



## ABSTRACT

Foreign Direct Investment in Nigeria has dropped by \$325.82m in two year, according to data from the National Bureau of Statistics. This study intends to examine effect of banking sectors development on foreign direct investment in Nigeria. Data were source from word bank indicators (wdi) for this study. Autoregressive lag distribution (ARDL) was employed to analyse the data and the result revealed that A month lags of foreign direct investment (FDI), gross domestic product (GDP), inflation (IF) and real interest rate (RIR)

# BANKING SECTORS DEVELOPMENT AND FOREIGN DIRECT INVESTMENT IN NIGERIA, 1960 - 2021

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## Introduction

Foreign direct investment (FDI) is the investment made by an investor in foreign countries; many countries actively seek to attract foreign direct investment (FDI) because they believe that multinational enterprises will contribute to economic growth by creating new job opportunities, increasing capital accumulation, and raising total factor productivity. Foreign direct investment (FDI) has grown dramatically as a major form of international capital transfer over the past decades. This rapid growth in cross border investment has to a large part been due to the reduction in trade and investment barriers, the harmonization and mutual recognition of regulation and the removal of domestic impediments through reform and privatization (Konstantinos, 2018).

Foreign Direct Investment in Nigeria has dropped by \$325.82m in two year, according to data from the National Bureau of Statistics. According to capital importation reports by the NBS, in the first nine months of 2019, the FDI contributed a total of \$666.33m to aggregate capital inflow. However, when compared to the same period in 2021, it was observed that the FDI fell to \$340.52m, representing a decrease of 48.9 percent. The FDI refers to an investment in the form of controlling ownership in a business in one country by an entity based in another country. It is one of the major channels of generating capital inflows into Nigeria alongside Foreign Portfolio Investment. A breakdown of the FDI in 2019 shows that in the first quarter of the year, the FDI stood at \$243.3bn but began to fall in subsequent



have positive significant effect on foreign direct investment, Two months lag of FDI as positive significant effect on FDI while MS<sub>2</sub> has negative significant effect on FDI, Three month lag of IF has negative significant effect on FDI, Four months lag of IF has positive significant effect on FDI and current year DCP has positive significant effect on FDI. It is recommended that the Central bank of Nigeria (CBN) should encourage all banks to grant more loans to domestic private sectors which in turn lead to increase foreign direct investment in Nigeria.

**Keywords:** Banking sectors, Domestic credit to private sectors, Foreign direct investment, Inflation, Real interest rate.

quarters, \$777.63m at the end of the first three quarters of the year. However, in the first quarter of 2021, the FDI fell to \$154.76m and tumbled further to \$77.97m in Q2, the lowest in about 11years. In Q3 2021, the FDI remained below \$200, rising marginally to \$107.8m (NBS, 2021)

Previous studies from developed countries such as Mollah, Muhammad, József, Włodzimierz, and Judit, (2020); Mohsen, Shamseddin, Karim and Ali, (2020); Mollah, Nahin, Muhammad, Mohammad and Riad (2021); Mumtaz, (2016); Rodolphe & Shang, 2014) and (Chaitanya, 2012) discovered that financial development attract foreign direct investment while only studied in developing countries based on researcher finding John, (2011) found that financial development has negative effect on FDI inflows based on inability to access studied on developing country, this study intend to fill the gap to examined the effect of banking sectors development on foreign direct investment in Nigeria.

The findings in our work can have important policy implications for Nigeria as countries in the world. Identifying the relationship can help in improving the quality of local financial systems to make them more attractive for any multinational firms to invest in markets.

The remainder of this paper is organized as follows: section 2 briefly summarizes the theoretical models and presents a review of the recent empirical literature on the topic. The data used for the empirical estimations is described in section 3 whereas section 4 features the econometric results from the analysis and their implications for policy focusing on the case of Nigeria. The findings are summarized in the conclusion

### **Literature Review**

This section discuss theoretical study, empirical study and gap of the study

### **Theoretical Study**

There is dual effect of financial development on foreign direct investment, which classified as direct effects and indirect effects:



### **The Direct Effect**

Foreign direct investment (FDI) project involves establishing or purchasing a production facility in the hosting country (Helpman, Melitz, & Yeaple, 2004). The ability of firms to finance the upfront fixed costs of FDI with internal funds varies across sectors. Some sectors are technologically more dependent on external finance; Firms in these financially vulnerable sectors will have to rely heavily on external finance to engage in FDI since they will only be able to internally finance a small fraction of the fixed costs of FDI (Buch, Kesternich, Lippone, & Schnitzer, 2009; Buch, Kesternich, Lippone, & Schnitzer, 2010). Firms' access to external finance depends on financial development. Hence, Country with higher source financial development (SFD) should have a positive direct external finance effect on the volume of outward FDI, which ought to be larger in more financially vulnerable sectors. Rise in firm-specific credit constraints resulted in lower FDI (Klein, Peek, & Rosengren, 2002).

Higher destination financial development (DFD) can also have a positive direct external finance effect on the volume of FDI inflow, if a fraction of the external financing required by financially vulnerable firms to engage in FDI is raised in the destination country. Firms may choose to use this source of external finance, if local financing conditions are favourable (Desai, Foley, & Hines, 2004; Harrison, Love, & McMillan, 2004; Shapiro, 2006). They may also be constrained to do so, if source countries' financial institutions are reluctant to fully cover the costs of FDI (or ask for a risk premium) because monitoring a foreign project and enforcing cross-border claims raise difficulties which are not present with the financing of a domestic project (Buch et al., 2009; Bilir, Chor, & Manova, 2013).

### **Indirect Effect**

Financial development strengthens competitive conditions among enterprises, On the other hand, stronger domestic competition could encourage firms to allocate a greater fraction of their limited financial resources towards foreign expansion rather than domestic expansion, and greater financial development should allow firms to compensate part of the shortfall in internal funds with external funds. Overall, the growth of local manufacturing sectors induced by higher financial development should have a positive indirect agglomeration effect on inward FDI, which is likely to dominate any potential negative indirect competition effect (Rodolphe & Shang, 2017).

### **Empirical study**

Mollah, Nahin, Muhammad, Mohammad and Riad (2021), studied how financial development attracts foreign direct investments for a sustainable real sector development of a country and found that development of a country's financial sector is one of the most important attractors of FDIs. Theoretically, financial sector development works as a symbol of trust and goodness to the new potential investors and a good resource allocation channel for the existing investors.



Mollah, Muhammad, József, Włodzimierz, and Judit (2020), investigates the financial development and FDI nexus used generalized methods of moments and they discovered that Financial development of Belt and Road Initiative (BRI) host countries significantly attracts FDI, while the institutional quality plays a significant moderating role in this relation. The in-depth analysis offers the insight that financial markets are less attractive to FDI relative to financial institutions. FD has a significant and positive role in attracting FDI, IQ shows a positive and significant effect on FDI, real GDP per capita, has highly significant ( $p < 0.01$ ) and positive, domestic investment variable is positive and highly significant, a country's openness to trade is prone to attract foreign investment to the country with positive and highly significant coefficients, an increase in human capital, FDI inflows decrease, the macroeconomic stability variable—inflation—shows a positive and significant coefficient.

Mohsen, Shamseddin, Karim and Ali (2020), examine the effects of financial development indicators in two groups (the financial markets index and the financial institution index) on the FDI absorption rate used panel Dynamic OLS estimates and discovered that when the financial institutional index including (FID, FIE), financial market index including (FMD), GDP & DCP increase the FDI increases, and when FIA, FMA & FME increase, the FDI decreases. So Expanding the capital market will increase FDI attraction in selected countries, and for countries with weak capital markets, the financial market access index and the financial institution efficiency index has a significant negative effect on FDI absorption and vice versa.

Hameed and Umair (2019), revisit the nexus of financial development and FDI inflows in Chinese perspective employed ARDL bound testing and VECM procedures, they found that there is a long-run relationship between FDI and financial development. Bidirectional causality is confirmed by using VECM. The inclusion of control variables, e.g., institutional quality, transport infrastructure, per capita GDP, trade openness, domestic investment, natural resources rent, is robust in the analysis. The positive role of financial development in FDI inflows is of utmost importance for policymakers and the Chinese government. Several policy implications are given in this study.

Mumtaz, (2016), studied the likely effect of financial development on inward Foreign Direct Investment (FDI) in Middle East and North African (MENA) nations, used random effects panel estimation method and found significant positive influence of financial development on overseas investors' investment decision.

Rodolphe and Shang (2014), investigates the various effects that source and destination countries' financial development (SFD and DFD respectively) have on foreign direct investment (FDI), employed pooled Poisson QMLE and found that Source financial development and Destination financial development have a large positive influence on greenfield, expansion, and mergers & acquisitions FDI, by directly increasing access to external finance and indirectly promoting manufacturing activity. The overall economic impacts of SFD and DFD tend to be similar but their direct and indirect effects vary across margins and types of FDI.



Chaitanya, (2012), examine if a well-functioning financial system has an impact on the FDI inflows and outflows of a country using the data mining techniques of attribute analysis, association and classification used Linear Regression and discovered that FDI is not directed into countries that are financially weak and is dependent on both the stock market variables and the banking sector variables. The development of the financial system of the recipient country is an important precondition for FDI to have a positive impact on economic growth.

John (2011) study determinants of Foreign Direct Investment Inflows to Africa, 1980-200 analyses that with robust Ordinary Least Squares (OLS) and robust GLM and result show that there is a positive relationship between market size and FDI inflows; openness to trade has a positive impact on FDI flows; higher financial development has negative effect on FDI inflows; high government consumption expenditure attracts FDI inflows to Africa; higher FDI goes where international remittances also goes in Africa; agglomeration has a strong positive impact on FDI inflows to Africa; natural resource endowment and exploitation (especially for oil) attracts huge FDI into Africa.

**Methodology**

To achieve the objective of the study this is examine the effect of banking sectors development on foreign direct investment in Nigeria. The study uses secondary data, the time series annually data spanning from 1960 to 2021, comprising 60years it will be applied. The required data related to FDI and banking sectors measure by financial depth proxy for domestic credit to private sector and broad money supply and financial efficiency proxy for net interest margin have been collected from the World Bank. However, In order to analyze the collected data the statistical tools such as the Augmented Dicky Fuller (ADF) and Philip Person (PP) type unit root test was employed to check the stationary among the variables. The autoregressive distributed lags (ARDL) approach was applied to examine the effect of bank development on foreign direct investment in Nigeria. The main reason to use ARDL of Pesaran, Shin and Smith (2001) in this paper is that, the sample size is small, as other models such as VAR and VECM need big samples size. Moreover, it can be used when the variables are stationary at 0, 1 or mixture unlike other models such as VAR can accept only stationary at 0.

The ARDL approach can be framed as in Equation.

$$\text{LNFDI}_{it} = \beta_0 + \beta_1 \text{LNFDI}_{it(-1)} + \beta_2 \text{LNFDI}_{it(-2)} + \beta_3 \text{DCP}_{it} + \beta_4 \text{DCP}_{it(-1)} + \beta_5 \text{DCP}_{it(-2)} + \beta_6 \text{GDP}_{it} + \beta_7 \text{GDP}_{it(-1)} + \beta_8 \text{GDP}_{it(-2)} + \beta_9 \text{IF}_{it} + \beta_{10} \text{IF}_{it(-1)} + \beta_{11} \text{IF}_{it(-2)} + \beta_{12} \text{IF}_{it(-3)} + \beta_{13} \text{IF}_{it(-4)} + \beta_{14} \text{M2}_{it} + \beta_{15} \text{M2}_{it(-1)} + \beta_{16} \text{M2}_{it(-2)} + \beta_{17} \text{RIR}_{it} + \beta_{18} \text{RIR}_{it(-1)} + \beta_{19} \text{RIR}_{it(-2)} + \beta_{20} \text{RIR}_{it(-3)} + \beta_{21} \text{RIR}_{it(-4)} + \mu_{it} \dots \dots \dots (1)$$

Where

FDI = Foreign direct investment (dependent variable)

Independent variables are;



DCP = Domestic credit to private sectors

MS<sub>2</sub> = Broad money supply

IF = Inflation

RIR = Interest rate

$\mu$  = Error term

A prior Expectation

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$

### Analysis and interpretation of result

Table 4.1 Descriptive statistics

Variables	LNFDI	DCP	GDP	IF	MS <sub>2</sub>	RIR
Mean	20.77411	8.871647	1.62E+11	18.36040	25.05844	-1.216142
Median	20.54143	8.102352	7.15E+10	12.94178	20.04437	1.956244
Maximum	22.90267	19.62560	5.47E+11	72.83550	89.19787	18.18000
Minimum	19.05813	4.699551	9.18E+09	3.457650	-2.010345	-65.85715
Std. Dev.	1.191827	3.407478	1.66E+11	15.58884	20.21337	14.24268
Observations	50	50	50	50	50	50

Source: Authors' computation from E-View 9

The descriptive statistics show that the mean value of the Log of foreign direct investment (LNFDI) is 20.77 with a standard deviation of 1.19. The maximum value for LNFDI is 22.90 in a year, while the minimum is 19.05. the mean value of Domestic credit to private sectors (DCP) is 8.87% with standard deviation of 3.41% while the maximum and minimum are 19.63% and 4.69% respectively, the average value of Gross domestic product (GDP) is 1.62% with standard deviation of 1.66% while the maximum and minimum are 5.47% and 9.18% respectively, Inflation rate (IF) has average value of 18.36% with standard deviation of 15.58% while the maximum and minimum are 73.83% and 3.45% respectively, the mean value and standard deviation of Broad money supply (MS<sub>2</sub>) are 25.05% and 20.21% respectively while the maximum and minimum are 89.19% and -2.01% respectively, Real interest rate (RIR) has an average of -1.21% with standard deviation of 14.24%, it maximum and minimum are 18.18% and -65.85% respectively.

Table 4.2: ADF and PP Stationary test first difference

Variables	ADF(Intercept)	ADF (Intercept & Trend)	PP(Intercept)	PP (Intercept & Trend)	Conclusions
LNFDI	-1.982120(-3.574446)**	-11.22652(-4.170583)*	-1.982120(-3.574446)**	-11.23471(-4.170583)	I(1)



<b>DCP</b>	-2.239385(- 3.568308)**	-5.836226(- 4.165756)	-2.112775(- 3.568308)**	-9.781093(- 4.156734)	I(1)
<b>GDP</b>	-0.565179(- 3.571310)**	-4.974725(- 4.156734)	-0.003727(- 3.568308)**	-4.824729(- 4.156734)	I(1)
<b>IF</b>	-3.480684(- 3.568308)*	-7.214560(- 4.161144)	-3.312633(- 3.568308)*	-15.49202(- 4.156734)	I(0)
<b>MS2</b>	-4.749645(- 3.568308)*	-8.610714(- 4.156734)	-4.625065(- 3.568308)*	-23.08329(- 4.156734)	I(0)
<b>RIR</b>	-5.528028(- 3.568308)*	-4.701061 (- 4.205004)	-5.537743(- 3.568308)*	-39.32175(- 4.156734)	I(0)

**Note:** \* denotes Significance at 1% level. Figures within parenthesis indicate critical values. Mackinnon (1991) critical value for rejection of hypothesis of unit root applied.

**Source:** Author's Estimation using Eviews 9.

Result from the Augmented Dickey Fuller and Philip Person unit root test above table shows that Inflation, broad money supply, real interest rate were stationary at level i.e integrated at order zero I(0) while foreign direct investment, domestic credit to sector and gross domestic product were stationary at first difference i.e I(1). On the basis of this, the null hypothesis of non-stationary is rejected at level and first differential as a result of differences in stationary of variables we can use ordinary least square to avoid spurious regression therefore Auto regression distribution lag can be applied.

Table 4.3 Regression Analysis

Dependent Variable: LNFDI

Method: ARDL

Date: 10/12/22 Time: 02:36

Sample (adjusted): 1974 2020

Included observations: 44 after adjustments

Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (4 lags, automatic): DCP GDP IF MS2 RIR

Fixed regressors: C

Number of models evaluated: 12500

Selected Model: ARDL(2, 2, 2, 4, 2, 4)

Note: final equation sample is larger than selection sample



Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNFDI(-1)	0.307882	0.129669	2.374373	0.0267
LNFDI(-2)	0.457692	0.128297	3.567444	0.0017
DCP	0.145924	0.055289	2.639312	0.0150
DCP(-1)	-0.123377	0.074856	-1.648191	0.1135
DCP(-2)	0.083521	0.051807	1.612163	0.1212
GDP	-1.88E-12	2.71E-12	-0.692265	0.4960
GDP(-1)	8.84E-12	4.30E-12	2.057208	0.0517
GDP(-2)	-9.53E-12	2.77E-12	-3.446771	0.0023
IF	-0.011821	0.008054	-1.467679	0.1563
IF(-1)	0.030545	0.008993	3.396439	0.0026
IF(-2)	-0.006805	0.007864	-0.865291	0.3962
IF(-3)	-0.027895	0.008079	-3.452786	0.0023
IF(-4)	0.021689	0.006394	3.392178	0.0026
MS2	-0.004040	0.004581	-0.882034	0.3873
MS2(-1)	0.008335	0.005007	1.664876	0.1101
MS2(-2)	-0.014461	0.005222	-2.769186	0.0112
RIR	-0.018317	0.012286	-1.490966	0.1502
RIR(-1)	0.048075	0.011112	4.326510	0.0003
RIR(-2)	-0.004923	0.005780	-0.851718	0.4035
RIR(-3)	0.003960	0.005676	0.697636	0.4927
RIR(-4)	0.009596	0.005713	1.679630	0.1072
C	4.519465	2.802881	1.612435	0.1211
R-squared	0.949694	Mean dependent var		20.92797
Adjusted R-squared	0.901674	S.D. dependent var		1.184616
S.E. of regression	0.371460	Akaike info criterion		1.164101
Sum squared resid	3.035614	Schwarz criterion		2.056196
Log likelihood	-3.610226	Hannan-Quinn criter.		1.494933
F-statistic	19.77715	Durbin-Watson stat		2.086519
Prob(F-statistic)	0.000000			
<b>*Note: p-values and any subsequent tests do not account for model</b>				
<b>Selection.</b>				

A month lags of foreign direct investment (FDI), gross domestic product (GDP), inflation (IF) and real interest rate (RIR) have positive significant effect on foreign direct investment (FDI) at 5% significant level with p-value of 0.0267, 0.0517, 0.0026 and 0.0003 respectively indicate that



percentage increase in a month lags of FDI increase foreign direct investment by 0.3%, a unit increase in a month lag of GDP increase FDI by  $8.84E-12$  and a unit increase in a month lag of RIR increase FDI by 0.048 while a month lag of domestic credit to private sectors (DCP) and broad money supply (MS2) have no significant effect on FDI at 5% significant level.

Two months lag of FDI as positive significant effect on FDI while MS2 has negative significant effect on FDI at 5% significant level indicate that a unit increase in two month lag of FDI increase FDI by 0.45 while a unit increase in two month lag of MS2 decrease FDI by 0.014 while Two months lag of DCP, IF and RIR have no significant effect.

Three month lag of IF has negative significant effect on FDI at 5% significant level indicate that a unit increase in IF decrease FDI by 0.027 while three month lag of RIR has no significant effect. Four months lag of IF has positive significant effect on FDI at 5% significant level indicate that a unit increase in IF increase FDI by 0.021 while four months lag of RIR has no significant effect.

Current year DCP has positive significant effect on FDI at 5% significant level indicate that a unit increase in DCP increase FDI by 0.146, while GDP, IF and RIR have no effect on FDI.

The F-statistic shows a value of 19.77715 and a p-value of 0.0000. This indicates that banking sectors development indicators included in the model had joint significant effect on foreign direct investment. This means the overall model is significant at 5% critical level. While the R-squared and Adjusted R-squared show values of 0.949694 and 0.901674 which indicate that about 94.9% (and about 90.17% after adjusting for loss of degree of freedom) of variation in FDI is explained by banking sectors development indicators included in the model. This implies that banking sectors development indicators have high explanatory power on FDI. This indicates that the model is in good fit. The Durbin-Watson statistics shows a value of 2.086519. Since this value is 2, a conclusion can be made that there is absence of serial correlation in the model.

## **Conclusion and Recommendation**

### **Conclusion**

The findings of this study indicate that banking sectors development indicators such as A month lags of foreign direct investment (FDI), gross domestic product (GDP), inflation (IF) and real interest rate (RIR) have positive significant effect on foreign direct investment, Two months lag of FDI as positive significant effect on FDI while MS2 has negative significant effect on FDI, Three month lag of IF has negative significant effect on FDI, Four months lag of IF has positive significant effect on FDI and current year DCP has positive significant effect on FDI. Therefore, banking sectors development has significant effect on foreign direct investment.

### **Recommendation**

- i. It is recommended that the Central bank of Nigeria (CBN) should encourage all banks to grant more loans to domestic private sectors which in turn lead to increase foreign direct investment in Nigeria.



- ii. Government should introduce reform policies to make their banking sectors more efficient and investment-friendly.

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