International Journal of Developing and Emerging Economies
Vol.3, No.2, pp.24-37, June 2015
Published by European Centre for Research Training and Development UK (www.eajournals.org)

CRUDE OIL PRODUCTION, PRICES, EXPORT AND FOREIGN EXCHANGE RATE, DO THEY INTERACT? EVIDENCE FROM NIGERIA (2006 - 2014)

Oliver Ike Inyiama & Okpe Innocent Ikechukwu
Department of Accountancy, Enugu State University of Science and Technology, Enugu State, Nigeria.

ABSTRACT: *The purpose of the study is to determine the extent to which Foreign Exchange Rate is influenced by or associated with crude oil selling price, crude oil export and crude oil production and the direction and magnitude of their granger causalities in Nigeria oil and gas sector (2006 -2014). Data were collected from Central Bank of Nigeria Statistical Bulletin and multiple regression, correlation and granger causality approach were adopted in the analysis of data. It was found that foreign exchange rate is positively influenced by volume of crude oil export and the selling price per barrel of crude oil, though not significantly; while a weak and insignificant relationship exists between crude oil export, crude oil production and foreign exchange rate. There is no Granger Causality running from any of the explanatory variables namely crude oil export, crude oil selling price and crude oil production, to foreign exchange rate. This implies that there are other factors that exert more far reaching impact on foreign exchange rate than crude oil production, export and sales price in Nigeria. Hence, the regulatory agencies in Nigeria such as the Central Bank of Nigeria (CBN) and Securities and Exchange Commission (SEC) should strengthen other macroeconomic and microeconomic variables in other to foster a stable foreign exchange regime.*

KEYWORDS: Crude Oil, Foreign Exchange, OPEC, Regression, Causality, Correlation.

INTRODUCTION

Crude oil, one of the nonrenewable fuel sources, is a type of substance which naturally occurs in certain formation of rocks inside the earth, distilled to generate hundreds of products such as diesel, gasoline, natural gas, kerosene, waxes, plastics, and others. In professional parlance, crude oil is also referred to as Brent Light Crude Oil and Bonny Light which could be characterized as light, heavy, sweet and sour; with light, sweet crude oil preferred globally, as it needs less refinement and production time (Tio and Purwanto., 2015). In Nigeria, the position of crude oil as the mainstay of the economy cannot be over emphasized. The impact of the fall in OPEC (Organization of Petroleum Exporting Countries) prices of crude oil export has almost got the economy of Nigeria crawling. Globally, crude oil is the largest source of energy today, it powers the global economy and its industrialization processes; fluctuation in the price of crude oil is expected to have significant impact on both importers and the exporters of the product (Abubakar

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

and Umar, 2013). Abubakar and Umar stated that Nigeria is an oil producing country and the largest oil producer in Africa; also with 6th position among OPEC membership.

However, the expansion of Nigeria's petroleum exports drained resources from other parts of the economy, brought about a rise in urbanization to the new oil centres and generated an appreciable exchange rate that culminated in a decline in the competitiveness of non-oil exports and of import-competing industries (Adebisi, 2012). He stated that Dutch Diseased economy, which is the Nigeria's case, is an economy whose original exports were tradable agricultural goods, but shift to export of booming sector that consequently leads to a real exchange rate appreciation and the near extinction of the original agricultural exporting sector.

Exchange rate is the price for which a country's currency is exchanged for another's country's currency and is influenced by factors such as interest rate, inflation, or political condition of the country. In Nigeria, fixed exchange rate is set by Central Bank as the official exchange rate while the floating exchange (self-correcting) rate is determined by the interactions of supply and demand in private market. Traditionally, the currency that is used to determine the global price of the crude oil is American dollar ($) (Alia, Mukhtar, Tijanib, and Auwal, 2015). Though American dollar is not the single anchor currency of domestic currency changes of countries in the world since the Bretton Woods System collapsed, it still maintains the function of world currency and up to now still takes the function of major international reserve and international settlement as one of the few hard currencies in the world (Xiaoguang and Menggang, 2013).

Meanwhile, for an investor, fluctuations in the prices of crude oil may lead to unstable inflation levels and bring about market uncertainties and on the part of listed companies, significant changes in world crude oil prices may translate to a rise in the cost of raw materials and transportation (Batac and Tatlonghari, 2013). However, in any aspect, substantial movements in crude oil prices heighten investment risks and the energy-intensive characteristics of several industries, as well as the continuous dependence of the domestic economy of Nigeria on imported petroleum, aroused the researchers' interest in conducting this research.

This study, therefore, aims at examining the effect, nature and magnitude of the relationship between crude oil prices, crude oil export, crude oil production and foreign exchange rates in Nigeria; considering the contribution and the place of the sector to national economic growth and development. The remaining part of the paper is arranged into four sections. Section 2, x-rays the existing related literature, section 3 documents the methodology for data analysis, section 4 discusses the empirical results while section 5 summarizes and concludes.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

REVIEW OF RELATED LITERATURE

Abubakar and Umar (2012) noted that empirical studies have shown that oil price fluctuation are significantly responsible for exchange rate movement (Chen and Chen, 2007; Huang and Guo, 2007). Their study on Crude Oil Prices and Foreign Exchange Rates: Evidence of Cointegration and Causality from Nigeria, used monthly time series data of official exchange rates and crude oil prices ranging from 2000:01 to 2011:05 obtained from Organization of Petroleum Countries OPEC and central bank of Nigeria. To examine the time series properties of the data for exchange rate and crude oil prices, they applied cointegration, ADF and KPSS, Granger causality, Johansen and Juselius and aAutoregressive Distributed Lag models (ARDL). Their findings reveal the existence of unidirectional causality and long run equilibrium between exchange rates and crude oil prices. This empirical relationship followed fairly closely to what economic theory have suggested. Their study therefore recommends that government should enhance the management of exchange rate in order to protect it from the price of crude oil movements.

Alia, Mukhtar, Tijanib, and Auwal (2015) estimated the relationship between the exchange rates and crude oil prices for the period of 1960 to 2013 based on Engle-Granger. They found that the variables are cointegrated; meaning that there exist long-run relationship. However, when they moved on to TAR and MTAR models, the findings were opposite as there was no element of cointegration and the speed of adjustment was symmetric. This shows that based on TAR and MTAR models, the effects of exchange rates on crude oil prices is insignificant. The policy relevance is that South African authority need to monitor its exchange rates persistently related to other currencies more especially American dollar because it determined the crude oil prices that might have greater influences on other macroeconomic variables

Adebisi (2012) stated that Dutch Disease occurs when a country discovers a substantial natural resource deposit and begins a large-scale exportation of it. As a result, the country's currency appreciates, thereby reducing the competitiveness of the country's traditional export sector. Therefore, this tradable goods sector should contract, leading to structural changes in the economy. His study examined whether Dutch Disease was present in Nigeria in the light of the rejection of the Dutch Disease thesis in other studies. The study assessed the impact of expanding oil revenues on non-oil sectors of the Nigerian economy, taking the agricultural sector as the non-tradable sector. It produced some empirical evidence for the contraction of Nigerian agriculture in the past five decades or more and it demonstrated that the changes in the direction of the Nigerian economy in general was in part a direct consequence of the increase in oil revenue which pushed up the exchange rate and made agricultural product uncompetitive for export. The study diagnosed Dutch

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Disease and concludes that the contraction of the agricultural sector in Nigeria was a result of the sudden windfall from oil.

Xiaoguang and Menggang (2013) examined **w**hether the Japan's earthquake would become a turning point of the high oil price and whether it would have big impact on the exchange rate. The study made use of VAR model and HP trend decomposition to estimate the mutual effect of yen exchange rate change and price fluctuation of international crude oil in that period of Japan's earthquake and price fluctuation of international crude oil. It was found that the fluctuation of yen exchange rate around the earthquake is one of the main reasons for the drastic fluctuation of international crude oil price in that period. The fluctuation of international crude oil price directly triggered by yen exchange rate occupied 13.54% of its total variance. There was a long-term interactive relationship between yen exchange rate and international crude oil price. The upward trend of international crude oil price after the earthquake was obvious, while yen exchange rate remained relatively stable after the earthquake. However, as economic globalization goes deeper, the influence of natural disasters on international financial market and world economy is expected to become more and more obvious.

Ferraro, Rogo and Rossi (2011) investigates whether oil prices have a reliable and stable out-of-sample relationship with the Canadian/U.S dollar nominal exchange rate. Despite state-of-the-art methodologies, they found little systematic relation between oil prices and the exchange rate at the monthly and quarterly frequencies. In contrast, the main contribution was to show the existence of a very short-term relationship at the daily frequency, which was rather robust and holds no matter whether contemporaneous (realized) or lagged oil prices were used in the regression. However, in the latter case the predictive ability was ephemeral, mostly appearing after instabilities have been appropriately taken into account, they submitted.

Ojebiyi and Wilson (2011) assessed the correlation which exists between exchange rate of Nigerian naira and Unites States dollar and oil price on the basis of monthly data from 1999-2009. The research employed the fundamental variables which were assumed to be the monthly spot crude oil price, monthly exchange rate of Nigeria naira and monthly exchange rate of United States dollar. The empirical result adopted the ordinary least square using regression analysis and also the correlation model which shows that there was a weak/negative relationship between exchange rate and oil price as there are other factors that bring about changes in oil price other than the exchange rate. The activities of cartel pricing policy and oil speculators too have come to greatly affect the price of crude oil.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Tio and Purwanto (2015) analyzed the influence of several economic factors affecting the automotive industry which has become one of the most contributing industries to nations' economy, including Indonesia. In this study, the researcher used case study of PT. Toyota Astra Motor (PT. TAM) as representative from Indonesia's automotive industries. The research used multiple regression analysis to analyze the influence and found that crude oil price, consumer confidence, exchange rate and GDP growth rate have positive significant influence toward sales number altogether. The most significant factor was exchange rate. All of the factors were found out to influence sales number by 78.8% while other remaining 21.2% of sales number was influenced by other factors outside the regression model.

The primary objective of the study conducted by Batac and Tatlonghari (2013) was to analyze the possible impact of changes in the peso-dollar exchange rates, crude oil prices, and money supply on the performance of the Philippine stock market. The choice of explanatory variables was dictated by theoretical considerations, related scholarly studies, and relevance to the current economic environment of the Philippines. However, the researcher acknowledged that other variables could possibly impose significant effects on the performance of the domestic bourse. A dynamic multiple regression analysis using Autoregressive Distributed Lag (ARDL) model was utilized to analyze the relationships between the dependent and explanatory variables. The Johansen Cointegration Procedure was employed to assess the long-run cointegrating relationship between the Philippine Stock Exchange Index (PSEI) and its predictor variables. The Granger Causality Test was used to determine the direction of causality among the variables. The results of the econometric procedures employed showed that 86.0 percent of the variation in the Philippine stock market performance is explained by its co-variates. The results of cointegration analysis indicated that there is a long-run equilibrium relationship between the PSEI and its predictor variables. Finally, the Granger Causality Test results showed the presence of a unidirectional causality from the peso-dollar exchange rates to the PSEI.

Despite their widespread use as predictors of the spot price of oil, Alquist and Kilian (2008) submitted that oil future prices tend to be less accurate in the mean-squared prediction error (MSPE) sense than no-change forecasts. This result was driven by the variability of the futures price about the spot price, as captured by the oil futures spread. This variability can be explained by the marginal convenience yield of oil inventories. Using a two-country, multi-period general equilibrium model of the spot and futures markets for crude oil, the researchers showed that increased uncertainty about future oil supply shortfalls under plausible assumptions, causes the spread to decline. Increased uncertainty also causes precautionary demand for oil to increase, resulting in an immediate increase in the real spot price. An empirical analysis of this indicator provides independent evidence of how shifts in the uncertainty about future oil supply shortfalls affect the spot price of crude oil and how they undermine the forecast accuracy of oil future prices.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Their model is consistent with a number of empirical regularities and results obtained by alternative methodologies.

The review of related literatures reveal that studies in this area is still very scanty. Most of the existing studies were done in developed countries of Europe and America. The emerging economies of Africa was not given adequate attention, hence, this study aims at examining the effect, nature, causalities and correlation between crude oil selling prices, export, production and foreign exchange rates in Nigeria (2006 – 2014).

METHODOLOGY

The study used multiple regression analysis in the form of Ordinary Least Square (OLS) method to test the effect of changes in crude oil selling prices, export, and production and foreign exchange rates in Nigeria. The multiple regression analysis shows the dependent variable (foreign exchange rates) as a function of a multiple independent variables (crude oil selling prices, export, and production) in line with the aim of the study.

However, both correlation and regression models are based on the general linear model, $\hat{Y} = a + b_1X_1 + \ldots + b_pX_p$, but they differ with respect to whether the X variables are considered random or fixed. In the correlation model they are considered random, that is, the values of the X variables obtained in the sample and the number of cases obtained at each level of the X variables is random. This means that another sample from the same population would yield a different set of values of X and different probability distributions of X. In the (fixed) regression model the values of X and their distributions are assumed to be, in the sample, identical to that in the population.

Data analysis and discussion of the study outcome was moderated by multiple regression model as it leads to a good and precise understanding of the association of the independent variable with the dependent variable. The foreign exchange rates are regressed on selling price of crude oil, crude oil export and crude oil production. Linear relationship between foreign exchange rates and crude oil prices is estimated in the symbolic form of:

$$FOREXit = \int(COPRICE, COEXP, COPRODTN)it \quad -- \quad - \quad (1)$$

Where FOREX = Foreign Exchange Rates in Nigeria, i in time t
The model in additive form is:

$$FOREX_{t,i} = \beta_o + \beta_1 COPRICE)_t + \beta_2 COEXP)_t + \beta_3 COPRODTN)_t + e_t \quad - \quad (2)$$

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Where: FOREX = Foreign Exchange Rates (USD to Naira)
COPRICE = Crude Oil Selling Prices
COEXP = Crude Oil Export
COPRODTN = Crude Oil Production
β_o = Coefficient (constant) to be estimated
t = Current period
i = ith (i= 1, 2, …, 5)
e = Stochastic disturbance (error) term

Causality under the Granger model is normally tested in the context of linear regression models and specified as follows in our bivariate linear autoregressive model of two variables X_1 and X_2 based on lagged values as applied by Pasquale (2006)*:*

$$X_1(t) = \sum_{j=1}^{P} A_{11,j}X_1(t-j) + \sum_{j=1}^{p} A_{12,j}X_2(t-j) + E_1(t) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad ..(3)$$

$$X_2(t) = \sum_{j=1}^{P} A_{21,j}X_1(t-j) + \sum_{j=1}^{p} A_{22,j}X_2(t-j) + E_2(t) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad \ldots..\ldots\ldots (4)$$

Where;

p is the maximum number of lagged observations included in the equation, *A is an arrangement of mathematical elements* ie the numerical part of the algebraic term.

X_1 is the foreign exchange rate which is constant while $X_{2\text{-}4}$ takes the form of crude oil prices, export and production identified above and the errors originating from predictions of the time series data are represented by $E_{1,}$ $E_{2..}$ The EViews software provides the signs and significance for interpretation of the result for test of regression and correlation analysis. The output from Eviews software tallies with the decision rule that the coefficient is significant if the p-value is equal to or less than 0.05.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

DISCUSSION OF FINDINGS

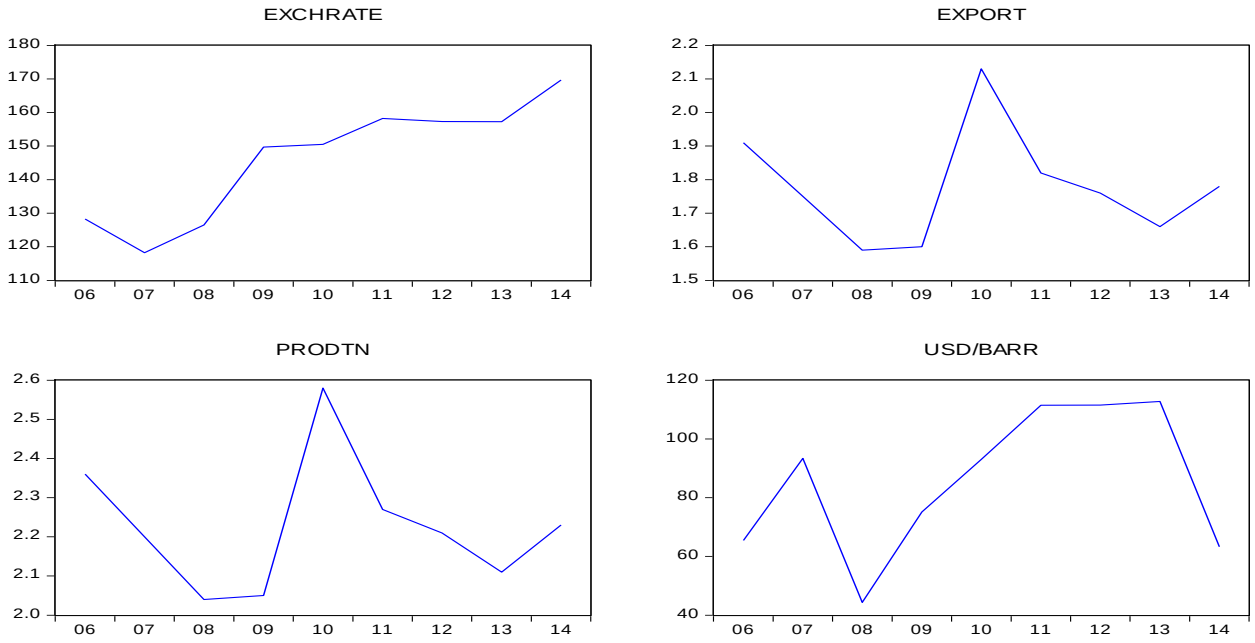

Fig1. Graphical Representation of the Variables
Source: Author's EView 8.0 Output

Figure One reveals that crude oil production and crude oil export have the same pattern of movement. This depicts that there is effective demand for crude oil production in Nigeria. The implication is that Nigeria exports all the crude oil produced. This is in line with our a priori expectation since there is no functional refinery in Nigeria.

Table 1: Descriptive Statistics of the Variables

	EXCHRATE	EXPORT	PRODTN	USD_BARR
Mean	146.1833	1.777778	2.227778	85.59000
Median	150.4800	1.760000	2.210000	93.00000
Maximum	169.6800	2.130000	2.580000	112.7500
Minimum	118.2100	1.590000	2.040000	44.36000
Std. Dev.	17.55638	0.167763	0.167763	24.76473
Skewness	-0.433188	0.903703	0.903703	-0.304605
Kurtosis	1.809394	3.219568	3.219568	1.780583
Jarque-Bera	0.813057	1.243097	1.243097	0.696793
Probability	0.665958	0.537112	0.537112	0.705819
Sum	1315.650	16.00000	20.05000	770.3100
Sum Sq. Dev.	2465.813	0.225156	0.225156	4906.333
Observations	9	9	9	9

Source: Author's EView 8.0 Output

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Naik and Padhi (2012) stated that if the value of skewness and kurtosis are 0 and 3 respectively, the observed distribution is said to be normally distributed but if the skewness coefficient is in excess of unity, it is considered fairly extreme and the low (high) kurtosis value indicates extreme platykurtic (extreme leptokurtic). None of the variables has a skewness value that is in excess of unity and this indicates that the variables are normally distributed. A confirmatory test with Jarque-Bera statistics is also necessary as it tests whether the series is normally distributed by measuring the difference of the skewness and kurtosis of the series with the series from normal distribution. Coefficient of Jarque-Bera statistics is significant when it has a small probability value ie, the significant coefficient of Jarque-Bera statistics is an indication that the frequency distributions of the series are not normal. There is no significant p-value for the Jarque-Bera statistics. This depicts normal distribution for all the variables under consideration.

Table 2: Regression Analysis Results

Dependent Variable: EXCHRATE
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXPORT	1.119092	40.32619	0.027751	0.9788
USD_BARR	0.268764	0.273181	0.983834	0.3632
C	121.1903	71.04570	1.705808	0.1389

R-squared	0.145481	Mean dependent var	146.1833
Adjusted R-squared	0.139358	S.D. dependent var	17.55638
S.E. of regression	18.73981	Akaike info criterion	8.960379
Sum squared resid	2107.083	Schwarz criterion	9.026121
Log likelihood	-37.32171	Hannan-Quinn criter.	8.818509
F-statistic	0.510749	Durbin-Watson stat	0.797202
Prob(F-statistic)	0.623971		

Source: Author's EView 8.0 Output

Table 2 reveals that foreign exchange rate is positively influenced by volume of crude oil export and the selling price per barrel of crude oil. However, there were indications that the extent of the influence of crude oil export and selling price is insignificant. This implies that there are other factors that exert more far reaching impact on foreign exchange rate than crude oil export and sales price in Nigeria. The outcome is further strengthened by the insignificant value of $R^{2.}$. In this case, R^2 was just 0.145481 (about 15%). This implies that about 15% of the variations in foreign exchange rate could be explained by volume of export of crude oil produced as well as the sales price while about 85% could be attributed to other factors capable of influencing foreign exchange rate in Nigeria and the error term.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Batac and Tatlonghari (2013) in their study acknowledged that other variables could possibly impose significant effects on the performance of the domestic exchange rate. Ferraro, Rogo and Rossi (2011) also found little systematic relation between oil prices and the exchange rate at the monthly and quarterly frequencies in Canada. The research outcome is also in tandem with the findings of Alia, Mukhtar, Tijanib, and Auwal (2015). The researchers found that using the TAR and MTAR models in South Africa, there was no element of cointegration and the speed of adjustment was symmetric, implying that the effects of exchange rates on crude oil prices is insignificant.

Table 3: Correlation Analysis Results

	EXCHRATE	EXPORT	PRODTN	USD_BARR
EXCHRATE	1.000000	0.087345	0.087345	0.381276
EXPORT	0.087345	1.000000	1.000000	0.202185
PRODTN	0.087345	1.000000	1.000000	0.202185
USD_BARR	0.381276	0.202185	0.202185	1.000000

Source: Author's EView 8.0 Output

Table 3 indicates, as an outcome of correlational analysis using the collected secondary data, that a weak and insignificant relationship exists between crude oil export, crude oil production and foreign exchange rate in Nigeria oil sector. The strength of the relationship between foreign exchange rate and crude oil export is about 9% while it has about the same rate with crude oil production. This implies that crude oil production equates crude oil export since the refineries for refining for local consumption are not functional. However, there is a fairly strong association between foreign exchange rate and selling price per barrel of crude oil which stood at about 38%. This portends that selling price of crude oil could help to predict movements in foreign exchange rates in Nigeria. The research outcome is in line with the findings of Ojebiyi and Wilson (2011) who found a weak relationship between exchange rate and oil price; as there are other factors that bring about changes in oil price other than the exchange rate.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Table 4: Pairwise Granger Causality Tests
Date: 06/18/15 Time: 14:19
Sample: 2006 2014
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
EXPORT does not Granger Cause EXCHRATE	7	0.21447	0.8234
EXCHRATE does not Granger Cause EXPORT		2.16588	0.3159
PRODTN does not Granger Cause EXCHRATE	7	0.21447	0.8234
EXCHRATE does not Granger Cause PRODTN		2.16588	0.3159
USD_BARR does not Granger Cause EXCHRATE	7	2.27789	0.3051
EXCHRATE does not Granger Cause USD_BARR		1.59276	0.3857
USD_BARR does not Granger Cause EXPORT	7	0.97260	0.5069
EXPORT does not Granger Cause USD_BARR		0.26221	0.7923
USD_BARR does not Granger Cause PRODTN	7	0.97260	0.5069
PRODTN does not Granger Cause USD_BARR		0.26221	0.7923

Source: Author's EView 8.0 Output

Table 4 reveals that at lag 2, there is no Granger Causality running from any of the explanatory variables namely crude oil export, crude oil selling price and crude oil production, to foreign exchange rate in Nigeria oil and gas industry. The implication is that foreign exchange rate is not caused by production, export and selling price of crude oil in Nigeria. This outcome is also replicated in Table 5 which shows that at lag 1, there is no causality running from the independent variables to the dependent variable.

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Table 5: Pairwise Granger Causality Tests

Date: 06/18/15 Time: 14:22
Sample: 2006 2014
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
EXPORT does not Granger Cause EXCHRATE	8	0.79732	0.4128
EXCHRATE does not Granger Cause EXPORT		1.33614	0.2999
PRODTN does not Granger Cause EXCHRATE	8	0.79732	0.4128
EXCHRATE does not Granger Cause PRODTN		1.33614	0.2999
USD_BARR does not Granger Cause EXCHRATE	8	0.14126	0.7224
EXCHRATE does not Granger Cause USD_BARR		4.63725	0.0839
USD_BARR does not Granger Cause EXPORT	8	0.00059	0.9815
EXPORT does not Granger Cause USD_BARR		1.33709	0.2998
USD_BARR does not Granger Cause PRODTN	8	0.00059	0.9815
PRODTN does not Granger Cause USD_BARR		1.33709	0.2998

Source: Author's EView 8.0 Output

CONCLUSION

The purpose of the study is to determine the extent to which Foreign Exchange Rate is influenced by or associated with crude oil selling price, crude oil export and crude oil production and the direction and magnitude of their granger causalities in Nigeria oil and gas sector. It was found that foreign exchange rate is positively influenced by volume of crude oil export and the selling price per barrel of crude oil, though not significantly while a weak and insignificant relationship exists between crude oil export, crude oil production and foreign exchange rate in Nigeria oil sector. The findings of this study are in tandem with studies done in Canada, South Africa and Europe such as in Batac and Tatlonghari (2013), Ferraro, Rogo and Rossi (2011), and Alia, Mukhtar, Tijanib, and Auwal (2015). There is no Granger Causality running from any of the explanatory variables namely crude oil export, crude oil selling price and crude oil production, to foreign exchange rate

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

in Nigeria oil and gas industry. This implies that there are other factors that exert more far reaching impact on foreign exchange rate than crude oil production, export and sales price in Nigeria.

The regulatory agencies in Nigeria, such as the Central Bank of Nigeria and Securities and Exchange Commission, should strengthen other macroeconomic and microeconomic variables in other to foster a stable foreign exchange regime. Some financial performance indicators were also reported in literature as contributing in determining the movement of foreign exchange rate in Nigeria. Government should evolve policies and strategies to encourage local and foreign companies as their financial performance could be key determinants of foreign exchange rate fluctuation.

REFERENCES

Abubakar, J. and Umar, A. (2013). Crude Oil Prices and Foreign Exchange Rates: Evidence of Cointegration and Causality from Nigeria

Adebisi T. (2012).A Vector Autoregressive Analysis of Oil and Exchange Rate in Nigeria: A Case of Dutch Disease, British Journal of Arts and Social Sciences, 11(I). http://www.bjournal.co.uk/BJASS.aspx

Alia, H, Mukhtarb, U, Tijanib, B., and Auwal, M. (2015). Dynamic relationship of exchange rates and crude oil prices in South Africa: Are there asymmetries? Research Journal of Finance and Accounting, Vol.6, No.6,195 – 200.

Alquist, R., L. Kilian and R.J. Vigfusson (2011), .Forecasting the Price of Oil,.in: G.Elliott and A. Timmermann, Handbook of Economic Forecasting: 2, Elsevier.

Batac, V. and Tatlonghari, M. (2013). The Behavior of Exchange Rates, Crude Oil Prices, and Money Supply and their Effects on Philippine Stock Market Performance: A Cointegration Analysis, Rev. Integr. Bus. Econ. Res. 2(2), 60 -227.

Chen, Sh. and Chen, Hu. (2007), "Oil prices and real exchange rates", Energy Economics, 29, 390-404.

Ferraro, D. and Rogo, K. and Rossi, B. (2011). Can Oil Prices Forecast Exchange Rates? 1-59.

Granger, C.W.J, (1969), "Investigating Causal Relations by Econometric Models and CrossResearch spectral Methods", Econometrica, 37, 428-438.

Huang, Y. and F. Guo (2007). The role of oil price shocks on China's real exchange rate. China Economic Review, 18: 403-416

Naik and Padhi, (2012). The Impact of Macroeconomic Fundamentals on Stock Prices Revisited: Evidence from Indian Data, Eurasian Journal of Business and Economics, 5 (10), 25-44.

Ojebiyi, A. and Wilson, D. (2011). Exchange rate volatility: an analysis of the relationship between the Nigerian naira, oil prices, and US dollar, Master Thesis in Business Administration 15 ECTS, Master of International Management , Gotland University, 1 – 33.

Pasquale, F. (2006). "Testing for Granger causality between stock prices and economic growth," MPRA Paper 2962, University Library of Munich, Germany, revised 2007. www.ask.com/Granger+Causality

ISSN 2055-608X(Print), ISSN 2055-6098(Online)

Tio, L. and, Purwanto. (2015). The Influence Of Crude Oil Price, Consumer Confidence, Exchange Rate And Gdp Growth Rate Toward Sales Number Of Pt. Toyota Astra Motor, GlobalIlluminators Publishing, Available online at www.globalilluminators.org, 1 – 17.

Xiaoguang, L. and Menggang, L. (2013).Research on the Trend of Yen Exchange Rate and International Crude oil Price Fluctuation Affected by Japan's Earthquake, Journal of industrial engineering and management, 546-558:http://dx.doi.org/10.3926/jiem.1035

ISSN 2055-608X(Print), ISSN 2055-6098(Online)