# DETERMINANTS OF FOREIGN DIRECT INVESTMENT INFLOWS IN NIGERIA: AN EMPIRICAL ANALYSIS (1970-2011)

### PROF. E. J. OKEREKE PhD

&

N. O. EBULISON Department of Finance & Banking, Faculty of Management Sciences, University of Port Harcourt <u>emeka.okereke@uniport.edu.ng erokereke77@yahoo.com</u> <u>ebulison@hotmail.com</u>

#### ABSTRACT

The study empirically identified the determinants of Foreign Direct Investment (FDI) inflow to Nigeria. Secondary sources were used to source annual time series data on FDI inflow into Nigeria, Degree of trade openness, Gross Domestic Product (GDP), Interest rate, Exchange rate of the naira against the US Dollar (N/\$),over the period, 1970 – 2011.These variables were analyzed using Ordinary least Square (OLS), Unit Root test, Co-integration and Error Correction Mechanism (ECM). It was found that there is a significant relationship between FDI and GDP, exchange rate and degree of openness but no significant relationship between FDI and interest rate in Nigeria. The study recommends among others, that Government should continuously formulate and implement policies that would increase productive base, embark on moderate devaluation of the national currency to attract more FDI inflow into Nigeria and encourage liberalization with some policy caution. **Key Words:** Degree of Openness, Foreign Direct investment, Devaluation and Exchange Rate.

# 1. INTRODUCTION

One major objective of Government of Sovereign nations all over the world is to embark on policies and programmes which are geared towards the improvement of the living standards of her citizenry and also ensure economic growth and development. The attainment of this cardinal objective in developing countries like Nigeria and other sub-Sahara African (SSA) countries has been hampered by low levels of capital formation occasioned by vicious cycles of low productivity, low income and low level earnings (Adepoju, *et al* 2007). This calls for public and private attention and the need for a financial and non-financial bridging from abroad to address them has become somewhat imperative. One vehicle or channel through which foreign financial bridging flows into developing countries like Nigeria is by Foreign Direct Investment (FDI).

Adefeso, et al (2012) stated that the overwhelming importance of Foreign Direct Investment (FDI) inflows to the developing countries has occupied a substantial body of economic literature. Again, it addresses the vicious circle of economic misalignments. According to Ngowi (2001) in Adefeso, et al (2012) FDI creates employment and acts as a vehicle of technology transfer, provides superior skills and management techniques, facilitates local firm's access to internationals markets and increase product diversity and overall an engine of economic growth and development in Africa where its need cannot be over emphasized. Unfortunately, Nigeria (before 2003) had has not enjoyed these benefits because she has witnessed declining and fluctuating foreign investment inflows. Nigeria alone cannot provide all the needed domestic funds to invest in all the sectors of the economy, to make it one of the twenty largest economies in the world by 2020 and to meet the Millennium Development Goals (MDGs) in 2015. The need to harness her foreign direct investment becomes a sin quo non for a healthy economy. Uwubanwen et al (2012) observed that economic growth as explained by the neoclassical growth theory emanates from the increase in the quantity of factors of production as well as the efficiency in their allocation (which are partly generated externally). In a simple world of two factor economy (i.e labour and capital), it is a known fact that developing economies (such as Nigeria) have abundant manpower but scarce capital due to shortage of domestic savings mobilization which places limitation on capital formation and economic development. Even when domestically generated capital and manpower are in abundant supply, increased production may be constrained by shortage of foreign input (machines) upon which manufacturing of goods and services in developing economies depend. This therefore makes international capital flow an important aspect of the efforts by developing countries to close their investment-savings gap. Montiel and Reinhart (2002) further posited that either from the perceived or rational meaning of FDI as seen above, there is little or no doubt that FDI directly augment the real resources available for production in the host country's economy. Indeed, the opinions in literature is that FDI is "a good cholesterol" necessary for closing the existing investment-savings gaps in developing economies. Thev concluded that the attraction of FDI into developing economies (such as Nigeria) is usually premised on the implicit assumption that greater inflow of FDI will accelerate the level of economic growth (measured by GDP) and the mobilization of domestic capital as well as improvement in balance of payments.

Unfortunately, studies conducted have varying results on the linkage between FDI and economic growth in Nigeria. For instance Odozi, (1995); Oyinlola (1995); Adelegan (2002) and Akinlo (2004) agreed that the empirical linkage between FDI and economic growth in Nigeria is yet unclear. The net result of this dive is that Nigeria Government has implemented various policy reforms so as to attract foreign direct investment. Despite these reforms, the perceived and obvious needs for FDI inflows to Nigeria have remained low compared to other developing Asian countries. This development is disturbing and sending signals of seemingly little hope of economic

development and growth. It calls for academic concern. Therefore, this study is focused on empirically identifying the determinants of FDI inflow to Nigeria. Specifically, the study is set to

- i) determine the impact of GDP on FDI inflow in Nigeria
- ii) explore the effects of trade openness on FDI inflows in Nigeria
- iii) determine the effect of interest rates on FDI inflows in Nigeria
- iv) determine the effect of exchange rate on FDI inflows in Nigeria

To put the paper into proper perceptive, it is divided into five sections. Section 1 introduced the study with background information, study gap and objectives set. Section 2 provided review of related empirical literature. Methods employed in the study are covered in section 3. Sections 4 and 5 treated data presentation and analysis and recommendations respectively.

# 2. LITERATURE REVIEW

#### **Conceptual Treatment**

Foreign Direct Investment (FDI) is a veritable tool for boosting economies of countries that employ it and maximize the attendant benefits. World Bank (1996) defined FDI as an investment made to acquire a lasting management interest (normally 10% of voting stock) in a business enterprise operating in a country other than that of the investor defined according to residency. Odozi (1995) sees FDI as the inflow of foreign resources in the form of equity capital, reinvested earnings or net borrowing of firm's parent companies or affiliated subsidiaries. It involves the transfer of a package of resources including capital, technology, and management and marketing expertise with the purpose of acquiring lasting interest in the management of a firm without necessarily having majority shareholding.

Caves (1996) however observed that the rationale for increased efforts to attract foreign direct investment has several positive effects among which are productivity gains, technology transfer, the introduction of new processes, managerial skills, capital formation, access to markets and international production networks.

### **Empirical Review**

A number of empirical research works has been carried out by academics and non academics alike on the subject of FDI and its determinants in developing countries, particularly Nigeria. The main variables are considered in this review. Essentially, there is an avalanche of arguments amongst researchers and economists regarding the main determinants of FDI inflow in Nigeria. Ayanwale (2007) succinctly argued that the role of FDI on growth can either be country specific, and can be positive, negative or insignificant, depending on the economic, institutional and technological conditions in the recipients' countries.

Economic growth has been identified as a determinant of FDI flows. It has been argued that growing economies attract more FDI than sluggish ones. This explains why Asia countries like India, China attract more FDI than Africa countries like Nigeria, Ghana, etc. Dunning (2000) and Lipsey (1999) confirms the positive relationship between economic growth and FDI. They used US investment in the manufacturing sector in Europe in the 1950, their work revealed that the US investment in the manufacturing sectors were directed to the faster growing countries like Germany, Britain and France.

Other studies have cited the host country's market size (measured by the Gross Domestic Product, GDP) as an important determinant of FDI inflows (Chakrabarti, 2001). However, if the host country is only used as a production base due to low production costs in order to export their products to another or home market, then the market size may be less influential or insignificant (Agarwal,1980). Dunning (2000) also concluded in his empirical work, that market size was the key variable that determines US investment in Europe. Ezirim, *et al* (2006) studied the determinants of FDI in Nigeria and found that FDI relates positively with exchange rates, inflation rates and expected returns on investments; contrariwise, FDI relates negatively with rate of economic growth, interest rates, socio political index, taxation and previous FDI. They therefore posited that FDI occurs in order to exploit the benefits associated with exchange rate depreciation, persistently rising price level and market imperfections in their quest for maximum profits in the host economies.

Amachi, (2002), using the ordinary least square regression technique for the period 1970 – 1997, examined the impact of macroeconomic environment on FDI. Whole some macro economic variables such as GDP per capital, interest rate and exchange rate had significant and very strong influence on FDI, other variables like inflation rate, unemployment record had weak relationship with FDI. The study concluded that macroeconomic environment plays a vital role in determining the volume of FDI inflows.

In another way, Benassy–Quere, *et al* (1999) emphasizes that the way exchange rate impacts on FDI inflows will depend on the type of FDI (whether horizontal or export oriented and vertical). In the case of horizontal FDI, if the host countries currency depreciates, exchange rate will have a positive impact on FDI inflows and consequently result to reduced cost of capital. Also, if the currency appreciates, FDI inflows to the country will also increase because the local consumers have high purchasing power. The reverse is the case on vertical FDI. For vertical FDI, if the host country's currency appreciates, it has negative effect on its FDI inflows because the product manufactured locally will become expensive abroad. Benassy-Quere *et al* therefore acknowledged that the theoretical impact of exchange rate volatility on FDI is ambiguous.

Salako and Adebusuyi (2001) using the co-integration technique, examined the empirical determinants of FDI in Nigeria. Their results showed that exchange rate, infrastructures development and credit to the domestic economy were some of the main factors that influence FDI inflows to Nigeria. It was observed that FDI was sensitive to domestic interest rate and real per capita income while there is need to maintain political stability in order to attract FDI to Nigeria. In a study change in domestic investment, change in domestic output or market size, indigenization policy and change in openness of the economy were identified as major determinants of FDI. No wonder closed policies when opened tend to encourage FDI inflow into such country. For instance when indigenization policy in Nigeria was abrogated, it attracted more FDI.

The benefits of FDI notwithstanding, care must be taken not to over depend on FDI to avoid mortgaging the nation's economic sovereignty. Sadik and Bolbol,(2001) warned that despite the rationale given for FDI inflows, emerging economies should be careful of over-dependence on the benefits of FDI as a means of ensuring economic development. It is sometimes questioned whether FDI contributes to the broader aspects of economic growth as well as reinvestment of income in host economies. It has been argued that the presence of foreign firms can affect the efficiency of local industry which Blomstrom and Koko (1998) referred to as spillover argument. This argument holds strongly when the multinational corporations (MNCs) are producing for the host country's market.

Aitken, Harrison and Lipsey (1999) showed for example, that the presence of foreign firms disturb the existing market equilibrium in the host country, which constrained the production capacity of local industry, and further increase their cost of production. This eventually leads to net domestic productivity decline despite the technological transfer from multinational companies!

### **3. METHODOLOGY**

The study utilized econometrics techniques to analyze and explain the determinants of FDI in Nigeria between 1970 and 2011. Specifically, Ordinary least Square (OLS), Unit Root test, Cointegration and Error Correction Mechanism (ECM) were used in analyzing the variables. This is with a view to establishing possible relationship between or among variables, correct anomalies that may affect regression results and provide long-run relationship between variables.

The study utilized annual time series data on FDI inflow into Nigeria, Degree of trade openness, Gross Domestic Product (GDP), Interest rate, Exchange rate of the naira against the US Dollar (N/\$), over the period, 1970 - 2011. They were mainly collected through secondary sources of National Bureau of Statistics (NBS) – Statistical fact book; Central Bank of Nigeria (CBN) Statistical Bulletin, Annual Reports, Statement of Accounts, Economic and Financial Review; and other relevant publications

### **Model Specification**

The study adopted the work of Ezirim *et al* (2006) with some modifications in GDP, interest rate, exchange rate and degree of trade openness as the main determinants of FDI inflow into Nigeria. This gives the functional relationship between the variables as:

FDI	=	f (GDP, IR	R, EXR, TRA,	)		1
Where						
<b><i>ap</i><b><i>p</i></b></b>	~				• `	

GDP = Gross Domestic Product (a proxy for economic growth)

IRR = Interest rate

EXR = Exchange rate

TRA = Degree of trade openness

Representing the above equation econometrically, we have

 $FDI = \alpha_0 + \alpha_1 GDP + \alpha_2 IRR + \alpha_3 EXR + \alpha_4 TRA + \mu. \dots 2$ Where:

 $\alpha$ o is the autonomous FDI inflow,  $\alpha_1$   $\alpha_4$  are parameters of the coefficients,  $\mu$  = error term and all the other variables remain as earlier defined.

The equation was analyzed at both linear and log-linear specifications for choice of best goodnessof-fit and a robust policy recommendation(s). As observed by Gujarati and Sangeetha (2007), when comparing two or more models, the model with the lowest value of AIC is preferred.

A priori:  $\alpha_1$ ,  $\alpha_3$ , and  $\alpha_4 > 0$  while  $\alpha_2 < 0$ 

# 4. PRESENTATION AND ANALYSIS OF DATA

# 4.1 Presentation of Data

Year	GDP	EXR	IRR	TRA	FDI
1970	5281.1	0.7143	7	0.02	1003.2
1971	6650.9	0.6955	7	0.03	1322.8
1972	7187.5	0.6579	7	0.04	1571.1
1973	8630.5	0.6579	7	0.08	1763.1
1974	18823.1	0.6299	7	0.21	1812.1
1975	21475.24	0.6159	6	0.06	2287.5
1976	26655.78	0.6265	6	0.04	2339
1977	31520.34	0.6466	6	0.03	2531.4
1978	34540.1	0.606	7	-0.04	2863.2
1979	41974.7	0.5957	7.5	0.06	3513.1
1980	49632.32	0.5464	7.5	0.1	3620.1
1981	47619.7	0.63	7.75	-0.04	334.7
1982	49069.3	0.67	10.3	-0.05	290
1983	53107.4	0.72	10	-0.02	264.3
1984	59622.5	0.76	12.5	0.03	360.4
1985	67908.6	0.89	9.3	0.05	434.1
1986	69147	3.78	10.3	0.02	735.8
1987	105222.8	4.08	17.5	0.11	2452.8
1988	139085.3	4.59	16.5	0.04	1718.2
1989	216797.5	7.39	26.8	0.12	13877.4
1990	267550	8.04	25.5	0.23	4686
1991	312139.7	9.91	20	0.1	6916.1
1992	532613.8	17.45	29.8	0.11	14463.1
1993	683869.8	22.41	18.3	0.19	29675.2
1994	899863.2	22	21	0.16	22229.2
1995	1933212	81.2	20.1	0.14	75940.6
1996	2702719	81.2	19.7	0.3	111295
1997	2801973	82	13.5	0.17	110452.7
1998	2708431	83.8	18.3	0.02	80750.4
1999	3194015	94	21.3	0.15	92792.5
2000	4582127	101.7	18	0.26	115952.2
2001	4725086	111.98	18.3	0.13	132481
2002	6912381	120.97	24.4	0.13	225224.8
2003	8487032	129.36	20.7	0.13	258388.6
2004	11411067	133.5	19.2	0.19	248224.6
2005	14572239	132.15	17.95	0.3	1921.21
2006	18564595	128.27	17.33	0.21	4111.49
2007	20657318	117.97	16.46	0.17	109161.3
2008	24296329	132.56	15.26	0.18	124645
2009	24794238	149.58	19.55	0.08	227093.3
2010	<u>3398475</u> 4	150.66	15.74	0.19	137029.2

 Table 1: Operational Data on Nigerian Economic Variables (1970-2011)

6

2011	37543655	154.27	16.85	0.15	125668.7

Note (i) FDI = Foreign Direct Investment (ii) GDP = Gross Domestic Product
 (iii) IRR = Interest Rate. (v) EXR = Exchange Rate (Viii) TRA = Trade Openness
 Source: CBN Statistical Bulletin (various issues)

Table 1 above shows the figures of the variables on foreign direct investment (FDI), gross domestic product (GDP), interest rate (IRR), exchange rate (EXR), and trade openness (TRA) between 1970 and 2011. It shows that FDI has been on the increase from N1003.2 million in 1970 to N3620.1 million in 1980 showing 261% growth rate. But it swiftly declined at the rate of 91% in 1981 and continued to fluctuate till 1990. It must be observed that the decline in FDI did not have the same affect on GDP, which showed only a decline rate of 4% and picked up the in 1982 and continued over the period studied. This implies that GDP affects FDI but at an insignificant level. From 1991, FDI rose again from N6916.1 million to as high as N248224.6 million in 2004. The value fell further again in 2005 to N1921.21 million, rises from 109161.3 in 2007 to N125668.7 million in 2011. This fluctuating trend in FDI observed from1991 is opposite of GDP that consistently grew from N312139.7 to N37543655 in 2011.

On GDP, there has been an increase from N5281.1 million in 1970 to N49632.3 million in 1980. In 1981, it declined to N47619.7 which is reflected in FDI. It picked up again from 1982 all through to 2011, it rose from N49069.28 million to as high as N37543654.70 million respectively. It must be noted that there is sharp increase of 52% from N69147 to N105222.8 in 1986 and 1987 respectively. This may be accounted to the deregulation of the economy. IRR has moved from 7 percent in 1970 to 7.75 percent in 1981. From 1982 to 2011, IRR fluctuated between 9.3 percent and 29.8 percent. This high interest rate, which is worrisome, was dominant during the Structural Adjustment Programme (SAP) era. It has to be stated that the changes that occur in IRR do not follow the same trend with FDI in Nigeria.

EXR appreciated from N0.7143 per one U.S. dollar in 1970 to N0.5464 per one U.S. dollar in 1980. This shows that as the Naira appreciates the FDI increases in value from N1003.2 to N3620. Between 1981 and 2000, it depreciated from N0.6100 per one U.S. dollar to N100.8016 per one U.S. dollar and N152.3297 per one U.S. dollar in 2011. It is observed from FDI figures that there is no established trend over the period 1981-2011 unlike what we have from 1970 to 1980. The value of TRA declined from 0.02 in 1970 to -0.04 in 1981 and -0.02 in 1983. Since then the value has been fluctuating between 0.15, 0.17, and 0.19. It must be observed that there is no established trend between the FDI and TRA figures. However, TRA fluctuates more in a decreasing trend than FDI that has an increasing trend especially from 1992 till 2011.

#### 4.2 Analysis: Regression Results and Interpretations

	0		
Variable	Coefficient	t-value	Probability
Constant	2.7014	1.8491	0.0734
Log GDP	0.4557	4.2314	0.0002
Log IRR	0.0182	0.0714	0.9435

### **Table 2: Short Run Regression Results**

Log EXR	0.3496	2.2568	0.0308		
Log TRA	-0.2332	-1.9304	0.0622		
$R^2 = 0.9549$ ; Adj $R^2 = 0.9495$ ; DW = 1.9346					
AIC = 1.335 F-Stat = 174.82; Log likelihood = -20.37					
Source: Extract from Appendix using E-view version 7.0 software					

The results of the short-run static regression shows that about 95.5 percent of changes in the Foreign Direct Investment is caused by the explanatory variables (GDP, IRR, EXR and TRA) while the remaining 4.5 percent is due to exogenous factors outside the model but covered by the error term. Also, the overall predictive ability of the model is significant at 5 percent level as shown by the high value of F-ratio 174.82 which is greater than the table value of 2.61. The DW computed value of 1.9346 is approximately 2 which is indicates absence of serial autocorrelation.

### **Unit Root Test**

This test helps to establish the stationary of data used since econometrics literature established that non-stationary data gives spurious regression results. Hence we establish the characteristics of the data to establish their stationary using unit root test, which is done in two phases. First, is the ADF test and the other is the Phillip-Perron test.

Variable	ADF Test	ADF Critical	Order of	PP test	PP Critical	Order of
	Statistic	Value	Integration		Value	Integration
FDI	-0.867494	-2.936942	Non-	-0.964128	-2.935001	Non-
			Stationary			Stationary
GDP	-0.187295	-2.935001	Non-	-0.199986	-2.935001	Non-
			Stationary			Stationary
IRR	-1.390125	-2.936942	Non-	-1.529658	-2.935001	Non-
			Stationary			Stationary
EXR	-0.060679	-2.935001	Non-	-0.187636	-2.935001	Non-
			Stationary			Stationary
TRA	-3.099387	-2.957110	Stationary	-4.031294	-2.948404	Stationary

 Table 3: Results of Unit Root Test at Two Levels

Source: Extract from Appendix using E-view version 7.0 software

The result of the unit root tests in table 3 above revealed that except TRA that was stationary at levels, the rest were not. Thus, the need to employ first differentiation approach to establish the order of interaction of the variables using the ADF and PP tests unit root as presented in table 4 below.

				• - •				
Variable	ADF	Test	ADF	Crit	<b>PP</b> Statistics	PP Crit value	Order	of
	Statistic		Value				Integration	n
FDI	-10.06891		-2.93694	12	-19.81996	-2.936942	1(1)	
GDP	-5.672577	1	-2.93694	42	-5.671527	-2.936942	1(1)	
IRR	-8.995615	j	-2.93694	42	-8.995203	-2.936942	1(1)	

 Table 4: Results of Unit Root Test at 1<sup>st</sup> difference

EXR	-5.170789	-2.936942	-5.116974	-2.936942	1(1)
TRA	-6.223405	-2.963972	-12.98392	-2.957110	1(1)

Source: Extract from Appendix using E-view version 7.0 software

Table 4 reveals that all the variables are stationary in their first difference operations. Thus, it could be concluded that the variables of the model are integrated of order one. This calls for further analysis of the co-integration equations using Johansen and Juselius (1992). This procedure involves estimation of the Eigen value and likelihood ratios (Trace statistic). Above all, it provides evidence for the long-run stability of the model and further validates its efficiency for prediction forecast and policy recommendation. The result of the co-integration test is presented in the table 5 below.

Table 5: Johansen Co-integration Test Result						
Hypothesized No	Eigenvalues	Trace Statistics	0.05	Prob**		
of EE(s)			Critical value			
None *	0.677988	76.66267	60.06141	0.0011		
At most 1*	0.552692	40.40132	40.17493	0.0474		
At most 2	0.336604	14.65704	24.27596	0.4830		
At most 3	0.046474	1.524784	12.32090	0.9796		
At most 4 6.14E-05 0.001964 4.129906 0.9711						
Trace test indicates 2 cointegrating equ (3) at the 0.05 levels.						
* denotes rejection of	f the null hypothes	is at the 0.05 leve	1			

# Table 5: Johansen Co-integration Test Result

Source: Extract from Appendix using E-view version 7.0 software

The result in Table 5 shows that two of the trace statistics values (likelihood ratios) are greater than the 5 percent critical values. This result establishes a long-run relationship between the variables.

Variable	Coefficient	t-statistic	Probability
С	-0.301351	-1.365302	0.1890
D(LogFDI(-1)	0.288438	1.633239	0.1198
D(LogGDP(-1)	-10.73019	-2.596762	0.0182
D(LogGDP(-2)	1.054798	2.266759	0.0360
D(LogIRR)	-0.892334	-1.956150	0.0661

 Table 6: Results of the Parsimonous ECM Regression Analysis

D(LogIRR(-2)	-1.465178	-3.558094	0.0022
D(LogEXR)	1.083585	3.633275	0.0019
D(LogEXR(-2)	0.432214	1.797267	0.0891
D(LogTRA)	-0.209127	-1.795825	0.0893
D(LogTRA(-1)	0.416259	3.068362	0.0066
ECM(-1)	-1.141423	-4.56448	0.0002
$R^2 = 0.816468;$	Adj $R^2 = 0.694113$		
DW = 2.2026	F-Stat = 6.692950		
AIC = 1.060342	SCC = 1.661692		

Source: Extract from Appendix using E-view version 7.0 software

Table 6 documents the short-run adjustment dynamics using the Parsimonous Error Correction Mechanism (ECM). As can be seen from the table, the adjusted  $R^2$  is 0.694 (approximately), which implies that about 69.4 percent of systematic variations in FDI are accounted for by the four variables taken together(regressors) while 30.6 percent of the systematic variations in FDI was left unexplained and this is captured by error term. This means that other factors apart from the ones in our model also determine FDI in Nigeria in the short run. Overall significance of the model shows that it is significance since the F-statistic of 6.69 is greater than the critical F-value at 5% sign. level, which validates the significant linear relationship between FDI and the explanatory variables. Also, the values of AIC and SCC of 1.06 and 1.66 were still low. Furthermore, the computed DW of 2.2 seems to suggest absence of serial autocorrelation in the mode at the long-run as when compared to the result at level. Again, the ECM is rightly signed and can correct any deviations from the long-run relationship between FDI and the explanatory variables above 100 percent. Thus the speed of adjustment to the long run when there is disequilibrium is very high.

Taking the individual statistical significance in the model, GDP, past (Lag 2) value is rightly signed while past (Lag 1) was not. The t-values calculated for past (Lag 1 and 2) GDP are greater than the table value of 2.021. That is, past (Lag 1 and 2) GDP are statistically significant. Thus, we reject the null hypothesis and accept the alternative which says there is a significant relationship between FDI and GDP.

Present and past (Lag 2) values of interest rate (IRR) are rightly signed. The implication of this result is that high interest will retard foreign investment inflow. The t-values calculated for current IRR is less than the table value of 2.021, except past (Lag 2) IRR. This suggests that on the average, the null hypothesis holds. This concludes that there is no significant relationship between interest rate and FDI in Nigeria within the period of study. This is in agreement with the findings of Ezirim, Emenyeonu and Muoghalu (2006) who posited that FDI relates negatively with interest rates.

Also, both current and past (Lag 2) EXR had the correct sign and statistically significant with FDI. Here, the null hypothesis is rejected and the alternative which says there is a significant relationship between exchange rate and FDI at 5 percent level accepted. This collaborates with Salako and Adebusuyi (2001) that examined the empirical determinants of FDI in Nigeria and found that exchange rate, infrastructural development and credit to the domestic economy were some of the main factors that influence FDI flows to Nigeria.

Past (Lag 1) value of TRA had the correct sign and is statistically significant at 5 percent level. Thus, the null hypothesis is rejected and the alternative which says there is a significant relationship between degree of trade openness and foreign direct investment inflow holds. This

result agrees with the findings of Anyanwu (1998) that identified change in domestic investment, change in domestic output or market size, indigenization policy and change in openness of the economy as major determinants of FDI.

#### 5. **RECOMMENDATIONS**

Based on the findings the following recommendations were proffered Government through its policy making agents should continuously formulate and implement policies that would increase the nation's Gross Domestic Products. This should involve creating` an enabling environment (including incentives, increased infrastructural development) for enhanced productive base. Government should tackle frontally the issue of security (internal and external) in order have a relatively low security risk investment environment as no foreign investor would want to invest in a high security risk country.

Given that exchange rate is a significant determinant of FDI inflow to Nigeria, government should embark on *moderate devaluation* of the national currency to attract more FDI inflow into Nigeria. With such devaluation, the dollar price of some ailing indigenous industries would be reduced, thereby encouraging possible take-over bids or merger and acquisition by foreign investors. This will in turn increase economic activities, create employment and boost economic growth.

The statistical significant relationship between the degree of trade openness and FDI inflow to Nigeria provides that while government is encouraged to liberalize trade, some policy caution should be introduced that would encourage re-investment (plough-back) of profits rather than outright repatriation of such earnings and dependence on loans and overdraft facilities for business activities.

#### REFERENCES

- Adefeso, H. A. and A.A. Agboola (2012). Determinants of foreign direct investment inflows in nigeria: an empirical investigation. *Journal of International Business Management*, 6 (1): 83 – 89.
- Adelegan, J. O. (2002). Foreign district investment and economic growth in nigeria: a seemingly unrelated model. *African Review of Money, Finance and Banking, Supplementary issue of Savings and Development, Milan, Italy, pp. 5-25.*
- Adepoju, A. A., Salau, A. S.and A.E.Obayelu (2007). The effects of external debt management on sustainable economic growth and development: lessons from Nigeria. *Munich Personal Ripec Archive (MPRA)* Paper, No. 2147, pp. 1- 30.

Agarwal, J. P. (1980). Determinants of foreign direct investment: a survey.

Aitken, B., Harrison, A. E., and R.Lipsey (1999). Do domestic firms benefit

Akinlo, A. E. (2004). Foreign direct investment and growth in Nigeria: an empirical investigation. *Journal of Policy Modeling*, 26:627-39.

- Amadi, S.N. (2002). Impact of macroeconomic environment on FDI in Nigeria. *International Journal of Development* 4 (2).
- Ayanwale, A. B. (2007). For and economic growth: evidence from Nigeria. *AERC (Nairobi, Kenya) research Paper 165.*
- Benassy-Quere *et al* (1999). *World consistent equilibrium exchange rate*. Benin City: Mareh Publishers.
- Blomstrom, M., and Kokko A. (1998). Multinational corporations and spillovers.
- Caves, R. E. (1996). *Multinational enterprise and economic analysis*. Cambridge: Cambridge University Press.
- Central Bank of Nigeria. Statistical Bulletin, 18 CEPII.
- Chakrabarti,A.(2001). *The determinants of foreign direct investment: corporations.* London: Routledge for the United Nations.
- Dunning, J.H., (2000). The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review* 9, 163–190.
- Ezirim, B.C., Emenyeonu, E.N. and Muoghalu, M (2006). The Determinants and Impact of

Foreign Direct Investment in Nigeria. International Journal of Business and Management, Vol.7

Gujarati "D.N.(2007). Economic Development in Delhi. Vrinda Publications

Johansen, J. and F. Wiedersheim-Paul (1975). The Internationalization of the Firm-Four Swedish Cases. *Journal of Management Studies*, volume 12, ISSN3, pp.305-323

Lipsey, R. E. (1999). The role of FDI in international capital flows, *Journal of Economic Surveys 12*, 247–277.

- Montiel, P. and C.Reinhart (2002). Do capital controls and macroeconomic policies influence the volume and composition of capital flows? evidence from 1990s. *Journal of International Money and Finance*, *18*, *619 639*.
- Odozi, V. A. (1995). An overview of foreign investment in Nigeria 1960 1995. Occasion Paper No. 11. Research Department, Central Bank of Nigeria.
- Oyinlola, O. (1995). External capital and economic development in Nigeria (1970 1991). *The Nigeria Journal of Economic and Social Studies*, 37 (2 & 3): 205 22.
- Sadiq, T. A., and A.A. Bolbol (2001). Capital Flows, Foreign Direct Investment

12

- Salako, H. A., and B.S. Adebusuyi (2001). Determinants of foreign direct investment: evidence from establishment data. *Journal of Development Studies*, *36* (1):53 73.
- Uwubanwen, A. E. and M.G. Ajao (2012). The Determinants and impacts of foreign investment in Nigeria. *International Journal of Business and Management; vol. 7, No. 24.*
- World Bank (1996). World debt tables: external financing for developing countries. *The World Bank*, Washington DC.