CRUDE OIL REVENUE AND ITS EFFECT ON ECONOMIC DEVELOPMENT: THE NIGERIA'S SCENARIO

BY

[1]TOPBIE, JOSEPH AKEEREBARI, [2]ADESUGBA CHIMA NWAMAKA

DEPARTMENT OF ECONOMICS, UNIVERSITY OF PORT HARCOURT, RIVERS STATE, NIGERIA.

Abstract

Empirically, this study sought to investigate crude oil revenue and its effect on Nigerian economic development, with the usage of yearly time-series data on variables which were collected from Word Bank database, Nigerian federal ministry of finance, Nigerian Central Bank, and Nigerian National Bureau of Statistics for the periods between 1981 and 2019. Dependent variable-gross national income per capita (GNIpc) was used to proxy economic development, whilst government total expenditure (GTEXP), oil revenue (OIL_REV), exchange rate (EXCHR) and external reserves (ETR) were used as independent variables. The study adopted Pairwise Granger Causality approach to analyse causal relationship between study variables. The findings of the study revealed that government total expenditure (GTEXP), oil revenue (OIL_REV), exchange rate (EXCHR), and external reserves (ETR) Granger cause gross national income per capita (GNIpc), but gross national income per capita (GNIpc) does not Granger cause government total expenditure (GTEXP), oil revenue (OIL_REV), exchange rate (EXCHR), and external reserves (ETR), implying that unidirectional causality runs from all independent variables to dependent variable. Thus, the study recommended that policymakers should ensure funds being generated by oil revenue be effectively used for the benefits of all Nigerians. And also, fixed exchange rate regime should be focused on to keep the value of the currency within a narrow band.

Keywords: *Crude oil, Economic Development, Resource-curse Thesis*

1. Introduction

The discovery of oil which has become the mainstay of Nigeria's economy today dated back in 1956 at a community called Oloibiri the present-day Bayelsa in the Niger Delta region of Nigeria. This discovery was characterized by exploration that took half a century. Shell-BP was the first major oil giant company to make this discovery. Then in 1958, Nigeria was said to have joined the ranks of producers of oils and its first oil field historically came on stream which produced five thousand one hundred barrels per day (5,100 bpd). After the year 1960, the rights for exploration in offshore and onshore areas connecting the Niger Delta which were extended to other alien corporations. In 1965, Shell discovered another field called EA in shallow water in Warri the south-eastern part of Delta State. At the end of Nigerian-Biafran civil war in 1970, this period coincided with an increase in the price of oil around the world, and this enabled Nigeria to reap the benefit of instant riches from its crude oil production.

In 1971, Nigeria was welcome as a member of Organisation of Petroleum Exporting Countries, OPEC, and the establishment of the Nigerian National Petroleum Company (NNPC) was done in 1977. This State-owned and-controlled company play a predominant role in both the downstream and upstream sectors. Shell D'Arcy Petroleum's Trailing discovery of crude oil in 1958, pioneering production commenced from the oil field of company in Oloibiri in the Eastern Niger Delta. Nigeria had accomplished the level of production over two million barrels of crude oil per day by the late 1960s and early 1970s. Although after a decade, production figures dropped especially in the 1980s due to economic slump, but a total revival of oil production to a record level of 2.5 million barrels per day was witnessed in 2004. Crude oil production plays a predominant role in the economy of Nigeria and it accounts for about 90% of its gross earnings. This significant role has obliviated agriculture which traditionally was the mainstay of the Nigerian economy, in the early 1950s and 1960s. Today, there is a record of 159 oilfields and 1481 oil wells in Nigeria which are in operation according to the Department of Petroleum Resources (Niger Delta Environmental Survey, 1997). The South-South region is the crude oil productive base of the nation that is located at the coastal Niger Delta Basin area of the Niger Delta region

and it involves 78 of the 159 oil fields. Presently, it is on record that Nigeria has more than 7,000 kilometers of pipelines, 275 flow stations, and flow lines, ten gas plants, four refineries, and 275 flow stations which are all being operated by 13 oil giants. Among these international oil companies, Shell, Chevron, Mobil, Elf, Agip, and Texaco play a leading role. Of course, it is worthy to know Shell is the largest among these multinational oil companies that has been active in Nigeria. Shell has been in Nigeria for more than fifty years, and it has produced more than 50% of the Nigerian oil and has over a 100 oil fields which are available at its disposal. The second and third oil producers in Nigeria are Mobil and Chevron. Though Irina Romanova (2007) has it that these oil giants – Shell, Mobil, and Chevron account for more than 65% of Nigerian crude oil, they operate highly in an integrated manner globally both in the downstream and upstream operations. Mostly, Nigeria's oil fields are scattered and small, however as of 1990. Record has it that these small unproductive fields accounted for 62.1% of all Nigerian oil production. This is contrasted with the 16 largest fields which produced 37.9% of Nigerian petroleum at that time. Crude oil as one of the natural resources Nigeria is endowed with could have been seen as a trajectory of economic development due to enormous financial benefits derived from it. As disclosed by the apex bank, CBN in its Quarterly economic report adding that oil and gas earnings accounted for 54.2 percent of totally-collected revenue of N10.21 trillion in 2019. Crude oil is believed to be creator of wealth, an important engine of growth and development. This belief has failed and cannot hold, because corruption in the oil and gas sector has taken another dimension that funds generated by this sector have been used for subsidy payment, for which a few individuals are the ones benefitting hugely from this national cake. Hence, International Monetary Fund has said the Nigerian government should remove oil subsidy completely and adopt revenue-based fiscal consolidation. It further stated the total removal of regressive fuel subsidy is a near-term priority, combined with sufficient compensatory measures for the poor. In its statement, it maintained that moving to a market-based pricing system in early 2022 as stipulated in the 2021 Petroleum Industry Act is necessary. This measure is aimed at enhancing the performance of crude oil sector so as to bring about economic development and the nation's creation of wealth. Yet, as a result of this, our dependence on crude oil and heavy subsidy payment has remained on the increase as available record by Lagos-based economic research and analysis firm, Financial Derivative Company (FDC) disclosed that Nigeria could spend $5 billion by the end of 2019 far beyond earlier projection of $3.5 billion. Thus, this has rendered severe consequence and retardation on economic development. Given the fact that crude has now become the mainstay of the Nigerian economy as well as catalyst for economic development, mismanagement of the funds accruing from crude oil clearly portends a great danger for the economy. Although, in this regards, some studies have been carried out as regards to this subject, and they have also used different strategies to tackle the problem. However, using this approach would make a more significant difference from the

techniques used and outcomes found by previous studies. It is of interest in this study to conduct an analysis of how to solve this problem by investigating the crude oil revenue and its effect on Nigerian economic development from 1981 to 2019.

2. Literature Review

1.1. Conceptual Literature Review

Nigeria is the largest oil and gas producer in Africa. Crude oil in Niger Delta Basin, a Southern part of Nigeria comes in two forms; light and comparatively heavy – the lighter one is around 36 gravity and the heavier one is around 20-25 gravity. Both forms are paraffinic and low in sulphur (David Thomas, 1995). Nigeria's budget and its economy have been largely buttressed by income and revenues generated from this oil and gas sector since the year 1960. February 2021 Statistics shows that the Nigerian oil sector makes a contribution of about 9% of the entire country's gross domestic product, GDP. Nigeria, as Africa's giant is the highest producer of oil and gas in Africa, and thus is a main exporter of petroleum products and crude oil to the United State of America. Exportation of Nigeria's oil to U.S accounts for over one million barrels per day this represents 9% of the U.S total crude oil and petroleum products imports and over 40% of Nigeria exports (Reuters, 2011).

1.2. Theoretical literature Review

This section of the study discusses deeply about selected theories of development.

1.2.1. The resource-curse thesis

Richard Auty in 1993 used this theory to describe how countries that are rich in natural resources find it difficult to use the wealth being received from their natural resources to boost their economies and these countries however had very low economic growth and development than countries that lack these abundant natural resources. In the expansion of this theory, Sachs, and Warner, 2001 argued and stated that there is a close relationship between natural resource abundance and poor economic growth. They went ahead to argue that this inverse relationship between natural resource, wealth, economic growth, and development can be easily seen by glaring at examples from the oil-producing countries especially Nigeria. The resource curse, the paradox of plenty or the so-called Dutch disease, refers to the paradox that regions and/or countries with an abundance of natural resources tend to have less economic growth and worse development outcomes than the countries with fewer natural resources. The rationale for this paradox of plenty or Dutch disease is attributed to government mismanagement of resources, or weak, ineffectual, unstable, or corrupt institutions possibly due to the easily diverted actual or anticipated revenue stream from extractive industries, appreciation of the real exchange rate leading to deindustrialization, volatility of revenues from natural resource sector due to exposure to global commodity market swings (Okeke and Aniche, 2013:23). Also in their argument, Stiglitz, and Karl (2005) maintained that extraction of resources lowers the wealth of a country unless the funds generated are invested in other forms.

1.2.2. Raul Prebisch Dependency Theory

This Dependency theory is simply a technique to fathom economy of underdevelopment which emphasize the putative restrictions posed by the world political and economic order. Argentine economist and statesman Raul Prebisch was the first to propose this method in the late 1950s, though this theory was said to have gained prominence in the 1960s and 1970s. Accordingly, dependency theory, postulated that underdevelopment is majorly caused by the unimportant position of affected countries in the world economy. Specifically, these underdeveloped economies offer raw materials and cheap labour on the world market and sell these resources to advanced economies, which have the means of transforming them into finished goods. The least-developed countries end up buying the finished goods at high prices, depleting the capital they could have used otherwise to upgrade their own productive capacity.

1.3. Empirical Literature Review

Crude oil revenue and its effect on economic development has attracted the attention of various researchers and scholars both inside and outside Nigeria. The approach of the examination of this topic has taken several dimensions by different scholars. The subject under review is a vital one which should be subjected to careful empirical review in order to keep abreast with the positions of the concerned researchers and scholars. For instance;

A study by Jina et al. (2017) in examining the causal relationship between petroleum income tax and economic development in Nigeria between 1999 and 2015. Gathering relevant data from the Statistical Bulletin of the Central Bank of Nigeria. Simultaneously, the ordinary least square econometric technique (Q correlogram, co-integration, and granger tests) was employed for the analysis. Results showed that petroleum income tax has a vital and robust relationship with economic development.

Also, Onaolapo et al. (2013) analysed the effect of petroleum profit tax on Nigerian economy using multiple regressions. The result of their study portrayed that income from a nation's natural resource has a positive influence on economic growth and development.

Again, Ibeh (2013) in her study, investigated the impact of the oil industry on the economic growth performance of Nigeria. Her study applied ordinary least square (OLS) method to regress Gross Domestic Product (GDP), on oil revenue (OREV). The result of the study revealed that the two explanatory variables did not have any significant impact on growth performance of the Nigerian economy within the periods of study.

Akinlo (2012) also assessed the vitality of oil in the development of the Nigeria's economy employing a multivariate VAR model for the period of 1960 and 2009. He modelled oil sector against other four sectors, such as manufacturing sector, agriculture sector, trade & service sector, and building & construction sector. The results of the empirical analysis displayed that the five sub-sectors co-integrated, this implies that the oil can cause other non-oil sectors to grow. However, oil had an inverse relationship with the manufacturing sector. Whereas, the result further revealed that bi-directional causality runs amongst the study variables.

More so, Odularu (2008) in his study examined the link between the crude oil sector and the Nigerian economic performance. Adopting Ordinary Least Square technique, and it was found that consumption of crude oil and export significantly contributed to the betterment of the Nigeria's economy.

Eravwoke et al. (2014) studied crude oil export and its impact on economy of developing countries: with focus on Nigeria. The study used ordinary least squares regression method, Augmented Dickey-Fuller unit root, cointegration test, and the short run dynamics. The result of the study reported that crude oil exports had adverse effect on economic growth in the Nigeria.

Furthermore, Baghebo and Atima (2013) examined the impact of petroleum on economic growth in Nigeria and used data covering the period 1980-2011. The result of the study found that the variables understudy co-integrated to long-run equilibrium. And further found that Foreign Direct Investment had a positive and significant impact on Real GDP.

In examining impact of crude oil revenue on the growth of the Nigeria's economy between 1960 and 2010. Nwoba and Abah (2010) used ordinary least square (OLS) method for analysis and the result of the finding revealed there is long-run relationship between crude oil proceeds and gross domestic product (GDP). And it further demonstrated that the extent of economic growth impacted by the oil industries was significant.

Awujola, et al. (2015) in their study examined the relationship between economic impact of oil exportation and the Nigeria's economy from the period of 1970 to the period of 2012. The study utilized vector error correction model to analyse its data. The result of the finding demonstrated that there is an existence of a long-run relationship between the crude oil exports and the economic growth in Nigeria.

Kawai, (2016) in his study investigated the impact of the non-oil exports on the economic growth in Nigeria with usage of time-series annual data between 1980 and 2016. The study applied multiple regressions method of data analysis. And the finding revealed that non-oil exports claims led growth in Nigeria for these periods of study.

More so, Usman, et al. (2015) in their study, determined the evidence of petroleum resources on Development of Nigerian Economy from 2000 to 2009. Annual time series data on study variables were two - crude oil Revenue and the Gross Domestic Product, GDP. The tool of data analysis employed was simple linear regression model with the aid of Statistical Packages for Social Sciences (SPSS). And it was found that petroleum had a direct and positively significant relationship with the economic growth.

Also, Ogbonna and Appah (2012) examined the effects of petroleum income on economic growth in Nigerian from the

periods 2000 to 2009; the study used the gross domestic product (GDP), per capita income (PCI), and inflation (INF) as response variables, petroleum profit tax (PPT), and oil revenue and licensing fees (LF) as the regressor variables. The result of the study found that oil revenue had a positive and significant relationship with GDP and PCI, and a positively insignificant relationship with INF. Similarly, PPT had a positive and significant relationship with GDP and PCI, and a negatively insignificant relationship with inflation. It was further revealed that LF positively and insignificantly related with GDP, PCI, and INF respectively,

2.1. Gap in Literature

Crude oil is very contributory to development if managed properly. However, some academic research has established that crude oil is harmful to economic development because it does more harm than good, especially to the developing nations because of the mismanagement of money derived from it. Like the findings of Ibeh (2013) who in her study investigated the impact of the oil industry on growth performance of the Nigeria's economy and the result demonstrated that two of the explanatory variables did not have any significant impact on growth performance of the Nigeria's economy within the same period. Her findings contradicted Odularu (2008) findings that found a significantly positive relationship between oil sector and economic performance in Nigeria. These inconsistencies in research findings call for concern, especially in matters of this nature that has to do with economic development. For instance, Appah and Ogbonna (2012) investigated the nexus between petroleum income and Nigerian Economy in their study. Their study only described the variables used but failed to disclose the method of analysis it used which is very necessary. The present study describes the techniques it uses to analyse its data. More so Kawai, (2016) in his study examined particular impact of the non-oil exports on the economic growth in Nigeria with usage of time-series annual data between 1980 and 2016. The study failed to describe the variables it used, thus the present study describes the variables it uses in its study. Furthermore, Akinlo (2012) assessed how the essentiality of oil affect the development of the Nigeria's economy with the application of a multivariate VAR model over the period of 1960 and 2009; the periods the study covered are far back. But there have developments in research studies, hence this study is current it deals with up-to-date data. It also links its findings with some previous studies and argue its findings based on some theoretical frameworks that underscore the study.

3. Methodology and Data Estimation Techniques

The estimation of the study variables is done using Augmented Dickey-Fuller Test to test for stationarity of the series, whilst the Johansen co-integration test is used to determine if there exists long-run relationship between the dependent and independent variables in the model, and finally, pairwise granger causality test is estimated to determine the causal relationship between variables under

study. The regression estimation is done using E-views10 statistical software to evaluate the parameters in order to decide whether the estimates of the parameters are theoretically meaningful and statistically satisfactory.

3.1. Data Sources and Study variables

This study investigates the crude oil revenue and its effect on economic development in Nigeria, and it adopts ex post facto design using already existing annual time-series data on study variables – such as gross national income per capita (GNIpc) as a proxy for economic development and are sourced from World Bank and are in Billions U.S. Dollars; while, data on government total expenditure (GTEXP), oil revenue (OILREV), exchange rate (EXCHR) and external reserve (EXTR) are sourced from federal ministry of finance, office of the Accountant General of the federation & Central Bank of Nigeria and Bureau of Statistics respectively from 1981 to 2019 and are all in Billions Naira except external reserves (EXTR) which is in Millions of U.S. Dollars.

3.2. The Specification of the Model

This research study is being anchored on the theory of resource-curse by Richard Auty in 1993. The theory describes that countries rich in abundant natural resources are unable to use the wealth derived from these resources to boost their economies and how these countries had lower economic growth and development than countries without abundance of natural resources. In light of this theory, the model that is used to investigating crude oil revenue and its effect on economic development in Nigeria is based on that proposed by Usman, et al. (2015) in their study, determined the evidence of petroleum resources on Nigerian Economic Development from 2000 to 2009. Using crude oil Revenue and the Gross Domestic Product, GDP. The adapted form of the model is expressed in a multiple regression and modified with the incorporation of exogenous factors considered includes oil revenue (OILREV), exchange rate (EXCHR), external reserves (EXTR), and Government total expenditure (GTEXP) were incorporated in the model because revenue from oil export constitutes 82% of government revenue which form its expenditure (World Bank, 2013). Therefore, a functional form of crude oil revenue and its effect on Nigerian economic development is illustrated as:

$$GNIpc = f (GTEXP, OILREV, EXCHR, EXTR)............. (1)$$
Where;
GNIpc= Gross National Income Per Capita (Dependent variable)
GTEXP= Government Total Expenditure (Explanatory Variable)
OIL REV = Oil Revenue (Explanatory Variable)
EXCHR = Exchange Rate (Explanatory Variable)
EXTR = External Reserves (Explanatory Variable)
From the functional relationship above, it can be represented in econometric model as follows:
$$GNIpc = \beta_0 + \beta_1 GTEXP + \beta_2 OILREV + \beta_3 EXCHR + \beta_4 EXTR + \mu .... (2)$$
Where: β_0 = Constant term, β_1 = Regression parameter of GTEXP; β_2 = Regression parameter of OILREV; β_3 =

Regression parameter EXCHR, and β_4 = Regression parameter of EXTR, μ = Idiosyncratic Error

A priori expectations
In accordance with economic theory, it is expected that β_1, β_3, and β_4 are to be positive, that is, > 0, and β_2 negative, that is < 0.

4. Results and Discussion of the data analysis

4.1. Stationarity Test for study variables
Since the study variables involved time-series data, the Johansen technique cannot be applied unless it is established that the variables concerned are stationary. Data on each series were tested for stationarity so as to avoid the problem of spurious regression. For this study, the Augmented Dickey-Fuller (ADF) test is employed to test for the level of stationarity and it is revealed that the series are all stationary after first differencing I(1). Intercept, no trend with one lag was chosen based on Akaike Info Criterion; $\Delta y_t = \sigma + Yy_{t-1} + \ldots \mu_t$ …… (3)

The unit root test results are presented in table 1 below.

Table 1. Augmented Dickey-Fuller Results

SERIES	ADFT LEVEL	CRITICAL LEVEL	ORDER OF INTEGRATION	P-VALUE
LGNIpc	-1.114197	-2.943427	I(0)	0.6999
D(LGNIpc)	-3.164218	-2.943427	I(1)	0.0304
LGTEXP	-0.610934	-2.941145	I(0)	0.8563
D(LGTEXP)	-6.556305	-2.943427	I(1)	0.0000
LOIL_REV	-1.439005	-2.941145	I(0)	0.5531
D(LOIL_REV)	-6.172019	-2.943427	I(1)	0.0000
LEXCHR	-2.116114	-2.941145	I(0)	0.2397
D(LEXCHR)	-5.19334	-2.943427	I(1)	0.0001
LEXTR	-1.447088	-2.941145	I(0)	0.5491
D(LEXTR)	-7.339606	-2.945842	I(1)	0.0000

Source: Authors' computation (E-view 10 Software)

Results in table 1 above show that at level of testing I(0) the series are non-stationary – which means, there is a unit root in the model. Thus, stationarity is achieved after first differencing of all the study variables. After attaining stationarity after first differencing, this means the study variables possessed long-run properties, hence, the series are integrated of similar order one I(1).

1.1. Co-integration Test for Study variables
Essentially, the test of co-integration is applied to determine the long-run relationship among study variables. In the study, the variables used are per capita gross national income (GNI_PC), government total expenditure (GTEXP), oil revenue (OIL_REV), exchange rate (EXCHR) and external reserves (EXTR). Hence, Johansen co-integration test is employed to test for the presence of this long-run relationship among the series of the similar order of integration through forming a co-integration equation. The main intuition of this co-integration test is that, if at the long-run, two or more series move closely together, it suggests that the series are defining a long-run relationship as the difference them is stationary. On the contrary, lack of co-integration shows that the variables do not have long-run relation. The Johansen co-integration test result is displayed in table 2a & table 2b below.

Table 2a

Unrestricted co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.830683	113.8848	69.81889	0.0000
At most 1 *	0.550321	49.94937	47.85613	0.0314
At most 2	0.287379	21.17739	29.79707	0.3467

At most 3	0.162731	8.980411	15.49471	0.3672
At most 4	0.069326	2.586473	3.841466	0.1078

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

 * denotes rejection of the hypothesis at the 0.05 level

 **MacKinnon-Haug-Michelis (1999) p-values

Table 2b

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.830683	63.93546	33.87687	0.0000
At most 1 *	0.550321	28.77198	27.58434	0.0351
At most 2	0.287379	12.19698	21.13162	0.5283
At most 3	0.162731	6.393938	14.26460	0.5632
At most 4	0.069326	2.586473	3.841466	0.1078

 Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
 * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

The tables 2a & table 2b above present the estimated results of the Johansen co-integration test. The results display that there are 2 co-integration equation. This suggests the existence of a long-run equilibrium relationship among the study variables. This co-integration relationship is evidenced by Trace statistic and the Max-Eigenvalue statistic with their respective p-values in the results of Johansen co-integration test. In the estimated results, both the Trace statistic and maximum Eigenvalue statistic show that long-run relationship is existed among the study variables at 5% critical value. Thus, this indicates that there is long-run relationship among GTEXP, OIL_REV, EXCHR, EXTR. and GNIpc,

1.2. Pair wise Granger Causality Test

In order to investigate the patterns of correlation by using empirical datasets in our model; this study employs Granger causality test, so as to check the robustness of results and to determine the nature of the causality of relationship between gross national income per capita and Government total expenditure, oil revenue, exchange rate, and external reserves. The results are presented in table 3 below.

Table 3 Granger causality Test Results

Null Hypothesis:	Obs	F-Statistic	Prob.
LGTEXP does not Granger Cause LGNIPC	37	5.32690	0.0101
LGNIPC does not Granger Cause LGTEXP		1.12135	0.3383
LOIL_REV does not Granger Cause LGNIPC	37	5.42673	0.0093
LGNIPC does not Granger Cause LOIL_REV		2.45866	0.1016
LEXCHR does not Granger Cause LGNIPC	37	6.23963	0.0052
LGNIPC does not Granger Cause LEXCHR		0.73355	0.4881
LEXTR does not Granger Cause LGNIPC	37	7.71903	0.0018

LGNIPC does not Granger Cause LEXTR		0.54915	0.5828
LOIL_REV does not Granger Cause LGTEXP	37	0.27727	0.7596
LGTEXP does not Granger Cause LOIL_REV		0.88873	0.4211
LEXCHR does not Granger Cause LGTEXP	37	2.10717	0.1381
LGTEXP does not Granger Cause LEXCHR		0.02286	0.9774
LEXTR does not Granger Cause LGTEXP	37	1.80561	0.1807
LGTEXP does not Granger Cause LEXTR		10.9616	0.0002
LEXCHR does not Granger Cause LOIL_REV	37	7.13273	0.0027
LOIL_REV does not Granger Cause LEXCHR		1.13975	0.3325
LEXTR does not Granger Cause LOIL_REV	37	0.19537	0.8235
LOIL_REV does not Granger Cause LEXTR		3.98273	0.0285
LEXTR does not Granger Cause LEXCHR	37	0.69852	0.5047
LEXCHR does not Granger Cause LEXTR		3.35712	0.0475

Source: Authors' computation with E-view 10 Software

Table 3 illustrates the results of the pairwise Granger Causality Tests. The estimated results show that the log transformation of GTEXP, OIL_REV, EXCHR, or ETR Granger cause the GNIpc respectively, but the GNIpc does not Granger cause GTEXP, OIL_REV, EXCHR, or ETR meaning that the null hypothesis of no causality between these study variables is upheld. This implies that causality does run from GTEXP, OIL_REV, EXCHR, or ETR to GNIpc within this one period under study – hence, unidirectional causality runs from GTEXP, OIL_REV, EXCHR, or ETR to GNIpc respectively.

5. Conclusion and Recommendations

Economic development has been a subject of discussion amongst nations. Countries set out policies, modalities, and programmes in order to achievement certain macro-economic goals, especially, economic development. This study sought to investigate crude oil revenue and its effect on Nigerian economic development; using annual time-series data on study variables which were drawn from World Bank, federal ministry of finance, National Bureau of Statistic, and Central Bank of Nigeria for the periods ranging from 1981 to 2019. In conclusion, the study suggests that development should encompass general welfare of individuals with the achievement of certain level of life, improvement in infrastructures, standard of living, life-long economy that is free from macroeconomic phenomena. Also, the variables understudy included in the model should be properly controlled by setting out policies that will manage their behaviours. And finally, recommended that policymakers should ensure funds being generated by oil revenue be effectively used for the benefits of all Nigerians. And also, fixed exchange rate regime should be focused on to keeping the value of the currency within a band that is narrow.

REFERENCES

1. Adekanola, O. (2007) Taxation as a Means of Economic Revitalization: Limitations and Prospects in a Developing Economy, Lagos. The Nigerian Institute of Chartered Accountants of Nigeria- *The Nigerian Accountant*, 4(4), pp. 12-27.

2. Akinlo, A. E (2012). How important is oil in Nigeria's economic growth? *Journal of Sustainable Development*, 5(4).

3. Auty, G. (1993). Leading Issues in Development Economics. Oxford University Press

4. Awujola A, Adam, S.O. and Alumbugu, A.I. (2015) Oil Exportation and Economic Growth in Nigeria Developing Country Studies. Vol.5, No.15, 2015 www.iiste.org

5. Baghebo, M. and Atima, T.O. (2013). The impact of petroleum on economic growth in Nigeria. *Global Business and Economics Research Journal*, 2(5), 102-115

6. Eravwoke, K. E. E. Alobari, C. M. and Ukavwe, A. (2014). Crude Oil Export and its Impact in Developing Countries: A Case of Nigeria. *Global Educational Research Journal*, 2(6), 80-92

7. Ibeh, D. S. (2013). Diversification and development of the UAE's economy. Messina, Italy: University of Messina.

8. Ibeh, F.U. (2013). The Impact of Oil Revenue on the Economic Growth in Nigeria: 1980-2010.

9. Igbeasere, T. (2013). The Effect of Oil Dependency on Nigeria's Economic Growth. *Journal of International Institute of Social Science*, 3(1), pp. 23-32.

10. *Irina Romanova, (2007) Oil boom in Nigeria and its consequences for the country s economic development, Munich, GRIN Verlag, https://www.grin.com/document/67959*

11. Jina, Kassem Gopar, Lawrence Mancha Dalyop, and Bezum David Yusuf (2017). Impact of Petroleum Profits Tax on Economic Growth in Nigeria: *A Longitudinal Study, Tax Academy Research Journal,* Vol. 1 No.1 pp 139 –150.

12. Johansen, S. and Juselius, K. (1990). Maximum likelihood estimation and inferences on cointegration-with applications to the demand for money. *Oxford Bulletin of Economics and Statistics,* 52, pp. 169-210. http://dx.doi.org/10.1111/j.1468-0084.1990.mp52002003.x.

13. Johansen, S. and Juselius, K. (1992). Testing structural hypotheses in a multivariate cointegration analysis of the PP and UIP for UK. *Journal of Econometrics*, 5(3), pp. 211-244. http://dx.doi.org/10.1016/0304-4076(92)90086-7.

14. Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control,* 12, pp. 231-54. http://dx.doi.org/10.1016/0165-1889(88)90041-3.

15. Kawai, V. (2016) An Analysis of the Impact of Non-Oil Exports and Economic Growth in Nigeria from 1980 – 2016. *International Journal of Innovative Research in Social*

16. Musa, Y. A.; Sunusi, S. A.; Sabiu, B.S. and Abdullahi, Y. J. (2016). Analysis of the Impact of Oil Revenue in the Nigerian Economy. *IOSR Journal of Economics and Finance*. 1(7), pp. 10-12.

17. Nwoba O. E. and Abah, E. O (2010) Impact of Crude Oil Revenue (COR) On Economic Growth in Nigeria (1960-2010) Ke IOSR: *Journal of Humanities and Social Science*: (IOSR-JHSS) Volume 22, Issue 7, Ver. 15 (July. 2017) PP 85-99, 1(6), pp. 9-17.

18. Odularu, G. O. (2008). Crude oil and the Nigerian economic performance. *World Trade Organization (WTO), Centre William Rappard, Rue de Lausanne*, 3(4), pp. 12-20.

19. Ogbonna, G. N. and Appah, E. (2012). Petroleum Income and Nigerian Economy: Empirical Evidence. *Arabian Journal of Business and Management Review*, 1(9)

20. Oladipo and Fabayo, (2012). Global Recession, Oil Sector and Economic Growth in Nigeria. Asian Transactions on Basic and Applied Sciences World Bank. World Bank (1994) Indonesia: *Sustaining Development. Washington,* DC: World Bank.

21. Usman, A.; Madu, I. and Abdullahi,F. (2015). Evidence of Petroleum Resources on Nigerian Economic Development (2000-2009). *Business and Economics Journal*, 6(2), pp. 12-29.

22. W. Rodney, How Europe Underdeveloped Africa, (Lagos: Panaf Publishing Inc., 2005) p.1-2 13. Ibid.p.2 14. Ibid., p. 2

23. World Bank (2013). Nigeria economic report (No. 1). Washington, DC: