THE ROLE OF GLOBAL TRADE IN SHAPING NIGERIA'S ECONOMIC GROWTH TRAJECTORIES

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Abstract

Due to advancements in the technology that facilitates commerce, global trade has over time changed the economic progress of several nations. This study analyses the role of international trade in shaping Nigeria's economic growth path from 1990 to 2022. The analysis utilized the Ordinary Least Squares (OLS) method, incorporating exchange rate, imports of goods and services, exports of goods and services, and trade openness as determinants of international trade. The research employed secondary data sourced from notable institutions, including the World Bank, IMF, and CBN. The results of the analyses reveal that international trade and exchange rate have negative effect on economic growth in Nigeria. In contrast, exports and imports of goods and services exhibit positive effects on economic growth in the country. While the estimated relationships between international trade, imports and exports and economic growth were found to be significant, the estimated relationship between exchange rate and economic growth was found not to be significant. From the findings of the study, it can be deduced that exports and imports of goods and services positively affect economic growth in Nigeria, while international trade in the country has not been positioned in a manner that it contributes meaningfully to economic growth. The study recommends that government should invest in education and research, as means to stimulate innovation, foster the development of new products, and enhance competitiveness in international markets, while revitalizing and modernizing the country's agricultural sector.

Keywords: International trade, Economic growth, Exchange rate, Import and export, Trade openness

INTRODUCTION

Nigeria's primary economic goal is to restructure its production and consumption systems, diversify its economy beyond the overwhelming dependence on oil, and pursue growth that is sustainable, inclusive, and devoid of inflationary pressures. While Gross Domestic Product (GDP) growth remains a vital indicator of economic progress, true development requires a comprehensive transformation of the nation's economic sectors. Like many other developing countries, Nigeria's economic growth depends on the availability of capital goods, labour, technological innovation, and the development of human capital. However, the country continues to struggle with persistent low levels of domestic saving and investment—two critical growth factors highlighted in classical economic growth models such as the Harrod-Domar model.

More than six decades after gaining independence, Nigeria's economic structure remains dominated by primary production sectors such as agriculture, mining, crude oil, and natural gas.

These sectors collectively contribute a significant share of the nation's GDP, government revenue, foreign exchange earnings, and employment opportunities. In contrast, the manufacturing and construction sectors contribute only marginally, even though the services sector has recorded steady growth. Over the years, the pattern of economic growth has shifted from being primarily agricultural in the 1960s to becoming heavily dependent on oil since the 1970s. This dependency has made the economy highly vulnerable to fluctuations in global oil prices. Despite its wealth of natural resources, Nigeria's overall economic performance still trails behind that of other resource-rich nations such as Malaysia, China, and Indonesia (Nwogwugwu & Umeghalu, 2021).

In the past, international trade played a central role in driving Nigeria's economic growth. However, trade activities have become overwhelmingly concentrated on crude oil exports, while agricultural exports have significantly declined since the discovery of oil. The nation's imports mainly consist of machinery, capital goods, and advanced technologies, reflecting a structural dependence on foreign production capacity. Although trade continues to generate substantial revenue, its potential is hindered by the narrowness of the export base, which is dominated by low-value commodities, as well as by high trade costs, tariff and non-tariff barriers, and limited access to international markets. Unlike other oil-producing countries that have successfully diversified into technology-driven and value-added industries, Nigeria remains largely confined to exporting raw petroleum, leaving its economy exposed to external shocks and global price instability. The developed countries import primary and intermediate goods from developing countries to augment domestically extracted raw materials; these raw materials are then processed and exported back to the developing countries (Obisike et al., 2020: Umeghalu, Machi, & Onwuka, 2025).

Nigeria's trade performance is further constrained by deep-rooted structural challenges, including excessive dependence on crude oil exports, a fragile export base centered on low-value products, high trade costs, and limited access to international markets. The economy's heavy reliance on minimally processed petroleum products has made it highly vulnerable to global price volatility, thereby weakening efforts to achieve sustainable and diversified economic growth.

From a broad perspective, effort is made in this study to determine the structural effect of international trade on economic growth in Nigeria. It specifically seeks to evaluate the effect of international trade on economic growth in Nigeria, while also examining the effect of exchange rate and trade openness on economic growth in the country.

Conceptual Issues

International Trade

International trade according to Adewuyi (2000), is simply the transfer of capital, goods, and services between countries which mainly consist of the transactions of exports and imports. Trade related to exports is the provision of goods and services to other countries, while import trade is the purchase of goods and services from foreign countries. If the trade deals with physical goods moving through imports and exports, it is classified as visible trade. Conversely, the movement of

non-physical goods and services across borders is known as invisible trade.

In recent decades, international trade has had diverse impacts on developing nations. While it has provided opportunities for economic growth through exports, these countries often struggle with issues such as overreliance on primary commodities, vulnerability to global market fluctuations, and persistent trade deficits. Furthermore, many developing economies face challenges associated with unequal power dynamics in the global trading system, which limit their ability to participate fairly and achieve sustainable economic progress (Nwogwugwu & Umeghalu, 2021).

Economic Growth

Economic growth is the process that increases the total amount of goods and services produced by the economy during a certain time period compared to a previous period. According to Todaro and Smith (2014), there are three essential factors that contribute to economic growth: (a) capital accumulation, which includes investments in new lands, physical assets, and human resources through health, education, and skill development sectors. This is the process in which a part of the current income is saved and reinvested to increase the productivity and income levels of the future.

In modern times, economic growth has emerged as the central objective of macroeconomic policies across the world. Developed nations with high income levels and consistent GDP growth rates are now primarily focused on understanding how globalization influences future trends in economic expansion. They also place strong emphasis on improving living standards and overall quality of life, which form the material foundation for sustainable development. These efforts aim to ensure the equitable participation of all nations, particularly developing ones in international economic activities alongside the more advanced economies (Popkova & Elena, 2014; Umeghalu, Machi, & Onwuka, 2025).

REVIEW OF RELATED LITERATURE

The theory of comparative cost advantage and the new trade theory played important role in the trade aspect of the debate made in this study. The theory of comparative cost advantage of trade was essentially formulated by the British economist David Ricardo who published his influential book “The Principles of Political Economy and Taxation” in 1817. The theory has since turned into one of the foundations of economic practice and is a key reason for proponents of free trade. In order to really grasp the concept of comparative advantage, it is necessary to separate it from absolute advantage. Before Ricardo's contribution, the absolute advantage was the main perspective on trade, the idea that countries ought to concentrate on the production of goods for which they are more efficient than others. But Ricardo's theory of comparative advantage offered another perspective, arguing that a country, even if it was less efficient in the production of all goods, could still gain from trade by concentrating on the goods for which it has a comparative advantage, that is, for the goods with the lowest opportunity cost of production (Murdock, 2020).

The new trade theory represents a transformative framework that emerged in the late twentieth century, redefining and expanding the traditional boundaries of international trade theories. Prima-

rily developed by economist Paul Krugman, this theory seeks to explain global trade patterns by incorporating concepts such as economies of scale, imperfect competition, and product differentiation. Traditional trade theories such as the Ricardian and Heckscher-Ohlin models, have long dominated discussions of international trade. These earlier models emphasize that nations specialize in producing goods based on comparative advantage derived from differences in resource endowments such as labor, capital, and natural resources. While insightful, these models fail to fully account for several real-world factors that shape modern global commerce.

A major contribution of the new trade theory is its recognition of economies of scale, the cost advantage that arises when production becomes more efficient as output increases. In other words, as firms produce on a larger scale, the average cost per unit falls. This concept challenges the classical assumption that all firms operate with similar efficiency, highlighting instead that larger firms often possess competitive advantages in industries where scale matters. For instance, the aircraft manufacturing industry provides a clear illustration of economies of scale. Producing an aircraft demands enormous fixed investments in research, development, and production infrastructure. Once these initial costs are covered, the cost of producing additional units decreases significantly. Consequently, a few large companies, such as Boeing and Airbus, dominate the market, making it difficult for smaller firms to compete effectively. Thus, economies of scale help explain the concentration of production within particular industries and among specific firms.

Another critical aspect of the New Trade Theory is its acknowledgment of imperfect competition. Unlike traditional trade models that assume perfect competition, this theory recognizes that many industries operate under monopolistic or oligopolistic conditions. In such markets, firms hold varying degrees of market power, allowing them to set prices, control output levels, and engage in strategic behavior to maintain or enhance their market positions.

Product differentiation also plays a central role in this theory. Firms often strive to distinguish their products through innovation, branding, design, technology, or other unique features. This differentiation enables companies to charge higher prices and foster brand loyalty among consumers. Additionally, the theory emphasizes that consumers value product variety, encouraging firms to compete by offering diverse product choices within the same industry.

Summarily, the new trade theory deepens our understanding of global trade by suggesting that countries specialize in producing particular goods not only due to differences in resource endowments but also as a result of factors such as economies of scale, imperfect competition, and product differentiation.

The conversations that border on growth as held in the study hover around the augmented Solow growth model and the neoclassical growth theory. The augmented Solow growth model extends the classical Solow growth model, a foundational concept in neoclassical economics formulated by Robert Solow in the 1950s. While the original model emphasized the relationships between capital accumulation, labour input, and technological progress, the augmented version integrates

additional components to provide a more comprehensive understanding of economic growth. In particular, it highlights the significance of human capital and technological innovation in determining long-term economic performance. Human capital, which includes the skills, education, and expertise of the labor force, is regarded as a vital production input alongside physical capital. The model underscores that investment in education and workforce development enhances productivity and contributes to higher economic output (Umeghalu, Udo & Metu, 2025).

Technological progress constitutes another central element of the augmented Solow model. Unlike the traditional framework that treats technology as an external factor, the augmented model incorporates ideas from endogenous growth theory, which views technological advancement as being influenced by internal economic factors such as research and development (R&D), innovation, and human capital formation. Moreover, the model introduces the concept of Total Factor Productivity (TFP), a measure that reflects the overall efficiency with which inputs like labor and capital are transformed into outputs. TFP captures the combined effects of technological improvements, better management practices, and other productivity-enhancing elements.

Generally, the augmented Solow growth model offers a more detailed and realistic perspective on economic growth by accounting for a broader set of determinants beyond capital, labor, and technology. This makes it a more robust analytical framework for explaining the variations in growth rates observed across different countries and regions.

The neoclassical growth theory stands out as one of the most significant economic paradigms that was developed as a result of the shortcomings of the original Solow growth model. This theory was a joint effort of eminent economists, namely, Robert M. Solow, Paul Romer, and Robert E. Lucas Jr., along with others, and it has considerably influenced the comprehension of long-term economic growth. Robert M. Solow's influential work "A Contribution to the Theory of Economic Growth" (1956), laid the foundation for this theory. In his study, Solow introduced the concept of exogenous technological progress as a vital driver of economic growth. He argued that continuous technological advancements—largely external to the economic system—play a key role in maintaining long-run growth.

Building upon Solow's groundwork, Paul Romer expanded the theory by incorporating the idea of endogenous technological progress. In his landmark paper "Endogenous Technological Change", Romer proposed that investments in human capital, research and development, and innovation could be influenced by deliberate policy decisions. His work emphasized that knowledge creation, learning, and innovation are essential mechanisms that stimulate sustained economic growth.

Together, these contributions highlight that long-term economic progress depends not only on the accumulation of physical capital but also on the dynamic processes of innovation, education, and technological advancement that occur within an economy itself (Umeghalu, Udo & Metu, 2025).

A couple of empirical works were reviewed out of the numerous related works in the literature. Salusi et al. (2023) conducted research to study the interaction between international trade and Nigeria's economic growth during the years 2000Q1 to 2020Q4. The Autoregressive Distributed Lag (ARDL) model and the Error Correction Model (ECM) were used for estimating the relationships among the variables in the short run as well as in the long run. It was found that the demand for exports has a very large and favorable influence on the growth of the economy in both periods, whereas the demand for imports and the exchange rate fluctuations have unfavorable influences in both periods. The authors recommended that the Nigerian government intensify efforts to diversify and expand its export base to strengthen external competitiveness. Such expansion would increase aggregate external demand and foreign exchange earnings, helping to mitigate the adverse effects of exchange rate fluctuations.

Makanjuola et al. (2022) conducted research to assess the impact of exports, imports, exchange rates, and inflation on Nigeria's economic development over the period from 1981 to 2020. With the support of the ARDL bounds testing method, the researchers utilized data collected from the World Development Indicators (WDI) and the Central Bank of Nigeria (CBN) Statistical Bulletin, eventually revealing that exports were one of the main drivers of growth along with inflation and exchange rate fluctuations, which posed the opposite effect of being counterproductive. The study also pointed to a positive interaction between trade and economic growth, thus reiterating the call for policies that support exports and stronger involvement in the global market.

Azeez et al. (2014) conducted a study on the connection between international trade and Nigeria's economic growth in the 21st century, using annual time series data from 2000 to 2012. The Ordinary Least Squares (OLS) estimation technique was employed in the study, and the outcome was that international trade had a significant and positive effect on economic growth. The various components of trade, such as imports, exports, and also trade openness, all significantly influenced the Nigerian economy. Consequently, the study suggested Nigeria to curtail the heavy reliance on oil exports and to concentrate more on diversifying its export base in order to achieve revenue that is not only higher but also more stable.

Ugwuegbe et al. (2013) carried out a study to determine the effect of oil and non-oil exports on the economic growth of Nigeria employing annual time series data from 1986 to 2011 which was extracted from the CBN Statistical Bulletin. Their results indicated that the economic growth, measured by GDP, was positively and significantly influenced by oil and non-oil exports, respectively. Moreover, foreign reserves were also reported to have a positive and significant relationship with economic growth. The study recommended that the government restructure the oil sector to increase its contribution to national development and implement targeted policies to strengthen the non-oil sector, thereby enhancing its role in overall economic expansion. The authors further suggested policies aimed at increasing foreign reserves as a means of promoting sustainable economic growth in Nigeria.

RESEARCH METHOD

Theoretical Framework

This research is anchored in the new trade theory, which was developed by economist Paul Krugman in 1980. The selection of this theoretical foundation is based on its strength in explaining international trade through key concepts such as economies of scale, network effects, and first-mover advantage. Prior to the development of the New Trade Theory, Adam Smith had laid the groundwork for international trade theory by introducing the principle of absolute advantage. Smith argued that countries engage in trade primarily because of differences in their natural resource endowments. According to his view, nations that have an absolute advantage in producing certain goods should concentrate on producing those goods and export them to countries that lack such advantages, while importing goods that they themselves cannot produce efficiently.

Smith's argument further emphasized that such specialization and trade lead to reduced production costs, enhanced efficiency, and greater competitiveness in the global market. Moreover, trade openness among nations contributes positively to the Gross Domestic Product (GDP) by expanding market access for domestic products and creating additional opportunities for foreign exchange earnings. Therefore, this theory provides a suitable and relevant foundation for examining the relationship between international trade and economic growth, particularly in developing economies like Nigeria, where the integration into global trade networks plays a significant role in shaping economic performance and development outcomes.

Model Specification

The current study applied the ARDL approach in order to evaluate the effect of government capital expenditure on Nigerian economic growth from 1990 to 2022. The choice of the ARDL procedure was due to its great flexibility in dealing with variables of different orders of integration—either I(0) or I(1)—and its suitability for analysing both the short-run and the long-run relationships between variables.

To achieve the study's objectives, an econometric model was formulated in alignment with the theoretical framework established in this research. The model specification draws upon the methodology used by Adeleye et al. (2015), who examined the relationship between international trade and economic growth in Nigeria. Consistent with their approach, the functional form of the model for this study is specified as follows:

$$GDP = f(TIM, TEX, BOP) \quad (1)$$

Where GDP = Gross Domestic Product; TIM = Total Imports; TEX = Total Exports; BOP = Balance of Payment.

The econometric form of the model is rewritten thus:

$$RGDP = \beta_0 + \beta_1 TRO + \beta_2 EXC + \beta_3 EXPG + \beta_4 IMPG \quad (2)$$

Where RGDP = Real Gross domestic product, TRO = International trade, EXC = Exchange rate, EXPG = Export of goods and services, IMPG = Import of goods and services, μ - Random disturbance/error term, β_0 – Intercept/constant term, β_1-β_4 = the coefficients of the independent variables.

Estimation Techniques and Procedures

Descriptive statistics was used to analyze the dataset used in the study, emphasizing on key statistical characteristics such as measures of central tendency, variability, skewness, and kurtosis for each of the variables in the model. In order to assure the reliability and validity of the time series data utilized in this research, the Augmented Dickey-Fuller (ADF) unit root test will be carried out to establish that the data of the study are stationary. Stationarity testing is highly important, as it aids in recognizing if the statistical properties of the variables, like mean and variance, are constant over time. On the one hand, stationary data are of utmost importance for obtaining precise and significant regression results; on the other hand, non-stationary data can lead to false or spurious regression results.

Furthermore, the Engle-Granger co-integration test was used to ascertain the existence of a long-run equilibrium relationship between the dependent and independent variables. This procedure is crucial for determining if the variables move together over time even with short-run variations, thereby revealing more about the economic interactions that underlie the model.

The Ordinary Least Squares (OLS) estimation technique was adopted in the analytical process of the study. The OLS method was chosen due to its computational simplicity and its ability to deliver reliable results even when data availability is moderate. It is widely recognized for its strong statistical properties, as it produces estimators that are unbiased, consistent, and efficient under the classical linear regression assumptions. Furthermore, its simple nature allows for easy interpretation of coefficients, which enhances the clarity and understanding of the empirical findings (Koutsoyiannis, 1977).

The Error Correction Model (ECM) is used to estimate the short-run dynamics of the model. The model does not only measure the correction of deviations from the long-run equilibrium but also shows the speed of adjustment of the dependent variable to the changes in the independent variables. Thus, the use of the ECM allows the study to comprehensively examine the short-run volatility and the long-run connections between the variables in the model.

Granger causality test was performed in order to determine the causal relationship between the dependent and independent variables. The predictive capability of one variable's movements over another one is established through this test.

DATA ANALYSES, PRESENTATION AND DISCUSSION OF RESULTS

Data Presentation and Analysis

The key variables analyzed in this study include International Trade, Gross Domestic Product (GDP), Exports of Goods and Services, Imports of Goods and Services, and the Exchange Rate. These variables were examined using the Ordinary Least Squares (OLS) estimation technique, which was selected for its reliability and interpretive simplicity.

These analyses form the empirical foundation for understanding and interpreting the relationships among the variables, including trade openness, exports, imports, exchange rate, and economic growth, providing insights into how international trade dynamics influence Nigeria's overall economic performance. Table1 below presents the summary of the descriptive statistics.

Table 1: Summary of the Descriptive Statistics Results

	GDP	EXCHANGE_RATE	EXPGS	IMPGS	TRADE OPENNESS
Mean	2.40E+11	137.8190	21.11458	3.49E+10	36.16016
Median	2.07E+11	128.9370	21.13515	2.74E+10	36.54016
Maximum	5.74E+11	401.1520	36.02327	9.40E+10	53.27796
Minimum	2.78E+10	8.038285	8.118312	3.22E+09	16.35219
Std. Dev.	1.85E+11	106.9853	6.929245	2.75E+10	9.393959
Skewness	0.258460	0.792016	-0.020561	0.512502	-0.157258
Kurtosis	1.464507	2.960799	2.443857	2.040900	2.465263
Jarque- Bera	3.499927	3.347592	0.414648	2.627343	0.513151
Probability	0.173780	0.187534	0.812756	0.268831	0.773696
Sum	7.66E+12	4410.210	675.6666	1.12E+12	1157.125
Sum sq. Dev	1.06E+24	354821.2	1488.448	2.35E+22	2735.641
Observations	32	32	32	32	32

Source: Researchers' computation using E-Views 10.0 (2025)

From Table 1, it can be seen that the Exchange Rate follows a mesokurtic distribution, as indicated by a kurtosis value of 2.96, which is approximately equal to 3. This means that the distribution of the exchange rate closely mirrors the shape of a normal distribution. On the other hand, the GDP, EXPGS, IMPGS, and International Trade exhibit negative kurtosis values, suggesting that these variables have platykurtic distributions. A platykurtic distribution is generally flatter than a normal distribution, indicating fewer extreme observations or outliers. This implies that the data points for these variables are more concentrated around their mean values, leading to less variability in the tails of their distributions.

The Jarque-Bera (J-B) test is used to assess whether the skewness and kurtosis of a dataset align with those of a normal distribution. The J-B statistic is always positive, and when its value deviates substantially from zero, it indicates that the data differ from normality. However, based on the findings in Table 1, the probability values of the J-B test statistics for all the variables are statistically significant. This result suggests that the distributions of these variables can be regarded as approximately normal, meaning that they reasonably conform to the assumptions of normality required for further econometric analysis. Below is the summary of the ADF unit root test:

Table 2: Summary of the Augmented Dickey Fuller (ADF) Unit Root Tests Result

Variable	ADF Statistic	Critical Values	Order of Integration	Remark
GDP	-4.393265	-2.960411	1(1)	Stationary
Exchange rate	-3.903894	-2.960411	1(1)	Stationary
EXPGS	-7.140660	-2.960411	1(1)	Stationary
IMPGS	-5.805403	-2.963972	1(1)	Stationary
Trade Openness	-5.422172	-2.967767	1(1)	Stationary

Source: Researchers' computation using E-Views 10.0 (2025)

The above unit root test results in Table 2 indicate that all variables involved in the research are stationary after first differencing. According to the decision rule, the non-stationarity hypothesis is declined when the ADF test statistic surpasses the critical value at the chosen level of significance (in absolute value). In this case, the ADF statistics of all variables being greater than the respective critical values reaffirms that the data series were stationary after being differenced once.

Since the stationarity of all the variables has been confirmed at the first difference level, the subsequent step is to use the Johansen co-integration test, which is suitable under these circumstances. The co-integration test indicates the existence of a long-run equilibrium relationship among the model variables, which means that they will move in the same direction during the long run even if they experience short-term fluctuations.

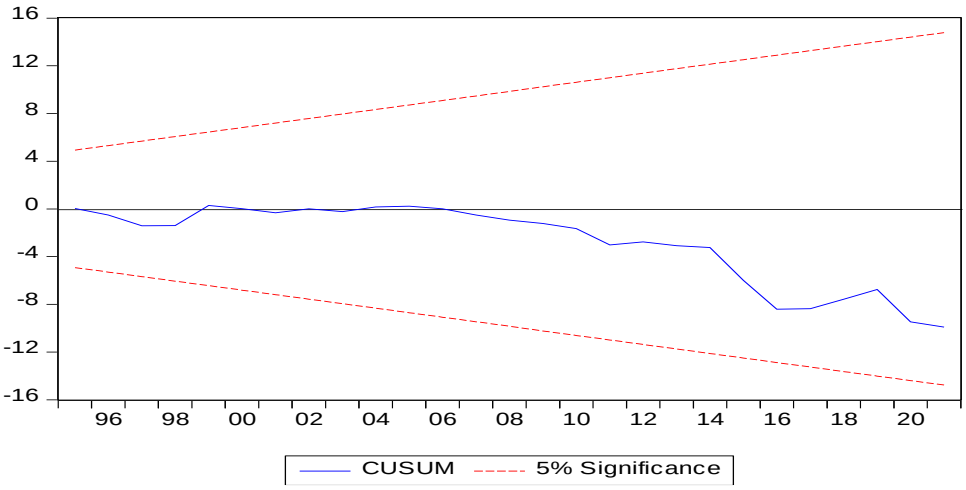
Table 3: Cointegration Test Result

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.611668	79.52799	69.81889	0.0069
At most 1 *	0.551852	51.15111	47.85613	0.0237
At most 2	0.418258	27.07219	29.79707	0.0999
At most 3	0.179361	10.82035	15.49471	0.2228
At most 4 *	0.150415	4.890205	3.841466	0.0270

Source: Researchers' computation using E-Views 10.0 (2025)

The results obtained in Table 3 are based on the trace and maximum eigenvalue statistics, revealing that at the 0.05 level of significance, there is at least one co-integrating equation. This conclusion necessitates the rejection of the null hypothesis of no co-integration among the variables. Hence, it is asserted that a long-run equilibrium relationship has been established among the variables. This result implies that these variables move together over time and maintain a stable long-term relationship within the Nigerian economy.

The Cumulative Sum of Recursive Residuals (CUSUM) test was used to assess the stability of the model. This method plots the CUSUM of residuals along with ±2 standard error bands around zero. When the plotted values stay inside these critical bands, it means that the model's estimated parameters remain stable during the entire sample period. On the other hand, if any part of the plot goes outside the critical limits, it means parameter instability, indicating that the model's coefficients might not be stable over time. The stability test results are presented in Figure 1.



Source: Researchers' compilation (2025)

Fig 1: Plot of Cumulative Sum Recursive Residuals (CUSUM)

At the 5% level of significance, the CUSUM plots show that all residuals remain within the critical boundaries, indicating that the model's parameters are stable and reliable throughout the study period. This result confirms that the model performs consistently over time, making it suitable for policy analysis and decision-making. The stability demonstrated by the model reinforces confidence in its estimates and their applicability to understanding economic dynamics.

Model Estimation and Evaluation

In this section, the study employs the OLS estimation technique on the specified model to determine the regression coefficients of the parameters by minimizing the sum of squared residuals. This approach ensures that the resulting estimates are both efficient and unbiased, providing reliable insights into the effects of the explanatory variables. The concise summary of the key findings is displayed in Table 4.

Table 4: Summary of the Ordinary Least Squares Estimates

Variable	Coefficient	t-statistics	Prob.
C	7.728138	15.28992	0.0000
EXCH	-0.031032	-1.307719	0.2020
EXPGS	0.052969	10.74145	0.0000
IMPGS	1.000473	39.14661	0.0000
TRO	-1.912194	-15.68578	0.0000
R-squared	0.995373	Durbin-Watson stat	1.634890
Adjusted R-squared	0.994688	F-statistic	1452.217
SE of regression	0.073706	Prob(F-statistic)	0.000000

Source: Researchers' computation using E-Views 10.0 (2025)

Since the model's variables demonstrate stationarity at both levels and first differences, it becomes necessary to use the ECM to estimate the short-run dynamics of the model. The ECM's error term coefficient shows how quickly the system will revert to the long-run equilibrium after a shock or a deviation. The error correcting term (ECT), which reflects the short-run adjustments series

necessary for the establishment of equilibrium, accounts for the gradual corrections of the long-run equilibrium deviations over time. The results of the ECM estimation are summarized in Table 5, providing insights into both the magnitude and direction of these adjustments within the model.

Table 5: Summary of Short Run Analysis Model

Variable	Coefficient	Std. Error	t-Statistic	Prob. Val
Exchange rate	-0.007338	0.118757	-0.061792	0.9512
IMPGS	0.056423	0.155225	0.363490	0.7193
International Trade	-0.026090	0.182221	-0.143179	0.8873
ECT(-1)	-1.074635	0.378670	-2.837919	0.0089
R^2	0.293177		Prob(Fstatistic)	0.102534
Adjusted R^2	0.151812			
F-statistic	2.073907			

Source: Researchers' computation using E-Views 10.0 (2025)

From Table 5, the ECM coefficient stands at -1.074635, which means roughly 107.5% of the short-run and long run equilibrium deviation is corrected within one year. This implies that any imbalance in the system is not only fully adjusted within the year but slightly overshoots before stabilizing at the long-run equilibrium. In line with the decision rule, if the p-value is less than 0.05, the null hypothesis is rejected and conclude that there are short-run causal effects among the variables.

Table 6: Summary of Granger Causality Analysis

Null Hypothesis:	F-statistic	Prob.	Remark
EXCHANGE_RATE does not Granger Cause GDP	4.97475	0.0148	Accept
EXPGS does not Granger Cause GDP	0.40223	0.6729	Reject
IMPGS does not Granger Cause GDP	0.15151	0.8602	Reject
International_Trade does not Granger Cause GDP	0.26881	0.7665	Reject

Source: Researchers' computation using E-Views 10.0 (2025)

From the Table 6, it can be observed that EXPGS, IMPGS, and TRO all Granger cause GDP in Nigeria. This indicates that these variables have predictive power over GDP; it also means that changes in exports, imports, and trade openness significantly influence the country's economic growth. On the other hand, the Exchange Rate, as shown in the same table, does not display any evidence of causal relationship with GDP, suggesting that changes in the exchange rate do not have a direct causal effect on Nigeria's economic output during the study period.

The Variance Inflation Factor (VIF) is a crucial statistical measure that helps identify the presence and degree of multicollinearity between the independent variables in a regression model. Multicollinearity occurs when two or more independent variables are closely related, thereby affecting the precision of the coefficient estimates and the interpretability of the model. The VIF values assigned to the variables can be found in Table 7, which provides a summary of the degree of correlation for each independent variable with others in the model. Lower VIF values indicate weak correlations, whereas higher values suggest stronger interdependence among variables,

potentially signaling concerns of multicollinearity that may affect the robustness of the regression results.

Table 7: Summary of Multicollinearity Test

Variable	VIF Centered	Remark
TRO	6.958566	Moderate
EXCH	3.970587	Low
IMPGS	3.897602	Low
EXPGS	6.662544	Moderate

Source: Researchers' computation using E-Views 10.0 (2025)

Based on the table above, the Variance Inflation Factor (VIF) results indicate that most of the variables in the model have values below 10, suggesting that multicollinearity is not a serious concern within the regression analysis. However, a moderate level of multicollinearity is observed for GDP and GCF, both of which have VIF values exceeding 5. Generally, it is recommended that researchers pay careful attention to potential multicollinearity issues when VIF values exceed 5 or 10, depending on the context of the analysis and the sensitivity of the model.

The calculated F-statistic is 0.534875 has a related probability value P(4,27) = 0.7112. Given that the value of probability is greater than the 0.05 level, the null hypothesis is accepted. This means that the model's residuals exhibit no heteroscedasticity. Therefore, the data can be regarded as homoscedastic, which means the variance of the residuals is constant, and the model's estimates are both reliable and efficient for the purpose of prediction.

Normality test evaluates the distribution of residuals using measures of skewness and kurtosis, with the Jarque-Bera (JB) statistic serving as the primary indicator. The result of the analysis carried out reveals that the computed JB statistic is 1.682411 and the corresponding probability (p-value) is 0.125540. The JB statistic quantifies the degree of deviations of the data from normal distribution, where higher values denote more significant variations. In this instance, the p-value of 0.125540, which is above the 0.05 significance level, implies that there is not enough evidence to reject the null hypothesis. So it can be concluded that the data shows a normal distribution.

In the analysis, a two-tailed test was conducted at the 5% level of significance. The results of the t-test are presented in Table 8. In this procedure, the calculated t-statistic for each coefficient is compared with the tabulated (critical) t-value at t $\alpha/2 = t_{0.025}$ for a two-tailed test.

Table 8: Summary of t-Statistic

Variables	T-statistics	Critical Value (5%)	Prob. Value	Assessment
C	15.28992	2.048	0.0000	Statistically Significant
EXCH	1.307719	2.048	0.2020	Not Statistically Significant
EXPGS	10.74145	2.048	0.0000	Statistically Significant
IMPGS	39.14661	2.048	0.0000	Statistically Significant
TRO	-15.68578	2.048	0.0000	Statistically Significant

Source: Researchers' computation using E-Views 10.0 (2025)

From Table 8, it can be deduced that all our variables are statistically significant with the exception

of Exchange rate.

Summary of Findings

The study made effort to evaluate the impact of international trade in the shaping of Nigeria's economic growth trends, examining the effect of international trade, exchange rate, and imports and exports of goods and services, on economic growth. The study which spans the period 1990 to 2022, analyzed secondary data that were sourced from World Bank, UNDP, ILO, IMF, and the CBN in its bid to achieve desired purpose. To ensure the reliability and robustness of the expected results, the ADF stationarity test was carried out on the times series data employed in the study, while the Engle-Granger co-integration test was used to examine the long-run relationships between the dependent and independent variables. The analyses and were carried out using the E-Views 10.0 software, while the OLS technique was employed to estimate the regression parameters. These estimates were further subjected to a range of economic, statistical, and econometric tests to validate their outcome.

The results of the analyses reveal that international trade and exchange rate have negative effects on economic growth in Nigeria. In contrast, exports and imports of goods and services exhibit a positive and significant effect on economic growth in the country. While the estimated relationships between international trade, imports and exports and economic growth were found to be significant, the estimated relationship between exchange rate and economic growth was found not to be significant. The Granger causality test result reveals that international trade and import and export of goods and services share a unidirectional causal relationship with economic growth proceeding from the independent variables to the dependent variables, exchange rate and economic growth were found not to share any causal relationship.

Generally, two out of the three independent variables do not aligned with the a priori expectations, that is, a contrary result was expected for international trade and imports of goods and services. The deviations observed for these variables seem to be as a results of trade barriers such as tariffs and import quotas, as well as political factors that influence trade relations, particularly when Nigeria and its trading partners are not part of the same trade blocs.

CONCLUSION

The examination of global trade integration in shaping Nigeria's economic growth trajectories opens up new perspectives regarding the complex interdependence of global trade and economic growth. From the findings of the study, it can be deduced that exports and imports of goods and services positively affects economic growth in Nigeria, while international trade in the country has not been positioned in a manner that it contributes meaningfully to economic growth. These findings highlight the need for Nigeria to create a more favorable trade environment, implement policies that enhance export competitiveness, and address structural obstacles that hinder sustainable trade. The results also suggest that Nigeria has substantial potential to advance its

macroeconomic objectives if it adopts effective trade and industrial policies. Therefore, policy measures aimed at promoting trade relations, diversifying exports, and strengthening domestic production capacities should be actively pursued to ensure sustained economic growth and development.

The study encourages government to invest in education and research, as means to stimulate innovation, foster the development of new products, and enhance competitiveness in international markets. By funding research initiatives and supporting innovation-driven programs, Nigeria can strengthen its technological capacity, leading to improved trade performance and the creation of new products for both domestic and international markets. The study also highlights that Nigeria's imports exceed its exports, negatively affecting the exchange rate. This imbalance is largely due to Nigeria's import-dependence, particularly for food and agricultural products. To address this, the agricultural sector should be revitalized and modernized.

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