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FOREIGN DIRECT INVESTMENTS AND ITS DETERMINANTS IN DEVELOPING ECONOMIES:

A VAR ANALYSIS OF NIGERIA.

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ABSTRACT

Policymakers believe that foreign direct investment (FDI) produces positive effects which can facilitate the realisation of sustainable development in host economies. Some of these benefits are in the form of externalities and the adoption of foreign technology. However, while the explosion of FDI flow is high in emerging-market economies, it is highly limited in developing countries and on this ground, we analyze the contributory factors to FDI inflows into Nigeria with the motive of evolving sound policy suggestions capable of increasing the FDI inflows into Nigeria. We utilized data spanning from 1980 to 2007 and utilized correlation and the vector autoregressive (VAR) models and decomposed the variance and impulse-response function. We found that the local demand condition, Infrastructure availability, natural resources endowment and the degree of openness of the economy to the external sector and economic stability are the major drivers of foreign direct investments in Nigeria. For Nigeria and other developing countries to move towards achieving sustainable development via FDI inflow, we recommend the stimulation of local demand condition via fiscal incentives, continuous investments in infrastructural development, provision of economic stability, sound macroeconomic management and encouragement of a stable political structure among others.

Keywords: Nigeria, FDI, Macroeconomic, Investments, Infrastructure, Economic Stability

INTRODUCTION

Various classifications have been made of foreign direct investment (FDI). For instance, FDI has been described as investment made so as to acquire a lasting management interest (for instance, 10% of voting stocks) and at least 10% of equity shares in an enterprise operating in another country other than that of investors' country (Mwillima, 2003; World Bank, 2007).

Possible channels through which FDI can ensure sustainable development include market openness and access to low cost produced goods, positive impact on the overall economy which has the tendency of trickling down to the masses. Linkage effects of FDI's and output growth, employment generation, economic diversification, greater access to infrastructure, international economic integration, market openness, indirect knowledge and technological transfer, and innovation in receiving firm.

Policymakers believe that foreign direct investment (FDI) produces positive effects on host economies. Some of these benefits are in the form of externalities and the adoption of foreign technology. Externalities here can be in the form of licencing agreements, imitation, employee training and the introduction of new processes by the foreign firms (Alfaro, 2006). According to Tang, Selvanathan & Selvanathan (2008), multinational enterprises (MNEs) diffuse technology and management know-how to domestic firms. When FDI is undertaken in high risk areas or new industries, economic rents are created accruing to old technologies and traditional management styles. These are highly beneficial to the recipient economy. In addition, FDI helps in bridging the capital shortage gap and complement domestic investment especially when it flows to a high risk areas of new firms where domestic resource is limited (Noorzoy, 1979).

According to Lipsey & Chrystal (2003), FDI often generates somewhat higher-paying jobs than might otherwise be available to local citizens. Secondly, it generates investment that may not be possible with the local resources only. Thirdly, it links the recipient economy into the world economy in manners that would be hard to achieve by new firms of a purely local origin. Fourthly, by working with large firms linked with the global market, FDI provides training in workers and management. Fifthly, it can provide advanced technology that is not easily transferable outside the firms and are already in use by foreign firms.

According to Lipsey & Chrystal (2003), the FDI works through the following mechanism. "By altering a country's comparative advantages and improving its competitiveness through technology transfer and the effects of myriad externalities, foreign as well as domestic investment can alter a country's volume and pattern of trade in many income enhancing directions."

According to UNCTAD (1999) Foreign Direct Investment is a welcome development and it is seriously sought by African countries. The contribution FDI can make to Africa's sustainable economic development and Integration into world economy is enormous and for this reason, African countries have continuously sought for better investment climate so as to attract FDI. Their effort includes, liberalized investment regulation so as to create incentives for foreign investors. One of the avenues through which FDI promise to ensure sustainable development is that MNCs, especially from the OECD, will assist in

driving up environmental standards in developing countries through the transfer of both clearer technology and better environmental management practice. However, empirical studies have failed to find no evidence of this trend (Zarksy and Gallagher, 2003).

Different methods have been devised in attracting FDI to different countries and these strategies include easing of restrictions on FDI and various tax incentives and subsidies so as to attract foreign capital (World Bank, 1997; Aitken & Harrison, 1999). According to Carkovic & Levine (2004) private capital flows to emerging- market economies exceeded US\$ 320 billion in 1990 and to about US\$ 200 billion in 2000. While the explosion of FDI flow is high in emerging-market economies, it is highly limited in developing countries and this has some daring consequences on the realisation of sustainable development. On this ground therefore, we analyze the contributory factors to FDI inflows into Nigeria with the motive of evolving sound policy suggestions capable of increasing the FDI inflows into Nigeria.

LITERATURE REVIEW

FDI as an engine for sustainable economic development has acquired great impetus over the last decades. The Promise of FDI for sustainable development is that it could be an important tool in creating an enabling environment for ecologically sound economic, and social development. The potential of FDI therefore is to assist in nurturing local conditions and capacities (That is, institutional, productive, social and regulatory) (Zarkysy and Gallagher, 2003).

UNCTAD (1998) identified at least four reasons why investments flow across the national boundaries. The first is the market seeking motive in which MNCs are seeking new markets because of a country's size and growth. The second motive is natural resources endowment of a country. The third reason is the efficiency – seeking motive in which MNCs are taking advantage of the cost –effective production processes at a foreign country. The fourth of course is the strategic reason in which an FDI acquire or merge with existing local companies to take advantage of the local companies' endowment in the form of man-made assets, brand names and images among others.

Nunes, Oscateguiy & Peschiera (2006) examined the determinants of FDI inflow into Latin American countries by considering the market size, infrastructural development, wages, market size, trade openness, macroeconomic stability, human capital and natural resources. They also studied the impact of privatization on FDI flows. They estimated the fixed effects model and random effects model and also conducted a Hausman test for each of the model but supports the fixed effects model. They concluded that market size, infrastructure, and trade openness are positively connected with FDI inflows. Wages is negatively related to FDI while privatization was not a significant variable explaining FDI inflow. They concluded that a country can control its macroeconomic variables and openness to attract FDI. Lucas (1993) used the real wage variable as an explanatory variable in FDI model. This seems reasonable since this can capture the comparative productivity of the labour force in an economy. Calvo & Reinhart (1997) assert that as opposed to other regions of the world, what determines capital flows to Africa is world commodity prices.

Faisal, Rabah & Nobert (2005) in their study attempts to identify the major determinants of the level and composition of capital flows to emerging markets – so as to conclude on South Africa. They estimated a panel data comprising of 81

emerging markets using the generalized method of movements. Their result suggests that further trade and capital control liberalization would stimulate FDI. Moreover, a moderation of volatility in exchange rate would impact on the composition of capital flows favouring FDI flows rather than the portfolio investments.

Kamaly (2002) observed that of all the variables determining FDI flows, the host country's growth prospects, the institutional environment and the openness of host market are the most crucial. He also found the agglomeration effect (FDI clustering in a particular location) as beneficial. FDI flows depend on past stock of FDI meaning that countries that succeeded in attracting FDI in the past are more likely to continue the trend in the future. According to Kamaly (2002), exchange rate flunctuations compounds the uncertainty of demand for exports and this may limit the profitability of FDI thus reduces FDI flows to the area concerned.

Rogoff & Reinhart (2003) concludes that escalated crisis, or conflicts, escalated inflation rates and highly volatile inflation rates are some of the reasons why FDI flows to African Countries are highly constrained. Edwards (1990) in his study also confirms the role of political instability in the determination of FDI inflow irrespective of the variables used as explanatory variables. According to Fisal, Rabahand & Nobert (2005) Macroeconomic Performance is also considered as a major determinant of FDI flows. This was captured by the lagged GDP per capita growth as a proxy for the growth prospect. Dupasquier & Osakwe (2005) also corroborated the roles of certain factors in FDI flows. These factors include political and marcroeconomic instability, low growth, weak infrastructure, poor governance, inhospitable regulatory environments, and ill-conceived investment promotion strategies among others.

Vijayakumar, Sridharan & Sekhara Rao (2010) investigated the determinants of FDI inflows for BRICS countries comprising of Brazil, Russia, India and China. Although the BRICS do not have economic union, but are similar because of their large potential markets and population. The analysis was conducted based on dataset spanning from 1975 to 2007 except for Russia with data starting from 1990 to 2007. They investigated the influence of market size, labour cost, infrastructure, currency value, gross capital formation, trade openness, economic stability (proxied by industrial production). They concluded that market size, labour cost, infrastructure, currency valve and gross capital formation are the potential determinants of FDI.

Reinhart & Reinhart (2001) also demonstrated that FDI flows to developing countries, more than other types of official flows, has, an important cyclical component. When the US economy is booming (rather than in recession) FDI flows readily to emerging market economies. However, this circle is not relevant to African economies as they receives very little FDI irrespective of the US circle.

Asiedu (2001) studied the determinants of FDI flows into regions of African countries. He found out that higher returns on investment and better infrastructure are positively linked to FDI into the non-Sub Saharan African countries but are not significantly linked to the Sub-Saharan African countries. Trade openness however is directly linked to FDI growth both in the non-Sub Saharan African countries, but the marginal benefits of increased openness is more for the non-sub Saharan African economies. Asiedu's result is a confirmation of the fact that variables that successfully boosted FDI in a particular region may not have the same effects at the other regions calling for a country-specific analysis.

According to Cline (2012), efforts made to increase the role of FDI in promoting sustainable development usually focus on macro level; such as initiating the right policies, and improving the investment climate. These steps are necessary but not sufficient condition. Effective implementation at the micro level is also essential for encouraging appropriate FDI which matches a country's sustainable developmental needs and priorities. The import of Cline's proposition here is that sustainable FDI can contribute to sustainable development, but the outcome is neither automatic nor assured, as micro assessments of potential projects are important.

One of the main flaws of the market size hypothesis was based on the UNCTAD's benchmark of \$36bn GNP. There are countries with so small GNP but still are able to draw substantial FDI flows. On this premise, we defined market size differently as the real domestic demand. In addition, GDP measures the prospect of the economy rather than portraying the demand condition. In addition, the computation is masked with a lot of problems that it may mask the demand condition. We are therefore making our contributions by analyzing the impact of real domestic demand, trade openness, GDP, infrastructure, resource endowment and the stability of domestic economy (inflation rate) on the inflow of FDI in Nigeria from 1980 to 2007.

THEORETICAL FRAMEWORK

Mody and Antu (2005) propounded a theoretical basis for the existence of sustainable FDI. They propounded that FDI movements depends on marginal rate of return on capital. According to them, if the marginal rate of return of capital is high for an economy in relation to the world interest rate, substantial capital will flow into such an economy and this may lead to a strong relationship with domestic investment and foreign capital inflows. This combination will in turn gear up economic growth and consequently ensure sustainable development. If however returns to domestic capital are low, the country can still attract some level of foreign capital in order for them to diversify. Domestic investment may or may not grow and trade openness in capital account may harm the economy as it may encourage domestic capital outflow and lead to capital flight which is detrimental to sustainable development as it hurts economic growth.

Lipsey & Chrystal (2003) observed that FDI is often undertaken by domestic firms which have accumulated some advantages in the local market. Such advantages include patents and know-how that bestowed on them advantages when they enter into foreign markets.

Dunning (1977) also proposes the eclectic theory of FDI. Dunning's eclectic theory is also known as OLI paradigm is a mix of three theories of FDI. If a firm must be successful in a foreign country, then it must have some advantages that reduce the costs of operating in a foreign country. The multinational companies (MNC) therefore must have some specific advantages over and above those of its competitors. For the MNC to make a profitable investment abroad, these specific advantages must be utilized by the MNC and is readily transferable between countries and within the affected MNC. Such an advantage is known as ownership advantages or firm's specific advantages. Some of the firm-specific advantages include, technology, innovations, economies of large scale production and some monopolistic advantages which could be through patent rights and ownership of certain scarce resources or inputs.

The second determinant of FDI flow is the location advantage (L). This of course postulates that firm must utilize its native specific advantages in combination with some foreign factors in order to maximize its rent. The multinational companies (MNCs) must possess some unique competitive advantage that offsets the disadvantages of competing with foreign firms in their home country. Locational advantages of countries will to a large extent determine FDI flows into such a country. Some of these country's specific advantages include social and cultural advantages (these include distance between the home and host economy, peoples' attitude towards foreigners, culture, trade openness and so on). Economic advantages (market size, qualities and quantities of factors of production, costs of doing business- transportation and communication costs among others). The last category of L-advantage is political advantages which include government incentives for attracting FDI, legal environments, taxes, subsidies and trade barriers among others.

The third advantage is the internalization (I) advantage. There is internalization advantage when an MNC must benefit more from controlling the foreign business activity rather than by selling its advantages to a local firm to provide its goods or services. In other words, internalization advantage means that multinational enterprises possess some assets in the form of know-how, or core ability which is an asset that can yield rents for the firm. These rents can be earned by licencing the MNC's specific advantages to another firm, or producing in the MNC's home country while exporting their products to another country. However, there are some advantages to MNCs for investing directly in a foreign economy rather than selling its specific advantages or producing in the MNC's home country while exporting its goods or services. This advantage is known as internalization advantage.

In summary, Dunning's eclectic theory of FDI states that firm must possess some ownership advantages over other firms in the area of the firm's specific intangible assets like technology and trademarks. These intangible assets are optimized only if they are used by the firm rather than selling or leasing them. More importantly, these intangible assets are most beneficial when combined with factor inputs abroad thus, providing a justification for FDI. How practicable these theories are, call for further empirical analysis.

MODEL AND ESTIMATION METHOD

To model the relationship between FDI and its determinants, we utilized the vector autoregressive (VAR) models. The VAR model has some good characteristics. First, it is very simple as we do not need to bother about which variable is endogenous or exogenous. Secondly, estimation is very simple as each equation can be estimated with the usual OLS method separately. Thirdly, Forecasts based on VAR models are in most cases better than those obtained from some more complex simultaneous models (Mahmoud, 1984).

The VAR model is given by the following set of linear equations.

$$Y_{t} = \boldsymbol{\alpha}_{0} + \sum_{i=1}^{n} \boldsymbol{\alpha}_{i} Y_{t-1} + \sum_{j=1}^{m} \boldsymbol{\beta}_{j} X_{t-j} + - - - - - + \sum_{k=1}^{q} \boldsymbol{\lambda}_{k} Z_{t-k} + \boldsymbol{\mu}_{1} - - - - (1)$$

$$X_{t} = \boldsymbol{\alpha}_{0} + \sum_{i=1}^{n} \boldsymbol{\alpha}_{i} Y_{t-1} + \sum_{j=1}^{m} \boldsymbol{\beta}_{j} X_{t-j} + - - - - - + \sum_{k=1}^{q} \lambda_{k} Z_{t-k} + \boldsymbol{\mu}_{2} - - - - (1)$$

$$Z_{t} = \Psi_{0} + \sum_{i=1}^{n} \Psi_{i} Y_{t-1} + \sum_{j=1}^{m} \pi_{j} X_{t-j} + - - - - - + \sum_{k=1}^{q} \rho_{k} Z_{t-k} + \mu_{n} - - - (n)$$

$$m, n, ---, q = 1, 2.$$

Where Y, X, ---, Z are the endogeneous variables of the model.

To characterize the dynamic structure of a VAR, and to determine how each endogenous variable responds over time to a shock in that variable and every other endogenous variable, the impulse response function is estimated. The impulse response function traces the response of the endogenous variables to shocks (Pindyck, & Rubinfeld, 1998). In the VAR equations above, the effect of a shock or change in μ_1 , μ_2 , --- , μ_n will immediately affect for instance FDIN and, will also have an immediate effect on other endogenous variables in the model. In other words, a change in μ_1 , will have an immediate effect on FDIN but will affect other variables after some periods. The impulse response function is the tracing of these effects through time.

To compute the impulse response function, the model should be in a stable equilibrium and a one-period shock must be introduced to one of the endogenous variables (FDIN in our own case), and we can increase μ_1 by one-standard at time t=0. (The shock is maintained for only one period and hence is an "impulse")

To the extent that this endogenous variables affects other endogenous variables, the shock will filter through the model and impact on other endogenous variables. Later, it may have a greater effect on the original endogenous variable (FDIN) than its initial reaction just because of its feedback effects from the other endogenous variables. The impulse response function show how shocks to any variable filter through the model to affect every other variable and consequently feed back to the original variable itself.

To calculate the impulse responses, we increase the error term by one standard deviation and then compute the immediate and the future impacts of this change on the other endogenous variables. This process is repeated for every other endogenous variables of the model. (Pindyck & Rubinfeld, 1998).

The data used in this analysis are: DDM which is the real domestic demand, FDI is the stock of inward FDI (in million USD), TRD is the total trade volume, EXR is the average naira exchange rate, INF is the inflation rate in %, GDP is the gross domestic product at current basic prices, ELE is the electricity generation (in mega watts per hour), CRD is the crude oil production and export (,000 barrels), POL is the dummy variable capturing political stability (with value 1 for democratization and zero otherwise). Trade openness (OPN) was derived as OPN=TRD/FDI while FDIN is FDI in million dollars converted to million naira (FDIN=FDI x EXR). All variables (except FDI and real domestic demand) were obtained from the Central Bank of Nigeria Statistical Bulletin 2007 and 2008 editions and we extrapolated data for 2006 and 2007 for electricity generation and 2007 for crude oil production using OLS to forecast these data. FDI and real domestic demand were obtained from the Economist Intelligence Unit (EIU) (2008) country Data – Annual time series.

EMPIRICAL FINDINGS

Table one below presents the correlation matrix of variables in the model, and it shows that foreign direct investment in Nigeria is positively correlated with the domestic demand. The correlation coefficient of 0.85 is a clear indication of strong correlation and this is in conformity with earlier findings. Degree of openness has a correlation coefficient of 0.94 with FDI meaning that the higher the level of openness of an economy, the higher will be the volume of FDI to be attracted. Inflation which measures the level of stability of the domestic economy indicates that there is an inverse relationship between economic stability and FDI inflows although the correlation coefficient is low.

Table 1: The correlation matrix of variables

	FDIN	DDM	OPN	INF	ELE	CRD	POL	GDP
FDIN	1.0000	0.8454	0.9385	-0.3241	0.7261	0.6752	0.6189	= 0.9378
DDM	0.8455	1.0000	0.8610	-0.3842	0.5716	0.4904	0.6221	0.9203
OPN	0.9385	0.8610	1.0000	-0.2368	0.6864	0.7570	0.4680	0.9698
INF	-0.3241	-0.3842	-0.2368	1.0000	-0.1266	-0.0957	-0.3773	-0.2945
ELE	0.7261	0.5716	0.6864	-0.1266	1.0000	0.4264	0.2803	0.6532
CRD	0.6752	0.4904	0.7570	-0.0957	0.4264	1.0000	0.2037	0.6603
POL	0.6189	0.6221	0.4680	-0.3773	0.2803	0.2037	1.0000	0.5013
GDP	0.9378	0.9203	0.9698	-0.2945	0.6532	0.6603	0.5013	1.0000

Electricity generation which is a measure of the level of infrastructure has a high correlation with FDI inflow indicating that FDI inflow is positively dependent on availability of infrastructure. Crude oil production which is a proxy for natural endowment is positively related to FDI inflows confirming the necessity of natural endowment in attracting FDI inflows. In the same manner, political stability and economic prosperity are directly linked with FDI inflows in Nigeria based on the correlation results.

Table 2: Variance decomposition of variables Variance Decomposition of FDIN:

	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period	170200.0	100 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	179390.8	100.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	226147.2	94.96011	1.25131	0.46545	2.270206	0.203888	0.177763	0.586259	0.085
3	293340.4	89.66359	4.53544	0.62999	4.293775	0.121478	0.105657	0.551162	0.0989
4	394274	86.55324	6.40136	1.55593	3.671472	0.168639	0.108245	1.486303	0.0548
5	495317.6	84.18218	6.14471	4.05111	2.904584	0.830752	0.077156	1.763628	0.0459
6	577523.8	82.2584	5.07004	7.064	2.431034	1.535409	0.076302	1.526114	0.0387
7	643374.4	79.10566	4.74821	9.79947	2.357718	2.539582	0.173714	1.244439	0.0312
8	700245.5	75.38485	4.97604	11.8159	2.59047	3.851896	0.293744	1.060424	0.0267
9	753987.8	71.66385	5.3729	13.3591	2.900428	5.330842	0.422279	0.926989	0.0236
10	801158.3	67.99967	5.63539	14.7362	3.133712	7.06764	0.577435	0.828243	0.0217
		Variance I	Decomposit	ion of DDI	M:				
D : 1	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	9427.915	2.236296	97.7637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	11450.46	15.78269	67.3805	0.15978	6.581734	0.1823	1.644293	6.918159	1.3506
3	15552.51	44.92297	39.3331	0.59773	8.666273	0.254295	0.928838	4.483896	0.8129
4	16810.23	45.99432	33.815	1.11268	7.442798	0.675214	1.475385	8.72303	0.7615
5	19668.79	49.86113	29.3092	1.44552	10.21054	0.526904	1.131364	6.822729	0.6927
6	25721.88	60.32508	23.6367	0.94083	9.229332	0.510996	0.674546	4.214186	0.4684
7	33321.99	69.33631	18.5282	1.24141	6.687553	0.406618	0.421625	3.098028	0.2803
8	41350.47	75.55569	13.1436	2.92489	4.73807	0.672861	0.277538	2.500654	0.1867
9	48926	77.49415	10.2044	5.03461	3.860157	1.158794	0.216854	1.897502	0.1335
10	55568.99	76.66541	9.01076	6.96039	3.744433	1.773009	0.228828	1.512842	0.1043
Variand	ce Decompo	sition of OP	PN:						
	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period	15.06564	10.04530	0.55001	00.2055	0.0000	0.0000	0.0000	0.0000	0.0000
1	15.06764	18.84529	0.75901	80.3957	0.0000	0.0000	0.0000	0.0000	0.0000
2	18.00318	34.97248	1.76947	63.1469	0.064017	0.013994	0.000109	0.011705	0.0213
3	21.35908	26.55851	6.09198	50.7252	5.978986	0.936093	1.780712	7.651613	0.2769
4	22.61364	23.69398	5.59633	45.462	8.288037	1.029599	3.29462	11.87977	0.7557
5	25.85639	25.72604	13.5034	35.0202	9.651249	1.59871	3.198821	10.45824	0.8434
6	30.16534	38.87236	12.8592	25.7669	9.111021	2.589034	2.391343	7.781917	0.6282
7	36.93978	52.13584	11.2157	18.1791	8.206461	2.937294	1.642524	5.250685	0.4324
8	42.60227	58.42898	9.89116	15.3051	7.672083	3.006002	1.289258	4.067542	0.3399
9	49.51257	60.41732	9.80128	14.6592	7.017027	3.525321	0.976482	3.350841	0.2525
10	55.97457	61.34278	8.80748	15.4266	6.195597	4.19779	0.787647	3.042347	0.1997

Variand	ce Decompo S.E.	sition of EL FDIN	E: DDM	OPN	ELE	CRD	TRD	INF	POL
Period	S.L.	TDIIV	DDM	OTT	LLL	CILD	TILD	1111	IOL
1	332.6009	2.652073	47.7127	1.89004	47.74524	0.0000	0.0000	0.0000	0.0000
2	451.7815	2.831398	44.0062	2.21164	26.53516	15.97516	2.081869	5.36243	0.9962
3	494.7706	3.243437	42.3684	2.05522	22.92512	16.89665	3.093589	8.336556	1.081
4	558.7949	12.7755	33.4295	2.23921	17.97431	17.31191	3.194299	11.7402	1.3351
5	641.5563	31.54281	25.6508	1.74085	15.18462	13.30472	2.439098	9.124208	1.0129
6	648.0817	31.52952	25.3951	1.83067	15.62148	13.08001	2.499426	8.957054	1.0868
7	688.554	31.11302	25.6149	4.45006	14.14032	12.11709	2.271702	9.317524	0.9754
8	735.6671	34.20858	22.4422	6.58027	12.49417	11.32935	2.077449	9.895699	0.9723
9	759.1538	32.87393	21.1817	9.70631	11.79667	12.13566	2.067727	9.309855	0.9282
10	779.7021	32.86445	20.5729	10.7052	11.19708	12.38242	2.250724	9.146467	0.8808
Variand	ce Decompo	sition of CR	D:						
	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	26506.29	0.394413	49.0706	0.54248	0.77405	49.2185	0.0000	0.0000	0.0000
2	42825.3	2.739939	42.2298	3.29399	14.3716	35.89829	0.082029	1.13214	0.2522
3	46649.72	2.324225	36.0997	4.97472	21.50829	30.50335	0.893639	3.205019	0.491
4	53982.4	11.73667	27.8172	4.86176	16.85758	22.92636	3.434518	11.04441	1.3216
5	56709.75	12.30076	28.4266	4.80181	15.87382	23.82106	3.337459	10.2268	1.2117
6	58835.25	15.83676	26.4957	4.4774	15.81957	23.59421	3.109183	9.538152	1.129
7	60234.71	15.6469	25.4202	4.27193	16.89311	22.75719	3.465552	10.29968	1.2454
8	61534.22	15.00275	25.9374	4.2	18.04329	22.05167	3.491964	9.968893	1.304
9	64135.83	17.00353	25.71	4.50767	17.4958	20.75428	3.237171	10.09095	1.2006
10	66710.78	19.87459	24.04	5.75989	16.33092	19.96535	2.994431	9.912316	1.1225
Variand	ce Decompo	sition of TR	D:						
	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	234689.8	23.88888	6.58983	67.9659	0.544458	0.072248	0.938668	0.0000	0.0000
2	309045.3	45.35216	4.5187	44.6423	1.078005	3.435521	0.671162	0.29739	0.0047
3	417453.2	29.62386	15.0687	28.8739	13.77679	1.984442	1.314997	8.955002	0.4023
4	469553.2	25.53189	12.1228	22.8522	15.23296	6.197118	2.471715	14.43885	1.1525
5	583732.8	32.84348	18.6288	14.9091	13.62207	4.011235	2.323357	12.46503	1.1969
6	749786.7	53.22568	14.6361	9.03659	10.65928	2.698029	1.433858	7.555327	0.7552
7	1018045	67.78541	11.2863	5.4139	8.402006	1.762542	0.806434	4.099903	0.4435
8	1268436	73.60443	9.59744	4.50538	7.376327	1.361182	0.552105	2.687242	0.3159
9	1576150	74.8628	9.35219	5.3363	6.393018	1.485506	0.366876	1.99374	0.2096
10	1892687	75.55879	8.2223	6.83542	5.379321	1.862431	0.265039	1.731311	0.1454

	Variance Decomposition of INF:									
	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL	
Period 1	11.31907	21.9307	7.2228	13.8966	8.285995	23.23441	6.070151	19.35934	0.0000	
_										
2	14.28011	39.1032	9.45149	8.98768	5.22169	16.33317	4.690034	16.20349	0.0093	
3	15.66584	39.29674	10.0191	10.9605	6.615227	13.62289	4.156384	15.0673	0.2619	
4	16.76613	38.03667	12.5002	13.3896	7.098395	11.90593	3.628843	13.16176	0.2786	
5	16.93683	37.371	12.7502	13.6353	6.979164	11.66735	3.694536	13.62224	0.2803	
6	17.10699	37.10346	13.2581	13.4278	7.233144	11.44044	3.681222	13.56855	0.2873	
7	17.14755	36.96868	13.5268	13.3775	7.257565	11.39034	3.679281	13.51008	0.2898	
8	17.22763	37.09228	13.5989	13.2534	7.191656	11.47588	3.679253	13.42082	0.2878	
9	17.33151	37.52816	13.437	13.0955	7.105884	11.63719	3.648169	13.26334	0.2847	
10	17.52109	38.44054	13.2448	12.8168	7.122572	11.54195	3.575186	12.97805	0.2801	
			Vari	ance Deco	mposition of	f POL:				
	S.E.	FDIN	DDM	OPN	ELE	CRD	TRD	INF		
Period							0.00.4004		POL	
1	0.192329	50.59927	5.71349	0.57604	16.01183	23.78217	0.026281	1.658775	1.6322	
2	0.216896	56.33993	4.6162	0.45311	14.37866	21.16948	0.021328	1.542714	1.4786	
3	0.24301	57.90318	7.58456	0.43975	11.45489	17.26432	0.270657	3.809058	1.2736	
4	0.287813	61.72156	7.60182	1.42883	8.29913	13.06251	0.517966	6.265145	1.103	
5	0.320389	63.36072	6.20645	3.87463	7.041531	12.14655	0.432974	5.905668	1.0315	
6	0.335705	62.02973	5.83913	6.24197	6.582941	12.47212	0.491744	5.379823	0.9625	
7	0.343414	60.33665	5.64598	7.59462	6.328807	13.29667	0.657257	5.220203	0.9198	
8	0.350329	58.61817	6.09362	8.14267	6.41778	14.08867	0.738679	5.016397	0.884	
9	0.357279	57.03289	6.53139	8.61094	6.449434	14.88263	0.79539	4.847366	0.8499	
10	0.362944	55.50799	6.52976	9.24389	6.328181	15.98221	0.868401	4.715628	0.8239	

Ordering: FDIN DDM OPN ELE CRD TRD INF POL

The variance decomposition results are presented in table 2. The second column (SE) is the standard error of forecast for the respective variables in the in the model. We shall limit limit the explanation to the first part of table 2. The variability of the foreign direct investment is totally accounted for by one-step ahead FDI volatility. The contributions explained by the domestic demand, degree of openness and crude oil exploration (a measure of natural resources availability) increases over time. On the other hand, the contributions explained by electricity generation (a measure of infrastructure) is constant over time. This makes domestic demand, degree of openness, natural resources endowment and infrastructure important in the determination of FDI inflows in Nigeria.

Table 3: Impulse response results for the relevant variables

9

10

20.51020

20.99610

7.79473

5.97279

9.03268

11.13417

5.72515

4.70059

Response of FDIN: **FDIN OPN ELE** TRD POL **DDM CRD INF** Period 0 0 0 0 0 179391 0 0 1 2 128000 10211 25297 -15429 34074 -9535 17316 -6594 3 169084 57120 17437 50336 506 64 -13208 -6453 4 239572 8795 77771 43320 44863 12555 -42851 -315 5 268297 71585 86719 37666 42143 4585 -44904 5231 6 260437 42836 116713 31340 55524 -8075 -27627 4062 7 230398 130392 52383 40632 73423 -21554 -7811 -375 8 205432 68887 131816 54248 91517 -26857 -6972 -1302 9 194326 78391 134193 61536 106856 -30989 -8378 -1803 10 170446 75008 136525 60208 122712 -36134 -6797 -2226 Response of DDM: **FDIN DDM** OPN **ELE CRD TRD INF POL** Period 9321.90 0.00 0.00 0.00 0.00 0.00 0.00 1 1409.87 2 4324.98 1202.82 457.70 -2937.60 488.90 1468.29 -3011.75 1330.70 3 9379.06 -2606.62 1111.90 -3511.77 613.25 -301.32 1332.31 442.16 4 4616.55 -645.50 -1303.25 264.78 1137.08 -1386.6 3715.40 -430.99 5 7932.27 4222.56 4297.50 -1564.57 -361.03 -455.65 1320.85 -726.39 6 14360.58 6557.27 -795.30 4643.49 -1158.64 293.41 -1219.50 -647.52 7 19255.11 7024.61 2749.43 3632.21 1064.93 467.59 -2552.92 -113.94 22847.73 4359.97 2599.78 8 6018.94 2643.88 252.95 -2891.13 282.15 9 23730.17 4419.40 8396.70 3374.64 4029.11 -1632.11 63.34 -667.41 5197.14 10 22634.97 5828.82 9716.71 4818.94 -1369.3 -1137.42 -162.18 Response of OPN: **FDIN DDM** OPN **ELE INF POL CRD TRD** Period 1 6.54104 1.31271 13.51020 0.00000 0.00000 0.00000 0.00000 0.00000 2 8.40034 -2.00298 4.70562 0.45551 -0.21297 -0.0188 0.19478 0.26279 3 2.79495 4.69650 5.90504 5.17158 5.20281 2.05553 -2.8502 -1.0928 4 0.05297 0.90888 1.03367 3.88669 -0.99729 -2.9537 5.08359 -1.6128 1.28313 2.32875 5 7.12929 7.85232 4.70538 -2.13023.02795 -1.3319 6 13.48058 5.17060 0.58011 4.28741 3.58757 -0.6117 -0.94475 -0.2796 7 18.91296 6.00257 3.68744 -0.8081 -0.4294 5.39217 4.06472 -0.91471 -0.5177 8 18.68262 5.14555 5.45142 5.22146 3.80483 -0.9932-1.47509

5.64496

6.71566

-0.7341

-0.8601

-2.88474

-3.62984

-0.1482

0.25941

			Re	esponse of E	LE:			
	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	54.1647	229.7419	45.7255	229.8203	0.0000	0.0000	0.0000	0.0000
2	-53.3409	-192.453	-49.2268	-36.6416	-180.572	-65.186	104.6187	-45.091
3	-46.4844	117.8876	22.7384	-44.2745	93.5752	-57.653	97.2762	-24.761
4	178.7508	-25.8314	-44.2812	-2.2096	112.6681	49.0022	-127.480	39.0182
5	299.8946	34.5415	13.1638	79.8371	26.5470	8.0585	-29.9293	-0.4525
6	50.9767	32.9308	22.8851	55.7917	-13.2604	-21.416	8.1105	-19.892
7	122.8080	121.5741	115.7975	37.7947	50.1059	16.5060	-80.9597	7.7193
8	193.9846	-4.0699	120.4773	-24.0630	62.1870	21.7484	-96.8562	25.2540
9	65.7135	-24.7867	142.5694	-19.1489	92.8676	-25.949	9.8950	9.3453
10	-101.673	-54.7440	95.6128	-9.2251	73.0589	-42.028	44.1652	-2.2763
			Re	sponse of C	RD:			
	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	1664.66	18567.76	1952.27	2332.03	18595.72	0.0000	0.0000	0.0000
2	6890.54	20730.05	7523.34	16066.67	17679.82	1226.55	-4556.70	2150.81
3	-573.63	3332.29	6917.19	14299.87	-2331.48	-4235.9	6998.86	-2461.7
4	-17071.6	5001.87	5780.74	4815.01	-2069.86	-8979.9	15877.58	-5275.0
5	-7319.41	10177.37	3570.66	4388.03	9898.85	-2692.1	2654.86	-675.75
6	12353.59	1724.78	750.38	6091.51	7116.86	-542.70	-1130.49	335.49
7	4415.95	2264.58	77.38	8081.52	2991.17	-4255.7	6597.25	-2471.0
8	-607.61	7733.63	2008.97	8383.49	3049.02	-2546.4	1942.45	-2046.7
9	11460.84	8685.96	5136.90	6039.14	4327.81	967.53	-6132.98	96.85
10	13603.69	3507.75	8421.11	2665.79	5900.52	322.55	-5103.82	753.64
			Re	sponse of T	RD:			
	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL
Period 1	114708	60246	193482	17317	-6308	22738	0	0
2	173659	-26194	72127	27013	-56934	11136	16853	-2127
3	91155	148135	87637	151588	-13304	-40627	123780	-26394
4	68324	21647	8176	97863	-101021	-56196	127394	-42893
5	235838	191698	20431	113273	-2150	-49669	103146	-39210
6	432796	137130	-54	116224	38726	-12007	846	-12925
7	635071	186258	72860	164789	55673	-17238	-4187	-18736
8	694049	193502	127976	177764	60276	-22912	-27272	-22046
9	821910	279134	245109	200346	122488	-15203	-79333	-11134
10	920291	249425	335105	184073	172666	-19501	-111762	1300

	Response of INF:									
	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL		
Period										
1	-5.30075	-3.04203	4.21954	-3.25824	5.45603	-2.7888	4.98031	0.00000		
2	-7.18623	-3.16538	-0.72338	-0.17892	1.88111	-1.3367	2.87035	-0.1374		
3	-4.08677	2.30544	-2.92768	2.36365	-0.35536	-0.7978	1.98383	-0.7898		
4	-3.23739	3.24805	-3.27711	1.92842	-0.18657	0.01578	-0.14193	-0.3747		
5	0.52801	1.19836	-1.21452	0.25760	0.02435	0.63025	-1.44157	0.14445		
6	1.17559	-1.49164	-0.42739	-1.07125	-0.10881	0.41841	-0.79500	0.19227		
7	-0.34511	-0.98709	0.19640	-0.41507	0.10779	0.21315	-0.12871	0.10598		
8	-1.17667	-0.76579	-0.00694	0.06470	-0.75328	0.31813	-0.32711	0.04565		
9	-1.62508	0.04293	0.04026	-0.02304	-0.94685	0.19675	-0.09359	-0.0320		
10	-2.29794	-0.54584	-0.09799	-0.72162	-0.69032	0.13037	0.02330	0.06699		
			Re	sponse of P	OL:					
	FDIN	DDM	OPN	ELE	CRD	TRD	INF	POL		
Period										
1	0.1368	-0.0460	0.0146	-0.0770	0.0938	0.0031	-0.0248	0.0246		
2	0.0882	-0.0076	0.0003	-0.0290	0.0341	-0.0006	-0.0106	0.0096		
3	0.0877	0.0480	0.0068	-0.0005	0.0154	0.0122	-0.0390	0.0075		
4	0.1301	0.0426	0.0304	-0.0105	0.0250	0.0164	-0.0542	0.0127		
5	0.1179	0.0086	0.0529	-0.0188	0.0406	0.0039	-0.0295	0.0120		
6	0.0698	-0.0145	0.0553	-0.0138	0.0398	-0.0105	0.0009	0.0051		
7	0.0354	0.0088	0.0438	0.0067	0.0403	-0.0149	0.0097	-0.0001		
8	0.0280	0.0286	0.0322	0.0203	0.0401	-0.0115	-0.0005	-0.0004		
9	0.0293	0.0293	0.0316	0.0189	0.0413	-0.0104	-0.0056	0.0000		
10	0.0178	0.0163	0.0344	0.0102	0.0453	-0.0113	-0.0049	0.0006		

Ordering: FDIN DDM OPN ELE CRD TRD INF POL

Table 3 reports the impulse response functions of the respective variables to one standard deviation in innovations. We shall limit our interpretation to the first part of the table. The foreign direct investment flows into Nigeria responds positively to shocks from itself and from, electricity generation, crude oil exploration for all time horizons. Its initial response to them is a steady rise for all time horizons.

The response to trade openness is positive and increases over time from the negative response in period 2. The foreign direct investment inflow also responds negatively to inflation from period 3 to 10 while the response to shocks from political stability is mixed.

CONCLUSIONS AND IMPLICATIONS

FDI has been acknowledged as a major propellant of growth and consequently, sustainable development through transfer of technology, technological innovations, and other externalities. However, the study found that the local demand condition, Infrastructure availability, natural resources endowment and the degree of openness of the economy to the external sector and economic stability are the major drivers of foreign direct investments in Nigeria. Resource-rich countries like Nigeria should devote conscious efforts to promote and facilitate FDI so as to advance priority sustainable development projects.

Policymakers must also recognize that FDI can help in bridging the gap between the investment needs and domestic capital thereby become potentially beneficial in the stimulation of economic growth and sustainable development and; complementing domestic resources. Investors may maximize benefits of FDI when they channel their investment expertise into sectors considered risky by the host economies because of their low capital and technological deficiency while Policymakers must encourage FDI flows into high risk areas or sectors with low domestic investment by initiating policies that can encourage FDI into those sectors.

Some of these policies include the stimulation of local demand condition via fiscal incentives, continuous investments in infrastructural development, provision of economic stability, sound macroeconomic management and encouragement of a stable political structure among others.

The global economic meltdown worldwide has caused a significant decline in FDI flows and consequently on growth, policymakers therefore must recognize this by ensuring open and friendly environment for international investment inflows. What distinguishes one potential recipient economy from another is the proper harnessing of its resources and locational advantage.

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