THE EFFECT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH OF NIGERIA

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Abstract
Foreign Direct Investment (FDI) has become the most important source of external resource flows to developing and underdeveloped countries over the years and has shown a significant part of capital formation and accumulation in these countries, though their share in the global distribution of FDI continued to remain small or even declining. The role of Foreign Direct Investment (FDI) has been widely acknowledged as a growth-deriving factor in the developing countries. This study was prompted to investigate empirically the effect of Foreign Direct Investment on economic growth of Nigeria between the periods of 1985-2016. Ordinary Least Square (OLS) method of data analysis was adopted, because of Best Linear Unbiased Estimator (BLUE) properties. The data used were sourced from Central Bank of Nigeria Statistical Bulletin, Vol. 26 2016. The variables were on: Agricultural FDI, Petroleum FDI and Real Gross Domestic Product. The study employed Unit Root Test, to determine the stationarity of the variables, cointegration approach to determine the long-run equilibrium relationship of the model, Granger Causality test to determine the direction of the variables, Stability Test was also performed and Error Correction Model to correct the error of the model. Granger Causality Test was conducted to determine the direction of the variables whether uni or bidirectional relationship. From the model, it was discovered that Agricultural FDI is positive and statistically significant, while Petroleum FDI is positive and statistically significant in Nigeria. The study recommends that high technological tools are requiring in agricultural sector in order to compete favourably with foreign counterpart. Government should also monitor the activities of foreign investors and as well crest enabling environment via security to attract foreign investors in Nigeria.

Keywords: Foreign Direct Investment, Economic Growth, Agricultural FDI, Petroleum FDI.

Introduction
Ugwuegbe, Okore & Onah (2013) speaking on the effect of Foreign Direct Investment on the Nigeria economic growth noted that the underdeveloped nature of the Nigerian economy has essentially hindered the fast pace of her economic development and has necessitated the demand for Foreign Direct Investment into the country. Korna, Ajekwe, & Idyu (2013) consider that Foreign Direct Investment is viewed as a major determinant to economic growth in developing countries. Its effect to deal with major obstacles namely: shortage of financial resources, technology and skills has made it the centre of attraction for policy-makers in low income countries in particular. Only a few of these countries have been successful in attracting significant FDI flows. Khan (2007) maintained that Foreign Direct Investment (FDI) has become the most important source of external resource flows to developing and underdeveloped countries over the years and has shown a significant part of capital formation and accumulation in these countries, though their share in the global distribution of FDI continued to remain small or even declining. The role of Foreign Direct Investment (FDI) has been widely acknowledged as a growth-deriving factor in the developing countries. Falki (2009), speaking on the effects and advantages of FDI to the host economy, noted that the effects of FDI on the host economy are normally believed to be increase in employment, GDP and all the economic activities.
Ugwuegbe, Okore and Onah (2013) pointed the potential merit of the FDI to the host economy to include facilitating the utilization and exploitation of local raw materials, introduces modern techniques of
management and marketing, eases the access to new technologies, foreign inflows can be used for financing current account deficits, finance inflows form FDI do not generate repayment of principal or interests (as opposed to external debt) and increases the stock of human capital via on-the-job training. The realization of the importance of FDI had informed the radical and pragmatic economic reforms introduced since the mid-1980s by the Nigerian government. The reforms were designed to increase the attractiveness of Nigeria’s investment opportunities and foster the growing confidence in the economy so as to encourage foreign investors to invest in the economy. Ojo: (1999), Adeleke, Olowe & Oluwafolakemi (2014) opine that Foreign Direct Investment is a direct investment into production or business in a country by an individual or company of another country either by buying a company in the target country or by expanding operations of an existing business in that country. Foreign Direct Investment is in contrast to portfolio investment which is a passive investment in the securities of another country such as stocks and bonds. Foreign investment is without any doubt vital to economic growth of developing countries; hence, many developing nations have made notable efforts to attract foreign private investment in the past decade. Private capital inflows consist of the commercial bank loans, foreign deficit investment, and portfolio investment. Unlike capital inflows, foreign private investment (FPI) always bring additional resources – technology, management and access to export markets that are desperately needed in developing countries, Olufemi & Keke (2014).

Statement of the Problem
There are a lot of mixed findings and inconclusive result on the impact of Foreign Direct Investment. Authors like Ugwuogebe (2013) noted the result of the OLS techniques indicates that FDI has a positive and insignificant impact on the growth of Nigerian economy for the period under study. Onu (2012) found in his study that FDI has the potential to positively impact upon the economy though its contribution to GDP was very low within the period under review. While the following authors like Adegbesi (2012) shows that FDI has a significant impact on output of the economy but that the growth effect of FDI differ across sectors. Olatoye, Arogundade, Adebisi, & Oluwakayode (2011), the study concluded that that there is a positive relationship between Foreign Direct Investment and Gross Domestic Product (GDP). This study improves on the previous studies by using an updated literature on the effect of Foreign Direct Investment on the Nigerian economic growth. The researcher also employed error correction model result to short the short-run effect of the model.

Objectives of the Study
The broad objective of this study is to evaluate the effect of Foreign Direct Investment on the Nigerian economic growth. The following are the specified objectives:

i. To evaluate the effect of agricultural FDI on the Nigeria economic growth.

ii. To determine the effect of petroleum FDI on the Nigeria economic growth.

Research Questions
The following questions are raised in the course of this study:

i. To what degree has agricultural FDI affect the Nigeria economic growth?

ii. How has petroleum FDI affect Nigeria economic growth?

Research Hypotheses
The following hypotheses are raised in the course of the study:

Ho: Agricultural FDI has no significant effect on Nigeria economic growth.

Ho: Petroleum FDI has no significant effect on Nigeria economic growth.

Scope of the Study
This study covers effect of Foreign Direct Investment on the Nigeria economic growth between the periods of 1985-2016. The time period has been chosen considering that it offers updated time series observations and it constitutes a period of reforms for the Foreign Direct Investment.
REVIEW OF RELATED LITERATURE

Conceptual Issues
Foreign Direct Investment (FDI) means the direct investment of a foreign company or country on the productive asset of the domestic economy. According to Draham (2013), Foreign Direct Investment (FDI) in its classic definition is defined as a company from one country making physical investment into building a factory in another country. Given the rapid growth and changes in global investment patterns, the definition has been broadened to include the acquisition of lasting management interest in a company or enterprise outside the investing firm’s home country. As such, it may take many forms, such as direct acquisition of a foreign firm, construction of facilities, or investment in a joint venture or strategic alliance with a local firm with attendance input of technology and licensing of intellectual property. Odozi (2005) reported that Foreign Direct Investment is a form of lending or finance in the area of equity participation; it generally involves the transfer of resources, including capital, technology, management and marketing expertise. Such resources usually extend the production capabilities of the recipient country. Direct investment whether portfolio or not, involves the movement of resources from a surplus region probably to deficit region with a view to making profit. The flow of resources can however be hampered if the political and socio-economic environment of the host country are hostile. Draham (2013) posits that Foreign Direct Investment (FDI) plays an extraordinary and growing role in global business. It can provide a firm with new markets and marketing channels, cheaper production facilities, access to new technology, products, skills and financing. For a host country or the foreign firm which receives the investment, it can provide a source of new technologies and management skills and as such can provide a strong impetus to economic development. It can be argued that the positive effects of Foreign Direct Investment are the reason for the increase in FDI attractions especially in the emerging economies (Bakare 2010).

Theoretical Framework

Keynesian Theory of Investment
Keynesian maintains that investment is an investment which adds to capital equipment. It provides increase in level of income and production by increasing the production and purchase of capital goods. Investment however, includes new plant and equipment, construction of public works like roads, dams, buildings, etc. in the words of John Robinson, “By investment is meant an addition to capital, such occurs when a new house is being built or a new factory is built; investing means making an addition to the stock of goods in existence”.

Acceleration Theory of Investment
The principle of acceleration is based on the fact that the demand for capital goods is derived from the demand for consumer goods which the former helps to produce. The acceleration principle explains the process by which an increase or decrease in the demand for consumption goods leads to an increase or decrease in investment on capital goods. The accelerator coefficient is the ratio between induced investment and an initial change in consumption expenditure. Symbolically, \( \beta = \frac{\Delta I}{\Delta C} \) or \( \Delta I = \beta \Delta C \) where \( \beta \) is the accelerator coefficient. \( \Delta I \) is net change in consumption investment and \( \Delta C \) is net change in consumption expenditure.

Empirical Review
Having review the theoretical aspect of FDI, it is necessary to take a look at some important empirical contributions based on the observation of rate mature significance and controversy regarding FDI especially in the recent past all over the world. Recent studies showed the flow of FDI have been on the increase in recent years. Oniore (2014) used the error correction model to examine the impact of financial deepening and Foreign Direct Investment affectedness on economic growth in Nigeria from 1970-2003. The study used Ordinary Least Square (OLS), Augmented Dickey Fuller (ADF) and such integration approach was adopted, the variables were on gross domestic product, liquidity ratio foreign investment. Ajekwe & Idyu (2013) used integration approach to studied the level of impact foreign direct investment has on the Nigeria banking sector in the wake of the unprecedented capital flight from the Nigerian economy during global economic
recession (the creditor). Data which are secondary data nature were from statistical bulletins of the Central Bank of Nigeria. The ex post facto research design was adopted to determine the level of the impact for 25 deposit money banks for the period 2006-2010. Results revealed that there is a non-positive significant impact of Foreign Direct Investment on the equity capital of the Nigerian banking sector. Ugwuegbe (2013) investigates the empirical relationship between Foreign Direct Investment and economic growth in Nigeria. The work covered a period of 1981-2009 using an annual data from Central Bank of Nigeria statistical bulletin. A growth model via the Ordinary Least Square method was used to ascertain the relationship between FDI and economic growth in Nigeria. The study also added Gross Fixed Capital Formation with a view to capture the effect of domestic investment on the growth of the economy for the period under review. Interest rate and exchange rate were also added as control variables in the model. Granger causality test was employed to determine the direction of causality between FDI and economic growth in Nigeria. The result of the OLS techniques indicates that FDI has a positive and insignificant impact on the Nigerian economy for the period under study. GFCF which was used as a proxy for domestic investment has a positive and significant impact on economic growth. Interest rate was found to be positive and insignificant while exchange rate positively and significantly affects the growth of Nigeria economy.

Oloyode (2013) examined the impact of FDI on the agricultural sector development of the Nigerian economy. This work employs secondary time series data which spanned 1981 to 2012; the variables were on agricultural input, foreign direct investment, exchange rate, interest rate. Following ADF test for stationarity and a grange causality test, the study found a relationship among the variables as affirmed by the error parameter. The study reveals that FDI positively impacted on agriculture not only in the short run but also in the long run. This will also engender domestic income diversification which will boost agricultural sector. Further, political instability adversely affected agricultural investments in the long run. An enabling environment should be provided to attract investment on short and long term basis. Onu, (2012) investigates the impact of Foreign Direct Investment (FDI) on economic growth in Nigeria within the period 1986-2007. The objective of this paper is to assess the impact of FDI on economic growth in Nigeria within the period under review. The paper employed multiple regression models to determine the impact of some external or macro variables on the gross domestic product (GDP) proxy for economic growth in Nigeria. The paper used time series data to ascertain the inflow of FDI to the Nigerian economy and its implications on economic growth. The study found that FDI has the potential to positively impact upon the economy though its contribution to GDP was very low within the period under review. The multiple regression results also revealed that FDI, government tax revenue (GTR) and savings exerted positive but not significant impact, except savings on GDP during the study period. However, foreign exchange and public expenditure on education (PEE) GDP had inverse relationship with GDP.

Adegbesi (2012) uses error correction method to investigate the impact of Foreign Direct Investment (FDI) on economic growth in Nigeria. The research developed a structural macro econometric model consisting of four blocks made up of supply, private demand, government and external sectors. The model deploys 18 simultaneous equations and 100 variables to capture the required proxies. The research adopted a three-stage least squares (3SLS) technique and macro econometric model of simultaneous equations to capture the disaggregated impact of FDI on the different sectors of the economy and the inter-linkages amongst the sectors in order to give better insight into the variations inherent therein. The variables were in telecommunication, manufacturing, oil service and other service. The finding shows that FDI has a significant impact on output of the economy but that the growth effects of FDI differ across sectors. The paper recommends sector-specific policies, enhanced trade openness, import substitution development strategy incentives to existing investors, and potential overseas investors so as to enhance the development of the country.

**Gap in Literature**

The researcher explored both previous empirical literatures of different authors in the same area. The researcher will incorporate in this work more sophisticated tools for the analysis such as stationary test, co-integration test, error correction model technique etc. Most previous works stopped at 2014 but this work will extend the data till 2016.
Method
Model Specification
However, as maintained by Ugwuegbe, Okore & Onah (2013), a vibrant economic system is necessary for Foreign Direct Investment to have expected impact in an economy, taking to this inference from the above model, we need a model specification to capture our research topic. Thus:
\[ \text{RGDP} = \text{f(AGRfdi, } + b_2\text{PETfdi)} + \mu. \]
Where \( \text{RGDP} = \) Real gross domestic product.
\( \text{AGRfdi} = \) Agricultural foreign direct investment.
\( \text{PETfdi} = \) petroleum foreign direct investment.
\( \text{f} = \) Functional Notation.

A’ Priori Expectation
This is based on the principle of economic theory, here, our results can be checked for their reliability with both the size and sign of economic a’ priori expectation.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRFDI</td>
<td>+</td>
</tr>
<tr>
<td>PETFDI</td>
<td>+</td>
</tr>
</tbody>
</table>

Estimation Techniques
This seminar follows unit root test, co-integration analysis and error correction modeling techniques. These method are believed to overcome the problem of spurious regression while at the same time provide consistent good estimates of both long-run and short-run elasticities that satisfy the property of the classical linear regression method. The techniques are also unique and preferred to the traditional Adaptive Expectation and Partial Adjustment Models because the latter are associated with the problems of spurious regression, inconsistent and indistinct short-run and long-run elasticity estimates.

Unit Root
The first stage of co-integration and error correction techniques is to test for unit root, the whole analysis then proceed from it. This study intends to use the Augmented Dickey-Fuller (ADF) unit root test. However, it is widely acknowledged that when the number of observations is relatively low, ADF unit root test have little power. Thus, we will complement the ADF unit root test with Philips-Perron (PP) unit root test. Also, while the ADF approach accounts for the autocorrelation of the first differences of a series in a parametric fashion by estimating additional nuisance parameters, the PP approach deals with the phenomenon in a non-parametric statistical methods to take care of the serial correlation in the error terms without adding lagged difference terms (Gujarati, 2009). Due to the possibilities of structural changes that might have occurred during the time period covered in this study, the ADF test might be biased in identifying variables as being integrated. However, the Philips-Perron test is expected to correct these shortcomings. Our ADF test consists of estimating the following equation:
\[ Y_t = \alpha + \gamma t + \delta Y_{t-1} + \sum Y_{t-1} + \epsilon \]
Where \( \epsilon \) is a pure white noise error term; \( t \) is the time trend; \( Y_t \) is the variable of interest; \( \gamma, \delta \) and \( i \) are parameters to be estimated; and \( A \) is the difference operator. In ADF approach, we test whether \( = 0 \). The Philips-Perron test is based on the following statistics:
\[ t = \left( \frac{(Y_0)^2}{T} \right) - \frac{T(\gamma - \alpha \mu)}{s} \]
Where \( \alpha \) is the estimate; \( \gamma \) is the t-ratio of \( \alpha \); \( \mu \) is the coefficient standard error and \( s \) is the standard error of the regression. Also, \( Y_0 \) is a consistent estimate of the error variance in the standard Dickey-Fuller test equation (calculated as \( (T-k)s^2/T \), where \( k \) is the number of regressors).

Co-integration Analysis
The aim of co-integration analysis is to determine the long run equilibrium relationship between variables. In the Engle-Granger co-integration analysis, variables of consideration are said to be co-integrated or have long run equilibrium relationship if in the OLS regression of one variable on the others, their residuals as the proxy for their combination are integrated less than original variables. For instance, if the variables are integrated of order one, 1(1), then their residuals should be integrated of order zero, 1(0) (Engle and Granger, 1987). Alternatively, co-integration exists among the variables if they are integrated of the same order. The implication of this analysis is that deviation or drift may occur between the variables but this is temporary as equilibrium holds in the long run for them. In this study, we use the Johansen co-integration approach to examine the existence of long run relationship between variables of interest.

The Johansen co-integration test is based on the following vector autoregressive (VAR) model:

$$Z_t = A_1 Z_{t-1} + \ldots + A_p Z_{t-p} + Y_t + \varepsilon_t$$

Where $Z_t$ is a k-vector of non-stationary variables; $Y_t$ is a d-vector of deterministic variables; and $\varepsilon_t$ is a vector of innovations. This can be rewritten as:

$$Z_t = Z_{t-1} + \sum r_i Z_{t-1} + Y_t + \varepsilon_t$$

Where $\sum A_i - I, r_i = \sum A_j$

In the Granger’s representation theorem, if the coefficient matrix $n$ has reduced rank $r<k$, then there exists a $k \times r$ matrices $a$ and $b$ each with rank $r$ such that $Z_t$ is 1(0); $r$ is the number of co-integrating relations (i.e. the rank) and each column of $b$ is the co-integrating vector and the elements of $a$ are the adjustment parameters in the vector error correction model. In general, the Johansen’s approach is to estimate the $n$ matrix from an unrestrictive VAR and to test whether we can reject the restrictions implied by the reduced rank.

**Error Correction Model (ECM)**

When variables are found to be co-integrated, it became customary to express them as an error correction model. An error correction model (ECM) represents an alternative way of presenting the long run equilibrium relationship between variables. It indicates the dynamic error analysis of the co-integrated variables. Thus, in this paper, the first step to ECM analysis is the estimation of the real GDP function. Upon the rejection of the null hypothesis of no co-integration, the lagged residuals from co-integrating equation are imposed as the error correction term (ECM(-1)) in an error correction equation. This is given as:

$$LRGDP = 0 + 1LGRFDI + 2ALPETFDI + ECM(-1) + \ldots$$

Where .. is the difference operator; ECM(-1) is the error correction term; $\varepsilon_t$ is a white noise error term. The coefficient 8 of error correction term in the equation represents the speed of adjustment from one period to another. If it is significant carrying with it a negative sign, it shows a strong convergence of the equilibrium after any shock.

**Causality Test**

It is widely known that the existence of long run relationship among variables entails that causality run in at least one direction. One of the main thrust of this study is to determine the causation between capital market and economic growth (RGDP) in Nigeria. Thus, pairwise-Granger causality test will be employed. Granger causality test is a statistical test of hypothesis for determining whether a time series is useful in forecasting another series. The null hypothesis underlying the Granger causality test is that the variable under consideration does not Granger cause the other while the alternative is that Granger-causes it.

**EMPIRICAL RESULT AND DISCUSSION**

The empirical results and discussion of findings are being presented first, we being this by discussing the order of integration of the included variables.

**Unit Root Test**

It is important to verify the stationary properties of the variables in order to determine their order of integration. The Augmented Dickey-Fuller unit root test has been carried out in the level and differences of the relevant variables. Each variable is tested for a unit root by both ADF and P.P with an intercept and trend.

**Table 4.1: ADF and PP Unit Root Test for all Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF statistics</th>
<th>Integration</th>
<th>P.P statistics</th>
<th>Integration</th>
</tr>
</thead>
</table>

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The result above shows that none of the variables are stationary at level, but eventually all the variables turn to be stationary at first differences, however, this result apply to and PP. the result for both ADF and PP unit root test are reported in table 4.1 above.

Co-integration Test

Two variables may be co-integrated, if they have a long-run equilibrium relationship between them. As Granger notes, a test for co-integration can be thought as a test to avoid spurious regression situation. Co-integration deals with the relationship amongst a group of variables unconditionally where each variable has a unit root.

Table 4.2: Johansen Co-integration

<table>
<thead>
<tr>
<th>H0</th>
<th>HI</th>
<th>Trace statistics</th>
<th>5% critical V.</th>
<th>Max. egen stat.</th>
<th>5% critical V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>r=0</td>
<td>r=0</td>
<td>26.90497</td>
<td>24.27597</td>
<td>19.06858</td>
<td>17.79730</td>
</tr>
<tr>
<td>r≤1</td>
<td>r&gt;1</td>
<td>7.836390</td>
<td>12.32090</td>
<td>7.584680</td>
<td>11.22480</td>
</tr>
<tr>
<td>r≤2</td>
<td>r&gt;2</td>
<td>0.251710</td>
<td>4.122906</td>
<td>0.251710</td>
<td>4.129906</td>
</tr>
</tbody>
</table>

Source: Author’s Computation using E-view
NB * implies rejection of the null hypothesis (Ho) at 5% level of significance, both the trace test and max-eigen value test indicates one(2) co-integration equation at 5% level.

Table 4.3: Error Correction Model Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF statistics</th>
<th>Integration</th>
<th>P.P statistics</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAGRFDI</td>
<td>1.727214</td>
<td>0.130045</td>
<td>13.28166</td>
<td>0.0000</td>
</tr>
<tr>
<td>LPETFDFI</td>
<td>0.477491</td>
<td>0.038396</td>
<td>12.43587</td>
<td>0.0000</td>
</tr>
<tr>
<td>ECM(-1)</td>
<td>-0.883491</td>
<td>0.122806</td>
<td>-7.194203</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>9.475739</td>
<td>0.918829</td>
<td>10.31284</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-squared 0.992533
Adjusted R-squared 0.991703
F-statistic 119.6254
Prob. (F-statistic) 0.000000
Durbin-Watson stat. 1.601126

Interpretation of Regression Result

The result of the ECM result is shown in table 3. The coefficient of determination (R2) is 0.992533, which is about 99%. This indicates that about 99% of changes in real gross domestic product (RGDP) can be explained by the variables in the model of foreign direct investment. The overall significance of the model is tested with the F-statistics. The F-value is 119.6254 with P-value of 0.0000. This indicates that all the explanatory variables collectively have significant effect on real gross domestic product. The Durbin Watson statistics (1.6) is approximately 2 indicating that the model does not have autocorrelation. This implies that the model is suitable for the analyses. The specific objectives are addressed using the coefficient of regression and its corresponding t-statistics. The result is as shown on the equation below:

\[
\text{RGDP} = 9.475739 + 1.727214 \text{LAGRFDI} + 0.477491 \text{LPETFDFI}
\]
Effects of Agricultural FDI on Real Gross Domestic Product
The coefficient of regression (13.28166AGRFDI) indicates that Agricultural FDI has positive effect on real gross domestic product. This indicates that a unit increase in Agricultural FDI will lead to about 13 kobo rise in the real gross domestic product. The t-statistics 13.28166 with P-value of 0.0000. Since the P-value is less than 0.05 level, we reject the null hypothesis that “Agricultural FDI has no significant effect on real gross price per domestic product”.

Effects of Petroleum FDI on Real Gross Domestic Product
The coefficient of regression (0.477491PETLFDI) indicates that Petroleum FDI (PETLFDI) has positive effect on real gross domestic product. This indicates that a unit increase in Petroleum FDI will lead to about 33 kobo rise in the real gross domestic product. The t-statistics 12.43587 with P-value of 0.0000. Since the P-value is less than 0.05 level, we reject the null hypothesis and accept alternative. Therefore the study posits that Petroleum FDI has significant effect on Nigeria economic growth. The value of DW = 1.601126 and Breusch-Pagan-Godfrey heteroscedasticity test shows that our residuals variance is homoscedastic.

The ECM(-1) coefficient shows how slowly or quickly variables return to the equilibrium. It is expected that the sign of ECM(-1) should be negative with high level of significance. The ECM estimates the speed of adjustment to reestablish the stable equilibrium in the dynamic short run model. The appearance of ECM(-1) with a negative sign and significance ensures that an establish long-run relationship can be attained. The coefficient of ECM is (0.883491) and significance at 5 percent level of significance for the short run model. This implies that long-run deviation in foreign direct investment is corrected by 46 percent over each year. The stability test enables us to predict the dependent variables in a regression with a reasonable level of precision given the independent variables used in the analysis. Therefore, the test is carried out using the cumulative sum and cumulative sum of squares. The result shows that our model is dynamically stable because the fitted lines fall within the dotted lines for critical value of 5%.

Table 4.4: Breusch-Pagan-Godfrey, Heteroscedasticity Lm Test
<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(3.26)</th>
<th>0.8526</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>0.874669</td>
<td>Prob. Chi-square(3)</td>
<td>0.8315</td>
</tr>
<tr>
<td>Scaled explained ss</td>
<td>0.312023</td>
<td>Prob. Chi-square(3)</td>
<td>0.9578</td>
</tr>
</tbody>
</table>
Source: Author’s Computation using E-view

Table 4.5: Breusch-Pagan-Godfrey, Serial Correlation Lm Test
<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(2.24)</th>
<th>0.2976</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>2.864339</td>
<td>Prob. Chi-square(2)</td>
<td>0.2388</td>
</tr>
</tbody>
</table>

Causality Tests
It has been stated earlier that the existence of long-run relationship among variables entails that causality run in at least one direction. The Granger causality runs from LPETFDI to LAGRFDI. This shows a unidirectional relationship between the variables.

The Granger Causality tests are reported in table 4.6 below:

<table>
<thead>
<tr>
<th>Null hypothesis:</th>
<th>Obs</th>
<th>F-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAGRFDI does not Granger Cause LRGDP</td>
<td>30</td>
<td>0.38795</td>
<td>0.6825</td>
</tr>
<tr>
<td>LRGDP does not Granger Cause LAGRFDI</td>
<td>1.93531</td>
<td>0.1654</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion and Recommendations

This research explores the effect of Foreign Direct Investment on the Nigeria economic growth between the periods of 1985-2016. FDI has been discovered as an engine of economic growth. Obviously, the great potential of FDI for accelerating the pace of economic progress of Nigeria cannot be overemphasized. Foreign investments cater for job creation requirements, income generation, utilize national savings productively and perpetuate the process of economic growth. FDI has been traditionally found to help attract skilled labour, entrepreneurship, technological know-how and direct flow of foreign resources including foreign exchange. The study reveals that both agricultural FDI and petroleum FD has a significant positive impact on the Nigeria economic growth. The study recommends that high technological tools are requiring in agricultural sector in order to compete favourably with foreign counterpart. Government should also monitor the activities of foreign investors and as well crest enabling environment via security to attract foreign investors in Nigeria.

REFERENCES


