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ANALYSIS OF OIL EXPORT AND CORRUPTION IN NIGERIA ECONOMY

Eze Onyinye Junior
Graduate University of Brighton, United Kingdom
onyitexjun@yahoo.com

Abstract

Generally, it can be argued without doubt that the engine of Nigeria economic growth lies on crude oil exploration. In this study, it is recognized that corruption was-used as an independent variable because of its substantial adverse effect on Nigerian economy. Corruption has really eaten deep into the economy of the country and that is one of the major crises that Nigeria is facing today. This study analyses the impact of crude oil export on Nigeria economy and its level of corruption. The study focused mainly on the revenue generated from oil export with the purpose of assessing oil exploration and corruption with the objective of investigating Nigeria's oil export and its contribution to the growth of economy and finding out if the level of corruption affects the economic growth in Nigeria. Based on the findings, the result portraits that oil export has significant impacted on the economy despite its effect by corruption which appears to be negatively related to other economic variables. Therefore it is recommended that the policy of oil and non-oil export promotion strategy should be taken serious by the government in order to effect a positive change. Federal government should pay more attention to sectors like agriculture and manufacturing, as well as inject.

Keywords: Oil Export, Corruption, Non-oil export, GDP, Economy

INTRODUCTION

Before the oil boom era, Nigeria was predominantly known for some non-oil export products which also contributed to the growth of the economy. During that period, there was more provision for bulk foreign exchange earnings, employment and possibly government revenue. When Nigeria got their independence, the government depended much on agricultural produce until the early 70's when crude oil was discovered at Oloibiri in Niger delta in the year

1956(Watts and Lubeck 1983: 106). Before then, Nigeria was one of the exporters of agricultural produce like groundnut, cotton, cocoa, palm oil, timber, hides and skins which are used in most manufacturing industries within and outside the country. In today economy, the Agriculture industry has effectively been replaced by the oil industry in terms of revenue yield and it has really increased the strength of the federal government. In the year 2007, the oil revenue accounted about 80 percent of the government revenue and 95 percent of export earnings (Douglas et al. 2003). Despite the significant expansion of oil towards Nigerians economy, the structural development has been poor and has even worsened the administrative position in Nigeria due to the level of corruption and oil policy implementation. Oil products are distilled from crude oil which comprises of petrol, natural gas, kerosene, bitumen etc. All these products are of necessity to the entire world because they are used in the production of goods used by most individuals and also for domestic use.

In the International market, the instability in price of crude oil has really affected the economy and has been like a challenge towards achieving desired revenue which will help in developing the manufacturing and production sector. The foreign exchange rate often affects the price of oil within and outside the country due to the fact that Nigeria don't have enough and efficient number of refinery for more massive production and to meet up the demand for oil by other countries. The revenue recovered from export of crude oil only benefits about one percent of the entire population in Nigeria due to the level of corruption involved in the system. The economic reforms has failed to achieve its full economic potentials due to inappropriate or mismanagement over the previous years. Despite the enormous resources endowment, the level of development in Nigeria is not really encouraging. The gross domestic product is increasing but the masses are still suffering from poverty, insecurity, unemployment, underdevelopment etc. which is not meant to be. That is why I said that corruption has eaten deep into the economy. The revenues are not properly distributed rather it circulates in the hands of few Nigerians. Looking at the GDP of the emerging Asian countries (china, Malaysia, Thailand, India and Indonesia) which were far behind Nigeria as of 1970, they have creditably transformed their economies and are far much better than Nigeria even though they are part of the major players on the global economy (Sanusi,2000). Revenues recovered from crude oil export is not properly monitored and published, payments made to government for the oil exploration are kept secret and the Oil and gas companies always protect the identities of their shareholders unnoticed. For the fact that most oil firms do not publish their financial statement and information country by country, there will always be corruption in terms of hiding the amount of fees and taxes paid as well as their royalties.

Problem Statement

Since oil was discovered in Nigeria during the period of 1950s, the growth performance of Nigeria GDP has been doing satisfactorily well. About 90% of Nigeria's national income is generated from the oil sector and that is why the government strictly monitors this sector so as to maintain their standard in the international market.

Due to the total dependency of the GDP on oil export, it fluctuates government spending and therefore causes the Government to be unable to apply accurate policies and to minimize the level of corruption within the economic system. Also, the communities where the oil-well are being discovered and exploited (like the Ogonis in Niger delta region) are suffering from devastation and low-economic viability because the federal Government has failed to enact and enforce environmental protection against all the hazards caused by companies that exploit the oil like Shell, NNPC etc. According to the Amnesty program international (2006), 70% of the people in Niger Delta region live below One U.S Dollar per day due to their environment degradation and also the corrupted leaders in their midst. These same leaders of these regions, go ahead to sponsor the youths in the militancy to kidnap innocent people and destroying all the efforts of the federal government towards infrastructural development.

However, the Amnesty program was introduced in the south-south region of Nigeria due to the level of poverty and suffering unleashed on the communities by the crude oil hazards; Lands were destroyed by the oil spills, waters were polluted and lives were affected. This Amnesty scheme served as a means of compensating the communities affected in order to improve their standard of living. Despite the efforts made by the federal government to calm the situation, some militant groups still terrorize the states and mount pressure on the government through the performing of reckless acts like blowing up the Oil pipelines and also kidnapping of some high officials in the government. The problem of inactive refineries is another major issue that affects the positive progress of the oil sector. The refineries we have in Nigeria are working below standard even to the extent of exporting unrefined oil outside the country to refine them and still pay a substantial foreign exchange charge to import them back for domestic consumption. Surprisingly, the level of competition in Nigeria oil industry has been very intense and competitive. Because of this reason, lots of international companies has been lobbing the oil refining agencies in order to allow them export crude oil for refining and bring back into the country, but that has proved impossible as the NNPC is run and controlled by the Nigerian government and also accounts for about 70 % of the government revenue and 40% of the country revenue.

The problem of corruption is another vital heart-break in Nigeria especially in the Oil sector. A situation whereby oil firms refuse to be honest in publishing their financial statement

and releasing the proper information needed by the government for proper monitoring and statistical analysis, results to corruption and tends to be a major problem. Rather, they go ahead lobbying the government to protect their unfavourable practices for selfish gain. The government only publishes the figure given to them in order to convince the public to believe their financial statement even though they know it's not true. Every individual wants to know how much revenue we get in every export of crude oil done and also how the money is been used.

LITERATURE REVIEW

Many economic theorists see Nigeria Oil export as the engine of the economic growth and development, in the argument, demonstrating the direct effects of crude oil exports on the economy. According to history, it was shown that crude oil export is crucial to the development process and also the sharp increases in gross domestic product are usually accompanied by sharp increase in crude oil export. Despite the increase of crude oil export to other foreign countries, some economists are still encouraging the government to look into other sectors (non-oil exports) which can also improve the economy and also increase the level of development in the country. In spite of the number of exports taking place every year in the oil sector, the Nigerian government had still not been able to reach their main target in the upstream oil and gas sector. Most indigenous companies in Nigeria have interest in this sector to assist the government in reaching their demand both domestically and internationally but they are facing financial problem of which they cannot operate in the system. This gave opportunity to some big international oil companies to invest in the Nigeria oil reserves in the deep offshore. The Nigeria oil sector has always faced security challenges most especially in the area of Niger delta where the main Oil reserves are located. But since the amnesty program was introduced in June 25, 2009, there was an improvement in the Niger Delta region as regards the security challenge. Since the security problem was tackled, some of the oil companies (Domestic partners and international partners) had opportunity to participate in bidding for oil blocks. The stake holders in the petroleum sector argued that the Nigeria Oil sector could have been compared to the western world if not for the issues relating to corruption, crude oil theft, insecurity, infrastructure deficiency, environmental pollution, as well as the funding challenges and the delay in the passage of Petroleum Industry Bill (PIB). According to Clara Nwachukwu and his colleague Michael Eboh, they stated in their report that the upstream sector has done well in the energy value chain, though the other sectors are still struggling. Despite the challenges facing the oil sector, the country has been able to make much profit from both the upstream and downstream sector. It is reckoned that about 90

percent of revenue in Nigeria is gotten from oil exports of which the upstream rates about 75 to 80 percent. However, if the issue of PIB can be settled within the oil governing body in Nigeria (NNPC) and federal Government, it will definitely go a long way to address other challenges facing the oil and gas sector.

Theories of Export, Corruption and GDP

The introduction of export supporting policies have really helped to increase the level of GDP in some developing nations like china, Korea, Pakistan, south Africa and probably Nigeria. The issue of how export trade theory and GDP have been related to each other has been a thing of estimation in the past until this present age when it started surfacing and getting clearer to the citizens of that nation. Recently, it was reported by the African development Bank, that Africa has been experiencing its high economic growth since last two decades. The GDP growth rate was averaged about 5 percent in the year 2005 but increased to 5.5 percent in the year 2006. Presently, the GDP rate of Nigeria has gone so high even more than the South Africa, of which Nigeria economy is rated as the largest economy in Africa after the sharp increase of GDP data for the first time in two decades. The legal system of Nigeria is quite different and more advanced than other African nations, and that is why Nigeria is known as the giant of Africa. Looking at the Nominal GDP from year 2010-2013, the GDP estimates have always been recorded based on a base year of 1990 which postulates that the Current Gross Domestic Product is being expressed in 1990 base price of goods and services.

In the past decades, the agric sector has always been a great donor to the Nigerian economy until the discovery of crude oil which took over the export sector with a high percentage of contribution to the total GDP. The agricultural output in Nigeria seems to be unimpressive since it performs lower than other African countries that once compete with them in the past. The relationship between economic growth and export was first highlighted by one of the famous economist, Adam Smith in his book titled “Wealth of nations”. According to one of the Nigerian Economist, Prof. Udabah (2002:207), he stated that export creates and promotes more avenues for injection into the economy. Injection involves consistent exportation of goods and services which creates more money for the exporting country. According to (Feder (1982), Lucus (1988) and Edwards (1992)), they argued that export leads to reallocation of public sector inefficient non-trade resources in the area of trade and dissemination of new management and production techniques through the entire economy. Balassa (1978) and Esfahani (1991), Rodrik (1999), stated in their research that exports may provide currency which is essential for capital and intermediate goods imports which will in turn increase the formation of beneficial capital to meet the expansion of domestic production and

thus stimulate growth of output. {Giles, Williams (2000a, 2000b)} quoted in his research that the whole economy would benefit because of the dynamics of the benefits of growth in the export sector.

According to (Helpman, Krugman (1985) and Boomstorm (1986)), they stated that international trade promotes specialization in the production of export products, which in turn increases the amount of productivity, and causes the general level of skills to increase in the export sector. Chenery, Strout (1996), an increase in exports improves the balance of payments and foreign currency reserves distended, allowing increased imports of capital goods and the necessary facilities for the growth of domestic production.

Corruption is simply an ability to secure power or wealth illegally, with the sole aim of gaining privately in a public expense. Corruption is not only found in the public sector like democratic and political sector, but can also be seen in every other areas of life even in the religious sector. It has been observed by some economic researchers that corruption has large adverse effect in Nigeria economy. Corrupt practices are as old as the world because it is not a thing of today (Lipset and Lenz, 2000). Corruption has not only penetrated the government sector but has also penetrated into the oil sector which is seen as the engine growth of the economy. This practice has spread so widely as if it has been legalized in the country (Gire 1999). The rate of poverty and unemployment within the country is very high despite the huge sum of revenues recovered from oil export. This problem occurs as a result of corrupt practices within the sect of leaders managing these oil firms in collaboration with the leaders ruling the country. The politicians and Oil firm Directors and managers are always seen as the most vulnerable money embezzlers in the country. Revenues from crude oil is not properly published and monitored, payments to government for the exploration of mineral resources are kept secret, oil and gas companies always protect the identities of their shareholders and subsidiaries which encourage them to hide stolen funds unnoticed. For the fact that most oil firms do not publish their financial statement and information country by country, they will always hide the amount of fees and taxes paid and as well their royalties. It has been recognized by some economist and policy makers that corruption has large adverse effect on Nigeria economy. Corruption has been in existence over the years even unto the nearest future except Government figures out solution to it.

In the oil industries, corruption is extensively hard to measure and its empirical economic research is fairly meager. However, some researchers are beginning to look at corruption indices which are being sourced or gathered by some private rating agencies based on the response received from some oil firm consultants. From their observation, they discovered that the correlation between indices produced by various agencies is very high. It is

observed that high prices being paid to these agencies by the oil firms constitute indirect evidence that the information is very important and can have tangible effect on the economy. According to Paolo Mauro (1997), he stated that public corruption is being traced to government intervention towards the economy, policies designed to stabilize, deregulate and privatize can equally reduce the opportunities for corrupt practices. When the Government enforces their regulation, individuals who are not ready to obey the law will be willing to offer bribes to the officials' in-charge so as to avoid or bypass the rules being set by government. When this bribe comes, the officials will be tempted to accept the bribe and when this occur often, it spoils the system and there by increases the level of corruption in that system.

In Nigeria, most of the oil firms are controlled by Multi-national companies and they award contracts to other oil servicing firms. When they need supply of any material for oil production, they call for tender of which many oil servicing firms will declare their interest. In a real world of economy, the contract is expected to be awarded to those who will deliver a good and quality product for effective production, but unfortunately in countries like Nigeria the bidders tend to bribe the officials (like the procurement officers) so as to win the contract to themselves. This practice has a negative effect because if the servicing firm that won the contact cannot be able to provide quality products needed, it will affect the quality of oil production at that particular period which thereby affects the economy.

There are non-oil sectors which also play a role in the development of the economy such sector involves the Agricultural sector. Whenever an average Nigerian hear Non-oil exports, the first thing he thinks of is the agric sector. This is because it has been the survival of Nigerian economy before the exploration of oil began. It was observed that Agriculture made a large contribution to the economy in the year 1998 with 92.8% and was the lowest in the year 1981 with 19.6% contribution to the economy. The contribution of Agricultural to total exports has been negatively related between the year 1981 and 1985, it was examined by some researchers that there was a negative growth rate in Agricultural export until SAP was introduced. The unsatisfactory performance of this sector tends to decrease the contribution of non-oil export in the economy of Nigeria. The reason why the agricultural sector has not been doing favourably well in the economy is firstly, because of unfavourable weather condition which substantially decline the agricultural output with adverse consequences of the economy. Secondly, the government agencies are not implementing the right policy measures. This could be as a result of poor orientation by institutions involved in the implementation of the policies to the needs of the small farmers. Some of these institutions include research institutes, commodity boards, credit agencies and institutions that handle the input procurement and distribution. Thirdly, most of the macroeconomic policy measures adopted by government

seem to place agriculture at a greater disadvantage. For example, when there is an excessive growth in government spending and money supply, it hikes inflation and labour cost which thereby affect the agricultural sector. The value of naira placed agriculture at a disadvantage and its export in an uncompetitive position in the world market. The local prices which were subsidized by government were never remunerative and disincentives to increase the level of agricultural produce in the country.

The response of the federal government to the non-oil export has been discouraging, particularly in the Agricultural sector. In the History of Agriculture in Nigeria today, one of the famous leader and then president of Nigeria, Chief Olusegun Obasanjo has contributed immensely to Nigeria Agricultural sector with the help of his own Farm (Ota Farm) established on October 8th 1979. Despite the challenges facing the sector, the Ota farm has been able to stabilize to an extent and also improve the non-oil export. According to the founder of the Ota farm in Nigeria Chief Olusegun Obasanjo, he stated during the Ota Farm 30th Anniversary in 2009 that the farm had come to stay and will always continue to command greater heights in agricultural production, processing of foods and efficient distribution of food resources in Nigeria and to other parts of the world. During the same anniversary, Rev. (Dr) Kwabena Darko the chairman of Darko farms and company ltd in Ghana stated in his address that “any nation that fails to provide measures to achieve food security in the 21st century is on the path of committing suicide”. In that case, it Ota farm could be able to make a little impact in the area of non-oil export, it means that non-oil export will do more better in the economy when government sponsor more people who are ready to establish in agricultural sector and other sectors like the wholesale and retail trade, services, building and construction etc, in order to improve the economy and also provide food security for the whole nation

Nigeria Petroleum Industry Bill (PIB)

This Bill is piece of legislation in Nigeria which has been the talk of the day in the oil sector, given its far reaching reform that is proposed to an oil industry as the most significant contributor to the economy of the nation. This Bill was originally introduced in year 2008. This bill has undergone several reviews just to get approval and enacted. The president of Nigeria, Dr Goodluck Jonathan presented a new version of Petroleum Industry Bill to the National Assembly for consideration and enactment. This new version of PIB presented contains some salient features like;

- The deregulation of the downstream sector
- The reformation of the existing joint ventures between NNPC and the Multi-national oil companies

- Promotion of openness and transparency in the industry which will help to reduce corruption.
- To encourage the development of Nigerian content
- To establish commercially oriented and profit driven oil and gas entities.

Despite the number of reviews done by the National assembly, the bill has still not been approved and enacted due to so many reasons given by them like the existence of different versions of the PIB and also the preparation of the general elections. According to the Minister of petroleum resources, Mrs Diezani Alison-Madueke, she said that the delay by the National Assembly in passing the proposed PIB is really threatening investments and the development of oil and gas industries. During her speech at the Oil and Gas conference held in Abuja 2011, she stated that Government is losing much more revenue than they were due to the current high oil prices resulting in windfall profits and changes in the fiscal terms. The essence of this Petroleum Industry Bill is to enable the oil industry boost up crude oil revenues and also the daily production capacity so that they will gain more revenues that will accrue to the government.

Review of Empirical Research

The analysis of Oil export on Nigeria economic growth has been empirically tested by different economist using different statistical/econometric technique. Many theorists such as Idowu (2005) argued extensively on the relationship between oil exports and economic growth in Nigeria using Johansen's multivariate Co-integration technique. After his test analysis, he concluded that there is a stationary relationship between oil exports and economic growth. He also said that there is feedback causality between Oil export and GDP.

Akanni(2007) used the PC-Give 10 (ordinary least square regression) to evaluate if oil exporting countries grows as their earnings on oil rents increases. After his test analyses with OLS, the result turned out to be positive and significant, that means there is a positive relationship between Oil rents and economic growth. Akanni concluded in his analysis that Oil rents in most oil developing countries in Africa do not promote economic growth.

Also Mohammed and Amirahi (2010) made an investigation using Error correction model of ARDL to check if factors like world oil demand and supply, oil price and production capacities enhances export growth in Iran. From their result, the observation made was that there is an inverse relationship between consumption of oil products and revenues from oil export.

Hadi, etal (2009) made an investigation using Cobb- Douglas production function to check if the income generated from Iran's Oil export has an impact on their economy. The

result stated that Iran's economy adjusts quickly to shocks and there level of technology is progressing. Therefore oil exports in Iran contributed to their real income through real capital accumulation.

According to Odularu (2010), he made an empirical investigation on the impact of crude oil production on Nigeria economic growth with the use of ordinary least square and Cobb-Douglas production functions. His result showed that the production of crude oil in Nigeria contributed well to economic growth but has not made any significant improvement on the level of economic development.

Samadi (2011) also used VEC Granger Causality and Wald Test to test the hypothesis which stated that there is a relationship between exports and economic growth in Algeria. After the test analysis, the result reveals that the explanatory variables are non-stationary and therefore there is causal relationship between economic growth and exports.

Gemechu (2002) made an analysis on the policies and the relationship between exports and economic growth in Nigeria using the Co-integration and Error Correction Model in the regression analysis. The test result states that export has significantly affected economic growth in the short run which means that there is causality runs from exports to economic growth.

Khaled, etal (2010) conducted a Causality test using Co-integration method to test if export sector in Libya enhances economic growth in Libya. From the result obtained, it shows that exports, price relatives and income are statistically co-integrated. Therefore Khaled concluded that both value of export and economic growth are related to each other.

Khadijat, Afolabi (2011) carried out an empirical research on the impact of crude oil export on Nigeria economy using the Ordinary least square method (OLS) as his econometric technique to test its significance. From his result, it shows that some of the explanatory variables (labour, domestic consumption, crude oil export and total production) are statistically significant while capital is statistically insignificant. Khadijat concluded in his research that there is apparently a significant relationship between oil export and economic growth in Nigeria.

Can Corruption be measured and used as Variable to determine impact of oil export on economic growth?

Based on several studies in literature review where different approaches were used to model corruption, I can equally say that Corruption can be measured. One of the approaches used by Knack (1995), Murphy (1993) and Mandapaka (1995) to model corruption was to transform the computation of corruption perception index (CPI) gotten from the Transparency International Corruption Index into a common Index.

The use of economic growth models has also been used to model the influence of corruption on economic growth (Murphy 1995, Mauro 1995 and Krueger 1974). Another approach is the use of game theoretical approach with three players known as Principle, agent and hidden principal (Andvig 1990; Laffont 1991; Basu 1992; Mookherjee 1995).

A programming language called SWARM has also been used by Tumovsky (1995), Jain (1998) and Stapenhurst (1999), to stimulate corruption models and also to analyze the evolutionary process of corruption on various parameters.

Other methods and models like Ordinary Least square (OLS), 2-Stage least square and Maximum-likelihood Estimation (MLE) has also been used by some scholars like Murphy (1993), Mauro (1997), Hellman (2000), Triole (1996). The game theory approach models only the demand side of corruption but involves One-stage game while it occurs in other continuing relationships. In the table below are the summary of selected empirical studies of oil export and also previous model of corruption.

Table 1: Summary of the Empirical Studies Discussed and their Findings

Year	Authors	Research	Methodology	Major Findings
2005	Idowu	Relationship between oil exports and economic growth in Nigeria	Johansen Multivariate co-integration technique	Stationary relationship between export and GDP
2007	Akanni	Does Oil Exporting Countries grows as their earnings on oil rents increases	Ordinary least square (OLS)	There is a positive relationship between oil rent and economic growth in oil exporting countries
2010	Mohammed and Amirahi	Does factors like world oil demand and supply,oil price and production capacities enhance export growth in Iran	Error correction Model	There is an inverse relationship between consumption of oil products and revenues from oil export
2009	Hadi, etal	Impact of Oil export in Iran economy.	Cobb-douglas production function	Oil exports contribute to real income through capital accumulation
2010	Odularu	Impact of crude oil production on Nigeria economic growth	Ordinary Least square and Cobb-douglas production function	Crude oil production contributed to Nigeria economic growth but had no significant improvement on economic development.
2011	Samad	Relationship between exports and economic growth in Algeria	VEC Granger Causality and Wald test	There is causal relationship between exports and economic growth

Table 1…

2002	Gemechu	Relationship between oil export and economic growth in Nigeria	Co-integration and Error correction model	There is causality runs from exports to economic growth
2010	Khaled	Impact of Export sector on Libya economic growth	Co-integration method	Exports and economic growth are related to each other.
2011	Khadijat Afolabi	Impact of oil export on economic growth in Nigeria	Ordinary least square technique	There is significant relationship between oil export and economic growth in Nigeria.
1993 1995 1996	Murphy Mandapaka Triole	Relationship between corruption and economic growth	OLS 2-Stage least square (Economic growth approach)	Only few were able to empirically prove the negative relationship between corruption and growth
1995 1998 1999 2000	Tumovsky Jain Stapenhurst Hammond	Effectiveness of some proposed solutions to combat corruption	SWARM (Simulation approach)	Many showed the strength of the cause effect relationship between corruption and growth.
1990 1991 1992 1995	Andvig Laffont Basu Mookherjee	Conditions necessary for corruption and those that is conducive to it.	One stage Game	This approach yields some useful insights into the notion of corruption.

METHODOLOGY

The methodology of any work simply refers to the steps taken by the researcher to solve the problem posed in the research work. Since this work is an economic research work based on the analysis of oil export in Nigeria and how it has really impacted on economic growth, the econometric method will be used to measure or estimate the parameters of economic relationship based on sample observations. The aim of the study is to ascertain the extent to which the explanatory variables influence the dependent variable for the specified number of years.

Thus in this methodology, we would be able to determine the impact of oil exports on economic growth in Nigeria, visa-viz establishing a casualty between Real Gross domestic product and Oil export which can be used to achieve a reasonable level of economic growth. After measuring and estimating the relationship between the two variables, the work will go further to test for various regression and structural stability of the estimated model. That means, multiple regression technique will be employed with the use of ordinary least square method.

Model Specification

Various studies on oil export in Nigeria seem to agree that there are some other variables that also affect the impact of oil export in Nigeria economy. Such variables will be highlighted in this research and they include normal export and corruption. Based on what this study aspires to achieve "Y" is assumed to be Dependent variable on "X" which is the Independent variable. The equation to be used can be stated in an implicit form and econometric model.

In the implicit form; $Y= F(X_1 X_2 X_3)$. This is because there are three independent variables which will be modeled in this research. RGDP= F (OE, NOE, COR), Where "F" is the function of the three variables stated.

Econometrically, the model for this research analysis will be stated as;

$$Y = \beta_0 + \beta_1 X_t + \beta_2 X_t + \beta_3 X_t + \mu_t$$

Where Y is known as the Dependent variable, β_0 is known as the Intercept while β_1,β_2 and β_3 are known as the Coefficients.

Thus; $RGDP= \beta_0 + \beta_1 OilExp_t + \beta_2 NOilExp_t + \beta_3 COR_t + \mu_t$

Where RGDP = "Real Gross Domestic product" which is the proxy for Economic growth

OilExp = "Oil export" which is an independent variable

NOilExp= "Non-Oil export" which is also an independent variable

COR = "Corruption" also an independent variable (percentile rank for Nigeria among countries ranging from 0 (highest corrupt) to 100 (lowest corrupt).

t = Time trend

μ = error term or stochastic term at time "t".

According to Damodar N. Gujarati, he stated that a model is simply a set of mathematical equations. If the model has only one equation, that means it is a single equation model but if the model has more than one equation, it is classified as multiple-equation model.

The econometric method to be used in this research analysis for better estimation of the parameters of economic relationship stated above is the ordinary least square (OLS) regression method.

Economic Apriori

This specifically has to with sign expectation set by economic theory and it is expected that parameters in this model have the correct signs and sizes that conform to economic theory. If they carry the expected signs, then the hypothesis is accepted otherwise they are rejected.

Statistical Approach

The significance test for the analysis will comprise of Descriptive statistics which tells us the mean and standard deviation of each of the variables, the OLS regression estimate which tells us our coefficient of determination, T-test and F-test, the Jarque-bera test, the Ramsey Reset Test, Chow-F test and Autocorrelation test.

Coefficient of Determination

This used to measure the goodness of fit of the estimated regression models. In other words, the R^2 determines how well the sample regression line will fit the data. It also measures the properties of the variations in the dependent variables that are explained by the regression model. The independent variables explain the greater portion of the variation in the dependent variable "Y". The correlation coefficient (r) is totally different from Coefficient of determination (r^2).

T-test

This particular test is used to check whether the variables in the research work are significant or not in determining the level of economic growth in Nigeria. And the hypothesis test shall be carried out at 5% level of significance and at 95% confidence interval. The hypothesis for this test is stated as follows;

- *Null Hypothesis*; $H_0 : \beta = 0$, (Statistically insignificant)
- *Alternative Hypothesis*; $H_1: \beta \neq 0$. (Statistically Significant)

And the decision rule states that "H_0" should be rejected when T –statistics is greater than the critical value [$t_{0.025(N-K)df}$]. But when the T-statistics is lower than the critical value, the "H_0" is accepted with its conclusion.

F-test

This test is used to find out the overall significance of the regression model at 5% level of significance. The hypothesis for this test is stated as;

- *Null Hypothesis;* $H_0: \beta_1=\beta_2=\beta_3=0$ (all slope coefficients are equal to zero)
- *Alternative Hypothesis;* $H_0: \beta_1\neq\beta_2\neq\beta_3\neq0$ (all slope coefficients are not equal to zero)

The decision rule for this test is that "H_0" should be rejected when F-statistics is greater than the critical value of F ie $F_{0.05(k-1,n-k)df}$. But when the F-statistic is lower, then the "H_0" is accepted while the H_1 is rejected.

Ramsey Reset Test

This is used to test for correct functional form, to check whether the linear functional form is appropriate or not for my set data. This test can be formulated as a t-statistic for the significance of the term $\hat{Y}^2$. Therefore the hypothesis can be stated as

- H_0: γ = 0 (Original model fits the data)/ correct functional form
- H_1: γ ≠ 0 (original model do not fit the data)

The Null hypothesis can be rejected if the T-statistics of the "fitted^2" (predicted value) is high but if low, the null-hypothesis will be accepted.

Chow F-Test

This test is used mostly in time series data to confirm if the estimated model is structurally stable or unstable due to certain shocks or crisis that occurred and affected the economy at that particular period. The chow F-test can also handle cases of more than one structural break. In other words, it is not restricted to only one structural break. The hypothesis can be stated as;

- H_0: Coefficients are stable (there is no structural break)
- H_1: coefficients are not stable (there is structural break)

After the estimation, if the chow F-test is greater than the critical value (2.93) reject null hypothesis (H_0) and accept Alternative hypothesis (H_1) which states that there is structural break. But if the chow F-test is lower than the critical value (2.93), we accept H_0 and reject H_1 thereby concluding that there is no structural break.

Test for Autocorrelation

The Durbin Watson statistic is used in this research to test for the presence of auto correlation. When there is presence of auto correlation, the First order autoregressive scheme will be employed to correct it. The hypothesis states that;

- H_0: P= 0 (There is serial independence in the errors)
- H_1: P>0 (There is first order (AR (1)) positive autocorrelation.

When the Durbin Watson statistics (DW-Stat) is lesser than lower Durbin Watson (D_L), the null hypothesis (H_0) is being rejected but if the Durbin Watson statistic is greater than the upper Durbin Watson (D_u), the null (H_0) is then accepted.

The data collection method for this study is basically *secondary* and it is a *quantitative* data analysis collected annually based on the number of research periods. The sources of data collection will be extracted from the Central bank of Nigeria (CBN) annual report and statement

of account and also from CBN statistical bulletin, vol.24, 2012 for the *Time series data analysis*. However, the data required for this research analysis include Real Gross Domestic product, Oil export and Non-oil export spanning through the period 1980 – 2012.The data for Corruption will be extracted from World Bank Governance and Anti-corruption website and also the Transparency International Corruption Index(1996 – 2012), since it's a key determinant for country's global competitiveness. Though the data set for corruption index is not complete but statistical estimation formula is being applied to find the missing figures.

ANALYSIS AND FINDINGS

This chapter serves as the deciding point for any research work because it adds meaning and shape to the data collected either primarily or secondary. The data used for the analysis comprises Real GDP, Real Oil export, Real non-oil export and corruption index (percentile rank for corruption in Nigeria among all countries ranging from 0 to 100). In the corruption index data, the high values shows the low level of corruption amongst other countries while the low values shows the high level of corruption amongst other countries. Apparently, the data used for the research can be viewed in the appendix page for more information. The application of these variables into econometric software will generate values that will explain the impacts of the variables empirically.

The results of this model were arrived at by estimating various forms of the equation modeled, thereby using general approach to model selection. The analysis however is based on the functional equation stated in the methodology. The ordinary least square regression technique is used for the analysis with the help of E-views automated software adopted as the econometric package for the analysis.

Descriptive Statistics

The mean determines or measures the returns of the sector while the standard deviation measures the level of risk involved in the impact of oil sector in the economy and also determine the level of success achieved. Below is the automated result obtained from the E-views software to determine the performance of each variable. The original result can be seen on the appendix page.

Table 2. Descriptive Statistics

VARIABLE	OILEXP	NOILEXP	COR
Mean	2694480	81831.85	10.51515
Standard Deviation	3640156	114483.4	3.536605
Probability	0.0324	0.008530	0.019415

From this result, we can see that mean and standard deviation of the Real oil export in Nigeria has a higher value than the non-oil export and corruption which proves that the oil export has a greater performance in the economy that the other variables and also the probability of corruption also will determine the extent at which the economy will be affected.

OLS regression Result

The result below shows the coefficient of determination of the three independent variables, the T-statistics and F-statistics.

Empirical Result;

$RGDP = \beta_0 + \beta_1 OilExp_t + \beta_2 NOilExp_t + \beta_3 COR_t + \mu_t$

$RGDP = 105857.2 + 0.043389OILEXP + 19624.41LOG(NOILEXP) - 3328.69COR + \mu_t$

Table 3. OLS regression Result

Variable	Coefficient (std error)	T-stat
C (β_0)	105857.2 (68795.40)	1.5387
OILEXP	0.043389 (0.0046)	9.4244
LOG(NOILEXP)	19624.41 (6048.83)	3.2443
COR	-3328.685 (2901.686)	-1.1471
Model Diagnostics		AR(1)
R^2	0.959	-
Adj R^2	0.955	-
F-Test	226.84(0.00)	-
Reset Test	0.5575 (0.461)	-
Chow F-Test	1.047 (0.468)	-
Durbin Watson	1.3957	1.742

The above results are stated from the E-views automated result which can be viewed on the appendix page. From the result, the entire regression coefficient has the expected sign of hypothesis. All the test result shows that Oil export in Nigeria has significantly impacted on the economy despite its effect by corruption which appears to be negatively related to Real oil export, real non-oil export and Real Gross Domestic Product. From the result, the constant (β_0) has a positive sign which states that if other independent variables are assumed to be zero, the real gross domestic product equals 105857.2. The First independent variable Real Oil export (β_1) has a positive sign which also conforms to the apriori expectation because a 1% increase in oil export will increase GDP by 4.3%, the second independent variable (β_2) known as Real Non-oil export also has a positive sign which conforms to the apriori expectation since a 1% increase in real non-oil export can add value to the economy while the variable β_3 known as the corruption (percentile rank for Nigeria among other countries), has a negative sign which

conforms to the apriori expectation because any 1% increase in corruption within the oil sector or non-oil sector will affect the growth of the economy.

Coefficient of Determination (R^2)

Since this measures the goodness of fit for the estimated model, the result concludes that 96% of the changes in Real GDP are significantly explained by variation of the explanatory variables (Real Oil export, Real Log non-oil export and corruption) in the equation model, while the remaining 4% accounts for other external factors that are not captured in the model.

Student t-test

This test determines if the independent variables used are significant in determining the level of economic growth in Nigeria. The Test is based on statistical decision theory of hypothesis testing. The T-test is carried out at 5% level of significance to decide if the Null Hypothesis (H_0) or the Alternative Hypothesis (H_1) is true. According to the methodology chapter, the hypothesis for T-test is stated as H_0: $\beta = 0$ (Statistically insignificant) and H_1: $\beta \neq 0$ (Statistically significant). From the result, the three independent variables have its own T-statistic which is compared to the critical value to determine its significance. The T-statistics for Oil export (9.42) and Log Non-oil export (3.24) is greater than the critical value "$t_{0.025\ (n-k)}$" (±2.045). Therefore we reject the null hypothesis (H_0) and conclude that the coefficient of Oil export and Log Non-oil export is statistically significant at 5% while the T-statistics for corruption (-1.15) is less than the critical value (±2.045) which concludes that the coefficient of corruption index is statistically insignificantly at 5%. However from T-test, we can conclude that statistically, there is significant relationship between oil exports, non-oil export and economic growth (RGDP) in Nigeria except corruption index which appears to be statistically insignificant. This decision is in line with empirical research carried out by khadijat Afolabi (2011) on the impact of oil export in Nigeria economy. In his research he concluded that there is significant relationship between oil export and economic growth in Nigeria.

F-test

The F-statistic tests the overall significance of the regression model based on the hypothesis stated in the methodology chapter where;

Null hypothesis; H_0: $\beta_1 = \beta_2 = \beta_3 = 0$ (all the slope coefficients equals zero)

Alternative hypothesis; H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (all the slope coefficients are not equal to zero)

From the regression result, the F-statistics (226.84) is greater than the critical value $F^{*}_{0.05(k,n-2k)}$ (2.759) therefore the null hypothesis is rejected and concluded that the slope coefficient of Oil export, Non-oil export and Corruption are not simultaneously zero.

Ramsey Reset Test

This test for the correct functional form, checks whether or not the linear functional forms is appropriate for the selected data used for analysis. This has to do with the fitted value "$\hat{Y}^2$" generated from the model. When an OLS is performed using the Ramsey Reset, the T – statistic for the fitted value is derived which will determine the decision of the researcher. The decision rule for Ramsey Reset test has been stated in the methodology chapter. Based on the result from the automated Ramsey reset test, the T-statistics of the fitted value appears to be low (0.7466) and the P-value of the F-statistic (0.5575) suggests that the null hypothesis (H_0) should be accepted which states that the original model fits the data while the alternative hypothesis is rejected. Therefore the model stated for the analysis of oil export in Nigeria economy is absolute in a correct functional form. However whenever the fitted value $\hat{Y}$ is introduced in any form of model, it increases the coefficient of determination which appears to be statistically significant.

Chow F-Test

This test was used to check if the model estimated in the methodology is structurally unstable maybe as a result of shocks or natural disaster within a particular period. The Chow F-test was used in this research to check if there was a structural break in the year 1997 which will determine the growth performance of RGDP from the result obtained. It is observed that the Chow-F statistics (1.047) is less than the Critical value (2.93) and therefore will have to accept H_0 and conclude that there was no structural break within the period. This result postulates that the Real GDP has been doing well with the help of the oil export and non-oil export.

Test for Autocorrelation

In this test, the Durbin Watson statistic is used to check the presence of autocorrelation in the estimated model. From the first regression result, it is recorded that the Durbin Watson statistics (DW) is 1.3957, Lower Durbin Watson (d_L) is 1.19 while the Upper Durbin Watson (d_u) is 1.73 based on 5% significance level. This result can be viewed at the appendix page under the first regression analysis. The hypothesis stated in chapter three of this research work states that when P=0, we accept the null hypothesis (H_0) but when P>0 we have to reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). The null hypothesis states that there

is no presence of autocorrelation while the alternative hypothesis states that there is presence of first order AR (1) positive autocorrelation in the model. According to the first regression estimate, the Durbin Watson statistic is greater than the D_L but lower than Upper Durbin Watson (D_u), therefore the null hypothesis is rejected and concluded that there may be positive autocorrelations. But in order to correct the presence of autocorrelation, the use first order AR (1) is introduced. However after the use of AR(1) scheme, the Durbin Watson statistics changes to 1.742 which is greater than the upper Durbin Watson (D_u). At this level we accept the null hypothesis stating that there is no evidence of autocorrelation based on the statistical result. In general, the investigation from this research has shown that the level of oil export, non-oil export and corruption will determine the growth of the economy. Apparently, oil export has performed creditability well in the economy. The result suggests that Nigeria should not only pay attention to the oil export but should also improve the non-oil export sector as well as controlling the level of corruption within the country.

POLICY IMPLICATIONS

It is very crucial at this point to state the working hypothesis having interpreted in the regression result. The investigation from this research work shows that if the level of Oil export increases, the level of GDP will also increase despite the level of corruption in the system. This shows that there is a significant positive relationship between economic growth and oil exports but negatively related to corruption. The investigation also shows that oil export sector has performed creditably well. The fact still remains that oil export accounted for a very greater percentage of the total exports though the level of corruption has a negative impact on the sector according to the empirical analysis. Another Implication is that our economy depends on the vagaries of oil fluctuation and also that the revenue from oil exports over the years has remained very high and therefore has been able to make-up for the short falls in the non-oil sector of Nigerians balance of trade. Also the oil exports which constitute the bulk of exports made by Nigeria, has remained the chief contributor to Nigerians economic growth. Hence, Nigeria is over depending on oil-export and paying less attention to non-oil export.

CONCLUSION

Looking at the results and analysis made on the impact of oil export in Nigeria for a period of 33 years, it was observed that there is a positive relationship between the Real GDP, Real oil export and Real non-oil export and a negative relationship between the corruption index and real GDP. The first two independent variables (oil export and non-oil export) appear to be statistically significant except the third independent variable (corruption) which is statistically

insignificant. According to the coefficient of determination, it suggest that 96% variation in RGDP can be explained by the independent variables (oil export, non-oil export and corruption) while the remaining 4% are determined by other variables not stated in the model. From the result, since the oil export and non-oil export has a positive significance; it means that empirically they have contributed the growth of economy while corruption has affected the growth rate of the economy negatively. Also, the reduction in oil export will affect the economic growth to an extent because that is the engine growth of the economy, despite the contributions made by the non-oil export. But if the percentage growth of non-oil export is simultaneously on the same level with oil export, the reduction in crude oil export will not really affect the growth of the economy per say.

Based on the empirical research carried out on the analysis of oil export in Nigeria economy covering the year 1980-2012 using econometric technique, it appears that statistically there is a significant relationship between Real Gross Domestic product, oil export and non-oil export which therefore suggests that the Alternative Hypothesis (H_1) which states that there is a significant relationship between Real oil export and Real GDP should be accepted and reject the Null (H_0). Corruption index was used to measure the performance of the oil sector on Nigeria economy. From the result it is observed that there is a correlation between corruption and economic growth in Nigeria and if strict measure is not taken, it will cripple the oil sector which automatically affects the state of the economy and the level of development within the country. Corruption has stolen the wealth of Nigeria thereby enslaving people with poverty. From the regression analysis, it is proven that corruption is negatively related to economic growth because of its insignificance effect on economic growth. The higher the rate of corruption the lower the growth of development in the oil sector as well as the ratio of investment in the economy. Since the oil sector is seen as the engine growth of the economy, it is expedient that the government monitors the activities to ensure accurate and better output/result. Therefore based on this research, I can conclude that oil export has contributed well to the economy of Nigeria numerically, though there is low level of development because the richer in the nation keep getting richer while the poor ones keeps getting poorer.

RECOMMENDATION

Based on the empirical research carried out in a theoretical and econometrically, I would recommend that government should adopt some of the measures listed below to improve more on the state of the economy both numerically and in development.

- Government should ensure that the policy of oil and non-oil export promotion strategy is taken serious for a positive change.

- Since the non-oil sector is also contributing to the economy, I suggest that the federal government should pay more attention to sectors like agriculture and manufacturing, as well as inject more money into the system to increase their level of production and impact in the economy.
- Technical input and financial support should be provided for the agricultural and manufacturing sector, perhaps through favourable prices for the materials needed and developing the level of infrastructure to encourage partnership between the public and private and also grant tax incentives.
- There should be reduction in the exportation of crude oil for refining in order to fix-up the challenges faced in the domestic refineries and also to setup more refineries for production
- The export promotion policy should be backed up by strong political and economic environment in order to attract foreign investors and improve technology.
- The manufacturing sector should go further in advertising their products globally rather than locally, in order to attract foreign customers who will help to promote the non-oil export.
- Importation of manufactured products outside the country should be reduced in order to encourage the home based industries and to protect them from unhealthy competition.
- Government should always monitor the committee set up for the deregulation and privatization of NNPC to ensure they are doing their work effectively
- The revenue generated from crude oil export should be used to set up more active refineries and also refurbish the old ones to help increase the bonds of crude oil produced every day.
- Government should monitor the level of corruption within the oil sector in order to control its effect on the economy.
- Government should help to make the price of petroleum products affordable for domestic users.

SCOPE FOR FURTHER RESEARCH

One of the Implication for further research is that Nigerian economy depends very much on the vagaries of oil fluctuation of which when affected negatively will result to low income level and Inflation of goods. When the oil price per barrel is reduced, it sends both political and economic shock n the system. Currently, the price of Oil is reduced and it has really destabilized the economy. Even though the country does not only export oil, but it is seen as the major

commodity that yields more revenue for the country. Another implication is that it will lead to setbacks in the economic transformation system especially those countries that depend much on Oil export as their source of revenue. Also the oil exports which constitute the bulk of exports made by Nigeria, has remained the chief contributor to Nigerians economic growth

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