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Effect of Financial Deepening on Foreign Direct Investment in Nigeria

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Abstract: This study examines the effect of financial deepening on foreign direct investment in Nigeria. An ex-post facto research design was employed for this study. Secondary data were collected from Central Bank of Nigeria Statistical Bulletin, World Bank Development Indicators, and World Governance Indicators for twenty six year period spanning through 1996 to 2022. Employing Autoregressive Distributed Lag Model and Bounds Tests, the study established long run relationships among the variables. The results show that credit to private sector by banks, control of corruption, and regulatory quality has significant effect on foreign direct investment in Nigeria. The study concludes that financial deepening has a significant effect on foreign direct investment in Nigeria. The study recommends that that CBN being the regulator of the banking industry should take urgent steps to improve its regulatory quality by providing favourable monetary policies that increase the flow of credit supplied by banks to the private sector. The CBN should also devise an effective mechanism to be put in place to ensure that all borrowed funds supplied by banks are judiciously and productively utilized to further increase the credit granting capacity of the banks. Further, government in the fight against corruption through its agencies such Economic and financial crimes, Independent and Corrupt Practices Commission , and Code of Conduct Bureau should continuously monitor civil servants involved in unethical practices especially in contract awards to illuminate transparency and accountability in the process.

Keywords: Financial Deepening, Foreign Direct Investment, Institutional Quality.

Introduction

The financial system (FS) is the primary driver of a nation's economy that provides an enabling environment for productive activities to flourish. The FS includes all financial intermediaries that operate in the economy. It is a cluster of financial institutions such as banks, insurance companies and pension funds; financial markets and instruments, as well as the legal and regulatory framework that permits transactions for the purpose of investments to grow the economy. A well-developed FS is the one that promotes efficient allocation of financial resources and helps boost the absorptive capacity of the host country and contributes to the process of technological innovations associated with foreign investments.

Foreign investors are concerned about the development and stability of the FS. This perceived instability lowers the confidence of foreign investors willing to invest in the domestic economy (Nwosa & Emma-Ebere, 2017). This brought about the need for financial reforms in the financial sector. These reforms became indispensable due to the challenges faced in the Nigerian FS. These challenges according to Nzotta and Okereke (2009) include systemic crisis, globalization, technological innovation, and financial crisis. The reforms always seek to strengthen the system, prevent systemic crisis, strengthen the market mechanism, and ethical standards. This entails having robust policies for regulation and supervision of all the important entities. The global financial crisis is a reminder of the consequences of poor regulation in the financial sector. Inadequate regulation of the financial sector has disastrous outcome not only on domestic

investment but also on the role financial institutions and markets play to attract foreign capital inflows.

FD plays a huge role in economic growth and development of any nation. It is the size of financial institutions and markets that provides the catalyst needed for growth of the economy. It promotes economic growth through capital formation and technological progress by mobilizing savings and optimizing the allocation of capital to productive sectors; producing information about investments; facilitating and encouraging foreign capital inflows. To encourage FD in the economy, the Nigerian government in 2005 launched the National Microfinance Policy. The policy was implemented to cater for the need of micro businesses in the economy. It further formulated the Nigerian Financial System Strategy 2020 (FSS 2020) as a strategic guideline and framework for developing the financial sector into a growth catalyst to enable Nigeria become one of the twenty largest economies by the year 2020. In 2011, non-interest banking was introduced to improve FD by introducing fully pledged Sharia compliant banking institutions and instruments to cater for the growing need of the non-interest banking population. Other initiatives introduced and implemented by regulatory authorities include E-banking services, such as: Automated Teller Machine (ATM), Point of Sale (POS) services, and implementation of cashless policy.

For decades open economies have witnessed an upsurge in cross-border investment as a result of a growing number of diverse multilateral and bilateral agreements. This is due to increased globalization of investors' seeking higher rates of return on investment opportunities to diversify risk globally. As a result, many open economies around the world encouraged capital inflows by removing barriers to international trade and investment. These restrictions among others include: deregulation of domestic financial institutions and markets; reducing restrictions on FDI. FDI is one of the capital inflows recognized as a powerful catalyst for economic growth and development. It enables developing countries to build up physical capital, create employment opportunities, develop productive capacity, enhance skills of local labour through transfer of technology and managerial know-how, and help integrate the domestic economy with the global economy. It is important to emphasize that the pre-condition necessary for FDI to generate positive macroeconomic performance in the host economy is the existence of a developed financial system. The importance of FDI has drawn the attention of the Nigerian government to the potentials that lie in FDI inflows. Various government regimes in Nigeria have made efforts to improve FDI inflows through various economic strategies. For instance, the introduction of fixed medium term plans as National Rolling Plans in 1990, with a view to increasing and accelerating FDI flow to Nigeria by strengthening the base for market-oriented economy among other objectives. These rolling plans achieved little. National Economic Empowerment and Development Strategy (NEEDS) introduced in 2003 is yet another policy package thought to accelerate economic growth through increased deregulation and improve FDI. However, the package was discredited due to low capital formation. However, NEEDS was replaced with Vision 20:2020 framework of development in 2010 to enroll Nigeria among the first 20 economies of the world by the year 2020, through privatization, deregulation and openness of the Nigerian economy.

The relationship between FD and FDI has not received adequate attention from empirical researchers in Nigeria. It is common in the literature of financial development to find domestic credit to private sector CPS) and broad money supply (M3) as percentages of GDP to measure FD. In the current study and a departure from previous studies, institutional quality (IQ) indicators are introduced to empirically study the effect of the relationship between FD and FDI in Nigeria. IQ in the financial system of a country is closely associated with the regulatory, transparency and reliability of financial transactions and contract enforcement, all of which are only possible when

the country has quality institutions (Islam, Khan, Popp, Sroka & Oláh, 2020). Countries with better IQ are more attractive to foreign investors (Buchanan, Le & Rishi, 2012). IQ can ensure property rights protection and minimize uncertainty and boost investor confidence. The main objective of the study is to examine the effect of FD on FDI in Nigeria. This research is built to empirically examine the effect of financial deepening on FDI in Nigeria by answering the following research questions. The specific objectives are to examine the effects of: Credit to Private Sector by Banks and FDI in Nigeria; Broad Money Supply and FDI in Nigeria; Domestic Savings and FDI in Nigeria; Institutional Quality and FDI in Nigeria. The following null hypotheses are formulated for the study:

H_{O1}: Credit to Private Sector by Banks does not attract FDI inflows in Nigeria

H_{O2}: Broad Money Supply does not attract FDI inflows in Nigeria

H_{O3}: Domestic Savings does not attract FDI inflows in Nigeria

H_{O4}: Institutional Quality does not matter in attracting FDI inflows in Nigeria

Literature Review
Concept of Financial Deepening
Akinmulegun and Akinde (2019). defines FD as increase in the provision of financial services with a wider range of services geared toward the growth and development at all levels of society. Nwosu and Ogbonnaya-Orji (2021), also define FD is an increased provision of financial services, with a wider choice of services channeled to all levels of the society. Ehiedu, Onuorah and Osakwe (2022) define FD as the expansion of the financial system and its role as financing a wider range of services is geared toward the development of all facets of society. FD explains the expansion in the provision of financial services by financial institutions in their intermediation role with a wider range of services targeted toward the development of the society at large. (Nwanna & Chinwudu, 2016).

Freytag and Frickea (2017) define FD as the efficient provision of financial services which determines the economic growth and prosperity of a country. With the onset of absorptive capacities, the level of FD of the domestic economy could partly determine the positive effects of FDI in a country. The level of FD can be a necessary condition for the positive effect of FDI for the growth of a country.

From the foregoing, FD is a concept that is understood to mean the ability of the banking sector to efficiently mobilize savings and channeling same for the exclusive purpose of investments in the real sector. The development in domestic savings lays the foundation for the formation of diverse financial claims that induce effective actions of banking institutions in financial markets to provide the market with high-quality financial products and services in the economy to attract foreign investments.

Concept of Institutional Quality
The concept of IQ is widely discussed among policymakers and scholars; there is as yet no strong consensus around a single definition of IQ. According to World Governance Indicators (WGI) there are a total of six dimensions of IQ below:

1. Voice and Accountability (VA) captures perceptions of the extent to which the citizens of a country are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

2. Political Stability and Absence of Violence/Terrorism (PV) captures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional means, including politically motivated violence and terrorism.

3. Government Effectiveness (GE) captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

4. Regulatory Quality (RQ) captures perceptions of the ability of the government to formulate and implement policies and regulations that permit and promote private sector development.

5. Rule of Law (RL) captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

6. Control of Corruption (CC) captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests.

Concept of Foreign Direct Investment
Foreign Direct Investment (FDI) is a major component of international capital and human resources flow. FDI is an investment in the enterprise located in another country but effectively controlled by residents of another country. Flora, Tian and Ezezue (2020) define FDI as investments made by an individual or company in one nation for profitability in another nation, either through acquisition of business assets or establishment of business operations in that country, including controlling interests or ownership of a foreign firm. FDI is an investment made by a resident enterprise or direct investor into the enterprise that resides in another country establishing operations or acquiring tangible assets (Al-Masbhi & Du, 2020). FDI is defined as an investment involving the acquisition or creation of assets by foreign investors or a joint venture with governments in order to establish a long lasting business relationship (Ibeanacho, 2019). Kabara and Amirthalingam (2020) argue that FDI is the most dominant and reliable source of deficit financing to most developing countries characterized with low investible fund since the early 1980s. FDI inflows are a major source of external financing for many developing countries, and thereby provide important means of implementation of sustainable development goals and growth of the private sector. FDI encourages the incorporation of new inputs and technologies in the production systems of host countries.

Empirical Studies

Financial Deepening and Foreign Direct Investment Nexus
Ehiedu et al. (2022) examined the relationship between FD and entrepreneurial growth (EG) in Nigeria for the period of 1986-2021 (36years). This was done in respect to the measures of FD, namely; Ratio of M2/GDP, Ratio of CPS, Ratio of Market Capitalization to Gross Domestic Product (MCAP/GDP) and Ratio of Loans to Small and Medium Scale Enterprises to Gross Domestic Product (LSMSE/GDP) in relation to economic growth was a proxy for Small and Medium Scale Enterprises Output (SMSEO) in Nigeria. The data for the study was sourced from CBN Statistical Bulletin and World Bank Development Indicators. The results showed that M2/GDP, CPS, MCAP/GDP and LSMSE/GDP have positive and negative significant effect on SMSEO in Nigeria. Hence, the study indicated that FD had a considerable impact on EG in Nigeria.

Nwajiaku et al. (2020) examined the effect of FD on entrepreneurial growth in Nigeria. Financial deepening is measured using three proxies: Banking Sector Deepening (BSD) expressed by private sector credit to Real Gross Domestic Product (RGDP), Stock Market Deepening (SMD) represented by stock market capitalization to RGDP and Insurance Sector Deepening (ISD) determined in term of total insurance assets to RGDP, while entrepreneurial growth is proxied by

wholesale and retail trade to RGDP. Following the approach of the Granger Causality test with ARDL technique of model estimation using data from 1986 to 2018, the study revealed that financial deepening has no significant effect on entrepreneurial growth. Entrepreneurial growth was found to have significantly influenced financial deepening through banking and insurance sector deepening.

Babarinde, (2020) investigated the growth effects of foreign direct investment and FD in Nigeria for the period 1981-2018. Data employed for this study were obtained from Central Bank of Nigeria Statistical Bulletin and WDI. Pairwise granger causality test and ARDL model were employed in the data analysis. Empirical results show that FDI has positive significant effect on economic growth (GDP) in Nigeria both in the long and short runs. FD measured as M2/GDP has positive significant effect on GDP in Nigeria in the long run but the position is reversed to negative non-significant in the short run. In the long run, FD indicator, CPS as a ratio of GDP, has negative non-significant effect on GDP in Nigeria while its influence is absent in the short run model. Findings also reveal a unidirectional causality from FDI to GDP. Likewise, unidirectional causality flows from GDP to each of the two financial deepening indicators, thus lending credence to the demand-following hypothesis. This study concludes that FDI and FD have positive growth effects in Nigeria with causality flowing from FDI to economic growth and the latter granger-causing FD in Nigeria.

Akinmulegun and Akinde (2019) investigated the effect of FD on manufacturing sector performance in Nigeria from 1981 to 2017. Manufacturing sector performance, (dependent variable), was proxied by ratio of manufacturing value added to gross domestic product, while the independent variables include ratio of CPS to GDP, ratio of market capitalization to GDP, ratio of value of transaction to GDP and interest rate. The study adopted ECM estimate the effect of the independent variables on the dependent variable. The results revealed that ratio of credit to private sector to GDP and ratio of market capitalization to GDP had positive effect on manufacturing sector performance while ratio of value of transaction to GDP and interest rate had negative effect on manufacturing sector performance.

Igwebuike et al. (2019) examined effects of FD on the economic growth of Nigeria (1981 to 2016) through two of the basic arms of the financial industry (Insurance companies and Banking Industry). Secondary data from CBN statistical bulletin and Global Financial Development bulletin, 2017 as provided by the World Bank were utilized. Insurance industry premium to GDP, Savings accumulated to GDP, CPS by commercial banks to GDP were used as independent variables while GDP is used as dependent variable. The study adopted an ex-post facto research design. The analytical tool used was OLS. The study found that insurance industry premium to GDP has positive but no significant effect while credit to private sector by commercial banks to GDP has positive and significant effect on economic growth in Nigeria.

Nwakobi et al. (2019) investigated the effect of financial deepening on economic growth in Nigeria over a period of thirty three (33) years: 1986 to 2018. Financial deepening was variables used in the study were Banking Sector Development (BSD) measured by private sector credit to RGDP, Stock Market Deepening (SMD) reflected by market capitalization to RGDP and Insurance Sector Deepening (ISD) defined in terms of total insurance assets to RGDP, while economic growth was defined in term of Real Gross Domestic Product (RGDP) is the dependent variable. Data were collected from statistical bulletins of the Central Bank of Nigeria (CBN) and fact books of the Nigerian Exchange (NGX). The model estimation followed the Auto-regressive Distributive Lag (ARDL) approach with the effect estimated in line with the Granger Causality analysis. The study revealed that economic growth in Nigeria is not affected by FD

Nwosa and Emma-Ebere (2017) examined the relationship between foreign direct investment and financial development in Nigeria for the period 1980 to 2015. Financial market development, FDI, inflation rate, trade openness and exchange rate were used as proxies for financial development while FDI is the dependent variable. VECM technique was used to analyze data. The study revealed a negative relationship existed between financial market development and foreign direct investment in the long run while in the short run, a positive relationship existed between financial market development and foreign direct investment in Nigeria.

Etukafia and Williams (2016) examined the causal relationship between FDI, the significance of the country's FS development and economic growth over the period 1981-2013. The study used the ratio of broad money, M2/GDP. M2/GDP measures the degree of the monetization of the economic system and serves as an indicator of the expansion payment system and saving function and the ratio of credit to private sector to gross domestic product (CPS) as proxies of FD. Using time series data published in the 2014 statistical bulletin by central bank of Nigeria, the study investigated the time series properties of the variables employing the ADF test approach, and adopted the multivariate autoregressive. The study revealed the presence of bi-directional causality between GDP and FDI, FDI and CPS, as well as FDI and M2/GDP. A unidirectional causality was found from GDP to Money supply. The findings above indicate that financial system is a significant conduit in attracting FDI inflows to boost economic growth in Nigeria. The findings of this study have clear policy implications. The evidence of bi-directional causality between CPS relative to economic activities, the ratio of FDI and GDP; and the ratio of CPS and FDI is an indication of simultaneity between financial development and FDI, FDI and GDP as well as CPS and GDP.

From the above review, it is evident that there exist a paucity of knowledge on the relationship between FD and FDI in Nigeria. Most studies focused on the impact of financial deepening on economic growth, manufacturing, entrepreneurial, and other variables to estimate the relationships among their variables in Nigeria. Few studies focused on the effect of financial development on FDI in Nigeria. However, this study focuses on the effect of financial deepening on FDI to throw insight into the problem low FDI in Nigeria from 1996 to 2022.

Theoretical Framework
Supply-Leading Hypothesis
The study hinges on supply leading hypothesis. The supply-leading hypothesis suggests that causality flows from finance to economic growth with no feedback response from economic growth. The hypothesis which has been widely accepted by scholars (Greenwood & Jovanovic, 1990; Levine, 2002; Montiel, 1995 among others) argues that finance is a pre-condition for an economy to achieve growth. The existence and development of the financial institutions and markets and their services results in a higher level of savings and investments, thus, enhances the efficiency of capital accumulation and utilization. Thus, the supply-leading hypothesis postulates that with the development of the financial sector, savings will increase and later be transformed into investment through various financial intermediaries, which in turn improves the efficient allocation of funds and greatly enhance growth through multiplier effect.

Pradhan et al. (2018) state that the efficiency financial services between borrowers and lenders, improving the allocation of resources, increasing saving rates, and promoting the development of institutions, markets and instruments that enable risk sharing are the four ways in which financial deepening can increase FDI inflows. The studies supporting the nexus between financial deepening and FDI are those of Pradhan et al. (2018), Wu et al. (2010), and Beck et al. (2000).

Methodology
Ex post facto research design was adopted in this study. The study uses yearly time series data covering the period 1996 to 2022. The variables of the study are FDI, CPSB, M3, SV, and IQ index variables. Data for FDI, CPSB, and IQ index were obtained from WDI and World Governance Indicators respectively (WGI) from 1996 to 2022. M3 and domestic SV were obtained from CBN Statistical Bulletin from 1996 to 2022. Stationary test was conducted to test for the presence of unit root in the time series. Principal Component Analysis (PCA) along with ordinary correlations was also conducted on the variables to extract the most important variables to include in the model and also to reduce multicollinearity among the variables. Co-integration test was conducted to investigate possible long run relationship using ARDL regression model.

Autoregressive Distributed Lag Model
The long-short-run nexus, as well as the ECM are all presented in the linear model. To examine the effect of FD on FDI in Nigeria, this study made use of ARDL model:

$$\Delta \text{FDI}_{t-j} = \alpha_o + \sum_{i=1}^{m} \alpha_{1i} \Delta \text{FDI}_{t-j} + \sum_{j=1}^{n} \alpha_{2i} \Delta \text{CPSB}_{t-k} + \sum_{k=1}^{0} \alpha_{3i} \Delta \text{CC}_{t-l}$$
$$+ \sum_{l=1}^{p} \alpha_{4i} \Delta \text{PS}_{t-m} + \sum_{m=1}^{q} \alpha_{5i} \text{RQ}_{t-n} + \sum_{n}^{r} \alpha_{6i} \Delta \text{LBR}_{t-o} + \text{ECT}_{t-1} + \varepsilon_t$$

α_o is the drift component
Δ Denotes the first difference operator
FDI is Dependent variable
CPSB is Independent variable
CC is Independent variable
RQ is Independent variable
PS is Independent variable
LBR is Control variable

FDI is measured by net FDI inflows as a percentage of GDP, FD is measured by CPSB as a percentage of GDP, IQ (CC, RQ, and PS) are measured by governance index, labour force is measured participation rate, total (% of total population ages 15 and above). Data for FDI inflows, CPSB, and LBR were sourced from World Bank indicators; while data for IQ (CC, RQ, and PS) were all sourced from World Governance Indicators (WGI).

Treatment of Missing Values
Linear interpolation (LI) is a method commonly used for estimating the value of a function between any two known values. LI involves the generation of new values based on an existing set of values. LI which is popularly used for forecasting data in research will be used in this study to compute and fill the missing values for the years 1997, 1999, and 2001 of the IQ indicators from 1996 to 2022 using e-views 10 software.

Results and Discussions
The ARDL bounds testing procedure requires that the variables included in the model for unit roots are mix of integrated order *I*(0) and *I*(1), the application of unit root tests in the ARDL procedure necessary in order to ensure that the dependent variable is integrated of order one and none of the variables is integrated of order *I*(2) because the computed F-statistics provided by Pesaran et al. (2001) are valid for only variables that are *I*(0) or *I*(1). The first step in the estimation of time series data set is to verify the existence or otherwise of unit root. This is particularly important because,

if an OLS regression is estimated with non-stationary data and residuals, the regression estimates are most likely to be spurious. Therefore, it is important to test for the stationarity of the series and correct for the non-stationary series. One way of correcting the non-stationary series into a stationary series is through the method of differencing. This study uses the Augmented Dickey Fuller Test (ADF) stationarity test to verify the stationarity properties of the series based on 5% significance level. The result is presented in the table below:

Table 1: Augmented Dickey Fuller Test

Series	Probability (5% Significance)	Stationarity
FDI	0.0000	I(1)
CPS	0.0049	I(1)
M3	0.0015	I(1)
SV	0.0050	I(1)
CC	0.0124	I(0)
GE	0.0093	I(0)
RL	0.0025	I(0)
RQ	0.0001	I(1)
PS	0.0009	I(1)
VA	0.0054	I(0)
LBR	0.0109	I(1)

Source: Author's Computation, E-Views 10 Output, 2024

Principal Component Analysis

Principal component analysis (PCA) of factor analysis is a technique will be used to reduce the number of factors in a research. PCA stats extracting the maximum variance and puts them into the first factor. It further removes that variance explained by the first factors and then starts extracting maximum variance for the second factor. The process goes to the last factor. In this study, PCA is applied to all the independent variables six IQ indicators to extract the variables that helps better explain the dependent variable and retain much of the information in the process. The result of the PCA analysis of all the variables shows that CPSB, M3, SV, CC, PS, RQ, and RL from the Eigenvectors (loadings) of Principal Component 1 (PC1) contribute 0.492247%, 0.462179%, 0.515250%, 0.365196%, 0.237481%, 0.133103%, 0.257530% to the model. Owing to low contribution, the variables GE and VA with -0.032968 and -0.060917 respectively are excluded in the ARDL model. Similarly, in the ordinary correlations section, to avoid multicollinearity, SV and M3 with 0.85 and 0.75 showed high correlations to CPSB were further excluded to improve the output of ARDL model. Financial deepening variable, CPSB, and institutional quality (CC, PS, and RQ) were used in the regression to estimate the effect of FD on FDI in Nigeria.

ARDL Bounds Test for Co-integration

Given a relatively small sample size (26) and the use of annual data, a lag length of 1 is used in the bounds test, Pesaran, Shin and Smith (2001). The results of the bound test are given in table . The critical values used in this paper are extracted from the ARDL results using E-views 10 software. The computed F-statistics; *FDI (CPSB, CC, PS, RQ, LBR)* as shown in Table 2 is 24.73. This value is above the upper bounds of the critical value of 3.79 at 5% level of significance. This implies that there is long run co-integration relationship between FDI, capital investment, unemployment rates, index of political stability, Index of Government Effectiveness, and regime change. Therefore, the null hypothesis of no co-integration between the variables is rejected and

the alternative hypothesis is accepted implying that, a long run relationship exists among the variables of the study.

Table 2: ARDL Bounds Test for Co-integration

F-Statistics	Critical Values	Lower Bound value I(0)	Upper Bound Value I(1)
24.73932	5%	2.62	3.79

Source: Author's Computation, E-view 10 Output, 2024.

Estimated Long Run Relationship

The existence of a long run relationship among the variables suggests that the estimation of long run coefficients and short run dynamic parameters. The estimation of the ARDL model is based on the Akaike info criterion (AIC). The long-run results and the diagnostic test statistics of the estimated model are presented in the table below:

Table 3: ARDL Long Run Form and Bounds Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.976814	0.685762	-2.882655	0.0114
DFDI(-1)*	-1.313821	0.192301	-6.832125	0.0000
DCPSB**	0.132150	0.034519	3.828328	0.0016
CC(-1)	-1.696955	0.592801	-2.862604	0.0119
DPS(-1)	0.616902	0.692260	0.891142	0.3869
DRQ**	3.304182	0.666003	4.961215	0.0002
DLBR(-1)	0.416605	0.115592	3.604086	0.0026
D(CC)	-3.761991	1.177802	-3.194078	0.0060
D(DPS)	-0.270210	0.581454	-0.464713	0.6488
D(DLBR)	0.194590	0.102129	1.905338	0.0761

Source: E-Views 10 Output, 2024

The result of the estimated coefficients of the long run relationship in Table 3 indicates that CPSB, RQ, and LBR have positive and significant effect on FDI at 5% probability level. The estimated probability of CPSB is 0.0016, while RQ and LBR is 0.0002 and 0.0026 respectively. This implies that a unit increase in the coefficient values of CPSB, RQ and LBR will increase FDI inflows positively by 0.132150, 3.304182, and 0.0026 respectively. Therefore the study rejects the null hypotheses which states that CPSB does not attract FDI inflows in Nigeria and RQ does not matter in attracting FDI inflows in Nigeria. On the other hand, CC showed a negative coefficient value of -1.696955 which is significant at 0.0119. The negative coefficient implies that CC has a negative effect on FDI inflows in Nigeria. This means a unit increase in CC will decrease FDI inflows by -1.696955. Therefore, the study rejects the null hypothesis which states CC does not matter in attracting FDI inflows in Nigeria. PS showed a positive coefficient but insignificant effect on FDI inflows at 5% probability level. Therefore, the study accepts the null hypothesis which states PS does not matter in attracting FDI inflows in Nigeria.

The result of the short run relationship is presented in Table 4 below.

Table 4: ARDL Error Correction Regression Results

ECM Regression
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.976814	0.152012	-13.00430	0.0000
D(CC)	-3.761991	0.710261	-5.296628	0.0001
D(DPS)	-0.270210	0.273592	-0.987637	0.3390
D(DLBR)	0.194590	0.071527	2.720518	0.0158
CointEq(-1)*	-1.313821	0.093389	-14.06821	0.0000

R-squared	0.924073	Mean dependent var		-0.027018
Adjusted R-squared	0.908887	S.D. dependent var		0.991347
S.E. of regression	0.299237	Akaike info criterion		0.601693
Sum squared resid	1.790852	Schwarz criterion		0.845468
Log likelihood	-2.521159	Hannan-Quinn criter.		0.669306
F-statistic	60.85260	Durbin-Watson stat		2.064550
Prob(F-statistic)	0.000000			

Source: E-Views 10 Output, 2024

The signs of the short run dynamic interactions are consistent with that of the long run relationship. The estimated error correction coefficient is -1.313821 with a probability value of 0.0000 is significant, has the negative sign, and imply a high speed of adjustment to equilibrium after a shock. This implies that the previous year's deviation from long run equilibrium is corrected in the current period at an adjustment speed of 133.5%.

Diagnostic Tests

The outcome of the Variance Inflation Factor (VIF), Lagrange Multiplier (LM) test of residual serial correlation, Ramsey's RESET test, Jarque Bera normality test and Heteroscedasticity test as presented in Table 5 indicates the model passed all the tests and this implies that it has a correct functional form, its residuals are serially uncorrelated, normally distributed and homoscedastic.

Table 5: Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
DFDI(-1)	0.036980	2.436728	2.436096
DCPSB	0.001192	1.254330	1.240327
CC	1.387217	403.8490	6.038007
CC(-1)	1.031916	301.8647	4.448404
DPS	0.338089	2.494732	2.386928
DPS(-1)	0.169150	1.325441	1.295867
DRQ	0.443559	1.646350	1.639746
DLBR	0.010430	1.394805	1.386784
DLBR(-1)	0.011657	1.532885	1.516086
C	0.470269	98.47316	NA

Source: E-Views 10 Output, 2024

The results of the test showed that all the variables have VIF less than 10 which signifies low multicollinearity among the variables of the study.

Table 6: ARDL Model Diagnostic Test

Test	P-values
Serial correlation	0.4312
Ramsey's RESET	0.4475
Jarque Bera Normality	0.3021
Heteroscedasticity	0.7656

Source: E-Views 10 Output

Stability Test of the Model

The study used Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum Squares of Recursive Residuals (CUSUMSQ) in testing for the stability of the parameters of the model. The CUSUM and CUSUMSQ plots from the recursive estimates of the model are shown in Figures and , respectively. This indicates stability in the coefficients over the sample period as the plot of the CUSUM and CUSUMSQ statistic fall inside the critical boundary of 5% confidence interval.

Figure 1: Plot of CUSUM Recursive Residuals
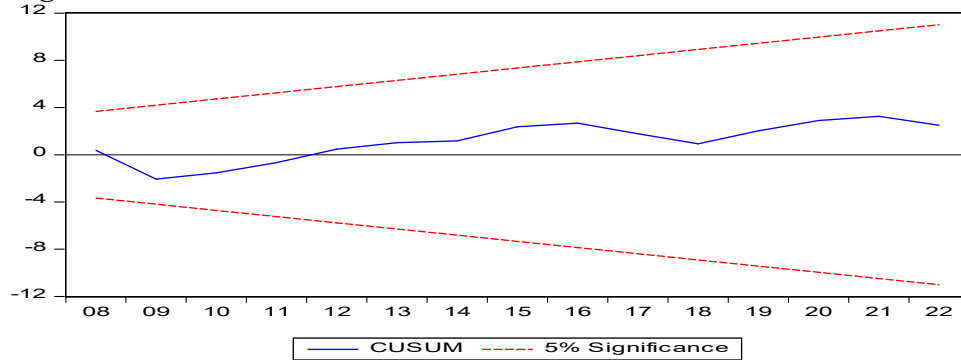
Source: E-Views 10 Output, 2024

Figure 2: Plot of CUSUMSQ Recursive Residuals
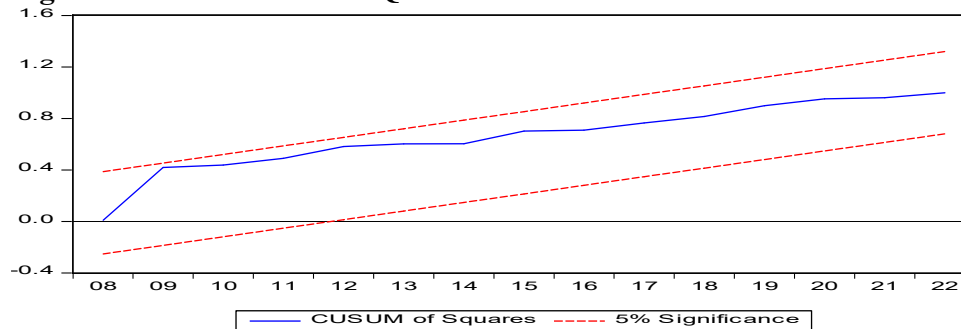
Source: E-Views 10 Output, 2024

It is evident from the plots of both CUSUM and CUSUMSQ that both the statistics are within the critical 5% region; suggesting the stability of the parameters of the study.

Conclusion and Recommendations

The main objective of the study is to empirically examine the effect of FD on foreign direct investment in Nigeria for the period of 1996 to 2022. Based on the findings of the study, it can be concluded that there is an existence of equilibrium relationship between CPSB and IQ variables in

Nigeria. The study concludes that FD has significant effect on FDI inflows in Nigeria. Additionally, LBR used as a control variable in the study had a significant effect on FDI inflows. Based on the findings of the study, it is recommended that CBN being the regulator of the banking industry should take steps to improve its regulatory quality by providing favourable monetary policies to increase the flow of credit to the private sector by banks to the real sector of the economy. The CBN should also devise an effective mechanism to be put in place to ensure that all borrowed funds are judiciously and productively utilized to further increase the credit granting capacity of the banks. Further, government in the fight against corruption through its agencies such Economic and financial crimes (EFFC), Independent and corrupt practices commission (ICPC), and code of conduct Bureau should provide polices that helps to continuously monitor civil servants involved in unethical practices in contracts awards to improve transparency and accountability in Nigeria.

The government should also take initiatives and provide incentives to encourage entrepreneurial growth to improve labour force participation from the ages of 15 years and above in Nigeria.

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