

IS FOREIGN DIRECT INVESTMENT INFLOW MARKET SEEKING IN AFRICA? EVIDENCE FROM THE AFRICAN LARGEST ECONOMY

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Abstract

The aim of this study is to examine whether FDI inflow is a market seeking in the African largest economy in which majority of the past studies have not fully explored. FDI Data and other macroeconomic data were collected from UNCTAD investment report and WDI respectively. ARDL and Bound test techniques were used to address the objective this study. Consequently, the findings that originated from this work established the following among others that the principal determinants of FDI inflows in Nigeria are past FDI inflows and growth rate of the economy. Meanwhile, openness of the economy is a minor determinant of FDI inflows in the country. However, market size is a minor factor that discourages FDI inflows in Nigeria. This implies that FDI inflow in Nigeria is not market seeking. Furthermore, due to these important findings, this paper makes the following recommendations for the policy makers, investors, financial institutions regulators and future researchers as follows: firstly, if the goal of the policy makers in Nigeria is to attract more FDI inflows, the country should be committed to the continuous expansion of its market size, liberalizing its economy and ensuring double digits growth rate in the country

Keywords: FDI, Market Seeking, ARDL.

JEL Classification: F21, F23

1. INTRODUCTION

In the past few decades, the roles of trade and investment in globalizing the world economy cannot be overemphasized. One of the prominent drivers of globalization in the last three decades is Foreign Direct Investment (FDI). Activities of multinational firms are expanding abroad on daily basis via direct investment. Both developed and developing economies are now competing in attracting multinational enterprises (MNEs).

However, the developing countries of Africa have not been able to compete favourably with other regions of the world especially the developing countries of Asia in attracting FDI inflows

Table 1. Top 12 countries by FDI inflows in 2016

S/N		USD millions, current prices
1	USA	391104
2	UK	253825
3	China	133700
4	Hong Kong	108125
5	Netherlands	91956
6	Singapore	61593
7	British Virgin Island	59679
8	Brazil	58190
9	Australia	44967
10	Cayman Island	44485
11	India	37667
12	Russian Federation	33721

Source: Author's calculation from UNCTADstat, 2017.

The inflows of foreign direct investment have not been consistent in the past few years in Africa. A cursory look at FDI data shows that FDI inflows decreased from \$56 billion in 2015 to \$41 billion in 2017, which is about 26.7% decline (UNCTAD, 2018). Meanwhile, FDI inflows have not been evenly distributed across Africa. For instance, five countries, namely Angola, Egypt, Nigeria, Ghana and Ethiopia accounting for 57% percent of continent's total FDI inflows in 2016. In the same vein, 15 African oil-rich nations have attracted about 75% of FDI inflows between 2000 and 2010 (AfDB OECE, UNDP and UNECA, 2011).

The Nigerian economy is the focal point of Africa due to its huge market size and abundant resource endowments. Nigeria is the highest oil exporter in Africa and the African biggest economy with over 200 million populations. Little wonder 70% of FDI inflow in ECOWAS countries went to Nigeria in 2006. Interestingly, rapid inflows of FDI in Nigeria are primarily traceable to the oil

boom of 1970s. From 1980 to 2006, it has been estimated that oil sector alone accounted for 90% of the FDI inflow in Nigeria. UNCTAD (2007).

Consequently, there are numerous reasons why study on market factors that drive foreign direct investment (FDI) inflows is imperative in developing countries that are endowed with natural resources like Nigeria in the recent time. Firstly, Nigeria is a mono-cultural economy which heavily relies on oil and gas for its survival. Therefore, there is a compelling need for the diversification of the Nigerian economy in order to ensure balanced sectoral, industrial and geographical development in the country. Also, despite the fact that there are several studies focusing on the factors determining the inflows of FDI in Nigeria yet studies on market seeking FDI are very scanty. See Akenbor and Tennyson (2014), Abubakar and Abdullahi (2013) and Wafure and Nurudeen (2010). In the same vein, the results of other FDI studies focusing on non-market issues are conflicting (Akenbor and Tennyson, 2014 and Thaddeus and Yadirichukwu (2013). Against this backdrop this study examines the role of market in attracting FDI inflows in Nigeria.

The rest of this paper is organized as follows: section two examines the review of literature. Meanwhile, section three presents methodology, discussion of results and policy implication.

2. REVIEW OF EMPIRICAL LITERATURE

In this section an attempt has been made to present the past empirical studies about the linkage between FDI and other macroeconomic variables in developing countries in particular and the world as a whole.

Soumare (2015) concluded that there was an existence of a direct and strong relationship between net FDI inflows and welfare improvement in the Northern Africa sub region while making use of a dynamic panel analysis and Granger-causality approach to estimate the relationship between FDI and welfare in Northern Africa from 1990 to 2011. In another related study, Aderemi et al (2019) posited that FDI, growth rate and economic growth had a long run relationship and FDI had a one way feedback relationship with economic growth in BRICS countries. Israel (2014) submitted that FDI inflows had a direct relationship with poverty reduction in Nigeria while investigating the link between FDI and poverty reduction in Nigeria between 1980 and 2009. Hudea and Stancu (2012) opined that in the short run and the long run, FDI inflows and economic growth had a direct relationship.

However, Akinmulegun (2012) utilized a Vector Autoregression to examine the nexus between FDI inflows and welfare in Nigeria from 1986 to 2009. It was concluded from the study that FDI inflows led to an insignificant impact on

welfare in the country. Ogunniyi and Igberu (2013) corroborated that FDI inflows have an insignificant impact on poverty reduction in Nigeria in a similar study in Nigeria between 1980 and 2012 with the aid of the Ordinary Least Squares.

Akinlo (2017) examined determinants of FDI in Nigeria with the application of Markov-Regime Switching Model (MSMs). The author argued that the main determinants of FDI in Nigeria are GDP growth, macro instability, financial development, exchange rate, inflation and discount rate. In another perspective, Thaddeus and Yadirichukwu (2013) concluded that interest rate, exchange rate and inflation rate discouraged FDI inflows in Nigeria while Wafure and Nurudeen (2010) enunciated that openness, inflation and infrastructural development were not significant factors that propelled FDI inflows in Nigeria.

Consequently, Aderemi, Olayemi and Olu-Young (2018) adopted a panel OLS to investigate determinants of FDI in the three largest economies in Africa from 1990 to 2017. This paper identified that, there exists active and passive determinants of FDI inflows in Africa. The authors posited that the active determinants of FDI inflows in Africa are market size and the growth rate of economy while the passive determinants are GDP per capita and past FDI inflows. Asiedu (2006) employed a panel data analysis to examine the factors that propel FDI inflows in 22 Sub Saharan Africa countries from 1984 to 2000. It was discovered from the study that countries with large market size and natural resource endowments attracted more FDI. Also, FDI inflows were sensitive to macroeconomic stability, good infrastructure, an educated labour force, openness to FDI, an efficient legal system, less corruption and political stability. While examining the link that exists between FDI and real exchange rate in some selected Sub-Sahara Africa (SSA) economies, Ogun, Egwaikkhide and Ogunleye (2012) used Granger causality and simultaneous estimation techniques to submit that FDI inflows are sensitive to real exchange rate movements in the continent. Anyanwu (2012) adopted a panel analysis to investigate variables that caused the inflows of FDI in 53 African countries from 1996 to 2008. The paper pointed out that the openness of the countries to foreign trade, market size, rule of law, foreign aid, natural resources, and past FDI inflows were the principal variables that caused inflows of FDI in Africa.

In conclusion, it could be pinpointed from the reviewed empirical studies that studies regarding the impact of market in attracting FDI inflows in Africa is ongoing, but studies on country specific is very scanty in the recent times which makes this study very imperative in this time.

3. METHODOLOGY

This study makes use of secondary data from 1990 to 2017. Data on FDI inflows were extracted from UNCTAD investment report of the World Bank. Data

on GDP, GDP per capita growth and openness of the economy were extracted from World Bank Development Indicator.

3.1. MODEL SPECIFICATION

$$FDI = F (MKTZ, GRT, OPEN) \text{-----I}$$

Log linearizing model one leads to model two as follows:

$$LnFDI_t = \alpha_0 + \alpha LnMKT_t + \beta_0 GRT_t + \gamma OPEN_t + U_t \text{-----II}$$

3.2. ARDL MODEL SPECIFICATION

Various diagnostic tests such as unit root test and Bound Test performed on the variables of interest motivated the choice of Auto Regressive Distribution Lag (ARDL) model. The model could be stated thus:

$$\Delta LnFDI_t = \alpha + \sum_{i=1}^p \beta_0 \Delta Ln FDI_{t-i} + \sum_{i=0}^p \beta_2 \Delta LnMKT_{t-i} + \sum_{i=0}^p \beta_3 \Delta GRT_{t-i} + \sum_{i=0}^p \gamma \Delta OPEN_{t-i} + \mu_t \text{-----III}$$

Where:

FDI is FDI inflows which is measured in millions USD

MKT is used to denote the market size of the economy: the real GDP is used to proxy it and is measured in USD.

GRT denotes the annual growth rate of economy and is measured by GDP per growth in percentage

OPEN means openness of the economy and is measured as difference between exports and imports as a percentage of GDP.

μ captures error term.

t= 1990-----2017.

α_0 is an intercept and α , β_0 , β and γ are the slope parameters. A priori expectation α , β_0 , and $\gamma > 0$

3.3. RESULT AND DISCUSSION

Table 2. Descriptive Statistics of Annual Data Series (1990-2017)

Descriptive Statistics	LnFDI	LnMKT	GRT	OPEN
Mean	21.74894	42.44046	5.217857	37.54679
Median	21.52907	31.28159	4.350000	38.75500
Maximum	22.91100	346.1660	33.70000	53.28000
Minimum	20.72626	30.60445	-1.600000	20.72000

Std. Deviation	0.726565	59.52657	6.521989	8.791938
Skewness	0.160137	5.003169	3.070353	-0.129728
Kurtosis	1.593786	26.03362	14.19066	2.415346
Jarque-Bera	2.426683	735.7866	190.0958	0.477328
Probability	0.297203	0.000000	0.000000	0.787680
Sum	608.9704	1188.333	146.1000	1051.310
Sum. Sq. Deviation	14.25320	95672.13	1148.481	2087.051
Observation	28	28	28	28

Source: Authors` Computation (2019)

The table above presents the descriptive analysis such as the mean, median, minimum and maximum values; and the distribution of the sample measured by the skewness, kurtosis and Jaque-Bera statistics of FDI inflows and other macroeconomic variables. Consequently, the mean and median values of log of FDI, GDP per growth and openness of the economy are very close, except that of market size that indicates a slight difference. Also, the positive values of skewness in the majority of the selected variables and the value of Kurtosis of FDI and openness of the economy is not far from 3. This shows that the distribution of the data series in this study is fairly symmetrical which is could be further used for econometric analysis.

Table 3. Unit Root Test

Variables	ADF Test			PP Test		
	Level	1 st Difference	Remarks	Level	1 st Difference	Remarks
LFDI	-2.976263**	-2.981038**	I (1)	-2.976263**	-2.976263**	I (1)
LMKT	-2.976263**		I (0)	-2.976263**		I (0)
OPEN	-2.976263**	-2.986225**	I (1)	-2.976263**	-2.981038**	I (1)
GRT	-2.976263**		I (0)	-2.976263**		I (0)

Source: Authors` Computation (2019)

** %5 level

Table 3 shows the stationarity test with the aid of the augmented dickey fuller (ADF) and Phillips-Perron (PP) tests. This test is very paramount because of the problem of spurious regression which could be the result of time series data if such data have a unit root. However, the reported results in the table show that FDI and openness of the economy are stationary after first differencing. In other words, these variables possess unit roots. Meanwhile, market size and growth rate of the economy are stationary at level. This shows the absence of a unit root in the variables. It is worth of note that the variables of interest in these studies are combination of I(0) and I(1). Therefore, this study employed Auto Regressive Distribution Lag (ARDL) model for its analysis (Pesaran, Shin and Smith, 2001; Pesaran and Pesaran, 1997).

Table 4. ARDL Bounds Test

Sample: 1991 2017
 Included observations: 27
 Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	2.673815	3
Critical Value Bounds		
Significance	I0 Bound	II Bound
10%	2.72	3.77
5%	3.23	4.35

Source: Authors` Computation (2019)

The dataset for this study is a combination of stationarity and non-stationarity data. Therefore, it is expedient to examine the existence or otherwise of the long run equilibrium relationship among these variables using Bound Test. {Pesaran and Pesaran (1997): Pesaran, Shin and Smith (2001)}. The result presented in the above table shows that the Null hypothesis of no long run relationship could not be rejected because the upper and lower Critical Value Bounds at all level of significance is greater than the value of F-Statistic. Hence, there is no presence of cointegrating relationship among the variables in the model. This outcome necessitates the estimation of both short run relationship alone among these variables.

Table 5. Short Run Regression Estimates of the Relationship between FDI Inflows and Market Size

Dependent Variable: LFDI
 Method: ARDL
 Selected Model: ARDL(1, 1, 1, 0)

Short Run	Coefficient	t-statistics	P-value
LnFDI(-1)	0.830444*	10.23113	0.0000
LnMKTZ(-1)	-0.001365	1.393647	0.1787
GrT(-1)	0.021922**	2.417019	0.0253
OPEN	0.002895	0.411697	0.6849
C	3.646065	2.026482	0.0563
R Square	0.864742		
Adj. R Square	0.824165		

Source: Authors` computation (2019) **Significant at 5%, *Significant at 1%

The ARDL result of the short run relationship between the variables is presented above. When FDI inflow is the dependent variable, all the explanatory

variables have the expected sign except the market size. Similarly, the explanatory variables jointly explained about 86% of the systematic variations in the dependent variable in the model, leaving 14% unexplained as result of random chance. Therefore, the model utilized for this analysis is relatively good. It could be pinpointed from the above table that FDI inflow in the previous year has a significant positive impact on the FDI inflow in the current year. This shows that past FDI inflows is a significant determinants of FDI inflow in Nigeria. This finding is in tandem with the conclusion of Anyanwu (2012) in a related study in Africa. Also, growth rate of the economy is a significant determinant of FDI inflow in the country. This conclusion corroborates the assertion of Akinlo (2017) in a related paper focusing on Nigeria. Openness of the economy is an insignificant determinant of FDI inflow in the country. This finding is consistent with Wafure and Nurudeen (2010) in a similar study in Nigeria. However, market size has an insignificant negative impact on FDI inflow in the country. This implies that FDI inflow in Nigeria is not market seeking. The reason for this result in Nigeria might be as a result of the overdependence of the Nigerian economy on oil and gas which has shifted the attention of the Nigerians away from other sectors of the economy. This finding contradicts the submissions of Aderemi, Olayemi and Olu-Young (2018) and Asiedu (2006) in related studies in Africa.

4. CONCLUSION AND RECOMMENDATION

This paper examines the variables that determine the inflow of foreign direct investment in Nigeria between 1990 and 2017 using ARDL and Bound test techniques. Consequently, the findings that originated from this work established the following among others that the principal determinants of FDI inflows in Nigeria are past FDI inflows and growth rate of the economy. Meanwhile, openness of the economy is a minor determinant of FDI inflows in the country. However, market size is a minor factor that discourages FDI inflows in Nigeria. This implies that FDI inflows in Nigeria is not market seeking. Furthermore, due to these important findings, this paper makes the following recommendations for the policy makers, investors, financial institutions regulators and future researchers as follows: firstly, if the goal of the policy makers in Nigeria is to attract more FDI inflows, the country should be committed to the continuous expansion of its market size, liberalizing its economy and ensuring double digits growth rate in the country.

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