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Impact of Financial Institutions Development on Foreign Direct Investment in Nigeria

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Abstract **Original Research Article**

This study examines the effect of financial institutions development on foreign direct investment (FDI) in Nigeria from 1986–2025, focusing on financial depth, access, and efficiency. Using an ex post facto research design and the Autoregressive Distributed Lag (ARDL) model with data from the World Development Indicators and International Monetary Fund, the study analyzes both short- and long-run relationships. Findings revealed a long-run cointegration between financial institutions development and FDI. Specifically, financial institutions access and efficiency were found to have positive and significant impact on FDI in both the short run and long run while Financial institution depth had a positive and non significant effect. Diagnostic tests confirm the robustness of the model. The study concludes that sustainable improvements in financial access and efficiency, alongside effective long-term institutional development, enhance Nigeria's capacity to attract foreign capital. It recommends that the Central Bank of Nigeria should strengthen financial inclusion through digital finance, improve institutional efficiency by reducing non-performing loans and intermediation costs, and promote financial deepening with stronger governance and supervision to enhance the attraction of foreign direct investment.

Keywords: Financial institutions development, financial institutions access, financial institutions depth, financial institutions efficiency, and foreign direct investment.

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1. Introduction

Foreign Direct Investment (FDI) is widely recognized as one of the major contributors to foreign inflows, as well as a source of economic growth and development, particularly for emerging economies like Nigeria (Manuchehr, 2021; Elya et al., 2018). FDI inflows are viewed as an engine of growth because they provide the capital needed for investment, increase competition in domestic industries, and help local firms become more productive by adopting more efficient technology and/or by investing in human and/or physical capital (Ibrahim & Mutiu, 2013).

A financial institution (FI) is an intermediary that facilitates the movement of capital between lenders and borrowers. It provides a variety of financial products and services that allow individuals, corporations, and governments to manage their funds, invest for the future, and access the funds they need for growth. Moreover, Financial institutions,

which act as vital middlemen that ease the movement of capital and money, are the foundation of a contemporary economy and financial development will help emerging economies such as Nigeria reap more growth from foreign capital flows especially if financial reforms are sustained. (AFP, nd; Adeniyi 2015; & Jayalakshmi & Gokulnath, 2024). According to the World Bank (2023), financial institutions development involves the growth and improvement of institutional capabilities, functions, and effectiveness within the financial system. This development facilitates more efficient mobilization of savings, capital allocation, risk management, and the delivery of financial services to bolster extensive economic activities. This institutional development contributes to financial depth, access, and efficiency. It also refers to improvements in the services provided by financial intermediaries such as banks, credit unions, investment businesses, and central banks (Jayalakshmi and Gokulnath, 2024).

In this study, financial institutions development is measured using the core components of depth, access, and efficiency of the Nigerian financial system:

The depth of Nigeria's financial institutions refers to the overall size and liquidity of the banking sector and other non-bank financial intermediaries relative to the broader economy (Mustapha, 2023). Nigeria has achieved considerable financial deepening, notably following the 2005 banking reforms which mandated an enhanced capital base, leading to sector consolidation and a greater capacity for lending (Mustapha, 2023). Significant measures of depth include the ratio of private sector credit to GDP and the ratio of broad money (M2) to GDP, which together indicate the extent to which funds are mediated by financial institutions (Egbetunde & Abayomi, 2024). Despite these advancements, persistent challenges, such as the prevalence of high non-performing loans and inadequate long-term financing facilities, continue to constrain the full potential of financial depth to attract FDI (Egbetunde & Abayomi 2024).

Access serves as a proxy for the availability and ease with which individuals and businesses can utilize formal financial services. While policies such as financial inclusion programs and the expansion of mobile banking have widened accessibility, a significant portion of the Nigerian population remains unbanked or underbanked (Bekele & Degu, 2023). The Central Bank of Nigeria (CBN)'s National Financial Inclusion Strategy has actively promoted agent banking, microfinance institutions, and digital payment systems to improve access (Quadri et al, 2024). Nevertheless, gaps persist, particularly in rural areas, stemming from a shortage of infrastructure and low levels of financial literacy (Ajide & Ojeyinka, 2022). Enhanced financial connectivity is vital for attracting FDI, as foreign investors favor economies where local firms and consumers can effortlessly receive payments and credit flows (Ayodele et al, 2022).

The efficiency of Nigeria’s financial institutions concerns the ability of intermediaries, such as banks, to properly mobilize and allocate savings at minimal cost (Nadabo et al., 2024). Efficiency is typically gauged using metrics like the net interest margin, overhead costs relative to total assets, and the speed of financial transactions (Ozilli, 2021). While the banking sector has embraced technology, exemplified by the rise of electronic banking and digital payment platforms, inefficiencies remain due to high operational costs, regulatory bottlenecks, and occasional systemic risks (CBN, 2023). A highly efficient financial system is critical for reducing transaction costs for foreign investors, improving liquidity management, and enhancing the overall ease of doing business, thereby making the economy more compelling for FDI inflows (Habiba & Xinbang, 2022).

As one of the largest economies in Africa, Nigeria has historically been a significant destination for capital inflows, with FDI consistently accounting for a major share of the total. However, the country's foreign direct investment (FDI) has been characterized by significant instability and decline. For instance, statistics from the United Nations Conference on Trade and Development (UNCTAD) reveal a sharp decline in foreign direct investment (FDI) inflows from about $8.8 billion in 2011 to about $1.1 billion in 2024 (UNCTAD, 2025), before a partial recovery to $4.01 billion in 2025, driven largely by oil and gas project finance (UNCTAD,

2026). This long-run decline and volatility highlight the need for a more detailed empirical examination, given the generally recognized critical role that financial institution development plays in attracting foreign direct investment. The theoretical relationship between financial development and foreign direct investment (FDI) attraction is significant; however, prior empirical studies have predominantly employed cross-country analyses and have frequently focused on aggregated indicators of financial sector development, neglecting its complex, multi-dimensional characteristics. This limitation has perhaps hindered a clear understanding of the relationship between a developing financial sector and its ability to attract foreign capital.

This study is thus motivated to investigate the impact of financial institutions development on foreign direct investment in Nigeria using a disaggregated framework, focusing specifically on the core components of depth, access, and efficiency. By employing this disaggregated approach, this research attempts to provide a more nuanced and empirically sound understanding of how particular improvement in the Nigerian financial sector, as measured by its depth, access, and efficiency, translate into the ability to draw in and maintain foreign direct investment.

In line with the above, this study formulates the following null hypothesis;

H01. Financial institution access does not have a significant impact on foreign direct investment in Nigeria

H02. Financial institution depth does not have a significant impact on foreign direct investment in Nigeria

H03. Financial institution efficiency does not have a significant effect on foreign direct investment in Nigeria

2. Literature Review

2.1 Conceptual Review

Foreign Direct Investment

Flora et al. (2020) define FDI as investments made by an individual or company in one nation for profitability in another nation, either through the acquisition of business assets or the establishment of business operations in that country, including controlling interests or ownership of a foreign firm.

Foreign direct investment (FDI) is also defined as an investment involving the acquisition or creation of assets by foreigners or a joint venture with local governments in order to establish a long-term business relationship (Chinedu, 2021). Also, Yeboua (2019) stated that foreign direct investment, the main channel through which business entities expand their operations abroad, is believed to be not only about capital movement across borders but also an avenue for knowledge and advanced technology transfer, which, in turn, stimulates economic progress in the host country.

In other words, it is the process by which a person or an entity from one nation (the source country) acquires ownership of an investment in another (the host country) for the goal of controlling and distributing production as well as other connected operations of a corporation located in the host country. In this study, FDI is measured using net FDI inflows (% of GDP).

Financial Institutions Development

According to World Bank (2023) financial institutions development involves the growth and improvement of institutional capabilities, functions, and effectiveness within the financial system. This development facilitates more efficient mobilization of savings, capital allocation, risk management, and the delivery of financial services to bolster extensive economic activities. This institutional development contributes to financial depth, access, and efficiency. It is also refers to the improvement in the services provided by the financial intermediaries such banks, credit unions, investment businesses, and central banks (Jayalakshmi and Gokulnath, 2024).

Financial Institutions Depth

Financial institutions' depth refers to the overall size, liquidity, and scale of operations of financial institutions within an economy. It is a key dimension of financial sector development and a critical driver

of economic growth and investment flows, including foreign direct investment (FDI) (Beck et al., 2010; World Bank, 2023).

At its core, financial institutions' depth reflects the extent to which financial resources are intermediated by institutions such as banks, insurance companies, and pension funds relative to the size of the economy. A deeper financial institution sector implies greater availability of funds for investment, more robust credit intermediation, and an expanded capacity to support productive economic activities (Sahay et al., 2015). Common indicators used to measure financial institutions' depth include; domestic credit to the private sector by banks (% of GDP), bank assets, and broad money supply among others. These proxies are widely used in empirical literature to capture how deep and resourceful the financial system is (IMF, 2016; World Bank, 2023).

Financial Institutions Access

Financial institutions' access refers to the ease with which individuals, households, and businesses can use financial services provided by institutions such as banks, credit unions, microfinance institutions, and insurance firms. It is one of the core dimensions of financial sector development and is essential for promoting inclusive growth, poverty reduction, and private sector development (Beck et al., 2007; World Bank, 2023). Access to financial institutions ensures that a greater portion of the population can utilize services such as savings accounts, credit, insurance, and payment platforms. The broader and more equitable the access to these services, the more efficiently financial intermediation can drive economic activity and attract investments like foreign direct investment (FDI) (Sarma & Pais, 2011). Financial institutions' access is typically measured using indicators that reflect the availability and usage of financial services across various segments of society. Common proxies include; Number of commercial bank branches per 100,000 adults, number of ATMs per 100,000 adults, volume of deposit accounts per 1,000 adults and Loans to small and medium enterprises (SMEs).

Financial institutions Efficiency

Financial institutions' efficiency refers to the ability of financial institutions primarily banks and similar intermediaries to deliver financial services at the lowest possible cost while maintaining quality, stability, and profitability. It captures how well financial intermediaries allocate resources, manage risks, minimize operating costs, and provide financial services to the public and private sectors (Beck et al., 2000; IMF, 2016). Efficiency is a core dimension of financial development and plays a crucial role in ensuring the sustainability, resilience, and competitiveness of the financial system. Efficient financial institutions are more likely to channel savings into productive investments, reduce credit constraints, and promote financial deepening and inclusion (Levine, 2005). Efficiency in financial institutions is often measured using financial performance ratios that assess operational cost, profitability, and risk management. Key proxies include the net interest margin (NIM) which measures the spread between interest income and interest expenses, indicating income generation efficiency. Return on assets (ROA) Indicates how effectively a financial institution utilizes its assets to generate profits. Cost-to-income ratio reflects operational efficiency by showing the percentage of income consumed by operating costs. Non-performing loans (NPLs) as a percentage of total loans measures credit risk management efficiency. Loan-deposit ratio evaluates how effectively institutions convert deposits into loans. These indicators are widely used in both academic and policy literature (Sahay et al., 2015; World Bank, 2023).

2.2 Empirical Review

Magakam and Zhao (2020) examined the impact of financial institution development on the absorption of foreign direct investment in Africa from 1980-2018. The study used the IMF's framework to measure financial institutions development using their dimensions of depth, access and efficiency. they employed PMG, MG and DFE to analyse the relationship. The empirical result suggests that a positive and significant impact is found in the long-

term in regions while no significant impact is found in the short run.

Al Mustofa et al (2025) investigated the nexus relationship between foreign direct investment (FDI), economic growth (EG) and financial development by focusing on the levels of economies. Using panel data and a panel pooled mean group (PMG) estimation approach, they found that FDI and financial development are crucial factors stimulating long-term EG. Specifically, in emerging economies, this study found that the institutions-based financial system is more dominant than the market-based financial system when attracting capital inflows. This response shows that emerging economies experience an effect of intermediation institutions first to build inclusive financial development.

Chettri (2022) examined the long-run and short-run growth effects of financial institutions depth in Nepal along with the sensitivity to the choice of proxy representing financial depth. Using annual time-series data for the period from 1980 till 2019, obtained from Quarterly Economic Bulletins published by Nepal Rastra Bank, the study employed autoregressive distribute lag (ARDL) model with bounds testing procedures to examine cointegration. Domestic credit to private sector, broad money supply, total deposits and financial institution's assets are used as proxies for financial institutions depth as indicated by World Bank. Real GDP is used to measure economic growth and the influence of macroeconomic environment is accounted by inflation and trade openness. The bounds tests found cointegration in economic growth functions and the regression results revealed that domestic credit to private sector performed better than other indicators in terms of its significant contribution to economic growth both in the long-run and the short-run. Money supply and financial deposits show significant positive contribution to growth in the long-run. The positive relationship of financial depth indicators with economic growth also supports the supply-leading (finance-led-growth) hypothesis in the long-run.

Olayungbo (2013) examined how banking sector performance—through efficiency indicators such as return on assets (ROA), operating costs, and liquidity—affects capital inflows in Nigeria, including FDI. Using vector error correction modeling (VECM), the study found that banking efficiency significantly and positively affects FDI. This is because foreign investors prefer environments where the financial system is stable, cost-efficient, and productive.

Islam et al (2020) investigated the financial development and FDI nexus, using institutional quality as a moderator. The sample consists of 79 Belt and Road Initiative (BRI) partner countries. The empirical findings o show that the financial development of BRI host countries significantly attracts FDI, while the institutional quality played 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.

Nwani and Bassey (2022) in their recent study investigated the relationship between financial sector performance (including institutional efficiency measured through overhead costs and interest spreads) and FDI in Nigeria. Using ARDL estimation techniques, the study found a positive and significant effect of efficiency on FDI, concluding that improved resource utilization by banks creates a more conducive climate for investment inflows.

Egbetunde and Abayomi (2024) investigated effect of monetary policy and financial development on Foreign Direct Investment (FDI) inflow in Nigeria. They employed ARDL model and found that financial development had long run positive and significant impact on FDI inflow, but had significant and negative effect in the short run. Therefore, the study recommends that monetary authority should ensure strong financial institutions that will attract more FDI inflows into the country.

Doan and Bui (2021) examined the impact of financial depth (FD) on foreign direct investment (FDI) in emerging markets and developing economies (EMDEs). The data were obtained in 8 Asian EMDEs including Vietnam, Thailand, Philippines, Malaysia, Sri Lanka, India, Indonesia, and China. They utilized panel threshold regression which is superior to other traditional models,

especially in analyzing the nonlinear relationship between variables. The findings revealed that FD has a nonlinear effect on FDI with the threshold value $\gamma = 82.9\%$. Specifically, if FD reaches the threshold γ, FD is positively associated with FDI. This correlation turns to be negative but at a lower level beyond the threshold value. In addition, the study showed the positive impact of economic growth (EG) and inflation (INF) on FDI. This confirms the importance of FD and macroeconomic factors in attracting FDI into EMDE.

2.3 Theoretical Framework

Eclectic Pradigm (OLI) Theory

This study is anchored on the eclectic paradigm or OLI framework proposed by Dunning (1988) because this theoretical lens provides a systematic approach for understanding the specific framework through which financial sector characteristics influence the investment decisions of multinational enterprises. The OLI framework posits that foreign direct investment occurs when a firm simultaneously possesses ownership advantages, locational advantages, and internalization advantages (Egbetunde and Abayomi, 2024). Within this tripartite structure, the development of financial institutions directly speaks to the locational advantages that a host country like Nigeria can offer to foreign investors, as a well-functioning financial system signals economic stability, credible regulatory oversight, and the availability of critical support services that reduce the costs and risks associated with cross-border capital deployment. By anchoring the study on this framework, the researcher can meaningfully interpret how improvements in financial institution access, depth, and efficiency translate into tangible locational benefits that attract multinational corporations seeking to establish or expand their operations in Nigeria. Furthermore, the OLI framework allows the study to go beyond merely establishing statistical relationships by providing a theoretical justification for why financial sector reforms, such as banking consolidation and digital payment innovations, enhance Nigeria's investment readiness and competitive positioning relative to other emerging economies

Financial Liberalization Theory

In addition to the eclectic paradigm, the study is also anchored on the Financial Liberalization Theory, which is particularly relevant to the Nigerian context given the extensive financial sector reforms that have been implemented over the past few decades. Financial Liberalization Theory, associated with the work of McKinnon and Shaw, argues that the removal of government-imposed restrictions on financial markets, including interest rate deregulation, reduction of reserve requirements, and the privatization of financial institutions, leads to a more efficient allocation of resources, higher savings, and increased investment, thereby creating a conducive environment for both domestic and foreign capital inflows (McKinnon, 1973; Shaw, 1973). This theoretical perspective is essential for the study because Nigeria's financial landscape has undergone significant liberalization since the structural adjustment programs of the 1980s, followed by the banking sector consolidation in 2004-2005 and the subsequent embrace of fintech innovations, all of which have expanded financial access and improved institutional efficiency. By incorporating Financial Liberalization Theory, the study can effectively capture the dynamic policy environment that has shaped the evolution of Nigerian financial institutions and help explain why different dimensions of financial development, such as access, efficiency and depth, may affect FDI differently. Together, the OLI framework and Financial Liberalization Theory offer a robust and complementary theoretical foundation that addresses both the micro-level investment decisions of multinational enterprises and the macro-level policy environment that shapes the financial ecosystem in Nigeria, enabling the study to produce a holistic analysis of the relationship between financial institutions development and foreign direct investment.

3. Methodology

In this study, ex post-facto research design was adopted, and it entailed logical investigation of events following their occurrence. The ex-post facto approach, unlike the survey or experimental designs, does not allow manipulation of variables; therefore, it uses past data to test the relationship between variables. The design enables logical deductions to be made without the interference from the researchers by analyzing past events (Onwumere, 2021). In this framework, the study looked at how the development of the financial institutions affects foreign direct investment in Nigeria, 1986-2025. Specifically, the study disaggregated the financial institutions development into financial institutions access, financial institutions depth, and financial institutions efficiency; while the foreign direct investment was measured as a percentage of GDP in Nigeria. The variables data used in the study were obtained from the World Development Indicators (WDI) and International Monetary Fund (IMF).

3.1 Model Specification

This study is modelled after the theory of financial development by Gurley and Shaw (1960), and empirically espoused the model of Agabi et al. (2025) who investigated the impact of foreign inflows on financial institutions development in Sub-Saharan Africa: A panel data approach. Unlike the panel data approach, this study also utilized the time series data approach. The Agabi et al. (2025) model is hereby restated as follows:

FID = f (DR, FDI, ODA, EXCR) …… (1)

The model was specified in a linear equation as:

$$FID = \sum_{j=0}^{p} \gamma_{it} tFID_{i,t-j} + \sum_{j=0}^{q} \delta'_1 DR_{i,t-j} + \sum_{j=0}^{q} \delta'_2 FDI_{i,t-j} + \sum_{j=0}^{q} \delta'_3 ODA_{i,t-j} + \sum_{j=0}^{q} \delta'_4 EXCR_{i,t-j} + \mu_t \ldots (2)$$

However, in aligning with the objectives of this study, the study adopts Autoregressive Distributed Lag (ARDL) model developed by Pesaran and Shin (1998) and Pesaran et al. (2001) and specified its model as follows:

$$FDI_t = \pi_o + \sum_{j=1}^{p} \delta_1 FDI_{t-i} + \sum_{i=0}^{q} \delta_2 FIA_{t-i} SS + \sum_{i=0}^{q} \delta_3 FID_{t-i} + \sum_{i=0}^{q} \delta_4 FIE_{t-i} + \sum_{i=0}^{q} \delta_5 EXCR_{t-i} + \beta_1 FIA_{t-i} + \beta_2 FID_{t-i} + \beta_3 FIE_{t-i} + \beta_4 EXCR_{t-i} + \mu_t \quad \ldots (3)$$

Where π_o is the intercept, δ_1- δ_5 stand as the coefficients of the short run explanatory variables, β_1 - β_4 means coefficients of the long run influencing variables, while μ is the error term. The dependent variable is measured by foreign direct investment (FDI), while the independent variable, financial institutions development, is measured by Financial Institutions Access (FIA), Financial Institutions Depth (FID), and Financial Institutions Efficiency (FIE), while controlling for exchange rate.

The description of the model variables along with the apriori expectation is presented in the Table 1 below:

Table 1: Description of Variables and Apriori Expectation

Variables	Symbol	Measurement	Source	Apriori Expectation
Foreign Direct Investment	FDI	Net inflows of FDI percentage of GDP	WDI 2024	
Financial Institutions Depth	FID	Bank credit to private sector in percentage of GDP, Pension assets to GDP , Mutual Fund to GDP and insurance premium ,life and non life to GDP.	IMF 2024	+
Financial Institutions Access	FIA	Bank branches per 100,000 adults and ATM per 100,000 adults	IMF 2024	+
Financial Institutions Efficiency	FIE	Banking sector net interest margin , lending-deposit spread.	IMF 2024	+
Exchange Rate as % of GDP	EXR	Official exchange rate	WDI 2024	-

Source: **1Authors' 1Compilation, 12026**.

4. Results and Discussions

This section presents and discusses the empirical findings of the study. Table 2 below presents the decriptives statistics of the variables.

Table 2. ***Basic Descriptive Statistics***

Variables	Mean	Std. Dev.	Minimum	Maximum
FDI	0.27	0.33	-0.19	1.81
FIA	0.09	0.04	0.05	0.14
FID	0.05	0.01	0.03	0.09
FIE	0.52	0.08	0.40	0.69
EXCR	109.01	52.28	49.77	273.00

Source: Extracted from Appendix Two

It is observed that, apart from FDI, the variables are not widely spread around their means.

Foreign Direct Investment (FDI): The mean value of 0.27 with a standard deviation of 0.33 indicates extremely high variability in FDI flows over the study period. The negative minimum value of -0.19 suggests periods of FDI divestment, while the maximum of 1.81 reflects significant inflows during favourable economic periods. The high standard deviation indicates that FDI has been highly volatile, consistent with Nigeria's fluctuating investment climate influenced by policy uncertainty, exchange rate volatility, and global economic conditions.

Financial Institution Access: The mean value of 0.09 with a standard deviation of 0.04 indicates moderate variability among the financial institutions indicators. The minimum of 0.05 and maximum of 0.14 suggest a relatively narrow range of financial access levels, reflecting the gradual and measured pace of financial institution liberalization in Nigeria over the study period.

Financial Institution depth: The mean value of 0.05 with a standard deviation of 0.01 indicates the lowest variability among the financial institutions indicators. The minimum of 0.03 and maximum of 0.09 suggest that financial institution depth has been relatively stable.

Financial Institution Efficiency: The mean value of 0.52 with a standard deviation of 0.08 indicates the most stable pattern among the financial institutions variables.

Exchange Rate (EXCR): The mean value of 109.01 with a standard deviation of 52.28 indicates variability in exchange rates over the study period. The minimum of 49.77 and maximum of 273.00 demonstrate the significant depreciation of the naira over time, reflecting the various exchange rate regimes and economic pressures that have characterized Nigeria's foreign exchange market.

Table 3: ***Basic Correlation Matrix***

Variables	FDI	FIA	FID	FIE	EXCR
FDI	1				

FIA	-0.22346	1			
	0.1657	-----			
FID	-0.28546	0.754824	1		
	0.0742	0	-----		
FIE	-0.18356	0.408236	0.596738	1	
	0.2569	0.0089	0	-----	
EXCR	-0.29042	-0.01494	-0.0171	-0.00281	1
	0.0691	0.9271	0.9166	0.9863	-----

Source: Extracted from Eviews 10 Output

According to the result of the bivariate correlational matrix above, there is evidence of negative and positive linear associations between these studied variables. It is important to note that the dependent variable shares a negative linear association with all explanatory variables, but these associations are weak and, apart from FID and EXCR at the 10 percent level, statistically insignificant. Correlation does not imply causation, so these bivariate results are not evidence that increases in the explanatory variables reduce FDI; inference is based on the multivariate ARDL results below. Most importantly, the result rules out serious multicollinearity, as no pair of explanatory variables has a correlation coefficient above the 80 percent threshold (the highest is 0.75, between FIA and FID).

Table 4: ***Variance Inflation Factor***

Variance Inflation Factors			
Date: 10/13/26 Time: 16:21			
Sample: 1986 2025			
Included observations: 37			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
FDI(-1)	0.007276	3.844018	2.250302
FDI(-2)	0.006695	3.524265	2.106845
FDI(-3)	0.015253	8.026861	4.814017
FIA	0.059749	12.57495	4.756630
FIA(-1)	0.064704	15.60632	4.914091
FIA(-2)	0.090765	22.55924	4.736623
FIA(-3)	0.085561	13.24898	4.841241
FID	0.081037	18.07609	4.617337
FIE	0.083104	21.87914	4.807408
FIE(-1)	0.064805	13.16058	4.019137
FIE(-2)	0.578608	19.20543	4.069612
FIE(-3)	0.251029	18.14946	3.224902
EXCR	4.22E-07	15.48934	2.530698
EXCR(-1)	5.80E-07	21.46026	3.416526
EXCR(-2)	4.05E-07	15.08474	2.347715
C	0.128158	22.60191	NA
@TREND	0.000118	17.57609	36.71846

Source: Eview 10

The variance inflation factor was carried out to test the multicollinearity between the variables. According to the result above, the centered VIFs all fall below the statistical threshold of 5. Therefore, the results further confirm the absence of multicollinearity between the variables.

Table 5: ***Unit Root Tests***

Variables	AT LEVEL			AT FIRST DIFFERENCE			Order of Integration
	ADF Test statistics	Test Critical Value @ 5%	Prob. Value	ADF Test statistics	Test Critical Value @ 5%	Prob. Value	
FDI	-4.30	-2.94	0.00	-	-	-	I(0)
FIA	-1.03	-2.94	0.73	-4.14	-2.94	0.00	I(1)
FID	-0.39	-2.94	0.90	-5.18	-2.95	0.00	I(1)
FIE	-1.87	-2.94	0.34	-4.96	-2.95	0.00	I(1)
EXCR	-4.28	-2.94	0.00	-	-	-	I(0)

Sources: Extracted from Appendix Six

According to the result of the unit root test above, the variables were all stationary at level and at first difference. That is, they were all integrated at under zero I(0) and at under one I(1). The outcome variable (FDI) and the control variable (EXCR) were integrated at level. While the all the explanatory variables (FIA, FID, FIE) were all integrated at first difference. The result confirm the absence of unit root and the mixed order of integration reaffirmed the ARDL estimation techniques as the suitable approach of analysis.

Table 6: ARLD Short-run and Long-run Results

	Short run				Long run			
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Coefficient	Std. Error	t-Statistic	Prob.
FIA	14.19	1.60	8.88	0.00	8.36	1.02	8.23	0.00
FID	0.61	7.14	0.09	0.93	0.36	4.18	0.09	0.93
FIE	4.87	0.95	5.14	0.00	2.87	0.77	3.74	0.00
EXCR	-0.00	0.00	-2.93	0.01	-0.00	0.00	-3.39	0.00

Sources: Extracted from Appendix 6

The results indicate that financial institution access exerts a positive and significant influence on foreign direct investment in Nigeria in both the short-run and the long-run. This implies that, in the short-run, a unit increase in financial institution access leads to a 14.19-unit increase in foreign direct investment in Nigeria, while in the long-run, it leads to an 8.36-unit increase. The relationship between financial institution depth and foreign direct investment in Nigeria is statistically non-significant in both the short-run and the long-run. This is reflected in the probability values of 0.93 in both periods, although the direction of influence is positive. By contrast, financial institution efficiency shares a positive and significant relationship with foreign direct investment in Nigeria in both the short-run and the long-run. A unit increase in financial institution efficiency leads to a 4.87-unit increase in foreign direct investment in the short-run and a 2.87-unit increase in the long-run.

Diagnostic Test

To test the validity and reliability of the result above and ascertain its fitness to be used in drawing inferences and making actionable recommendations, some diagnostic tests were carried out. These include the error correction model (ECM), model fitness test, ARDL bound test, serial correlation test, heteroscedasticity test, Ramsey RESET test, and CUSUM test.

Table 7: *Error Correction Model*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM	-0.70	0.09	-7.03	0.00
R-Squared =0.95	**Adjusted R-squared = 0.93**			

Source: Extracted from Appendix Seven

The Error Correction Model (ECM) enter with the correction model entered with the correct sign (it is negative) and significant, indicating that every short-run shock or disequilibrium will converge or return to equilibrium in the long run. The negative coefficient value of (-0.69) implies that 69 percent of the disequilibrium will be corrected within a single period, usually a year. This means that it will take approximately one year 4 month for full equilibrium to be restored after short-run shocks. This signifies a high speed of adjustment.

The R-Squared and Adjusted R-Squared of 95% and 93%, respectively, also indicate that the model is fit and has high explanatory power. The R-Squared implies that 95 percent of changes in foreign direct investment in Nigeria are explained by the chosen variables in this study, which are financial institution access, financial institution debt, and financial institution depth. While the remaining 5 percent changes are caused by factors other than those.

Table 8: *F-Bound Test*

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	9.11550	10%	2.68	3.53
K	4	5%	3.05	3.97
		2.5%	3.4	4.36
		1%	3.81	4.92

Source: Extracted from Appendix Seven

The bound test confirms the existence of co-integration. That is, there is a long-run equilibrium relationship between financial institutions development proxied by financial institution access, financial institution depth, and financial institution efficiency and foreign direct investment in Nigeria. This is reflected in the bound test's F-statistic of (9.11), which is greater than the lower and upper bound statistics at 5%, which are (3.05) and (3.97), respectively.

Table 9: *Serial Correlation Test*

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.860001	Prob. F(2,18)	0.1844
Obs*R-squared	6.337020	Prob. Chi-Square(2)	0.0921

Source: Extracted from Appendix Eight

Based on the Breusch-Godfrey serial correlation test above, there is no evidence of autocorrelation in the model. This is reflected in the F-statistic probability of 0.18 and the Chi-square statistic of 0.09. Since the null hypothesis is the absence of serial correlation, and the above probability values are statistically non-significant, we fail to reject the null hypothesis and conclude that there is no serial correlation.

Table 10: *Heteroscedastic Test*

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.306177	Prob. F(16,20)	0.9901
Obs*R-squared	7.279722	Prob. Chi-Square(16)	0.9675
Scaled explained SS	2.997376	Prob. Chi-Square(16)	0.9998

Source: Extracted from Appendix Nine

The Breusch-Pagan-Godfrey Heteroskedasticity has an F-statistic probability of 0.99, and a chi-square probability of 0.97. The two values are greater than the 0.05 critical threshold, which is a significant justification to refuse to reject the null hypothesis. This means that the residuals are homoskedastic, which implies that the variance is fixed and the model is well-specified in terms of the error variance.

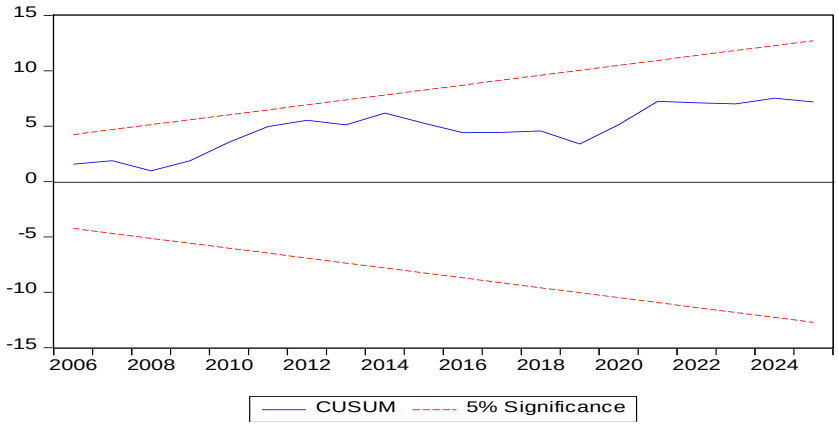
Table 11: *The Ramsey RESET Test*

Ramsey RESET Test			
Equation: UNTITLED			
Specification: FDI FDI(-1) FDI(-2) FDI(-3) FIA FIA(-1) FIA(-2) FIA(-3) FID FIE			
FIE(-1) FIE(-2) FIE(-3) EXCR EXCR(-1) EXCR(-2) C @TREND			
Omitted Variables: Squares of fitted values			
	Value	df	Probability
t-statistic	0.048795	19	0.9616
F-statistic	0.002381	(1, 19)	0.9616

Source: Extracted from Appendix Ten

The result of the Heteroscedasticity above, which justifies this study's model specification, is backed by the Ramsey RESET test, which has an F-statistic value of 0.96 (greater than the 0.05 threshold) and thus is indicative of the failure to reject the null hypothesis. This means that the model of foreign direct investment in Nigeria is rightly specified and does not show any omitted variable prejudice or wrongful functional form.

Figure 4.1: CUSUM Test



Source: Eviews 10

The CUSUM test above revealed that the parameters of the model are also constant throughout the sample period. That is, the cumulative sum of the residuals fell within the 5% threshold as reflected by the graph above when the blue line is between the red lines throughout the temporal scope of the study.

Discussion of Findings

The positive and significant effect of financial institution access on foreign direct investment in Nigeria, both in the short -run and long-run, is theoretically supported by the eclectic paradigm or OLI framework proposed by Dunning, which implies that foreign direct investment is drawn to areas with ownership advantages, locational advantages and internalization advantages, with financial institutions development being a key locational advantage that sends signals of economic stability and investment readiness to multinationals. The finding is justifiable in the Nigerian context, considering the extent of financial sector reform and liberalization that has occurred over the last few decades and which have enhanced access to financial services throughout the country. The Banking Sector Consolidation that was initiated in 2004 – 2005 with the introduction of the new minimum capital base of banks (N2 billion to N25 billion) has re-shaped the banking industry in Nigeria, making financial institutions stronger and more resilient in order to serve a larger cross-section of domestic and foreign investors better. The later introduction of mobile banking, agent banking and financial technology innovations have further enhanced financial access to previously unbanked populations and regions, thereby creating a more inclusive financial ecosystem that is telling foreign investors that their money will be properly intermediated. Empirically, this finding is supported by the work of Magakam and Zhao (2020), Olayungbo (2013), Nwani and Bassey (2022), Egbetunde and Abayomi (2024),

The statistically insignificant relationship between financial institution depth and foreign direct investment in Nigeria in both the short and long run is justified through Nigeria specific situation because of the special features of the financial sector development in the country: despite strong expansion of the assets and credit of financial institutions extended to the private sector, the quality of financial intermediation is still limited by several structural issues. The banking sector in Nigeria has always been dominated by a few large banks, the over-emphasis on government securities as opposed to loans to the private sector and a short-term lending policy instead of long-term lending for productive investment. This has led to a situation where depth of financial institutions, as measured by credit to the private sector as a proportion of GDP or bank assets as a proportion of GDP, may not necessarily reflect the availability of financial services that are relevant and accessible to foreign investors. The non-significance of financial institution depth can also be explained in terms of the crowding-out effect of government borrowing, which has taken up much of the available credit in the domestic financial system, thereby reducing the amount of credit available for the productive private sector investment, including foreign direct investment. Furthermore, the Nigerian financial system has been plagued by high non-performing loan ratios, poor corporate governance and low levels of financial innovation, thereby limiting foreign investors' trust in the capacity of the financial system to facilitate their investment activities. Empirically, this finding is supported by the work of Magakam and Zhao (2020), Chettri (2022), and Doan and Bui (2021).

The positive and significant relationship between financial institution efficiency and foreign direct investment in Nigeria both in the short-run and long-run is a reasonable result for the Nigerian environment, where continuing progress in financial institution efficiency over the last few decades, resulting from financial sector competition, financial regulations and technological innovation, is evident. Electronic banking, mobile banking, and digital payment systems have significantly enhanced transaction speed and efficiency in Nigeria, allowing for faster and more cost-effective banking and facilitating foreign investor financial operations. The introduction of the Real Time Gross Settlement (RTGS) system, the Nigeria Inter-Bank Settlement System (NIBSS), and various electronic payment platforms has made the payment and settlement system more efficient, thereby minimizing risks and

delays in cross-border transactions and repatriation of profits. The positive relationship between financial institution efficiency and FDI is also demonstrated by the fact that Nigeria's ranking on the various international indexes of financial efficiency and competitiveness has improved, and this has won the attention of foreign investors. The positive and significant correlation also indicates the effectiveness of the several financial sector reforms undertaken by the Central Bank of Nigeria such as the Banking Sector Consolidation, the adoption of the Bank Verification Number (BVN) system and the introduction of the Financial System Strategy 2020 which have helped to improve the efficiency and stability of financial institutions in Nigeria. In addition, the Nigerian government's efforts to improve the business environment, including through the Presidential Enabling Business Environment Council (PEBEC) have established a more streamlined regulatory framework for the financial sector which, in turn, creates a more conducive environment for foreign direct investment. Financial institutions' efficiency in Nigeria is also reflected in the sophistication of financial products and services offered to investors, such as foreign exchange derivatives, hedging instruments, and investment products that help foreign investors manage their risk and optimize returns. Empirically, this finding is supported by the work of Olayungbo (2013) and Nwani and Bassey (2022) .

5. Conclusion and Recommendations

This study provides robust empirical based evidence that the development of financial institutions, particularly its access and efficiency dimensions significantly influences foreign direct investment (FDI) inflows in Nigeria for the period 1986-2025. With a disaggregated ARDL-ECM model, the findings indicates that there exists a stable long-run relationship between financial access, depth, efficiency and FDI.

Financial institution access and efficiency positively and significantly influenced FDI in both the short and long-run, underscoring the role of inclusive finance and cost-efficient intermediation in enhancing investor confidence. Financial institutions depth had a positive but statistically insignificant effect in both the short and long run, which suggests that financial deepening can attract FDI only when it is backed by institutional quality and stable regulatory conditions.

Policymakers, particularly the Central Bank of Nigeria, should expand financial inclusion policy through digital finance and the provision of banking services to a wider population. It is also important to enhance the efficiency of financial institutions by reducing non-performing loans intermediation costs.

Similarly, financial deepening should be done with stronger governance and supervision to address the distortions in the quality of lending. Macroeconomic and exchange rate stability should also be maintained to sustain foreign investment. Overall, well-sequenced policies on access, depth, and efficiency of financial institutions are fundamental to boosting and sustaining FDI inflows in Nigeria.

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