Economic Development, Technological Change, and Growth

Drivers of Foreign Private Investment Inflows in Emerging Market: Evidence from Nigeria

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Abstract: In the globalized world with intense competition, emerging markets have attempted to attract more foreign private capital to bridge the dual gap and ultimately achieve their developmental goals. Against this backdrop, it has become imperative to ascertain the drivers of these inflows. This study advances the international private capital flows literature by empirically identifying the drivers of both foreign direct investment (FDI) and foreign private investment (FPI) inflows in Nigeria between 1986 and 2017. To achieve this objective, we employed the ARDL bounds test for cointegration. The estimated model revealed counts of the number of significant push and pull factors influencing the flows of FDI to Nigeria in the short run. The findings further revealed that country-specific factors seem to be much more important than global factors in explaining the dynamics of FPI inflows to Nigeria both in the short-run and long-run. The policy inference of this study is that Nigerian policymakers should embrace a more open approach to international economic integration, combined with a proactive macroeconomic policy measure to managing the risks associated with volatile foreign private capital flows.

Keywords: ARDL; FDI; FPI; Domestic savings and macroeconomic policy

JEL Classification: F210

1. Introduction

As the world speedily becoming a global village and the competition for foreign private investments get more intense, the emphasis is now placed on the less-developed economies are putting measures in place to attract more foreign capital into their economies in order to bridge the gap between domestic savings and investment gap and foreign exchange gap. A standard neoclassical production function with diminishing marginal productivity of capital suggests that capital

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should flow from capital-abundant countries to capital-scarce countries, but this has not entirely been the case. Foreign private investment inflows are driven by multiple factors, which can be broadly classified as *"pull factors" and "push" factors*. The push factors, otherwise known as supply-side factors, are external conditions that reinforce the repository of global liquidity and induce investors to invest in foreign markets. These are usually undesirable home country conditions that push capital flows out of a home country to seek higher returns in a foreign country (Fernandez-Arias, 1996). Typically, the push factors comprise of U.S. corporate spreads, and the yield gap; economic growth and interest rates in advanced economies; as well as the global liquidity, commodity price changes, and risk aversion (IMF 2016). On the other hand, attractive domestic conditions, otherwise known as pull factors, are the influential factors that attract capital flows into a host country. They are the recipient country-specific features that determine risks and returns to investors and depend on local official policies, macroeconomic fundamentals, and market imperfections.

Onyeiwu and Shrestha (2004) argued that Africa receives the least foreign investments in the world because it is seen as an unsafe zone to conduct business due mainly to political disorders, violence, severe poverty, diseases and the breakdown of law and order. Also, political uproars discourage investments in real sectors which make it unattractive to foreign investors. All these may result in lower risk-adjusted returns to assets than what obtains in the developed economies, even though potential return on investment is high in Africa. Asiedu (2002), for instance, found that although SSA countries had a higher rate of return on investments for U.S. firms, they are less likely to attract investors. Since investors are also risk-conscious with optimal strategy of maximizing return per unit of risk, capital will thus fly to a haven (developed countries). In contrast, developing economies may suffer scarcity in the presence of abundant global money.

To attract foreign private capital, the Nigerian government has increasingly privatized, deregulated and opened the Nigerian economy to the rest of the world since the mid-1980s. Despite these conscious efforts, the share of Nigeria in the global capital inflows is still meager. The observed trend suggests that these policies have failed in achieving their goal of attracting foreign private investments (Okafor, Piesse & Webster, 2015). The questions are, why this low rate of inflow? What factors determine the inflows of foreign capital to developing economies? This paper applies the Autoregressive Distributed Lags (ARDL) technique to understand the short-run and long-run dynamics of foreign private investment inflows and to identify the drivers of foreign private investment inflows to Nigeria during the period under consideration.

The paper is structured into five sections. Following this introductory section, we review related literature in section two. In the third section, the methodology used

in the study is stated while section four contains the presentation and discussion of results. Finally, in section five we conclude and make appropriate recommendations.

2. Literature Review

In this section, we review extant studies on the determinants of FDI and FPI flows to get up to speed with developments on the subject matter. A strand of literature has focused on ascertaining empirically, the pull factors that drive FDI inflows, especially domestic market size. Narayanamurthy, Perumal, and Kode (2010) studied the determinants of FDI in Brazil, Russia, India, and China (BRIC) countries using panel data analysis. The study identifies market size (GDP) as a driver of FDI inflows in BRIC countries. Obida and Abu (2010) investigate the determinants of FDI in Nigeria using the error correction model (ECM) estimation technique. The results reveal that the market size of the host country, deregulation, political instability, and exchange rate depreciation are the significant determinants of FDI in Nigeria. Rashid (2018) revealed that in Tanzania, market size has a strong negative effect on FDI. Oke, Ezike, and Ojogbo (2012) examined locational determinants of FDI in Nigeria and identified the index of government expenditure, index of energy consumption, and the indicator of political stability as positive and significant predictors of FDI in Nigeria. Other locational variables such as inflation rate, exchange rate, market size, infrastructure, and human capital are, however, not significant determinants of FDI in Nigeria. The study by Najat, Shivee, and Normaz (2015) on the determinants of FDI in Southern Africa Customs Union (SACU) countries showed that market size, trade openness, and natural resources positively predicted FDI in these countries while a strong but adverse relationship existed between inflation and FDI. Using static linear Panel data techniques, (pooled OLS, Fixed, and Random effect) they conclude that the inflows of FDI into SACU countries largely depended on its natural resources endowment. Arawomo and Apanisile (2018) applied the ARDL analysis to reveal that market size, trade openness, government expenditure, inflation, and interest rate were the drivers of FDI in the Nigerian telecommunication sector between 1986 and 2014.

Another strand of literature identifies the drivers of FPI inflows. Ekeocha et al. (2012) applied the ECM technique to show that the capital market rate of return had a positive effect on FPI and validated the significant positive role of domestic real interest rates, GDP growth rate, and institutional quality on FPI in Nigeria in the long-term. A negative relationship, however, existed between trade openness and FPI flows contrary to conventional expectations. Kristin (2010) examined the factors attracting foreign inflows into USA portfolio equities, using the GLS estimation technique. The findings of the study imply that top levels of trade and low levels of corporate governance (a risk factor) push capital to United State. At

the same time, higher returns in the equities markets attract foreign capital to advanced economies. The study further revealed that despite investors earning less return on their investments from the USA's portfolios relative to their home countries, relatively higher returns in the equities market drove capital to the USA. Nielsen and Bjørnskov (2012) used panel data analysis in examining various factors that influence FPI inflows in Sub-Saharan Africa. With a sample of twenty-nine African countries from 1996 to 2010, their results show that the drivers of FPI in these countries are regulatory quality, control of corruption, financial market openness, size of the market, and infrastructure (represented by mobile phone subscription). The tax burden hurt FPI. The study noted that investment flowed mainly to South Africa despite higher GDP growth rates in other Sub-Saharan Africa countries. The paper thus concluded that investors developed too much confidence in South Africa at the expense of opportunities in other well-performing economies in the region.

Gossel and Biekpe (2017), using Vector Error Correction models (VECM), established that in both the short and long-term, push factors determine FPI flows to South Africa with domestic and foreign outputs being dominant in the long-term. Ahmad, Draz, and Yang (2015) examined the determinants of FPI Inflows with analysis and implications for China using Multiple Regression. The results show that GDP growth, external debt, FDI, and exchange rate are significant determinants of FPI in China. Shannon (2017) investigates the drivers of FPI inflows and outflows for Jamaica using Structural Vector Autoregression (SVAR). Their results revealed that while both pull and push factors are essential in explaining the behaviour of portfolio flows to Jamaica, domestic factors play a dominant role. The findings show that economic growth, foreign and domestic interest rates, and the exchange rate, are more influential in driving portfolio inflows to the country. In the middle East, Al-Smadi (2018) studied the determinants of FPI in Jordan between 2000 and 2016 using the Multiple Regression estimation techniques. The results show that foreign investors are attracted by a stable macroeconomic environment and prefer to invest in the capital market which avails the possibility of risk diversification, liquidity to meet its obligation and has a well-governed environment.

De Vita and Kyaw (2008) used a structural VAR model for five emerging economies. They found that emerging markets' economic productivity growth is more critical for FDI flows than FPI flows, while the domestic money supply is the dominant driver of portfolio inflows. A study by Fratzscher (2012) to identify predictors of capital flows to emerging market economies during and following global financial crises. The Author found that growth and interest rate differentials between emerging markets and advanced economies, and global risk aversion are essential determinants of net private capital inflows to emerging markets. The paper finds that there have been significant changes in the behaviour of net capital

inflows, particularly for net portfolio inflows, from before the global financial crises to the period following the global financial crises. The finding is partly explained by the greater sensitivity of such flows to interest rate differentials. The unconventional monetary policy of the U.S. has positive effects on total capital inflows and portfolio inflows, with the impact more massive for portfolio flows and gross inflows.

Abdul and Abdul (2014) examine the determinant of capital inflows in eight Asian developing countries from 1990 to 2012 using the static panel data fixed effects technique. Their findings show that foreign exchange reserves, fiscal incentives, current account positions, efficient capital markets, robust infrastructure, and efficient legal, judicial system, and law and order play a key role in attracting foreign capital inflow.

Ogbechie and Anetor (2016) investigate the determinants of capital flows into Nigeria using the ARDL approach. They examine the long-run and short-run determinants of capital into Nigeria, using the sum of FDI, FPI, personal remittance received, and official development assistance (ODI) for capital inflows between the periods of 1986-2014. They found that the exchange rate and stock market prices are important determinants of capital flows into Nigeria both in the short-run and long-run. In a similar study by Philip and Omolade (2017) on determinants of FDI and FPI Volatility in Nigeria using Exponential Generalized Autoregressive Conditional Heteroskedasticity (EGARCH). Trade openness and world GDP were the significant determinants of FDI volatility, while domestic interest rate and stock market capitalization were significant determinants of FPI volatility in Nigeria.

This review has shown that studies on the determinants of international capital flows are still ongoing, and there are no definite identified influential pull factors or push factors that dictate the movement of global capital flows. Hence, the relevance of this study.

3. Methodology

3.1. Source of Data

The study employed the use of secondary data mainly sourced from World Development Indicator a publication of the World Bank; Global Financial Development Database of the World Bank, The Central Bank of Nigeria's (CBN) Statistical Bulletin 2017 edition, and International Country Risk Guide, the publication of Political Risk Service (PRS) group.

The scope of the study covers the period between 1986 and 2017; the choice of the base period is to capture the period associated with economic liberalization and

financial integration policies in Nigeria. The periodicity of data for this study is annual time series data with twelve calendar months. The variables for this study are Foreign Direct Investment and Foreign Portfolio Investment to measure foreign private capital flows. Other variables introduced as the pull and push factors determinants of international capital flows are political risk rating, GDP growth rate, global real interest rate (the average real interest rate of the World's five leading economic powers - USA, UK, France, Germany, and China, i.e. G5), global Gross Domestic Product (the average real GDP growth rate of the World's five leading economic powers - USA, UK, France, Germany, and China, i.e. G5), financial development, stock market capitalization, domestic economy interest rate, domestic economy inflation rate, domestic economy exchange rate, degree of openness, household savings, and government expenditure.

3.2. Model Estimation Technique

To estimate the specified model for this study, we used the ARDL method that was introduced and developed by Pesaran and Shin (1998) and refined by Pesaran et al. (2001). The method was employed to estimate the short-run and long-run relationship among the variables and has been extensively applied in extant studies because of its advantages over traditional statistical methods for assessment of cointegration and short/long-run relationships (Haug, 2002). ARDL method provides robust and consistent results for small sample sizes, and the methodology can be utilized to test for a level relationship for variables that are either integration order or as well as for a mix of order and variables (Duasa, 2007, Adom et al. 2012). In addition, the ARDL method integrates the short-run impact of the given variables with a long-run equilibrium using an error correction term without dropping long-run information.

3.3. Model Specification

To ascertain the drivers of foreign private investment inflows in Nigeria, we first estimated the following equations using the ordinary least square (OLS) method after selecting the optimal lag length of the model:

$$\Delta \mathrm{FDI}_t = \beta_0 + \sum_{i=1}^{n} \beta_1 \Delta \mathrm{FDI}_{t-i} + \sum_{i=1}^{n} \beta_2 \Delta \mathrm{GDPR}_{t-i} + \sum_{i=1}^{n} \beta_3 \Delta \mathrm{FINDEV}_{t-i} + \sum_{i=1}^{n} \beta_4 \Delta \mathrm{INTR}_{t-i} + \sum_{i=1}^{n} \beta_5 \Delta \mathrm{INFR}_{t-i} + \sum_{i=1}^{n} \beta_6 \Delta \mathrm{EXCR}_{t-i} + \sum_{i=1}^{n} \beta_7 \Delta \mathrm{DOP}_{t-i} + \sum_{i=1}^{n} \beta_8 \Delta \mathrm{GINT}_{t-i} + \sum_{i=1}^{n} \beta_9 \Delta \mathrm{GGDPR}_{t-i} + \sum_{i=1}^{n} \beta_{10} \Delta \mathrm{POLR}_{t-i} + \alpha_1 \mathrm{FDI}_{t-i} + \alpha_2 \mathrm{GDPR}_{t-i} + \alpha_3 \mathrm{FINDEV}_{t-i} + \alpha_4 \mathrm{INTR}_{t-i} + \alpha_5 \mathrm{INFR}_{t-i} + \alpha_6 \mathrm{EXCR}_{t-i} + \alpha_7 \mathrm{DOP}_{t-i} + \alpha_8 \mathrm{GINT}_{t-i} + \alpha_9 \mathrm{GGDPR}_{t-i} + \alpha_{10} \mathrm{POLR}_{t-i} + e_t \quad (1)$$

$$\Delta \mathrm{FPI}_t = \beta_0 + \sum_{i=1}^{n} \beta_1 \Delta \mathrm{FPI}_{t-i} + \sum_{i=1}^{n} \beta_2 \Delta \mathrm{GDPR}_{t-i} + \sum_{i=1}^{n} \beta_3 \Delta \mathrm{FINDEV}_{t-i} + \sum_{i=1}^{n} \beta_4 \Delta \mathrm{MCP}_{t-i} + \sum_{i=1}^{n} \beta_5 \Delta \mathrm{INTR}_{t-i} + \sum_{i=1}^{n} \beta_6 \Delta \mathrm{EXCR}_{t-i} + \sum_{i=1}^{n} \beta_7 \Delta \mathrm{DOP}_{t-i} + \sum_{i=1}^{n} \beta_8 \Delta \mathrm{GINT}_{t-i} + \sum_{i=1}^{n} \beta_9 \Delta \mathrm{GGDPR}_{t-i} + \sum_{i=1}^{n} \beta_{10} \Delta \mathrm{POLR}_{t-i} + \alpha_1 \mathrm{FPI}_{t-i} +$$

$\alpha_2 \mathrm{GDPR}_{t-i} + \alpha_3 \mathrm{MCP}_{t-i} + \alpha_4 \mathrm{FINDEV}_{t-i} + \alpha_5 \mathrm{INTR}_{t-i} + \alpha_6 \mathrm{EXCR}_{t-i} + \alpha_7 \mathrm{DOP}_{t-i} + \alpha_8 \mathrm{GINT}_{t-i} + \alpha_9 \mathrm{GGDPR}_{t-i} + \alpha_{10} \mathrm{POLR}_{t-i} + e_t$ (2)

Where:

β_0 is the drift component; Δ denotes the first difference operator; $(\beta_1 - \beta_{10})$ short-run dynamics of the model; $(\alpha_1 - \alpha_{10})$ long-run elasticity coefficient; e_t is the usual white noise residuals; FINDEV is financial development; GDPR is real GDP growth rate, a proxy for domestic economy market size; MCP is stock market capitalization; INTR is interest rate; INFR is inflation rate; EXCR is exchange rate; DOP is Degree of Openness, measured as import plus export divided by GDP; POLR is Political Risk; GINT is Global Interest rate; and GGDPR is Global GDP.

3.4. Error Correction Model (ECM)

To define ECM-term, which is the second step in the ARDL approach, a few assumptions must be made. Assuming that the F-bound test indicates the cointegration relationship among the variables, it is possible to determine the long-run equilibrium relationship without spurious regression by estimating the long-run model for equations 1 to 3 above. After that, the short-run dynamic parameters are gotten by estimating an error correction model associated with the long-run estimates. The error correction version (ECM) of the ARDL model of the variables in equation 1 and 2 are thus specified as follows:

$$\Delta \mathrm{FDI}_t = \beta_0 + \sum_{i=1}^{n} \beta_1 \Delta \mathrm{FDI}_{t-i} + \sum_{i=1}^{n} \beta_2 \Delta \mathrm{GDPR}_{t-i} + \sum_{i=1}^{n} \beta_3 \Delta \mathrm{FINDEV}_{t-i} + \sum_{i=1}^{n} \beta_4 \Delta \mathrm{INTR}_{t-i} + \sum_{i=1}^{n} \beta_5 \Delta \mathrm{INFR}_{t-i} + \sum_{i=1}^{n} \beta_6 \Delta \mathrm{EXCR}_{t-i} + \sum_{i=1}^{n} \beta_7 \Delta \mathrm{DOP}_{t-i} + \sum_{i=1}^{n} \beta_8 \Delta \mathrm{GINT}_{t-i} + \sum_{i=1}^{n} \beta_9 \Delta \mathrm{GGDPR}_{t-i} + \lambda ECM_{t-1} + \mu_t \quad (3)$$

$$\Delta \mathrm{FPI}_t = \beta_0 + \sum_{i=1}^{n} \beta_1 \Delta \mathrm{FPI}_{t-i} + \sum_{i=1}^{n} \beta_2 \Delta \mathrm{GDPR}_{t-i} + \sum_{i=1}^{n} \beta_3 \Delta \mathrm{FINDEV}_{t-i} + \sum_{i=1}^{n} \beta_4 \Delta \mathrm{MCP}_{t-i} + \sum_{i=1}^{n} \beta_5 \Delta \mathrm{INTR}_{t-i} + \sum_{i=1}^{n} \beta_6 \Delta \mathrm{EXCR}_{t-i} + \sum_{i=1}^{n} \beta_7 \Delta \mathrm{DOP}_{t-i} + \sum_{i=1}^{n} \beta_8 \Delta \mathrm{GINT}_{t-i} + \sum_{i=1}^{n} \beta_9 \Delta \mathrm{GGDPR}_{t-i} + \sum_{i=1}^{n} \beta_{10} \Delta \mathrm{POLR}_{t-i} + \lambda ECM_{t-1} + \mu_t \quad (4)$$

Where:

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$ are the short-run elasticity coefficient.

λ is the coefficient of the error correction term (ECT), and it represents the speed of adjustment of the model to the long-term equilibrium.

The ECM coefficient λ must be statistically significant and negative for the model to converge to equilibrium. Likewise, significant ECM coefficient confirms the existence of a stable long-run relationship between the independent and dependent variables, the coefficient also determines the speed of adjustment towards equilibrium.

4. Results and Discussion

Table 1. Augmented Dickey-Fuller Test

Variables	Test at Levels			Test at 1st difference			Inference
	ADF statistic	t-Statistic	Prob.*	ADF statistic	t-Statistic	Prob.*	
FDI	-3.493726	-2.960411**	0.0150	-5.119815	-3.679322	0.0003	I(0)
FPI	-4.406802	-3.661661*	0.0015	-7.402862	-3.670170	0.0000	I(0)
GDPR	-4.446609	-3.661661*	0.0014	-8.180050	-3.670170	0.0000	I(0)
INFR	-2.751289	-2.960411	0.0771	-6.338668	-3.670170*	0.0000	I(1)
EXCR	1.791650	-2.960411	0.9996	-3.134615	-2.963972**	0.0346	I(1)
INTR	-5.456862	-3.661661*	0.0001	-6.742653	-3.679322	0.0000	I(0)
FINDEV	-0.795124	-2.960411	0.8065	-5.829043	-3.670170*	0.0000	I(1)
DOP	-3.355480	-2.960411**	0.0207	-7.431016	-3.670170	0.0000	I(0)
GINT	-0.621901	-2.960411	0.8515	-4.998840	-3.670170*	0.0003	I(1)
GGDPR	-3.862784	-3.661661*	0.0061	-5.949700	-3.679322	0.0000	I(0)
MCP	-3.085572	-2.963972**	0.0385	-3.803734	-3.670170	0.0072	I(0)
POLR	-2.577174	-2.960411	0.1083	-6.881360	-3.670170*	0.0000	I(1)

*** (10%) **(5%); and * (1%) significance level

Source: Authors' computation (2020)

Table 1 shows the unit test results. It was observed from the results that seven of the variables (FDI, FPI, GDPR, INTR, DOP, GGDPR, and MCP) are stationary at levels while nine variables (INFR, EXCR, FINDEV, GINT, and POLR) are stationary at first difference. The variables that are stationary at level are all at one

percent and five percent significance level, their respective probability values are less than 0.05. The first difference test results revealed that nine variables become stationary after first differencing. Given that none of the variables is second difference stationary [I (2)], they satisfy the condition to be included in the ARDL model.

4.1. Bounds Test Cointegration Results

The ARDL bounds test for cointegration for each of the models were carried out at 5 per cent level. The results are reported in Table 2

Table 2. ARDL F-Bounds Test Cointegration

Dependent Variables	F-Statistics	Significance	I(0) Bound	I(1) Bound	Cointegration
Foreign Direct Investment (FDI)	4.108309	10%	1.88	2.99	Yes
		5%	2.14	3.3	
		2.50%	2.37	3.6	
		1%	2.65	3.97	
Estimate ECM (Error Correction Model) since there is cointegration					
Foreign Portfolio Investment (PFI)	4.375282	10%	1.88	2.99	Yes
		5%	2.14	3.3	
		2.50%	2.37	3.6	
		1%	2.65	3.97	
Estimate ECM (Error Correction Model) since there is cointegration					

Source: Authors' computation (2020)

The result in Table 2 shows that there is a Long-run relationship among the variables in the first (FDI) model since the F-statistic (4.108309) is greater than the upper bounds value (3.3) at 5 per cent significance level. Thus, the null hypothesis of no cointegration is rejected. Similarly, the estimated results above also revealed a long-run relationship among the variables in the FPI model. Since the F-statistic (4.375282) is greater than the upper bounds value (3.3) at 5 per cent significance level, the null hypothesis of no cointegration is therefore rejected.

4.2. Presentation of Estimated ARDL Models

Model I: The optimal lag order for the ARDL models was decided automatically using Akaike info criterion (AIC). The empirical result for the short run and long run estimates are reported in Table 3.

Table 3. ARDL Short Run and Long Run Estimates for Model I - FDI Model

Dependent Variable: FDI				
Short run estimates				
Variable	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
C	0.092254	0.237041	0.389188	0.7015
D(FDI(-1))	-0.055923	0.125163	-0.446802	0.6601
D(GDPR(-1))	0.032130	0.027344	1.174992	0.2545
D(FINDEV(-1))	0.628842	0.147270	4.269997	0.0004
D(INTR(-1))	0.002077	0.012323	0.168592	0.8679
D(INFR(-1))	0.121206	0.015965	7.591852	0.0000
D(EXCR(-1))	-0.032167	0.013702	-2.347639	0.0299
D(DOP(-1))	-3.982234	2.732694	-1.457256	0.1614
D(GINT(-1))	0.660004	0.250395	2.635851	0.0183
D(GGDPR(-1))	0.197475	0.182309	1.083186	0.2923
D(POLR(-1))	7.725626	2.999526	2.575616	0.0463
CointEq (-1)	-1.500579	0.185681	-8.081487	0.0000
Long Run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
C	0.811594	5.860025	0.138497	0.8912
FDI(-1)	-0.159624	0.222166	-0.718492	0.4804
GDPR(-1)	0.035737	0.059810	0.597506	0.5566
FINDEV(-1)	-0.073781	0.155771	-0.473652	0.6406
INTR(-1)	0.013055	0.026954	0.484335	0.6332
INFR(-1)	-0.080065	0.031628	-2.531431	0.0194
EXCR(-1)	0.000195	0.010651	0.018340	0.9855
DOP(-1)	1.439184	3.993447	0.360386	0.7222
GINT(-1)	0.265073	0.516178	0.513531	0.6129
GGDPR(-1)	-0.363087	0.324634	-1.118451	0.2760
POLR(-1)	-2.628585	0.68600	-3.831756	0.0097
Robustness/Diagnostics Tests				
R-Squared = 0.877479	Adjusted R-squared = 0.806546			
Prob (F-stat.) = 0.000002	Durbin-Watson = 2.096340			
		Test Statistics	**P-value**	
Breush-Godfrey serial correlation LM test		0.205155	0.65060	
White's heterskedasticity test		0.849700	0.91530	
Jarque-Bera test		8.830777	0.01209	
Ramsey RESET test		0.226921	0.63900	

Source: Authors' Computation (2020)

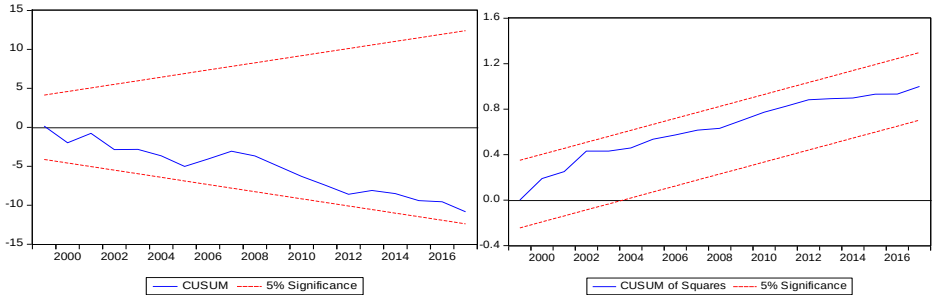

Figure 1. Plot of CUSUM and CUSUM Square for Coefficients for ARDL ECM for Model I (FDI)

The cumulative sum of recursive residual (CUSUM) and the squares residual (CUSUMQ) plot displayed in Figure I above, show that of the parameters of the model are stable at 5% significance level over the sample period.

Model II: The optimal lags order for the ARDL models was decided automatically using Akaike info criterion (AIC). The empirical result for the short run and long run estimates are reported in Table 4.

Table 4. ARDL Short Run and Long Run Estimates for Model II - FPI Model

Dependent Variable: FPI				
Short run estimates				
Variable	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
C	-0.005298	0.192031	-0.027587	0.9783
D(FPI(-1))	0.140489	0.153861	0.913086	0.3726
D(GDPR(-1))	0.094659	0.020092	4.711325	0.0002
D(FINDEV(-1))	0.252722	0.105878	2.386928	0.0275
D(MCP(-1))	-0.059297	0.033848	-1.751852	0.0959
D(INTR(-1))	0.015347	0.009646	1.591018	0.1281
D(EXCR(-1))	-0.007469	0.012090	-0.617781	0.5441
D(DOP(-1))	3.979742	1.785141	2.229371	0.0381
D(GINT(-1))	0.215153	0.296731	0.725078	0.4772
D(GGDPR(-1))	0.208290	0.138485	1.504067	0.1490
D(POLR(-1))	1.194386	5.710894	0.209142	0.8366
CointEq (-1)	-1.465706	0.266761	-5.494455	0.0000
Long Run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
C	-0.541736	2.738912	-0.197792	0.8451
FPI(-1)	-0.168650	0.184623	-0.913482	0.3714
GDPR(-1)	0.064323	0.029659	2.168770	0.0417
FINDEV(-1)	0.133927	0.074341	1.801522	0.0860
MCP(-1)	-0.077432	0.024583	-3.149885	0.0048
INTR(-1)	0.019370	0.013471	1.437960	0.1652
EXCR(-1)	0.000617	0.005110	0.120713	0.9051

DOP(-1)	5.531778	2.341835	2.362155	0.0279
GINT(-1)	0.189915	0.242899	0.781869	0.4430
GGDPR(-1)	0.097233	0.147778	0.657970	0.5177
POLR(-1)	-3.927527	5.586288	-0.703066	0.4897
Robustness/Diagnostics Tests				
R-Squared = 0.784616	Adjusted R-squared = 0.659919			
Prob (F-stat.) = 0.000258	Durbin-Watson = 2.209125			
		Test Statistics	**P-value**	
Breush-Godfrey serial correlation LM test		2.563200	0.1094	
White's heterskedasticity test		8.894688	0.6316	
Jarque-Bera test		4.238402	0.120128	
Ramsey RESET test		12.32557	0.0022	

Source: Author's computation (2020)

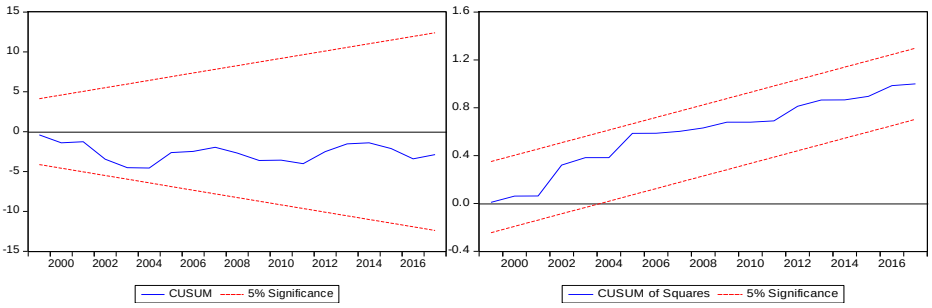

Figure 2. Plot of CUSUM and CUSUM Square for Coefficients for ARDL ECM for Model II (FPI)

The cumulative sum of recursive residual (CUSUM) and the squares residual (CUSUMQ) plot displayed in Figure II above, show that of the parameters of model are stable at 5% significance level over the sample period.

5. Discussion of Findings

The estimated results show that domestic market size, measured by GDP growth rate, positively but weakly impacted FDI in Nigeria while it positively and strongly affected FPI in the country in the short run and the long run. Generally, this result indicate that large market size encourages the inflows of foreign investments into the country in varying degrees. This is expected since better economic performance attracts foreign investors into a country. This finding agrees with the result of Haider, Khan, and Abdulahi (2016) in China.

Moreover, political risk has a significant positive impact on both the FDI and FPI in the short run but a significant adverse effect in the long run. This implies that

foreign private investors are not responsive to the political risk in the short run but reactive to the risk in the long run by moving out their investments out of the shore of Nigeria as shown by the estimated long-run result.

The exchange rate has a significant negative impact on FDI inflows to Nigeria in the short run but turns out to impact FDI inflows positively in the long run. The reason for this negative impact in the short run may be due to unexpected movements in the exchange rate, which may hurt the expected rate of return on investment. In the long run, the depreciation of the domestic currency makes export and domestic inputs cheaper, which improve the domestic economy and increase FDI inflow. The global GDP (GGDPR) had an insignificant positive impact on FDI in the short run but turn out to impact FDI inflow negatively to Nigeria in the long run. This result is expected since a larger portion of foreign direct investment in Nigeria is from the advanced economy. As their economy grows, its investment in Nigeria also increases in the short run. The foreign direct investment is not sustainable in the long run due to an unfriendly and corrupt investment environment, as a result, as the output of advanced economy grows in the long run, they look for a safer environment to invest since most of these investors are risk-averse. The Nigerian capital market capitalization has a significant negative impact on FPI both in the long run and short run, which is against the A-priori expectation. This result indicates that the Nigerian capital market is not deep and robust enough to attract and retain FPI. Foreign portfolio investors will prefer to invest more in larger, more liquid, and more efficient markets, with low trading costs. This result agrees with the finding of Akinmulegun (2018) and Haider et al. (2017). The two push factors included in this study, i.e. global interest rate and global gross domestic products are not significant determinants of FPI inflows to Nigeria both in the short run and long run as indicated by the estimated regression result.

The error correction estimate ECM of both the determinants of FDI and FPI models are statistically significant at 1 percent with a negative sign, confirming the existence of a stable long-run relationship among the variables. The coefficients indicate that the short-run disequilibrium will be corrected in the long run at the rate of 150% and 146% for FDI and FPI models, respectively.

5.1. Conclusion and Recommendations

This study examines the determinants of foreign private investment inflows in Nigeria to optimize the benefits of foreign private investments in the country. From the findings of this study, we, therefore, conclude that pull factors play a significant role in attracting foreign private investment inflows to Nigeria as compared to the push factors.

The policy implication of this study is that the Nigerian policymaker should embrace a more open approach to international economic integration, combined with a proactive macroeconomic policy measure to managing the risks associated with volatile foreign capital flows. The Nigerian government should leverage domestic market size to drive the inflows of foreign capital by reducing the cost of doing business, building an investment-friendly environment free of insecurity, political instability, corruption and other vices that retard foreign investors. The Nigeria government should diversify the productive base of the economy to make room for efficient absorptive capacities of foreign investment inflows. The diversification of foreign private investments to other sectors like the real sector rather than the oil sector will enhance significantly economic growth because of spillover and multiplier effects to the rest of the economy.

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