# Foreign Direct Investment (FDI), Financial Development and Economic Growth in Nigeria: Evidence of Causal Relationships

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**Abstract:** This paper aimed to determine the significance of foreign direct investment inflow on economic growth in Nigeria using financial development as a control variable, and ascertain the causal relationship among foreign direct investment inflow, financial development and economic growth. Study's data is the Nigeria economic data from 1982 to 2014 obtained from the central bank of Nigeria statistical bulletin. The ordinary least square method of estimating multiple regression was employed to regress economic growth on foreign direct investment inflow, financial development, exports and labour and the t statistics to test the study's hypotheses at 5% level of significance, the augmented Dickey fuller Unit root test and Granger causality test were also used. Results established a unidirectional causality flowing from financial development to gross domestic product growth. The individual effects of financial development or foreign direct investment are negative, however this negative relationship turned positive when their joint effect is considered as established by the positive and significant coefficient of the interaction variable between foreign direct investment inflow and financial development, thus the significance and positive coefficient of foreign direct investment in effecting the desired growth in output is subject to financial development. The government should encourage foreign direct investment inflows through infrastructural development, political stability, tax and other fiscal incentives, however these should be complimented with policies that foster financial development.

**Keywords:** Economic growth, foreign direct investment inflow, financial development, unit root, Granger causality test.

### **1. INTRODUCTION**

The effects of foreign direct investment (FDI) on economic growth on one hand, and the upshot of financial development on economic growth on the other, has been subjects of debates dating back to the 19<sup>th</sup> century (Bagehot 1873). FDI inflows result into increase in host country's capital stock, labour and knowledge capital, while the neo classical theorist (Solow, 1956) concluded the irrelevance of increased capital stock in the long run due to the diminishing returns, recent theories have linked the significance of FDI to economic growth through technology spillovers from the knowledge capital introduced by FDI (Balasubramanyam, Salisu and Sapaford 1996, Olofsdotter, 1998, Borensztein, De Gregorio and Lee 1998). Although the magnitude of the positive effect is dependent on some country specific variables (Buckley, Clegg and Wang 2002).

De Mello (1999) used both time series and panel data fixed effects on a sample of 32 developed and developing countries and found only a weak link between FDI and economic growth, similarly Carkovic and Levine (2002), found no robust link between FDI and economic growth in their study of 72 developed and developing countries using both cross sectional ordinary least square analysis and a dynamic panel data analysis using GMM. On the contrary, the new theory of economic growth concludes that FDI affects not only level of output per capital but also its rate of growth (Falki, 2009). Balasubramanyam et al.(1996) used both cross section data and ordinary least square to investigate the FDI-growth nexus and, they concluded that FDI has a positive effect on economic growth in countries having an export promotion strategy and negative in countries having an import substitution strategy, this lends to the preference of openness in other to enjoy the benefits of FDI. Borensztein et al. opined that the effect of FDI on economic development though positive is dependent on the level of human capital in host country and to corroborate this Olofsdotter (1998) adduced the positive effect of FDI on Growth to be dependent on institutional capability measured by the degree of property rights protection and bureaucratic efficiency in the host country. Zhang (2001) went further to analyze the causal link between FDI and growth, he used both Granger causality test and cointegration tests on

a sample of 11 developing countries across East Asia and Latin America, he found evidence in five countries that FDI enhances economic growth but again dependent on host country's trade regime and macroeconomic stability. Choe (2003) concluded that causality between FDI and growth is bidirectional but is more of demand following (growth causing FDI) than supply leading.

Financial institutions perform the function of financial intermediation in an economy, encouraging savings and channeling saved funds to entrepreneurs for investment leading to output growth, Financial development a term that refers to financial institution's operational depth, number of participants and their inclusiveness, to a large extent determine the extent and efficiency of this function in an economy. Roles and significance of financial institutions has been documented by various writers.

Gurley and Shaw (1967), criticized the non-inclusion of the financial intermediaries in the neo classical growth models, the writers reiterated the importance of the finance sector as a whole and opined that banks and other financial intermediaries are equally important in credit creation and their effect on money supply in any economy. They were of the opinion that a full-fledged financial control should replace a traditional approach to monetary policy. In the view of Cameron (1967), the functions of the financial system include, one, redistribution of resources from risk adverse individuals to entrepreneurs, two, reduction of borrowing cost leading to reduced interest rate and therefore aiding investment and lastly, facilitation of effective allocation of initial stock of capital in period of industrialization and contribution to technological advancement. Patrick (1966) identified two types of finance- growth nexus thus, demand following and supply leading, The former suggests that financial development comes after or responds to real economic growth while the latter refers to active intermediation by financial sector encouraging savings and channeling such to entrepreneurs for investment, the terms are not isolated and evolved according to stage of economic development. He opined that at initial stage of economic development, supply leading exists but overtaken by demand following as the economy develops. Goldsmith (1975) provided a comprehensive system of financial indicators and aimed to ascertain whether financial development leads, parallels or lags behind economic development. He aimed to ascertain whether financial development is passive, aids or inimical to economic development. He suggested financial interrelation ratio (FIR) calculated as the value of all financial instrument outstanding at a given date to that of the national the ratio of wealth at same date.

The new growth theories has settled that FDI positively affects economic growth but the extent of the positive effects depend on identified country specific variables of the host country which includes human capital, (Borensztein et al., 1998), economic policy, that is whether export promotion or import substitution (Balasubramanyam et al.1996), institutional capability (Olofsdotter, 1998), savings, degree of openness and level of technological development (Buckley, et al. 2002). This paper explored the significance of FDI on economic growth in Nigeria using a measure of financial development as control variable. What is the significance of FDI to economic growth in Nigeria, what is the significance of financial development to economic growth in Nigeria? What is the direction of causality between FDI and economic growth and what is the direction of causality between financial development and economic growth are questions agitating the minds of the writer. Consequently the objective of the paper is to determine the significance of FDI and financial development on economic growth individually and jointly. The paper also aimed to ascertain the causal relationship among FDI, financial development and economic growth. After this introduction, the paper reviews relevant literature in the second section, the third section discusses the method of analysis while the fourth section is the discussion of findings, the last section is summary and conclusion.

# **2. LITERATURE REVIEW**

### **2.1.** Conceptual Literature

Three main concepts are identified thus foreign direct investment, financial development, economic growth or development.

### **2.2.** Foreign Direct Investment (FDI)

Foreign direct investment (FDI) occurs when a firm invests directly in facility to produce and/or market a product in foreign country. Foreign Direct investment can be classified into FDI stock and FDI flow, while the former is the accumulated amount of FDI at a given time, the latter refers to the amount of FDI undertaken over a given period of time usually annualized. FDI inflo w are flows into

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a domestic economy and FDI outflows are flows away from a domestic economy. Johnson (2006) identified FDI flow to include flow of physical capital, labour, firm specific advantages (superior technology, scale economies, and management) knowledge capital (brand names, human capital, patents, trademarks and Technology) and externalities. Johnson, (2006) categorized FDI into greenfield and brownfield, when FDI inflow results into the purchase or construction of new hitherto non existing production lines or market channels it is called greenfield FDI, but acquisition of ownership powers of an existing production facility in a domestic economy by foreigners is called brownfield.

# 2.3. Financial Development

Financial development refers to the improvement of the financial system overtime, specific areas of improvement will include, structure and size of assets and liabilities of all types of financial institution, there distribution among different institutional sectors, financial inclusion and the concentration, maturity, yield and security of financial instrument. Goldsmith (1975) identified that the Financial Interrelation Ratio (FIR) will at best capture the multiplicity of factors determining financial development. FIR is the ratio of value of all financial instruments outstanding at a given date to that of national wealth at same date that is, ratio of financial wealth to national wealth at a particular date. Difficulty of sourcing data to correctly compute the many sub measures included in FIR made many authors resort to relatively easier ratios like the currency (M1/GDP) and monetization ratios(M2/GDP) (Darrat et al., 1989, Jung, 1986). Measures of financial development adopted by the central bank of Nigeria(CBN) over time include, broad money to gross domestic product (M2/GDP), currency in circulation to broad money (CIC/M2), currency outside banks to broad money(COB/M2) quasi money (savings) to broad money (QM/M2), currency in circulation to GDP (CIC/GDP), credit to private sector to GDP (CP/GDP), credit to private sector to non-oil GDP (CP/non-oil GDP), deposit money banks assets to GDP(DBMs Asset/GDP), CBN assets to GDP and banking system's assets to GDP.

### 2.4. Economic Growth and Development

Economic growth is the sustained increase in an economy's per capita output or income accompanied by increase in labour force, consumption, capital and volume of trade (Jhigan, 2010), while economic development is the reduction or elimination of poverty, inequality and unemployment in the context of a growing economy (Baran, 1962; Lewis, 1963; Goulet, 1971; Kuznets, 1971; Cohen, 1973). Economic development is growth plus qualitative change in economic wants, goods, incentives, institutions, productivity and knowledge or the upward movement of the entire social system. Improvement in the social and economic capacity to produce growth can be said to be economic development. In summary, economic growth is increase in output and production efficiency, if growth is now accompanied with improvement in institutional and technical arrangements by which it is produced, then we have economic development. With growth development may be lacking because of presence of unemployment and inequality brought about by absence of technological and structural improvement, but it is difficult to imagine development without growth. Measures of economic growth include; output and output per capita, while measures of economic development include; gross national product (GNP).

### 2.5. Theory of Economic Growth

The Solow-Swan model of economic growth advances a continuous production function linking output to inputs of capital and labour. With the assumptions of absence of technical progress, constant rate of capital depreciation, constant population growth rate, constant returns to scale and diminishing returns to an individual output among others, the model concludes that at equilibrium, net change in capital per worker (capital output ratio) equals to zero, and therefore Investment (per worker to maintain capital per worker) equals savings per worker. This is depicted in the equations below.

Y = F(K, L)	1
With constant returns to scale	
Y/L = F(K/L, L/L)	2
y = F(k) where $y=Y/L$	3
With constant savings s, total savings equals	
sy = sF(k)	4
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Investment to maintain capital per worker is (n+d) k

Therefore net change in capital per worker k' is

$$\mathbf{k}' = \mathbf{sF}(\mathbf{k}) - (\mathbf{n} + \mathbf{d})\mathbf{k}$$

At equilibrium k'=0 therefore

sF(k) = (n+d)k

Equation 7 represents the neo- classical view of the Solow-Swan model where, Y is the output, K is capital and L is labour, Y/K, K/L and k' are output per worker, capital per worker and change in capital per worker respectively, n is the population growth rate and d is rate of depreciation.

Inferences of the Solow-Swan model include, the fact that growth rate of output in steady state is exogeneous and independent of savings rate and technological progress (which is constant), increased savings rate will lead to increased output per worker and increased capital per worker, but the growth rate of output is not affected. Growth in per capita income can be achieved through increased savings or reduced rate of population growth and lastly in the absence of technological advancement growth per worker will seize due to diminishing returns to capital.

The new endogeneous growth models improved on the perceived deficiency of the Solow-Swan model by postulating a growth model that emphasize technological progress, rate of investment, size of capital stock and stock of human capital . The models conclude that increased rate of economic growth results from technological spillover of externalties brought about by increased capital stock (increased investment). Chief among the new growth models include the Arrow model, the lucas model and the Romer's model of Technological Change.

Arrow model 
$$Y_i = A(K) F(K_i, L_i)$$
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Lucas model  $Y_i = A(K_i).(H_I).H^e$ 

Romer's model of technological change  $\Delta A = F(K_A, H_A, A)$ 

Where  $K_i$  and  $L_i$  is the capital and labour of individual firms respectively, K denotes the aggregated stock of capital, A is the technological factor and  $\Delta$  A denotes increasing technology ,  $H_i$ ,  $H_A$  and  $H^e$  denote individual firm human capital, amount of human capital employed in a new design and economy's average level of human capital respectively, the superscript (e) represents the strength of the external effects from human capital to each firm's productivity and  $Y_I$  denotes the individual firm's output.

### 2.6. Theories of Financial Development

Debates on the role and effects of financial development on economic growth can be classified into three schools of thought, a view holds that finance is not important, another holds that finance is key to economic development while the third preaches a cautionary view. However, the new endogenous models holds that economic growth is achieved through technological spillovers brought about by increased capital (physical and human), the increased capital according to Bhole (2004) can be achieved through increased investment and savings mid wifed by a developing financial sector. The Prior Savings Theory, postulates that monetary and fiscal policy should encourage voluntary savings for investment and growth and that all prior savings goes into investment. Any investment not as a result of prior savings will generate inflation which is not needed for growth. Finance thus comes into the equation by encouraging prior savings and activating such savings into investment through the deepening of financial products like bonds, shares and other financial securities. Schumpeter, (1934) added that financial institutions also reduce asymmetric cost and risk of finance (through insurance). The credit creation theory claims that financial system creates credit in anticipation of savings, created credit catalyses investment which generates amount of income leading to savings that is equal to investment earlier undertaken. The theory opines that causality flows from investment (midwifed through credit creation) to savings, and without the activities of financial institutions credit creation is impossible. The theory of forced savings credited to Keynes and Tobin, argues that investment is brought about by fixed savings and not through voluntary savings. They hold the view that it is investment that determines savings and the investment can be increased autonomously through monetary expansion. This monetary expansion is accomplished through financial development.

### 2.7. Empirical Literature

Many authors have investigated the effect of foreign direct investment (FDI) on economic growth and their results have been mixed, while some concluded a positive effect, others opined the contrary. Loto (2002) investigated the globalization- growth nexus with FDI as one of the independent

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variables, other variables he included were, total trade, real exchange rate, money supply, ratio of fiscal deficit or surplus to GDP, and inflation rate. He used Nigerian data between 1980 and 2000 and concluded that FDI is positively related to economic growth. Dicken (1992) also noted that one of the dominating forces of the global integration is rapid increase in foreign direct investment inflow, he also opined that a major source of this inflow is the transnational corporations (TNC). On the contrary, Oaikhenan and Udegbunam (2008) evaluated the impact of openness and capital flows on Nigeria's economic growth between 1989 and 2004 using the co integration and error correction techniques. They discovered albeit counter intuitively, that private capital inflow has a negative impact on economic growth while private capital outflow has a positive impact. This may be due to the volatile nature of foreign capital in Nigeria. Falki (2009) investigated the impact of FDI on economic growth of Pakistan for the period 1980 to 2006. He adopted the new endogeneous growth model as developed by Balasubramanyam et. al, (1996) and Borensztein, et.al, 1998). He concluded a negative and statistically insignificant relationship between FDI and economic growth. Similarly, concluded a positive but statistically insignificant relationship between FDI and Singh. (1998) economic growth.

Another class of studies agreed that FDI positively affects growth, but realization of the full effect of FDI is dependent on some factors present in the domestic economy. For instance, Buckley, et.al, (2002) concluded that FDI favours growth in economically stronger provinces and that provinces with strong competition realize the optimal benefit of FDI. They employed data for china as a whole, and for 20 provinces in sub-samples from 1989 to 1999. de Mello, (1999) also noted that the effect of FDI is dependent on the state of technology in a domestic economy relative to that in the rest of the world. Johnson, (2006) did an empirical study of the FDI and growth nexus, the study included a cross section and panel data analyses of 90 economies. He concluded that effect of FDI depends on state of economic growth, since he concluded that FDI had a positive effect on developing economy but not for developed economy.

Intuitively, finance either creates credit for investment in capital leading to economic growth or activates idle savings for investment. This is done through the financial intermediation role of financial institutions. Earlier economists especially the classical and neo classical schools disagreed with this reasoning and concluded that finance has no place in development, however, recent theories and empirical evidences agreed that finance and its development have crucial roles in bringing about economic growth such studies pointed to the direction of causality whether demand following or supply leading. Douglason (2007), investigated the causal relationship between financial development and economic growth in Nigeria using a multivariate vector auto-regression (VAR) model. He used real GDP, net domestic credit, net investment, trade openness and human capital investment as the variables and the data spanned 1970 to 2002. He concluded that GDP Granger causes financial development a case of demand following. Kar and Pentecost (2000) similarly investigated the finance growth nexus in turkey using the vector error correction model (VECM), they developed four alternate indicators of financial development thus, ratio of money to income, ratio of banking deposit liabilities to income, ratio of private sector credit in domestic credit and ratio of domestic credit to income. They were largely neutral concerning causality direction. Similarly Shan (2003) investigated the finance growth causality using World Bank data and the VAR models. The paper concluded that the direction and strength of causality are not uniform among countries of the world.

Few Studies have investigated the FDI- growth nexus with financial development in the domestic economy as a control variable. Noteworthy is the work of Khan, (2007), his study used the Bound testing approach to co- integration within the framework of Autoregressive Distributed Lag (ARDL) to investigate the long run equilibrium relationship among variables using Pakistan data from (1972-2005). Variables in the study included growth rate of real GDP, ratio of FDI to real GDP, financial sector development, labour and physical capital. He discovered that the interaction variable between FDI and Financial development is significant on growth, while FDI taken individually had insignificant effect on growth, this suggests that benefits of FDI will be felt only if financial sector is well developed.

This study, in a bid to modestly fill identified gap in literature, investigated the effect and direction of causality between economic growth and FDI in Nigeria using financial development in Nigeria as a

control variable, in addition the study seeked to ascertain the joint effect of FDI and financial development using an interaction variable.

### 3. METHODOLOGY AND RESEARCH DESIGN

The study, is an empirical research using time series economic data of Nigeria, the null hypotheses are, economic growth do not significantly depend on FDI, economic growth do not significantly depend on financial development and economic growth do not significantly depend on the interaction variable (FDI and financial development). The causal relationship among economic growth, foreign direct investment and financial development will also be explored.

The theoretical model used in the study is based on the new endogeneous growth model as developed by Balasubramanyam, et al.(1996) and Borensztein, et al.(1998) and earlier used by by Falki (2009). The model is stated below.

 $Y_t = A_t K^{\alpha}_{dt} K^{\lambda}_{ft} L^{\beta}_t$  where Y is output,  $K_d$  is the domestic capital and  $K_f$  represents foreign owned capital, L is the labour force,  $\alpha$  is the output elasticity of domestic capital while  $\lambda$  represents the output elasticity of foreign capital stock,  $\beta$  is the output elasticity of labour force and A is total factor productivity that explains the output growth that is not accounted for by the growth in factors of production specified. The model illustrates that output depends on the production factors of capital and labour, however, effect of increased capital is felt through variable A (total factor productivity) that represents effects of new technologies, improvement on human capital, infrastructure and development of institutions introduced through new capital.

To test the study's hypotheses, the equation below is employed

 $GDPR = \alpha_0 + \alpha_1 FDIGDP + \alpha_2 COBM2 + \alpha_3 XGDP + \alpha_4 FDICOB + \alpha_5 L + \mathcal{E}$ 

Where GDPR is the GDP growth rate, a proxy for output, FDIGDP is the ratio foreign direct investment inflow to GDP, a proxy for capital and the ratio of currency outside banks to money supply COBM2 served as a proxy for financial development. XGDP is export as a ratio of GDP, L is the percentage of active labour in total population and FDICOB is the interaction variable between capital inflow and financial development,  $\alpha_0$  is the constant while  $\alpha_1$  to  $\alpha_5$  are variables' coefficients and  $\varepsilon$  is the error term.

Study's data is the Nigeria economic data from 1982 to 2014, obtained from the Central Bank of Nigeria Statistical bulletin. The Ordinary Least Square method of estimating multiple regression was employed and the t statistics adopted to test the hypotheses at 5% level of significance. According to Gujarati (2013), empirical works based on time series data assume that the time series are stationary, furthermore, variables must be integrated of same order before they can be paired for test of causal relationship, these necessitated test of stationarity so that the stationary forms of the variables will be used. The Augmented Dickey Fuller unit root test was employed to test for the series stationarity and the Granger causality test for the test of causal relationship.

# 4. RESULTS, DISCUSSIONS AND FINDINGS

# **4.1. Descriptive Statistics**

From table 4.1, the labour growth rate had the highest deviation around its mean at 5.757 with the interaction variable (FDICOB) having the lowest at 0.003, the pairwise correlation matrix as contained in table 4.2 indicated that there was negative correlation between financial development and foreign direct investment. However positive correlation existed between gross domestic product and financial development, gross domestic product and foreign direct investment and gross domestic product and the interaction variable (FDICOB) where it was highest.

	COBM2	FDICOB	FDIGDP	GDPR	L	XGDP
Mean	0.208	0.004128	0.02	0.257727	37.12	0.244382
Median	0.208	0.004419	0.019	0.157564	38.42	0.234314
Maximum	0.339	0.008959	0.051	1.202619	42.95	0.520071
Minimum	0.076	0.000552	0.002	-0.14035	25.88	0.067007
Std. Dev.	0.079	0.00273	0.013	0.290174	5.757	0.121319
Skewness	-0.223	0.224805	0.536	1.741855	-0.653	0.411342

Table4.1. Descriptive S	tatistics
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Source. Author's calculations 2016.

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	COBM2	FDICOB	FDIGDP	GDPR	L	XGDP
COBM2	1	0.562	-0.10298531	0.143036	-0.3560416	-0.17929
FDICOB	0.562	1	0.713236877	0.191789	0.348533045	0.481053
FDIGDP	-0.103	0.713	1	0.049094	0.63045297	0.755986
GDPR	0.143	0.192	0.04909387	1	0.05478408	-0.00503
L	-0.356	0.349	0.63045297	0.054784	1	0.760535
XGDP	-0.179	0.481	0.755985508	-0.00503	0.760534821	1

Table4.2. Correlation Matrix

Source. Author's calculations 2016.

#### 4.2. Augmented Dickey Fuller Unit Root Test

The study tested the null hypotheses that the variables contained unit root at 5% level of significance, all the variables except gross domestic product growth rate were non-stationary at level but all became stationary at first difference the regression equation thus used the first difference forms of the study variables. Table 4.3 contain the results of the unit root analysis

Table4.3. Augmented Dickey Fuller unit root tests

	LEVEL		FIRST DIFFERENCE		SECOND DIFFERENCE	
	CRITICAL TAU -3.580623		CRITICAL TAU -3.562882		CRITICAL TAU -3.580623	
	TAU	$R^2$	TAU	$R^2$	TAU	$R^2$
FDIGDP	-2.819792 <sup>a</sup>	55.8	-9.181016	75	-7.849884	92
COBM2	-0.786142 <sup>a</sup>	10.7	-3.657086	32	-6.894291	74
GDPR	-5.559004	51.6	-6.296520	81.7	-5.717589	92
L	0.733485 <sup>a</sup>	43	-3.608505	32	-7.379292	67
FDICOB	-2.235650 <sup>a</sup>	17.4	-9.180153	75	-7.56538	92
XGDP	-1.423714 <sup>a</sup>	10.4	-6.443772	60	-5.268791	83

Source. Author's calculations 2016.

Superscript (a) denotes presence of unit root.

# 4.3. Granger Causality Test

The null hypotheses tested was the absence of causal relationship among gross domestic product growth rate, foreign direct investment (FDIGDP) and financial development (COB). Pairings were possible since mentioned variable were all stationary at first difference. At  $N_1 = (k-1)$  (5) and  $N_2=(n-k)(27)$ , the critical F value was 2.59 at 5% level of significance. Table 4.4 shows the presence of unidirectional causality flowing from financial development to gross domestic product growth rate. That is, financial development granger cause gross domestic product growth but not conversely, this is in line with the supply leading hypothesis of finance. The result of the Granger causality test is presented in table 4.4

Table4.4.	Granger	causality test
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Null hypotheses	F statistics	probability
FDIGDP does not Granger cause GDPR	0.57419	0.5701
GDPR does not Granger cause FDIGDP	0.36261	0.6993
COBM2 does not Granger cause GDPR	4.49219 <sup>b</sup>	0.0211
GDPR does not Granger cause COBM2	0.30253	0.7415
COBM2 does not Granger cause FDIGDP	0.48846	0.6191
FDIGDP does not Granger cause COBM2	0.06050	0.9414

Source. Author's calculations 2016

Superscript (b) denotes that test is significant.

### 4.4. Estimated Regression Result and Test of Hypotheses

The regression result is presented in table 4.5 below, the study conducted a one tail test at 5% level of significance and difference level 30, the critical t statistic gives 1.697, comparing this value with the calculated t statistics of the variables revealed that foreign direct investment and the interaction variable between FDI and financial development were statistically significant while other variables were not. The study tested the null hypotheses that foreign direct investment equals zero and financial development equals zero, the former, was rejected, while accepting the latter. The study thus accepted

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that financial development has no significant effect on gross domestic product while a foreign direct investment inflow has a significant effect on gross domestic product. However it is interesting to note that the interaction variable between foreign direct investment and financial development was positive and significant. This suggested that a foreign direct investment inflow without financial development was negative and significant but became significant and positive when accompanied by financial development.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.068118	0.113660	0.599308	0.5542
D(COBM2,1)	-0.889469	4.169324	-0.213337	0.8327
D(FDICOB,1)	222.8730	79.62044	2.799194	0.0095
D(FDIGDP,1)	-44.18600	15.23591	-2.900122	0.0075
D(L,1)	-0.122397	0.160907	-0.760666	0.4537
D(XGDP)	-0.115787	1.203671	-0.096195	0.9241

Table4.5. Least Square regression results

Source. Author's calculations 2016.

### 5. SUMMARY AND CONCLUSION

The study established a unidirectional causal relationship that flowed from financial development to economic growth, that is, financial development Granger caused economic growth but not conversely. The finance sector in Nigeria was supply leading, financial development preceded economic growth. The individual effect of financial development or foreign direct investment is negative, however this negative relationship turns positive when their joint effect was considered as depicted by the positive and significant coefficient of the interaction variable (FDICOB) on economic growth. Foreign direct investment is desirable in developing economies as its inflows into a domestic economy engenders growth in output through technology spillovers and externalities. However its significance and positivity in affecting the desired growth in output is subject to financial development. The government should encourage foreign direct investment inflows through infrastructural development, political stability, tax and other fiscal incentives, however these should be complimented with policies that foster financial development so that foreign direct investment could have a significant positive effect on economic growth.

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