dependency, relating reviewed topics to the topic of this thesis. Section two gives detailed information about the research methodology parameters, design, the methodology used while section three entails a comparison between Nigeria and other oil-producing countries, UAE, Indonesia and China. Section four, the empirical part, comparison among all four countries and with a regression analysis of countries. Section five discusses conclusions and recommendation.

1. THEORETICAL BACKGROUND

This section briefly discusses oil price shocks from 1960 to 2014 also, three different views on economic growth and resource dependency. The mainstream economist view supports a country to continuous production and trade of good which provides a comparative advantage. Furthermore, new institution economist supports the notion of comparative advantage while associating negative or low growth to institutional failures. The other view discussed under this review is the view of a structural economist who strongly holds on to industrialization and diversification in contradiction to the view of a mainstream economist.

1.1. Oil price shocks between 1960 to 2014

Over time, the oil market had witnessed quite a number of shocks beginning from the 1960's to 2014. During 1973-1974, the first oil supply shock was experienced which was followed by the 1979 oil shock which resulted from a protest during the Iranian revolution affecting the Iranian oil sector (Behir & Pedrosa-Garcia, 2015). Control measures were put in place by OPEC instructing nations to increase production to curb the oil decline that resulted from the Iranian revolution, however, lose in oil production was still about 4 percent which resulted in a widespread panic and oil price doubling the previous level. By the mid-1980's Angolan, Saudi Arabia and Mexico increased oil production despite its low demands, which resulted in fall in OPEC market share and oil price collapse of 1985-86. (Behir & Pedrosa-Garcia, 2015)

The 1990 Iraqi invasion of Kuwait also leads to an energy crisis during said period although its impact was not as negative compared to the previous oil crises of 1973 and 1979. Oil price experienced an increase from US$17 to US$25 per barrel (Behir & Pedrosa-Garcia, 2015). Also by 1996, a relatively low decline in prices of oil occurred as a reason of Iraqi oil-for-food deal exportation of oil. It should also be noted that by 1999, the tension in the Middle East, California's energy crisis and also the emergence of new superpowers the likes of Iran, India, China, and Brazil caused a shock during said period.

A shock occurred in 2001 after the terrorist attack on the USA. This resulted to the USA war in Iraq which led to countries instability resulting to a significant increase in the price of oil, however, the financial crisis in 2007 led to a price decrease of oil due to the fall in global demand. Although

the fall in price was short-lived, by 2010 the Arab Spring helped to increase oil prices to its original price. Prices ranged between US$100 to US$110 but stood at US$115 by 2014 (Behir & Pedrosa-Garcia, 2015). However, by July 2014, the price fell drastically by almost 58 percent. This recorded the second largest fall in the last 50years.

1.2. Literature Review

The slow growth in developing countries has been on the topics discussed by economist over the years. This phenomenon resulted in economics taking sides on how best the problem can be solved. While Mainstream economists held on to the school of thought of Comparative advantage, the structural economist, in contrast, supported the view of diversification and industrialization. The mainstream economist views on comparative advantage are briefly discussed in this paper in relation to views according to the Heckscher- Ohlin model of factor endowment. A new institutional economist that also believes in comparative advantage will be examined in this literature. Literature will also examine structural economists, the focus will be on effects of volatility in terms of trade, specialization on growth and commodity price volatility.

1.3. Mainstream Economists Resource-Based Growth.

Mainstream economics believes a countries production and export be based on areas where they have a comparative advantage. A country has a comparative advantage when it produces something at a lower cost in relative to anyone else (Liberty Fund, Inc., 2007). This theory explains that a country would produce at lower cost commodities which it has in abundance in other to gain the greatest economic benefit in contrast to other countries. The theory of comparative advantage guides the mainstream economists view on specialization, free trade and international division of labor. This theory contributes to some counties of the world producing industrial goods while other producing agricultural and mineral commodities (O'Toole, 2007).

The Heckscher-Ohlin theory in relation to comparative advantage explains that countries should produce and export goods or commodities that require the use of its excess productive factors (Feenstra, 2003). The model used by Feenstra was based on two countries, both countries having

identical technologies, two good and two factors, different factor endowments and free trade in good. He stressed that both countries will benefit from trade due to the fact they both of different endowments. The difference in endowment gives each country its comparative advantage which leads to specialization and exporting of goods between countries. If both countries offer something different in its area of competitive advantage Freestar explained both countries will benefit from international trade. The mainstream economist also believes that this process allows for efficient use of resources resulting in more gain from trade exchange (World Trade Organization, 2010). Heckscher and Ohlin put forward that countries of the world with surplus labor will export labor-intensive goods and import capital-intensive goods, while counties having surplus capital-intensive goods will export capital-intensive goods and import labor-intensive goods (Clarke & Kulkarni, 2009).

Further studies in the context of natural resources were examined. Kemp and Long (1984) devised the HO model. In developing the model, a three-scenario test was run. The first scenario, goods produced were only by exhibitable resources while the second scenario had a combination of goods produced by one inexhaustible resource and one exhaustible resource. The third scenario had a combination of production one exhaustible resource and two non-exhaustible resources. In its findings, Kemp and Long found that countries which with advantage as regards natural resources specialize more in resources base sector producing goods related to its resources which are inexhaustible. Finding from the scenario test reveals factor endowment and areas of comparative advantage are factors that still drives trade (World Trade Organization, 2010).

Clarke and Klkarni (2009) implored the use of data from Asia in testing the validity of the HO model. They used data from Singapore and Malaysia in the validity of HO model. Malaysia a country endowered with labor abundance compared to its capital while Singapore richly blessed with capital abundant. The research was aimed at finding if export of both countries will reflect the basis of HO theory (Clarke & Kulkarni, 2009). In comparing result, data were collected from the United Nations Comtrade comparing commodities trade between two countries in 2007 (Clarke & Kulkarni, 2009). It was discovered in the findings that Malaysia's exportation was relatively Captial intensive in comparison to Singapore's exports which are relatively capital intensive. However, the rations revealed some interesting findings, 32 percent of Singapore export were related to its Capital-intensive sector which is relatively low compared to the HO theory and standards. However, Clarke et al. concluded that the trading behavior between Malaysia and

Singapore in 1997 was in accordance with the theory of comparative advantage which will still give room for both countries to experience growth (Clarke & Kulkarni, 2009).

Wood and Berge (1997) in contrast argues that the availability of skilled labor largely contributes as the deciding factor that determines where a country exports manufactured or primary goods (Berge & Wood , 1997). Questions as regards why East Asia manufacturing industry has grown rapidly in recent times and most of the African countries have performed below average. The conclusion made shows that difference in outcome is not related to the composition of export but highly correlated with the availability of natural resources and human capital. Hypothesis generated were tested by using the HO model but replacing the variables labor and capital with land and skill (Berge & Wood , 1997).   Trade data has been used in estimating the model from UNCTAD Handbook of Trade and Development statistics. Years of schooling has been used in measuring skills. Land area was used as a measurement of Natural resources divided by adult population (Berge & Wood , 1997). According to Berge et al., countries will produce more of labor-intensive goods when it has an abundance of natural resources and unskilled labor. Skill level for manufacturing will be higher compared to what is needed in producing primary goods, countries will land endowment ration, and low skill will produce primary goods where it has its comparative advantage this could be in the form of resource extraction and agriculture (Berge & Wood , 1997). In Berge et al.'s findings, it was suggested that a strong colouration exists between export composition and development. Berge et al.'s findings also reveal that higher growth rate is recorded in countries that deals with manufacturing export compared to good primary exporters. The importance of skill was attributed to this correlation as a determinant of comparative advantage (Berge & Wood , 1997).

The literature on the HO model and comparative advantage helps in revealing that comparative advantage plays an important part in a countries economic growth. However, mainstream economists put forward that developing countries will experience economic growth as longs as they continue to produce and export the commodities they can produce intensely which will inevitably lead to economic growth. Furthermore, questions have been raised in the literature of comparative advantage by an economist. The literature assumed market and information are perfect, but in the real sense they are not perfect. It was also put forward that studies on comparative advantaged performed poorly unless alteration was made by using other variables.

The next section will be reviewing literature by new institutional economist stressed the role of institutions as the key to economic growth acknowledging that information and markets vary.

1.4. New Institutional Economics

New Institutional Economics (NIE) known to be a subgroup of the mainstream economics with suggestions assumptions of the mainstream economist of no transaction cost, perfect information, unbounded rationality, and perfect competition are not always valid. Instead, the NIE studied the unwritten and written rule and laws that govern the government and society that are meant to reduce uncertainty and control the society. The assumption that individual does not always have the perfect information and have limited mental capacity. The limited capacity crease an informal and formal institutions to reduce transaction cost and risk of uncertainty. Individuals develop systems to motivate agents where the performance of the economy is dependent on informational and formal institutions (Menard & Shirley, 2008). Mainstream focuses majorly on price and outcome, NIE shifts its attention and considers the effect of institutions. According to NIE, the institutions set the transport cost. Also, the political institutions infuse the rules, contracts, and laws (Menard & Shirley, 2008). However, both mainstream and NIE are in support of the assumptions of scarcity and competition (Menard & Shirley, 2008).

NIE, in search for answers to questions lingering around the inability of countries to attain sustainable growth, shifted its attention to roles of institutions to provide its answers. According to NIE, countries with relatively high transaction cost have lesser investment, trade, specialization, and productivity (Shirley, 2008). In contrast to NIE literature aiming explained the growth in countries with abundant resources which according to a mainstream economist, countries with abundant resources are meant to experience development growth compared to lowly resource-endowed countries. But in its real sense, this has not been the case. Sachs and Warner (1999) point out that poor resources countries have a per capita income growth three times better between the 1960 and 1990 in comparison with abundant resource countries. NIE believes that institution and its quality will determine the rate of economic growth experienced within countries (Frankel, The Natural Resource Curse: A Survey. National Bureau of Economic, 2010).

Sach and Warner (1997) explained with empirical evidence to the slow growth experienced in the Sub Saharan African from 1965-1990. Hypothesize factors were used such as economic policy,

geography, initial conditions, and demography were used in explaining the growth in Africa some recent decades (Sachs & Warner, 1997). Regressions were run using varieties of variables as determinants of growth and other variety that were shown that influenced growth in Africa was estimated. Sach and Warner (1995) work also revealed that natural resources endowments were in correlation with counties that experienced slower growth. The regression revealed that increase in export of natural resource increased GDP by .1 with growth projection decreasing by .33 percent annually (Sachs & Warner, 1997). Estimation of government saving was also included in the regression which has a positive correlation with growth. Lastly, the authors discovered that in each regression, the institutional quality index is significant to growth. The index as a composition of five sub-indexes which includes a bureaucratic quality index, the rule of law index, government repudiation of contract index, corruption in government index and risk of expropriation index (Sachs & Warner, 1997). The regression reveals that there was an increase in the institutional quality index by one unit coupled with an increase in the annual growth rate by .28 percent. In conclusion, their findings suggest slow growth in Africa is attributed to poor quality of institutional policies. However, they believe the problem can be solved.

Mehlum et al. (2006) concur with Sachs and Warners and argues that the negative effect of natural resource apply to countries of the world with weak institutions. Data were used from 87 endowed resource countries, with its resource exporting activities contributing to more than 10% of its GDP with an average yearly grown from 1965 to 1990 (Mehlum, Moene, & Torvik , 2006). Natural resources abundance according to Mehlum et al. (2006) is considered harmful to economic development where countries institutions are "grabber friendly". Grabber friendly institutions have rent-seeking and competing for production activates while producer friendly institution has rent-seeking and complementary production. Hypotheses were tested using Sachs and Warner data and methodology. GDP growth is considered the dependent variable and explanatory variables include openness, initial income level, resource abundance, institutional quality and investments (Index which ranges from zero onwards) (Mehlum, Moene, & Torvik , 2006). The interaction term and a series of regressions.

Resource abundance x institutional quality

They concluded that the quality of institution determines the divergence that exists between growth winners and growth losers.

In the study conducted by Robinson et al. (2006), they argue that the impact or effect of resource boom on any society is largely dependent on political incentives and what it generates from the resource endowment. In proving their hypothesis, a two-period probabilistic voting model with two parties was set up. The election was included too in the first period at the end of the period (Robinson, Torvik, & Verdier, 2006). An incumbent politician seeking re-election must decide if resources are extracted and how rent is redistributed to ensuring re-election votes through patronage (Robinson, Torvik, & Verdier, 2006). The result of the study revealed that politicians are to remain in power in the event of permanent resource boom seems more valuable in the future which directly increase the efficiency of the extraction path (Robinson, Torvik, & Verdier, 2006). The conclusion was made that the quality of institution which governs the resources determine choice chosen.

Bhattacharyya et al. (2010) investigate the relationship between corruption and natural resources and also the effect of the quality democratic institution has on the relationships. A game-theoretic model consisting of one economy that has an incumbent president and challenger. In the presence of a good democratic institution, the equilibrium explains a bad challenger lives to imitate a good incumbent. Probability is said to be better in a democratic institution when it as a large difference (Bhattacharyya & Holder, 2010). Claims were tested using panels data from 1980-2004 for 124 countries. Natural resources, corruption, democracy, and income are variables included in the model (Bhattacharyya & Holder, 2010). It was discovered that there were negative correlations between resources rent and natural resource, income. This suggested that there is a relationship between natural resources and high level of corruption. An interaction term resourced rent and lagged democracy was added to study and estimate the quality of democratic institution effects corruption. They find that corruption is highly related to resource rent lead. This can be proven otherwise if the democracy score is about .93 and a POLITY scoring 8.6. Findings were confirmed by revealing in 2004, with Botswana having a POLITY2 score of 9 while Mexico and Bolivia had a POLITY2 score of 8 (Bhattacharyya & Holder, 2010).

Variation exists in the literature by the new institutional economist in ways which are evidence; however, they all agree to the imperativeness of the role of institutions. Lack of economic growth in developing countries is attributed to the weak institutions governing the countries. New institutional economists stress that countries with strong institutions would experience a positive rate of growth. However, countries such as Indonesia, Latin American and Nigeria have experienced some level of economic growth in recent years but have short-lived due to the level

of corruption in its governments. Structural economist's literature will be discussed in the next section, arguing against both new institutional and mainstream but focus on industrialization.

1.5. Structural Economists View

Structural economists propagate industrialization was the production of primary products is less prioritized (O'Toole, 2007). Structural economists refute many claims made by the mainstream economists, holding on to the view that a politic and power controls and influences a countries economy. Similarly, while the notion of free trade is being supported by the mainstream economist, a structural economist argues that free trade harms less developed countries but have a positive effect on developed countries which eventually leads high development. In handling the free trade issues, they implore developing countries to trade internally with each other to reduce its dependency on industrialized economies. Structural economics underlying theme is the notion that free market failure is highly attributed to developing countries, states as a big role to play in ensuring development (O'Toole, 2007).

Prebisch and Singer (1950) explain the key to growth is highly attributed to the diversification of the economy and tilting towards manufacturing. They argue that a downward pricing tread will follow good agricultural prices and mineral in the long run. Hypothesis made was based on the notions that elasticity of primary goods is inelastic which is relative to household income. The demand for manufacturing goods becomes more elastic has household income increases leading to low demand for primary goods and diminishing share of GDP (Frankel, Frankel, J.A (2010) The Natural Resource Curse: A Survey. National Bureau of Eco-nomic Research. Working paper No.15836, 2010). Thus, countries that rely on manufactured goods experience higher growth rate. Prebish and Singer recommend developing the manufacturing industry of the country and closing of the economy (Polterovich, V, & Tonis).

All structural economists including Prebisch and Singer believe that diversification is key to growth but diversification in relations to manufactured goods leads to long-run sustainability growth. East Asian countries have experienced significant economic growth in recent time, moving from primary product exporter to industrial sector exporter while Sub Saharan African countries and Latin American countries have not moved to embraces manufacturing holding on to a resource

based economy (Gelb, 2010). Gelb (2010) study reason why abundant resource countries are encouraging to going into diversification when it has a comparative advantage of its resources. Gelb (2010) looks at a study by Hesse (2008) who provides evidence that diversification of economies has its long-run benefits. He argues that the problem of commodity-dependent countries who suffer from unstable export because of unstable global demand and inelastic can be solved by export diversification (Hesse, 2008). Hesse sorts out to test the relationship between GDP per capita growth and export diversification. He estimates an augmented Solow growth model with a cumulative GDP per capita growth from 1961-2000(5 years intervals) and a data set of average export concentration. His findings on a scatted plot revealed that poor growth performer appears in the upper left corner having a high level of export concentration while many East Asian countries clustered in the lower right corner, having a low level of export concentration (Hesse, 2008). Hesse findings reveal a nonlinear effect of export concentration in poorer countries than in rich countries (Hesse, 2008).

The negative relationship existing between resource dependence and economic growth has been an area of study for Economist. Lederman and Maloney (2007) conducted a study in examining the relationship that exists between economic growth and resource dependence. The result of the study reveals that GDP per capita grew higher in natural resource-importing countries than exporting countries (Gelb, 2010). Countries that focus and specialize on the oil mining find it difficult to venture into diversification due to its capacity of investment required to mining oil finding it difficult to invest into other products (Gelb, 2010).

Other structural economist's argument was based on the premises that a country experiences economic growth when investments are made in sectors other than the energy sector. Blattman et al.(2007) argue trends price of a commodity, not commodity price its self that causes volatility and low growth in countries dependent on commodities. The volatility of primary commodities and price trends are the reason why there is a divergence in global income. Volatility in income cause internal instability which eventually leads to diminished economic growth and reduced investments (Blattman, Hwang, & Williamson, 2007). Eichengreen (1996) argues that poor growth and financial crisis are caused by negative trends and volatility regarding trade. Capital inflows are decreased. As a result price shocks which leads to a reduction in interest in foreign investments (Blattman, Hwang, & Williamson, 2007).

A handful of a lot of assumptions made by the mainstream and new institutional economist were disproved by structural economists. However, their arguments for industrialization and manufacturing will be the focus of this literature. The structural economist believes growth bases strategies centered based on resources will lead to poor growth. To ensure sustainability of economic growth, it is of high necessity for countries to diversify its economy. Also, it was noted that growth could sustain in the short run through resource dependency. Other views supported the need for industrialization but questioned the importance of manufacturing. In recent times, most developed countries experienced an enormous growth due to its commitment to manufacturing and industrialization.

2. RESEARCH METHODOLOGY

This section explains the research designs, research instruments, target population, data collection and analysis procedures that will be implored for this study. It also explains the methodology that will be implored in analyzing relationships between volatility in the price of oil and economic growth in Nigeria.

2.1. Research design

For this study, descriptive study is used. In answering the research questions, (Jackson, 2009) enables studies to be more formalized and structure with a clearly outlined investigative questions or hypotheses. The descriptive study serves numerous research objectives i.e. giving in-depth information that can be used for qualitative or quantitative research method also it results in useful data that can be collected in large amounts, it is also be used within a subject population that have discovery and characteristics among different variables.

2.2. Data collection

For this research study, quantitative and qualitative data was used as a means of collating data as implored by (Carvalho & White, 2007) is used. The quantitative approach used entails gazing at macroeconomic data from 1960 to 2016 which are relevant to the study. World crude oil prices, oil exportation prices and oil rent percentage to GDP was collected for the test period. The gross domestic product was collected on a yearly basis and was used in measuring growth rate. National and international data will be used as a source in helping collate quantitative secondary data. Data's from the Central Bank of Nigeria, United Nations, World Bank, Organization of Petroleum Export Countries, National Planning Commission, Nigeria National Bureau of Statistics. Data prior to 1960 were not readily available. However, for this study, the study period used is between 1960 to 2016.

2.3. Data Analysis

The research is both qualitative and quantitative. An exploratory data analysis will be used by the author following the recommendation of (Hastings & Peacock, 2000) . The use of EDA in both qualitative and quantitative approach will enable the author to have a clearer view in summarizing

the key characteristics of the country's economy. With EDA, data presentation and analyzing are clearer for both author and interested reader in a concise way.

2.4.   Model Specification

To establish the relationship between economic growth and oil price within an economic, a first-order multiple linear regression analysis was conducted by the author that consist of more than one predictor variable. (Henseler, 2009) explained an r-square lesser than 0.3 is considered having a none or very weak effect size, while an r-square greater than 0.5 is considered moderate and strong if greater than 0.7. For the study, five predictor variables were used.

$Y = \beta_0 + \beta_1 x_1 + \epsilon$

Y – GDP % growth

x_1 – Oil price volatility

3. RESULT AND DISCUSSION

This section compares Nigeria with other three countries which are U.A.E, Indonesia, and China. Nigeria economy before and after the oil shock will also be examined. The three oil producing countries will be examined individually and lastly, a regression analysis will be conducted.

3.1. GDP growth Comparison of Nigeria, U.A.E, Indonesia, and China From 1960-2017

All four countries implemented the resource-based growth strategies at their early stage of economic development in the early 1960's, however, Indonesia and China took different paths in controlling their economy after the world oil price shock by diversifying countries economy as recommended by the structural economist (Behir & Pedrosa-Garcia, 2015).
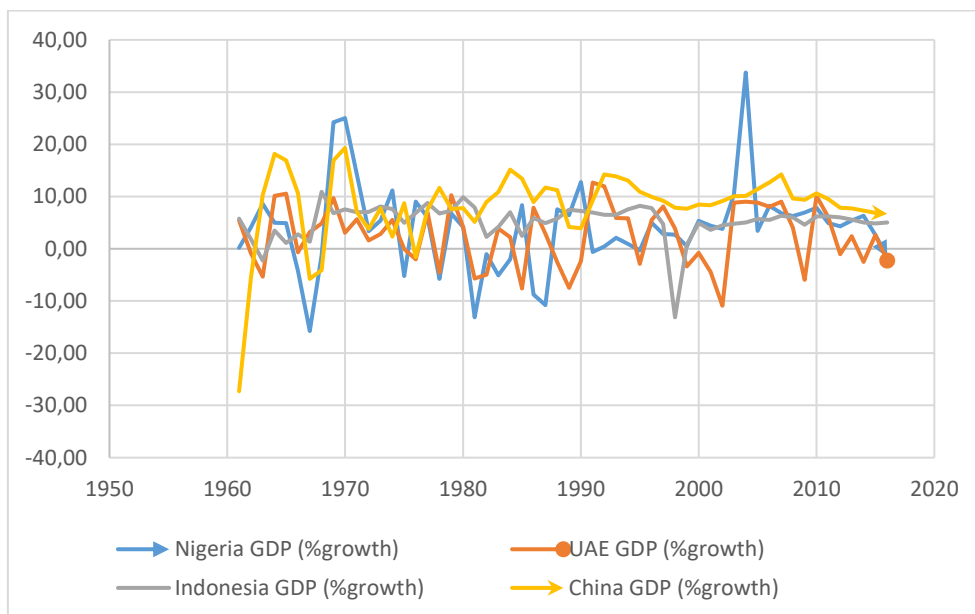

Figure 1. Comparison of Nigeria, UAE, Indonesia, and China GDP Growth in %
Source: Authors, Based on World Development Indicators, World Bank (2018)

Figure 1 shows a comparison among all four countries GDP % growth. All four countries moved in the same direction in the 90's, however, Indonesia and China GDP growth seems positive while Nigeria and UAE are both struggles in recent times.

3.1.1. Nigeria's Economy and projections before the 2014 oil shock

The projection of economic growth was set at 7 percent per year before the economic shock. However, with the volatility of global oil prices, there was a decline the growth rate in 2015 with an outright contraction in 2016. Non-oil sectors oil sector records a negative growth during this said period (see figure 2).
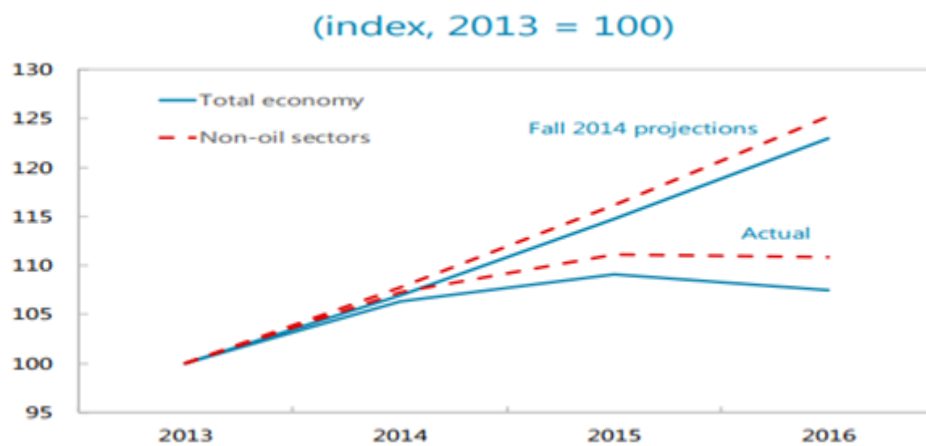
Figure 2. Nigeria: Real GDP Lower Than Projected

Source: National Bureau of Statistics; and IMF staff calculations.

3.1.2. Nigeria's Economy after the 2014 oil shock

In 2016, most oil exporter's economic activity was typically fell below the 2014 forecast and Nigeria being the third most impact country of the global oil shock period (see Figure 3).
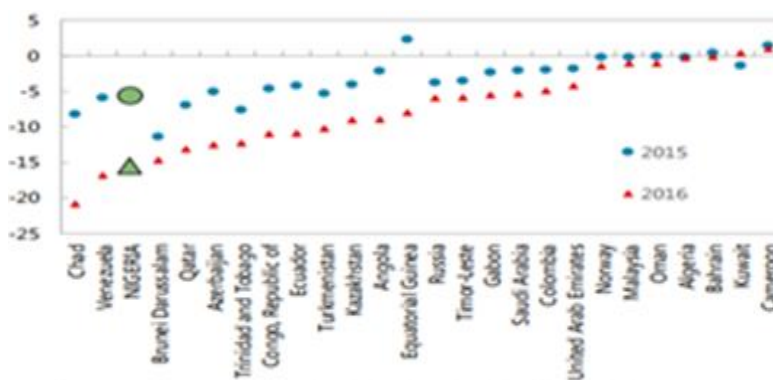

Figure 3. Nigeria; Real GDP Typically Underperformed Forecasts

Sources: National Bureau of Statistics; and IMF staff calculations.

Oil export in Nigeria and the other 25 countries compared declined in the wake of the shock. Nigeria heavily depends on oil for its fiscal revenue and export receipts. Other factors may have contributed to the slum in growth during the period between 2014 and 2016, oil price stands to be a large contributing factor to the slump in economic growth of Nigeria supporting (Gelb, 2010) view on oil dependence being not sustainable. Although in 2013, oil contribution to overall GPD was 13% (see Figure 4), the oil sector still accounted for three-quarter of government revenue which was about 95 percent of export.
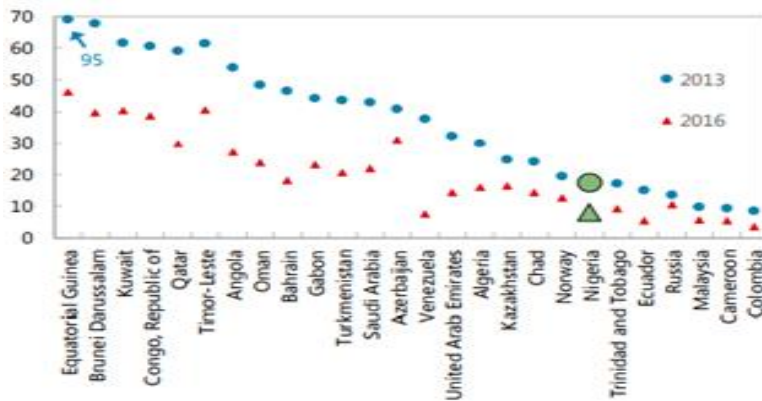
Figure 4. Nigeria: Reduction in Oil Exports across Oil Exporters (Oil exports, percent of GDP)
Source: National Bureau of Statistics; and IMF staff calculations.

Increase in revenue and GDP growth before the oil shock corroborates the view of (Clarke & Kulkarni, 2009) stressing countries need to continue production of goods it has a competitive advantage in, however during periods of volatility oil productions could not sustain volatility in growth in the period between 1998-2011. To examining Nigeria's economic growth during this period, Figure 4. reveals oil rent percent % of GDP dropped in years when oil prices dropped. Oil rent percent of GDP is used to compare the difference between the value of crude oil production at world prices and total costs of production.

3.1.3. The relationship between GDP and oil production before oil Shock

Figure 5. illustrates relationship in growth rate and production between 1998-2015. The graph reveals a negative correlation between growth and oil production between 1996 to 2015 revealing little or no relationship exists between GDP and oil production during the said period.
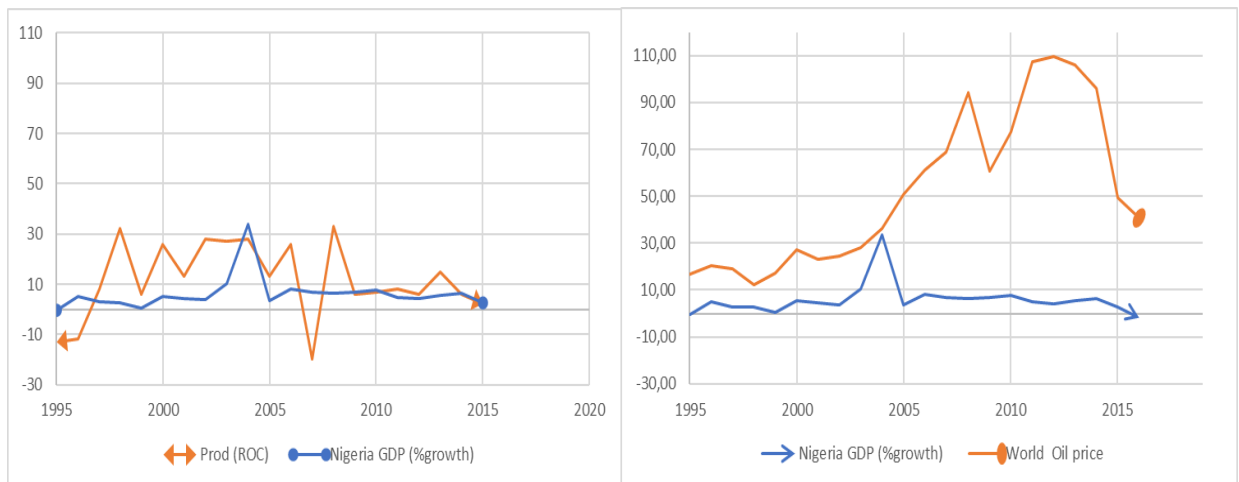

Figure 5. The rate of change in Oil production and GDP 1998-2015
Source: GDP data from World Bank databank/Crude Oil production data from NNPC

From Figure 5. We can deduce that years of increment in production did not result in an equivalent increase in GDP growth, this, however, negates the mainstream economist assumption of comparative advantage as the best alternative in sustaining a countries economy. However, there exists a correlation between counties GDP and the global oil price volatility as revealed in Figure 5.

3.1.4. Nigeria's GDP growth and oil exportation

Figure 6. reveals that oil exportation and countries GDP growth move in the same direction buttressing (Feenstra, 2003) view of comparative advantage. However, Oil exportation, the world price of oil and GDP growth rates seem to move in the same direction, deductions can be made that world oil price seems to be the driver of Nigeria economy growth.
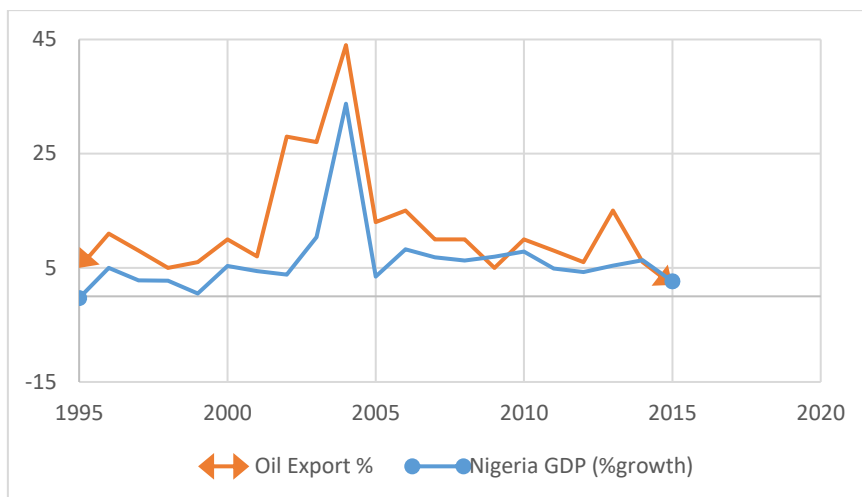
Figure 6. 1990-2012 value of oil export % and GDP

Source: GDP data from World Bank databank/Value of petroleum data from Organization of Petroleum Export countries Annual Statistical Bulletin 2007 and 2012.

3.2. United Arab Emirates

In section, a brief overview of United Arab Emirate will be discussed. Its growth strategy prior to 1970 also the present strategy adopted will be discussed in this section. The UAE began oil exportation in early 1970's after its independence. Revenue generated from oil sales immensely helped improve economic growth which in return improved citizen's general standard of living (Shihab, Al , & P, 2001) proving right the assumption of the mainstream economist. Nigeria, on the other hand, was unable to turn revenue generated from the proceeds from oil into economic development. However, due to the oil price shock and globalization, UAE had to diversify its economy to ensures sustainable economic growth during future crises. Oil contributed to about 90 percent of countries GDP in the early 1980's according to IMF but its contribution as significantly reduced to about 30% in recent times (Business, 2016), with a goal to reduce oil contribution to 20% by the year 2021.

Figure 7 shows the global oil prices from 1960 to 2018 and UAE's GDP growth. From the graph, it is suggested that UAE's GDP has experienced some level of volatility due to general oil price volatility. UAE's GDP grows as the oil prices increase but experienced a decline during the period of the world oil shocks, suggesting a correlation between both variables GDP and world oil prices.
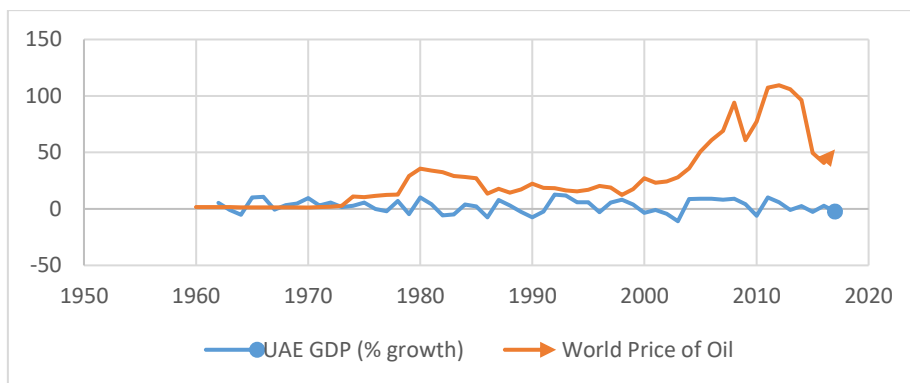
Figure 7. Compares UAE GDP and Global Oil prices (1960-2016)

Source: Authors, Based on World Development Indicators, World Bank (2018)

In 1990, a large number of oil exporting countries experienced volatility in oil price, however, UAE had a 7% average GDP growth rate (Business, 2016). Growth was largely associated with the diversification strategy adopted by the country. However, by 1999, the oil rent prices dropped from 25% to 12% so as the industrial sector's GDP share dropping to 42% in 1999 but an improvement was recorded in the manufacturing sector (Business, 2016). From 1975 to 2013, the country experienced extreme volatility in economic growth revealing it has been adapting the resource-based growth strategy (Schilir`o, 2013). Furthermore, oil rent appears to be extremely volatile during the same said period he stressed although the manufacturing remained steady, the industries continued to experience growth. Although UAE is in its earlier stages of industrialization and diversification as proposed by the structural economist, however, the changes made in increasing promotion of its manufacturing sector and productive base contributed to the resistance it economy as developed in absorbing oil shocks.

3.3. Indonesia

Indonesia and Nigeria both share a comparative history filled with military coups and overthrows, underdevelopment, corruption, and oil. During the 1960's both nations made huge revenue from oil sales which were not properly managed due to corruption. Be that as it may, the Indonesian economy experienced rapid economic development since the 1960's almost quadrupled its economy while redundancy was associated Nigeria's economy (Ross, 2003). Increase in world prices of oil improved economic growth in Indonesia however, oil price volatility affected countries economic growth (see figure 8) proving the mainstream growth strategy was not sustainable in the long-run.
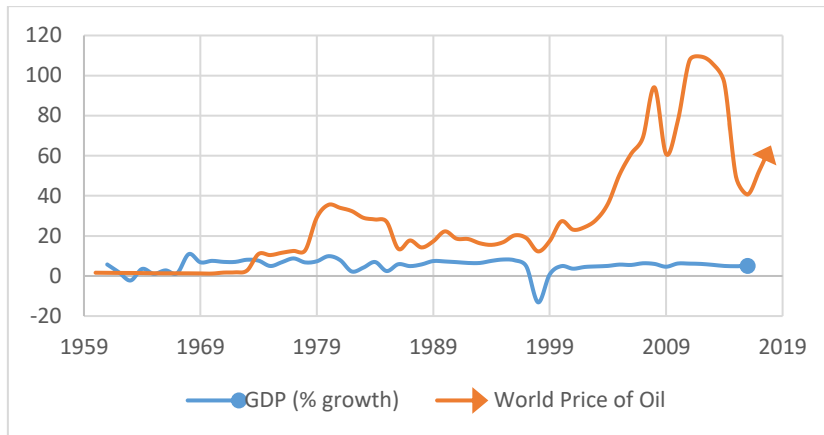
Figure 8. Indonesian GDP and Global Oil Prices (1976-2011)

Source: Authors, Based on World Development Indicators, World Bank (2018)

3.3.1. Indonesia economy before the oil shock

In the 70's, the economic structure of Indonesia was solely based on agriculture, emphasizing and promoting self-sufficiency (Reserve Bank of Australia, 2011). However, oil contributed to 30 to 40 percent of the country's total export. Exportation of oil was on the increase in the 1970's due to the oil boom experience during that period which resulted to a tenfold increase of oil export leading to 55% of government revenue, 70% of export earnings coming from oil exportation and 22% to countries GDP (Kurniawan, 2018) . In 1970's economic development grew to about 9% before the end of 1980 however the non-oil sector experienced little or no development during this said period, investment was focused on the oil sector (Kurniawan, 2018). However, revenue from oil sales wasn't distributed evenly within the economy which lead to a high level of corruption within the government.

3.3.2. Indonesia's economy after the oil shock

The oil shock in 1980's prompted the government to review its economic strategy in the view of protecting its economy against a future crisis. Diversification strategy was set as recommended by (Hesse, 2008) the government strengthen the non-oil sector. Productive based were to be diversified to ensure a reduction in reliance on oil. In doing this, an outward trade strategy was adopted and investments were made in the private sector (World Bank, 1994). Serval initiative has been introduced under the leadership of Joko Widodo, who was inaugurated as the 7th Indonesia's president. Amongst many, he scrapped the fuel subsidy cost which as always caused

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an opal among citizens. Under his regime, his administration also introduced the Micro, small and medium-sized enterprises (MSME) which accounts for almost 99% of total active enterprises in Indonesia, creating jobs for almost 180 million Indonesians contributing to 60% of countries GDP. (Van der Schaar Investments, 2018). Oil subsidy removal or decrease in production was not the cause of the countries transformation, transformation within the economy was directly related to increasing export promotion strategy and exporting of manufactured goods. In 1990's, the country's GDP was between 9% and 6%, however, in 1998, the fall in prices of oil had a negative effect on the GDP although shock was withstood by the manufacturing sector (Tabor, 2015). From 1990, the economics of Indonesia shifted from being an oil-based economy into industrialization and manufacturing. The share of manufacturing to GDP increase to 28% while oil rent % to GDP dropped from 19% in early 1990 to 0.5 % in 2015.

3.4.   China

China rapid economic growth and urbanization in the last 38 years has been quite astonishing and unprecedented in history. In 1978, 17.8% of Chinese's lived in the urban communities. Be that as it may, in the course of recent years, more than a large portion of a billion (558 million) individuals moved from the rural areas to the urban area with the quest to get jobs in the manufacturing and service as China industrialized its economy through creating export-oriented industries and special economic zones. As a result of the urbanization, 57% of Chinese individuals in urban communities in 2016 has been highly successful. Billions of people were lifted out of poverty as a result of its real per capita income increasing about 20times in 1978-2016 (World Bank, 2017). China known to be a second biggest oil consuming nation in the world, it consumes about 12% of the world's oil demand which is about 10.77 million barrels per day (BP, 2014). Figure 9 shows a relationship between the world oil price and GDP of China.
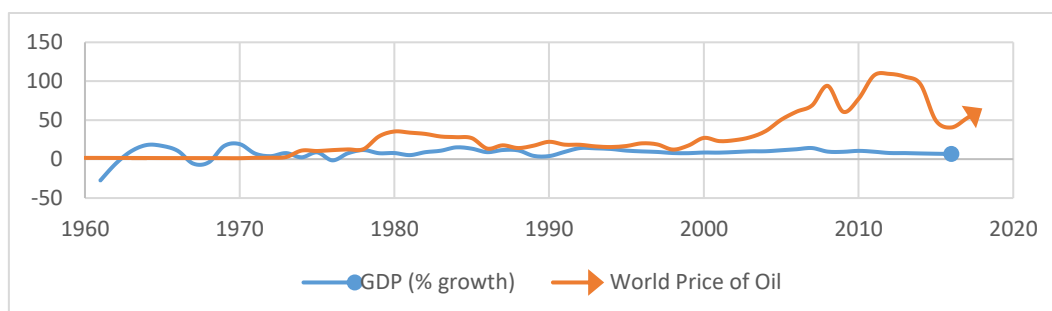

Figure 9. Indonesian GDP and Global Oil Prices (1976-2011)

Source: Authors, Based on World Development Indicators, World Bank (2018)

Figure 9 reveals little or no correction between world price of oil and GDP of China, from the graph it can be seen that oil price volatility affected the GDP growth by a little percentage, but in recent time, with oil rent contributing to just 0.2% of countries GDP, the Chinese economy is hardly affected by any form of volatility in world oil price. The U.S. Energy Information Administration forecasted that by 2035 China oil consumption will surpass the U.S with an estimate of about 18.46 billion barrels (Energy Information Administration, 2014). In 2017, the China's economy recorded $23.12 trillion based on purchasing power parity. Presently the country's economy is the largest in the world, the European Union is second with $19.9 trillion while the United State falls to the third place position with $19.3 trillion (Amadeo, 2018). The foundation of China's economic growth and development is built around low-cost exportation of equipment and machinery. Although the country is the 6th largest producer of oil in the world, it also stands at 48th on the list of oil exporter country in the world. The returns from oil contribute to less than 1 % of countries GDP making its economy less dependent on the oil this corroborates (Hesse, 2008) view on production based sector and industrialization.

Figure 10 shows a downward movement in slops for both Nigeria and UAE. Both countries oil contribution to GDP as of 2015 are 3.03 percent oil and 11 percent respectively, which is relatively high compared to Indonesia and China. Nigeria and Indonesia both as negative GDP's in the fourth quarter of 2015.
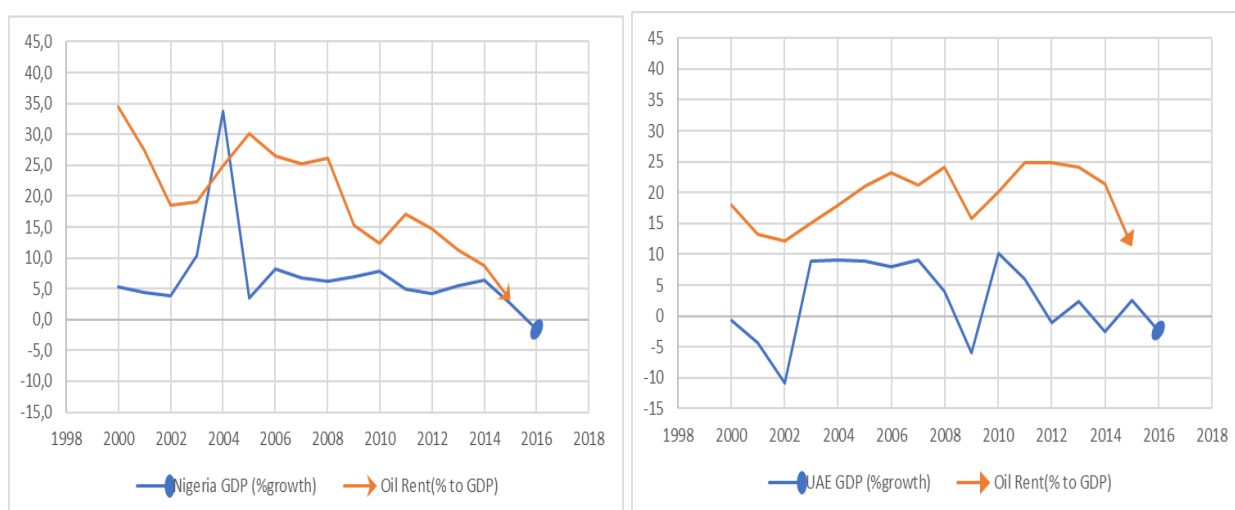
Figure 10. Nigeria, UAE Oil rent percent to GDP

Source: Authors, Based on World Development Indicators, World Bank (2018)

Indonesia and Chinese GDP growth move in opposite direction to oil rent contribution to GDP. Figure 11 reveals that there is little or no correlation between GDP growth and oil rent percentage in both countries. Both countries also had a positive GDP in the last quarter of 2015 with oil percentage to GDP lower than 1%.
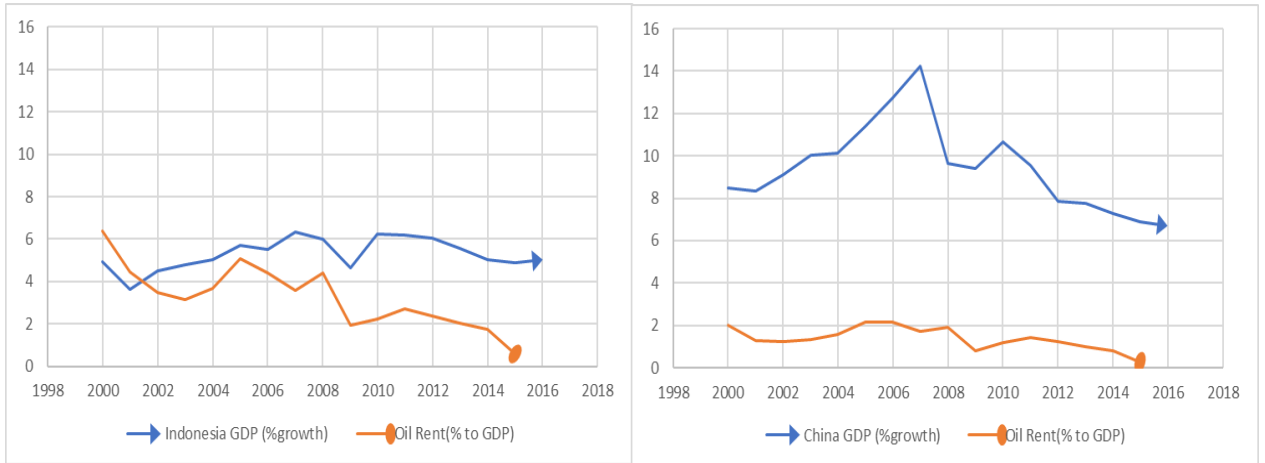
Figure 11. Indonesia and China's Oil contribution to GDP
Source: Authors, Based on World Development Indicators, World Bank (2018)

Figure 12. Nigeria, UAE, Indonesia and China Fuel exports (% of merchandise exports)
Source: Authors, Based on World Development Indicators, World Bank (2018)

Figure 12 shows an overview of fuel exports as a percentage of merchandise export in four countries. From figure 12, it can be revealed that fuel exportation in Nigeria of nearly 90% meaning oil exportation accounts for nearly 90% of total export in Nigeria. In agreement with Ledermen and Maloney (2007), GDP growth grows higher in countries that are natural resource-

importing countries other than exporting. China, Indonesia, and UAE perform better because it focuses on economic diversification as advised by (Gelb, 2010) and resource importation.

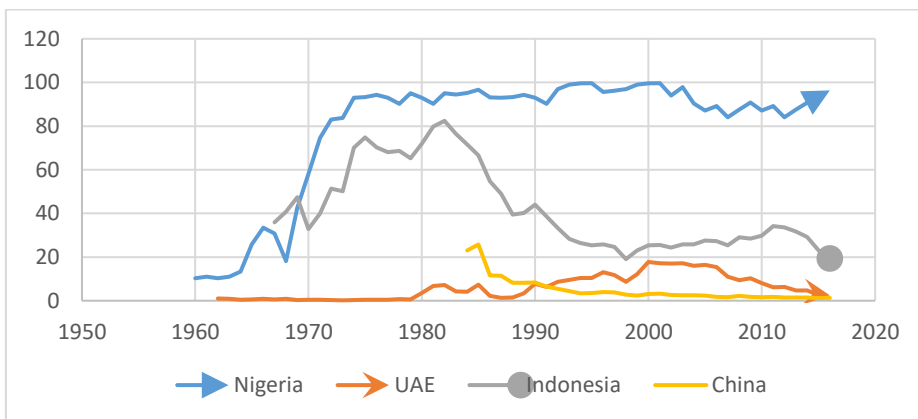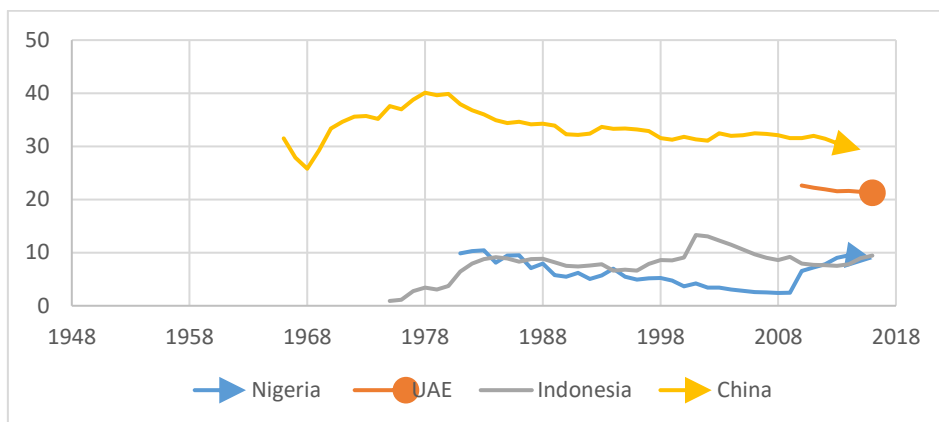Figure 13. Nigeria, UAE, Indonesia and China Manufacturing (% of GDP)
Source: Authors, Based on World Development Indicators, World Bank (2018)

Some relative data of the manufacturing sector contribution to GDP were not readily available in the case of UAE, data are used where from 2011 to 2014. However, figure 13. Reveals all four countries paid different priority to the manufacturing sector of the country, China having the highest investing in the manufacturing sector with its percentage contribution to GDP is the largest from figure 13. The economy of China performs better than other 3 countries compared in figure 13. This buttress the assumption made by (Hesse, 2008). Diversification in its sense might cost expensive but as its long-run benefits as seen in the case of China.

To sum up, all four countries implemented strategies in ensuring economic sustainability. Nigeria, on the other hand, tilted more toward a resource-based growth strategy as postulated by the mainstream economist however, this strategy had its benefits in the short run but seem rather not sustainable in the long run. UAE, Indonesia, and China, on the other hand, implemented the growth strategy as recommended by the structural economist with its focus on economic diversification, industrialization and manufacturing this on the hand produced a different result.

3.5. Corruption and Growth

According to Ben Ali (2015), economic growth and reduction of income inequality can only be attained with little corruption within an economy. An economy lacking a strong institutional framework he stressed might face redundancy in growth and development. Corruption and political conflicts have been a major challenge in Nigeria since independence. Although this claim seems true supporting the argument of a new institutional economist, however in recent times, the political condition and institution within the country has been steady and improved over time but with little or no improvement in the economic condition.

Figure 14 reveals the relationship between annual growth rate from 1996 to 2014 and Transparent International's Corruption Perception Index (CPI). Data before 1995 were not available thus Nigeria inclusion to CPI begins from 1996.
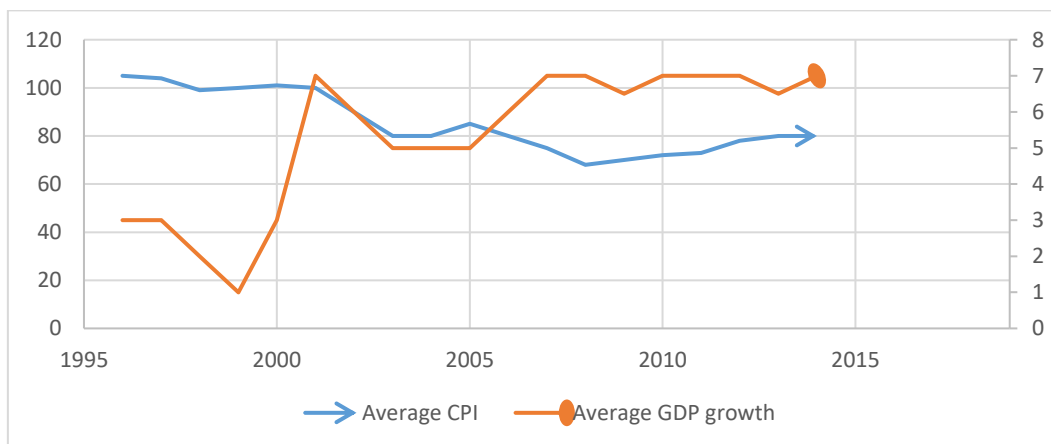
Figure 14. Corruption Perception Index (CPI) and Annual Percentage GDP (1996-2012)
Source: GDP growth data from World Bank Databank/ CPI data from Transparency International (www.transparency.org). CPI data calculated to the percentage by the author.

From Figure 14, we discovered that some years relatively experienced low CPI ranking but there were little or no correspondence in economic. In 2003, CPI was relatively unchanged but growth improved disproving the assumption of the New Institutional Economist which claims the lower the CPI ranking, the higher the growth rate within the country. Figure 14. Proves little or no correlation exists between corruption and growth rate in the case of Nigeria.

3.6. Regression Analysis

According to (Henseler, 2009), in establishing the relationship between economic growth and oil price volatility, a first-order multiple linear regression analysis was conducted by the author that consist of more than one predictor variables. The coefficient of determination between economic growth and the overall independent variables were used to measure the strength of the relationship.

$Y = \beta_0 + \beta_1 x_1 + \epsilon$

Y – GDP % growth

x_1– Oil price volatility

Presentation of results will be in such a way that after each result, the analysis will be displayed to make result clearer.

Table 1. Regression Statistics Nigeria's GDP % growth to Oil price volatility (1960-2016)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,3568475
R Square	0,1273401
Adjusted R Square	0,1114736
Standard Error	24,75875
Observations	57

ANOVA

	df	SS	MS	F	Significance F
Regression	1	4919,7201	4919,7201	8,0257008	0,0064342
Residual	55	33714,764	612,99571		
Total	56	38634,484			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	68,858076	4,544414	15,152245	2,777E-21	59,750867	77,965285	59,750867	77,965285
Oil Price Volatility	0,3182673	0,1123442	2,8329668	0,0064342	0,0931246	0,5434101	0,0931246	0,5434101

   a.   Dependent Variable; GDP growth %

   b.   Predictors; (Constant), Oil price volatility,

Table 1. Reveals there exist a relationship between economic growth and independent variable used. The R^2 values of 0,1273401 and adjusted to 0,1114736 connotes a somewhat weak relationship between dependent and independent variables however putting into consideration oil price was the only the independent variable. This explains that independent variable accounts for 11.1 % of variations in the economic growth of the country which is measure by GDP % growth.

Model Goodness of Fit

The Analysis of Variance (Anova) shown in Table 1 shows that there is a regression margin of error of 0,0064342 indicating the models has a 0,0064342 % probability of giving false predictions.

Analysis of Variance

The regression analysis established the following;

GDP=68,858076+12+0,3182673*oilpricevolatility

From Table 1, the study found that holding oil price volatility at zero was 68,858076. An increase in oil price volatility leads to an increase in economic growth of 0, 3182673 (p=.0, 0064342).

Table 2. Regression Statistics China's GDP USD to Oil price volatility, (1960-2016)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,1360403
R Square	0,018507
Adjusted R Square	0,0006616
Standard Error	6,9335766
Observations	57

ANOVA

	df	SS	MS	F	Significance F
Regression	1	49,856872	49,856872	1,0370756	0,3129615
Residual	55	2644,0966	48,074484		
Total	56	2693,9535			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	7,3894721	1,2726427	5,8063996	3,299E-07	4,8390391	9,939905	4,8390391	9,939905
World Price of Oil	0,0320394	0,0314615	1,0183691	0,3129615	-0,0310108	0,0950896	-0,0310108	0,0950896

    a.   Dependent Variable; GDP in USD

    b.   Predictor; (Constant), Oil price volatility

China, on the other hand, had a different result compared to Nigeria. Table 2. reveals there exists a weak relationship between economic growth and independent variable. The R square values of 0,018507 and adjusted to 0,0006616 connotes shows the weak relationship between dependent and independent variables. This explains that independent variable Oil price volatility only accounts for 0.066 % of variations in the economic growth of the country which is measured by GDP % growth.

Table 2. Analysis of variance (Anova) shows that there is a regression margin of error of 0,3129615 which seems not to meet the significant levels of 0.05 as a state by (Peter & Meintrup, 2016). However, we have a positive predictor variable. The study found that holding oil price volatility at zero was 7,3894721. An increase or decrease in oil price volatility will have little or no effect on countries economic growth

Table 3. Regression Statistics Indonesia GDP% growth in Oil price volatility (1960-2016)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,0934713
R Square	0,0087369
Adjusted R Square	-0,0092861
Standard Error	3,4054141
Observations	57

ANOVA

	df	SS	MS	F	Significance F
Regression	1	5,6217269	5,6217269	0,4847635	0,4892046
Residual	55	637,82649	11,596845		
Total	56	643,44822			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	4,9693526	0,6250563	7,9502485	1,051E-10	3,7167118	6,2219933	3,7167118	6,2219933
World Price of Oil	0,0107586	0,0154523	0,6962496	0,4892046	-0,0202084	0,0417256	-0,0202084	0,0417256

    a.   Dependent Variable; GDP in USD

    b.   Predictors; (Constant), Oil price volatility, Oil rent, Agriculture, Manufacturing, Industry

Table 3. Shows the independent variable accounts for R-square of 0,0087369 and adjusted valve of -0,0092861. Conclusions can be drawn that oil price volatility as a weak relationship with the GDP growth right of Indonesia.

We can see from table 1, that there exist a negative relationship between economic growth and oil price volatility from 1960 to 2016 while countries like China and Indonesia seems to not be affected by the volatility in the prices of oil despite being an oil-producing country. The result shows oil price has a mild influence on countries economy with a very low significance disproving the argument of resource-based growth strategy as a means of sustaining economic growth. However, this strategy had its benefits in the short run but seem rather not sustainable in the long run. Indonesia and China, on the other hand, implemented the growth strategy as recommended

by the structural economist with its focus on economic diversification, industrialization and manufacturing this on the hand produced a different result.

CONCLUSION

This thesis examined the effect of resource dependency on Nigeria's economic growth. Embarking on this study other studies were examined that focused on resource dependency, strategies and its effect on economic growth. There was variation in findings; some studies concluded that the Natural resource growth-based strategy appropriate growth strategy, while other studies supported the growth-based strategy but argued that growth-based strategy can be effective only with a good institution. Other studies reveal that in other to achieve sustainable growth; industrialization should be the driving force of the economy, not a natural growth-based strategy.

Ever since independence, Nigeria's economy has been centered on a resource-based growth strategy in sustaining its economy. The current growth average rate of 1.4 percent in the third quarter of 2017 proves and reveal economic growth-based strategy cannot sustain its economy. For this thesis, data used includes global oil prices, corruption data, and gross domestic and exporting data. After careful analysis of the effect of oil dependency on Nigeria economic growth, the following were the conclusions,

1. Economic growth in Nigeria since the 1960s has been attributed to the dependency on the oil sector.
2. The volatility of Oil prices and growth rate moved in the same direction between 1960-2016.
3. Oil dependency in the short-run as it advantages but its negative implication in the long-run can cause stagnation within the economy. Thus, stagnancy in Nigeria is largely attributed to Nigeria not being able to diversify its economy.

Findings also revealed that GDP growth decreases during years of low world oil price of fuel and shocks in the world oil market. However, the value of export and GDP has a positive correlation suggesting that oil prices affect countries economic growth.

Although the country recorded economic growth, however, the resource-based growth strategy is unsuccessful in Nigeria. Growth recorded were not consistent, continuous and suitable. Also, the importance of a credible institution cannot be undermined, in the case of Nigeria based on the Transparency International Corruption perception indexes; there happen to be a significant correlation between the country's ability to grow and the level of corruption buttressing the argument of the New Institutional Economist. Appropriately, in addressing the issue of oil

dependence, economic stagnancy, and volatility in Nigeria, the government should embrace diversification and shift its focus on industrialization in promoting and ensure economic growth as in the case of China and Indonesia. The government should strategically move from being an exporter of oil to a manufacturing exporter. The transition process might be expensive and requires time thus in the short-run, its attention should be shifted towards its fiscal policy which can help improved development.

Finally, this paper encountered some limitations due to lack of data of some relevant years. Data before 1960 were not readily available to measure economic performance before the discovery of Oil. Although the focus of the research is to examine the effect of oil dependency on economic growth of a country notwithstanding, other variables affect economic growth variables like GDP per capita, gross national product, HDI indicators (Health, education and living standards), technological advances, household income and many others. Other variables should be considered for further research.

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APPENDICES

	Nigeria		UAE			Indonesia		China	
	GDP Growth	Oil Rent	GDP Growth	Oil Rent		GDP	Oil Rent	GDP Growth	Oil Rent
1971	14,24	0,0	5,66			7,02	1,02	7,06	0,08
1972	3,36	0,0	1,63			7,04	2,20	3,81	0,18
1973	5,39	2,4	2,81			8,10	4,09	7,76	0,39
1974	11,16	6,8	5,53			7,63	15,05	2,31	2,55
1975	-5,23	29,6	-0,03	24,03		4,98	12,26	8,72	2,70
1976	9,04	20,2	-2,02	27,18		6,89	12,61	-1,57	3,54
1977	6,02	19,8	6,93	23,94		8,76	12,94	7,57	3,78
1978	-5,76	22,7	-4,51	23,52		6,77	11,48	11,67	5,04
1979	6,76	20,0	10,22	51,13		7,32	28,42	7,60	10,97
1980	4,20	46,3	4,15	38,60		9,88	22,71	7,81	11,57
1981	-13,13	32,6	-5,69	27,14		7,93	14,95	5,17	8,27
1982	-1,05	17,2	-4,96	18,28		2,25	6,77	8,93	4,56
1983	-5,05	12,1	3,88	19,54		4,19	9,83	10,84	5,47
1984	-2,02	19,8	2,21	20,32		6,98	11,12	15,14	5,53
1985	8,32	27,1	-7,59	18,43		2,46	10,05	13,44	5,17
1986	-8,75	30,6	7,88	11,71		5,88	5,42	8,94	2,61
1987	-10,75	17,9	2,91	17,89		4,93	8,36	11,69	4,46
1988	7,54	23,9	-2,56	15,30		5,78	5,40	11,23	2,97
1989	6,47	22,0	-7,50	23,99		7,46	7,34	4,19	3,91
1990	12,77	40,4	-2,40	31,70		7,24	9,45	3,91	5,27
1991	-0,62	45,1	12,67	20,11		6,91	5,21	9,29	2,81
1992	0,43	30,2	11,94	20,09		6,50	4,97	14,22	2,82
1993	2,09	31,5	5,91	17,10		6,50	3,91	13,87	2,65
1994	0,91	54,1	5,84	13,83		7,54	3,31	13,05	1,89
1995	-0,31	40,5	-2,85	13,64		8,22	3,16	10,95	1,63
1996	4,99	27,3	5,53	16,66		7,82	3,45	9,93	1,80
1997	2,80	30,8	8,11	13,91		4,70	3,17	9,23	1,45
1998	2,72	28,3	3,85	7,98		-13,13	3,58	7,84	0,69
1999	0,47	13,8	-3,39	10,79		0,79	4,00	7,67	1,10
2000	5,32	22,5	-0,79	18,05		4,92	6,39	8,49	2,00
2001	4,41	34,4	-4,41	13,33		3,64	4,43	8,34	1,30

2002	3,78	27,4		-10,89	12,19		4,50	3,50		9,13	1,25
2003	10,35	18,4		8,84	15,12		4,78	3,13		10,04	1,31
2004	33,74	19,1		9,03	17,98		5,03	3,70		10,11	1,59
2005	3,44	24,8		8,85	21,10		5,69	5,06		11,40	2,17
2006	8,21	30,2		8,05	23,27		5,50	4,41		12,72	2,15
2007	6,83	26,6		9,01	21,16		6,35	3,59		14,23	1,71
2008	6,27	25,2		4,06	24,18		6,01	4,41		9,65	1,91
2009	6,93	26,2		-5,92	15,76		4,63	1,92		9,40	0,81
2010	7,84	15,2		10,13	20,18		6,22	2,22		10,64	1,18
2011	4,89	12,4		6,00	24,83		6,17	2,72		9,54	1,45
2012	4,28	17,1		-1,03	24,84		6,03	2,36		7,86	1,22
2013	5,39	14,7		2,41	24,04		5,56	2,03		7,76	0,99
2014	**6,31**	**11,3**		**-2,51**	**21,37**		**5,01**	**1,75**		**7,30**	**0,80**
2015	**2,65**	**8,7**		**2,65**	**11,21**		**4,88**	**0,59**		**6,90**	**0,25**