Trade Openness and Economic Growth Nexus in Nigeria Economy: Role of Institutional Quality

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Abstract

The connection between trade openness and economic development has garnered considerable scholarly attention, particularly regarding emerging economies. This study conducted an empirical investigation into the relationship between Trade Openness and Economic Growth in Nigeria from 1980 to 2023. The study utilized the Autoregressive Distributed Lag (ARDL) Estimation Technique, and the results indicated a long-run relationship between Trade Openness and Economic Growth. Therefore, the study suggests that those in positions of authority should prioritize the improvement of Nigeria's trade policies and investment environment. Additionally, it is advised that the government implement careful monetary policies aimed at managing inflation while still fostering investment and economic growth.

Keywords: Economic Growth; Institutional Quality; Trade Openness; Corruption

INTRODUCTION

The link between trade openness and economic growth has attracted much scholarly interest, particularly for developing countries (Raghutla, 2020). Nigeria, the leading economy in Africa, exemplifies the intricate relationship between trade liberalization policies and economic development. In recent decades, Nigeria has seen significant economic transformations, marked by a series of legislative changes aimed at facilitating trade liberalization. These alterations have been essential in influencing the nation's economic framework and have consequences for its overall growth trajectory (Ikechi, Chinedum, & Nwokoro, 2022).

The economic history of Nigeria is marked by a shift from a primarily agricultural economy to one that is more diversified. The introduction of trade liberalization policies, highlighted by the Structural Adjustment Program (SAP) in the 1980s, was a significant moment in Nigeria's economic growth. These programs attempted to eliminate trade obstacles, improve export-oriented businesses, and encourage foreign direct investment. Subsequent initiatives, such as the foundation of the Nigerian Export-Import Bank (NEXIM) by Act 38 of 1991 as an Export Credit Agency (ECA) and trade agreements with regional and international partners, further highlight the nation's determination to boosting commercial openness (Effiong & Okon, 2020).

In recent years, a growing body of empirical research has attempted to assess the impact of trade openness on Nigeria's economic development. Researchers have used various approaches,

including econometric models and time-series studies, to examine the causal link between trade liberalization attempts and key economic indicators. Some studies demonstrate a positive correlation, highlighting the potential benefits of increased trade openness in promoting economic growth, while others emphasize the need for comprehensive analyses that consider the specific sectors affected and the possible challenges associated with liberalization (Tanyi-Tang, 2021).

The global economic environment, marked by uncertainties like the COVID-19 epidemic and commodity price volatility, complicates the examination of the correlation between trade openness and economic development in Nigeria. It is crucial to examine the interplay between external shocks and internal variables within the Nigerian setting, affecting the overall impact of trade policy on the nation's economic performance (Odo, Agbo & Agbaji, 2020).

This research aims to enrich existing literature by providing a comprehensive and detailed analysis of the link between trade openness and economic growth in Nigeria, as well as the impact of institutional quality. This study seeks to provide substantial insights for academic discourse and policymakers on Nigeria's economic advancement by rigorously analyzing prevailing patterns, policy structures, and empirical evidence.

Numerous studies have examined the correlation between trade openness and economic growth (Kumari, Shabbir, Saleem, Yahya Khan, Abbasi, and Lopez, 2023; Banday, Muruga, and Maryam, 2021; Udeagha and Ngepah, 2021), with their findings differing potentially due to the data utilized, the scope addressed, and the estimation methodologies applied, among other factors. To the best of the researcher's knowledge, the function of institutional quality has not been explored, hence creating a significant gap. This research addresses this gap and expands the breadth beyond what has been previously examined in the literature.

The main purpose of this study is to examine the nexus between trade openness and economic growth. Specifically, the study sought to:

- i. Examine the nexus between trade openness and economic growth in Nigeria
- ii. Examine the impact of institutional quality on trade openness and economic growth in Nigeria

Based on the above specific purposes for this study, the following null hypotheses were generated:

- i. There is no significance relationship between Trade openness and economic growth in Nigeria
- ii. Institutional Quality has no significant impact on economic growth in Nigeria

This research is organized into four components to accomplish its primary purpose. Section one addressed the introduction, section two detailed the materials and methods, while sections three and four gave the findings and discussion, and policy implications, respectively.

Materials and Methods

This study adopts Multiple Regression via Autoregressive Distributed Lag (ARDL) Model to analyze the nexus relationship between Trade Openess and Economic growth in Nigeria. This estimation technique was adopted because it accommodates regression of variables with different order of integration or stationarity levels. In the process of analyzing the data to test the research hypothesis and draw valid conclusion, the model regresses the dependent variable (GDP growth rate) on the independent variables (Trade Openness, Foreign Direct Investment, Governance Indexes and Consumer Price Index).

This research used the subsequent model for generic estimation

$$GDPgr_{t} = \beta_{0} + \beta_{1}TRO_{t} + \beta_{2}FDI_{t} + \beta_{3}COC_{t} + \beta_{4}GEF_{t} + \beta_{5}CPI_{t} + \varepsilon_{t}$$
(*i*)

Where: GDPgr is Gross Domestic Product Growth Rate;

TRO is Trade Openness; FDI is Foreign Direct Investment; COC is Control of Corruption; GEF is Government Effectiveness and CPI is Consumer Price Index to proxy Inflation. $\beta_{0:}$ is the level of economic growth obtainable when the respective independent variables assumed zero,

 $\beta_1, \beta_2, \beta_3$ and β_4 are slopes coefficients of the respective impact of the explanatory variables on the response variable.

 ε : is random variables or error term to accommodate the influence of other determinants of that are incorporated in the model.

Results and Discussion

Unit Root Test

To ensure that the outcome of this estimation is free of spurious regression, the study perform stationarity test on all the variables employed using the popular approaches of Phillip Perron and Augmented Dickey Fuller, the result is presented below:

Table I Stational	ity Mesult		
Variable	ADF	PP	Order of
			Integration
GDPgr	-11.63398***	-9.743409***	I(0)
TRO	-3.376251**	-4.487362**	I(I)
FDI	-5.989082**	-6.090193**	I(I)
COC	-9.677952***	-9.788063***	I(0)
GEF	-5.022784***	-6.133895***	I(0)
СРІ	-3.458219**	-4.569320**	I(I)

 Table 1 Stationarity Result

*** Significant at 1%, ** significance at 5%.

Source: E-view Output

The unit root test is performed using constant and trend specifications for the respective series. Lag selection was conducted based on the default criteria established by the Akaike Information Criterion (AIC). The table displays the ADF and Phillips-Perron test statistics for both levels and first differences of the time series.

The results of the unit root tests conducted using the ADF and PP methods reveal a mixed order of integration, as certain variables exhibit stationarity at both levels and first differences concurrently. The stationarity of the general unit root process in the time series data demonstrates that all variables are significant at the 5 percent level for their initial differences, thereby rejecting the null hypothesis of a unit root in the data.

Long Run Test

The study employed the Autoregressive Distributed Lag Bound Test to assess the existence of long-run relationships among the variables in the model. This approach is deemed efficient due to

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the mixed stationarity results from the unit root test, which indicated varying orders of integration between levels and first differences.

 Table 1.2 ARDL Bound Test Result

ARDL Bounds Test				
Date: 09/28/24 Time: 20:54				
Sample: 1981 2022				
Included observations: 41				
Test Statistic	Value	K		
F-statistic	2.930558	5		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	2.26	3.25		
5%	2.52	3.69		
1%	3.41	4.58		

Source: E-view Output

The F statistic value of 2.930558 is within the bounds at different significance levels. Therefore, we do not reject the null hypothesis of no co-integration among the variables in the long run. Consequently, the ARDL Model will be utilized for a general estimation of this model.

Serial Correlation Test

Table 1.3: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.689177	Prob. F(2,24)	0.0883
Obs R ²	6.773664	Prob. Chi-Square(2)	0.0338

Source: E-view Output

The results demonstrate that the model exhibits no serial correlation problems, evidenced by a F statistic of 2.689177 and a probability value of 0.0883, which exceeds the 5% significance level.

Heterosckedasticity Test

The constancy of variance in linear regression, known as homoscedasticity, is a fundamental assumption. A violation of this assumption may lead to biassed estimates of the model parameters. This study analysed the model's heteroscedasticity through the Breusch-Pagan-Godfrey method, with the results presented below:

Table 1.4 Heterosckedasticity Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.854270	Prob. F(16,19)	0.0748
Obs*R-squared	22.23957	Prob. Chi-Square(16)	0.1423
Scaled explained SS	3.528313	Prob. Chi-Square(16)	0.8994

Source: E-view Output

The F statistic of 1.854270 and the probability value of 0.0748 suggest that the null hypothesis of no heteroscedasticity remains unchallenged, as the probability exceeds the 5% significance level. The model is subject to the assumption of homoscedasticity.

ARDL Estimation

The Autoregressive Distributed Lag Regression Technique effectively captures the relationship between variables with differing orders of integration, such as levels and first differences. Table 1.3 below presents the results of the ARDL regression conducted on the model.

Dependent Variable: GDPgr					
Method: ARDL					
Date: 09/28/24 Time: 20:40	Date: 09/28/24 Time: 20:40				
Sample (adjusted): 1981 202	22				
Included observations: 41 af	Included observations: 41 after adjustments				
Maximum dependent lags: 1	(Automatic sele	ection)			
Model selection method: Ak	aike info criterio	on (AIC)			
Dynamic regressors (0 lag, a	utomatic): TRO	FDI COC GEF C	PI		
Fixed regressors: C					
White heteroskedasticity-consistent standard errors & covariance					
Variable	Coefficient	Std. Error	t-Statistic	Prob.*	
TRO	0.269865	0.121001	2.230275	0.0029	
FDI	0.085740	0.127371	0.673155	0.0057	
COC	1.525077	1.310475	1.163759	0.0231	
GEF	0.405842	1.786874	0.227124	0.8218	
CPI	-1.015643	0.319898	-3.174892	0.0033	
С	8.272690	7.097566	1.165567	0.2524	
R-squared	0.890092	Mean dependent var 3.14992		3.149929	
Adjusted R-squared	0.887609	S.D. dependent var 5.4673		5.467388	
S.E. of regression	46.14652	Akaike info criterion6.0574		6.057499	
Sum squared resid	681.4405	Schwarz criterion 6.35608		6.356087	
Log likelihood	-111.1212	Hannan-Quinn criter. 6.164630		6.164630	
F-statistic	35.56921	Durbin-Watson stat 1.574147		1.574147	
Prob(F-statistic)	0.008209				
*Note: p-values and any subsequent tests do not account for model selection					

Table 1.5 ARDL Regression Outcomes

Source: E-view Output

The result demonstrates the long-run equations of the model. The results for Trade Openness (TRO) demonstrate a significant positive impact on Economic Growth. A 1% increase in trade openness correlates with a 0.27% enhancement in economic growth. The results are consistent with prior expectations and are statistically significant at the 5% level, as the p-value is less than 0.005.

Foreign Direct Investment (FDI) has a significant and positive impact on Economic Growth. A 1% increase in Foreign Direct Investment (FDI) leads to a 0.09% increase in Economic Growth in

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Nigeria. This outcome is consistent with previous expectations and highlights the importance of foreign direct investment in attaining sustainable economic development. Foreign Direct Investment (FDI) is a vital strategy for promoting long-term economic development in Nigeria.

The Control of Corruption (COC) exhibits a significant positive correlation with Economic Growth in the long term. The result is consistent with previous expectations. A 1 percentage point increase in Control of Corruption (COC) correlates with a 1.52% rise in Economic Growth. It is clear that the Control of Corruption significantly influences long-term Economic Growth.

The effectiveness of government (GEF) demonstrates a direct correlation with economic growth in Nigeria. The findings are consistent with previous expectations; however, they do not achieve significance at the 5% level. A 1% increase in Government Effectiveness is associated with an approximate 0.41% increase in Economic Growth. However, this result is not significant at the 5% level, as the p-value of 0.8218 is greater than 0.05. Thus, it is clear that Government Effectiveness is not a significant factor influencing Economic Growth. This outcome is expected, considering the lack of parameters available for the public to assess government effectiveness, other than macroeconomic variables.

The Consumer Price Index significantly influences economic growth in Nigeria. A 1% increase in the Consumer Price Index (CPI) is associated with an approximate 1.02% decrease in Economic Growth, indicating a significant long-term relationship. Price volatility significantly influences economic growth in Nigeria.

The R² result indicates that explanatory factors explained 89% of the variance in Economic Growth over the long term. This is corroborated by a substantial modified R² value of 88%. The Durbin-Watson value of 1.574147 resides in the rejection zone, indicating a lack of serial correlation among the regressors. The Akaike Information Criterion, Schwarz Criterion, and Hannan-Quinn Criterion values of 6.057499, 6.356087, and 6.164630, respectively, suggest that the model selection is satisfactory.

Conclusion and Policy Implications

The empirical findings from the ARDL estimation approach highlight the substantial impact of institutional quality on the relationship between trade openness and economic development in Nigeria. The significant and positive impact of trade openness, foreign direct investment (FDI), and corruption control on economic growth demonstrates that an open trade policy, increased foreign investment, and effective anti-corruption measures facilitate Nigeria's economic advancement. These results correspond with economic theories that highlight the advantages of globalization, capital inflows, and government efficacy in improving productive capacity and promoting sustained growth. The little correlation between government effectiveness and economic expansion suggests that although governance frameworks may be present, their execution and efficacy in fostering economic advancement are deficient. This conclusion indicates a disparity between policy development and implementation, constraining the direct impact of governmental efficacy on total output.

The unfavorable and significant link between the consumer price index (CPI) and economic growth underscores the adverse effects of inflation on economic performance. Chronic inflation reduces purchasing power, increases production costs, and causes macroeconomic instability, ultimately obstructing development opportunities. This result highlights the necessity of maintaining price stability through judicious monetary and fiscal policy. The findings highlight

the necessity for comprehensive institutional reforms, effective governance frameworks, and inflation control measures to optimize the benefits of trade liberalization and foreign investment for enduring economic growth in Nigeria.

In light of the significant and advantageous impacts of trade openness and foreign direct investment on economic advancement, it is imperative for authorities to focus on enhancing Nigeria's trade policies and investment climate. This encompasses the reduction of trade barriers, enhancement of infrastructure, and the cultivation of a stable regulatory framework that promotes both foreign and domestic investments. Policies designed to enhance the caliber of institutions, especially in collaborative contexts.

The negative impact of inflation on economic development requires stringent macroeconomic policies to ensure price stability. The government must implement prudent monetary policies that regulate inflation without obstructing investment and economic development. This may entail a combination of interest rate modifications, improved coordination of monetary policy, and strengthened fiscal discipline to mitigate excessive public expenditure. Structural reforms aimed at enhancing productivity, especially in the agricultural and industrial sectors, may alleviate inflationary pressures by securing a consistent supply of goods and services. Addressing these key policy areas will enable Nigeria to establish a more resilient and growth-oriented economy, thereby maximizing the significance of trade openness and institutional quality in its development trajectory.

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