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**EFFECT OF TRADE OPENNESS AND FOREIGN DIRECT INVESTMENT ON NIGERIA'S ECONOMIC GROWTH****Ikubor Ofili Jude**Department of Economics, Nigerian Defence Academy (NDA)  
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Kaduna, Kaduna State, Nigeria**Yahaya Umar Isah**Department of Economics, University of Abuja  
Abuja, Nigeria**ABSTRACT**

*Over time, Nigeria's foreign investment has not yielded the desired result that would drive stable inflation, exchange rate, and enhance economic growth in Nigeria. This is as a result of the bottleneck that hinder foreign trade and encourage mono export drive (crude oil) in the country. The study examined the effect of trade openness and foreign direct investment on economic growth, using the Auto-regressive Distributed Lag (ARDL) model from 1986 to 2023. The result revealed direct relationship between trade openness (TOP), foreign direct investment (FDI), and economic growth in the long run. Specifically, trade openness had a direct and significant relationship with economic growth at 5% level in the long run. In the same vein, foreign direct investment (FDI) had an inverse and significant relationship with economic growth at 5% level in the long. Inflation (INF) exhibited an inverse and insignificant relationship with economic growth, while exchange rate revealed a direct and insignificant relationship with economic growth in the long run. The paper recommended that government needs to do more by ensuring stable inflationary rate, attract foreign direct investment (FDI) through production diversification that would enhance foreign exchange earnings, stabilize inflation and boost economic growth in Nigeria.*

**Keywords:** Trade Openness; Foreign Direct Investment**JEL Classification:** F18, Q17

## 1. Introduction

It is a common knowledge that trade openness measures the strength of foreign direct investment (FDI), which is an important factor to economic growth. Nigeria's stands out as the most important location in Africa with abundance of natural resources that promote intra- regional trade among the continents in the world (Banday, et al. 2021 & Kumari, et al 2023).

Trade openness measures the degree to which a country engages in international trade and international investment. Before now, various studies on this issue centred on foreign direct investment and economic growth with less emphasis on trade openness, which is the catalyst of trade liberalization (Makki & Somwaru 2004; Carkovic & Levine, 2005; Liargovas & Skandalis, 2012), such study is inappropriate and inadequate to analysis foreign trade as link to economic growth in Nigeria. For effective analysis of foreign trade in Nigeria, it requires the combination of trade openness and foreign direct investment as a link to economic growth. This is supported by recent studies such as Edwards (1993), Banday, et al. (2021), Rakshit (2022) and Kumari, et al (2023).

Trade openness and foreign direct investment have been a burning issue over a decade due to the volatility of exchange rate and unstable inflation in Nigeria. The issue of trade liberalization policies tends to integrate Nigeria into a global economy that enhance export performance, stabilize inflation, attract foreign capital through foreign direct investment. Despite these efforts, Nigeria's trade structure remains heavily on mono-product oil exportation, which account for over 80% of government revenues and foreign exchange earnings with unprecedented volatility in inflation and exchange rate in Nigeria. This over dependence had exposed the economy to external shocks, such as fluctuating oil prices, underscoring the need to diversify exports and improve the competitiveness of other sectors (Afolabi, 2022).

In advance economy, FDI has been a vital channel for technology transfer, job creation, and capital inflows, but with less impact in Nigeria. In the last decade, government have implemented various initiatives to attract foreign investors, such as tax incentives, investment-friendly regulations, and the establishment of free trade zones. However, Nigeria's FDI inflows have been volatile due to challenges like policy inconsistencies, poor infrastructure, corruption, and security concerns, particularly in the Niger Delta and northern regions. Despite these obstacles, FDI remains a significant contributor to sectors like telecommunications, manufacturing, and energy, complementing domestic investment and fostering economic growth (Abdullahi, Hussaini, & Azu 2024).

Theoretically, trade openness and FDI contribute to economic growth by facilitating access to international markets, improving resource allocation, and promoting the transfer of advanced technologies and expertise. Empirical studies

suggest that these factors can boost productivity and GDP growth, provided that macroeconomic stability, institutional quality, and infrastructure are in place. In Nigeria, however, the benefits of trade openness and FDI have been undermined by structural issues, including inadequate infrastructure, low human capital development, and over-reliance on oil (Nketiah, Cai, Adjei & Boamah, 2020).

Despite recent studies on the relationship between trade openness, FDI, and economic growth, the Nigerian case presents unique challenges and opportunities. Understanding how these factors interact in the Nigerian context is crucial for designing effective policies to harness their potential benefits. The study analysed the dynamic effects of trade openness and FDI on Nigeria's economic growth, while considering inflationary rate as moderating factor which hinders sectorial expansion and diversification. In line with this background, specific research questions were drawn to support the study. Does trade openness, foreign direct investment, inflation and exchange rate has direct effect on economic growth in Nigeria. In providing answers to these questions, various literature were reviewed to support the study.

The study is therefore structured into six sections with section as the introduction. Section two is the empirical review. Section three is the methodology of the study. section four presents the research findings. Section five is the discussion of findings and section six forms the concluding remark and policy recommendations of the paper.

## 2. Literature Review

Abdullahi et al (2024) attempts to analysis the impact trade openness, institutional quality, and economic growth in Nigeria. Their study established a long run relationship between trade openness, institutional quality, and economic growth in Nigeria using ARDL technique. Specifically, trade openness exhibited a positive relationship with economic growth, while institution quality shows an inverse relationship with economic growth in Nigeria.

Using panel data from 1998 to 2017, Oppong-Baah et al. (2022) examined how trade openness affected Ghana's and Nigeria's economic growth. The study used Hausman tests, fixed effects, random effects, and pooled OLS. The results showed that, whilst inflation and investment have no discernible impact on economic growth, trade openness and exchange rate do have. Furthermore, the analysis shows no indications of autocorrelation or heteroskedasticity in the model, guaranteeing the accuracy of the findings.

In order to resolve the discrepancies in earlier empirical findings, Jalil and Rauf (2021) investigated the connection between trade openness and economic growth. They ascribed these disparities to differences in trade openness metrics, sample choices, and methodology differences. employing sophisticated

econometric methods, system-GMM estimator to analysis the study. Their results contradict earlier research that supports trade restrictions by confirming that trade openness substantially promotes economic growth. The analysis provides strong evidence for the beneficial effects of trade openness on economic growth by taking endogeneity, structural breaks, and cross-sectional dependence into consideration.

Using institutional quality data from 1984 to 2017, Omoke and Opuala-Charles (2021) investigate the connection between trade openness and economic growth in Nigeria. The study applied three trade openness metrics, import, export, and total trade, in the analysis with the support of ARDL techniques. The study revealed a long run relationship between institutional quality, trade openness and economic growth in Nigeria. Specifically, import trade has a negative impact on economic growth while export trade and institution had a positive relationship with economic growth. The study recommended stronger institutional frame that enhances export drive

Banday, et al (2021) used the autoregressive distributed lag model and the Dumitrescu and Hurlin Granger causality tests to examine the relationship between FDI, trade openness, and economic development in the BRICS nations between 1990 and 2018. The result showed that trade openness and foreign direct investment have a long-term favourable effect on economic growth. Furthermore, there is a long-term correlation between economic growth, gross capital formation, and the real effective exchange rate. In addition to unidirectional causality from trade openness to FDI, the causality analysis shows bidirectional causality between FDI and economic growth and between FDI and trade openness.

From 1993 to 2016, Raghutla (2020) looked at how trade openness affected economic growth in five emerging market economies. The findings of the study with panel estimation supported a long-term correlation between trade openness and a number of variables, including labour force participation, inflation, financial development, and technology. The results revealed that trade openness significantly boosts economic expansion. Furthermore, while unidirectional causality is seen from economic growth to trade openness and financial development in the short term, heterogeneous panel non-causality tests indicate bidirectional causality between inflation and economic growth. These findings demonstrated the intricate relationships that exist between trade openness and economic expansion in developing nations.

Nketiah, et al. (2020) investigate the connection between Ghana's economic growth, trade openness, and foreign direct investment between 1975 and 2017. According to the study, which used the Ordinary Least Squares (OLS) estimator, trade openness is the primary factor influencing GDP growth in Ghana, but inflation and foreign direct investment have an inverse association with

economic growth in Nigeria. The report suggests a level playing field that promotes exports and foreign direct investment inflow by establishing a welcoming and conducive business climate for output growth.

Using the Autoregressive Distributed Lag (ARDL) model, Ayomitunde et al. (2020) investigated the macroeconomic factors influencing foreign direct investment (FDI) inflows into Nigeria between 1990 and 2017. The results showed that market size, growth rate, exchange rate, and previous FDI inflows all have a significant and favourable impact on FDI inflows into Nigeria. FDI inflows were found to be discouraged by inflation, nevertheless. The study emphasizes the detrimental effects of inflation on investment inflows while stressing the crucial role that stable and growth-oriented macroeconomic variables play in luring FDI.

Ajayi and Araoye (2019) used data from 1970 to 2016 to investigate how trade openness affected Nigeria's economic growth. They discovered that all variables, with the exception of labour input, were stationary at first difference using co-integration analysis based on the Engel and Granger (1987) framework and unit root tests (ADF and PP). Economic growth and trade openness have a long-term link, according to co-integration tests. The study showed that while exchange rate volatility had a detrimental influence on growth, trade openness had a favourable effect. These results highlight the necessity of stable exchange rates in order to optimize the advantages of trade liberalization.

Solomon and Tukur (2019) used the RGDP as a growth proxy to examine how trade openness affected Nigeria's economic growth between 1981 and 2018. Johansen Co-integration tests showed a long-term association, while ADF tests verified stationarity at first difference. According to the Error Correction Model (ECM), trade openness had a considerable and beneficial impact on economic growth, whereas inflation had a significant negative impact. The impact of the exchange rate was favourable but not substantial.

In the framework of the African Continental Free Trade Area, Guei and Le Roux (2019) investigated the connection between GDP per capita and trade openness, concentrating on ECOWAS nations between 1990 and 2016. With the exception of Ghana, Guinea-Bissau, Mali, Senegal, and Togo, the study reveals a long-term correlation between trade openness and GDP per capita using the PMG model and the ARDL bounds testing approach. The findings show that trade openness has a long-term detrimental effect on GDP per capita.

Alabi (2019) examined the impact of foreign direct investment (FDI) on economic growth in Nigeria using data from 1986 to 2017. Employing descriptive and regression analyses, the study revealed that FDI significantly influences economic growth, with a coefficient of 0.633506 and a p-value of 0.0002. While real interest rate showed a positive but insignificant relationship with GDP,

domestic investment significantly increased GDP at a 10% alpha level. Additionally, exchange rate demonstrated a strong positive and significant effect on economic growth. These findings underscore the pivotal role of FDI and macroeconomic factors in Nigeria's economic development trajectory.

Using panel data from 45 African nations between 1980 and 2016, Acquah and Ibrahim (2019) examined the connection between FDI, economic growth, and the development of the banking sector. The study, which used the two-system generalized technique of moments, found that although increased foreign direct investment (FDI) is typically linked to economic development, the exact nature of this relationship varies depending on the model. Interestingly, it was discovered that the financial sector reduces the growth-promoting effects of foreign direct investment (FDI), with domestic credit having a greater dampening effect than private credit.

### 3. Methodology

The theoretical framework is supported by endogenous growth theory that explain the relevance of foreign trade as a parameter to economic growth in Nigeria. Trade openness allows for greater market access and resource mobilization, while FDI facilitates the inflow of capital, technology, and managerial expertise, enhancing the region's growth potential. This theory, supported by empirical findings, form a solid foundation for understanding the complex interaction between trade openness, FDI, and economic growth.

The study used secondary time series data to experimentally investigate trade openness, foreign direct investment, and economic growth. In order to capture the long-term dynamics of trade openness, foreign direct investment, and economic growth, the years 1986–2023 were selected. This time frame includes important economic reforms like Nigeria's Structural Adjustment Program (SAP) in 1986 that promote trade liberalism and economic globalization. The study adopted the work of Bandy, et al (2021) with its functional form of the model stated below as equation 1.

$$GDP = f(FDI, GCF, TO, REER) \quad (1)$$

With slight modification, gross fixed capita formation (GCF) was replaced with inflation. Inflation rate was introduced as moderating variable to derive the main model that captures the objective of the study. The inflation rate provides insights into the stability of purchasing power and its broader implication for economic activity and policy efficiency. In addition, it enhances the model's ability to analyse growth patterns comprehensively.

The main objective is stated as equation 2:

$$GDP_{it} = a_0 + a_1TO_{it} + a_2FDI_{it} + a_3EXR_{it} + a_4INF_{it} + E_t \tag{2}$$

Theoretical expectations for the model coefficients are as follows:  $\beta_1$  is expected to be positive, implying that trade openness enhances economic growth, while  $\beta_2$  and  $\beta_3$  are anticipated to be positive, signifying that Foreign Direct Investment (FDI) and the exchange rate positively impact economic growth. Additionally,  $\beta_4$  is expected to be negative meaning that inflation and expected to be negative.

**4. Results**

Having established the unit root result, the result produced a mixed order of integration. These led to the conducting of the co-integration test using the bound test analysis. The result revealed a long run relationship between the dependent variable and independent variable with F-statistic valued 8.5900 greater than the lower and upper bound at 5% level, as seen table 1 below.

**Table 1: ARDL Bound Test**

Null Hypothesis: No long-run relationships exist				
Test Statistic	Value	Significance	I0 Bound	I1 Bound
F-statistic	8.5900	10%	2.45	3.52
		5%	2.86	4.01
K	4	2.50%	3.25	4.49
		1%	3.74	5.06

Source: Authors' computation using EViews 9, 2024

The regression result presented in Table 2, examined the effect of trade openness (LTO), and Foreign direct investment (FDI) on economic growth (LGDP) in both long-run and short-run contexts.

The long-run results show a robust positive effect with a coefficient of 0.6625, suggesting that sustained trade openness plays a significant role in enhancing economic growth over the long term. This finding aligns with existing literature, which underscores the importance of trade openness for fostering economic expansion.

Regarding Foreign Direct Investment (FDI), the results show mixed short-run effects. While lagged FDI values have a positive impact on economic growth, the long-run coefficient for FDI is significantly negative at -0.4489. This suggests that although FDI can contribute positively to economic growth in the short run, its long-term effects may be detrimental, possibly due to over-reliance on foreign

investment or potential misallocation of resources. This is consistent with studies that argue for the importance of balancing FDI with domestic investment to ensure sustainable growth.

**Table 2: ARDL and Long-Run Form  
Panel 1 short Run Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1))	0.3336	0.1432	2.3298	0.0399
D(LGDP(-2))	0.2304	0.1345	1.7134	0.1146
D(LTO)	0.0420	0.0194	2.1627	0.0535
D(LTO(-1))	-0.0431	0.0201	-2.1453	0.0551
D(LTO(-2))	-0.0084	0.0209	-0.4026	0.6950
D(LFDI)	-0.0248	0.0117	-2.1268	0.0569
D(LFDI(-1))	0.0052	0.0099	0.5224	0.6118
D(LFDI(-2))	0.0117	0.00978	1.2010	0.255
D(LEXR)	-0.0940	0.0273	-3.4465	0.0055
D(LEXR(-1))	0.0284	0.0217	1.3057	0.2183
D(LEXR(-2))	-0.0517	0.0204	-2.5385	0.0276
D(LINF)	-0.0262	0.0086	-3.0774	0.0105
D(LINF(-1))	0.0457	0.0112	4.0770	0.0018
CointEq(-1)	-0.1902	0.0793	-2.3990	0.0353

**Panel 2 Long Run Coefficients**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LTO	0.6625	0.0935	7.0856	0.0000
LFDI	-0.4489	0.0802	-5.5910	0.0002
LEXR	0.0211	0.0494	0.4267	0.6779
LINF	-0.2292	0.1349	-1.7003	0.1171
C	1.9081	1.6921	1.1276	0.2835

Source: Authors' computation using EViews 9, 2024

The exchange rate variable shows significant negative effects in the short run, indicating that exchange rate fluctuations may create instability in the economy. However, in the long run, the exchange rate's impact becomes insignificant, suggesting that its role in influencing economic growth diminishes over time. Similarly, inflation demonstrates negative short-run effects on economic growth, with positive lagged effects. Despite these short-term fluctuations, inflation's long-run impact remains insignificant, highlighting the critical role of price stability in fostering sustainable economic growth over time.

Lastly, the Error Correction Term (ECT) of -0.1903 signifies that 19% of disequilibrium in the system is corrected in each period, confirming that the model is effective in capturing long-term adjustments. This result supports the long-run stability of the relationship between economic growth and the explanatory variables, indicating that the economy tends to return to equilibrium over time, correcting short-term deviations in a relatively stable manner. Thus, the findings underscore the model's validity and its capacity to represent the dynamic interplay between the various determinants of economic growth.

**Table 3: Diagnostic Test**

R-squared	0.999655
Adjusted R-squared	0.999026
Durbin-Watson stat	2.225985
Serial Correlation	1.031084(0.4541)
Heteroscedasticity	0.002405(0.8164)

Source: Authors' computation using EViews 9, 2024

Table 3 results present the diagnostic tests used to assess the reliability and validity of the model. R-squared value was 0.999655 which implies, 99.97% of the variation in the dependent variable, (LGDP), is explained by the independent variables, suggesting a very strong model fit. The adjusted R-squared value of 0.999026, which adjusts for the number of predictors, further confirms the robustness of the model, as it explains 99.90% of the variation in LGDP. The Durbin-Watson statistic of 2.225985, which is close to the ideal value of 2, suggests that there is no significant autocorrelation in the residuals, thereby satisfying the assumption of independent errors. The serial correlation test statistic of 1.031084, with a p-value of 0.4541, indicates the absence of serial correlation, as the p-value exceeds the 5% significance level. Finally, the heteroscedasticity test, with a statistic of 0.002405 and a p-value of 0.8164, confirms that the residuals exhibit constant variance, satisfying the assumption of homoscedasticity. These diagnostic results collectively support the validity of the model, confirming that it adheres to the key assumptions of regression analysis, and demonstrating its reliability in analysing the long-run relationship between economic growth and its determinants.

## 5. Discussion of Findings

The findings of this study align with several previous works, highlighting the complex relationship between trade openness, FDI, and economic growth. The positive short-run effects of trade openness observed here reflect the findings of

Abdullahi, Hussaini, and Azu (2024), who reported that trade liberalization enhances growth in the short term. However, the diminishing long-term benefits align with their conclusion that trade openness can negatively impact growth in the long run. Similarly, the results of Oppong-Baah et al. (2022), who identified mixed effects of trade openness on growth, further support this study's findings on its time-varying impacts.

The long-run significance of trade openness in this study aligns with the findings of Jalil and Rauf (2021), who demonstrated a robust positive relationship between trade liberalization and economic growth globally. The significant coefficient (0.6625) for trade openness in this study corroborates their assertion that open trade policies are critical drivers of economic development, particularly in developing economies. These findings emphasize the need for strategic trade policies to sustain growth over time.

The mixed short-run effects of FDI in this study, with both positive and negative impacts at different lags, echo the findings of Bandy, Murugan, and Maryam (2021), who observed similar patterns in BRICS countries. However, the negative long-run effect of FDI observed here aligns more closely with Raghutla (2020), who found that FDI's long-term benefits are influenced by external factors such as inflation and financial development. The negative short-run effects of inflation, followed by lagged positive impacts, also resonate with Solomon and Tukur (2019), who identified inflation as a significant deterrent to economic growth in Nigeria.

The exchange rate's short-run negative effects and its insignificance in the long run found in this study are consistent with the work of Ajayi and Araoye (2019), who stressed the importance of exchange rate stability in maximizing trade liberalization benefits. The insignificant long-run effect of the exchange rate supports Guei and Le Roux (2019), who noted that exchange rate impacts are often secondary to institutional quality and trade policies in driving economic growth. These underscores the importance of addressing structural challenges to enhance the long-term benefits of trade openness and FDI.

## **6. Conclusion and Recommendations**

### **6.1 Conclusion**

The study examined trade openness, foreign direct investment (FDI) and economic growth in Nigeria, offering both short-run and long-run insights. The results show that trade openness has a positive impact on economic growth in the long run, driven by factors such as expanded export opportunities and greater market access. The short run reveals, trade openness displays diminishing returns, as the coefficients for lagged values of trade openness are negative, reflecting structural weaknesses such as poor infrastructure and inefficient institutions. FDI,

while initially showing a negative short-term effect, has a positive long-term relationship with growth, contingent upon stable macroeconomic conditions and effective policy implementation. Moreover, the study reveals that exchange rate volatility and inflation negatively affect economic growth, with exchange rate fluctuations undermining trade and investment, while inflation introduces instability, harming growth prospects. The error correction term indicates that the Nigerian economy is gradually adjusting towards long-run equilibrium after short-term shocks.

## 6.2 Recommendations

Based on these findings, the study recommended several policy measures to address the identified challenges and enhance Nigeria's growth potential. First, policymakers should prioritize structural reforms to improve infrastructure and strengthen institutions, ensuring that trade openness leads to sustained growth. Stabilizing the exchange rate and reducing inflation are crucial steps in mitigating their adverse effects on economic performance, requiring effective monetary and fiscal policies.

Additionally, the government should foster a more favourable environment for FDI, particularly in sectors outside oil, by offering incentives and ensuring macroeconomic stability. Long-term growth can only be achieved if Nigeria addresses these short-term economic challenges and ensures that trade liberalization and foreign investment are supported by sound policy frameworks. By focusing on these areas, Nigeria can realize the full potential of its trade and investment policies, driving sustainable economic growth. The study suggests that further study should focus more on inflation and exchange rate stability as the surest way of attracting foreign investment in Nigeria.

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