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Title: Foreign direct investment (FDI) and economic growth in Nigeria: A sectoral analysis.

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Foreign direct investment (FDI) and economic growth in Nigeria: A sectoral analysis.

Abstract

The current research investigates the Foreign Direct Investment (FDI) and its role in the economic growth in Nigeria, focusing specifically on the sectoral FDI inflows from 1980-2024. While existing literature acknowledges the benefits of FDI, such as capital provision, technology transfer, and enhanced access to foreign markets, few studies have thoroughly examined its sectoral impacts in Nigeria, leaving a glaring knowledge gap. To fulfil the gap, we conducted a mixed method research, in which both quantitative and qualitative studies were designed and implemented.

We first collected quantitative data from multiple databases (UNCTAD, IMF, OECD, World Bank & CBN) and ran analyses on GDP, FDI inflows, exchange rate, interest rate, natural resources, inflation rate, openness and foreign reserves. The FDI inflows in the oil and gas, manufacturing, banking, telecommunications, trading, agriculture and servicing sectors were also analyzed by the Time Series and OLS. The analyses above revealed that oil gas, manufacturing, banking, telecommunications and trading sectors attracted FDI inflows into the economy, and that FDI flowing into the servicing and agriculture sectors showed negative impact on economic growth.

We then gathered qualitative data by carrying out semi-structured interviews with eighteen FDI practitioners in Nigeria, in line with the data saturation and ethical guidelines. We adopted thematic analysis and coding schemes to examine the interview data. The outcomes showed that the oil gas and telecommunications sectors attracted the most quantum of FDI in Nigeria, while the agricultural and servicing sectors, despite their potential, experienced grave challenges in attracting FDI, related to infrastructure and market access, which deter foreign investors. The services and agriculture sectors have declined due to the overdependence on oil, which is a classic case of the 'resource curse.' The government's failure to promote productive activities through incentives or subsidies in non-oil sectors has further discouraged foreign direct investment (FDI) in areas like agriculture and services.

Our novel contribution lies in employing a mixed-method approach used for the first time in this context to demonstrate, across two studies, that Nigeria's economy is heavily reliant on the oil and gas sector, and that this dependency risk can be mitigated through strategic investment in agriculture, manufacturing, technology, and services, representing a risk-management motto of '*not putting all eggs in the same basket*'. Research findings have advanced knowledge by clarifying which sectors attract the most FDI and how these inflows contribute to the economic growth. Findings have also improved FDI practices by identifying challenges in attracting FDI to high-potential sectors in Nigeria, thus providing a foundation for more effective investment strategies. Research limitation and suggestions are discussed.

Keyword: Economic Growth; Emerging Economies; FDI inflows; Nigeria; Sectoral Analysis

INTRODUCTION

Foreign Direct Investment (FDI) refers to the acquisition of assets by individuals or entities in one nation to exert influence over the operations, including production, distribution, and related activities, of a company located in another country (Osunkwo, 2020). In a fiscal period symbolised by global interconnectivity, Foreign Direct Investment (FDI) and economic growth have become a core focus for all nations seeking sustainable development (Chen, He & Ali, 2025). Foreign Direct Investment (FDI), in theory, is intended to improve the host country and its economy. The process of economic development has grown increasingly complex, necessitating more sophisticated theories to fully explain the intricate dynamic between public investment, private investment, and foreign direct investment (FDI) (Bekun and Sarkodie, 2020; Bekun and Adedoyin, 2020). These elements, when interacting with country-specific macroeconomic factors, are believed to form a cohesive pattern of economic growth. Due to this perception, FDI has gained significant prominence in international economics, driving extensive research into the FDI-growth relationship, particularly in capital-scarce economies. Many scholars inflows (Adenikinju & Akinlo, 2010; Oyinola & Odusanya, 2014; Odo & Okereke, 2015) argue that FDI can bridge the gap between desired investment levels and domestically available capital facilitating development through effective strategies and breaking the cycle of underdevelopment. While economists and policymakers often struggle to decipher the precise nature of the FDI-growth nexus, both developed and developing nations continue to assign substantial political and economic importance to this vital source of investment (Akinwalere & Chang, 2023; Ascani et al., 2023).

Nigeria sought FDI to join other African countries in modernizing and improving their economy as per the New Partnership for Africa's Development (NEPAD) (Sekunmade, 2021). Nigeria's 'low corporate tax rates, labor force, and natural resources' would attract FDI inflow (Olorogun et al, 2020) in the hope of improving the overall economic growth of the country. However, factors such as political instability, infrastructure, corruption, and external and natural shocks have influenced volatility of FDI in-flow in Nigeria and impacted many different sectors. Nigeria, due to its rich resources and sectors, presents a compelling case for analysing the dynamics between Foreign Direct Investment and Economic Growth and ranks as the second-largest recipient of foreign direct investment (FDI) inflows in sub-Saharan Africa (SSA), surpassed only by South Africa (UNCTAD, 2019), and remains West Africa's top FDI recipient. However, despite significant FDI inflows into the country, the impact of FDI on Nigeria's economic growth has been discouraging (Pulstova, 2016; Osunkwo, 2020). This can be attributed to the concentration of FDI in extractive industries, which have limited linkages to other sectors of the economy (Asiedu, 2002). Previous studies (Acquah & Ibrahim, 2019; Bekun & Sarkodie, 2020; Bekun & Adedoyin, 2020; Lloyds Bank, 2023) have explored the relationship between FDI and economic growth, yet the findings remain inconclusive, with no clear consensus on whether FDI significantly promotes economic growth (Olorogun et al., 2020).

Most research has focused on aggregate FDI, with relatively few studies examining sector-specific FDI inflows (Adenikinju & Akinlo, 2010; Oyinola & Odusanya, 2014; Odo & Okereke, 2015). The nature and impact of sectoral FDI have been largely overlooked, and therefore, assessing the sectoral effects of FDI will provide a more comprehensive understanding of its role in the economy. Moreover, no studies have focused on the sector-level impact of the FDI in Nigeria through a mixed method approach. To the best of our knowledge, this is the first. This current research embarks on a nuanced evaluation of the

sector-specific impacts of FDI and will analyze the influence of FDI on the Nigerian Economy through a sectoral analysis from 1980-2024 through mixed-method research. Thus, through a mixed-method investigation and analysis of interviews and secondary quantitative data, this research aims to address the aforementioned gaps and contribute to the academic discourse on FDI and economic growth in Nigeria through sectoral analysis.

In the current mixed-method research, our quantitative study seeks to address the following questions: (1) *Which sectors attract the most FDI inflows?* (2) *Which sectors contribute to economic growth in Nigeria?* (3) *Which sectors operate in the opposite way and why?* At the same time, our qualitative study seeks to address the following questions: (1) *What sectors attract the most FDI into Nigeria and which sectors don't?* (2) *What factors positively attract FDI inflows into Nigeria and what is the impact of FDI inflows on the Nigerian economy?* (3) *What challenges do certain sectors face and what sectors present with untapped opportunities for FDI inflows in Nigeria?*

When formulating the aforementioned research questions on Foreign Direct Investment (FDI) inflows, it is essential to consider the dynamic nature of global investment flows. The factors influencing FDI inflows are not static; they continuously evolve as governments introduce new policies, regulatory frameworks, and economic incentives to attract foreign investors. By designing these research questions that address these shifting dynamics, scholars can explore how changes in trade agreements, taxation policies, infrastructure development, and political stability impact FDI patterns. Understanding this evolving landscape allows for a deeper analysis of how nations compete for investment and adapt their strategies to global economic trends, ultimately shaping the direction of FDI inflows.

While much of the existing literature emphasizes the positive effects of FDI on economic growth (e.g., Bekun and Sarkodie, 2020; Bekun and Adedoyin, 2020), some studies, such as Olorogun et al. (2020), highlight potential negative spillover effects, such as the crowding out of domestic firms. Additionally, research by Acquah & Ibrahim (2019) found inconclusive evidence regarding whether FDI generates positive or negative spillovers or significantly drives economic growth. What remains insufficiently explored is which sectors are most successful in attracting FDI and whether these inflows contribute to economic development in Nigeria—a country where development indicators have been steadily declining. Recently, Nigeria surpassed India in terms of extreme poverty cases, with youth unemployment at around 66.5%, alongside low capacity utilization and other pressing economic and social issues (Osunkwo, 2020). Given these challenges, this current research takes a sectoral approach to analyze the impact of FDI on Nigeria's economy.

Research findings will first and foremost bring new insights to the FDI literature, advancing the knowledge of FDI and the impact of FDI inflows on sectoral economic growth and development through a mixed method lens of both qualitative and quantitative approaches, derived from consultants specialised in FDI as well as time series data ranging from 1980-2024. This research not only addresses the gaps in existing literature that is either outdated or provides only quantitative analysis, but it also serves as a guide for investors, policymakers, global business leaders and stakeholders keen on fostering sustainable economic development in Nigeria and managers keen on policy development and managerial practices.

LITERATURE REVIEW

Foreign Direct Investment (FDI) is a complex and multidimensional phenomenon influenced by a wide range of economic, political, and institutional factors. Understanding the determinants and impacts of FDI requires a comprehensive approach that integrates both theoretical and empirical perspectives. Theoretical frameworks, such as Dunning's Eclectic Paradigm, institutional theory, and new economic geography, provide essential conceptual foundations for explaining why firms invest in foreign markets and how host countries position themselves to attract investment. These theories help identify key variables, such as market size, regulatory stability, and labor costs, that shape FDI decisions.

The global investment landscape is continuously evolving, driven by shifts in policy, technological advancements, and geopolitical developments. Empirical research, through quantitative data analysis and case studies, allows scholars to test theoretical predictions in real-world contexts, uncovering patterns and trends that may not be apparent in abstract models. By integrating both perspectives, researchers can design robust studies that not only explain why FDI flows into certain countries but also assess the effectiveness of specific government strategies in attracting investment. This dual approach strengthens the research design by ensuring that findings are both conceptually sound and empirically grounded, ultimately providing valuable insights for policymakers and business leaders.

Review of the theoretical perspectives

The origin of FDI began officially with the work of Mundell, (1957) who introduced the concept of capital move from countries with low return on investment to countries with high interest rate and with time, the conceptualisation of FDI was explicated as the existence of a 'imperfect market structure.' According to Bano (2003), sectoral economic growth, only occurs when Multi-National Corporations fail to take full advantage of the imperfect market and a positive spill over occurs- leading to economic growth (Bano, 2003) which tends to be short term not long term (Acquah & Ibrahim, 2019). This roots from Solow's (1957) theory, who used the neoclassical framework to state that FDI generally creates a short-term economic growth and not long term (Solow, 1957). However, it can also be argued that FDI cannot independently reflect economic growth as other factors can also intertwine that influence economic growth (Esfandyari, 2015).

Dunning's (1977) eclectic theory of FDI offers a comprehensive framework to understand the determinants of FDI across countries, encompassing three key advantages: ownership, location, and internationalization. According to Kaban (2023), FDI flows into a country when multinational corporations (MNCs) identify resources or assets that give them a competitive advantage over local firms. These assets, both tangible and intangible, are transferred to the host country at minimal cost. Olorogun et al. (2020) emphasized that FDI occurs when MNCs perceive that the benefits outweigh the associated risks. The location advantage complements the ownership advantage, as MNCs prefer countries with favorable economic conditions, including abundant natural resources, stable exchange rates, low inflation, large market sizes, and lower risks related to political instability or weak institutions (Kaban, 2023). The internationalization advantage focuses on factors such as proximity to consumer markets and the host country's policy environment, including respect for intellectual property rights and franchise regulations (Akinwalere & Chang, 2023; Ascani et al., 2023). This theory provides an integrated perspective that highlights the interaction of ownership, location, and internationalization factors in shaping FDI flows and offers valuable insights into MNC decision-making.

Building on Dunning's framework, various theories identify key factors influencing FDI inflows, which depend on MNC strategies, such as market-seeking, efficiency-seeking, natural resource-seeking, and asset-seeking. Market-seeking MNCs are divided into defensive investors, aiming to bypass tariffs and trade barriers, and offensive investors, targeting growing markets (World Bank Group, 2022). Efficiency-seeking MNCs focus on minimizing production costs through lower labor and production costs in host countries (Dunning, 1977; Pulstova, 2016; Osunkwo, 2020). Many FDIs in Asia follow this strategy. Natural resource-seeking strategies involve MNCs investing in countries rich in specific resources, which are then extracted and exported to the home country. In Nigeria, a significant portion of FDI aligns with natural resource-seeking or efficiency-seeking strategies (Usman et al, 2024). However, as Ascani et al. (2023) note, Nigeria's poor FDI inflows are not only due to economic factors like macroeconomic instability but are also shaped by political and social violence. Groups such as Boko Haram in the North and Niger Delta militants in the South have posed significant risks to MNC operations, damaging facilities and eroding investor confidence. These challenges highlight the interconnectedness of economic, political, and social stability in influencing FDI inflows.

Review of the empirical and practical perspectives

Several empirical studies have examined the impact of FDI on economic growth. One such study by Iqbal (2014) employed the Johansen Cointegration technique to explore the relationship between FDI and economic growth in Nigeria from 1970 to 2012. The findings indicated a positive but statistically insignificant link between FDI and Nigeria's short- and long-term economic growth. The error correction model revealed that any deviations from equilibrium would adjust at a very slow rate of 0.3% per period. In a different study, Usman et al, (2024) used dynamic panel models to analyze the differential growth effects of domestic investment and FDI across Africa from 1970 to 2017. The results highlighted that both FDI and domestic investment are critical for the long-term growth of African nations. The study found that FDI outpaced domestic investment, and while the growth effects of FDI and domestic investment differed significantly, their combined effects on the growth of African countries were statistically significant. According to their observation, in the short term, their research observed that FDI negatively impacted the growth of 24 countries, with four countries (Benin, Madagascar, Nigeria, and Equatorial Guinea) showing strong significance at the 5% level, while domestic investment positively affected the growth of most African nations.

Similarly, Olorogun et al, (2020) analyzed a panel of 50 African countries from 1980 to 2009 using the system generalized method of moments estimator (Blundell & Bond, 1998) and concluded that FDI inflows significantly impacted economic growth in the African region. In another study, Ascani et al. (2023) examined the effect of FDI on economic growth in 10 selected Sub-Saharan African countries using data from 2008 to 2013. The results from a panel multiple regression analysis, utilizing pooled OLS, fixed, and random effects, suggested that while FDI positively stimulates development in SSA, it is not a significant predictor of growth performance in the region. Osunkwo (2020) investigated the relationship between FDI and economic growth in the member states of the Organization of Eastern Caribbean States (OECS). Using annual panel data from 34 countries, including the six OECS economies, for the period 1988-2013, and applying the generalized method of moments (GMM) to estimate a dynamic panel growth model, the study found that FDI has a favorable impact on economic growth.

Hammed and Okunoye (2021) assessed the impact of foreign direct investment (FDI) on economic growth in Africa using panel data from 38 African countries between 1960 and

2014. The system generalized method of moments (GMM) analysis revealed that while FDI positively stimulates economic growth, its growth-enhancing effect becomes insignificant when conditional sectoral effects are considered. The study further found that the impact of FDI is substantial only for the agriculture and services sectors, while its effect on the manufacturing sector is predominantly negative, though not statistically significant. In a separate study, Uwubanwen and Ogieudia (2016) investigated the effect of FDI on Gross Domestic Product (GDP) in Zimbabwe and concluded that FDI has a highly significant and positive impact on economic growth. The study recommended policies to promote inward FDI to help the country achieve its economic growth objectives and emphasized that private investment and government spending also have a large, positive effect on GDP.

Hammed and Okunoye (2021) examined the causal relationship between foreign direct investment (FDI) and economic growth in Côte d'Ivoire, Gambia, Ghana, Nigeria, and Sierra Leone from 1970 to 2005, using a trivariate framework that incorporated Granger causality tests within a vector error correction (VEC) model. The study utilized three distinct measures of financial sector development which were total liquid liabilities, total banking sector credit, and credit to the private sector to capture the effects of financial intermediation. In Ghana, Gambia, and Sierra Leone, economic growth was positively correlated with the level of financial development, with the relationship varying based on the financial indicator used. In contrast, Nigeria showed no evidence of a causal link between FDI and economic growth, even with accompanying financial deepening. Hammed & Arawomo (2022) analyzed the effects of corruption, FDI, and worker remittances on economic growth in five South and Southeast Asian countries between 1985 and 2011. Using panel data with fixed and random effects models, the study found that both FDI and worker remittances had positive and statistically significant effects on economic growth. In addition, the findings revealed a negative and statistically significant impact of widespread corruption on economic growth during the study period.

To sum up, the literature review reveals that FDI scholars have presented diverse perspectives on the roles and benefits of sectoral FDI inflows, with ongoing debates between proponents and skeptics (Enisan & Olufisayo, 2016). Each viewpoint has its own strengths, but the significant divergence between these groups has hindered the consolidation of FDI research and left a notable knowledge gap. The question of whether FDI flows are beneficial for a country's growth or do more harm than good remains a topic of ongoing debate. Scholars and economists continue to disagree on the nature of the relationship between FDI and economic growth (Odozi and Egwaikhide, 1994).

Additionally, there is a lack of research focusing on the impact of sectoral FDI on economic growth. The existing literature suggests that econometric methodologies, model assumptions, and country- or region-specific factors significantly influence empirical results in this field (Adebusuyi and Olokoyo, 2012; Osunkwo, 2020). This uncertainty highlights the need for further research to deepen our understanding of this economic relationship. As theoretical frameworks and statistical tools evolve, it is expected that the accuracy and consistency of empirical findings in the sectoral FDI-growth literature will improve. While the relationship between FDI and growth has been extensively studied in developed, emerging, and developing countries, there is a lack of clarity on the specific sectors through which foreign flows can most effectively impact growth, particularly in developing countries like Nigeria. It is crucial to now conduct new research incorporating fresh perspectives, through a mixed-method approach.

METHODOLOGIC NOTES

In the current research, we undertook the investigation of sectoral FDI inflows to Nigeria ascertain their impacts on the economic growth and development of Nigeria through a missed method approach. To achieve the aforementioned aim, authors first reviewed FDI-driven literatures and data including sector related information in Nigeria and cognate journal articles from renowned databases. These databases include, for instance, UNCTAD, IMF, OECD, WORLD BANK, CBN and so on. These databases are recognized as the world's leading academic databases with the abundance and diversity of the publications (Clarivate, 2023) and hence adopted for the current research.

To ensure the quality of data collection, we defined clear inclusion criteria and searching parameters in collection; specifically, we first selected FDI related items, such as 'foreign investors', 'growth impact' and 'sectoral flows. Then, we set 'FDI' and 'Nigeria' as filtering criteria, so non-FDI related items were excluded. The spectrum (range) of the data had been set from 1980 to 2024, reflecting the development of FDI inflows and its popularity and contributions in Nigerian sectors. During the data collection, we repeated the aforementioned filtering procedure until the appropriate level of information is obtained, indicating a sign of data collection saturation (see similar data collection strategy in: Kaban, 2023).

To assure the research ethics of data collection, authors abode by the institutional research ethical guidelines, in which individual names, source identifiers, and organizational titles all were anonymized, except for the originality and copyright purposes (Kara, 2018). To ensure the confidentiality of data collection and analysis, all researchers signed the data protection form, in which the gathered data were only reserved for the literature reviewing purpose and stored in the password-protected server. Only researchers can access the server with log-in activities recorded. To ensure a successful and in-depth review, the following structure was crafted for the current research, in line with the two-staged reviewing strategy (Silverman, 2019).

To facilitate our mixed method approach, a primary qualitative review, through thematic analysis was conducted, in which diverse viewpoints and suggestions from the FDI practitioners were described, analyzed and compared. The purpose of the primary review was to clarify what we had already known about FDI and to determine the impact of sectoral FDI flows on the Nigerian economy. Next, after the primary analysis, secondary analysis was conducted through the use of secondary quantitative time series data and analysed using the Ordinary Least Square method (OLS), in which we were keen to analyze what sectors of the Nigerian economy attracted the highest quantum of FDI and to explore how effective these sectoral FDI inflows were in facilitating economic growth and development in Nigeria. Finally, following the theory-informed analyses, we continued to discuss the new discoveries and consolidate the outcomes that emanated from both. Limitation and suggestions for the future studies were addressed accordingly. As a result, we planned a mixed method approach for the current research, including both qualitative and quantitative data collection and analysis techniques. Different types of data were gathered and analyzed, in which research findings from different studies were contrasted and integrated.

Rationale for Study One (Quantitative approach)

For our quantitative analysis, we describe the theoretical framework and methodology adopted here. To further achieve the objectives of this research, time series annual secondary data covering the period of 1980 to 2024 are adopted based on sector level data availability and analysed using OLS. We plan to focus on a fixed-scope data (1980-2024) as per the sectoral FDI inflows to Nigeria and other cognate variables. These are, for instance, exchange

rate, interest rate, natural resources, inflation rate, openness and foreign reserves, which are found to affect the economic performance and FDI inflows. Economic growth proxied by the growth rate of GDP is the dependent variable while FDI in the oil sector, FDI in the manufacturing sector, FDI in the mining sector, FDI in the telecommunications sector and other control variables are used as the independent variables. Data are obtained from the Central Bank of Nigeria statistical bulletin, UNCTAD, IMF, OECD, WORLD BANK, and so on. The data collected are analyzed using Error correction mechanism and Ordinary Least Squares techniques.

Data for the year 2025 is not available yet due to the natural delay in data collection, processing, and reporting. Many organizations, including government agencies, financial institutions, and research bodies, take time to gather accurate information, verify its reliability, and analyze trends before publishing official reports. Typically, annual data is compiled throughout the year and then reviewed before being released in the following months or even the next year. For example, economic indicators such as GDP growth, inflation rates, and employment statistics require comprehensive surveys and assessments before they can be finalized. Additionally, some data is subject to confidentiality policies, legal restrictions, or proprietary controls that delay its release to the public. If real-time or preliminary estimates exist, they may be based on projections rather than actual finalized figures. Therefore, on the basis of the economic variables being sought, the most recent available information is from 2024 or earlier, with official 2025 data expected to be published at a later date.

Rationale for Study Two (Qualitative approach)

For our qualitative analysis, we take steps to collect qualitative data via semi-structured interviews (e.g., FDI practitioners) and analyse using thematic analysis. We aim to interview 18 FDI practitioners who provide their view on the impact of sectoral FDI inflows into Nigeria. Our use of thematic analysis begins by gathering all FDI relevant qualitative data. This involves transcribing the interviews, typing up fieldnotes, and compiling other materials. We organize our interview data in a way that makes it accessible for analysis. We read through our data multiple times to gain a sense of its content and look for patterns, repeated ideas, and connections. We develop a set of codes based on our observations. These codes help us label and categorize different aspects of our data and help us identify themes and patterns. We further review the codes we have assigned to our data and group similar codes into broader themes. Finally, we explore how these themes relate to our research question by discussing the implications of the identified themes and presenting our insights in a cohesive manner. The results of the qualitative semi structured interview are analyzed via thematic analysis.

STUDY ONE

Following the ‘*Rationale for Study One*’ above, we revised a renowned model (Balasubramanyam, 1996) to accommodate the research purpose, by adding more variables such as inflation, foreign debt, and exchange rate in analysis (*see Appendix 1 for details*). The revised model took a lead from Solow’s Production Function framework (Solow, 1956), which has been widely used to analyze the determinants of growth in developing countries. It involves testing hypotheses by estimating a function that shows how the overall growth of an economy (aggregate output) is related to the growth of inputs like labor and capital, as well as to a variable that captures improvements in efficiency or technology, known as total factor

productivity. Following the ‘Rationale for Study One’, we reviewed two models: Solow’s model and Balasubramanyam’s model. After a comparative analysis, we found that Balasubramanyam’s model performed better than Solow’s in several key areas, such as the explanatory power, data fit, and predictive accuracy. Based on these findings, we adopted Balasubramanyam’s model as the foundation for our study. This allowed us to reframe and refine our research hypothesis in a way that aligned more closely with the model’s assumptions and strengths comparison (Mankiw, Romer, & Weil, 1992). Finally, we proposed a new hypothesis informed by this theoretical framework and the insights gained from our model.

Hypothesis: FDI has a significant effect on sectoral GDP growth.

Data collection

We collected a fixed dataset spanning 1980 to 2024, focusing on key macroeconomic variables in Nigeria to analyse the impact of FDI on Nigeria’s economy. These variables included the exchange rate, interest rate, natural resources, inflation rate, trade openness, and foreign reserves. Economic growth, represented by GDP growth rate, served as the dependent variable, while FDI in the oil, manufacturing, mining, and telecommunications sectors, along with other control variables, acted as independent variables. The data were sourced from the Central Bank of Nigeria’s statistical bulletin, UNCTAD, IMF, OECD, World Bank, and other relevant institutions.

Analytic method (Theme 1: Effect of aggregate FDI inflows on the economy)

We adopted Ordinary Least Square (OLS) for data analysis. To reiterate, Study One examined the impacts of sectoral FDI on economic growth in Nigeria and the data covered a period of 1980-2024. We investigated the impact of aggregate FDI inflows on the dependent variable (GDP) which served a proxy for Nigeria’s economic growth, considering all other variables such as Openness, Inflation rate, Real exchange rate, Interest rate, foreign reserve, External debt rate and Natural resources.

< Insert Table 1 About Here >

The OLS detected a significant relationship between the predictors and the outcome (0.629). An R Square of 0.396 indicated that about 40% of the variance in the dependent variable was explained by the predictors in the model. This represented a modest amount of variance explained, suggesting that other factors not included in the model might have been influencing the dependent variable. The Adjusted R Square of 0.250 accounted for the number of predictors in the model and was lower than the R Square (0.250 vs. 0.396). This lower value suggested that the model’s explanatory power, after adjusting for the number of predictors, was not very strong. It implied that some of the predictors might not have contributed significantly to explaining the variance in the dependent variable. A Standard Error of 4.607 was the standard deviation of the residuals, representing the average distance between the observed values and the predicted values. A standard error of 4.607 indicated a moderate level of prediction error.

Findings of the Theme 1

Table 2 below reveals variables coefficients and their Interpretation. An intercept of (1.392) showed that the intercept term was not statistically significant (p-value = 0.560). This indicated that the intercept did not contribute meaningfully to explaining the dependent

variable when all predictors were zero. Foreign Direct Investment, Net Inflows (% of GDP), showed a coefficient of (0.100), which was positive with a p-value of 0.044, indicating statistical significance. This suggested that higher foreign direct investment net inflows were associated with a positive change in the dependent variable. Trade Openness (Import + Export)/GDP showed a coefficient of (0.668) that was positive, but the p-value (0.938) was very high, suggesting that trade openness did not significantly impact the dependent variable in that model.

The Inflation Rate indicated a coefficient of (-0.124), which was negative with a p-value of 0.051 and just above the 0.05 significance threshold. This indicated a marginally significant negative relationship, suggesting that higher inflation rates were associated with a decrease in the dependent variable. The Real Exchange Rate (RER) had a coefficient of (-0.016) that was negative, and the p-value (0.100) indicated it was not statistically significant. This suggested that the real exchange rate did not have a significant impact on the dependent variable.

Interest Rates had a coefficient of (0.019) that was positive, and the p-value (0.0354) suggested that interest rates had a statistically significant effect on the dependent variable. Total Reserves (% of Total External Debt) indicated a coefficient of (0.007), which was positive, and the p-value (0.0270) indicated that total reserves significantly affected the dependent variable. External Debt Stocks (% of GDP) showed a coefficient of (-0.016), which was negative with a p-value of (0.0491), suggesting that external debt stocks significantly impacted the dependent variable. Total Natural Resources Rents (% of GDP) presented a coefficient of (0.252) that was positive, and the p-value of (0.019) was statistically significant, suggesting that higher natural resources rents were associated with a positive change in the dependent variable, and this relationship was statistically significant.

< Insert Table 2 About Here >

To summarise the Coefficients and their Interpretation as explained above, the significant variables included Foreign Direct Investment, debt, foreign reserves, interest rates, inflation, and Total Natural Resources Rents. These variables had notable effects on the dependent variable, with natural resources rents showing a particularly significant positive relationship. Variables such as Trade Openness and Real Exchange Rate did not show significant effects on the dependent variable, suggesting that these variables may not have been contributing meaningfully to the growth and development of the economy.

Analytic method (Theme 2: Effect of Sectoral FDI inflows on the economy)

The next step measured the impact of sectoral FDI on (GDP) Nigeria's economic growth to identify if there was a particular sector that had an impact on the Nigerian economy and to determine the significance thereof. Here, we broke down the FDI that went into each sector such as the agricultural sector, manufacturing sector, banking sector, oil sector, telecommunications sector, trading sector, and servicing sector. Due to limited sectoral FDI data available, ranging from 2007–2024, we also examined other variables such as openness, interest rate, reserves, external debt, natural resources, inflation rate, and exchange rate, alongside sectoral FDI, by incorporating these variables into our model, in order to properly capture the effect of sectoral FDI on the economy. Table 3 below presented the regression statistics. The Multiple R of (0.770) indicated a relatively strong positive correlation between the observed and predicted values of the dependent variable. The higher Multiple R value suggested that the model explained a significant portion of the variance in the dependent variable.

The R Square of (0.770) indicated that approximately 77% of the variance in the dependent variable was explained by the independent variables included in the model. This was a strong fit, showing that the model captured a substantial portion of the variability in the dependent variable. The Adjusted R Square of (0.645) took into account the number of predictors in the model and adjusted for overfitting. The value of 64.5% suggested that, while the model was reasonably good, some of the predictors might not have contributed as much to explaining the variance as implied by the R Square alone. It was still a relatively high value, indicating a decent model fit after accounting for model complexity. The Standard Error of (0.315) represented the average distance between the observed data points and the model's predicted values, which suggested that the model's predictions were fairly accurate but there was still some degree of prediction error.

< Insert Table 3 About Here >

Findings of the Theme 2

Table 4 below captured the sectoral coefficients and their interpretation. The Intercept of (2.289): The intercept represented the expected value of the dependent variable when all independent variables were zero. The p-value (0.032) suggested that this intercept was statistically significant. The FDI that went into the Agriculture, Fishing, Weaving, and Tanning sector showed a coefficient of (0.721) which was positive, but the high p-value (0.408) indicated that this variable did not have a statistically significant effect on the dependent variable.

The FDI that went into the Manufacturing, Construction, and Brewing sector indicated a coefficient (0.129) that showed a positive relationship with the dependent variable (GDP), and the p-value (0.040) indicated that this effect was statistically significant. The FDI attracted by the Banking and Financing sector presented a coefficient of (12.867) that was notably high, suggesting a strong positive relationship with the dependent variable. The p-value (0.038) indicated statistical significance. The FDI that went into the Oil and Gas and Drilling sector had a coefficient of (4.037) that suggested a positive relationship with the dependent variable, and the p-value (0.025) showed this effect was statistically significant.

FDI that went into the Telecoms, IT Services, and Electrical sector revealed a coefficient of (4.890) that was seen to be positive, and the p-value (0.046) suggested statistical significance. FDI attracted by the Trading, Marketing, and Shares sector presented a coefficient of (2.544) which was positive, but the p-value (0.077) indicated that this effect was marginally significant, as it was close to the 0.05 threshold. FDI that went into the Servicing, Consultancy, Hotels, and Transport sector indicated a coefficient of (9.512) and suggested a positive impact, but the p-value (0.988) indicated no significant effect on the dependent variable.

Trade Openness presented a coefficient of (188.104) which was large, but the p-value (0.389) indicated that this variable did not have a statistically significant effect. Inflation Rate showed a coefficient of (-0.721) and suggested a negative relationship with the dependent variable. The p-value (0.049) showed that this relationship was statistically significant. Real Exchange Rate (RER) had a coefficient of (-0.070) and indicated a negative relationship, but the high p-value (0.771) showed it was not statistically significant. Interest Rates showed a coefficient of (0.943) which indicated a positive relationship with the dependent variable, and the p-value (0.046) suggested this effect was statistically significant.

Total Reserves (% of total external debt) showed a coefficient of (0.099) that was seen as positive, and the p-value (0.0327) indicated that this effect was statistically significant. External Debt Stocks (% of GDP) presented a coefficient of (-0.558) which was negative, but the p-value (0.043) indicated a significant effect. Total Natural Resources Rents (% of GDP) had a coefficient of (3.369) which suggested a positive relationship with the dependent variable, and the p-value (0.036) indicated this relationship was statistically significant.

To summarise the Coefficients and their Interpretation as explained above, variables like FDI inflows in the Manufacturing sector, Banking sector, Oil and Gas sector, Telecommunication sector, Trading sector, as well as variables such as Inflation Rate, Interest Rates, external debt, foreign reserves and Natural Resources Rents had statistically significant effects on the dependent variable. These variables were crucial for understanding the variations in GDP, which was the dependent variable, as they had an impact on Nigeria's economic growth. Variables such as FDI inflows to the Servicing sector and Agriculture sector, as well as variables such as Trade Openness and RER, had high p-values, indicating that their influence on the economy was not statistically significant.

< Insert Table 4 About Here >

Summary of the Study One

Sectoral FDI inflows were broken down into seven sectors (oil and gas, manufacturing, banking, telecommunications, trading, agriculture and servicing). The empirical evidence indicates that FDI inflows to all the sectors except servicing and agriculture sectors, had positive effects on economic growth. Lack of an enabling environment including unfavorable policies are identified as the key factor contributing to negative effect of servicing and agriculture FDI on Nigeria's economic growth. Our quantitative research further concludes that the oil and gas, manufacturing, banking, telecommunications, trading sectors are statistically significant, attracting reasonably amount of FDI inflows into the economy and contributing most towards Nigeria's economic growth while the agricultural and servicing sectors are the least impacted sectors in the economy, appearing to experience challenges in attracting reasonable quantum of FDI. This result is in line with Sijabat (2023) and Azizov et al. (2023). We have discovered also that the Nigeria's economic growth is impacted through a series of variables.

During the analysis of our economic variables, inflation was found to be statistically significant. This means high inflationary trends can deter FDI by creating an unstable economic environment, which increases the risk for foreign investors. When inflation is high, it erodes the value of returns on investment in the local currency, making Nigeria less attractive compared to other countries with more stable economic conditions. Lubis et al. (2017), Wawrosz and Traksel (2023) also suggest that high inflation in an economy deteriorates the economic growth of the country. Trade openness was found to be statistically insignificant, revealing the need to have more competitive products for international markets to begin to demand for more of Nigeria's exportable commodities.

For the case of Nigeria, our research findings showed that the effect of exchange rate volatility was not statistically significant. This result may be rationalised on the basis that most FDI flowing to Nigeria is resource-seeking, and hence, because of this, undeterred by short term fluctuations in the value of the Nigerian currency. These results are in accordance with the findings of Lubis et al. (2017) and Pramanik (2021), who also reported that these variables of exchange rate and trade openness do not impact the economy significantly. The

empirical results unveiled a positive and statistically significant estimated coefficient for the interest rate variable. This could be explained on the basis of the fact that foreign investors are not discouraged by rises in interest rates since they do not tend to raise capital in Nigeria but in their own country for such investment. This could also improve investors' confidence since it can signal the Nigerian government's ability to curb inflationary trends. Also, higher interest rates provide incentives to foreign investors looking for a higher return, therefore, high interest rates can lead to increased FDI in Nigerian sectors, which mirrors the findings of Abegaz, & Lahiri, (2021).

Our findings showed a positive and significant total reserve. High levels of total reserves are often seen as a sign of economic stability and sound financial management. This stability makes Nigeria more attractive to foreign investors, as they feel more confident that the country can manage external shocks and maintain a stable investment environment as argued by the findings of Alfaro, & Chauvin (2020). External debt was found to be negatively and significantly related to FDI according to our results for Nigeria. FDI has been adversely affected by Nigeria's bad debt. Negative expectations are created in investors towards a country ridden with both bad debt and bad debt servicing policies, such as Nigeria, which mirrors the findings by Akinwalere, (2018) and Akinwalere, & Chang (2023). The variable representing 'oil' exhibits a positive relationship with FDI, an indication that FDI flows to Nigeria can be explained by resource-seeking FDI irrespective of any specific trade relation. Trading partners have a strong influence on Nigeria's natural resources outflow. Their basic target is to extract resources from the resource-rich Nigeria and repatriate as much profit as possible. The findings of Akinwalere, (2018), Akinwalere, & Chang (2023) and Darazo & Adaramola, (2021) support our findings will help to formulate appropriate policies for resource-rich poor-countries.

STUDY TWO

Rationale for Study Two

For our qualitative analysis, we employed semi-structured interviews to collect insights from FDI practitioners. We interviewed 18 FDI experts to gain their perspectives on the impact of sectoral FDI inflows into Nigeria. The process of collecting qualitative semi-structured interview FDI data began with defining our research objectives and identifying suitable participants. We then designed an interview guide with open-ended questions that allowed flexibility in responses. 18 FDI participants were recruited through purposive or snowball sampling, ensuring they had relevant expertise or experience. Interviews were conducted via video calls, with responses recorded for accuracy. FDI data were then transcribed, coded, and analyzed thematically to identify patterns and insights. Throughout the process, ethical considerations such as informed consent and confidentiality were maintained.

Background and Procedure

Our semi structured qualitative (study 2) interview findings of the impact of sectoral FDI on Nigeria's economic growth, arising from interviewing FDI consultants, are analyzed using thematic analysis. We aim to answer our qualitative research questions listed earlier. The chart in Figure 1 below presents our findings and shows the frequency of key themes from interviews on sectoral Foreign Direct Investment (FDI) in Nigeria, ranging from sectors attracting substantial FDI to sectors experiencing challenges in attracting FDI amongst others. These responses specify factors that influence FDI into Nigeria as well as highlight specific challenges to FDI investors. FDI's impact on the economy, untapped opportunities, and policy suggestions to boost FDI are all captured in the chart below.

Data analysis and findings

To answer our question and analyze sectoral FDI trends, we interviewed 18 FDI consultants to understand the recent trends in sector-specific foreign direct investment (FDI) inflows into Nigeria and answer our research questions on which sectors have witnessed significant FDI growth. Common responses from our participants explained dominant and emerging sectors attracting FDI include oil and gas, telecommunications, and manufacturing. These sectors are particularly attractive, contributing most towards economic growth, due to Nigeria's vast natural resources, large market size, and growing consumer base. The oil and gas industry has been a longstanding magnet for FDI, given the country's significant reserves and this could be seen particularly in relation to the impact of onshore versus offshore investments in the Delta region (Amade & Oyigebe, 2024). In the case of Nigeria, abundant natural resources, and large domestic markets, have attracted FDI. UNCTAD reflect, in their report, that Nigeria is classified as a 'FDI Destination' in Africa in sectors such as: hydrocarbon, energy and other valued economic resources' (UNCTAD, 2019; Amade & Oyigebe, 2024). Despite its supremacy in oil production, the country aims to expand its economy by relatively staying away from oil dependence and building a competitive global industrial sector. Records from the World Bank (2022) put value on FDI inflows stating that it holds an integral part in Nigeria's Economy (World Bank Group, 2022). Telecommunications and manufacturing have also seen substantial inflows, driven by the

expanding middle class and increasing demand for modern infrastructure and consumer goods.

To answer our question on which sectors have not attracted the sufficient FDI, common responses from our participants as seen in our chart (Figure 1) below indicates that despite their potential, sectors such as agriculture, real estate, health and education, have not attracted sufficient FDI. Agriculture and real estate sectors, for instance, face significant challenges related to infrastructure and market access, which deter foreign investors. Similarly, the health and education sectors struggle with inadequate government support and regulatory hurdles. These sectors, although critical to Nigeria's long-term development, remain underfunded by foreign investors due to perceived lower returns and higher risks. Key elements such as economic factors (currency volatility, foreign exchange instability), governance issues (judicial and governance reforms, corruption), all pose challenges in sectors like agriculture, trading and servicing sectors.

In answering our question on what the challenges preventing adequate amount of FDI into certain sectors are, common responses from our FDI consultants reveal that corruption and inadequate infrastructure are the most significant challenges that foreign investors face when considering Nigeria. These issues are compounded by currency devaluation, exchange rate volatility, and difficulties in accessing dollars, all of which contribute to the complexity and risk of investing in the country. These challenges hinder Nigeria's ability to attract the level of FDI necessary to spur significant economic growth. These challenges can be attributed to infrastructure deficits, security concerns, and governance issues. Economic factors such as high taxation and corruption are major challenges, with taxation being the most cited issue. Malikane, & Chitambara, (2017) also argue that these challenges facing investors into the agricultural and servicing sectors in Nigeria are due to poor infrastructure, political instability, bureaucratic hurdles, transparency issues, corruption, and risks associated with money laundering, underscoring the complexities of the operating environment.

Furthermore, we asked our FDI consultants, what factors positively impacts FDI inflows into Nigeria. To answer our question, they argued that in order to increase FDI, the Nigerian government must focus on policies improving infrastructure, reducing corruption, ensuring currency stability, and enhancing security. These policies are essential to creating a more predictable and secure investment environment. By addressing these issues, Nigeria can attract more foreign investment, which is crucial for driving economic growth and development. Narula & Pineli (2019) argue that consistency in policy enforcement and governance is also vital to maintaining investor confidence and sustaining long-term investment inflows. Policy recommendations include tax openness and judicial fairness are elements that could improve FDI flow into Nigeria according to Wawrosz and Traksel (2023). The interview underscores the importance of friendly policies, removal of corruption as well as infrastructure, particularly reliable power and robust market systems, in facilitating and sustaining FDI inflows. They argued that government strategies can enhance investment attractiveness through legal reforms, infrastructure development, and human capital enhancement, all aiming to foster economic growth, job creation, and technology transfer.

Summary of the Study Two

Our findings sought to answer the question on what the impact of FDI inflows on the Nigerian economy was. As indicated in the chart below, the impact of FDI on economic

growth was evaluated during our interviews as our participants argued that FDI plays a crucial role in Nigeria's economic development, contributing to GDP growth, job creation, and the expansion of the middle class. As foreign capital flows into Nigeria, Cicea, & Marinescu (2021) and Darazo, & Adaramola (2021) argue it enhances productivity, introduces new technologies, and fosters better corporate governance. These factors collectively lead to an increase in disposable income and improvements in the quality of life for the broader population, demonstrating the transformative potential of FDI.

Our analysis delved into the sectoral exploration of untapped opportunities for FDI inflows in Nigeria. As seen in the chart below and to answer the question, our FDI consultants highlighted that Nigeria has significant untapped opportunities for FDI, particularly in agriculture and real estate. The country's vast arable land and favorable climate make agriculture a sector with high potential, yet it remains underexploited. FDIs can continue to revitalize Nigeria's economy through opening employment prospects, industrial growth, and expanding and diversifying exports, possibly through agricultural products (Olorogun et al, 2020). As FDI, according to studies and reports makes up 25.1% of the country's GDP (UNCATD, 2019; Amade & Oyigebe, 2024; Akinwalere, 2018; Akinwalere & Chang, 2023; Ascani et al, 2023; UNCTAD, 2023; World Bank, 2022). Similarly, the growing urban population creates a substantial demand for real estate development. Akinwalere, (2018), and Akinwalere, & Chang (2023) argue that investing in these areas could yield substantial returns while also addressing critical needs within the Nigerian economy, such as food security and housing.

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GENERAL DISCUSSION

This section compares results between quantitative and qualitative analyses, allowing for a holistic and more robust understanding of investment dynamics and the economic climate in Nigeria. This section details an integrated approach which highlights that empirical findings are not only statistically validated but also contextualized within broader economic and policy discussions, strengthening the article's contribution to FDI research in Nigeria. Discussions are made in relation to knowledge advancement and practical implications. Limitations and future research direction are highlighted in this section too.

Integrated analysis and discussion of two studies

Our qualitative (study 2) findings highlight the sectors that have experienced substantial FDI growth. Participants consistently identified oil and gas, telecommunications, and manufacturing as the dominant and emerging sectors attracting FDI. These industries appeal to investors due to Nigeria's abundant natural resources, large market size, and expanding consumer base. In particular, the oil and gas sector has remained a major destination for FDI, driven by the country's vast natural resource reserves. These mirror our quantitative (study 1) OLS results that indicate similar sectors such as the Manufacturing sector, Oil and Gas sector, and the Telecommunication sector, as having statistically significant effects on Nigeria's economic growth. These results also align with the findings of Eze, (2020) and Giwa, George, Okodua, & Adediran, (2020).

Our qualitative (study 2) findings also indicate that the oil and gas, telecommunications, and manufacturing sectors in Nigeria contribute significantly to the country's economic expansion and development, which are aligned with our OLS regression analysis (study 1). The oil and gas sector, long the backbone of Nigeria's economy, has attracted significant FDI due to the country's vast crude oil reserves, ranking among the largest in Africa. Ascani et al, (2023) argues that multinational corporations like Shell, Chevron, and TotalEnergies have heavily invested in exploration, production, and refining, generating substantial government revenue, employment opportunities, and infrastructure development. However, despite challenges like oil price volatility and security concerns, the sector remains a crucial FDI magnet. Similarly, the telecommunications sector has witnessed remarkable FDI growth, particularly following Nigeria's market liberalization and the introduction of GSM technology in the early 2000s. Mukherjee, Nuruzzaman, Gaur, & Singh, (2023) findings show that companies such as MTN, Airtel, and Glo have expanded mobile connectivity across the country, increasing internet penetration, driving digital transformation, and fostering entrepreneurship in fintech, e-commerce, and digital services. This sector has significantly enhanced financial inclusion and access to global markets. Meanwhile, the manufacturing sector has benefited from FDI inflows into industries like food processing, cement production, and automobile assembly. Companies like Dangote Cement, Unilever, and Nestlé have expanded local production, reducing import dependence, boosting exports, and creating employment. The collective impact of FDI in these sectors has contributed to economic diversification, GDP growth, job creation, and infrastructure development, reinforcing Nigeria's position as a key investment destination in Africa (Wawrosz and Traksel, 2023).

In our qualitative (study 2) findings, we identify sectors that have not attracted sufficient FDI. Participants commonly noted that, despite their potential, agriculture, real estate, health, and education have struggled to secure adequate foreign investment. Agriculture and real estate, for example, face challenges such as poor infrastructure and limited market access, making them less appealing to investors. Likewise, the health and education sectors grapple with insufficient government support and regulatory barriers, further hindering FDI inflows. Similarly, this aligns with our study 1 OLS findings which indicate that the Agricultural and servicing sectors do not have a statistically significant effect on the growth of the economy. The findings of Mukherjee, Nuruzzaman, Gaur, & Singh, (2023) & Sigler, Martinus, Iacopini, & Derudder, (2020) align with our results.

Knowledge advancement:

Analysing how our findings have advanced knowledge in relation to FDI investment into Nigeria over the period of 1980-2024 to establish its impact on Nigeria's economic growth and over the period of 2007-2024 for sectoral FDI, has yielded crucial findings on the country's growth and development factors and frameworks according to our quantitative and qualitative data.

Firstly, this research has advanced knowledge by contributing to the process of identifying the effect of sectoral FDI on Nigeria's economic growth for a better understanding of the impact of sectoral FDI on the Nigerian economy (Ogbokor, 2013). This research contributes not only to the theoretical literature on the sectoral FDI but also to the field of international business studies, because it increases our knowledge of the Nigerian context and how the

latter interacts with the investment decisions of foreign investors. This research contributes to the growing body of knowledge on Foreign Direct Investment (FDI) in Nigeria by providing a sectoral and macroeconomic analysis of investment trends, determinants, and challenges. By identifying the sectors that attract the highest levels of FDI and those that struggle to secure sufficient foreign investment, the current research highlights disparities in investor preferences and sectoral performance.

Secondly, this work fills gaps in the empirical literature on the Nigerian context concerning sectoral FDI, thereby offering guidelines on how efforts can be put in place to better attract greater FDI flows to weak sectors of the Nigerian economy. Using a mixed method approach, which has not been done before, we analyzed the impact of sectoral FDI flows to Nigeria. Contributions have been made to knowledge both methodologically and theoretically in advancing previous work on sectoral FDI and its effect on Nigeria. It further explores the key drivers of FDI inflows, such as combating corruption, market size, infrastructure development, and government policies, offering empirical insights into what enhances Nigeria's attractiveness to foreign investors. Additionally, the research uncovers the barriers preventing adequate FDI inflows into certain industries, including regulatory inefficiencies, currency volatility, corruption, poor infrastructure, and policy inconsistencies.

Thirdly, our findings further revealed the need for sectoral exploration of untapped opportunities in Nigeria, particularly in the agriculture and real estate sectors. The agriculture sector, despite its vast potential due to Nigeria's arable land, favorable climate, and large labor force, has not attracted sufficient FDI due to infrastructural deficits, inconsistent policies, and inadequate financing. Examining these challenges, through our research has provided data-driven insights on how targeted policies, such as investment incentives, mechanization, and value chain development, can boost agricultural FDI, enhance food security, and drive rural development. Similarly, the real estate sector, which has lagged in FDI attraction despite Nigeria's growing urban population and housing deficit, presents a unique opportunity for international investors (Wawrosz and Traksel, 2023). It is hoped that through our research, we have advanced current knowledge by highlighting the need to encourage foreign participation in housing and commercial property development. Furthermore, our findings can serve as a foundation for policymakers, investors, and scholars to explore innovative solutions, such as public-private partnerships (PPPs), special economic zones, and digital platforms for real estate transactions.

Practical implications:

Our findings will inform policy decisions made by various stakeholders, such as the Nigerian government, policymakers, practitioners, FDI researchers in evaluating the importance of domestic FDI policies required in developing Nigerian sectors for attracting and retaining FDI. The Nigerian government has failed to employ policies to further open up other sectors in a manner conducive to attract more FDI. It is believed that the inability of the government to increase its investment in the development of the nation's infrastructure (power supply, roads, telecommunication, etc.) in order to reduce the cost of doing business has drastically reduced FDI into certain sectors and the country as a whole. Nigeria has the potential to become Sub-Saharan Africa's largest economy and a major player in the global economy because of its rich human and material resources as well as natural endowments

(Olorogun et al, 2020). It follows that Nigeria has the potential to build a prosperous economy, reduce poverty significantly and provide health, education and infrastructural services as per the needs of its population. However, this has not been achieved because essential productive sectors such as the agriculture sector, have shrunk in size with the over dependence on oil ('resource curse'). The failure of the government to encourage production activity via production incentives and/or subsidies in sectors other than oil has led to a reduction of FDI in other sectors such as the agriculture and servicing sectors (World Bank Group, 2022). There is significant potential for FDI in modernizing agriculture through mechanization, improving supply chains, and investing in agro-processing. This could not only boost food security but also create jobs and export opportunities.

The findings from this research have significant policy and strategic implications for government authorities, investors, and business stakeholders seeking to optimize FDI inflows into Nigeria. By identifying the sectors that attract the most FDI and those struggling to secure adequate investment, policymakers can tailor sector-specific incentives and reforms to enhance investor confidence. Understanding the factors that positively impact FDI inflows, such as improved infrastructure, regulatory efficiency, and economic stability, enables the government to design targeted policies that reinforce these drivers. Additionally, recognizing the challenges that hinder FDI in certain sectors, such as policy inconsistencies, security risks, and inadequate infrastructure, allows authorities to implement corrective measures, including regulatory streamlining, security improvements, and strategic investment in industrial zones (Wawrosz and Traksel, 2023). The current research also underscores the economic impact of FDI, reinforcing its role in job creation, technology transfer, and GDP growth, which can guide economic planning efforts. Moreover, by identifying untapped sectors with strong FDI potential, such as renewable energy, agribusiness, and digital technology, the research provides actionable insights for both domestic and foreign investors seeking profitable opportunities. Ultimately, these findings offer a roadmap for enhancing Nigeria's FDI attractiveness, promoting sectoral diversification, and fostering sustainable economic development.

The significance of FDI in the economy and the low level and fluctuation of FDI into certain sectors in Nigeria at the moment signifies that some sectors of the economy need to be looked into and also worked upon by the Nigerian government (Ogunmuyiwa & Ekone, 2013). The findings of this research will enable policy makers to plan and formulate both short- and long-term policies that would be beneficial for Nigeria in attracting FDI into all significant sectors of the economy, as elaborated above.

Research limitation and suggestions for future research:

This section of research limitations will provide avenues for future research and help define areas that require further investigation into sectoral FDI and its effect on the Nigerian economy. Although this current research has extended and developed previous research in several ways in sectoral FDI, a complete and systematic time-series research on sectoral FDI in Nigeria would require more resources than were available for this research. The researchers encountered a number of constraints in the course of this work, including data sourcing and data inconsistencies due to the poor nature of information management in Nigeria. For example, we intended to employ annual sectoral FDI data from 1980-2024,

however, data was only available from 2007-2024. Ideally, corruption, infrastructure deficit and security factors were seen to be major factors in deterring economic growth and development in the country but due to limitations in getting data on these variables, this research was confined to the following variables: FDI, GDP growth rate, openness, exchange rate, inflation, foreign reserves, debt, natural resources and interest rates. Secondary data is usually more authoritative and accurate and does not involve a large amount of time in data collection (Acquah & Ibrahim, 2019). However, secondary data may not perfectly suit the research needs (in this case, corruption, infrastructure deficit and security) and sometimes it cannot reflect the latest information compared to primary data sources (Amade & Oyigebe, 2024). Collecting primary data on challenges deterring FDI inflows for analysis is, therefore, worth being explored in the future. This approach could overcome the problem of lack of certain data. In this way, the patterns discovered from data sourced from standard databases could be compared to results based on primary data.

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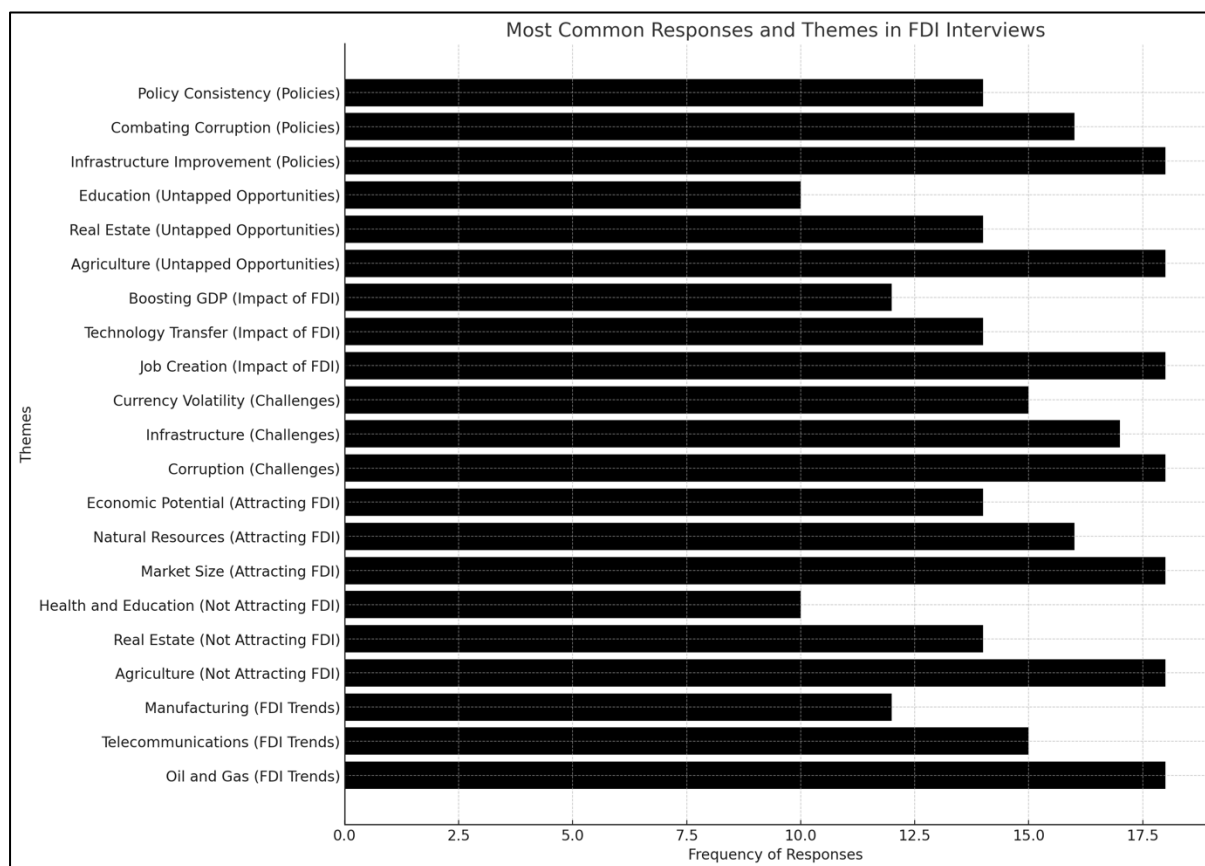
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Figure 1.

Key responses and themes on sectoral FDI into Nigeria



Source: Compiled by authors

Table 1.

Summary of the regression analysis

Regression Statistics	
Multiple R	0.629409642
R Square	0.396156497
Adjusted R Square	0.249770193
Standard Error	4.607490795
Observations	42

Source: Compiled by authors

Table 2.

Coefficients and interpretations

	Coefficients	Standard Error	t Stat	p Value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.392224483	5.756107827	0.058933	0.559656	-8.31866	15.10311	-8.31866	15.10311
Foreign direct investment, net inflows (% of GDP)	0.100408556	1.292929168	0.07766	0.043857	-2.53008	2.730893	-2.53008	2.730893
Trade openness ((Import + Export)/GDP)	0.668138866	8.471764704	0.078867	0.937615	-16.5678	17.90407	-16.5678	17.90407
Inflation Rate	-0.123669149	0.060962327	-2.02862	0.05063	-0.2477	0.00036	-0.2477	0.00036
RER (units)	-0.016377278	0.009690315	-1.69007	0.100442	-0.03609	0.003338	-0.03609	0.003338
Interest Rates (per cent)	0.018941994	0.326433445	-0.05803	0.034077	-0.64519	0.683076	-0.64519	0.683076
Total reserves (% of total external debt)	0.007091506	0.018240407	0.38878	0.026999	-0.03002	0.044202	-0.03002	0.044202
External debt stocks (% of GDP)	-0.016357936	0.147239448	-0.1111	0.049122	-0.31592	0.283203	-0.31592	0.283203
Total natural resources rents (% of GDP)	0.252144943	0.188360488	1.33863	0.018984	-0.13108	0.635367	-0.13108	0.635367

Source: Compiled by authors

Table 3.

Summary of the regression analysis

Regression Statistics	
Multiple R	0.769815076
R Square	0.769633573
Adjusted R Square	0.645035882
Standard Error	0.314705418
Observations	16

Source: Compiled by authors

Table 4.

Coefficients and interpretations

	Coefficients	Standard Error	t Stat	p Value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.288994011	32.4702352	-1.79515158	0.032355841	-470.8624503	354.2844623	-470.8624503	354.2844623
FDI Agriculture, Fishing, Weaving and Tanning	0.721353767	0.000538645	1.339201333	0.408324462	0.006122777	0.007565484	0.006122777	0.007565484
FDI Manufacturing, Construction and Brewery	0.128745838	0.009492005	1.356360859	0.040444582	0.107732773	0.133481941	0.107732773	0.133481941
FDI Banking and Financing	12.86712709	0.00088663	1.45124019	0.038410443	0.012552412	0.009978986	0.012552412	0.009978986
FDI Oil And Gas and Drilling	4.037057813	0.00437419	0.92292693	0.025255028	0.051542297	0.059616412	0.051542297	0.059616412
FDI Telecom, I T Services and Electrical	4.890410899	0.006098255	0.801936062	0.045696957	0.082376092	0.07259527	0.082376092	0.07259527
FDI Trading, Marketing and Shares	2.544429343	0.006662114	0.381925216	0.076774314	0.087194614	0.082105756	0.087194614	0.082105756
FDI Servicing, Consultancy, Hotels and Transport	9.512102686	0.005054398	0.018819459	0.988020575	0.064317332	0.06412709	0.064317332	0.06412709
Trade openness ((Import + Export)/GDP)	188.1036116	131.6679313	1.428621304	0.388789783	-1484.89608	1861.103304	-1484.89608	1861.103304
Inflation Rate	0.720731211	0.703231903	1.024884122	0.049217687	-8.21467732	9.656139742	-8.21467732	9.656139742
RER (units)	0.069931345	0.185703276	0.376575722	0.770720492	-2.289652505	2.429515195	-2.289652505	2.429515195
Interest Rates (Per cent)	-0.942948121	1.255620221	-0.750981949	0.045899346	-15.01121948	16.89711572	-15.01121948	16.89711572
Total reserves (% of total external debt)	0.098721881	0.055757984	1.770542493	0.327307804	-0.609750485	0.807194246	-0.609750485	0.807194246
External debt stocks (% of GDP)	-0.557869507	0.63115633	-0.883884833	0.539189134	-8.577471062	7.461732047	-8.577471062	7.461732047
Total natural resources rents (% of GDP)	3.368744144	2.697768728	1.24871495	0.035529873	37.64714594	30.90965765	37.64714594	30.90965765

Source: Compiled by authors.