

# Real Output Effects of Foreign Direct Investment in Nigeria

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**Abstract** The study examined the impact of Foreign Private Investment on economic growth using annual time series data from Nigerian economy. Cointegration and Error Correction Mechanism (ECM) techniques were employed to empirically analyze the relationship between foreign private investment and economic growth and to draw policy inferences on the observed relationship. The result revealed that there was a substantial feedback of 116% and 78% from previous disequilibria between long-run economic growth and foreign private investment respectively. The findings also indicated that a substantial proportion of capital inflow were not productively invested however the relatively small proportion (22%) of net capital inflows invested, contributed significantly to economic growth in the Nigerian economy. The political environment was found to be unfavorable and overwhelmed the positive impact of foreign private investment. The paper concluded that there is high prospect for foreign private investment to boost economic growth if conducive environment, such as: political and macroeconomic stability are provided in Nigeria.

**Keywords:** *growth, Private Investment, Nigerian economy*

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## 1. Introduction

Foreign investment is without any doubt; vital to economic growth of developing countries hence, many developing nations have made notable efforts to attract foreign private investment in the past decade. private capital flows consist of the commercial bank loans, foreign deficit investment, and, portfolio investment. Unlike capital inflows, foreign private investment (FPI) always bring additional resources – technology, management and access to export markets that are desperately needed in developing countries. Moreover, lessons from the debt crisis which had plagued many of the LDCs had forced them to opt for a non-debt creating inflow of capital since, equity debt requires payments irrespective of the state of the economy, while earnings from private foreign investment are frequently reinvested and only a part is repatriated. One basic issue on foreign investment inflow into less developed countries (LDCs) is its impact on the various sectors of the economy. While, there is consensus on the determinant of FPI into LDCs, its specific effects on the development of the economy remain an empirical issue. Most often scholars do assume that since there is prevalent resources gap in LDCs, and then inflow of foreign private investment will definitely promote growth in the economy. This is a serious contentious issue given the abysmal growth rate of GDP

in the Nigerian economy despite the battery of incentives provided to foreign private investors by the Nigerian government.

This study therefore, attempts to investigate the relationship between foreign private investment and economic growth in Nigeria. The main issues this paper investigates are: what is the relationship between foreign private investment and economic growth in Nigeria? Given the answer to the above, to what extent can foreign private investment stimulate real output growth in Nigeria? This paper is divided into five sections. Apart from this introductory part, section 2 examines the trend of investment inflow to Nigeria since 1970s. Section 3 presents the methodology of the study used for empirical analysis. Section 4 analyses the results of the estimated models. Section 5 presents conclusion and the policy implication from the results.

## 2. Review of the Related Studies

The interest in the analyzing the role played by FPI is growing in the literature. Few of such recent studies are reviewed here. While examining the implication of private capital flows on the growth process [1] used panel data from 40 developing countries from 1975–95. He specified a model which accounted for potential endogeneity of the explanatory variables and the result shows that capital inflows foster higher economic growth, above and beyond

any effects on the investment rate, but only for economies where the banking sector has reached a certain level of development. Also [2] examine the nature of the causal relationship between output level, inward foreign direct investment and trade in Latin American countries; Argentina, Brazil and Mexico from the middle seventies to 1997. Utilizing a vector auto-regressive (VAR) model the result of the study suggests a significant impact of foreign direct investment on economic growth and trade in the analyzed countries. In Nigeria, [3] carried empirical investigation on the effects of foreign direct investment on economic growth from 1980 to 1997. The result showed that foreign direct investment had significant impact on economic growth in Nigeria. However, the study concludes that the presence of foreign direct investment in the LDCs particularly in Nigeria is not totally useful.

Using cross-section data relating to a sample of 66 developing countries over three decades [4] analyzes the role foreign direct investment and trade in economic growth of developing countries within the endogenous growth-theory framework. The study shows that foreign direct investment and trade contribute toward advancing economic growth in developing countries and that foreign direct investment is often the main channel through which advanced technology is transferred to developing countries. The study further believed that sound macroeconomic policies, better stock of human capital and institutional stability are necessary preconditions for foreign direct investment -driven growth to materialize and stimulate domestic growth. Another study [5] examined a panel analysis of the effects of foreign direct investment (FDI) on economic growth from 47 African countries over two decades (1980–2000). Utilizing a seemingly unrelated regressions (SUR) technique of analysis the study revealed that foreign direct investment exerts a positive impact on growth in Africa. Using data from several investor surveys [6] suggest that macroeconomic instability, investment restrictions, corruption and political instability have a negative impact on foreign direct investment (FDI) to Africa. Using time series data covering the period 1970-2003, [7] examine the impact of foreign direct investment on economic growth in Africa using graphical and regression analysis. It was established that the contribution of foreign direct investment to growth is positive in most of the countries but not significant. While contributing to the debate on the joint effects of aid and FDI in economic development estimated a panel data for countries in the Southern Africa region [8] found a negative relationship between FDI and growth but no relationship between aid and growth. In another similar study [9] established that there was a long run association between aid, FDI and economic growth in 36 sub-Saharan Africa countries, and also found that foreign aid and FDI exert positive effect on economic growth, but the effect of aid is lower.

Examining the impacts of foreign direct investment in oil sector in Nigeria and its attendant impact on economic growth, [10] used co-integration analysis to show that foreign direct investment at current year is negatively associated with GDP possibly due to the fact that such investment needed to be allowed some time lag to translate to any significant impact. The impact of domestic capital formation is relatively small compared with the impact of foreign direct investment in the oil sector.

Investigated the relationship between foreign direct investment and economic growth in Nigeria between 1970 and 2008, [11] argued that there is endogeneity i.e., bi-directional relationship between FDI and economic growth in Nigeria. The paper then adopted both single and simultaneous equation systems to examine if there is any sort of feed-back relationship between FDI and economic growth in Nigeria. The results show that FDI and economic growth are jointly determined in Nigeria and there is positive feedback from FDI to growth and from growth to FDI.

More importantly, recent studies have begun to query the robustness of model that ignored the possible interaction between foreign direct investment and other capital inflows. For instance [12,13,14] introduced financial development to a model that examined the effects of foreign direct investment on economic growth. The conclusion from the papers was that the effect of foreign direct investment could depend on the level of financial development in developing countries. Also [15,16] examined similar issues in Nigeria where they incorporated savings and foreign aid as alternative sources of invisible resources in the growth process.

Obviously from the above review foreign direct investment has been established to be a crucial factor in the growth process especially in developing countries. However, most of the existing studies is based on the assumption all foreign capital mobilized were directly invested in the productive process. Such assumption is less likely to hold. In many instance there are capital flight especially in developing countries and also some of the capital inflow are either misappropriated or invested in less productive ventures. If this is the case then empirical analysis must incorporate such scenario in the empirical analysis and policy inference, this is clearly missing in the existing literature. The next provide a simple modeling approach to incorporating such missing gap in the FPI-growth analysis.

### 3. Empirical Methodology

#### 3.1. Model Specification

The starting point of the model is the dual –gap model via the standard production function in the context of Harrod-Domar model;

$$Q_t = \frac{1}{g} K_t \quad (1)$$

Equation (1) suggests that output in period t is a function of capital stock in period t. Where,  $Q_t$  = Output capacity in period t,  $\frac{1}{g}$  = Incremental Capital- Output ratio, and  $K_t$  = Capital Stock in Period t.

It is assumed that capital and labour are employed in fixed proportions and there is always sufficient amount of labour to ensure that it is not a significant constraint output. Assume that investment is the change in capital stock that is  $I_t = \Delta K_t$  where,  $\Delta K_t = K_t - K_{t-1}$  then equation 1 becomes

$$\Delta Q = \frac{1}{g} I_t \quad (2)$$

The implication of equation (2) is that a positive change in output can be brought about by an increase in investment. Following [17] investment in the two-gap analysis includes both domestic and foreign capital goods in fixed proportions that is;

$$I_t = \text{Min} [I_t^d, M_t^k] \quad (3)$$

Where  $I_t^d$  is domestic investment and  $M_t^k$  is capital goods imported from abroad. Equation (3) is typical of developing countries that are constrained by financial resources to implement development programmes. They face both domestic and external constraints, which form the bedrock of dual-gap analysis. Following Keynesian model aggregate demand for goods and service can be represented by the identity equation,

$$Y = C + I + G + X - M \quad (4)$$

$$I - S = X - M = FPI \quad (5)$$

Y = Aggregate output, C = Consumption Expenditure, I = Investment Expenditure, G = Government Expenditure, X - M = Export - Import, S = aggregate saving and FPI is foreign capital inflow to augment the short fall in domestic resources. Under the two gap model, the domestic short fall in resources is equal to net export and the net export is equivalent to net capital flows. Based on equation 5, I-S<sub>t</sub> is the domestic resource constraint while M-X is the foreign resource constraint. Here, the argument is that savings rate in Nigeria, as in other LDC are too low to meet up with investment needs [18]. This gap can be met through inflow of foreign capital FPI<sub>t</sub>. Given that total import M<sub>t</sub> is composed of import of consumer goods and capital goods, the import of capital (M<sup>k</sup>) can be obtained as follows;

$$M_t = M_t^c - M_t^k \quad (6)$$

Where M<sup>c</sup> is the import of consumer goods, total investment in equation (3) can be written as;

$$I_t = I^d - M_t^k \quad (7)$$

If the domestic constraint is operative, total domestic investment capital is sourced locally, then  $I_t = \alpha I^d$  where  $I^d = I_t - M_t^k$  then and equation (2) becomes;

$$\Delta Q = \frac{\alpha}{g} I^d - M_t^k \quad (8)$$

Incorporating equation 5 into equation 8

$$\Delta Q = \frac{\alpha}{g} S_t + FPI_t - M_t^k \quad (9)$$

Equation (9) specifies a positive relationship between the proportions of capital inflow to total output and its rate of growth. Similarly when the foreign constraint is operative, then  $I_t = \beta M_t^k$  then and equation (2) becomes;

$$\Delta Q = \frac{\beta}{g} M_t^k \quad (10)$$

From equation (5) import of goods and services can be expressed as

$$M_t = X_t + FPI \quad (11)$$

Substituting equations (6) and (11) into equation (10) we have;

$$\Delta Q = \frac{\beta}{g} [S_t + FPI_t - M_t^c] \quad (12)$$

which again specifies a positive relationship between foreign capital inflow and economic growth.

Therefore from the two scenarios above whether domestic or foreign capital constraint is operative foreign capital inflow has positive relationship with economic growth. The above analysis follows from two important premises: namely; (a) that the entire amount of foreign capital inflow is devoted to domestic capital formation. (b) That the incremental capital - output ratio does not change when the inflow of foreign capital takes place, though these assumptions have recently come under attack by various authors. The point of departure is the observation that given any plausible welfare function, optimal allocation of resources leads to the conclusion that part of the foreign capital inflow will be allocated to present consumption and the rest to domestic savings and investment. However, a positive relationship between foreign capital inflow and economic growth can still hold in spite of these criticisms. From equation (5) investment can be expressed as addition of domestic savings and foreign capital inflow such that we have

$$I_t = S_t + FPI_t \quad (13)$$

And since investment is also a fraction of national output not consumed from the current output then we can specify savings in the form.

$$S_t = s_1 Q_t + s_2 FPI_t \quad (14)$$

Here, the economy is assumed to save part of domestic output and part of foreign capital inflow.  $s_1$  and  $s_2$  are the average propensities to save from output and foreign capital respectively. In equation (14), as long as,  $s_2 < 0$  any additional capital inflows helps in easing domestic resource constraint as more investible funds are available for domestic production process. Substituting equation (13) and (14) into equation (2) and by simple rearrangement we have

$$\Delta Q = \frac{1}{g} [s_1 Q_t + (1 - s_2) FPI_t] \quad (15)$$

As long as,  $s_2 < 0$ , the positive relationship between FPI<sub>t</sub> and  $\Delta Q$  is not disturbed. Equation (25) thus implies that only a fraction of FPI is directly involved in the production process hence the higher the marginal propensity to invest FPI, the higher the change in economic growth.

It is fairly obvious from our theoretical framework and literature review that in trying to analyze the relationship between foreign private investment and economic growth, we have to account for the influence of other variables apart from those specified in the above model. The additional variables that were considered along within those specified above are political instability and macroeconomic instability variables. The rationale for including such variables in the model is in view of the fact that, both macroeconomic and political instability have

become serious issues developing countries like Nigeria contend with in recent times. Hence, their effects on economic growth determinants could no longer be ignored. In the light of the above discussion, the empirical model to be estimated becomes;

$$\Delta Q = \varphi_0 + \varphi_1 \Delta Q_{t-1} + \varphi_2 \Delta FPI_t + \varphi_3 M_t + \varphi_4 PI_t + e_t \quad (16)$$

Where  $\varphi_0, \varphi_1, \varphi_2 > 0$  and  $\varphi_3, \varphi_4 < 0$ .  $M_t$  = macroeconomic instability proxied by variance of Inflation rate,  $PI$  = political instability proxied by breach of peace index,  $e_t$  = Error term.

### 3.2. Method of Analysis

This study adopts cointegration and Error Correction Modeling (ECM). There several other methods of examining the properties. Among such methods is the Vector error correction mechanism and Autoregressive distributed lags. The Ordinary ECM approach is preferred in this case because of its simplicity and the fact that the results from all these methods are found to be statistically consistent  $t$  with each other [19]. Central to this technique is the examination of the variable in the econometric model for stationarity. Basically, the idea is to ascertain the order of integration of the variables and the number of time the variables have to be differenced to arrive at stationarity. This enables us to avoid the problems of spurious on inconsistent regressions that are associated with non-stationary time series models. First we performed a unit root test on each variable in our model using the Dickey Fuller (DF) and Augmented Dickey-Fuller (ADF) tests. This Dickey-Fuller test is specified as;

$$\Delta y_t = \alpha + \beta Y_{t-1} + e_t \quad (17)$$

Where  $Y$  represents the vector of variables considered in this study namely Log of GDP (LGDP), Log of FPI (LFP1), macroeconomic instability (MI) and, political instability (PI). If  $\beta$  in equation (17) is negative and significantly different from zero, then the series is  $I(0)$  that is stationarity. In most cases stationary series have a finite variance, transitory innovations from the mean and a tendency for the series to return to its mean value. The critical  $t$  values for the test were calculated by Monte Carlo simulation in [20] because the distribution is not standard. However, the error terms  $e_t$ , should be white noise. This problem is overcome by adding lag values of  $Y_t$  that is

$$\Delta y_t = \alpha + \beta Y_{t-1} + \sum_{j=1}^n \Delta y_{t-j} + e_t \quad (18)$$

which is the equation for the Augmented Dickey-Fuller (ADF) test, with “ $n$ ” sufficiently large enough to obtain autocorrelated residuals. The  $t$  statistics computed in equation (18) for the coefficient  $\beta$  is the (ADF) test. It has critical values as that of equation (17). Next we test for cointegration using [21] two critical steps. First, the Long-run relationship expressed by equation (16) as estimated in levels by the ordinary least squares (OLS) estimations and then we applied the DF and ADF tests to the residual from the estimates of equation (16) regression to test the hypothesis of cointegration. If coefficient on the residual is found to be significant then, the second step is followed whereby the residual from this static regression is used as an error correction term in the dynamic first difference

regression estimation. Following Engle and Granger (1987) the residuals derived from equation (16) as:

$$e_t = Q_t - [\varphi_0 + \varphi_1 Q_{t-1} + \varphi_2 FPI_t + \varphi_3 M_t + \varphi_4 PI_t] \quad (19)$$

The error term derived from equation (19) is examined using the DF and ADF discussed earlier. If the calculated  $t$  values for this test are less than the critical values, then  $e_t$  is  $I(0)$  and,  $Q$ ,  $FPI$ ,  $M$  and  $PI$  are considered cointegrated. The next move is to switch to a short-run model. We employed an error correction dynamic specification of the form:

$$\Delta Q = \theta \Delta LZ - \delta ECM_{t-1} + e_t \quad (20)$$

Where:  $L$  is a general Lag Operator is vector of explanatory variables ( $FPI$ ,  $M$  and  $PI$ ) and  $ECM$  is the time series of residuals from cointegrating vector. Equation (19) incorporates a connective mechanism between the level of output growth and the levels of its determinants that affects the current changes in output growth. In this way an allowance is made for any short-run divergence in output growth. Equation (19) was reduced to a parsimonious equation through the elimination of insignificant terms and the impositions of constraints that hold a reasonable approximation [22]. The result of re-parameterization of this equation was then used for examining the contribution of each independent variable to changes in dependent variables.

### 3.3. Data Description and Sources

The study relied on secondary data. Four variables were considered: Economic Growth, ( $Q$ ), foreign private investment ( $FPI$ ), macroeconomic instability ( $MI$ ) and political instability ( $PI$ ). The economic growth was measured by the growth of gross domestic product at current prices. The foreign private investment was measured by the net inflow of foreign private investment in Nigeria. The macroeconomic instability was proxied by the variance of inflation rate, instead of composite consumer price index ( $CCPI$ ) because of greater accuracy of the statistical compilation of the former over the latter. The political instability was measured by the breach of peace index. Data on all the variables were obtained from various issues Statistical Bulletin, Annual Reports and Economic and Financial Review published by Central bank of Nigeria.

## 4. Empirical Results

### 4.1. Unit Root Test and Cointegration Tests

The result of the unit root test on the variables using Dickey Fuller (DF) and Augmented Dickey Fuller (ADF) as specified in equation (19) and (20) are reported in Table 1 panel A. The parameter estimates from DF and ADF tests showed that the null hypothesis was rejected, implying that these variables were non-stationary hence require first differencing to achieve stationarity. Though the DF of foreign private investment was significant but stationarity requires both DF and ADF to be significant to avoid spurious result. Therefore, since the non-stationarity of the variables was confirmed, then the order of integration of the variables whether  $I(1)$  or  $I(2)$  series

was established. To do this, we differenced the dependent variable twice and then regressed it on the first differenced

lagged level of the variables. The results obtained using the above procedure is also presented in Table 1 panel B.

**Table 1. Time Series Properties if the Series**

Series	DF	ADF
<b>Panel A: Unit Root Test</b>		
LGDP	0.41468	0.02925
LFPI	-4.37853	-2.45223
LMI	2.01423	0.76351
LPI	-1.46369	-1.48330
<b>Panel B: Establishing Order of Integration</b>		
ΔLGDP	-3.60662	-3.15064
ΔLFPI	-9.81923	-4.77888
ΔLMI	-2.96526	-3.85362
ΔLPI	-4.98370	-3.02284

Notes: LGDP = Log of Gross Domestic Product, LFPI = Log of Foreign Private Investment ,LMI = Macroeconomic instability, LPI = Political instability, and Δ = first difference

From panel be in Table 1, it was observed that the variables were I (1) series, indicating that stationarity was induced after first differencing. Next, we tested for cointegration. The idea of cointegration is that if two or more series are I (1) series then, it is possible that their residuals are stationary, that is, I (0). We employed the DF and ADF tests to the residuals of the cointegrating regression rather than the levels of the series. Following [20] as explained in equation (19), we obtained the result

of the cointegration estimation and the result of the DF and ADF tests on the residuals are presented in Table 2. As shown in Table 2, the null hypothesis that there is “a random walk” was rejected at the 5% level of significance, indicating that gross domestic product (a measure of economic growth), foreign private investment, macroeconomic and political instabilities were cointegrated.

**Table 2. Cointegration Test**

Variables	Coefficient	Standard error	t-value
Constant	1.073	0.39283	3.737
LFPI	2.467	0.03364	1.41674
LMI	0.631	0.5113	0.9975
LPI	6.520	0.24717	2.03157
Dependent Variable LGDP, R <sup>2</sup> = 0.985 F (3.25) 198.06(0.000) DW = 1.738			
DF and ADF Stationarity test on the Residual			
Variables	DF	ADF	Order of integration
RESIDUAL	-088322(-4.4423)	-1.4176(-3.5719)	1(0)

NOTE: The values in parentheses are t-statistics for the stationarity test for the residual term

**Table 3. Over Parameterized Modeling of Δ LGDP**

VARIABLES	COEFFICIENT	STD Error	HCSE	t-Value
CONSTANT	-0.0295675	0.27720	0.32440	-0.10667
ΔLGDP 1	0.9761928	0.49827	0.54186	1.95918
ΔLGDP 2	-0.4725624	0.25921	0.23282	-1.82307
ΔLGDP 3	0.4757649	0.37586	0.46272	1.26579
Δ LFPI	0.0299029	0.07321	0.06464	0.40847
Δ LFPI 1	0.0903549	0.08465	0.07242	1.06735
Δ LFPI 2	-0.0025252	0.07221	0.07763	-0.03497
Δ LFPI 3	0.1346398	0.07269	0.04209	1.85229
Δ LINF	0.1106319	0.04895	0.04578	2.25999
Δ LINF 1	0.0241379	0.05918	0.05426	0.40788
Δ LINF 2	0.0054578	0.04536	0.04152	0.12033
Δ LINF 3	0.0837701	0.04908	0.04054	1.70683
Δ LPI	-2.2393489	0.87505	0.84498	-2.55912
Δ LPI 1	2.3487621	1.64519	1.97007	1.42765
Δ LPI 2	-1.5803869	1.23240	1.19841	-1.28236
Δ LPI 3	1.9969296	2.11677	2.12684	0.94339
ECM 1	-0.9706257	0.59364	0.63132	-1.63505
Model statistics	R <sup>2</sup> = 0.8416,	SE = 0.1327	F(16,8)= .66(0.0819)	DW = 1.807
Information Criteria	SC = -2.9887	HQ = -3.5876	FPE = 0.0296	

In order to identify the main dynamic pattern of the model an over parameterized auto-regressive distributed lag Model (ADL) was first estimated using ordinary least squares (OLS), with three lag length for all the variables in the model. The regression results for ADL version of equation (17) are reported in Table 3. The model was further simplified into a more interpretable parsimonious model by dropping out the insignificant lag coefficient. The final model produced by the simplification process is reported in Table 4. The simplification resulted in an improvement in Schwarz information criterion (SC) compared with the ADL model. For instance, the Schwarz

information criterion reduced significantly from -2.98873 to -3.42688 in the final model. The Durbin Watson (1.816), the final prediction Error FPE (0.01929) and the overall significant level of the model F-statistic 4.85 (0.0053) performed more efficiently in the final parsimonious model in Table 4 when compared with results in Table 4. An examination of the results for the parsimonious model error correction model (Table 4) showed that the explanatory power (R<sup>2</sup>) of the model is high (83%). This implies that the model explained at least 83% of variations in economic growth in Nigeria. Furthermore, the F-statistics 4.85 (0.0053) and the

standard errors (0.112) indicated that the model fit the data relatively well while the Durbin Watson statistics (1.82) indicated absence of autocorrelation. The conventional and Heteroscedastic Consistent Standard Error (H.C.S.E) (column 2 and 3 of Table 4 respectively) are not

significantly different from one another hence heteroscedastic in the errors is not indicated. Table 4 also showed that the a priori expectations about the signs of all the parameter estimates (except for macroeconomic instability variable) were met.

**Table 4. Parsimonious Error Correction Modeling of  $\Delta$  LGDP**

VARIABLES	COEFFICIENT	STD ERROR	HCSE	t-Value
$\Delta$ LGDP 1	1.0421366	0.29570	0.35162	3.52428
CONSTANT	-0.0456740	0.15127	0.19825	-0.30194
$\Delta$ LGDP 2	-0.5085965	0.17002	0.14728	-2.99138
$\Delta$ LGDP 3	0.5124382	0.24797	0.30837	2.06655
$\Delta$ LFPI 1	0.0810455	0.03969	0.03040	2.04215
$\Delta$ LFPI 3	0.1434456	0.04282	0.04249	3.35021
$\Delta$ LINF 3	0.0739099	0.03646	0.02676	2.02743
$\Delta$ LPI	-2.3646832	0.66331	0.59170	-3.56500
$\Delta$ LPI 1	-2.6236748	1.03206	1.50846	-2.54217
$\Delta$ LPI 2	-1.7395153	0.083180	0.65645	-2.09127
$\Delta$ LPI 3	2.1711616	1.05558	1.20371	2.05685
ECM 1	-1.0343830	0.40388	0.43361	-2.56110
Model statistics	$R^2 = 0.8290$	SE = 0.1126	F(12, 12) = 4.85 (0.005)	DW = 1.816
Information Criteria	SC = -3.4246879	HQ = -3.884901	FPE = 0.019293	

The error correction term (ECMI) measures the existence of long run equilibrium relationship between the dependent variable and its determinants were highly significant and had the appropriate signs. The disequilibria error from the long run elasticity of economic growth variable was 1.42 with t-statistics of  $-2.57$ . The strong significance of ECM is an indication of a long-run linkage between economic growth and its determinants in the model.

Specifically, the parameter estimates on the foreign private investment variables showed that current inflow of FPI had no real effect in Nigeria economy. The coefficients on FPI were significant and positive as expected only in the first and third lags. This suggested that the effects of FPI took some time to manifest on the economic growth indicators. Doubling FPI induces about 14% increase in economic growth for the next three years in Nigerian economy. One other issue of interest is that the later years (i.e. third lag, 0.143) effect of FPI is higher and more significant than the earlier years (i.e. first lag 0.081). This showed that foreign private investment took time before its effects manifest on the real economic growth. Therefore foreign private investment stimulates economic growth in Nigeria and thus providing the necessary resources to fill the gap created by domestic resources constraints in financing economic development and economic growth in Nigeria.

As argued in our theoretical framework, it is not all the FPI inflows that are invested, i.e. part of it are saved. The implication of this on the results is that, the coefficients on FPI as a group (i.e. addition of the coefficients on FPI which equals 0.224) gives only the marginal propensity to invest. The balance ( $1 - S_2 = 0.78$ ) represent marginal propensity to save part of the FPI. This implied that 78% of the FPI attracted into the Nigerian economy were not invested either wasted or even re-exported back, since savings is a withdrawal from circular flow, then much of FPI are being withdrawn. The likely cause of such high withdrawal could be attributed to highly volatile nature of Nigeria socio-economic environment. As the results showed, the coefficients on political instability were highly significant and negative at the contemporaneous and its lags values. Specifically a one percent increase in the crime rate in Nigeria will reduce economic growth by more than 2% in current and next two years. This is a very

serious constraint to any growth enhancing factor such as foreign private investment. This implied that even if all what is imported as investible funds to augment the domestically mobilized funds are invested, a little social unrest or higher crime rate will dampen the positive effects of the capital inflow. The investors are profit maximizers and risk averse, the political situation in any country is important factor usually considered when taking investment decision.

## 5. Conclusion and Policy Implication

The summary of the main findings of the study are that:- the pattern of inflow of foreign capital showed that though the net capital inflow has increased in nominal term, it has not translated to substantial real economic growth. There exists substantial feedback from Long-run determinants of economic growth implying that the previous disequilibria in the determinants of economic growth fed-back into the present level of economic growth in Nigeria. The result also showed that a relatively small proportion (22%) of the capital inflows was actually invested in the Nigerian economy while a substantial amount (78%) were either mismanaged or repatriated. However foreign private investment still had significant and positive effect on economic growth; implying that the FPI had contributed to economic growth in the Nigerian economy over the years. Moreover, macroeconomic and political instability had significant/impacted adversely on economic growth; their effects overwhelmed that of FPI.

The results further showed that foreign investors are reluctant and cautious in their investment decision in Nigeria economy. Also, most of the foreign capital inflow into the Nigeria economy has not been well utilized and the conducive environment has not been provided hence the relatively small amount of the inflows invested despite the battery of incentives introduced to encourage real investment in Nigeria. Foreign Private Investment like "seed" germinates and become fruitful in a well-nourished fertile environment. Many other studies [23,24,25] have also found conducive macroeconomic economic environment as *sine quo nonto* a positive technological transfer in communication, transportation and production buttress this finding [23]. The situation in Nigeria over the

years has shown that most of these changes are lacking. The energy crisis, transportation, production and the communication systems are inefficient and inadequate in meeting the social needs of the people. Couple with these, are insecurity of life and properties arising from political and inter ethnic crisis as well as frequent policy reversals which induces socio-political instabilities and creates fears in the minds of investors that beset the country since independence. All these discourage investment, even the little that are invested could not adequately promote economic growth. This may therefore suggest that the Nigerian economy during the study period was beset with a lot of socio-economic problems that suppressed the expected positive effects; foreign private investment may have on the promotion of economic growth.

The policy implication of this finding for the Nigerian economic management is that: for Nigerian government to achieve its rapid economic growth objective, maximum efforts will have to be directed towards boosting real investments. Moreover, Nigeria should use all resources, both domestic and externally sourced more efficiently. It needs to be stressed that given the stiff global competition for foreign capital, efficiency in resource use will be a major determinant of Nigeria's economic growth prospects in the years ahead. In conclusion, the evidence provided in this study based on the empirical findings in the previous section showed that the issue of whether foreign private investment is relevant is no more controvertible. Rather, the issue that remains is how to ensure that the volume of such investments so mobilized is utilized effectively and for the real development of the economy. The overall policy implication of the result is that policies that attract more foreign direct investments to the economy and increased productive use of these resources need to be pursued and reinforced to ensure that the domestic economy captures greater spillovers from FDI inflows and attains higher economic growth rates.

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