FOREIGN DIRECT INVESTMENT, MACRO ECONOMIC VARIABLES AND NIGERIA`S ECONOMIC DEVELOPMENT

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ABSTRACT

Nigeria has been unable to fully capitalize on the advantages of foreign direct investment (FDI) because of its weak infrastructure, excessive reliance on oil, and macroeconomic instability, despite its abundant resource endowment and enormous market potential. Efforts to attain sustainable economic development are hampered by these persistent challenges. Using GDP per capita as the primary proxy, this study examines the effects of foreign direct investment (FDI) and two important macroeconomic factors—inflation and exchange rate—on Nigeria's economic development. Using secondary time series data spanning the years 1990–2023, the study adopted a quantitative approach. The relationships between FDI, inflation, exchange rates, and economic development were estimated using multiple regression analysis. The findings showed that whereas inflation and the exchange rate were both statistically significant but had negative effects, foreign direct investment (FDI) had a positive and significant impact on economic development. The findings imply that while foreign direct investment (FDI) is a key contributor to economic expansion, macroeconomic unpredictability limits its efficacy.

Keywords: *Foreign Direct Investment, Exchange Rate, Inflation, Economic Development, Gross Domestic Product per capita.*

1.1 INTRODUCTION

Foreign direct investment represents sectoral inflow to an economy. This occurs when international investors enter a country to gain ownership and control of business assets (Adeseyoju, 2021). The foreign investors can invest in the manufacturing, agricultural, health sectors, and so on. Foreign direct investment (FDI) involves foreign capital entering the economy, which boosts production through investments across various sectors. This may result in increased employment, which would increase the availability of goods and services as well as the money available for consumers to buy them (Kareem, et al, 2021). This cycle can lead to economic development. According to the United Nations Conference on Trade and Development (UNCTAD) (2023) report, Nigeria ranked fifth among African nations in attracting FDI, followed by Ghana, Egypt, South Africa, and Ethiopia. Approximated at $164.9 billion in 2022, FDI represented approximately 40% of Nigeria's gross domestic product. Foreign direct investments total stock represented 40% of the Nigerians gross domestic product, (UNCTAD, 2023).

Some countries that mainly invest in Nigeria are: USA, United Kingdom, France, South Africa, and China. To attract more foreign investors, Nigeria must diversify beyond oil by strengthening

industries such as manufacturing (Isibor, et al, 2023). Nigeria`s foreign direct investment potentials can be limited by factors like corruption, lack of transparency, poor quality infrastructure, political instability (Okoh, et al, 2025). The World Bank ranked Nigeria as the 131st in the 2023 Doing Business Report (Okoh, et al, 2025).

Nigeria, being Africa's most populous nation has the largest GDP and rich agricultural resources (Olurotimi, et al, 2024) and these are strong points the nation has in terms of attracting foreign direct investments. However, the major weak points in foreign direct investment are poorly developed infrastructures and corruption which lead to increase operating cost, high tax burden, oil as the major exporting produce, and so on (Okoh, et al, 2025).

Nigeria is a main oil producer and due to economic mismanagement, the oil has not affected and improved the standard of living in the country (Roberts, 2021). FDI`s influxes to Nigeria is positively impacted by the growth of the oil sector, oil prices, and policies of government. Foreign direct investment influxes in non-oil sectors were impacted by the several policies in the private sector. Foreign investors are important in the growth of the oil sector. Oil is vital to the Nigerian economy as it accounts for 40% gross domestic product (Roberts, 2021) and Nigeria is also one of the worlds fastest growing markets with main telecommunication companies like Airtel and MTN and so on, so this are of telecommunication should be focused on and developed so as to increase Nigeria's GDP. The telecommunication sector has to be improved on so that the FDI can invest in them for economic development. FDI`s are made with acquiring or merging or the growth of new business into Nigeria will have a great effect on the GDP of the economy they are investing in.

Many growing economies find foreign direct investment as the vital factor for development of the economy. According to UNCTAD (2019), fifty-seven fresh strategies impacting foreign direct investment were started by forty African nations of which forty-nine among the strategies encouraging big performance and increased economic growth (UNCTAD, 2019). Nigeria has historically been the main beneficiary of foreign direct investment (FDI) in Africa due to its abundant natural resources and sizable market. FDI influxes to Nigeria have reduced due to economic instability like, exchange rate fluctuation, and inflation (Okafor & Isibor, 2021). Most Nigeria`s work in Agriculture and yet exports and government revenue are largely driven by oil. Oil is the main pot of gold for Nigeria in the 70s and agriculture is ranked sixth in the world and first in Africa in agricultural products, the agricultural sector accounts for 26.8% of GDP and two-thirds of employments (Okafor & Isibor, 2021).

Exchange rate is the price of one country's currency in relation to another country (Murtalazakari, 2021). In other words, exchange rate is the required number of units of a given currency that can buy one unit of another currency. A core characteristic of an industrialized nation is a fairly stable currency. Thus, any developing country with the desire of becoming an industrialized nation in the nearest future has to ensure that its currency is relatively stable. It is widely accepted exchange rate is an essential macroeconomic variable in the context of international economics for policy formulations, and a key price variable which governments take very active interest in (Murtalazakari, 2021). Exchange rate is one of the most important fundamentals in an economy that enables trade goods and services internationally. Foreign goods can easily appear cheaper or

more expensive than local goods depending on the direction of the exchange rate (Okafor & Isibor, 2021).

In the process of macroeconomic adjustment and performance, a stable real exchange rate plays a vital role as the price that measures the market value of common baskets of domestically and internationally produced goods. The real exchange rate is a contributing factor to the external competitiveness of a country and to its balance of payments viability (Zardoub & Sboui, 2020). This is so because the exchange rate influences the allocation of productive resources between goods and services. It is one of the indicators used by economic agents in making decisions concerning production and consumption choices between domestic and foreign goods. Exchange rate policy has been identified as one of the endogenous factors that can affect the economic performance and industrial productivity of a nation (Zardoub & Sboui, 2020).

Galloping inflation is one of the main threats to the stability and prosperity of a large number of market economies. It has impeded most economies due to its undesirable effects (Tasinda, et al, 2022). Olurotimi, et al (2024) suggested that moderate inflation helps in increasing industrial output and economic development. Hence, high inflation is inimical to development. The problem of inflation surely is not a new one. It has been a major challenge in the development process of many economies over the years.

By definition, inflation is a persistent and appreciable rise in the general level of prices (Obidike, 2022). Inflation could also be defined as a generalized increase in the level of price sustained over a long period in an economy (Oyewole & Adegbite, 2021). According to Oseni and Nwachukwu (2021), inflation can be defined as a persistent rise in the general price level of broad spectrum of goods and services in a country over a long period of time. Not every rise in the price level is termed inflation. Therefore, for a rise in the general price level to be considered inflationary, such a rise must be consistent, enduring and sustained (Oseni & Nwachukwu, 2021). The rise in the price level should affect almost every commodity and should not be temporal. But, Ibrahim, Akinbobola, and Odusanya (2023) were more explicit referring to inflation as a continuing rise in prices as measured by an index such as the Consumer Price Index (CPI) or by the implicit price deflator for Gross National Product.

Inflation has been intrinsically linked to money supply, as captured by the often-heard maxim "inflation is too much money chasing too few goods". According to Abasiakan, Sani, and Obiezue (2021), inflation reflects a reduction in the purchasing power per unit of money – a loss of real value in the medium of exchange and unit of account within the economy. Inflation is a household word in many market-oriented economies. In an inflationary economy, it is difficult for the national currency to act as medium of exchange and a store of value without having adverse effects on income distribution, industry output and employment (Abasiakan, Sani, & Obiezue, 2021).

FDI has been focusing more on oil sector in Nigeria and this is because of the lack of infrastructural facilities in the development of other sectors. Nigeria`s most participation is the agricultural sector, which will bring about employment if it is being developed (Okafor & Isibor, 2021). The involvement of the FDI in the non-oil sector in Nigeria is low and unattractive. Nigeria is

dominated by the oil industry and this will increase her lack of development due to low investments in other sectors that will improve and increase her gross domestic product and will increase their exporting produce or goods. FDI has not significantly impacted Nigeria's economic growth. The non-oil sector has a great percent on export value and would lower the nation's widespread poverty and unemployment. The agricultural sector has been declining due to lack of improvement; Nigeria is faced with poverty and bringing more sectors in for investment will reduce the poverty level due to more employment.

The oil sector has outgrown the agricultural sector as it boosts 80% of the government revenue. Ayanwale and Bamire (2022) opined that the global economy was opened because of trade liberalization, no business barrier, and technology advancement. Agriculture is very productive and so it needs the attention of the foreign direct investment. The Nigerian Transport sector is another good area for investment; however, it has been a barrier to economic development as transport infrastructures is in bad shape, poor management and maintenance. Although, tourism brings in revenue to the country as a strong point for economic development, but it has not been equipped and stocked.

Nigeria`s problem is the over dependency in the oil sector, neglecting the development of the other sectors that can add to the economic development and making it attractive to the foreign direct investment (Isibor, 2022). 90% of Nigeria's FDI inflows are from the oil sector with companies like Mobil, Shell and Chevron making Nigeria a major headquarters (Nwanosike, 2021). Therefore, this research majorly wants to examine how FDI and a few macroeconomic factors might help Nigeria reach full economic growth.

1.2 Hypotheses Statements

H_0: Foreign direct investments do not significantly impact development of Nigerian economy.

H_0: Exchange rate does not significantly impact Nigeria's economic development.

H_0: Inflation does not significantly improve the Nigerian economic development.

2.0 Literature Review

2.1 Inflation

Inflation could be described as tenacious and continuous increase in general prices of commodities in a country. Milton Friedman famously noted that inflation is forever a monetary event caused by a sustained increase in money supply over and above the productivity of output (Isibor, et al 2025). Olurotimi, et al (2024) defined inflation without tying it to a root cause, instead describing inflation as prolonged and consistent decline in the value of money. Whether caused by an unexpected expansion in money supply or growth in wages, inflation is generally considered to be harmful to economic growth once it exceeds certain thresholds (Isibor, et al 2025).

Since higher quantity of money causes greater overall prices in a mechanical manner, inflation may only be produced if increased money supply is matched with an equivalent rise of general spending in an economy which may not always occur (Olawale, 2020). Changes in price level are usually measured monthly, quarterly and annually. According to Friedman, inflation is by and large simply a monetary phenomenon which emerges due to faster increase in money supply compared to total output in the economy (Kareem, Chukwu, Oke & Fatimah, 2021). This point is further stressed by advocates of the quantity theory of money who opine that fluctuations in overall prices are majorly influenced by adjustments in the quantity of money being circulated (Kareem, et al, 2021).

According to Murtalazakari (2021), higher prices of commodities and services can only be considered as inflation if such changes are constant, enduring and sustained. For example, short term hike in prices due to scarcity or hoarding should not be considered as an inflation effect. Therefore, the price change should be permanent, and the inflationary pressure must be far reaching instead of occurring in only one or a few products. This is because an evolving economy sees some product prices increase as others fall in response to changing demand and supply of these amenities. If price stability must be attained in any economy, then individual prices of goods, services, wages, etc. should have room to fluctuate such that general prices remain relatively unchanged. However, one may choose to define inflation, it is universally accepted that inflation is the erosion of the value of money through consistent increase in overall price levels owing to unnecessary expansion in volume of disseminated money in circulation.

Monetarist believes that an expansion in money supply is the sole reason for inflation, as an unexpected rise in nominal income of households will cause greater demand of the goods and services which could bring about inflation. However, higher inflation does not always lead to a monetary problem as changes in prices could simply be a mere inclusion of typical intricacies of competitive structure (Ndugbu, 2020). For instance, apparently if there is crop deficiency or something of that kind, there will be some rise in prices to ration the reduced supply; again, if the economy is recovering from recession to a higher employment level, some prices will be unavoidably higher due to increased demand for goods and labour. In both cases, the rise of prices ought not to be regarded as inflationary; first, because in the nature of things it will be self-limiting, and second, because it does not in itself represent any serious policy problem (Ndugbu, 2020).

The monetarists see money as the main determinant of prices and income as its undersupply or oversupply can influence the direction of prices and income in the country. Economists argue that there exists a proportionate linkage between price level and aggregate money being disseminated within a nation (Okafor & Isibor, 2021). Theoretically, if money supply expands and output produced in that country does not increase, the prices of merchandises and amenities will rise by that nation's growth of money supply because households would simply purchase those very products and services at greater prices. Monetarists who argue that "demand draws forth supply" say that the money supply must expand but at a slow pace to encourage economic expansion and control inflation in the country. Prices must be steadily maintained economically due to debilitating consequences of inflation in a nation (Isibor, et al, 2025).

Monetarists opined that control of money supply is key to achieving price stability in any country. Furthermore, their view on inflation is that Central Banks play a critical part in ensuring stable prices in any country as the control in expansion or contraction of money supply ultimately influences inflation levels in that country (Isibor, et al, 2025). The philosophy of monetarism is that the monetary authority could influence variation in inflationary pressure on the economy over time through its management of the monetary base, the pace of credit growth and other diversified monetary aggregates.

The speediness of monetary policies which impacts base and broad money to completely affect prices is reliant on predictability or unpredictability of those specific monetary policy actions, where for the latter scenario, the swiftness of anticipations to adapt matters. Anticipations are also very crucial in ascertaining the magnitude of these policy schemes to influence other parameters, such as interest rate and total output temporarily, before totally affecting prices. Lastly, comprehensive fundamental processes by which Central Bank controls monetary base could alter the schedule of monetary policy's impacts on inflation, output and interest rates (Isibor, et al, 2025).

2.1.1 Measures of Inflation

Generally, two major reasons for quantifying inflation include the fact that it lessens welfare and shows sign of deteriorating or backwards ephemeral economic progressions (Olurotimi, et al, 2024). The relevance of these respective components will influence selection of specific definition for inflation. Measuring inflation is an extremely intricate matter, which incorporates several decisions that might significantly affect the degree and dynamism of constructing certain preferred series. Concurrently, capturing inflation in a clear and trustworthy manner that is comprehended by various societal bodies is key. So, if inflation indicator depends on estimations of living costs among diverse set of people, such quantification may differ among groups as earmarking the cost-of-living index useful for a particular cohort could be incompatible for other groups.

Inflation rate is captured by percentage change in price index including producer price index, wholesale price index, consumer price index among others (Omankhanlen, Ilori, & Isibor, 2021). Consumer Price Index (CPI) evaluates prices of symbolic quantity of amenities and commodities bought by average individuals based on periodical observation of customer prices. Given varying basket mass, price alterations of services and products can impose varying effects on quantified inflation. However, CPI has numerous shortcomings in measuring prices.

First, it fails to reveal items and facilities purchased by government and/or companies, including machines and plants. Moreover, it fails to illustrate adaptations in product standards that may have transpired eventually. Thirdly, alterations in prices of substitutable items are not considered. Finally, CPI mostly does not transform frequently to reflect changes in the taste of consumers. Regardless of these flaws, CPI remains the largest popular measure of overall price levels, probably due to its indexing relevance for numerous salary and wage recipients (inclusive of government workers). GDP Deflator is another index of price fluctuation and is usually on yearly

basis. Notwithstanding, it is hardly adopted for evaluating inflation since CPI depicts cost of living and, thus has better suitability for quantifying people's welfare (Olawale, 2020). Additionally, greater availability of CPI aids its usability for monetary policy undertakings.

Chekwube and Maduka (2023) also noted that there are market-based and survey-based inflation anticipations in assessing predictive powers of anticipated inflation information on actual price levels. The former dealt with inflation-linked swaps, where fixed inflation swap rate (investors' anticipation of prices) is substituted for real inflation over certain duration, based on high frequency financial transactions. Yet, relatively short time series has restricted market-based possibility of predicting inflation. Contrarily, the latter involved probability outcomes from survey (such as Professional forecasters executed by Federal Reserve Bank of Philadelphia for United States or European Central Bank for Europe).

The importance of survey in predicting inflation is supported by Chekwube and Maduka (2023) and Nwanosike (2021). But recently, Olurotimi, et al (2024) recognised the deteriorated inaccuracy of professional and household inflation surveys, most likely due to low frequency, sometimes limited respondents. Again, some asset prices which could be utilised in speculating inflation for some nations at certain time periods are rather unstable (Olurotimi, et al, 2024). Although both these measures as containing inadequate futuristic details about subsequent inflation, Olurotimi, et al (2024) argued that they are very reliable in transmitting information concerning upcoming inflation. Roberts (2021) opined that inflation predictions by many respondents aligns with economic theory as irrational behaviours are mostly associated with lower education, numeracy and financial literacy. Surprisingly, these contrast the findings of Obidike (2022), who compared forecasting efficiency of diverse avenues and concluded that statistical benchmarks like autoregressive processes are arduous to surpass.

2.1.2 Effects of Inflation

Most related literary texts begin from defining inflation as persistent rise of prices, which causes four possible challenges, whose austerity relies greatly on anticipations of such inflation (Isibor, et al, 2025).

The first, and maybe greatest apparent issue is that inflation erodes monetary value, thus constituting tax on sums of money (Isibor, et al, 2023). So, individuals end up holding lesser real money compared to if inflation was absent, yielding unsatisfactory effects. Numerous works tried to measure corresponding consequential welfare loss by using money demand function and evaluating the portion occupied by inflation beneath the curve. Also, a moderate swift reduction in money's value would exert more consequences for money-spenders, who must complete extra journey to banks to refill their preferred nominal money volume so as to be at par with higher prices (Isibor, 2022). Formerly termed 'shoe-leather' costs, illustrating further treks to banks, could be more recently called 'banking-transaction' costs. Such journey to banks will be unnecessary when inflation does not exist, hence depicting an expense forced by it.

Secondly, inflation adversely redistributes wealth from creditors to debtors (Alfaro, 2018). If greater prices are unforeseen, borrowers would repay nominal debts in real dollars which are subsequently less valuable. Unpredicted inflation lessens debtors' weight and endangers lenders. It may be argued that this is not necessarily an inflationary cost since it is transferable rather than a net loss. Nonetheless, continual price hike (especially with varying and erratic rates) might make lenders minimise total credit volume supplied, hence depicting real loss compared to monetary balance in a nation.

Thirdly, inflation compels sellers to incur extra inputs to survive rapidly fluctuating prices. These menu costs will alter directly with adaptations in inflation. Quicker increases in prices will force merchants to rapidly modify price levels. Duration used to recount inventories, or re-configurate computers, shows problems imposed by inflation. It is important to recognise that such consequences still prevail even with impeccably foreseen inflation. Rectifying prices immediately from past equilibrium numbers to post-inflation values yet incorporates resource expenditures (Murtalazakari, 2021). All three issues all link to evolution in overall price

The fourth trouble involves mannerism by which alterations in prices may influence dispersal of comparative prices economically. Perhaps inflation just affects nominal prices, and leaves relative prices untouched, all identified costs would still apply. But if it goes beyond to impact relative price levels, then, resources would be misappropriated as some comparative prices will shift from equilibrium point (Murtalazakari, 2021). An avenue of differentiation is that the initial three consequences may merely place a country at a fresh steady state with less general welfare. Whereas, the last challenge could result in total displacement from equilibrium aside aggregate welfare forfeiture.

2.1.3 Monetary and Fiscal Policy Mix to Manage Economic Development

The suitable combination of monetary and fiscal policies for monitoring inflation is: (1) instantaneous fiscal policy implemented immediately inflation occurs, (2) prompt application of monetary prudence by Central Bank reserve and swift reversal after it has been remedied, and (3) intentional fiscal policy by government strictly for critical, elongated and continuous inflation.

In summary, from diverse fiscal, monetary, and other measures which have been expounded upon, it is apparent that in curbing inflation, government should implement all measures at the same time depending on inflationary situation inherent at specific periods.

2.1.4 Foreign Direct Investment (FDI)

FDIs involves a company or individual based in one country investing business interests in another country. These investments are typically in foreign business operations or assets, rather than buying and selling equities that are considered portfolio investments (Abdul-hamid, Syed, & Seid, 2020). Countries around the world track the levels of FDI they attract as an indicator of economic performance, with high inbound FDI seen as both a sign of economic growth and a creator of it. Greenfield FDI involves setting up a new business, subsidiary or facility in a different country,

and is associated with job creation and the transfer of goods and skills into the host country. FDI can transfer technologies and its spillovers affect domestic firms, which may make them more competitive and of a higher standard to that necessary to compete with foreign firms and products. These may then be made generally available in the economy, and lead to an increase in the standards of production (Abdul-hamid, Syed, & Seid, 2020). Edun and Yusuf (2024) reported that FDI inflows have the potential to create employment, increase productivity, transfer skills and technology, boost exports and continue the long-term economic growth and development of developing countries. FDI is also seen as the largest source of external financing for developing countries and Africa in particular.

The concept of FDI is intricate and ever-changing, embodying the essence of globalisation and the interconnectedness of contemporary economies. FDI denotes investments made by individuals or entities from one country into businesses or assets situated in another country. FDI is a key element in international economic integration. FDI creates direct, stable and long-lasting links between economies (Epor, Yua, & Iorember, 2024). It encourages the transfer of technology and know-how between countries, and allows the host economy to promote its products more widely in international markets. The phrase FDI describes a cross-border investment made by a resident entity in one economy with the aim of acquiring a long-term stake in a firm located in another country. FDI is the greatest source of money flowing from industrialized to developing countries, and is defined as a foreign investment that is a part or share of GDP that grows quickly.

According to Ibrahim (2024), economic growth occurs when a nation's production possibility frontier shifts outward, indicating an increase in the real GDP, typically measured in terms of per capita. Economic growth is known as an increase in the market value of the goods and services generated by an economy over time, adjusted for inflation. It is measured as the rate of growth in real GDP, typically expressed in terms of per capita. Growth is typically measured in real terms, or terms adjusted for inflation.

1.1.5 Economic Development

This is a key indicator of a country's economic performance because it also refers to an increase in the level of production the nation produces over time (Olurotimi, et al, 2024). Since the idea of economic development is relative, scholars have examined it from several angles. Over time, economists have distinguished between economic growth and economic development. They contended that economic development and economic growth are distinct. Gross domestic product per capita is an indicator of economic development. It means an increase in the average rate of output produce per person usually measured on a per annual basis (Nwanosike, 2021). It is also the rate of change in national output or income in a given period in relation to the total population (Nwanosike, 2021). It is the increase of per capita gross domestic product or other indicator of aggregate income. It denotes an increase in the production of goods and services over a specific period. It creates a legitimate expectation among consumers and investors of continued economic development. This encourages consumer spending and business investment which in turn increases the demand on the money supply moving through the economy. It facilitates the redistribution of incomes between population and society (Nwanosike, 2021).

2.1.6 Exchange Rate

An exchange rate is the value of one currency another currency (Ndugbu, 2020). A complex web of interrelated economic factors like import and export affects exchange rates, or the relative cost of one currency to another. Because they affect the flow of cash across borders and set the price of goods and services in various nations, exchange rates are essential to international trade, investment, and finance (Ndugbu, 2020).

Nigeria's monetary policy has always placed a high priority on exchange rates due to the country's trading relationships with other nations, its reliance on oil exports as its main product, and aside from the competitiveness and general economic growth of the country, as an import-dependent (developing) nation. Therefore, to attain the macroeconomic goal of stability of price, the monetary authorities (Central Bank of Nigeria) have on multiple times in the recent past participated in distinct exchange rate adjustment strategies (fixed and flexible) (Omankhanlen, et al, 2021). One of the objectives of Nigerian monetary policy is exchange rate stability, and throughout the years, the fixation with maintaining the nominal exchange rate has largely dictated exchange rate policy. The nominal exchange rate serves as a proxy for the state of the economy for the general public; a declining rate is indicative of a deteriorating economy (Omankhanlen, et al, 2021).

2.2 Solow-Growth Model

The Solow growth model is an exogenous economic growth model that was developed by Robert Solow in 1957. The model extended the Harrod–Domar model by including labor as a production factor, along with non-fixed capital-output ratios overtime (Solow, 1957). The main argument of the model is that labor productivity and exogenously driven new technological progress is the driving force behind permanent long-run economic growth, since they are instrumental in overcoming the diminishing marginal returns characteristic of production factors (Romer, 1993). The theory is a neoclassical model that breaks down how the growth rates of inputs like capital, labor, and foreign direct investment inflows contribute to output growth. The theory includes a vector of extra variables in its estimation, including the interest rate, inflation rate, and exchange rate (Solow, 1957). According to Solow, the growth process of any economy can be derived from the following equation:

$Y = A\Phi (K, L, \Omega)$.

Where Y, K, L, and A stand for output, capital, labor, and production efficiency, respectively; and Ω is a vector of ancillary variables (Solow, 1957). Employing a Cobb-Douglas function with observing the logarithms and time derivatives of the equation it yields: $gy = gA + agk + \beta gL + \gamma g\Omega$ Where gy represents the AKL's rate of growth and y represents the output's elasticity with regard to labour, physical capital, and ancillary factors, respectively. The study made the assumption that the growth rate of technology diffusion is an increasing function of foreign direct investment in its application of Findlay's (1978) Solow's growth model. This emphasized the

handicap and need for rescue which less and developing economies cannot provide themselves, thereby needing inflows from abroad.

The model thus explained that much of the variation in the growth rates among countries that we see overtime, is a result of the varied technological pace changes and differences among them. It further assumes that production is characterized by returns to scale that are constant, a state that implies that a doubling of production inputs should result into no more or less than output doubling. A very important implication of the model is the convergence hypothesis, i.e. open economies in the long run ultimately converge to their steady state equilibrium levels according to Dunning (2005), this implied that countries at low levels of development should thus exhibit higher return rates on both human capital and physical capital, than countries at higher levels of development because such are further away from their steady state. This theory is relevant to the current study as it recognizes the role played by technological innovations brought about by FDI inflows plays in enhancing a countries economic growth.

2.3 Empirical Review

Ozili (2025) studied the effect of foreign direct investment (FDI) inflows on economic growth in Nigeria from 2010 to 2019. Using the ordinary least square regression methodology, the findings revealed that FDI inflows do not have a significant effect on economic growth in Nigeria. The result held when different measures of economic growth and different measures of FDI inflows are employed. Meanwhile, population size, real interest rate, domestic private credit and the inflation rate are significant determinants of economic growth in Nigeria while gross capital formation is an insignificant determinant of economic growth in Nigeria. The implication of the findings is that policy makers in Nigeria should focus on other drivers of economic growth other than FDI inflows when developing policy initiatives to stimulate economic growth in Nigeria.

Ositaufere, Metu, and Okafor (2024) examined the impact of foreign direct investment on economic performances in sub-Saharan Africa using panel autoregressive distributed lag techniques from 2000 to 2022. The findings of the study revealed that FDI increases economic growth and inflation rate in Sub-Saharan African countries.

Edun and Yusuf (2024) analysed the impact of the challenges of foreign direct investment on the economic development of Nigeria. Adopting empirical review of relevant literatures, the study found among others that FDI has culminated in capital inflow in the country, but the impacts are yet to be felt due to external and internal challenges Nigeria is bedevilled with.

Kutu and Ohonba (2024) examined the impact of foreign capital inflows on economic growth in Nigeria between 1984 and 2020. The overall finding revealed that foreign capital inflows have a long-run impact on economic growth in Nigeria except for official development aids. Granger causality shows a unidirectional relationship running only from remittance to GDP, implying that remittance is a predictor of economic growth in Nigeria. Interestingly, a bi-directional causal effect exists between FDI and GDP (both are influencers of each other). This generally implies that international capital inflow is one major promoter of economic growth in Nigeria.

Ghazalian, (2024) conducted empirical analysis on the short-run and the long-run effects of economic growth on FDI inflows. The main results showed significant positive effects of economic growth on FDI inflows, and they indicated that the magnitudes of these effects are statistically comparable over time and do not diminish with higher economic growth levels. These findings underscored the significance of developing growth enhancing policies that are designed on the basis of the economic and geo-economic characteristics of host countries. Such policies could be coupled with international trade and foreign investment openness directions to stimulate stronger responses of FDI inflows to economic growth and mitigate the implications of unfavorable global and regional political conditions.

Ibrahim (2024) analysed the foreign direct investment (FDI) and economic growth in Nigeria. This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. It was found that FDI positively impacts Nigeria's economic growth by fostering capital formation and technology transfer. The theory of FDI and economic growth, the dependency theory & the institutional theory may be used to anchor future studies on analyse the FDI and economic growth in Nigeria. Fostering investment in sectors such as manufacturing, agriculture, and technology can contribute to economic diversification, employment generation, and skill development, thereby fostering sustainable economic growth. Nigerian authorities should focus on improving the investment climate by implementing reforms aimed at reducing bureaucratic hurdles, streamlining business processes, and enhancing transparency.

Ai-Jun, et. al., (2024) investigated the relationship between Foreign Direct Investment (FDI) inflows and economic growth at sectorial levels in Bangladesh, employing a panel study framework. Utilizing sectorial-level panel data spanning six sectors from 2007–08 to 2018–19, the analysis is conducted using Panel Vector Error Correction Model (Panel VECM). Results from panel unit root tests confirmed that all variables are integrated of order one I (1), indicating stationarity. The Pedroni panel co-integration test further supported the presence of co-integration among the variables. Notably, the Panel VECM revealed evidence of a unidirectional causal relationship from Real Gross Domestic Product (RGDP) to Real Foreign Direct Investment (RFDI) across all six sectors of Bangladesh. The findings underscored the significance of formulating pragmatic policies and implementing them effectively to attract FDI across sectors, thereby contributing to the overall economic growth of Bangladesh.

Ayanwale and Bamire (2022) examined the relationship between foreign direct investment and the growth of Nigeria's agricultural sector using the Autoregressive Distributed Lag (ARDL) model. Their analysis revealed a strong and positive association between the two variables.

Obidike (2022) assessed the influence of select macroeconomic indicators on foreign direct investment in Nigeria using the Generalized Method of Moments (GMM). The results indicated that both inflation and interest rates had significant negative effects on FDI, whereas exchange rate fluctuations were found to have a positive impact.

Kareem et al. (2021) examined the influence of foreign direct investment on Nigeria's oil sector through a logit regression approach. Their findings indicated that FDI contributes positively to enhancing both the productivity and efficiency of the oil and gas industry.

Murtalazakari (2021) analyzed the effects of inflation and exchange rates on FDI in Nigeria, concluding that moderate inflation could stimulate FDI inflows, but only up to a certain threshold beyond which it becomes detrimental.

Asiedu (2020) explored the relationship between key macroeconomic indicators and foreign direct investment in Nigeria through regression analysis. The study revealed that inflation adversely influenced FDI inflows, whereas interest rates showed no statistically significant effect.

Ndugbu (2020) explored the connection between various macroeconomic factors and foreign direct investment in Nigeria using regression analysis. The findings showed that while inflation had little to no effect on FDI, the exchange rate played a highly influential role.

3.0 Methodology

3.1 Model Specification

This study's model is adapted from Ozili (2025) and the implicit form of the model is:
$GDP\_pc = f(FDI, EXR, INF)$..... *(1)*

Where:
GDP_pc= Gross Domestic Product per capita
FDI = Foreign Direct Investment
EXR = Exchange Rate
INF = Inflation
Explicit form of the model is:
$GDP\_pc = a_0 + a_1FDI + a_2EXR + a_3INF + u$..... *(2)*

Where
a_0, a_1, a_2, and a_3 are parameters estimating the independent variables.
u = error term

3.2 Data Source

The secondary data utilized for the research was from 1990 to 2023 and obtained from CBN statistical bulletin. The sourced data was estimated using the multiple regression method.

4.0 Results and Discussion

4.1 Augmented Dickey-Fuller (ADF) Unit Root Test

Table 4.1

Variable	ADF test statistics	5% test critical values	Stationary	Remark
LFDI	-4.672905	-3.590496	Levels	I(0)
LGDP_PC	-5.484886	-3.215267	Levels	I(0)
EXR	-7.545008	-3.215267	Levels	I(0)
INF	-6.410407	-3.215287	Levels	I(0)

Source: Author's Computation using Eviews 9 (2025)

This was utilized to evaluate data stationarity. This showed that data set was stationary overtime and could be used for the study. The data set could be stationary at levels I(0) and/or first difference I(1). It is expected that the Augmented Dickey-Fuller test statistics should be greater than 5% test critical values, it is by this that the variables are regarded as being stationary. Hence, the table 4.1 showed all the variables were stationary at levels as value of the ADF test statistics was greater than 5% test critical values.

4.2 Multiple Regression Result

Table 4.2

Variables	Coefficients	Standard error	t-statistics	Probability
LFDI	0.539550	0.153934	3.505084	0.0000
INF	-0.013411	0.003016	-4.446258	0.0000
EXR	-0.244134	0.103916	-2.349354	0.0027
C	-5.809016	1.780150	-3.263216	0.0009
R-Squared = 0.702168	Adjusted R-Squared = 0.641853	Prob(F-Statistics) = 0.000000	Durbin Watson Test = 1.074286	

Source: *Author's Computation using Eviews 9 (2025)*

From the table 4.2, the R-squared was represented by 0.70 (70%) which revealed that all independent variables explained 70% of the dependent variable. After aligning for degree of freedom, the R-square became 0.64 (64%).

The Durbin-Watson test checks whether the residuals in the regression model are correlated; this implies that all the variables are not correlated. It is expected that Durbin Watson must be equal to 2 or approximately 2 to prove that there exists no autocorrelation among the variables; table 4.2 revealed the Durbin Watson test to be 1.07

The probability value from the result must be at 5% significance level to show a variable's significance in impacting GDP_pc.

From the probabilities given in table 4.2, the probability value for log of foreign direct investment (LFDI) was 0.0000, this proved it was statistically significant at 5% level of significance in impacting GDP per capita (economic development). The probability value for inflation (INF) was 0.0000. This revealed its statistically significant nature at 5% level of significance in impacting GDP per capita (economic development). The probability value for exchange rate (EXR) was 0.0027. This also revealed that it was statistically significant using 5% level of significance in impacting GDP per capita (economic development).

The next step is to check if the significant relationship was negative or positive. The coefficient figures was examined to determine this

From table 4.2, the coefficient of inflation (INF) was -0.013411 and carried a negative sign; this showed a negatively significant connection with GDP_pc. Also, coefficient of exchange rate (EXR) was -0.244134 which carried a negative sign. Hence, this showed that it was negatively significant in impacting GDP_pc. Finally, the coefficient of log of foreign direct investment (LFDI) was 0.539550 and it showed a positive connection between FDI and GDP_pc (economic development).

FDI was found to be positively significant in impacting Nigeria's economic development. The result implication is that government should allow many foreign investors pump their funds in various sectors of the economy and also the capital market as this would cause sectorial growth and ultimately lead to economic development. FDI would boost variables like employment, improved funds to the capital market, sectorial funds, corporate social responsibility, trade openness, good foreign relations, and so on. These variables are needed for any economy to develop.

Inflation was negatively significant in impacting economic development. The result implication is that the monetary authority has to limit inflation to a single digit figure to support production and consumption and enhance economic development. A high inflation would lower the units of goods produced as production cost would increase. High inflation would also drive struggling businesses away from the market and reduce competition which is good for development.

Exchange rate was also negatively significant in impacting economic development. This means that as monetary authorities like the CBN must ensure a relative fair exchange between the naira and other foreign currencies. A high exchange rate would increase cost of production as many of the raw materials needed for production are imported. This would lead to increase in prices of such product.

4.3 Post Estimation Technique

4.3.1 Heteroskedasticity Test

Table 4.3: Breusch-Pagan-Godfrey Heteroskedasticity Test

F-statistic	0.724671	Prob. F (6,22)	0.3261

Obs*R-squared	3.271032	Prob. Chi-Square (6)	0.5012
Scaled explained SS	2.128480	Prob. Chi-Square (6)	0.7294

Source: *Author's Computation using Eviews 9 (2025)*

This means that the error term has a constant variance. When this happens, it can make the regression estimators not to be the Best Linear Unbiased Estimators (BLUE). If the probability value and probability chi-square figures are significant at 5% level of significance, the null hypothesis would be rejected and this proves there existed heteroskedasticity in the adopted model.

From table 4.3, the probability value of 0.3261 and probability chi-square values of 0.5012 and 0.7294 are not significant at 5% level of significance. Therefore, null hypothesis was accepted that the result has no heteroskedasticity.

4.4 Hypothesis Testing

Hypothesis 1

H_0: Foreign direct investments do not significantly impact development of Nigerian economy.

Based on the multiple regression result above, the null hypothesis was therefore rejected. Hence, there is a significant relationship between foreign direct investment and development of Nigerian economy.

Hypothesis 2

H_0: Exchange rates do not significantly impact Nigeria's economic development.

From the result above, exchange rate was significant in impacting economic development. Hence, the researcher also rejected the null hypothesis. This proves a significant relationship between exchange rate and development of Nigerian economy.

Hypothesis 3

H_0: Inflation does not significantly improve the Nigerian economic development.

From the result above, the null hypothesis was further rejected as a significant relationship exists between inflation and the development of Nigerian economy.

4.5 Discussion of Result

Foreign direct investment proved relevant in impacting Nigeria's economic development. This is due to the fact that foreign investment in Nigeria would stimulate the country's economy and contribute to its growth. FDI also increases the total investments in a nation. For example, MTN

telecommunication owned by a South African country having offices in Nigeria has positively improved the Nigerian telecom sector. The mining sector contributed about 40% to the Nigerian GDP (Okoh, et al, 2025) and the sector is made up majorly of foreign firms. This proves the positive influence FDI has on the nation's economy as a whole. This finding was further affirmed by Ayanwale and Bamire (2022) who opined that FDI had a positive and favorable impact on the Nigerian agricultural sector. Also, Kareem, et al (2021) supported this result by revealing that FDI positively and significantly boost the Nigerian oil and gas sector.

Also, inflation and rate of exchange were both significant in having an effecting on economic development in Nigeria. It merely suggests that, as inflation influences the cost of products and services, it is a crucial macroeconomic factor in promoting economic growth in Nigeria. Inflation pushes up costs of factors of production which in turn hampers production. The cost-pushed inflation increases prices of goods and services drastically and this lowers economic development. Additionally, inflation was viewed as important in the sense that the CBN uses monetary policy to monitor inflation as it affects general prices level. This result was confirmed by Asiedu (2020) who found that inflation had a negative impact on foreign direct investment in particular and the economy in general. Also, Obidike (2022) corroborated this result by stating that inflation was negatively significant in impacting FDI and economic growth in the long run.

The exchange rate has an impact on the value of the investor's host country's currency relative to their home country's currency. It affects prices also just like inflation. High exchange rate would increase the cost of imported goods and also imported raw materials for production. All these would increase the prices of goods and services in the long run and affect consumption. The result was affirmed by Ndugbu (2020) who opined that exchange rate was highly significant in impacting FDI and the economy.

However, Obidike (2022) negated this result by showing that exchange rate had a positive relationship with FDI. Obidike (2022) further stated that high exchange rate would discourage large foreign firms from investing in the economy and this would help local firms and small-scale businesses spring up, thus boosting local production since the government would want to give the local firms subsidies in various production areas.

5.0 Conclusion and Recommendations

This study concluded that foreign direct investment is an important and complementary driver of Nigeria's economic development. However, its positive impact depends on the presence of enabling institutional frameworks, supportive policies, and macroeconomic stability. The study highlights the need for coordinated strategies that simultaneously promote FDI inflows and enhance the quality of trade engagement. Also, inflation and exchange rate were significant though negatively. The negative relationship means that as the variables increases, they distort economic development as costs of production and consumption would increase and this would hamper development. The study recommended that to encourage FDI growth, the government must maintain a stable macroeconomic environment. They can do this by, for example, offering tax incentives such as one-year holidays could attract foreign businesses. The government should

ensure stable macroeconomic policies like exchange rate as a motivating factor for the attraction of foreign direct investment into Nigeria. The monetary authority should also reduce inflation and boost economic development and they should also ensure that the exchange rate should be stabilized so as to boost export and lead to economic development.

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