ACU Journal of Social Sciences
https://ajss.acu.edu.ng

DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN NIGERIA

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Abstract

This study examines the short- and long-run determinants of foreign direct investment (FDI) in Nigeria from 1980 to 2022, addressing the persistent challenge of attracting sustainable foreign investment amidst fluctuating macroeconomic conditions. Key variables explored include investment inflows, exchange rate, degree of openness, GDP growth rate, inflation rate, and infrastructure. Utilizing the Autoregressive Distributed Lag (ARDL) model, the study found that GDP growth rate, exchange rate, and degree of openness are critical determinants of FDI both in the short run and long run. Notably, these variables maintain a significant influence over FDI in the long run, emphasizing their importance for long-term investment strategies. Additionally, the analysis revealed a long-run equilibrium relationship between FDI and the macroeconomic variables, suggesting that changes in these factors will impact FDI flows over time. To harness the full benefits of FDI inflows, the study recommends policies that promote greater openness to trade, ensure exchange rate stability, and support sustained GDP growth, thereby creating a more favorable environment for foreign investors and contributing to Nigeria's economic development.

Keywords: *foreign direct investment, exchange rate, inflation rate, degree of openness.*

Introduction

Foreign direct investment (FDI) is widely regarded as a key driver of economic growth, offering not only financial capital but also the transfer of technology and exchange of ideas essential for development. While FDI may be associated with capital flight, its benefits for countries like Nigeria, which has reaped substantial rewards from these inflows, are undeniable. The sustained inflow of FDI is crucial for Nigeria's economic growth and development, as noted by Hoang, et al (2022). In an era of globalization, where the world operates as a unified entity, nearly all

aspects of human activity—such as sports, health care, education, technological transfer, and economic reforms—are interconnected across borders. FDI is a byproduct of this global integration and has become a predominant form of international capital transfer over the last few decades. It plays a vital role in economic integration and is a significant source of capital investment financing for countries (Cieślik, 2020 Suryanta & Patunru, 2022, Amade & Oyigebe ,2024).

Foreign direct investment (FDI) is described by Lee (2022) as an investment where a company from one country establishes controlling ownership in a business located in another country, distinguishing it from foreign portfolio investments, which lack direct control. FDI involves companies or individuals investing in foreign business interests by either establishing new business operations or acquiring assets such as ownership or control of a foreign company (Ajide et al, 2022; Asongu et al, 2018). Unlike portfolio investments, which involve purchasing shares in foreign companies without significant influence, FDI provides a more hands-on approach to managing overseas business interests. FDI typically occurs in open economies that offer a skilled workforce and above-average growth potential, making them attractive destinations for investors (Tocar, 2018; Nazarczuk & Krajewska, 2018, Okoh, 2024).

Over the years, the Nigerian government has implemented several policies aimed at attracting foreign direct investment (FDI) to stimulate economic growth and development. These include the establishment of the Nigerian Investment Promotion Commission (NIPC) to streamline investment processes, offering tax incentives such as pioneer status, and removing restrictions on foreign ownership in key sectors. Additionally, the government has liberalized exchange controls, improved infrastructure development, and created free trade zones to offer more favorable conditions for foreign investors. Despite these efforts, challenges persist, including policy inconsistencies, weak enforcement of regulations, poor infrastructure, and persistent insecurity, which continue to undermine investor confidence. Corruption, bureaucratic bottlenecks, and an unpredictable exchange rate environment further exacerbate the issue. As a result, Nigeria struggles to attract the level of FDI needed to support its economic ambitions, with many investors opting for more stable and business-friendly environments elsewhere (Eshiett, & Dayıoğlu, 2023; Ndofor et al, 2024).

Today, the challenge of attracting sustained foreign direct investment (FDI) in Nigeria has remained a critical concern, despite its potential to drive economic growth through capital inflows, technology transfer, and job creation. However, Nigeria continues to grapple with economic instability, fluctuating exchange rates, poor infrastructure, and an unpredictable policy environment, all of which hinder FDI inflows. The inconsistent performance of key macroeconomic indicators, such as GDP growth, inflation rate, and degree of openness, further complicates the country's ability to attract and retain foreign investors. Understanding the factors that significantly influence FDI in Nigeria, both in the short and long term, is essential for policymakers to develop effective strategies that enhance the nation's investment climate and foster sustainable economic growth. This paper seeks to address this issue by investigating the determinants of FDI in Nigeria, focusing on key macroeconomic variables and their long-term impact.

Apart from the introduction, the rest of the paper is structured as follows: Section two discuss the literature review. Data and methodology are presented in section three. Section four presents the results and discussion while conclusion and suggested recommendations are presented in section five.

Literature Review

Concept of FDI

Foreign Direct Investment (FDI) refers to an investment made by a company or individual in one country into business interests located in another country, typically by acquiring a lasting management interest or significant ownership stake (Emeka, 2024; Amade & Oyigebe, 2024) . Unlike portfolio investments, which involve passive ownership of assets such as stocks, FDI provides the investor with control or substantial influence over the foreign business’s decision-making and operations. FDI often involves not only the transfer of capital but also the transfer of technology, management expertise, and skills, contributing to the economic development of the host country. It plays a vital role in global economic integration by linking economies, boosting productivity, creating jobs, and facilitating the exchange of knowledge. FDI can take various forms, including establishing new operations, mergers, acquisitions, or joint ventures, and is typically driven by factors such as market size, access to resources, competitive advantages, and policy incentives offered by

the host country (Biodun et al, 2024; Ly-My et al, 2024).

Trend of FDI inflow in Nigeria

Figure 1 illustrates the trend of foreign direct investment (FDI) in Nigeria from 1980 to 2022, revealing a complex and often troubling trajectory. In the early 1980s, Nigeria experienced low FDI inflows largely due to the oil glut, which negatively impacted the economy. However, the years 1989 and 1994 marked significant increases in investment, driven by various government initiatives aimed at attracting foreign capital. Unfortunately, this positive trend was short-lived; by 1996, FDI levels had sharply declined, reflecting the onset of economic instability, political unrest, and regulatory challenges that plagued the country. Since then, the FDI landscape has been characterized by volatility, with significant fluctuations attributed to a myriad of setbacks, including inadequate infrastructure, corruption, security issues, and inconsistent government policies that have often failed to provide a stable investment climate. Despite efforts to implement favorable policies, such as the establishment of the Nigerian Investment Promotion Commission (NIPC) and tax incentives for foreign investors, these measures have not sufficiently addressed the underlying issues affecting investor confidence. As a result, Nigeria continues to struggle in attracting the consistent and substantial FDI necessary for sustainable economic growth and development.

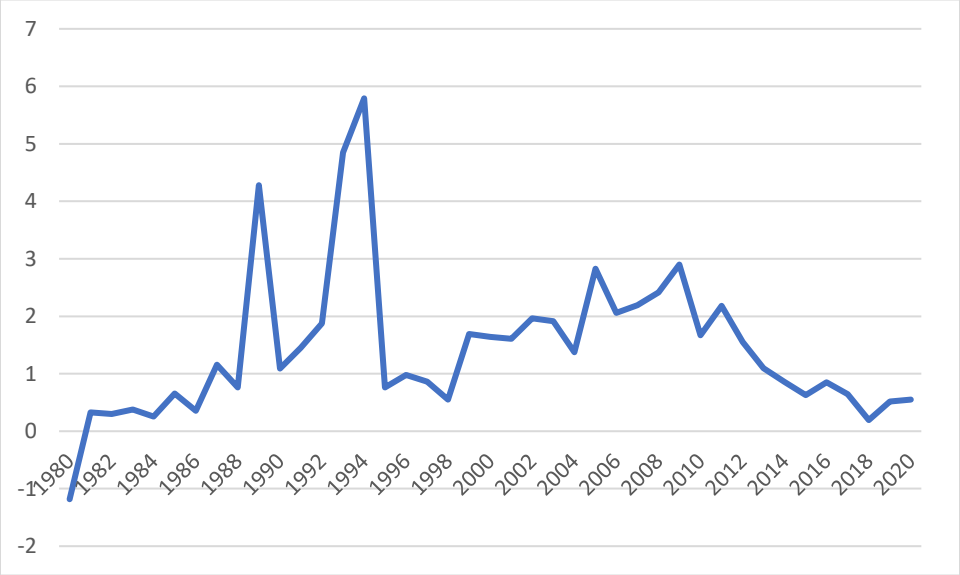


Fig 1. Trend of FDI in Nigeria

Theories of Foreign Direct Investment

Capital market Theory

The capital market theory is a fundamental component of portfolio investment theory and is recognized as one of the earliest frameworks explaining the rationale behind firms' expansion into foreign markets. This approach posits that foreign direct investment (FDI) is primarily influenced by interest rates and the value of the host country's currency. Aliber (1971) suggested that firms are more inclined to invest abroad when their home currency is strong, while those from countries with weaker currencies tend to shy away from international investments (Moosa, 2002; Faeth, 2009). Additionally, significant currency fluctuations in host countries may incentivize foreign firms to borrow at lower interest rates compared to domestic companies. Boddewyn (1985) elaborated on capital market theory by identifying three key scenarios that encourage firms to expand their operations internationally. First, a lower or undervalued exchange rate in the host country can reduce production costs, making investment more attractive. Second, the lack of organized securities markets in less developed countries often drives firms toward FDI instead of merely purchasing securities. Lastly, insufficient information about these securities markets further favors FDI, as it allows firms to maintain control over assets in the host country (Hennart, 2015).

Product Life Cycle Theory

The theory of product life cycle, developed by Vernon (1966), offers a coherent framework for understanding the motivations behind the establishment of operations in foreign countries. This theory leverages the concept of comparative advantage and examines the correlation between the product life cycle and potential foreign direct investment (FDI) flows. Vernon outlined specific types of FDI for U.S. companies in Western Europe following World War II, identifying three distinct stages in the production cycle (Dunning and Lundan, 2008).

Stage One: Innovation (New Product)—During this initial stage, local companies focus on creating innovative products primarily for domestic consumption, exporting any surplus to foreign markets. Products at this stage are often non-standardized in terms of cost and specifications (Peltoniemi, 2011).

Stage Two: Growth Products—As demand increases, products begin to standardize, and local markets approach saturation. Consequently, local firms expand their operations into international markets where

production costs are lower, enhancing their competitive edge.

Stage Three: Maturity Products—In this final stage, products achieve full standardization, and price considerations become critical in competition. The number of foreign firms seeking to expand increases, particularly in countries that add value to production. At this point, firms may find their export positions under threat and are prompted to establish production facilities in host countries through foreign subsidiaries (Chen et al., 2017)

Internalization Theory

The internationalization theory offers an alternative explanation for foreign direct investment (FDI) by focusing on the role of intermediate inputs and technology. Developed by Buckley and Casson (1976) and building on Coase's foundational work (1937), this theory addresses the question of why a single firm may choose to operate in multiple locations. Buckley and Casson (1976) and Hennart (1982) introduced the theory of internalization, which emphasizes market imperfections as a driving force behind firms' international expansion. According to this perspective, companies seek to extend their operations abroad to mitigate market failures and enhance their monopolistic advantages (Kang and Jiang, 2012).

The core premise of this theory posits that established multinational enterprises (MNEs) are motivated to minimize transaction costs associated with market inefficiencies, thereby improving their profitability. Buckley and Casson (1976) identified several forms of market failure that prompt internalization, such as government interventions that create incentives for transfer pricing and inaccuracies in price estimation. As noted by Buckley and Casson (2009), internalization occurs due to failures in the markets for intermediate inputs, leading to horizontally integrated MNEs (horizontal FDI). Additionally, failures in intermediate output markets result in vertically integrated MNEs (vertical FDI).

Industrial Organization Theory

The industrial organization theory developed by Hymer (1976) serves as a foundational framework for understanding the motivations behind the actions of multinational corporations. As a prominent economist, Hymer provided a structured approach to explain why domestic firms choose to expand their operations internationally. His theory posits that firms venture abroad primarily to compete with local businesses and to leverage unique capabilities and

advantages—such as consumer preferences, legal systems, and cultural factors—that are not easily replicated by foreign competitors. This competitive edge is referred to as "monopolistic advantage." However, entering foreign markets also subjects firms to various risks associated with market imperfections, commonly referred to as market failures (Rugman et al., 2011).

These market imperfections can manifest in several ways, including limited access to capital markets, shortages of specific managerial skills, and potential collusion in pricing. Furthermore, market failures can arise from government policies, such as taxes, tariffs, interest rates, and exchange rates. To ensure the profitability of foreign investments, firms must counteract these challenges by leveraging their market power, which may involve securing lower financing costs or possessing patented technologies. Hymer's interpretation has faced criticism from Dunning and Rugman (1985), who argued that he did not adequately differentiate between structural market failures—stemming from a firm's ownership advantages that create barriers for competitors—and transactional market failures. The former contributes to a firm's monopolistic power, which acts as a protective entry barrier in the industry (Dunning and Pitelis, 2008).

International Production Theory (Eclectic Paradigm)

This theory was introduced by John Dunning in 1976, and it is seen as a strong since it underlies the explanation of the relationship between earlier theories of FDI and international production. Moreover, International Production theory provides a coherent framework and basic outline to help economists to understand the behavior of multinational enterprises that investing abroad (Dunning, 2001). The essence of this theory is based on the idea of integrating between three main hypotheses, which represent the main important factors that affect the firm’s decision to extend their operations abroad (OLI); “Ownership, Location, and Internalization”. The OLI model is a combination of earlier theories that attempted to explain the reasons behind FDI phenomenon such as the internalization theory, Industrial Organization Theory of Hymer, and location theory (Moosa, 2002).

According to an eclectic paradigm, there are three conditions that must be satisfied before a firm engages in FDI. First, a firm needs to have an ownership advantage factor, and thereby it gives it an advantage over other firms. These advantages are for example

property rights of a particular technology, firm size, monopoly power, and access to raw material or cheap finance (Moosa, 2002) Second, the firm must exploit these advantages internally instead of contracting, selling or leasing them to other firms. Third, the benefits of setting up production abroad must be higher than the benefits of depending on exports (Wadhwa, 2011).

According to Dunning (2001) and Faeth (2009) the ownership advantages consist two types of advantages: asset ownership advantages and transaction ownership advantages. They mentioned that the monopolistic asset ownership advantages originate from the possession of the firm to intangible assets such as property rights of a specific technology, patents, and trademarks, while the transaction ownership advantage originates from possessing the necessary knowledge to reduce transactional market failure

Empirical Review

Nwisienyi and Okaro (2024) conducted an empirical analysis to investigate the determinants of Foreign Direct Investment (FDI) in Nigeria, utilizing time series data from 1990 to 2023, sourced from the World Bank database and the Central Bank of Nigeria's statistical bulletins. The study aimed to assess the impact of several variables, including Trade Openness, Real GDP, Stock Market Capitalization, Human Development Index (HDI), and Skilled Labour Cost, on FDI, employing the eclectic FDI theory as its theoretical framework. Utilizing Johansen Co-integration and the Vector Error Correction Model (VECM) within a VAR framework, the results indicated the presence of cointegration among the variables. Specifically, Trade Openness and Stock Market Capitalization were found to have statistically significant positive relationships with FDI, whereas Real GDP exhibited a statistically significant negative relationship with FDI in the long run. In contrast, HDI and Skilled Labour Cost did not demonstrate significant effects on FDI in the long run, and all variables were insignificant in the short run.

Ayinde et al. (2024) investigate the macroeconomic determinants of Foreign Direct Investment (FDI) in emerging economies during turbulent times, specifically focusing on the impacts of the COVID-19 pandemic. The study encompasses fifteen countries and analyzes data from the first quarter of 2019 to the second quarter of 2023, employing the Wang and Wong (2007) model as its analytical framework. To address inherent issues of

endogeneity and heterogeneity in the estimations, the researchers conducted various data stability tests and utilized the panel system generalized method of moments (GMM) for analysis, ensuring an optimal identification solution. For robustness, the sample was divided into two categories: emerging economies with a history of high FDI receipts and those with low FDI receipts. The findings reveal that the macroeconomic determinants are sensitive to this disaggregation, with lagged counterparts of the variables playing significant roles in influencing FDI.

Nosigwe and Asoga (2024) investigated the determinants of Foreign Direct Investment (FDI) in Nigeria, focusing on the factors that created an enabling environment for FDI inflows. Anchored in the OLI (Ownership, Location, Internalization) Paradigm, Market Imperfections Theory, and Institutional Theory, this research provided a robust theoretical framework to navigate the complexities surrounding FDI determinants. Through a comprehensive qualitative analysis of secondary data sourced from academic literature, government reports, and publications from international organizations, the study identified several key themes that influenced Nigeria's attractiveness as an FDI destination. The findings highlighted that political stability, market size, and economic growth were pivotal in attracting FDI, alongside critical factors such as infrastructure development, institutional quality, and human capital development. These elements collectively contributed to creating a favorable investment climate, underscoring the multifaceted nature of FDI dynamics in Nigeria.

Hoang, et al (2022), investigated the determinants of foreign direct investment in Southern Central Coast of Vietnam using a spatial econometric analysis. The variables used were exchange rate, inflation, GDP growth rate and degree of openness. They concluded that GDP growth rate, exchange rate and degree of openness serve as a major determinant of FDI in the Southern Central Coast of Vietnam. In the same vein Suryanta, & Patunru, (2022), examined the major determinants of FDI in Indonesia. They concluded that government effectiveness, exchange rate and degree of openness stand as a major determinant of FDI.

Using the OECD countries Cieślik,.(2020), make use of the countries in Poland to determine the major determinant of FDI. They concluded that different factors are what determines FDI in different countries. The results show that FDI process in Nigeria

is governed by two different regimes and a shift from one regime to another regime depends on transition probabilities. The results show that the main determinants of FDI are GDP growth, macro instability, financial development, exchange rate, inflation and discount rate. This implies liberalization that stems inflation and enhance the value of domestic currency will attract more FDI into the country.

Ajide, et al (2022) investigated the relationship between Shadow economy and foreign direct investment in Nigerian manufacturing industry. They concluded that underground economy raises FDI but was insignificant in determining FDI in Nigeria. Moreover, the study also confirm earlier findings of the literature, namely the importance of other determinants of FDI inflows, such as labour costs, the size of the target market (as proxied by its economic activity), the trade openness of the recipient country as well its tendency to tax economic actors. Comparing the empirical results using new FDI data, cleaned of statistical artefacts, such as financial round tripping, with those using series that do not correct for such artefacts, it was found out that results indeed differ somewhat, but remain overall robust.

Asongu, et al, (2018) studied the main determinants of foreign direct investment in fast-growing economies using both the BRICS and MINT countries. They concluded that factors that determine FDI in the BRICS countries also determine FDI in the MINT countries. Major factors they considered are growth rate of GDP, credit to private sectors and exchange rate. In the same vein, Tocar, (2018) also confirmed that exchange rate and credit to private sectors are major determinants of FDI in the country

The central concern of Dellis, et al (2017) was the investigation of the determinants of FDI into advanced countries especially the euro area. The paper as a deviation from other literature makes the advanced countries its priority rather the usual FDI and the developing economies. This paper attempts to provide a deeper understanding on the measures and factors which could encourage capital transfers into advanced economies and the euro area specifically with a particular focus on the role of structural and institutional features. In addition to focusing on institutions the paper also explore a newly available FDI methodology which is able to clean as much as possible the FDI data of statistical artefacts such as financial round tripping. The results suggest that well-functioning economic structures are indeed a relevant determinant of FDI inflows in advanced countries, thereby suggesting that

policies to attract FDI should also focus on improving these countries' economic structures.

Methodology

Data

The study examined the determinants of foreign direct investment (FDI) in Nigeria over the period from 1990 to 2022, aiming to identify the critical factors influencing investment inflows into the country. The research employed several key variables, including investment inflow, degree of openness, exchange rate, inflation rate, GDP growth rate, and infrastructure development. Data for these variables were meticulously gathered from the World Bank's World Development Indicators database, (https://databank.worldbank.org/source/world-development-indicators) which provided a reliable foundation for the analysis. The study sought to explore how each of these determinants affected FDI, considering Nigeria's economic context and the global investment landscape.

Model

In order to examine major short run and long run determinants of FDI in Nigeria, the model by Nwisienyi and Okaro (2024) was adopted with a slight modification. The functional form of the model is specify as follows below:

FDI= $f(GDPgr, EXR, DOP, , INF, INFR)$

(1)

Where: FDI represents foreign direct investment, GDPgr is the growth rate of gross domestic producet, DOP stand for the degree of openness, EXR represents real exchange rate, INF means inflation rate and INFR represents infrastructure.

To empirically determine the major determinants of foreign direct investment, equation (1) is transformed into an econometric form as specified bellow:

$$FDI_i = \alpha_0 + \alpha_1 GDPgr_t + \alpha_2 EXR_i + \alpha_3 DOP_t + \alpha_4 INF_t + \alpha_5 INFR_t + \varepsilon_i \quad (2)$$

In order to reduce the error term, equation 2 is re-specified in its logarithm form as:

$$logFDI_i = \alpha_0 + \alpha_1 logGDPgr_t + \alpha_2 logEXR_i + \alpha_3 logDOP_t + \alpha_4 logINF_t + \alpha_5 logINFR_t + \varepsilon_i \quad (3)$$

Definition of Variables

Foreign direct investment, net inflows (% of GDP)

Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is

the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors and is divided by GDP.

Exchange Rate: Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).

Trade Openness: Trade openness is defined as the ratio of exports plus imports over GDP.

Inflation, consumer prices (annual %)

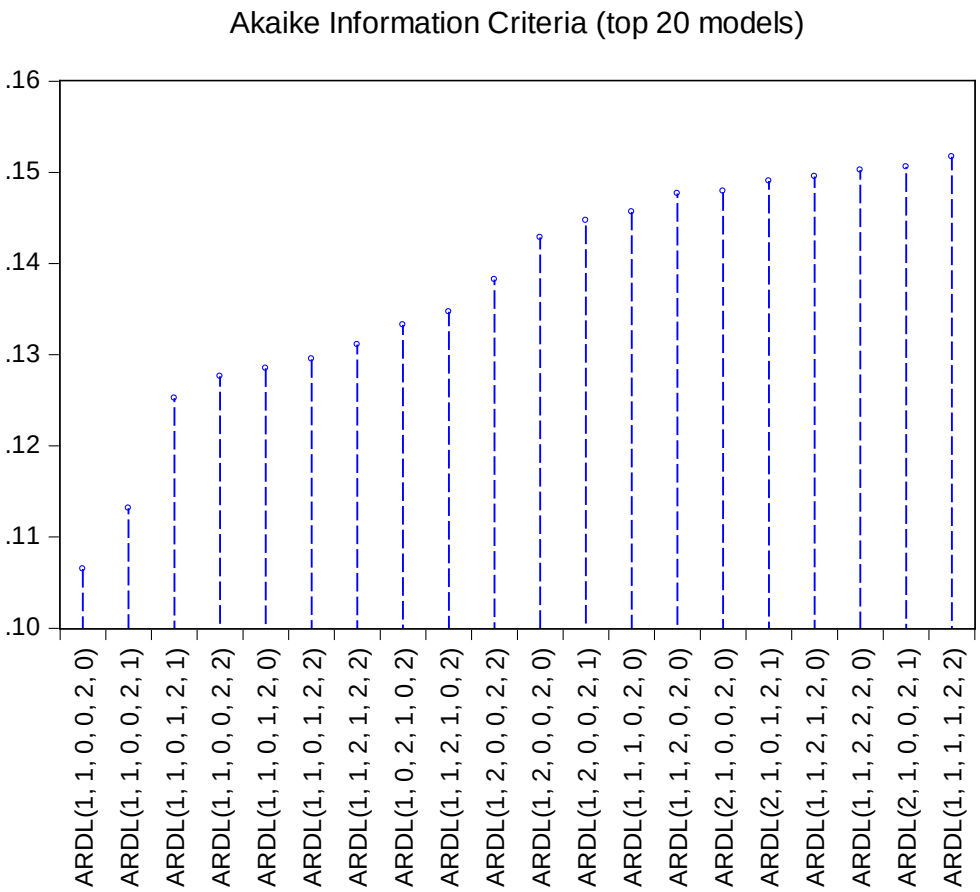
Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.

GDP growth (annual %)

Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources

Model Selection

The ARDL model selection used for this study is the Akaike Info Criteria and the ARDL model used is 1,1,0,0,2,0.



Results and Discussion

Descriptive statistics

Table 1 presents the descriptive statistics for all the variables utilized in this study, offering a comprehensive overview of their characteristics over the specified period. The average values indicate that foreign direct investment (FDI) stood at approximately $1.735 billion, while the degree of openness (DOP) averaged around $32.53 billion, and infrastructure (INFR) was valued at approximately $0.002 billion. Additionally, the mean GDP growth rate was a notable 43.05%, indicating substantial economic expansion during the study period, while the inflation rate averaged 18.72%, suggesting fluctuating price levels. The exchange rate averaged N98.32 per dollar, reflecting the relative value of the Nigerian naira against the US dollar throughout the analysis.

The minimum values for FDI, DOP, and INFR were significantly lower, at $0.195 million, $9.14 million, and $5.28E-06 million, respectively, highlighting the variability in investment inflows and infrastructure development over time. In contrast, the maximum values reached $11.15 million for FDI, $53.27 million for DOP, and $0.017 million for INFR, illustrating the potential for significant

growth in these areas. Furthermore, the minimum and maximum GDP growth rates ranged from 26.87% to 55.33%, indicating a dynamic economic environment, while inflation rates varied between 5.38% and 72.83%, suggesting periods of both stability and volatility. The exchange rate also exhibited substantial variation, with a minimum value of N0.57 per dollar and a maximum of N358.81 per dollar, reflecting the fluctuations in the currency market and the economic challenges faced during the period under review. These statistics not only highlight the fluctuations in investment and economic indicators but also provide critical context for understanding the factors influencing FDI in Nigeria.

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Table 1: Descriptive statistics of variables used

	FDI	GDPGR	DOP	EXR	INF	INFR
Mean	1.735509	43.05507	32.52905	98.31591	18.71666	0.002096
Median	1.159070	44.19592	34.02388	101.6973	12.21778	0.001056
Maximum	11.15086	55.32916	53.27796	358.8108	72.83550	0.016838
Minimum	0.195183	26.87212	9.135846	0.546781	5.388008	5.28E-06
Std. Dev.	1.945131	5.387712	12.40661	100.6851	16.74163	0.003423
Skewness	3.162344	-0.825581	-0.352935	0.916136	1.863246	2.944909
Kurtosis	14.87358	4.621278	2.236216	3.034686	5.309833	11.50286
Jarque-Bera	309.1803	9.147918	1.847764	5.737307	32.83771	182.7722
Probability	0.000000	0.010317	0.396975	0.056775	0.000000	0.000000
Sum	71.15586	1765.258	1333.691	4030.952	767.3831	0.085941
Sum Sq. Dev.	151.3414	1161.097	6156.954	405499.5	11211.28	0.000469
Observations	43	43	43	43	43	43

Unit Root Test

Table 2 presents the findings from the unit root test conducted on all the variables to ensure the reliability of the regression analysis and avoid spurious results. The unit root test is essential in time series analysis, as

it helps identify whether a series is stationary or non-stationary, which influences the validity of econometric modeling. The results indicate that the variables logFDI, logGDPGR, and logINF were stationary at their levels, denoted as I(0), meaning they do not exhibit a unit root and remain constant over time. In contrast, the variables logEXR, logINFR, and logDOP were found to be stationary only after first differencing, indicating that they required transformation to achieve stationarity.

Since not all variables were stationary at the same order, this necessitates testing for long-run relationships among them. The presence of non-stationary variables can lead to misleading conclusions if a long-term relationship exists, making it crucial to establish whether these variables share a common stochastic trend. Therefore, understanding the order of integration among the variables is a vital step in accurately modeling their interactions and ensuring valid inferences can be drawn from the data.

Table 2: Unit Root Test

Variables	ADF at Level	ADF at First Difference	Order of Integration
logFDI	-4.368		I(0)
	(0.001)		
logGDPGR	-2.327		I(0)
	(0.051)		
logEXR	-1.042	-5.369	I(1)
	(0.351)	(0.000)	
logINF	-3.524		I(0)
	(0.012)		
logINFR	-5.186	-6.239	I(1)
	(0.000)	(0.000)	
logDOP	-2.239	-7.503	I(1)
	(0.196)	(0.000)	

Note: *** and ** denotes significant at 1% and 5% respectively.

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Cointegration Test

To assess the presence of a long-run relationship among the variables, the study employed the bounds testing approach to cointegration developed by Pesaran, Shin, and Smith. This method utilizes both lower and upper critical bounds to evaluate cointegration. The test is based on three key conditions: if the calculated F-statistic exceeds the upper critical value, a long-run relationship exists among the variables; if it falls below the lower critical value, no long-run cointegration is present; and if it lies between the two bounds, the result is inconclusive. In the results obtained, the F-statistic was found to be 4.19, which surpasses the upper bound critical values for I(1) at both the 10% and 5% significance levels. This finding indicates a robust long-run relationship among the variables in the context of Nigeria, leading to the rejection of the null hypothesis that posits no long-run relationship among them..

Table 3: Cointegration Tests

	BDS		
Critical Value	Lower Bound (0)	Upper Bound (1)	F-Statistics
1%	3.41	4.68	F= 4.197
5%	2.62	3.79	
10%	2.26	3.35	

Note:** and *** denotes significance at 5% and 1% respectively

Empirical Results

The results presented in the analysis reveal significant insights regarding the relationship between foreign direct investment (FDI) and various macroeconomic variables in Nigeria. Specifically, the growth rate of GDP demonstrated a positive correlation with FDI; however, this relationship was not statistically significant in the short run but gained significance in the long run. The findings indicate that a one-percentage-point increase in the GDP growth rate corresponds to a 1.75% increase in FDI in the short run, while in the long run, this effect strengthens

to a 2.47% increase. This suggests that, while GDP growth does not play a major role in attracting FDI in the immediate term, it becomes a significant determinant over a longer horizon, reflecting a growing confidence among investors as the economy expands.

The degree of openness also exhibited a positive relationship with FDI in both the short and long runs. The lagged value of the degree of openness was found to be statistically significant at the 5% level, indicating that Nigeria's trade policies and market accessibility are crucial in attracting foreign investments. The significance of this variable in both timeframes emphasizes its role as an essential determinant of FDI, suggesting that a more open economy encourages foreign investors to engage in Nigeria's market.

In contrast, the exchange rate showed a negative impact on FDI in both the short and long runs. The results indicate that a one-percentage-point increase in the real exchange rate would result in a decrease in FDI of 0.033% in the short run and 0.285% in the long run. This negative relationship highlights that fluctuations in the exchange rate can deter foreign investment, as investors may perceive a weaker currency as a risk factor, leading to concerns about profitability and return on investment. The significance of these findings at both the 5% and 10% levels underscores the exchange rate as a critical determinant of FDI in Nigeria.

Lastly, the inflation rate did not significantly influence FDI in Nigeria. Although the analysis showed that a two-lagged inflation rate had a positive impact on FDI in the short run, its long-term effect turned negative. This suggests that while short-term inflation may not deter foreign investment, long-term inflation contributes to price instability, ultimately discouraging foreign investors. The insignificance of the inflation rate in determining FDI further indicates that, overall, inflation remains a minor factor affecting investment decisions in Nigeria, as investors are more concerned about stable economic conditions

Table 4: Short-Run and Long-Run Determinants of FDI

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR)	1.755	1.191	1.474	0.151
D(DOP)	0.749	0.318	2.357	0.025
D(EXR)	-0.178	0.077	-2.324	0.027

D(INF)	-0.033	0.182	-0.184	0.856
D(INF)	0.567	0.185	3.059	0.005
D(INFR)	0.032	0.051	0.630	0.534
CointEq(-1)	-0.626	0.149	-4.212	0.000

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPGR	2.472**	1.146	2.157	0.044
DOP	1.197**	0.518	2.309	0.028
EXR	-0.285*	0.143	-1.996	0.055
INF	-0.243	0.393	-0.618	0.542
INFR	0.051	0.080	0.632	0.532
C	-4.829*	2.529	-1.910	0.066

Note:***,**, and * denotes significant at 1%,5% and 10% respectively

Conclusion and Recommendations

This paper analyzed the determinants of foreign direct investment (FDI) in Nigeria from 1980 to 2022, utilizing five key macroeconomic variables: GDP growth rate, degree of openness, exchange rate, inflation rate, and infrastructure. The study employed Autoregressive Distributed Lag (ARDL) estimation techniques to explore both short-run and long-run determinants of FDI. To ascertain the presence of a long-run relationship among the variables, the Pesaran, Shin, and Smith bounds testing cointegration approach was utilized. The findings revealed that, in the short run, the GDP growth rate, real exchange rate, degree of openness, and inflation rate emerged as significant determinants of FDI. Conversely, in the long run, the GDP growth rate and degree of openness were identified as the primary drivers of FDI in Nigeria. Furthermore, the results indicated a long-run relationship between FDI and the examined variables. Therefore, the study highlights the necessity of fostering a conducive environment for openness, ensuring exchange rate stability, and implementing strategies to stimulate GDP growth in order to enhance foreign direct investment inflows into the country.

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