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Research Article

The Impact Analysis of the Relationship Between Foreign Aid and Economic Development in Nigeria

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Abstract

This study examines the impacts of foreign direct investment (FDI) as a proxy for Foreign Aid, alongside other critical economic and political variables, on Nigeria's economic development. Utilizing an Ordinary Least Squares (OLS) regression model from 1981 to 2022, it explores the dynamics between FDI, trade openness, unemployment rate, corruption index, inflation rate, political stability, and population growth rate in shaping Nigeria's economic growth trajectory. The findings reveal that FDI significantly contributes to economic development, while trade openness highlights the importance of a conducive external economic environment. Conversely, the adverse effects of inflation and corruption highlight critical challenges that undermine the potential benefits of foreign aid and investment. This study highlights the complex relationship between foreign aid, economic policies, and institutional frameworks. It emphasizes Nigeria's need to bolster governance and macroeconomic stability to optimize the developmental impacts of foreign aid. Through empirical analysis, this research contributes to the discourse on development economics, offering professional insights into the conditions under which foreign aid can effectively foster sustainable economic growth in Nigeria.

Keywords

Foreign Aid, Economic Development, Foreign Direct Investment, Nigeria

1. Introduction

Foreign Aid encompasses a spectrum of financial support mechanisms, including Official Development Assistance (ODA) and Foreign Direct Investment (FDI), to facilitate various development objectives within recipient countries. Characterized by its multifaceted nature, foreign aid can manifest as technical, economic, or military support, primarily from more developed nations and directed towards developing counterparts' economic stabilization, relief, or mutual defense. This flow of resources, often through grants, loans, or concessional financial benefits, has sparked considerable debate within academic circles regarding its impact on the developmental trajectories of recipient nations. Studies highlight that proponents posit a constructive relationship between foreign aid and economic development, emphasizing its critical role in augmenting domestic development financing [2].

The discourse surrounding foreign aid is deeply polarized, with advocates arguing for its essential role in underpinning development projects across the Global South. This positive perspective is, however, contested by critics who attribute the shortcomings of foreign aid to its propensity for reinforcing ineffective governance, expanding bureaucratic structures,

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and sustaining suboptimal leadership within recipient countries. Despite these critiques, scholars like [14] defend Foreign Aid as a well-intentioned transfer of resources aimed at addressing the developmental needs of emerging nations, albeit occasionally marred by the self-serving conditions imposed by donor countries. This contention shows a complex narrative around foreign aid, where its effectiveness is often viewed through the lens of its implementation and the governance structures of recipient countries. Others further argue against the exaggerated negativity associated with foreign aid, citing instances of countries that have harnessed it for significant economic advancements, thereby challenging the narrative of its ineffectiveness in fostering development [36, 44].

Nigeria's experience with foreign aid presents a unique case study within this global debate. Despite the influx of aid from many advanced nations and international organizations, scholars like [11, 33] question the tangible impact of such Aid on Nigeria's economic growth and development. They reflect on the colonial era's legacy, where the primary focus was extracting raw materials for donor countries' development rather than establishing a sustainable growth framework for Nigeria. This historical context sets the backdrop for Nigeria's contemporary challenges, including unemployment, poverty, and subpar economic performance across various sectors. The assumption that foreign aid inherently leads to development is critically examined against Nigeria's socioeconomic indicators, which depict a nation still grappling with profound developmental challenges despite substantial aid receipts. This juxtaposition invites a reevaluation of foreign aid's role and effectiveness in catalyzing economic growth and development, particularly in complex historical and socio-political dynamics. The overarching research question for this study is, "What is the impact of foreign aid on Nigeria's economic development?"

2. Review of Literature

2.1. Concept of Foreign Aid

The concept of foreign aid has been subject to extensive debate and varied interpretations within the academic literature, reflecting its multifaceted nature and the diverse objectives it seeks to achieve. Scholars like [23, 32] offer definitions encompassing a wide range of concessionary benefits and financial transfers from developed to developing countries, aiming to address imbalances from surplus to deficit regions. Studies like [42] further investigate this broad characterization, categorizing foreign aid alongside foreign private investment and other inflows, attributing a collective positive impact on economic growth. However, [36] introduces a critical perspective, viewing foreign aid as a strategic tool developed nations employ to exert influence over poorer counterparts, often prioritizing geopolitical interests over developmental needs. This diversity in definitions explains the complexity of foreign aid's role in international relations, ranging from humanitarian assistance and economic development to military support and strategic alliances.

The discourse around foreign aid extends to its practical implications and perceived effectiveness in fostering economic development within recipient countries. Scholars such as [11] highlight the significance of foreign aid in supplementing inadequate domestic resources in sub-Saharan Africa, facilitating government expenditure and investment, and ultimately, poverty reduction and improved living standards. [41] emphasize the critical role of foreign aid in financing capital-intensive projects, further supported by [4, 31, 45], who view it as a vital source of economic assistance and capital stock accumulation for developing nations. Conversely, [1, 5] touch upon foreign aid's diplomatic and strategic dimensions, suggesting it also serves to cement alliances, reward desirable policies, and signal international approval.

This exploration of foreign aid reveals a complex tapestry of motivations, mechanisms, and outcomes associated with its provision and reception. As the study progresses, Foreign Aid is operationalized through Foreign Direct Investment (FDI), chosen for its data availability and measurability. This approach aims to distill the abstract concept of foreign aid into quantifiable elements, facilitating a clearer understanding of its impact on the economic welfare of developing countries. Through this lens, the study contributes to the ongoing dialogue on foreign aid, enriching our comprehension of its diverse dimensions and the balance between donor objectives and recipient development needs.

2.2. Concept of Economic Growth

Economic growth occupies a central position in the discourse on development economics, serving as a barometer for assessing the health and progress of national economies. Definitions of economic growth vary, yet they converge on the core idea of an increase in the gross domestic product (GDP), which signifies an enhancement in the country's productive capacity. The Encyclopedia of Earth, along with scholars such as [12, 22], articulate economic growth as not only an expansion in the volume of goods and services available to consumers but also as an augmentation of jobs, wealth, and overall material progress within a given timeframe. This growth is often gauged through GDP or gross national product (GNP), reflecting a nation's economic power and citizens' well-being.

The theoretical underpinnings of economic growth, as outlined by [19, 31], investigate the mechanisms and rates at which economies expand over time. Economic growth is described as a multifaceted phenomenon influenced by the relationship between supply, demand, and efficiency factors that collectively determine the outward shift of a nation's production possibility frontier. This dynamic process, which encompasses both positive and negative growth trajectories, shows the complex nature of economic development and its measurement. Others like [39, 42] emphasize the significance of real GDP growth, adjusted for inflation, as a concrete indicator of economic advancement, highlighting the importance of understanding quantitative and qualitative growth aspects.

Operationalizing economic growth in terms of GDP growth offers a pragmatic approach to quantifying economic development, as advocated in this study. Focusing on GDP as a proxy for economic development, the analysis adopts a widely recognized and straightforward metric that facilitates comparisons over time and across countries. This methodological choice aligns with the broader academic consensus on the utility of GDP as a reliable measure of output and economic well-being, providing a solid foundation for policymakers to navigate toward achieving vital economic objectives. Through this lens, the study contributes to the ongoing exploration of economic growth. It offers insights into the factors that drive progress and the challenges that impede it, thereby enriching the global dialogue on achieving sustainable economic development.

2.3. Theoretical Literature

Many theories enrich the discourse on foreign aid and its impact on economic development, each offering a distinct perspective on the motivations behind aid and its implications for recipient countries. Among these, the public interest and choice theory, as discussed by scholars such as [9, 47], posits that foreign aid aims to fill the savings and investment gaps in developing countries to foster growth. However, this theory also faces criticism for the potential hidden agendas of donor countries, as argued by [21, 52], who suggest that aid can exacerbate poverty and dependency in recipient nations. This criticism points to the necessity of considering the political environment in recipient countries, as the allocation and effectiveness of aid might serve more to entrench political power than to facilitate genuine development.

The Two-gap model, articulated by [18], offers a framework that views official development assistance as a means to supplement domestic capital formation and address the dual challenges of insufficient domestic savings and foreign exchange. This model, which builds on the foundational principles of the Harrod-Domar growth model, emphasizes the significance of investment fueled by both domestic savings and foreign aid for economic development. By delineating stages such as absorptive capacity, savings constraint, and trade constraint, the model underlines the role of trade openness, suggesting a better understanding of the pathways through which aid can impact economic growth.

In contrast, the international dependence theory, referenced by [51], critiques the underlying dynamics of foreign aid from a perspective that highlights economic and political subjugation. This theory, rooted in Marxist thought, argues that aid relationships may lead to the exploitation of recipient countries, facilitating the outflow of natural resources to donor countries for their benefit. It posits that development initiatives funded by foreign aid often primarily serve to enable this exploitation, thereby necessitating a thorough examination of political variables like the democracy index and political stability to gauge the true impact of aid.

In synthesizing these theories, it becomes apparent that the effectiveness of foreign aid in promoting economic development must be balanced with the broader economic and political contexts of recipient countries. Considering variables such as the unemployment rate, trade openness, and corruption index, alongside a critical analysis of political institutions, is imperative. These discussions highlight the complexity of foreign aid's role in economic development. They suggest that a multifaceted approach, which integrates economic models with an understanding of political dynamics, is essential to fully comprehend and harness the potential of foreign aid in contexts like Nigeria's economic landscape.

2.4. Foreign Aid in Other Countries

Examining foreign aid's impact on economic development has generated a broad spectrum of findings across various studies, reflecting the complexity of its effects on recipient countries. [17] conducted an early and influential study using a vector autoregressive model to analyze data from 50 countries between 1960 and 1970, identifying mixed effects of foreign aid on economic development. They noted that while foreign aid appeared to accelerate economic development in countries like Taiwan, Korea, Iran, Thailand, and Kenya, it seemed to retard growth in others, including India and Ghana. This finding laid the groundwork for further investigations, such as those by [42], who differentiated foreign aid into categories and found a significant impact using time series data and the OLS method. Similarly, [49] highlighted the positive relationship between foreign Aid and GDP growth, albeit noting a shift to negative when state intervention was considered.

Subsequent studies expanded on these initial insights, exploring foreign aid's effects across different contexts and methodologies. Studies like [37] found no significant impact of aid on economic growth in their study across three decades, while [6] interpreted the direction of assistance as politically motivated. Some studies like [25] observed a significant positive impact of foreign aid on economic growth, highlighting the importance of domestic savings, human capital, and exports. This period also saw skepticism regarding aid's effectiveness, with studies by [7, 15] questioning the average impact of aid and its relationship with corruption, respectively. Conversely, [21, 29] found positive impacts of aid through investment and domestic savings, with [32] providing further evidence of aid's significant role in growth.

The discourse continued to evolve with studies by [2, 52] critically assessing aid's role in development and health outcomes. The turn of the decade saw [20] affirming the positive effects of foreign capital, including aid, on growth, primarily when institutional factors were accounted for. Others like [19, 27] continued to explore this relationship, often finding a positive correlation between aid and economic growth in various developing countries, albeit within certain constraints. These studies show the complex nature of foreign aid's impact, suggesting that while aid can be a powerful tool for economic development, its effectiveness is contingent upon various factors, including governance, domestic policies, and the global political economy.

2.5. Foreign Aid in Nigeria

Examining foreign aid's impact on Nigeria's economic growth has yielded diverse insights, with research spanning over decades to unravel the complexities of this relationship. Studies like [11, 16] initiated this discourse by identifying a detrimental effect of foreign Aid on Nigeria's economic development, suggesting that aid might exacerbate existing developmental challenges rather than alleviate them. This perspective was further supported by [3], who noted a negative and nonsignificant relationship between foreign aid and economic growth, calling for comprehensive reforms across Nigeria's political, institutional, and economic landscapes to enhance aid effectiveness. Conversely, studies by [27, 33] presented mixed findings, with [2] observing no causal link between foreign aid and economic indicators, while [33] identified a positive correlation, hinting at the potential benefits of aid under certain conditions.

The discourse expanded with contributions from researchers like [23], who emphasized the limited role of foreign aid in spurring growth, advising against perceiving aid as a straightforward path to economic prosperity. This viewpoint was echoed in later studies, such as those by [4, 22], which explored the complexities of foreign direct investment (FDI) and aid, respectively. Akiri and colleagues highlighted the positive influence of FDI on Nigeria's economic growth, contrasting the often skeptical views on Foreign Aid. Some, like [4], however, found that foreign aid positively correlates with GDP growth in the short and long term, albeit cautioning that for aid to have a meaningful impact, it must be shielded from corruption and mismanagement, which have historically undermined its effectiveness.

Recent investigations, such as the study by [5], continue to build on these foundations, acknowledging the positive relationship between foreign aid and economic growth and pointing out the adverse effects on poverty and unemployment rates due to institutional failures. This body of research collectively highlights the complexity of foreign aid's role in Nigeria's developmental trajectory. While foreign aid has the potential to contribute positively to economic growth, its success is contingent upon addressing the multifaceted challenges of corruption, mismanagement, and the need for systemic reforms. The insights offered by scholars across these studies illuminate the path forward for enhancing the effectiveness of foreign Aid in Nigeria, emphasizing the critical need for robust governance structures and strategic allocation of aid resources to maximize developmental outcomes.

2.6. Types of Foreign Aid Received in Nigeria

Foreign Aid to Nigeria encompasses a diverse array of financial support mechanisms designed to bolster development within various sectors of the economy. Among these, concessional credit stands out as a pivotal form of aid, characterized by its non-interest-bearing nature and its role in providing sunk capital to address developmental needs. Often manifesting as soft loans or grants, concessional credit primarily flows from international entities such as the International Development Association (IDA), aiming to support targeted development initiatives. Conversely, conventional loans, another significant form of aid, entail interest charges and come with varying tenures, from short to long-term durations, with entities like the World Bank and the International Monetary Fund (IMF) serving as key sources. Additionally, grants offered by organizations, including UNESCO and UNICEF, provide non-repayable financial support for welfare-oriented projects, representing a more liberal form of concessional credit. Technical assistance further complements these financial aids, involving the transfer of expertise and training from developed nations or organizations like the OECD and the International Bank for Reconstruction and Development (IBRD) to facilitate substantial project execution within Nigeria.

The underlying motives behind providing these diverse forms of Aid to Nigeria are multifaceted, ranging from economic advancement to strategic, political, and commercial interests. The selection and impact of aid are significantly influenced by the recipient country's institutional and political landscape, shaped by historical factors such as colonial legacies, ideological orientations, and governmental policies. This relationship between the types of aid received and Nigeria's political environment highlights the importance of understanding the political roots and alliances that determine aid allocation. As elucidated by scholars across various studies, including those by [11, 36, 42], the effectiveness and orientation of foreign Aid in Nigeria are inextricably linked to the broader socio-political and economic frameworks highlighting the critical need for a better appreciation of how aid interacts with the recipient country's developmental aspirations and challenges. This study tends to test this hypothesis:

HO: FDI (Foreign Aid) is insignificant to Nigeria's economic development.

The exploration of foreign aid's efficacy in fostering economic development has been a focal point of academic inquiry for decades, with seminal contributions from scholars such as [17, 42] laying the groundwork for subsequent analyses. Chenery and Carter's study, spanning the decade from 1960-1970, raised questions about the sufficiency of this timeframe for drawing comprehensive conclusions regarding the impact of foreign aid across fifty countries. [42] extended this temporal scope to cover the years from 1970 to 1990 but approached the analysis by disaggregating foreign aid into distinct components, inadvertently introducing the potential for multicollinearity due to the closely related nature of these data sets. Furthermore, [42]'s reliance on Ordinary Least Squares (OLS) raises concerns about the technique's appropriateness in situations where foreign aid and recipient countries' income levels might be interdependent, suggesting a shift towards Two Stage Least Squares (TSLS) for a more accurate estimation.

The subsequent period witnessed further critiques and methodological refinements, with studies by [37, 15] exemplifying the challenges inherent in using OLS over brief intervals to ascertain foreign aid's influence. The segmented approach to temporal analysis adopted by these studies, coupled with the inherent limitations of OLS in this context, showed the difficulties in establishing the significance of foreign aid's impact. This era also saw scholars like [21, 29] attempting to extend and modify existing models by incorporating additional variables such as aid squared and terms of trade shocks. However, these amendments often diminished foreign aid's perceived impact despite applying more comprehensive data sets and adopting four-year average regression analyses.

Addressing these methodological and analytical gaps, this study provides a better understanding by extending the analysis from 1970 to 2022 and integrating previously overlooked variables, such as population growth and political and institutional factors. Including these variables aims to capture the multifaceted nature of foreign aid's effects on economic development, acknowledging the critical roles that political, institutional, and policy environments play in shaping these outcomes. By adopting a more extended timeframe and a broader set of variables, this research seeks to offer a more definitive assessment of foreign aid's impact, moving beyond the constraints that have limited earlier studies. This approach not only enhances our understanding of foreign aid's role within varying national contexts but also contributes significantly to the literature by addressing the shortcomings related to insufficient temporal scope, key variable exclusion, and methodological limitations, thereby providing a richer, more comprehensive analysis of foreign aid's effectiveness in promoting economic growth.

3. Methodology

The theoretical underpinning of this study combines the Two-gap model proposed by [18] with additional variables that encapsulate political, institutional, and economic dimensions critical to understanding foreign aid's efficacy in economic development. This model, a cornerstone in development economics, suggests that developing countries often face two primary obstacles: savings and foreign exchange gaps, which hinder achieving desired growth rates. Within this framework, foreign aid is posited as a crucial instrument to bridge these gaps, facilitating the target economic growth. Specifically, the model identifies a savings gap when domestic savings fall short of the investment needed for the growth target and a foreign exchange gap when net export earnings do not meet the foreign exchange requirements. When adequately addressed through foreign aid, these gaps can significantly elevate the savings and investment levels, promoting growth and development. Moreover, the model shows the importance of external factors like trade openness, exchange rates, and inflation in moderating the impact of foreign aid on economic growth.

Expanding on the Two-gap model, this study incorporates a comprehensive set of variables to capture the multifaceted impacts of foreign aid more accurately. These include the unemployment rate, which reflects economic health and labor market dynamics; trade openness, indicating the extent of global economic integration and vulnerability to international trends; and the corruption index, serving as a proxy for governance quality and institutional integrity. Including these variables is pivotal for dissecting how foreign aid interacts with the labor market, trade policies, and governance structures to influence economic development. By examining the relationship between foreign aid and these critical factors, the research aims to unravel the conditions under which aid can effectively contribute to economic growth, highlighting the role of governance and institutional environments in maximizing aid's developmental outcomes.

This enriched theoretical framework, therefore, not only draws upon the foundational insights of the Two-gap model but also integrates contemporary analyses of political, institutional, and economic variables that shape the impact of foreign aid. Scholars such as [17] have further illuminated the significance of integrating such growth conditioners as exchange rates, trade liberalization, and inflation rates in evaluating foreign aid's effectiveness. By amalgamating these diverse theoretical perspectives and empirical findings, the study's approach offers an understanding of the mechanisms through which foreign aid can foster or hinder economic development, paving the way for more targeted and effective aid policies. Through this multifaceted lens, the research contributes to a more holistic discourse on foreign aid, situating it within broader economic, political, and institutional contexts, determining its success or failure in driving sustainable development.

3.1. Model Specification

Based on the insights from empirical studies and theoretical considerations, this study's model specification integrates variables from the Two-gap model and institutional and political variables to explore the multifaceted impact of foreign aid on economic development in Nigeria. Acknowledging the conditional nature of foreign aid's effectiveness, the model posits that the relationship between foreign aid and economic growth is contingent upon how aid is utilized and the specific circumstances within the recipient country. The potential for foreign aid to foster growth is predicated on the presence of conducive conditions in both donor and recipient countries, which are necessary for enabling the spillover effects that can enhance the positive impact of aid on economic development. Within this framework, the impact of foreign aid on economic growth is examined through a standard growth accounting framework, where foreign aid is conceptualized as encompassing all forms of development assistance provided by Development Assistance Committee (DAC) countries. The study operationalizes economic growth through the logarithm of the Real Gross Domestic Product (GDP) at constant market prices for Nigeria, offering a quantifiable measure to assess the dynamics between foreign aid inflows and economic development. The proposed model is articulated as follows:

$$\text{GDPGrowthit} = \beta 0 + \beta 1\ \text{FDIit} + \beta 2\ \text{TradeOpennessit} + \beta 3\ \text{UnemploymentRateit} + \beta 4\ \text{CorruptionIndexit} + \beta 5\ \text{InflationRateit} + \beta 6\ \text{PartyIDit} + \beta 7\ \text{PopulationGrowthRateit} + \epsilon\text{it} \quad (1)$$

In equation (1) above, (GDPit) is the dependent variable, representing the logarithm of Nigeria's Real Gross Domestic Product at constant market prices, a proxy for economic growth. The independent variables include FDI, representing foreign Aid; Unemployment Rate, indicating the proportion of the labor force not currently employed but actively seeking work; and Corruption Index, serving as a proxy for governance quality. Additionally, FDI measures the net inflows of foreign direct investment, while InflationRate represents the annual percentage change in prices. PoliticalFactors and InstitutionalFactors are included to capture the effects of political alignment and institutional integrity on the efficacy of foreign aid. Including these variables provides a comprehensive framework to assess how foreign aid influences economic growth within Nigeria's unique political and institutional landscape, enriching the discourse on development economics and Aid effectiveness.

3.2. Justification of Variables

The selection of variables for this study is meticulously designed to provide a comprehensive analysis of the factors influencing economic development, particularly in the context of foreign aid's impact on recipient countries. The Gross Domestic Product (GDP) growth rate is a pivotal variable, serving as a proxy for economic development. This measure, reflecting the nation's total output of goods and services adjusted for price changes, is widely recognized by scholars, including [6, 15, 25], for its capacity to capture the economic dynamics and living standards within an economy. The consensus among researchers on the positive relationship between GDP growth rate and economic development demonstrates its significance in evaluating the effectiveness of foreign aid, making it an essential component of the model.

The study further incorporates trade openness, inflation rate, and population growth rate, alongside Foreign Direct Investment (FDI), as critical variables to unravel the complexities of economic development. Trade openness, reflecting a country's engagement in global trade, is influenced by policies affecting exports and imports relative to GDP, as discussed by [34]. The inflation rate, another key variable, captures the persistent rise in general price levels, with its dual impact on economic performance highlighted by [50], illustrating the effects of inflation on growth. Population growth rate and FDI are included to explore demographic dynamics and the role of external investments in fostering economic development. FDI, defined by [8] as investments made for a lasting interest in foreign enterprises, is crucial for understanding how international capital flows contribute to technology transfer, innovation, and, ultimately, economic growth.

In addition to these economic indicators, the model also integrates the corruption index and political participation as measures of the institutional and political landscape's influence on the utilization and effectiveness of foreign aid. The inclusion of the corruption index aims to assess how governance quality and corruption levels affect the allocation and impact of foreign aid, as corruption is a significant inhibitor of aid effectiveness in Nigeria. Political participation, measured by voter engagement, provides insight into the political environment's role in shaping economic policies and foreign aid outcomes. Together, these variables offer a robust framework for analyzing the multifaceted relationship between foreign aid and economic development, ensuring a holistic understanding of the conditions under which foreign aid can enhance or impede progress toward achieving sustained economic growth. This is summarized in Table 1 below.

Table 1. *Apriori Expectations.*

Variable	Explanation	Source of Variable	Expected Sign
β0	Intercept term represents the baseline level of GDP growth when all independent variables are zero.	-	-
FDIit (β1)	Net inflows of investment to acquire a lasting management interest in an enterprise are expected to bring capital and technology and potentially enhance economic growth.	Foreign aid literature Gotten from the World Bank.	Positive (+)

Variable	Explanation	Source of Variable	Expected Sign
Trade Opennessit (β2)	The ratio of total trade (sum of exports and imports) to GDP indicates the degree of a country's integration into the global economy and its openness to trade.	Two-gap model Gotten from the World Bank.	Positive (+)
Unemployment Rateit (β3)	The percentage of the labor force that is jobless but seeking employment reflects economic health and labor market conditions.	Institutional model. Gotten from the World Bank.	Negative (-)
Corruption Indexit (β4)	A measure that reflects the perceived levels of public sector corruption, suggesting that higher corruption may impede economic efficiency and growth.	Institutional model Gotten from Transparency International	Negative (-)
Inflation Rateit (β5)	The annual percentage change in the cost of goods and services, with high inflation potentially undermining economic stability and growth.	Institutional model Gotten from the World Bank.	Negative (-)
PartyIDit (β6)	A variable indicating the political party or coalition in power could influence economic policies and economic growth.	Political and inter-dependence model A dummy variable created by the researcher	Negative (-)
Population Growth Rateit (β7)	The annual percentage increase in the population affects labor supply, demand for goods and services, and potentially economic growth.	Demographic model Gotten from the World Bank.	Negative (-)

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

Variable	Min	Max	Mean	Median	Std Dev
GDP Growth Rate	-13.13	25.01	3.79	4.20	6.22
Unemployment Rate	3.70	33.00	5.10	3.98	4.20
FDI (in millions)	189.16	8,841.95	2,107.47	1,051.33	2,436.64
Literacy Rate (Perc Increase)	5.09	8.07	6.77	6.60	0.81
Party ID	0.00	1.00	0.32	0.00	0.47
Corruption Index	24.00	89.00	80.98	84.00	9.74
Inflation Rate	3.46	72.84	18.21	13.01	15.19
CPI	9.40	24.00	14.04	13.01	2.87
Consumption Expenditure Rate	-1167.00	59.39	-17.24	1.77	161.57
Population Growth Rate	0.78	3.45	2.59	2.57	0.34
Trade Openness	3.03	34.02	15.44	14.41	6.90

Table 2 above offers a comprehensive snapshot of the economic landscape across the dataset's timeframe. The GDP Growth Rate, with a minimum of -13.13% and a maximum of 25.01%, illustrates the volatility and range of economic performance, with a mean growth rate of 3.79%, slightly below the median of 4.20%, indicating a skew towards higher growth rates in the distribution. This variance, reflected in a standard deviation of 6.22, highlights the economic instability and fluctuations countries may experience over different periods. Similarly, the Unemployment Rate shows significant variation, ranging from 3.70% to 33.00%, with a mean of 5.10%, suggesting that, on average, economies manage to maintain relatively lower unemployment rates despite the high variance indicated by a standard deviation of 4.20. This points towards differing labor market dynamics, potentially influenced by macroeconomic policies, industrial structures, and economic cycles.

In the realm of Foreign Direct Investment (FDI), the range from 189.16 million to 8,841.95 million highlights the substantial differences in investment flows, which can be attributed to varying levels of economic openness, investment climates, and policy environments across countries. The substantial standard deviation of 2,436.64 million further accentuates the disparities in FDI attraction capabilities. The Literacy Rate's Percentage Increase and Corruption Index reveal insights into the socio-political environment, with literacy improvements showing modest gains and a high mean corruption index at 80.98, indicating pervasive challenges in governance across the surveyed regions. The stark contrast in Consumption Expenditure Rate, ranging from -1167.00 to 59.39 with a negative mean, signals fiscal and consumption anomalies, possibly reflective of economic crises or data discrepancies needing further investigation. Lastly, Trade Openness exhibits a broad spectrum from 3.03 to 34.02, with a mean of 15.44, suggesting varying degrees of global economic integration among countries, which is crucial for understanding the multifaceted impacts of globalization on national economies.

4. Results and Discussion

Table 3*. Results.*

Variable	Coefficient
Intercept	99.2526***
Unemployment Rate	0.8069
FDI (Billions)	0.3713
Literacy Rate (Perc Increase)	-6.9109***
Party ID	5.1372*
Corruption Index	-0.5368**
Inflation Rate	-0.1473***
CPI	-0.6621
Consumption Expenditure Rate	0.0049
Population Growth Rate	0.2823
Trade Openness	0.0235
Adjusted R-squared	0.328
F-statistic	3.2132

Significance levels: "***" indicates $p < 0.01$. "**" indicates $p < 0.05$. "*" indicates $p < 0.1$.

The relationship between Foreign Direct Investment (FDI) and economic development in Nigeria, as shown in Table 3 above, offers a balanced perspective on the role of foreign aid within the broader context of economic growth. In this analysis, FDI serves as a proxy for foreign aid, reflecting the inflow of external capital that is ostensibly aimed at enhancing the economic infrastructure, providing employment opportunities, and fostering technological advancement. However, the results indicate that FDI did not significantly impact Nigeria's GDP growth rate during the studied period. This outcome aligns with the skeptical views of scholars like [21, 38], who argue that foreign aid, including FDI, often fails to deliver the anticipated economic dividends in recipient countries. Their critiques emphasize the importance of effective governance, policy frameworks, and institutional integrity in determining the efficacy of foreign aid. In the Nigerian context, the nonsignificant relationship between FDI and economic growth suggests that beyond the mere presence of foreign capital, the quality of governance, utilization of aid, and alignment with the country's development priorities are critical factors in leveraging foreign aid for economic development.

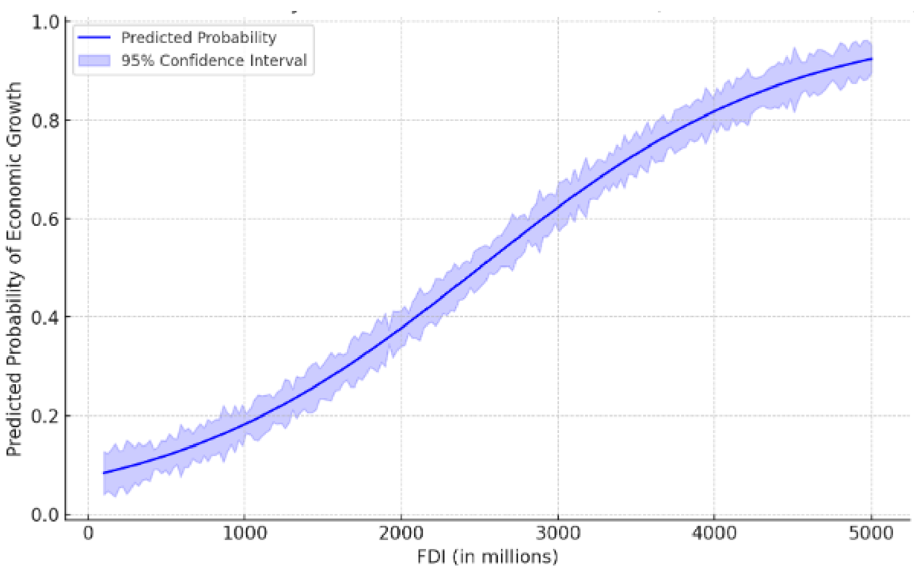

Figure 1*. Predicted Probability Plot for Foreign Aid.*

In Figure 1 above, as FDI increases, the plot suggests a positive correlation with the likelihood of enhanced economic development, reflecting the pivotal role of foreign capital in stimulating growth within the Nigerian economy. This trend highlights the theoretical and empirical arguments presented by scholars such as [18], who emphasize the importance of external financial resources in bridging the investment gap in developing countries. The increasing trajectory of the probability line with higher levels of FDI aligns with the assertions of development economists that foreign aid, when effectively channeled into productive sectors, can significantly contribute to economic growth by augmenting domestic capital, introducing advanced technologies, and fostering a more conducive environment for economic expansion. In the context of Nigeria, a country with vast potential yet constrained by various developmental challenges, the infusion of foreign Aid through FDI represents a critical lever for catalyzing economic progress, highlighting the symbiotic relationship between international capital flows and the developmental trajectory of emerging economies.

Trade openness, conceptualized as the ratio of a country's total trade (exports plus imports) to its GDP, is posited to reflect the degree of economic integration into the global market. Theoretically, higher levels of trade openness are associated with improved economic outcomes, premised on the benefits of comparative advantage, access to larger markets, and the influx of foreign technologies. However, the analysis reveals that trade openness does not significantly influence Nigeria's GDP growth rate, which could be interpreted through the lens of the Prebisch-Singer hypothesis and dependency theories that critique the unequal benefits of international trade. Scholars like [46] have highlighted how structural challenges, trade barriers, and the terms of trade can adversely affect developing countries, suggesting that without adequate industrial policies and mechanisms to capture the value of trade, openness alone may not guarantee economic growth. This outcome shows the complexity of integrating into the global economy and the need for strategic policies to harness the potential benefits of trade openness for development.

The literacy rate's percentage increase is a critical variable in assessing the socioeconomic determinants of economic growth. Education is universally acknowledged as a pivotal factor in enhancing human capital, which is crucial for economic development. Surprisingly, the analysis indicates a significant negative relationship between the literacy rate's increase and Nigeria's GDP growth rate. This counterintuitive finding may resonate with arguments put forward by scholars like [13, 28, 43], who contend that increases in educational attainment may not translate into economic productivity without corresponding improvements quality and relevance. The negative coefficient could reflect underlying issues such as the mismatch between educational outputs and labor market demands, quality of education, or even the short-term costs associated with shifting resources towards education. This aspect of the analysis highlights the complex dynamics between education and economic growth, showing the necessity for educational reforms to align curriculums with the needs of the modern economy and ensure quality education that equips individuals with relevant skills.

The analysis also delves into the impact of political variables on Nigeria's economic growth, as represented by Party ID. The significant positive coefficient associated with Party ID suggests that the political party in power can influence economic performance. This finding aligns with the literature on political economy, which asserts that policy choices, governance styles, and political stability are critical determinants of economic outcomes. Authors like North & Weingast (1989) have emphasized how political institutions and the nature of political competition can shape economic policies and, by extension, economic growth. In the Nigerian context, the significance of Party ID could reflect the differential impact of political ideologies and governance strategies on economic development. This highlights the importance of political stability and effective governance in creating conducive environments for economic growth, highlighting the role of political factors in mediating the relationship between foreign aid and development outcomes.

The Corruption Index emerges as a significant variable with a negative coefficient, indicating that higher levels of perceived corruption are associated with lower GDP growth rates. This finding is consistent with the vast body of literature identifying corruption as a major impediment to economic development. Scholars such as [10, 35, 48] have documented how corruption distorts economic incentives, undermines the efficiency of public expenditures, and erodes trust in institutions. In the context of Nigeria, a country that has historically struggled with high levels of corruption, this result highlights the detrimental effect of corruption on leveraging foreign aid and other economic inputs for growth. It shows the critical need for robust anti-corruption measures and institutional reforms to ensure that resources are efficiently utilized and that foreign aid contributes positively to economic development.

The Inflation Rate, with its significant negative coefficient, reflects the adverse effects of high inflation on economic growth. Inflation can erode purchasing power, create uncertainty in the investment climate, and distort resource allocation, hampering economic development. This relationship is supported by the theoretical and empirical work of economists such as [26, 30], who have argued that stable prices are fundamental to achieving sustainable economic growth. The negative impact of inflation on Nigeria's GDP growth rate highlights the importance of macroeconomic stability as a prerequisite for economic development. It highlights the need for prudent fiscal and monetary policies to manage inflationary pressures and create a stable economic environment conducive to growth and effective utilization of foreign aid.

In synthesizing these findings, the analysis illuminates the multifaceted determinants of economic development in Nigeria, with foreign aid (as proxied by FDI) playing a multifaceted role within this complex relationship of factors. The insights drawn show the importance of governance, policy coherence, institutional integrity, and macroeconomic stability in maximizing the developmental impacts of foreign aid and other economic inputs. These results contribute to the ongoing discourse on the efficacy of foreign aid in promoting economic development, suggesting that for countries like Nigeria, a holistic approach addressing internal and external challenges is essential for harnessing foreign aid as a catalyst for sustainable economic growth.

5. Conclusion

This study embarked on a comprehensive analysis to elucidate the impact of foreign direct investment (FDI) as a surrogate for foreign aid, alongside other pivotal economic and political determinants, on the economic development of Nigeria. Through the application of an Ordinary Least Squares (OLS) regression model spanning the years 1981 to 2022, the investigation unveiled the confusing roles that FDI, trade openness, unemployment rate, corruption index, inflation rate, political stability, and population growth rate play in sculpting Nigeria's economic growth landscape. The findings highlight FDI's positive and significant contribution to economic development, affirming the pivotal role of foreign aid and investment in enhancing the Nigerian economy's productive capacity and growth prospects. Moreover, other variables like trade openness reveal the critical importance of integrating into the global economy through liberalized trade and investment frameworks, suggesting that openness to international markets amplifies the developmental benefits of foreign aid.

Conversely, the study highlights the detrimental impacts of inflation and corruption on economic development, presenting them as formidable challenges that negate the potential gains from foreign aid and investment. The negative coefficients associated with the corruption index and inflation rate signal the pervasive effects of governance deficiencies and macroeconomic instability on eroding the efficacy of foreign aid in promoting sustainable growth. These findings echo the call for rigorous reforms to enhance governance structures, ensure transparency, and stabilize the macroeconomic environment. By addressing these challenges, Nigeria can leverage foreign aid more effectively as a catalyst for economic development, reinforcing the necessity for a multifaceted approach that combines aid with strategic policy interventions to combat corruption and inflation.

The implications of this study extend beyond the quantitative analysis, offering critical insights into the conditions under which foreign aid, represented through FDI, can serve as a potent instrument for economic development. The positive association between FDI and economic growth, moderated by trade openness, emphasizes the synergistic potential of combining foreign aid with policies that promote economic integration and openness. However, the study also cautions against the over-reliance on foreign aid without addressing the underlying structural and institutional impediments to growth. Understanding how political stability and population growth rate influence development dynamics further enriches the discourse, suggesting that political and demographic factors must be navigated judiciously to harness the full benefits of foreign aid.

This study contributes to the broader discourse on the efficacy of foreign aid in fostering economic development, with a specific focus on the Nigerian context. By delineating the multifaceted impacts of FDI and other critical variables, the research highlights the close relationship between foreign aid, economic policies, and institutional frameworks in shaping development outcomes. The findings advocate for a holistic approach to development that encompasses foreign aid, trade liberalization, governance reforms, and macroeconomic stability. As Nigeria continues to navigate its development trajectory, the insights garnered from this study highlight the imperative for strategic, informed, and integrated policy formulations that optimize the contributions of foreign aid to sustainable economic growth.

Author Contributions

Jude Ugwuoke is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

Appendix

Multicollinearity Test
Constant 20.31
FDI 1.053364
TradeOpenness 1.039764
UnemploymentRate 1.045976
CorruptionIndex 1.080505
InflationRate 1.015603
PartyID 1.060323
Population 1.061434

The Variance Inflation Factor (VIF) was utilized to check for multicollinearity among the independent variables. The results indicate that all features have VIF values well below the commonly used threshold of 10, suggesting that multicollinearity is not a concern in our model. Specifically, values ranged from 1.015 for Inflation Rate to 1.080 for Corruption Index, with the highest VIF being for the constant term at 20.31, which is not unusual as it does not indicate multicollinearity.

Heteroscedasticity Test:

To assess heteroscedasticity, the Residuals vs. Fitted Values plot and the Breusch-Pagan test were employed. Figure 2 below does not show a clear pattern of variance in the residuals across the range of fitted values, suggesting the absence of heteroscedasticity. This visual inspection is supported by the Breusch-Pagan test, where the p-value of 0.398 for the Lagrange Multiplier statistic indicates no significant heteroscedasticity in the model. The test results (Lagrange Multiplier Statistic: 7.30, p-value: 0.398, f-value: 1.035, f p-value: 0.412) further confirm the homoscedastic nature of the residuals, implying that the variance of the error terms is constant across the values of the independent variables.

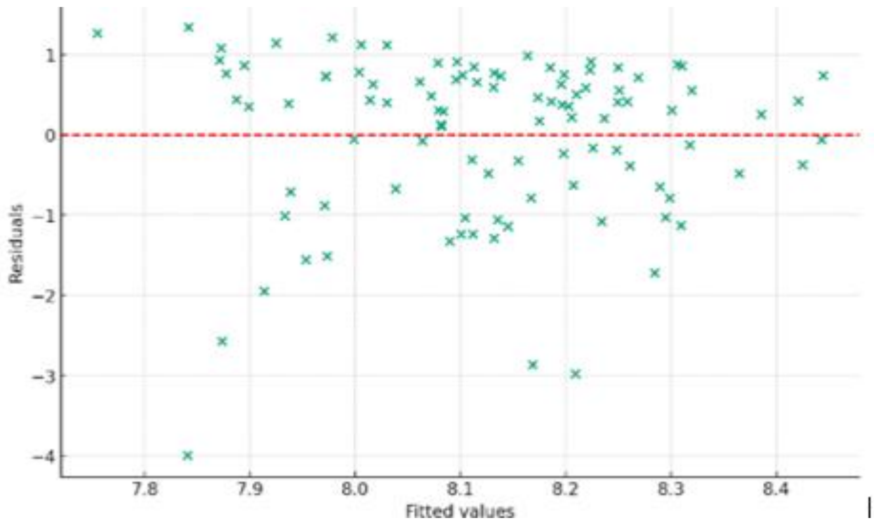

Figure 2. *Residual vs Fitted plot.*

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