SOME MACRO-ECONOMIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN NIGERIA

OLAWALE HEZEKIAH [1]&MOSES OYEYEMI, AGBEDE[2]
ECONOMICS DEPARTMENT
EDO UNIVERSITY IYAMHO ,
EDO STATE ,
&
ECONOMICS DEPARTMENT,
EVANGEL UNIVERSITY AKAEZE,
EBONYI STATE
hezekiaholaw@gmail.com[1]&yemi_agbede@yahoo.com[2]

Abstract

This study examined some macro-economic determinants of FDI in Nigeria for the period 1981 to 2017 with data from the Central Bank of Nigeria (CBN) Statistical Bulletin (2017) and the World Bank Report (2017). In order to achieve the objectives of this study, the study employed the Autoregressive Distributive Lag (ARDL) Bounds Testing Approach to co-integration analysis. The results revealed that gross domestic products, infrastructural development, inflation rate, deregulation and openness of the economy to foreign trade have positive and significant impacts on Foreign Direct Investment (FDI) in Nigeria whereas Exchange Rate, Interest Rate and political instability are not as effective. The ARDL Bounds Test result reveals an existence of unique co-integration among the variables used.The long run estimates reveal that a 1% increase in infrastructural development leads to a 55% increase in the level of FDI, whereas in the short run it leads to a 50% increase. More so, a 1-unit increase in the level of GDP in the long run shall lead to a 2.2-unit increase in FDI and a 10-unit increase in the short run. The ECM test result which was properly signed reveals a speed adjustment rate of 96%. The policy import of the study is that gross domestic products, infrastructural developments, openness of the economy are very imperative and should be substantially improved upon increased substantially to attract increased foreign direct investment. Policy makers should formulate policies that will reduce exchange rate adequately and avoid political instability.

Introduction

Foreign direct investment (FDI) has overtime played a prominent role in the development of developing countries by providing them with the much needed capital for investment. It serves as a major catalyst for job creation, increased managerial skills as well as transfer of technology. To this end, efforts have been made continuously by Nigerian authorities to attract FDI via various reforms. The reforms include the deregulation of the economy, the establishment of the Nigeria Investment Promotion Commission (NIPC) in early 1990s, and the signing of Bilateral Investment Treaties (BITs) in the late 1990s. For the sake of transparency and avoidance of major financial risks in the country, the Nigerian government establishedthe Economic and Financial Crime Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC) (Obida& Abu, 2010). Over several past decades, the economies of the world have become increasingly dependent (linked), through expanded international trade in services as well as primary and manufactured goods, through portfolio investments such as international loans and purchases of stock, and through Foreign Private Investment, especially on the part of large multinational corporations. Developing countries are exporting and importing more from one another as well as from the developed countries. Some of these countries include the developing world, especially East Asia but and notably Latin America. More investments have poured in from developed countries such as the United States, the United Kingdom and Japan (Todaro& Smith, 2006).

FDI inflows in African Countries have risen substantially over the years, it stood at 78% in 2013 as against 47% in 2005. The growth rate is surged up by cross border Merger and Acquisitions (M & As) of firms, which reflected strategical choices by Multinational Corporations (MNCs) following increased corporation profits and high commodities to gain an access to national resources and generally favourably policy stance for Foreign Domestic Investment (FDI) in these regions (developing and transitional)— (World Bank, 2006; Todaro& Smith, 2006).However, in spite of measures, the share of aggregate FDI in-flows in Nigeria relative to the GDP is still low when compared to some other African countries(Enisan, 2017). For instance, FDI in-flows increased from N4.7 billion in 1990 to N116.4billion in 1982 with a further increase to its peak in N1.2trillion in 2009. However, this has continually been on a reducing trend to a whopping N875billion in 2013 and the worst hit in 2015 to a total of N606billion.

Statement of the problem

Various research works, both empirical and theoretical have opined the supposed relationship that should exist among some determinants or macro-economic variables and Foreign Direct Investment. One of the major macro-economic determinants of FDI inflow cited by scholars is the host country'smarket size measured by the gross domestic product (Wang and Swain, 1995 andChakrabarti, 2001). Nevertheless, Agarwal (1980) cited by Maku (2015) argued that if the host country is only used as aproduction base and for ease in exportation then themarket size may be less influential or insignificant. Rising prices (inflation) has also been considered as a factor influencing FDI (Bajo-RubiaandSosvilla-Rivero, 1994). Aside this, exchange rate has been a major factor thatdetermines FDI inflows. Masayuki and Ivohasina (2005) said that if the exchange rate of a country depreciates, itattracts FDI since foreign firms may merge with or acquire domestic industries.

Contrary to the trends explained above by these researchers and others, some of the determinants of FDI in Nigeria do not actually respond in the like manner. It would be seen that the post 2009 era which clearly showed dwindling FDI has equally witnessed increased gross domestic product (GDP). Also, exchange rate has continuously remained an increasing phenomenon even in the periods of high FDI. The same goes for the inflation rate. It then becomes imperative to have an all-encompassing review of these determinants which were at different times considered separately by researchers by applying necessary econometric techniques to see the significance of these determinants on the FDI. It is also important to examine if there exists a long run relationship among the variables. This will then reflect the true pictures of the recent trends of the relationships. More so, various gaps were found in the recent studies reviewed in this research. Enisan (2017) failed to include other important determinants as proposed in the Jorgenson's Neoclassical Theory of Investment. These include Infrastructural development (a proxy for increased profit margin), openness of the economy and deregulation.

This study shall fillthese gaps, ranging from exclusion of major variables as seen in the works of Enian (2017), Maku (2015), to limited scope of work as seen in the work of Oba and Onuoha (2013), by enlisting a more robust list of determinants of FDI, more recent data inclusion (ending at 2017) and unique model of regression and testing known as the Autoregressive Distributive Lag bound testing method.

Objectives of the study

The broad objective of this study is to examine some macroeconomic determinants ofthe total amount of FDI in Nigeria. The specific objectives are to:

i. examines the influence of GDP, infrastructural development, interest rate, exchange rate and inflation rate on the level of the total FDI in Nigeria

ii. investigate the significance or otherwise of openness, political instability and deregulation of the economy on the behaviour of FDI in Nigeria.

Literature Review

Conceptual Issues

Foreign Direct Investment

One of the widely accepted definitions is the one by OECD and IMF. OECD (2008) and IMF (2009) define Foreign Direct Investment (FDI) as the category of international investment made by a resident of one country in an enterprise based in another country with the objective of building a 'lasting interest'. A direct investor is then defined as an individual, incorporated or unincorporated, public or private enterprises; associated groups or government agencies; trusts or other organization that own direct investment enterprises in a country other than that of the direct investor. Two main types of FDI can be distinguished namely: Horizontal FDI and Vertical FDI. Horizontal FDI is a type of FDI where a foreign firm duplicates its activities in other countries, that is, the foreign firm produces goods and services generally the same way it produces at home. The motive may be that of circumventing trade barriers. On the other hand, vertical FDI is one where multinational enterprises (MNEs) separate production by outsourcing some production stage abroad. This is because it becomes profitable for MNEs when input costs (for example labor cost) vary across countries (Protsenko, 2004).

In addition, vertical FDI is divided into two types: backward FDI and Forward FDI. Backward FDI is one where the firm institutes its own suppliers of intermediate inputs which deliver the inputs to the mother firm. On the contrary, Forward FDI is one where the firm builds up a foreign affiliate which draws inputs from the mother company for its own production. Investment explains the net capital formation, hence it refers to such capital expenditure on consumer durables, residential construction (buildings) and plants and machinery (Iganiga, 2012). Keynesian school of thought separates investments into real investment and ordinary investment. It is considered ordinary, when it includes buying shares, stocks, bonds and securities which already exist in stock market. Joan Robinson considers real investment as addition to capital, such as occurs when a new house is built or a new factory is built (Jinghan, 2010). Capital and investment are related to each other through net investment.

Theoretical Literature

Foreign Direct Investment (FDI) is rather a new phenomenon in modern economic growth theory. It gained enormous ground immediately after the Second World Warwhen some European countries strove to diversify and expend the scope of their investments in underdeveloped countries where they could make excess profit and/or repatriate the surplus or profit to the parental countries without thinking of the development of the recipient countries (Jhingan, 2006; Todaro and Smith, 2006).

Empirical Literature

Maku (2015) examined the impact of macro-economic determinants on foreign direct investment (FDI) in Nigeriabetween 1980 and 2012. He employed Augment Dickey Fullertest, Engel-Granger Co-integration, Ordinary Least Square, Error Correction and Granger Causality test for thedata sets. The findings indicated that market size measured by output growth, openness to trade andinfrastructure attracts FDI significantly as they cause an increase on FDI in-flows by 2.35%, 3.2%, and 0.46%respectively. More so, political instability was found to have negative and insignificant impact towards attractingforeign direct investment in Nigeria. Other macro-economic variables reported were exchange rate and inflation rate which were both insignificant. Furthermore, only output growth and inflation rate granger cause FDI in Nigeria.There is need for continuous increase and growth of the nation's output, trade growth, sustainable infrastructuralfacilities and stable political system as they have significant impact on FDI in-flows. Maghori (2014) investigated the determinants of Foreign Direct Investments (FDI) in the Nigerian economy usingannual time series data for the periods 1970 to 2010. Utilizing the Error Correction Modelling (ECM) technique the results showed that the major determinant of foreign capital inflow in the economy is the ratio of external debtto Gross Domestic Product both in the short run and long run. However, some factors such as the size of thenational income, the degree of openness to trade, and the existing stock of foreign capital in the previous period, inflation rate and exchange rate were well maintained through the long run. The study recommended thatgovernment should place less emphasis on policies that encourage external borrowing and embrace those thatstrengthen and stabilize the economy: such policies are those designed to maintain price and exchange ratesstability, reduction in fiscal deficit, increase in domestic investments and the diversification of the economy forexport trade among others.

Enisan (2017) analysed the movement of foreign direct investment in Nigeria usinglinear approach. He also used severalnon-linear FDI equations where the main determinants of FDI were examined using Markov-Regime Switching Model (MSMs). The results showed that FDI process in Nigeria is governed by twodifferent regimes and a shift from one regime to another regime depends on transition probabilities. The results show that the main determinants of FDI are GDP growth, macro instability, financial development, exchange rate, inflation and discount rate. This implies that liberalization which stems inflation and enhances the value of domestic currency will attractmore FDI into the country. Oba and Onuoha (2013), in their paper on “The Determinants of Foreign Direct Investments (FDIs) and the Nigerian Economy” analyzed the determinants of FDI in-flows in Nigeria during 2001 - 2010. Their main findings from OLS estimation were that infrastructure development which was measured by the transport and communication sector was a significant determinant of FDI in the country. However Real GDP and Openness to trade were not significant determinants of FDI.

Research Methods

Theoretical Framework

The theoretical framework of this study is hinged on the DuesenberryAccelerator theory of investment. The theory explained that investment is a function of Income (Y), capital (K), profit () and allowances

…… (3.1)

According to Jinghan (2012), the theory has an offshoot in the sense that the concept of profitability in the model leads to some other factors that determine profitability. The profit theory of investment explains that profit is a function of the cost of capital and income. The cost of capital includes the rate of interest (r), income level (Y), exchange rate; which are influenced by the prevailing inflation rate. An extension of this model is the profit theory and the Jorgenson's neo-classical theory of investment. The Hymer's theory of Foreign Direct Investment (FDI) introduced the concept of safety of investment as well as conditions prevalent in the host country. This explains the introduction of such determinants such as Openness (ratio of export to import), Political instability and Deregulation.

Model Specification

The study adapted the models used by Maku (2015) and Maghori (2014) in which they considered such variables as gross domestic products (GDP), deregulation (DEREG), political regime (POS), openness of the economy toforeign trade (OPEN), rate of inflation (INF), exchange rate of the host country's currency (EXR) andinfrastructural development (FRAS), Fiscal Deficit as a ratio of GDP (FDYR), Interest Rate(REINT), Debt income ratio (DEBT) being determinants of FDI outcomes.

Maku (2015) specified its model as:

$$\ln FDI = b_0 + b_1 \ln GDP + b_2 DEREG + b_3 POS + b_4 OPEN + b_5 INF + b_6 EXR + b_7 \ln FRAS + \ldots (3.2)$$

while Maghori (2014)

$$FDIt = \alpha_0 + \alpha_1 GDPt + \alpha_2 OPENt + \alpha_3 FDYRt + \alpha_4 REINTt + \alpha_5 INFLt + \alpha_6 DEBTt + \alpha_7 REXRt + Ut \ldots (3.3)$$

This study shall however specify its model based on the theoretical framework specified above and as utilised by Maku (2015) and Maghori (2014)

$$FDIt = f(GDP_t, FRAS_t, EXR_t, INT_t, INF_t, DEREG_t, OPEN_t, POS_{t,t}) \ldots\ldots (3.4)$$

While GDP = gross domestic products, FRAS = infrastructural development, EXR= exchange rate of the host country's currency, INT = Interest Rate, DEREG = deregulation, OPEN = openness of the economy toforeign trade, POS = political instability

Data Presentation and Analysis

This section undertakes empirical investigation regarding the impacts of determinants on FDI in Nigeria. Using the data from period 1981 – 2017, the study regressed and analyzed model which was specified in section three using E-views Version 9 econometric software package to run the ARDL bearing in mind the objectives and hypotheses of the study. The results of the estimation are in the sub sections.

Unit Root Test

This study conducted a test of order of integration for each variable using Augmented Dickey-Fuller (ADF). This becomes necessary as put by Granger and Newbold (1974), and Granger (1986) that if time series variables are non-stationary, all findings with these time series will be at variance with the conventional theory of regression with stationary series. That is, coefficients of regression derived from such non-stationary variables will be spurious and deceptive. The results of the unit root test are presented below.

Table 4. 1: Unit Root Test

Variable	ADF calculated value in Level	ADF calculated value at 1st Difference	5% Critical value	Order of Integration
LNFDI	- 1.341215	- 9.267556	- 2.945842	1(1)
LNRGDP	0.309824	- 3.592433	- 2.948404	1(1)
LNFRAS	- 1.528632	- 7.804888	- 2.945842	1(1)
INF	- 3.009334		- 2.945842	1(0)
EXR	2.238119	- 3.303326	- 2.945842	1(1)
INT	- 2.411968	- 5.904707	- 2.951125	1(1)
OPEN	- 3.271187		- 2.945842	1(0)
POS	- 1.423548	- 5.744563	- 2.945842	1(1)

Source: Author Regression Output.

From Table 4.1, Time series of FDI, RGDP, Exchange rate, Interest rate and Political instability are stationary at first difference as is presentedbecause the absolute values of ADF in column 3 is greater than the 5% ADF critical values in column 4, indicating that the variables are integrations of order one i.e. I (I). However, Inflation Rate and Openness are stationary at level because the absolute values of ADF in column 2 is greater than the 5% ADF critical values in column 4 for both variables and conclude that the variables are integrated at level i.e. I (0). The Unit test show that there is a mixture of I(I) and I(0) of the accompanying regressors, hence the Auto Regressive Distributive Lag (ARDL) testing could be proceeded.

Lag Length Criteria

The step that follows is, therefore, determining the appropriate lag length that yields white noise residuals as estimation of the long-run relationship using the Johansen's estimation technique takes white noise errors granted. Lag-length selection criteria such as sequential modified LR test statistic (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), and Hanna-Quinn information criterion (HQ) were employed to determine the appropriate lag length. The test results of the different lag selection methods are reported in the table 4.2. After meticulous examination of the different lag lengths by estimating the VAR at each lag length and diagnosing the whiteness of resulting residuals, two lag lengths, as recommended by sequential modified LR test statistic, was chosen.

Table 4.2: VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
Included observations: 3 4

La	gLog	LL	RFP	EAI	CS	CH	Q
0	5.238982	NA	0.06949	60.16241	3 0.52155	6 0.28489	1
1	7.66629	9 3.569583	0.06415	10.07845	3 0.48249	0 0.21624	1
2	13.0472	0 7.596566 *	0.049826	*-0.179247	* 0.269683	* -0.026149	*
3	13.0912	8 0.059632	0.05303	6 - 0.12301	6 0.37080	6 0.04539	1

* indicates lag order selected by the criterion
Source: Author Regression Output.

Bounds Test forCo-Integration

The next step after determining the order of integration of the variable was to apply a bound F-test in order to establish a long-run relationship among the variables. The results of the bounds test for co-integration alongside critical values are reported in Table 4.3 below. The Computed F-Statistic from bound test is 11.34420. This value exceeds the lower and upper bounds critical value of 2.22 and 3.39 at the 5% significance level respectively. This implies that the alternate hypothesis of the existence of a unique co-integration (long run) relationship between foreign direct investment and gross domestic product, infrastructural development, exchange rate, interest rate, inflation rate, level of openness, deregulation and political instability be accepted.

Table 4.3: ARDL Bound Test for Co -Integration Analysis

Test statistic	Computed F-statistic	Lag	Significance level	Bound Critical values	
F-statistic	11.34420	2		Lower Bounds I(0)	Upper Bounds I(1)
			10 %	1.95	3.06
			5 %	2.22	3.39
			2.5%	2.48	3.7
			1%	2.79	4.1

Source: Author Regression Output.

Long Run Statistic Regression of Unemployment

The results of the estimated long run coefficients using the ARDL approach is presented in the table 4.4 below

Table 4.4: Long Run Statistics

Variable	Coefficient	Std. Error	t - Statistic	Prob.
C	- 0.427979	2.176196	- 0.196664	0.8455
DEREG	0.481142	0.219996	2.187053	0.0373
EXR	- 0.000580	0.001447	- 0.401053	0.6914
IN F	0.006349	0.002904	2.186686	0.0373
INT	0.010745	0.012535	0.857236	0.3986
LNFRA S	0.555352	0.100471	5.527463	0.0000
LNRGDP	2.242172	0.502712	4.460151	0.0001
OPEN	0.223343	0.091823	2.432316	0.0216
POS	- 0.229327	0.162932	- 1.407507	0.1703

Source: Author Regression Output.

From table 4.4 above, it could be observed that the real gross domestic product, infrastructural development, exchange rate, openness of the economy, Interest Rate, deregulation and political instability met their expected sign while inflation rate is not consistent with the theoretical expectation. Real Gross Domestic Product (RGDP) has a positive and significant impact on Foreign Direct Investment (FDI) in Nigeria. A unit

increase in the RGDP will increase FDI by 2.2 units. This result isconsistent with the result obtained by Maku (2015), Maghori (2014) and Dembo and Nyambe (2016) but negates the result by Oba and Onuoha (2013). Infrastructural Development (LNFRAS) reveals a positive and significant relationship with FDI, a one percent increase in infrastructural development will attract increased FDI by 55 percent. This result is consistent with Maku (2015). Interest Rate (INT) shows a positive but insignificant relationship with FDI. One percent increase in the rate of interest will increase FDI by one percent. This shows that Interest Rate is not a significant determinant of FDI in Nigeria. Hence this result is in agreement with the findings of Maghori (2014).

Openness of the economy (OPEN) and deregulation (DEREG) have positive and significant relationship with FDI. A one percent increase in the degree of openness will increase FDI by 22 percent. Also one percent increase in the level of deregulation in the country will increase FDI by 48 percent. The period of deregulation has the tendency of attracting FDI significantly by than the period of regulation. The former agrees with Maku (2015) and contradicts the results of Maghori (2014) while the latter disagrees with the findings of Maku (2015). Meanwhile exchange rate (EXR) and Political Instability (POS) have negative and insignificant relationship with FDI. A one percent increase in the exchange rate (EXR) leads to a 0.05 percent reduction in FDI. This result agrees with Masayuki and Ivohasina (2005), Maku (2015) and Dembo and Nyambe (2016) and contradicts the results of Maghori (2014). A one percent increase in the level of political instability will reduce FDI by 22 percent. The period of political stability will attract more FDI by 22 percent than the period of instability. This result agrees with Maku (2015).

Furthermore, inflation rate (INF) has a positive and significant relationship with FDI in the country. A one percent increase in the rate of Inflation will increase FDI by 0.6 percent. It is important to state that while my result agrees with similar works of Maku (2015), Maghori (2014) and Dembo and Nyambe (2016) with reference to INF, it however differs in terms of significance with these authors.

Diagnostic Test

To confirm the robustness, the study performs diagnostic test as shown in table 4.8.

Table 4.6: Key Regression Statistics and Diagnostic Test for the short run relationship

R-squared	0.940028	Mean dependent var	0.106176
Adjusted R- squared	0.752617	S.D. dependent var	0.291225
S.E. of regression	0.144848	Akaike info criterion	- 0.943764
Sum squared resid	0.167849	Schwarz criterion	0.223453
Log likelihood	42.04399	F - statistic	5.015859
Durblin-Watson stat	2.038004	Prob.(F - statistic)	0.01169

Sources: Author Regression Output

The dynamic model diagnostic test shows that the explanatory variables account for 94percent of the variation in the Foreign Direct Investment. Thus, the overall goodness of the model is relatively satisfied. The Akaike information criterion and Schwarz criterion show that the model is correctly specified. F statistic measuring the joint significant of all the explanatory variables in the model is statistically significant by 5 percent. Similarly, the Durbin Watson statistics is significant by 2. The model passes the normality test. The

result shows that there is no serial auto-correlation in the model.

Stability Test

Stability test is performed using Cumulative Sum (CUSUM) and Cumulative Sum of Square (CUSUM Q) of residual of the ARDL model as shown in figure 1 and 2. The existence of parameter instability is established if the Cumulative Sum of the residual goes outside the area between the critical (dotted bounded) lines. It is estimated at 5 percent critical level. From figure 1 and 2, it can be inferred that the model at 5 percent level of significance has been stable over time. The decision rule is that, all the coefficients of the error correction are stable and the null hypothesis cannot be rejected provided that the plots stay within 5% range of the significant level (i.e. within the two straight lines), if otherwise we reject the null hypothesis (Pesaran and Smith 2001). As shown in figures 1 and 2, both plots lies within the critical boundaries, which implies that the long run coefficients of the Foreign Direct Investment function is stable.

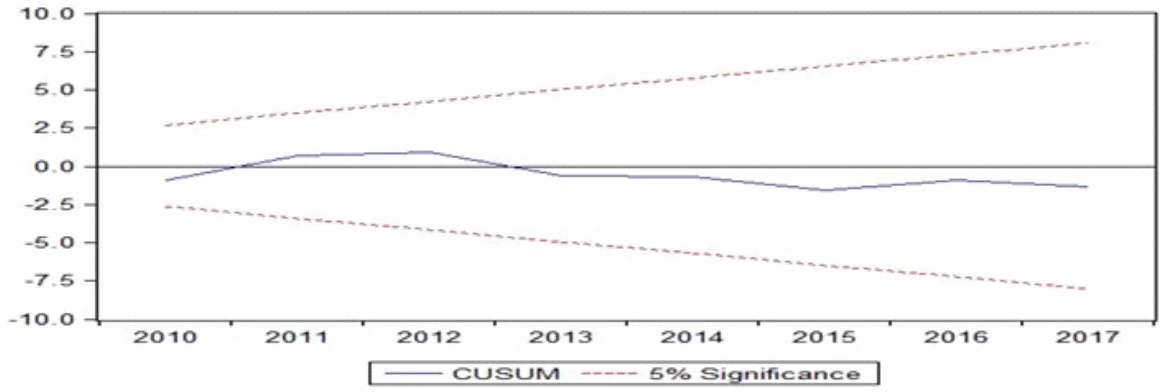

Fig. 1: Plot of Cumulative Sum of Recursive Residual

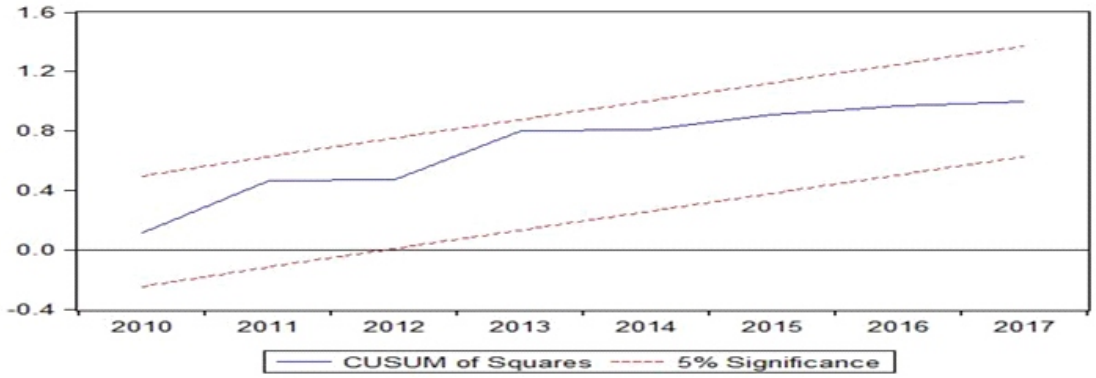

Fig.2: Plot of Cumulative Sum of Square of Recursive Residual Results

Summary, Conclusion and Recommendations

Summary

This study examined empirically some macro-economic determinants ofForeign Direct Investment (FDI) in Nigeria.The study employed Autoregressive Distributive Lag (ARDL) bounds testing approach to co-integration analysis and Long run relationship among the variables. It also adopted the Error correction model to test for the speed of adjustment of the FDI function and finally carried out stability and diagnostic tests. The unit root tests employed suggest that, all the variables were found to be either I(0) or I(1) stationary.

Infrastructural development, real gross domestic product, openness of the economy, inflation rate and deregulation have direct and significant relationship with FDI whereas Exchange rate and Political instability have negative relationship with FDI. Exchange rate, Interest Rate and Political instability have insignificant relationship with FDI in Nigeria.

Conclusion

The findings from this study show that gross domestic products, infrastructural development, inflation rate, deregulation and openness of the economy to foreign trade are effective determinants in the determination of Foreign Direct Investment (FDI) in Nigeria whereas exchange rate, Interest Rate and political instability are not the major determinants even though they all showed the desired apriori condition. It can also be concluded from the study that the political stability currently being enjoyed in the country has aided the huge Foreign Direct Investment witnessed till the end of 2009, as shown in the data, and that sustaining such trend will require increase in the level of infrastructural development, openness of the economy, increased deregulation drive and a more robust real gross domestic product.

Recommendations

The study recommends the following:

i. Infrastructural Development should be increased sufficiently to attract increased Foreign Direct Investment based on the direct relationship observed

ii. Real Gross Domestic Product should be increased especially as it has a direct and positive relationship with Foreign Direct Investment

iii. Government should also ensure increased openness which is to increase exports over the level of importation since it has a direct relationship from our result.

iv. Increased Deregulation drive of the government should be embarked upon to attract more Foreign Direct Investment.

v. Rate of exchange of leading foreign currencies should be reduced to attract Foreign Direct Investment especially as a result of the inverse relationship with FDI

vi. Political Instability should be avoided so as to attract more Foreign Direct Investment considering its negative relationship with FDI

References

Abubakar, M. and Abdullahi, F. A. (2013). An inquiry into the determinants of foreign direct investment in Nigeria. *European Scientific Journal*, 9(1), 293-308. ISSN 1857- 7431.

Aboutα-ObidaGobna, W. and Abu, N. (2010). Determinants of Foreign Direct Investment in Nigeria: An Empirical Analysis. *Global Journal of Human Social Science*, *10*(1), 26 – 34

Adegbite, E.O. and Ayadi, F.S. (2010), "The Role of Foreign Direct Investment in Economic Development: A study of Nigeria", *World Journal of Entrepreneurship, Management and Sustainable Development, Vol. 6* Nos. 1/2, pp. 133-147.

Agarwal, J. P. (1980). Determinants of foreign direct investment: *A survey. WeltwirtschaftlichesArchiv, 116*(4), 739-773.

Ahmed, L. E. (2012). The Political Economy of Cross Border Criminality Between Nigeria and the Benin Republic, since 2000, *A First Seminar Paper Presented to the Department of Political Science, University of Nigeria, Nsukka, In Partial Fulfilment of the Requirements for the Award of the Doctor of Philosophy (PhD) In Political Science (International Relations)*

Akinlo A. Enisan (2017). Determinants of Foreign Direct Investment in Nigeria: A Markov Regime-Switching Approach. *Review of innovation and competitiveness, 3*(1), 21-48

Ayanwale, A.B. (2007). Foreign Private Investment and Economic Growth: Evidence from Nigeria. *African Economic Research consortium, Kenya-Nairobi*, Modern lithographic (K) Ltd. April 2007.

Appleyard, D. R., Field, A. and Cobb, S. L. (2008). *International economics* (6th ed.). New York: McGraw-Hill.

Bajo-Rubia, O. and S. Sosvilla-Rivero (1994). "An Econometric Analysis of Determinants of Foreign Direct Investment in Spain," *Southern Economic Journal, 61*(1), pp. 104-117.

Chakrabarti, A. (2001). "The Determinants of Foreign Direct Investment pp. *Sensitivity Analysis of Cross country Regressions," kyklos, 54*(1), pp. 89-114.

Danja, K.H. (2012). Foreign Direct Investment and the Nigerian Economy. *American Journal of Economics, 2*(3), 33-40

Dembo, S. andNyambe, M. (2016). Investigating the Determinants of Foreign Direct Investments in Namibia. *European Journal of Business, Economics and Accountancy, 4*(5), 93-104

Dunning, J. H. (2000). The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review*, 9, 163-170.

Dunning, J.H. 1993, "Internationalizing Porter's diamond", *MIR: Management International Review*, pp. 7-15.

Dutse.A. Y,Okwoli. A.A and Kurfi. A.K. (2011); Promoting FDI related Technology spillover in Nigeria's manufacturing sector: Active firms targeted policy approach- *international conference on sociality and economic development, vol.10.*

Hymer, S. H. (1976). *The International Operation of National Firms: A Study of Direct Foreign Investment. London*: MIT press

Iganiga, B.O. and Unemhilin, D.O. (2011). The Impact of Federal Government Agricultural Expenditure on Agricultural Output in Nigeria. *Journal of Economics*, 2(2): 81-88.

Iganiga, B. (2012). *Macroeconomics: Concept, Theory and Applications* (2nd ed.). Ibadan, Nigeria: Amfitop Books.

IMF. (2009). *Balance of payments and international investment position manual* (6th ed.). Washington, DC.

IMF (International Monetary Fund), 1993, Glossary of foreign direct investment terms.

Jinghan M. L. (2003). *Macro-Economic Theory*. Delhi. Vrinda Publications (P) Ltd
Jhingan, M.L. (2006). *The Economics of Development and Planning*, New Delhi, Vrinda Publications (p) LTD.

Maghori, E. (2014). Determinants of Foreign Direct Investment in Nigeria "Evidence from Co- Integration and Error Correction Modeling". *International Journal of Business and Social Science*, *5*(6), 215-224.

Maku, O. (2015). Macroeconomic Consequences of Foreign Direct Investment in Nigeria: An Empirical Analysis. *European Journal of Business and Management, 7*(22), 78-85

Masayuki, H. and Ivohasina, F. (2005). The determinants of foreign direct investment into Japan. *Kobe University Economic Review*, 51.

Oba, U. O. and Onuoha, B. C. (2013). The determinants of foreign direct investments (FDIs) and the Nigerian economy. *American International Journal of Contemporary Research*, 3, 165-172.

OECD. (2008). *Benchmark definition of foreign direct investment* (4th ed.). Retrieved from http://www.oecd.org/daf/inv/investmentstatisticsandanalysis/40193734.pdf

Protsenko, A. (2004). *Vertical and horizontal foreign direct investments in transition countries* (doctoral dissertation).

Todaro, M.P and Smith, S.C. (2006). *Economic Development in the World*, 9th Edition, England, Pearson Education Limited.

Wafure, O.G. and A. Nurudeen (2010) Determinants of foreign direct investment in Nigeria: An empirical analysis. *Global Journal of Human Social Science, 10*(1): 26-34.

Wang, Z. Q. and Swain, N. J. (1995). The determinants of foreign direct investment in transforming economies: Empirical evidence from Hungary and China. *WeltwirtschaftlichesArchiv, 131*(2), 359-382.

World Bank (2017). *World Development Indicators*. 1999; 2017. CD-ROM.

Appendix 1: Long Run Estimation Output.

Dependent Variable: LNFDI
Method: Least Squares
Date: 09/24/18 Time: 19:44
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.427979	2.176196	-0.196664	0.8455
DEREG	0.481142	0.219996	2.187053	0.0373
EXR	-0.000580	0.001447	-0.401053	0.6914
INF	0.006349	0.002904	2.186686	0.0373
INT	0.010745	0.012535	0.857236	0.3986
LNFRAS	0.555352	0.100471	5.527463	0.0000
LNRGDP	2.242172	0.502711	4.460151	0.0001
OPEN	0.223343	0.091826	2.432316	0.0216
POS	-0.229327	0.162932	-1.407507	0.1703

R - squared	0.974356	Mean dependent var	10.67324
Adjusted R-squared	0.967030	S.D. dependent var	1.281004
S.E. of regression	0.232601	Akaike info criterion	0.128791
Sum squared resid	1.514894	Schwarz criterion	0.520636
Log likelihood	6.617363	Hannan-Quinn criter.	0.266935
F - statistic	132.9865	Durbin-Watson stat	2.140456
Prob(F-statistic)	0.000000		

APPENDIX 2: CO-INTEGRATION RESULT OUTPUT

ARDL Bounds Test
Date: 09/24/18 Time: 21:33
Sample: 1983 2017
Included observations: 35
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F - statistic	11.344208	

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10	%1.9	53.06
5	%2.2	23.39
2.5	%2.4	83.7
1	%2.7	94.1

Test Equation:
Dependent Variable: D(LNFDI)
Method: Least Squares
Date: 09/24/18 Time: 21:33
Sample: 1983 2017
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXR)	-0.004264	0.002670	-1.596782	0.1326

D(EXR(-1))	-0.005764	0.003357	-1.716966	0.1080
D(INF)	-0.006284	0.002743	-2.290597	0.0380
D(INT)	0.036615	0.013314	2.750188	0.0156
D(INT(-1))	0.006527	0.010840	0.602126	0.5567
D(LNFRAS)	0.419213	0.101764	4.119471	0.0010
D(LNFRAS(-1))	-0.131452	0.086052	-1.527578	0.1489
D(LNRGDP)	-11.24916	3.214710	-3.499278	0.0035
D(OPEN)	0.148466	0.084959	1.747513	0.1024
D(POS)	-0.479718	0.210955	-2.274032	0.0392
D(POS(-1))	-0.658397	0.167306	-3.935287	0.0015
C	6.284291	2.312329	2.717732	0.0167
DEREG(-1)	0.055189	0.214352	0.257469	0.8006
EXR(-1)	0.004973	0.002549	1.951000	0.0714
INF	0.011783	0.002826	4.169817	0.0009
INT(-1)	0.022209	0.011406	1.947210	0.0719
LNFRAS(-1)	0.972683	0.160984	6.042097	0.0000
LNRGDP(-1)	1.128524	0.620013	1.820162	0.0902
OPEN(-1)	0.419453	0.101770	4.121351	0.0010
POS(-1)	0.038042	0.246408	0.154391	0.8795
LNFDI(-1)	-1.221052	0.129558	-9.424771	0.0000

R-squared	0.923802	Mean dependent var	0.102000
Adjusted R-squared	0.814948	S.D. dependent var	0.287973
S.E. of regression	0.123879	Akaike info criterion	-1.055313
Sum squared resid	0.214844	Schwarz criterion	-0.122104
Log likelihood	39.46798	Hannan-Quinn criter.	-0.733170
F-statistic	8.486620	Durbin-Watson stat	1.878802
Prob(F-statistic)	0.000092		