Article

The Impact of Financial Development on Foreign Direct Investment in Nigeria

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Abstract
The study examined the relationship between foreign direct investment and financial development in Nigeria for the period 1980 to 2015. Using the vector error correction model (VECM) technique, the study observed a negative relationship existed between financial market development and foreign direct investment in the long run while in the short run, a positive relationship existed between financial market development and foreign direct investment in Nigeria over the estimated period of 1980-2015. Therefore, the study recommended further development of the Nigerian financial market by the monetary authority given its positive influence on the inflows of foreign direct investment in the short run. There is also the need for more financial reform of the Nigerian financial system in order to bring more foreign direct investment into the country both in the long and short runs.

Keywords
Financial development, Foreign Direct Investment, VECM, Nigeria

Introduction

The extent to which a country is able to manage and distribute its available financial resources efficiently depend on the degree of its financial development; which include banking institution, capital market institutions (such as the Nigerian stock exchange) and non-bank intermediaries such as savings and loan associations as well as merchant banks, insurance companies, pension funds and a range of financial managers and advisers (Black, 2003). The financial sector has an important role to play in the growth and development of a country's economy. Nonetheless, the development of the financial sector takes place when financial instruments, financial markets, and financial intermediaries work together to reduce the costs of information, enforcement and transactions (Ndekwu, 2013).

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A developed financial sector has the capacity to provide information at moderate cost about the investment opportunities and such information improves the effective distribution of resources and makes it possible to improve investment returns (Lamouchi & Zouari, 2013). Apart from the above, financial development enhances the channelizing of financial resources efficiently; mobilizing savings; reducing information asymmetry problem; facilitating trading, hedging, pooling and diversification of risk; aiding the exchange of goods and services and monitoring managers by exerting corporate control (Dutta & Roy, 2008). Besides, financial development entails establishing robust financial policies and regulatory framework with great impact on the level of domestic investment of funding by the financial institution (Ndekwu, 2013). Therefore, the absence of an adequate and developed financial sector could have disastrous outcome not only on domestic investment but also on the ability of financial institution to attract foreign capital inflows.

Foreign capital inflow has over the years been perceived to have contributed meaningfully to the growth of many economies of the world through the provision of technology spillover, products varieties and foreign expertise skills, and marketing channels for the domestic commodities among others (Prasad *et al*., 2003). However one of the main determinants of foreign direct investment flows is the degree of the financial development of the domestic or host economy (Korgaonkar, 2012). Foreign investors are always concerned about the development and stability of the financial sector of a country which affects the confidence of such foreign investors in investing in the domestic economy. Thus, the quest to boost the public and foreign investors confidence on the Nigerian financial system has resulted in the initiation of various financial reforms such as the deregulation of the interest rate to reflect markets forces and ensure efficient allocation of financial resources; introduction of universal banking in 2001, recapitalization of banks capital base to ₦25 billion in 2005, the strengthen of corporate governance among financial institutions and the massive growth in the use of the Automated Tell Machines (ATM) among others.

All these financial reforms were geared towards the development of the domestic financial system and it is therefore important to examine whether the financial development has spurred the inflow of foreign capital in Nigeria over the period 1980 to 2015. Although studies have largely examined the impact of such financial development on economic growth in Nigeria (See Ugbaje and Ugbaje, 2014; Adebola and Dahalan, 2011) while other studies have equally examined the influence of foreign direct investment on economic growth in Nigeria (see Edu *et al*., 2015; Anochie *et al*., 2015; Onyali and Okafor, 2014), still studies by Adeniyi *et al*. (2015) and Saibu *et al*. (2011) examined the impact of financial development and foreign direct investment on economic growth in Nigeria.

However, the nature of the relationship between financial development and foreign direct investment or perhaps the extent to which financial sector

development have influenced the inflow of foreign direct investment in Nigeria has been neglected by these previous studies. Thus, this study seeks to address the research question "What is the relative impact of financial development on foreign direct investment in Nigeria?" The objective of this study is "to examine the relationship between financial development and foreign direct investment in Nigeria". This study is divided into five sections. Section one is the introductory part, section two dealt with the review of related literature while section three focused on the research methodology. In section four, the analysis and interpretation of empirical results were discussed while the conclusion and policy recommendations was the focus of section five.

Review of Related Studies

Several studies have examined the relationship between financial development and other macroeconomic variables while some focused on the link between foreign direct investment and other macroeconomic variables. Only a few have analysed the extent to which financial development have influenced foreign direct investment in Nigeria. On the literature on financial development and other macroeconomic variables, Ugbaje and Ugbaje (2014) examined the nexus between financial sector development and economic growth in Nigeria for the period 1990 to 2010. The study utilized the Vector Error Correction (VEC) model to ascertain the direction of causation between financial sector development and economic growth in Nigeria. The result of the study showed a strong positive relationship between financial sector and economic growth with causality running from market capitalization, banking sector credits and foreign direct investment to economic growth which supports the supply-leading hypothesis. The study recommended the adoption of policies and actions capable of developing the financial sector in form of increase banking credits to the private sectors, robust and efficient capital market as well as increase inflow of foreign direct investment to the financial sector of the economy.

Zadeh and Madani (2012) investigated the role financial market development played in mediating the impact of FDI on economic growth using the average growth rates of real GDP over the period of 1971-2008 in Iran. The study adopted the regression model based on the concept of threshold effects to capture rich dynamic in the relationship between FDI, output growth, and financial markets. The results of the study indicated that the effect of FDI on growth is non-linear in nature and FDI has a negative effect on economic growth when financial development is low level but FDI has a positive effect on economic growth when financial development exceeds a threshold level. The findings of the study underlined the importance for government to emphasize on diffusion aspect in formulating FDI policies as knowledge diffusion is not sustained on welfare ground. Similarly, Konstantinos *et al*.

(2010) examined the relationship between financial development and economic growth in Greece for the period 1960 to 2006. The study used multi variate auto-regressive model and found that in the long term the variables are moving in the same direction but this will not happen in short-terms.

Adebola and Dahalan (2011) examined the relationship between financial development (bank and stock market) and economic growth in Nigeria for the period 1981 to 2009. The study utilized the Autoregressive Distributed Lag (ARDL) method of Pesaran, Shin and Smith (2001) and Granger causality test. The findings of the study showed a positive but insignificant influence of stock market and banking system on economic growth in the short-run. In the long-run, the relationship turns significant with banking system being more effectual in promoting economic growth. Further, the result of the causality tests provided evidence for supply leading hypothesis in the country. The study concluded that financial sector is important in the process of sustainable economic development in Nigeria.

Dokua *et al*. (2011) examined the relationship between financial market development and choice of finance (debt-equity) of listed firms in Ghana in a panel data framework. Employing data involving twenty-one listed firms on the Ghana Stock Exchange (GSE) over the period 1995-2005; the study observed that financial market development also accounted for financing decisions of listed firms. Debt and equity financing were important complements that increase firms' access to finance and debt-equity ratio as the financial market develops. Omran and Bolbol (2003) observed that the positive impact of foreign direct investment on growth depends on absorptive capacities, such as, financial development.

On literature on foreign direct investment, Edu *et al*. (2015) analysed the effect of foreign private capital inflows on economic growth in Nigerian using data from period 1980 to 2013. The study utilized the Ordinary Least Squares (OLS) technique and the findings of the study showed that foreign capital inflow has a positive but insignificant effect on economic growth in Nigeria. Thus, the study recommended the need for a re-assessment of government's foreign direct investment policies as well as institutional and general macro-economic policies to make them more hospitable to foreign funds. Also, Adaramola and Obisesan (2015) examined the relationship between foreign direct investment and the Nigerian capital market development for the period 1970 to 2010. Employing an ordinary least squares technique, the study observed that foreign direct investment positively impacted capital market development in Nigeria. The study recommended that effort should be made by the government and monetary authority to encourage foreign direct investment into Nigeria.

Anochie *et al*. (2015) examined the impact of foreign direct investment (FDI) on economic growth in Nigeria for the period 1981 to 2009. Employing the ordinary least squares method, the study observed that foreign direct investment had a positive but insignificant impact on economic growth in Nigeria. The study recommended that government should provide an enabling

environment that will encourage foreign investors to invest in Nigeria economy by addressing the security challenges in the country, providing investment friendly environment by improved regulatory framework as well as encourage domestic investment. Similarly, Otto and Ukpere (2014) observed that foreign direct investment had a positive but insignificant impact on economic growth in Nigeria.

Onyali and Okafor (2014) examined the nexus between foreign direct investment and the vision 2020 economic growth target in Nigeria for the period spanning 2000 to 2009. Employing the ordinary least squares technique, the study observed that increase in the inflow of foreign direct investment in Nigeria is a major pathway towards achieving the vision 2020 economic growth target. The study recommended the need for the encouragement of domestic investors foreign investors. Soumia and Abderrezzak (2013) examined the determinants of FDI and their effects on the growth of three Arab Maghreb Union (AMU) countries (Algeria, Morocco and Tunisia) during the period 1980-2010. The study used a dynamic panel system Generalized Methods of Moments estimator in studying the determinants and the growth effects of FDI. The approach was applied using three econometric methods with fixed effects, Ordinary Least Square Methods (OLS), Two Stages Least Squares methods (TSLS) and Generalized Methods of Moments (GMM). The results of the study showed that FDI is an important factor contributing to the increase economic growth of AMU countries.

Adeniyi *et al*. (2012) examined the causal linkage between foreign direct investment and economic growth in small open developing economies of five countries – Cote d'Ivoire, Gambia, Ghana, Nigeria and Sierra Leone- with financial development accounting for over the period 1970-2005 within a tri-variate framework which applies Granger causality tests in a Vector Error Correction (VEC) setting. The results of the study revealed lack of support for both short and long run influence of foreign direct investment flows on economic growth in the presence of credit to the domestic private sector (the financial indicator) in the Sierra Leonean economy. Inversely, Ghana's growth and foreign direct investment flows are better linked by a supportive domestic private sector stimulated by sound intermediating financial institutions. Foreign direct investment flows in Nigeria appeared to be resource-seeking and hence possess minimal growth effects regardless of the level of financial development. The study recommended that policy prescriptions should be embarked upon on a regular basis since there are reasons to accept as the true notion of considerable heterogeneity in the underlying economic structures of these countries.

With respect to literatures on financial development and foreign direct investment, Adeniyi *et al.* (2015) analysed how financial development influenced the relationship between foreign direct investment (FDI) and economic growth in selected Sub-Saharan Africa (SSA) countries. This study

considered three alternative measures of financial development (FD) and their impacts on the FDI-growth linkage. The study also explored the possibility of nonlinearities in the tripartite relationships. The results of the study showed a positive influence of FDI on economic growth. Also, the study observed that financial system development had growth-promoting impact in the presence of FDI flows. The result of the study also supported the existence of non-linearities in the role of financial development in the FDI-growth association. In policy terms, the study noted that the Sub-Saharan Africa countries will reap more growth benefits from foreign capital flows especially if financial reforms are sustained.

Hermes and Lensink (2003) examined the role of financial systems development of the recipient country as an important precondition for FDI to having a positive impact on economic growth. The study covered the period 1970 to 1995 for sixty-seven less developed countries. Employing multi-variable regression model, the study found that a certain level of financial market development is an important prerequisite for FDI to have a positive effect on economic growth. Secondly, the study suggested that the importance of a certain level of human capital as a prerequisite for the growth effects of FDI is at least partly explained by the existence of a well-developed financial sector. Pradhan (2010) explored the long run equilibrium nexus between financial deepening, foreign direct investment and economic growth in India during 1970 to 2007. The study employed causality and error correction model (ECM) techniques. The causality test confirmed the presence of bi-directional causality between foreign direct investment and economic growth and a unidirectional causality from financial development to foreign direct investment. The result of the study indicated that financial deepening contributes to foreign direct investment and economic growth, both directly and indirectly. The study recommended the need to reform Indian financial system in order to bring more foreign direct investment and economic growth in its economy.

Soumare and Tchana (2011) studied the causal relationship between foreign direct investment and financial market development using panel data from emerging markets in 29 countries for the period 1996 to 2006. The study used a VAR system to assess the Granger-causality between foreign direct investment and financial market development and also ran a system of simultaneous equations using panel data. The study observed that when using banking sector development indicators to measure financial market development, causality is ambiguous and inconclusive. The study recommended that policies meant to attract more FDI should be accompanied by market-friendly regulations, especially stock market regulations such as mechanisms to improve governance and protect investors.

Saibu *et al*. (2011) investigated the effects of financial development and foreign direct investment on economic growth in Nigeria. The study modified the standard endogenous model to incorporate foreign direct investment and financial development as the determinant of growth in the long run using time

series data from 1970 to 2009. The study adopted the Autoregressive Distributed Lag (ARDL) technique and observed that financial development and foreign direct investment had negative effects on economic growth in Nigeria. Samadi *et al*. (2011) carried out an investigation on whether foreign direct investment (FDI) can stimulate financial development in developing countries. The study also investigated the impact of corruption on financial development and the role of FDI on this influence. The study covered a sample of eight developing countries over the period of 1996 to 2009. The findings of the study showed that corruption affects financial development significantly and negatively. Also the inflow of foreign good and capital in the sampled countries reduced the negative impact of corruption on financial development.

Sghaier and Abida (2013) examined the causal linkage between foreign direct investment (FDI), financial development, and economic growth in a panel of four countries of North Africa (Tunisia, Morocco, Algeria and Egypt) over the period 1980-2011. The study focused on more direct evidence of the channels through which FDI inflows can promote economic growth of the host country. Using Generalized Method of Moment (GMM) panel data analysis, the study observed a strong evidence of a positive relationship between FDI and economic growth. Also, the study found evidence that the development of the domestic financial system is an important prerequisite for FDI to have a positive effect on economic growth. The study recommended that improved efforts need to be driven by local-level reforms to ensure the development of domestic financial system in order to maximize the benefits of the presence of FDI. Korgaonkar (2012) examined whether a well-functioning financial system has an impact on the FDI inflows and outflows of a country using the data mining techniques of attribute analysis, association and classification. The study used data related to 78 countries over a period of 1980 to 2009 for the analysis. The analysis of the study suggested that FDI is not directed into countries that are financially weak and is dependent on both the stock market variables and the banking sector variables. The development of the financial system of the recipient country is an important precondition for FDI to have a positive impact on economic growth.

Luca and Spatafora (2012) examined the determinants of capital inflows, financial development, and domestic investment in 103 developing countries and their interactions during the period 2001–2007, a period of surging global liquidity and low interest rates. The study used both cross-sectional and panel estimation methods. The cross-sectional method allowed the analysis of country-specific determinants of capital inflows, domestic credit, and investment. The panel estimation method enabled the investigation of the effects of country invariant factors, such as changes in global risk conditions. The Cross-sectional and panel techniques observed that reductions in the global price of risk and in domestic borrowing costs were the main contributors to the increase over time in net capital inflows and domestic credit. However,

the large cross-country differences in domestic and international finance are best explained by fundamentals such as institutional quality, access to international export markets, and an appropriate macroeconomic policy. Both private capital inflows and domestic credit exerted a positive effect on investment; they also mediate most of the investment impact of the global price of risk and domestic borrowing costs. Surprisingly, neither greater domestic credit nor greater institutional quality increases the extent to which capital inflows translate into domestic investment.

From the above literature review, it is evident that there exist a paucity of knowledge on the relationship between financial development and foreign direct investment in Nigeria. Most studies on Nigeria focused on the impact of financial development on economic growth while others were concerned on the impact of foreign direct investment on economic. None to the best knowledge of the authors focused on the impact of financial development on foreign direct investment. It was also observed from the literature review most of the studies on financial development and foreign direct investment were cross-sectional or panel studies rather than country specific studies. The results obtained by such cross country or panel studies have been brought into serious doubt due to the implicit assumption of a common economic structure and similar production technology across different countries, which is unlikely to be true (Cuadros *et al.*, 2001). Also, Levine and Renelt (1992) stressed that a lot of conceptual and statistical problems plague cross-country investigations. Cross country regression analysis presupposes that observations are drawn from a distinct population, which goes against the basic intuition that very different countries may not be comparable. Thus, the question may be asked as to whether highly heterogeneous countries should be put in the same regression. In the light of the above, the study seeks to fill the gap in literature by carrying out a country specific study on the relative impact of financial development on foreign direct investment in Nigeria.

Method: Model Specification and Data Sources

To examine the relationship between financial market development and foreign direct investment in Nigeria, this study makes use of a simple empirical model:

$$FDI = f(FMD, INF, OPNX, EXR) \quad (1)$$

Where *FMD* is financial market development; *FDI* is foreign direct investment; *INF* is inflation rate, *OPNX* is trade openness and *EXR* is exchange rate. Expressing the above equation in linear estimation form:

$$FDI_t = \beta_0 + \beta_1 FMD_t + \beta_2 INF_t + \beta_3 OPNX_t + \beta_4 EXR_t + \mu_t \quad (2)$$

Where β_0 is the intercept, (β_1, β_2, β_3 and β_4) are the coefficients of the explanatory variables and μ is the stochastic error term. The a priori expectation of the study is $\beta_1 > 0$, $\beta_2 > 0$ and $\beta_4 > 0$ while $\beta_3 < 0$. This implies that financial market development, trade openness and exchange rate are

anticipated to have a positive impact on foreign direct investment while inflation rate is expected to influence foreign direct investment negatively. Inflation rate is measured by annual inflation rate; foreign direct investment is measured by the volume of net FDI flows as a ratio of GDP (FDI/RGDP), financial market development (FMD) is measured with the ratio of credit in private sector to GDP. Trade openness (OPNX) is measured with the addition of import and export divided by the GDP. Gross Domestic Product is measured by real gross domestic product and the exchange rate (EXR) is measured by the official naira/dollars exchange rate. The data for this study are obtained from the Central Bank Nigeria statistical bulletin 2015 edition and cover the period 1980 to 2015.

Descriptive Statistics, Unit Root and Co-integration Estimate

This study commences the empirical analysis by examining the descriptive statistics of the variables. As noted on table 1, the mean values foreign direct investment as a ratio of real gross domestic product, financial market development, inflation, trade openness and exchange rate are 0.34, 12.93, 20.02, 5.93 and 69.57 respectively. It is observed from the table that foreign direct investment as a ratio of real gross domestic product had the lowest standard deviation of 0.48 while exchange rate has the highest standard deviation of 66.41. The skewness statistics which shows the degree of asymmetry, or departure from symmetry revealed that all the variables were positively. The kurtosis indicates the degree of peakedness of a distribution and it was observed that foreign direct investment as a ratio of real gross domestic product, financial development, inflation rate and trade openness had relatively high peaked distribution called leptokurtic since their values were greater than three (>3) while exchange rate had relatively low peaked distribution called platykurtic since its value is less than three (<3). Finally, the Jarque-Bera statistic rejected the null hypothesis of normal distribution at five percent level of significance for foreign direct investment as a ratio of real gross domestic product, financial market development, inflation rate and trade openness while the null hypothesis of normal distribution for exchange rate was accepted at the same critical value.

Table 1: Summary of Descriptive Statistics

Statistics/Variables	FDI/GDP	FMD	IFR	OPNX	EXR
Mean	0.335	12.983	20.017	5.925	69.566
Std. Dev.	0.479	6.512	18.285	7.662	66.408
Skewness	1.552	1.804	1.496	1.236	0.273
Kurtosis	4.341	6.690	3.960	3.334	1.368
Jarque-Bera	17.155	39.960	14.812	9.328	4.441
Probability	0.000	0.000	0.001	0.009	0.109
Observations	36	36	36	36	36

Source: Author Computation using e-views 9, 2017

Sequel to the descriptive statistics, this study conducted the unit root test of the variables using the Phillip-Perron (PP) test with the result presented on table 2 below. The result of the PP test showed that all the variables were stationary at first difference, that is, the variables are integrated of order one I(1).

Table 2: Phillip-Perron (PP) Test

Variables	Level	1st Difference	Status
FDI/GDP	-1.6786	-4.5327*	I(1)
FMD	-2.0653	-11.7399*	I(1)
IFR	-2.9183	-9.8717*	I(1)
OPNX	-1.9032	-7.1811*	I(1)
EXR	0.4058	-5.2505*	I(1)

Source: Author Computation using e-views 9, 2017
* denotes one per cent significance level

The result of the Phillip-Perron stationarity test suggests that a linear combination of the variables could be co-integrated. Thus, the Johansen co-integration result is conducted and the result presented in table 3. From the table, the Trace statistics indicated two co-integration equations while the Maximum-Eigen statistics indicated one co-integration equation. The evidence from the Johansen co-integration estimates suggests a long-run relationship among the variables in the regression model. Therefore, spurious and inconsistent regression problems which otherwise would occur with regression of non-stationary data series could be avoided (Nwachukwu & Egwaikhide, 2007).

Table 3: Summary of the Co-integration Estimate

Trace Test				**Maximum Eigen value Test**			
Null	alternative	Stat. Value	95% critical values	Null	alternative	Stat. Value	95% critical values
r=0	r≥1	95.87	69.82	r=0	r=1	47.90	33.88
r≤1	r≥2	47.97	47.86	r≤1	r=2	25.17	27.58
r≤2	r≥3	22.80	29.80	r≤2	r=3	16.45	21.13

Source: Author Computation using e-views 9, 2017

Regression Estimate

Sequel to the co-integration result, the relationship between foreign direct investment and financial market development as specified in equation (2) is conducted using the vector error correction model in order to assess both the long run and short run relationship between the variables. The long run VECM estimate showed that financial market development and trade openness had negative and significant effect on foreign direct investment as a ratio of real GDP while the effect of inflation rate on foreign direct investment as a ratio of real GDP was also negative but insignificant. The negative relationship between financial market development and foreign direct investment as a ratio of real GDP is in contrary to findings of Prahdam (2010), Sghaier and Abida (2013) and Kargaronka (2012) but in line with the findings of Ju and Wei (2010) and Bilir *et al*. (2013). In addition, the long run VECM estimate observed that exchange rate had positive and significant effect on foreign direct investment as a ratio of real GDP. The positive relationship between exchange rate and foreign direct investment is expected because the depreciation of exchange rate encourages the inflow of foreign direct investment in a country.

With respect to the VECM short run estimate, the error correction term (***ECM(-1***) is correctly signed and statistically significant. The coefficient estimate of the error correction terms of -2.72 implied that the estimated model corrects its short-run disequilibrium by 2.72 per cent speed of adjustment in order to return to the long-run equilibrium respectively. In addition, the negative sign of the error correction terms indicated a backward move towards the equilibrium. Also, the short run estimate showed that the first lagged values of foreign direct investment as a ratio of real GDP (FDI/GDP(-1)) and financial market development (FMD(-1)) had positive and significant effect on current foreign direct investment as a ratio of real GDP while the first lagged value of trade openness (OPNX(-1)) had negative and significant effect on foreign direct investment as a ratio of real GDP. However, the first lagged values of inflation rate (IFR(-1)) and exchange rate (EXR(-1)) had negative and insignificant effect on foreign direct investment as a ratio of real GDP in the short run. The result of a positive relationship between financial market

development and foreign direct investment is in line with Klein *et al*. (2002) and Desai *et al*. (2006).

With respect to the focus of the study, the VECM estimate showed a contrasting result on the relationship between financial market development and foreign direct investment in the short run and in the long run. It was observed that in the short run, financial market development had significant and positive influence on foreign direct investment while in the long run financial market development negatively and significantly influenced foreign direct investment. In short run, improve financial market development provides access to external finance or make more foreign capital available to domestic investors with limited internal funds to undertake profitable investment opportunities which require large fixed and variable costs incurred in the initial production stage. Thus, the increase in financial market development promotes foreign direct investment. However, in the long run continuous development of the financial market creates an incentive for multinational enterprises to substitute foreign outsourcing for foreign direct investment (Desbordes & Wei, 2014). Also, indirectly, better access to external finance facilitates local development which raises the likelihood of more intense local competition. Thus, higher financial market development may negatively influence foreign direct investment in the long run.

Table 3: VECM Regression Estimate

VECM Long Run Regression Estimate				
Dependent Variable	**Regressors**	**Estimated Co-efficient**	**Standard Error**	**t-statistic**
FDI/GDP	FMD(-1)	-0.010599	0.00132	-8.03079*
	IFR(-1)	-0.000788	0.00040	-1.96713
	OPNX(-1)	-0.060146	0.00108	-55.4567*
	EXR(-1)	0.000688	0.00014	4.89484*
VECM Short-Run Regression Estimate				
Dependent Variable	**Regressors**	**Estimated Co-efficient**	**Standard Error**	**t-statistic**
D(FDI/GDP)	ECM(-1)	-2.719552	0.68421	-3.97473*
	D(FDI/GDP(-1))	1.377885	0.43192	3.19017*
	D(FMD(-1))	0.022931	0.01049	2.18517**
	D(IFR(-1))	-0.001741	0.00211	-0.82543
	D(OPNX(-1))	-0.070736	0.02172	-3.25630*
	D(EXR(-1))	-0.001553	0.00274	-0.56676

Source: Author's Computation using e-views 9, 2017

The robustness of the VECM regression estimate above is shown by conducting the Serial Correlation LM Test. The Serial Correlation LM test confirmed the absence of serial correlation in the residuals of the VECM estimate. This is because the probability values of the LM-Statistics at various lags were insignificant, suggesting that the residuals were conditionally normally distributed, and the estimate can be used for policy inference.

Table 4: VECM Residual Serial Correlation LM Tests

Lags	LM-Statistics	Probability
1	25.594	0.4295
2	35.079	0.0868
3	22.015	0.6349

Source: Author's Computation using e-views 9, 2017

Policy Implication and Conclusion

This study investigated the impact of financial development on foreign direct investment in Nigeria for the period spanning 1980 to 2015. Using the vector error correction model technique, the study observed a negative relationship existed between financial market development and foreign direct investment in the long run while in the short run, a positive relationship existed between financial market development and foreign direct investment in Nigeria over the estimated period of 1980-2015. Therefore, the study recommended further development of the Nigerian financial market by the monetary authority given its positive influence on the inflows of foreign direct investment in the short run. There is also the need for more financial reform of the Nigerian financial system in order to bring more foreign direct investment into the country both in the long and short runs.

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Appendix: Data

Year	FDI	FMD	INF	EXR	OPNX	RGDP	FDI/RGDP
1980	-404.1	18	10	0.5464	0.7	31546.76	-0.01281
1981	334.7	9.1	21.4	0.6100	0.1	205222.06	0.001631
1982	290	10.6	7.2	0.6729	0.1	199685.25	0.001452
1983	264.3	10.6	23.2	0.7241	0.1	185598.14	0.001424
1984	360.4	10.7	40.7	0.7649	0.1	183562.95	0.001963
1985	434.1	9.7	4.7	0.8938	0.1	201036.27	0.002159
1986	735.8	11.3	5.4	2.0206	0.1	205971.44	0.003572
1987	2452.8	10.9	10.2	4.0179	0.2	204806.54	0.011976
1988	1718.2	10.4	56	4.5367	0.2	219875.63	0.007814
1989	13877.4	8.0	50.5	7.3916	0.4	236729.58	0.058621
1990	4686	7.1	7.5	8.0378	0.6	267549.99	0.017514
1991	6916.1	7.6	12.7	9.9095	0.8	265379.14	0.026061
1992	14463.1	6.6	44.8	17.2984	1.3	271365.52	0.053297
1993	29660.3	11.7	57.2	22.0511	1.4	274833.29	0.107921
1994	22229.2	10.2	57	21.8861	1.3	275450.56	0.080701
1995	75940.6	6.2	72.8	21.8861	6.1	281407.4	0.26986
1996	111290.9	5.9	29.3	21.8861	6.4	293745.38	0.378869
1997	110452.7	7.5	10.7	21.8861	6.9	302022.48	0.36571
1998	80749	8.8	7.9	21.8861	5.1	310890.05	0.259735

Year	FDI	FMD	INF	EXR	OPNX	RGDP	FDI/RGDP
1999	92792.5	9.2	6.6	92.6934	6.6	312183.48	0.297237
2000	115952.2	7.9	6.9	102.1052	8.9	329178.74	0.352247
2001	132433.7	11.1	18.9	111.9433	9.0	356994.26	0.370969
2002	225224.8	11.9	12.9	120.9702	7.5	433203.51	0.519905
2003	258388.6	11.1	14	129.3565	10.8	477532.98	0.541091
2004	248224.6	12.5	15	133.5004	12.5	527576.04	0.4705
2005	654,193.15	12.6	17.8	132.1470	17.9	561931.39	1.164187
2006	624,520.73	12.3	8.2	128.6516	17.5	595821.61	1.048167
2007	759,380.43	17.8	5.4	125.8331	19.3	634251.142	1.197287
2008	971,543.79	28.6	11.6	118.5669	23.8	672202.5541	1.445314
2009	1,273,815.79	36.9	12.4	148.9017	19.6	718977.335	1.771705
2010	905,730.77	18.6	13.7	150.2980	26.0	776332.21	1.166679
2011	1,360,307.91	16.9	10.8	153.8616	0.5	57,511,041.77	0.023653
2012	1,113,510.58	20.4	12.2	157.4994	0.4	59,929,893.04	0.01858
2013	875,102.46	19.7	8	157.3112	0.4	63,218,721.73	0.013842
2014	738,197.19	19.2	8	158.5526	0.3	67,152,785.84	0.010993
2015	602,067.8	19.8	9	193.2792	0.3	69,023,929.94	0.008723