

Foreign Direct Investment and Economic Growth Nexus: An Empirical Investigation, Bound Testing Approach.

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Abstract

*The study investigated foreign direct investment and economic growth nexus within the period of 1986 – 2014. The study used time series data on foreign direct investment, trade openness, external reserve, external debt, and gross domestic product. It assumes that foreign direct investment helps in creating an atmosphere for non-indigene of a country to invest in her home country which will eventually lead to economic development. Data sourced for the study were gotten from the Central Bank of Nigeria (CBN). **The study employed ADF Dickey-Fuller test, ARDL Bounds Test and autoregressive distributed lag (ARDL) bond test as the econometric tools.** Estimation results showed that there is a long run relationship between the foreign direct investment and gross domestic product, it was recommended that if the home countries also have a reasonable share in the foreign investing countries economy, the risk of sudden withdrawal that can crumble the economy of the home country will be mitigated and this will invariably mean that the country is not over depending on foreign investors but both countries are leveraging on themselves for survival.*

Key Words: Foreign Direct Investment, Trade Openness, External Reserve, External Debt, Gross Domestic Product.

Introduction

A speedy and smooth sailing economy is the paramount desire of every contemporary government. In this light, Foreign Direct Investment (FDI) is a major determinant of growth for developing nations like ours. This creates an atmosphere for nationals of other countries to invest outside their home country. FDI has helped in the development of the financial institution in the country by making funds available for capital development and bridging the gap in terms of technology between developed and developing nations. It is beneficial to any economy in terms of technology transfer, skill and labour transfer to the host countries. In a nut shell, Borensztein *et al* (1998) are of the view that “*FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment*”. This is in line with Lipsey R (2002) in his investigation on “home and host country effects of FDI”. He said *foreign owned firms possessed superior technology and that some of that technological knowledge spills over to*

the host country's economy.” From this point of view the link between foreign direct investment and economic growth can be traced to the degree of openness in terms of trade relationship between nations, trade helps in diffusion of technology, creation of employment, boosting the nation's balance of payment, and source of government revenue. All these have helped in settlement of the debt owned by the host country.

Foreign direct investment can occur in a country that has abundant natural resources. Its presence attracts foreign investors, most especially the availability of mineral resources like crude oil and gas. Similarly, FDI occurs in countries with comparative disadvantage in production, while foreign trade can take place if the home country has comparative advantage over another. For example, Nigeria is blessed with natural resources and her soil is good for cultivation. This will encourage exportation of agricultural products while the manufacturing sector is lagging behind making FDI a necessity for the country to undertake. With the effective contribution of FDI, diversification of revenue yielding strategies can be outlined to improve the revenue receipt and expenditure base of the government. The use of FDI does not attract any service charge unlike other sources of capital formation like bank credits. This attracts annual payment of interest which varies with the economic situation in the country. According to Adegbite and Ayadi (2010), FDI helps to mitigate the inability of the federal government to meet its expenditure while serving as a means for capital flow for developing countries. FDI has the potential of enabling the host country have access to international market which will help in facilitating the host country's financial system. Aleese (2004) is of the view that FDI has long term effect and easy to service than any other source of credit.

Foreign direct investment has its setbacks, ranging from overdependence on foreign ideas and innovation which has rendered home made innovations irrelevant for people in the country. This also leads to dumping site for developed nations, leading to a weak exchange rate in the nation's economy. On the other hand, the political situation in the country of which Nigeria is a case study, the federal government has tried to provide a conducive and enabling environment for investment purpose but FDI has in time past till date been on slow and steady path because of the insurgency in the country, (Boko-Haram and militancy in the Niger Delta). Statistics has shown that a good number of industries have relocated from the crisis area in the country to the western part of the country because of the palpable security situation in the area. And when the market situation becomes unbearable for the companies, they finally relocate out of the country to a neighboring country. All this occurs due to the inability of the government to effectively manage the abundant natural resources in the country, in this case, oil and gas. According to Daniel (2014), insecurity and crime will limit the inflow of foreign direct investment; the need for huge and intensive capital for economic development in the country is of utmost importance for development to take place.

This research work fills the gap in the literature by using gross domestic product (GDP) to measure economic growth and using Foreign Direct Investment, Trade Openness, External

Reserve, and External Debt, as yard stick to measure foreign direct investment in Nigeria. This research work therefore evaluates the nexus between foreign direct investment and economic growth of Nigeria within the period under review.

Theoretical Framework and Empirical Evidence

Foreign direct investment originates from Gravity approach. This theory is of the opinion that FDI is achieved more based on certain peculiarity between the host country and the investing country, the factors that determine this include language, culture, economy, political framework and economic development of the two countries when compared. The closer they are related the higher the level of FDI between them. According to Boddewyn's capital market theory, the host country not having an organized security market makes it possible for foreign direct investment to be possible and it can be viewed as long term investment. Based on the assumption of unorganized security market, FDI becomes the best way a foreigner can invest into a foreign country not having an overall knowledge of the investment environment of the host country. It is favorable to foreign investors to invest through FDI so that they will have control of the host country's asset to a reasonable extent.

The **Vernon Production Cycle Theory** explains what a country should do when it has technology advantage before its technology becomes obsolete and counterfeited. The founder of this theory, Vernon in 1966 after the Second World War, based on production categorized it into four: Innovation, Growth, Maturity, and Decline. The introduction and creation of new product is paramount in this theory; the surplus from the new product introduced will therefore be exported to neighboring countries to reduce waste and also to generate income. After the Second World War in Europe, there was an increase in manufactured products. With this level of demand America began to export her surplus to Europe owing to the first stage of production cycle. The American (manufacturer, exporter) had advantage over the Europeans (importers) in terms of technology. Vernon also opined that as the product continues to develop (growth), the technology becomes known to adulterators. After a long while of the product topping and gaining ground in the exporting country (maturity), even if the manufacturer continue to adjust to changes by standardizing his goods, these adulterators in the importing country will continue to be a pest. This then reduced the rate at which Americans exported their excess products. According to Raymond Vernon (1966), "FDI by an exporter becomes a prudent means of forestalling the loss of market. The USA will thus export more labour incentive due to un-standardized stage of product cycle and import capital incentive due to standardized products.

Internalisation Theory of Foreign Direct Investment: This explains why Greenfield investment is engaged by multinational companies. This theory was propagated by Buckley and Casson in 1976. Before then, the theory was spoken about by Hymer in 1976 who pointed out two determinants of foreign direct investment, ranging from removal of competition and firms' advantage in a peculiar activity. This theory was later developed by Hennart in 1982 and Casson

in 1983. Meanwhile, the founder of this theory is of the opinion that multinational companies must first organize their internal activity in the home country, and that by doing this they will develop distinct or specific advantage arriving at a monopolistic advantage which then will be exploited in the foreign country. Hymer (1982) is of the opinion that if firms' specific advantage outweighs the relative costs of the operations abroad, then FDI is said to take place.

Empirical Evidence

Okolo and Ani (2014) used econometric analysis under two stages: least square with vector auto-regression and granger causality to investigate insurance, foreign direct investment and economic growth in Nigeria, focusing more on insurance premium and trade openness. It was observed that trade openness relates to economic growth in a minute manner than foreign direct investment, while insurance premium has positive relationship on economic growth and foreign direct investment at different levels. Oni (2014) empirically investigated Human Capital as Determinant of Efficiency-Seeking Foreign direct investment with econometric analysis using data from 1970-2011. Result from the ordinary least squares (OLS) techniques shows that for every one percent increase in the variable of socio-political instability will lead to 60 percent increase in foreign direct investment in the country. Simon-Okeb and Jolaosho (2014) focused on the entrepreneurship contribution of foreign direct investment in Nigeria. The study discovered a significant domination in the oil and gas and oil servicing industries. It also discovered that the indigenous know-how among local artisans is less competitive. The researchers therefore concluded that the entrepreneurship contribution of foreign direct investment is highly insignificant to the realization of government vision and recommends that more participation and contribution of foreign entrepreneurs is needed to support the industrialization efforts in the country. Ehimare (2011) examined foreign direct investment and its effect on the Nigerian economy, using time series analysis from 1989-2011. Using inflation, balance of payment and exchange rate as dependent variables to determine the effect on foreign direct investment, he discovered that foreign direct investment has positively contributed significantly to balance of payment in the country. The study recommends a sound economic policy and political stability that will help make the country attain a desired FDI in the country. It is no doubt that the Nigerian capital market contributes to the development of the country. In this light, Olugbenga and Grace (2014) examined the impact of foreign direct investment on Nigerian capital market development. They found out that foreign direct investment has a significant relationship with market capitalization but there was no co-integration between the two variables, concluding that FDI does not worth the while. Cletus and Oghoghomeh (2014) used multiple regression analysis to investigate determinants of foreign direct investment in a democratic society, the Nigeria experience. The research found out that market size, natural assets, infrastructure, domestic credit, exchange rate, legal system and population health of the country affirmed its existence with FDI while corruption, human capital development, political risk and trade openness did not affirm with FDI. In other investigations across board, Daniel (2014) investigated the drivers of foreign direct investment and real gross domestic product in Kenya. He is of the opinion that

foreign direct investment has potential benefit that acquiesce to the host country, as it also provides much needed capital for development to take place. The effect is not equally felt among various industries in the country. Adi and Adimani (2014) investigated the effect of foreign direct investment in China, using Granger causality within the period 1995-2010. The result indicates that FDI Granger caused growth in the secondary and tertiary industries while it does not cause growth in the primary sector. Nadeem, Naveed, Zeeshan and Sonia (2014) analysed the impact of foreign direct investment in Pakistan. Secondary data was employed ranging from 1983-2012. The study revealed a positive relationship between FDI and economic growth in Pakistan but the extent cannot be predicted because the impact may be situational and culture related. Umar. D and Anupam (2014) analyzed the impact of foreign direct investment inflow on Indian economy, using data ranging from 2000-2012. The study found out that FDI is a tool that changes the level of development of the host country. While Ismail.M, Saadiah.M, Ridzuan.A.R and Ahmed, E.M (2014) conducted a research on Malaysia's economy and discovered that exports have contributed more to the economic development of the country than foreign direct investment. Their research spanned the period between 1980 and 2011 for their investigation. Ongo N.B and Emmanuel (2014) investigated the impact of foreign direct investment on economic growth of CEMAC, and discovered that foreign direct investment affects Central African Economic and Monetary Community (CEMAC) countries apart from Congo, and recommend that policies that will help to modernize the countries should be implemented. Nosakhare and Milton (2014) investigated the nexus between foreign trade and economic growth in Nigeria, using quarterly time series data from 1981-2010, VAR for analyses, proxy gross domestic product as the dependent variable while exports, foreign direct investment and exchange rate as the independent variable. The study found out that the four variables were stationary after being differentiated at level 1(1), while a long run relationship exist using Johansen Co-integration test, bi-directional causality between log of exports and FDI while there exists a uni-directional causality from LEXRT to LRGDP and from LFDI to LRGDP. Also, it was found that LEXRT Granger causes LEXPORTS and also Granger causes LFDI, recommends that export expansion policy should be encouraged.

Methodology

The main data source for this study is secondary data, which were obtained from Central Bank of Nigeria (CBN) annual statistical bulletin. Data sourced covers a 30-year period (1984 to 2014). In order to analyze the overall impact of foreign direct investment on economic growth in Nigeria, the equation estimated foreign direct investment as a function of gross domestic product, foreign direct investment, trade openness, external reserve, and external debt. To achieve our objective, the Ordinary Least Square (OLS), Augmented Dickey–Fuller (ADF), ARDL Bounds Test and the (ARDL) Auto Regressive Distribution Lag were used in this investigation.

Model specification

The relationship can be expressed functionally as

$$GDP = f(FDI, TP, ER, ED) \dots\dots\dots (1)$$

Equation one can be expressed explicitly as:

$$Y = b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \dots\dots\dots (2)$$

For purpose of estimation, we now express equ.2 econometrically as;

$$\ln Y = \ln \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + u_t \dots\dots\dots (3)$$

a priori = $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0$

Where: ln = natural log (ln to base e)

From 3 we have;

$$\ln GDP = \alpha_0 + \beta_1 \ln FDI + \beta_2 \ln TP + \beta_3 \ln ER + \beta_4 \ln ED + u_t \dots\dots\dots (4)$$

Where;

- GDP = Gross Domestic Product
- FDI = Foreign Direct Investment
- TP = Trade Openness
- ER = External Reserve
- ED = External Debt
- α = the intercept
- $\beta_1, \beta_2, \beta_3, \beta_4$ = the regression coefficients of GFCF and GDP
- u_t = error or stochastic term

Descriptive Statistics

Table 1

	INGDP	INFDI	INTP	INER	INED
Mean	17080.65	297140.9	3292541.	16818.96	1226.949
Median	4679.210	92792.50	1189154.	7504.590	633.0200
Maximum	89043.62	1360308.	15002995	53000.36	4890.270
Minimum	116.2700	360.4000	8965.054	710.1000	14.81000
Std. Dev.	25850.79	423956.7	4548025.	17388.17	1382.211
Skewness	1.709088	1.342271	1.331035	0.870997	1.401904
Kurtosis	4.545863	3.360437	3.486179	2.157058	3.717964
Jarque-Bera	18.17842	9.476547	9.458863	4.837413	10.82004
Probability	0.000113	0.008754	0.008831	0.089037	0.004472
Sum	529500.0	9211369.	1.02E+08	521387.9	38035.43
Sum Sq. Dev.	2.00E+10	5.39E+12	6.21E+14	9.07E+09	57315220
Observations	31	31	31	31	31

Source: E views 9.0 Output

Since the kurtosis of all the predictor variables INGDP, INFDI, INTP, and INED are larger than 3. We can infer that all the independent variables in this model are leptokurtic in nature, that is, they are with higher than normal Kurtosis and the weight in the tails of their probability density function is larger than normal. While INER Kurtosis is said to be pleytokurtic in nature if it is less than 3, which to a reasonable extent shows the presence of serial correlation between the

variables under investigation. The probability values of the Jarque-Bera statistics for all the explanatory variables are all significant at a 5% confidence level. The results indicate that LNGDP LNFDI and LNTP are normally distributed but LNER may not be normally distributed at 5% significant level, meanwhile Skewness that is >1.0 or < -1.0 is substantial and its distribution is far from being symmetrical.

Table 2 Unit Root Test. GDP, FDI, TP ER and ED

Variables	ADF	1% critical	5% critical	10% critical	Prob*	Order of
		level	Level	level		Integration
LnGDP	-5.352295	-4.309824	-3.574244	-3.221728	0.0008	I(1)**
LnFDI	-5.958024	-4.309824	-3.574244	-3.221728	0.0002	I(0)*
LnTP	-5.720992	-4.309824	-3.574244	-3.221728	0.0003	I(0)*
LnER	-5.704834	-4.309824	-3.574244	-3.221728	0.0004	I(0)*
LnNED	-6.867641	-4.323979	-3.580623	3.225334	0.0000	I(1)**

Source: Author's computation from E-View 9.0

Above is the result of unit root test presented in the table 2, using 5% level of significance to accept or reject the hypothesis based on the Dickey-Fuller distribution (Harris, 1995) The variable Ln(**FDI, TP and ER**) are integrated at level while Ln(**GDP and NED**) are integrated of order one and it is written I(1) as it is differenced ones to become stationary, at first difference, the ADF test shows the absolute value of the computed Dickey-Fuller is greater than the critical at 5% therefore the null hypothesis is rejected, meaning that the variable is stationary at first difference and level.

Table 3

ARDL Bounds Test			
Date: 04/21/16 Time: 10:19			
Sample: 1988 2014			
Included observations: 27			
Null Hypothesis: No long-run relationships exist			
Test Statistic	Value	k	
F-statistic	6.272246	4	
Critical Value Bounds			
Significance	I0 Bound	I1 Bound	
10%	3.03	4.06	
5%	3.47	4.57	
2.5%	3.89	5.07	
1%	4.4	5.72	
Test Equation:			

Source: Author's computation from E-View 9.0

Using The Model Earlier Specified the ARDL can be implemented using Pesaran *et al* (2001) bounds testing approach. The calculated F-statistics F_{LnGDP} (LnGDP| LnFDI, LnINTP, LnINER, LnINED) = 6.272246 at an optimum lag of 2. This is higher than the upper bound critical value of 4.57 and 4.23 at 5% significant level.

Table 3: Bounds F-test for co-integration.

Dependent variable	Function				F-test statistics	
LnGDP	F_{LnGDP} (LnGDP LnFDI, LnINTP, LnINER, LnINED)				6.272246	
Asymptotic Critical Values						
Pesaran <i>et al</i> (2001), p.301, Table CI(iv) Case IV	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	4.3	5.23	3.38	4.23	2.97	3.74

Note: *** denotes statistical significant at the 1% level.

Thus, the null hypothesis of non-existence of **co-integration** among the variables is rejected. This implies that there is a long run co-integration relationship amongst the variables when the model is normalized on gross domestic Product (LnGDP) in Nigeria.

Table 4: Result of ARDL Model: Modelling of Gross Domestic Product as a Function - Results of ARDL (1, 3, 2, 1, 1) model selected on Akaike info criterion (AIC).

Dependent Variable: D(INGDP)				
Method: ARDL				
Date: 04/04/16 Time: 21:10				
Sample (adjusted): 1988 2014				
Included observations: 27 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (3 lags, automatic): D(INFDI) D(INTP) D(INER) D(INED)				
Fixed regressors: C @TREND				
Number of models evaluated: 256				
Selected Model: ARDL(1, 3, 2, 1, 1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(INGDP(-1))	0.132225	0.216772	0.609972	0.5524
D(INFDI)	-0.021202	0.003534	-5.999507	0.0000
D(INFDI(-1))	0.001998	0.008494	0.235272	0.8177
D(INFDI(-2))	0.015908	0.005339	2.979763	0.0106
D(INFDI(-3))	0.012142	0.005892	2.060855	0.0599
D(INTP)	0.001538	0.000378	4.070230	0.0013
D(INTP(-1))	-7.64E-05	0.000759	-0.100590	0.9214
D(INTP(-2))	0.001042	0.000662	1.574227	0.1394
D(INER)	-0.323159	0.101334	-3.189049	0.0071
D(INER(-1))	-0.193714	0.115492	-1.677293	0.1174
D(INED)	-2.602053	0.557491	-4.667435	0.0004
D(INED(-1))	1.054119	0.929460	1.134120	0.2772
C	-1228.269	1156.850	-1.061736	0.3077
@TREND	175.3048	118.5730	1.478455	0.1631

R-squared	0.963668	Mean dependent var	3290.759
Adjusted R-squared	0.927335	S.D. dependent var	6054.765
S.E. of regression	1632.147	Akaike info criterion	17.93933
Sum squared resid	34630759	Schwarz criterion	18.61125
Log likelihood	-228.1810	Hannan-Quinn criter.	18.13913
F-statistic	26.52365	Durbin-Watson stat	2.218448
Prob(F-statistic)	0.000000		

Source: Author's computation from E-View 9.0

From the result the goodness of fit of the model which is used to determine the variation of change in the dependent variable is explained by changes in the explanatory variables which is measured by the R-squared (R^2) known as coefficient of determination is 0.963668 this implies that 96 percent variation in gross domestic product (proxy for Nigeria economic growth) is explain by the selected independent variable within the period under investigation, this implies that the model has a good fit for prediction and policy purpose there is while the remaining 4 percent variation are explained by other variables that are not captured in the model, while the F-test, this test is also carried out using fair level of 5 percent level of significance, to test for overall significance of the model, we reject the null hypothesis of the tabulated F-value, since the computed F-value is greater than the tabulated F-value. From the result above it can be deduced that the D(INFDI) D(INER) and D(INED) has a negative co-efficient (-0.021202, -0.323159 and -2.602053) but significant relationship (0.0000 0.0071 and 0.0004) with GDP on the short run, we accept the H_a hypothesis which states that there is a significant relationship between the variables, we therefore reject the apriori expectation because the result were contrary to our earlier anticipated expectation, this means for every one percent increase in D(INFDI) on the short run there is an decrease of (-0.021202%) in GDP, the reduction spills over to that of INER for every one percent increase in D(INER) there is a reduction of (-0.323159%) in GDP and for every percent increase in D(INED) there is a reduction of -2.602053% in GDP while at lag(-2) (-3) and short run D(INFDI(-2)) D(INFDI(-3)) and D(INTP) has a positive co-efficient (0.015908, 0.012142, and 0.001538) but significant relationship (0.0106, 0.0599, and 0.0013) with gross domestic product, we accept the apriori expectation because there is an increase of (0.0106%, 0.0599% and 0.0013%) at lag(-2) (-3) and short run we also accept the H_a hypothesis while D(INFDI(-1)) D(INTP(-2)) and D(INED(-1)) has a positive co-efficient of (0.001998, 0.001042, and 1.054119) but insignificant relationship with p-value of (0.8177, 0.1394 and 0.2772) we accept the apriori expectation, for every one percent increase in D(INFDI(-1)) leads to an increase of 0.001998% in GDP, while D(INTP(-2)) leads to an increase of 0.001042% and D(INED(-1)) leads to an increase of 1.054119% meanwhile we reject the H_a hypothesis, then we accept the H_0 hypothesis, which state that there is no significant relationship with GDP, meanwhile both D(INTP(-1)) and D(INER(-1)) at lag(-1) has a negative co-efficient (-7.64E-05 and -0.193714) and an insignificant relationship with gross domestic product (0.9214 and 0.1174), for every one percent increase in D(INTP(-1)) there is a reduction of (-7.64%) in GDP while D(INER(-1)) will lead to a reduction of in -0.19% in GDP, we reject the apriori expectation for this period, also reject the H_a hypothesis.

Conclusion and Recommendations

This paper analyzed the relationship between Foreign Direct Investment and Economic Growth, using Bound Testing Approach. The results of the descriptive statistics showed that INGDP, INFDI, INTP, and INED are leptokurtic in nature While INER is plelytokurtic in nature.

From the result gotten we saw that the variable were good and used for the analysis, judging from the result of the ADF analysis. While Bond Test shows us that there is a short and long run relationship between the independent variable and the dependent variable. The ARDL test indicated that $D(INFDI(-1))$ $D(INTP(-2))$ $D(INED(-1))$ has a positive but insignificant relationship with gross domestic product, while $D(INTP(-1))$ and $D(INER(-1))$ has a negative but insignificant relationship with gross domestic product, while $D(INFDI(-2))$ and $(-3))$ with $D(INTP)$ has a positive and significant relationship with gross domestic product, meanwhile $D(INER)$ and $D(INED)$ has a negative but significant relationship with gross domestic product. The Unit root tests showed that $\ln(FDI, TP \text{ and } ER)$ are integrated at level while $\ln(GDP \text{ and } NED)$ are integrated of order one. Using the ARDL Bounds Test the probability of the F-statistic and Chi-square showed that there is a positive and significant relationship between $(\ln GDP | \ln FDI, \ln INTP, \ln INER, \ln INED)$. While the Pesaran *et al* (2001) bounds testing approach implies that there is a long run co-integration relationship amongst the variables when the model is normalized on gross domestic Product ($\ln GDP$) in Nigeria. Based on the findings the following this research work support researchers like Daniel (2014) and Motano, S.B and Qing.Z (2014) are of the opinion that political and macroeconomic stability should be maintained and quality infrastructure should be put in place by the federal government to promote economic growth. If the home country also have a reasonable share in the foreign investing countries economy, the risk of sudden withdrawal that can crumble the economy of the home country will be mitigated and this will invariably mean that the country is not over depending on foreign investors but both countries are leveraging on themselves for survival, foreign investment attraction policies should be enacted and encouraged, while restriction should be placed on prohibited industries. Finally the findings agree with Umar.D & Anupam's (2014) investigation carried out on Indian economy, which is of the opinion that the country should not only depend on FDI for economic development but they should explore other means like openness to trade.

Reference

- Adegbite E.O and F.S. Ayadi (2010): "The Role of FDI in Economic Development: A Study of Nigeria." World Journal of Entrepreneurship, Management and Sustainable Development. Vol.6 No 1 Available from www.worldsustainable.org Retrieved 10/02/1016
- Adegboyega S.B and O.A (2014): Ibrahim: Empirical Analysis of Trade Openness, Capital Formation, FDI, and Economic Growth: Nigeria Experience. The International Journal of Social Sciences and Humanities Invention Volume 1 issue 1 page no.36-50 ISSN: 2349-2031
- Adi, A.A and Adimani, W.E (2014): Effect of Foreign Direct Investment on China Economic Growth: A Granger Causality Approach. IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925. Volume 2, Issue 4, Page 56-63
- Aleese, Mc.D. (2004): Economics for business: competition, macro-stability and globalisation. 3rd ed. Edinburgh Gate: Pearson Education Limited

- Borenszteina, E, Gregorio, J. De and Lee J.W (1998): How does foreign direct investment affect economic growth? *Journal of International Economics* 45 (1998) page 115 –135.
- Buckley, P.J. and Casson, M.C. (1976): “The Future of the Multinational Enterprise”, Homes & Meier: London.
- Cletus O. A and Oghoghohem. T (2014): Determinants of foreign direct investment in a democratic society: the Nigeria experience. *International Conference on Business and Economic Development (ICBED)*, New York-USA 282. *The Business & Management Review*, Volume 4 Number 4
- Daniel O.A (2014): Foreign Direct Investment And Economic Growth: An Empirical Analysis of Kenyan Data. *DBA Africa Management Review*, April, Vol 4 No 1. Page. 62-83
- Ehimare O. A. (2011): Foreign Direct Investment and its Effect on the Nigerian Economy. *Business Intelligence Journal* - July, 2011 Vol.4 No.2 page 253-26.
- Hennart J.F. (1982): “A theory of multinational enterprise”, University of Michigan Press.
- Hymer, S., 1976 (1960 dissertation): “The International Operations of Nation Firms: A Study of Foreign Direct Investment”, Cambridge, MLT Press.
- Ismail.M Saadiah.M, Ridzuan.A.R and Ahmed, E.M (2014): The Export Led-Growth and FDI Led-Growth Nexus in Malaysia: Evidence from ARDL Analysis *Advances in Research* 2(5): Page 240-249, Article no. AIR.2014.5.001.
- Lipsey R (2002): “Home and Host Country Effects of FDI”, Lidingö, Sweden. Paper for ISIT Conference on Challenges to Globalization. Retrieved 10/02/2016.
- Motano,S.B and Qing.Z (2014):An overview of China’s foreign direct investments in Africa. *Global Scholars Journal of Banking and International Finance* Vol.1 (1), page 1-7
- Nadeem,I, Naveed.A, Zeeshan.H and Sonia.A (2014): Impact of foreign direct investment (FDI) on GDP: A Case study from Pakistan. *International Letters of Social and Humanistic Sciences*. Vol 5 Page 73-80 ISSN 2300-2697
- Nosakhare L. A and Milton A. I (2014): Foreign Trade-Economic Growth Nexus: Evidence from Nigeria *CBN Journal of Applied Statistics* Vol. 5 No.1 Page 121.
- Okolo V. C and Ani .A (2014): Insurance, Foreign Direct Investment and Economic Growth: Growing the Nigerian Economy through Risk Management. *International journal of Innovative Research in Management* ISSN 2319 – 6912, issue 3 volume 6
- Olugbeng, A.A and Grace,O.O.(2014): Impact of Foreign Direct Investment on Nigerian Capital Market Development. *International Journal of Academic Research in Accounting, Finance and Management Sciences* Vol. 5 (1), page. 103–108.
- Ongo N.B and Emmanuel (2014): Foreign Direct Investment and Economic Growth: The Experience of CEMAC Countries. *Journal of Finance & Economics* Volume 2, Issue 1 page 01-14.
- Oni L.B (2014): Human Capital as Determinant Of Efficiency-Seeking Foreign direct investment: Empirical Evidence from Nigeria. *Research journal’s Journal of Economics* Vol. 2 No. 2 February ISSN 2347-8233
- Onyali, C.I and Okafor.T (2014): Foreign direct investment and the Nigerian economy: Vision 2020 mission. *International journal of business and finance management research*. *IJBFMR* Vol.2 Page 8-16 ISSN 2053-1842
- Simon-Oke, O.O. and Jolaosho, M.O. (2014), “Entrepreneurship contribution of foreign direct investment: A reality of unfulfilled vision in Nigeria”, *International Journal of Development and Sustainability*, Vol. 3 No. 1, page 184-195.

Umar.D & Anupam (2014) Impact of Foreign Direct Investment Inflows on the Growth of Indian Economy, International Journal of Research (IJR), Volume-1, Issue-5, page 112-118.

Vintila Denisia (2010): Foreign Direct Investment Theories: An Overview of the Main FDI Theories European Journal of Interdisciplinary Studies. Volume 2 Issue 2 page 106

Appendix I

Descriptive Statistics

	INGDP	INFDI	INTP	INER	INED
Mean	17080.65	297140.9	3292541.	16818.96	1226.949
Median	4679.210	92792.50	1189154.	7504.590	633.0200
Maximum	89043.62	1360308.	15002995	53000.36	4890.270
Minimum	116.2700	360.4000	8965.054	710.1000	14.81000
Std. Dev.	25850.79	423956.7	4548025.	17388.17	1382.211
Skewness	1.709088	1.342271	1.331035	0.870997	1.401904
Kurtosis	4.545863	3.360437	3.486179	2.157058	3.717964
Jarque-Bera	18.17842	9.476547	9.458863	4.837413	10.82004
Probability	0.000113	0.008754	0.008831	0.089037	0.004472
Sum	529500.0	9211369.	1.02E+08	521387.9	38035.43
Sum Sq. Dev.	2.00E+10	5.39E+12	6.21E+14	9.07E+09	57315220
Observations	31	31	31	31	31

Source: E views 9.1 Output

Appendix II

Unit Root Test. GDP, FDI, TP and ER

Variables	ADF	1% critical	5% critical	10% critical	Prob*	Order of Integration
		level	Level	level		
LnGDP	-5.352295	-4.309824	-3.574244	-3.221728	0.0008	I(1)*
LnFDI	-5.958024	-4.309824	-3.574244	-3.221728	0.0002	I(0)*
LnTP	-5.720992	-4.309824	-3.574244	-3.221728	0.0003	I(0)*
LnER	-5.704834	-4.309824	-3.574244	-3.221728	0.0004	I(0)*
LnNED	-6.867641	-4.323979	-3.580623	3.225334	0.0000	I(1)**

Source: Author's computation from E-View 9

Appendix III

Bounds F-test for co-integration.

Dependent variable	Function	F-test statistics				
LnGDP	$F_{LnGDP} (LnGDP LnFDI, LnINTP, LnINER, LnINED)$	7.969748				
Asymptotic Critical Values						
Pesaran <i>et al</i> (2001), p.301, Table CI(iv) Case IV	1%		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
	4.3	5.23	3.38	4.23	2.97	3.74

Note: *** denotes statistical significant at the 1% level.

Appendix IV

Dependent Variable: D(INGDP)				
Method: ARDL				
Date: 04/04/16 Time: 21:23				
Sample (adjusted): 1988 2014				
Included observations: 27 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (3 lags, automatic): D(INFDI) D(INTP) D(INER) D(INED)				
Fixed regressors: C @TREND				
Number of models evaluated: 256				
Selected Model: ARDL(1, 3, 2, 1, 1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(INGDP(-1))	0.132225	0.216772	0.609972	0.5524
D(INFDI)	-0.021202	0.003534	-5.999507	0.0000
D(INFDI(-1))	0.001998	0.008494	0.235272	0.8177
D(INFDI(-2))	0.015908	0.005339	2.979763	0.0106
D(INFDI(-3))	0.012142	0.005892	2.060855	0.0599
D(INTP)	0.001538	0.000378	4.070230	0.0013
D(INTP(-1))	-7.64E-05	0.000759	-0.100590	0.9214
D(INTP(-2))	0.001042	0.000662	1.574227	0.1394
D(INER)	-0.323159	0.101334	-3.189049	0.0071
D(INER(-1))	-0.193714	0.115492	-1.677293	0.1174
D(INED)	-2.602053	0.557491	-4.667435	0.0004
D(INED(-1))	1.054119	0.929460	1.134120	0.2772
C	-1228.269	1156.850	-1.061736	0.3077
@TREND	175.3048	118.5730	1.478455	0.1631
R-squared	0.963668	Mean dependent var	3290.759	
Adjusted R-squared	0.927335	S.D. dependent var	6054.765	
S.E. of regression	1632.147	Akaike info criterion	17.93933	
Sum squared resid	34630759	Schwarz criterion	18.61125	
Log likelihood	-228.1810	Hannan-Quinn criter.	18.13913	

F-statistic	26.52365	Durbin-Watson stat	2.218448
Prob(F-statistic)	0.000000		

Source: Author's computation from E-View 9.

Table : Result of ARDL Model Long Run Co-Integration Form.

ARDL Cointegrating And Long Run Form				
Dependent Variable: D(INGDP)				
Selected Model: ARDL(1, 3, 2, 1, 1)				
Date: 04/21/16 Time: 10:23				
Sample: 1984 2014				
Included observations: 27				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INFDI, 2)	-0.021202	0.003534	-5.999507	0.0000
D(INFDI(-1), 2)	-0.015908	0.005339	-2.979763	0.0106
D(INFDI(-2), 2)	-0.012142	0.005892	-2.060855	0.0599
D(INTP, 2)	0.001538	0.000378	4.070230	0.0013
D(INTP(-1), 2)	-0.001042	0.000662	-1.574227	0.1394
D(INER, 2)	-0.323159	0.101334	-3.189049	0.0071
D(INED, 2)	-2.602053	0.557491	-4.667435	0.0004
D(@TREND())	175.304809	118.572992	1.478455	0.1631
CointEq(-1)	-0.867775	0.216772	-4.003177	0.0015
Cointeq = D(INGDP) - (0.0102*D(INFDI) + 0.0029*D(INTP) -0.5956				
*D(INER) -1.7838*D(INED) -1415.4227 + 202.0163*@TREND)				

Source: Author's computation from E-View 9

Estimation Command:

ARDL(DEPLAGS=1, REGLAGS=3, TREND=LINEAR) D(INGDP) D(INFDI) D(INTP) D(INER) D(INED) @

Estimation Equation:

$D(INGDP) = C(1)*D(INGDP(-1)) + C(2)*D(INFDI) + C(3)*D(INFDI(-1)) + C(4)*D(INFDI(-2)) + C(5)*D(INFDI(-3)) + C(6)*D(INTP) + C(7)*D(INTP(-1)) + C(8)*D(INTP(-2)) + C(9)*D(INER) + C(10)*D(INER(-1)) + C(11)*D(INED) + C(12)*D(INED(-1)) + C(13) + C(14)*@TREND$

Substituted Coefficients:

$D(INGDP) = 0.132224592781*D(INGDP(-1)) - 0.021201644354*D(INFDI) + 0.00199841544107*D(INFDI(-1)) + 0.0159077192345*D(INFDI(-2)) + 0.0121422170544*D(INFDI(-3)) + 0.00153794854058*D(INTP) - 7.63837160166e-05*D(INTP(-1)) + 0.00104158564448*D(INTP(-2)) - 0.32315918514*D(INER) - 0.193713797045*D(INER(-1)) - 2.60205326008*D(INED) + 1.05411926318*D(INED(-1)) - 1228.26899637 + 175.304808561*@TREND$

Co-integrating Equation:

$D(INGDP, 2) = -0.021201644354*D(INFDI, 2) - 0.015907719235*D(INFDI(-1), 2) - 0.012142217054*D(INFDI(-2), 2) + 0.001537948541*D(INTP, 2) - 0.001041585644*D(INTP(-1), 2) - 0.323159185140*D(INER, 2) - 2.602053260085*D(INED, 2) + 175.304808560937*D(@TREND()) - 0.867775407219*(D(INGDP) - (0.01019470*D(INFDI(-1)) + 0.00288456*D(INTP(-1)) - 0.59562990*D(INER(-1)) - 1.78379565*D(INED(-1)) - 1415.42268443 + 202.01633637*@TREND()))$