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Globalization and Economic Growth in Nigeria

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Abstract

The study investigates the effects of globalization on economic growth in Nigeria, focusing specifically on the influence of financial globalization and trade globalization. It employs annual time series data from 1981 to 2022, analyzed using the Ordinary Least Squares (OLS) method. The findings reveal that both financial and trade globalization significantly and positively impact real GDP growth. Additionally, the study finds that total government expenditure has a positive but insignificant effect on real GDP growth, whereas the population growth rate has a negative but insignificant effect. Moreover, credit extended by banks to the private sector shows a positive and significant impact on real GDP growth. To fully harness the benefits of globalization while mitigating potential risks, policymakers should address issues such as capital volatility, financial instability, and the harmonization of regulations.

Keywords: *Separatist social movements, Civic space, IPOB, Southeast, Igbos, Nigeria*

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Background to the Study

Achieving economic growth and development as a key macroeconomic goal has become a central focus for governments globally. This is because an increase in the production of goods and services brings material benefits to citizens by fostering developments such as increased investment, technological progress, and heightened demand, all of which contribute to economic growth. Investment is necessary to maintain output per capita in the face of a growing labor force (Kagan and Johnson, 2020). Additionally, increased demand prompts producers to expand their capacity, thereby promoting economic growth. As economic activity rises, the economy experiences growth.

Moreover, economic growth can be driven by the optimal utilization of available resources through better allocation (Bangura, 2020; Ohale & Onyema, 2002). Economic growth allows consumers to enjoy more goods and services, leading to improved living standards. With higher output and positive economic growth, firms are likely to hire more workers, creating more employment opportunities. This environment encourages firms to invest to meet future demand, which increases the potential for future economic growth, creating a virtuous cycle of growth and development (Pettinger, 2019). Over the years, the economic growth of countries has been strongly linked to globalization.

Globalization refers to the increasing interdependence of countries worldwide, facilitated by cross-border trade in goods and services, and technological advancements (Investopedia, 2019). It involves the expansion and integration of market frontiers. The purpose of globalization is to benefit local and national economies worldwide by creating more efficient markets, increasing competition, reducing military conflict, and fostering wealth creation. Some specific benefits of globalization include foreign direct investment, technological innovation, and economies of scale, which have motivated countries to pursue freer trade over the years.

The relationship between globalization and economic growth is based on the premise that globalization directly stimulates growth through efficient resource distribution by encouraging the specialization of economic activities among countries with comparative advantages. Indirectly, it promotes growth through complementary reforms in capital and financial development. Globalization enhances economic growth by promoting international trade, reducing trade tariffs, and altering subsidies and other barriers to free trade. It creates jobs, fosters competitiveness among countries, and lowers consumer prices, all of which promote economic growth. Globalization also discourages monopolistic behaviors and promotes competition (Erixon, 2018).

However, recent perceptions view globalization as a potential no-win situation, challenging the previous notion of freer trade as a universally beneficial scenario. Critics argue that globalization increases costs, causes inflation, creates marketplace shortages, slows economic growth rates, and jeopardizes diplomatic relations and cultural exchanges, among other issues (Investopedia, 2019).

In recent decades, significant increases in globalization are largely viewed as contributive to economic growth, as seen in successful economies like China and Vietnam. These economies have impressive growth records, although the extent to which their success is attributable to globalization remains unclear. Significant changes such as increased globalization inevitably have distributional consequences, with some countries gaining more than others, with differences evident in the short and long term.

In Nigeria, policy decisions to reduce national barriers to international economic transactions have been made over the years to influence economic growth through globalization. Despite these efforts, the persistence of slow economic growth amid increased globalization, especially in the past two to three decades, raises concerns about the impact of globalization on Nigeria's economic growth. It is not surprising that Nigeria has performed worse than many other nations over the last 20 years of globalization. The extent to which globalization is responsible for Nigeria's growth issues remains a topic of empirical debate.

The prevailing view among globalization proponents is that globalization should increase economic growth rates, especially in developing countries like Nigeria. Given Nigeria's potential comparative advantages in areas such as the production of labor-intensive goods, it is expected that globalization would directly stimulate the specialization of economic activities, leading to significant growth in economic rates. With the growth of international trade and increased capital flows fueled by globalization, Nigeria should see increased production of goods and services, job creation, and reduced consumer prices, all of which should lead to higher growth rates. However, Nigeria's growth experience has often been disappointing, with frequent periods of negative growth spanning over four consecutive quarters, marking economic recessions.

The state of Nigeria and other developing countries continues to raise questions about whether these nations truly benefit from globalization. Changes in economic growth data are often linked to trade and financial globalization. The impact of globalization on the economic growth of developing countries is an important topic that has garnered renewed interest among researchers and policymakers. Many studies suggest that globalization produces both winners and losers, indicating that developing countries benefit from globalization if complementary policies are in place. Despite mixed empirical evidence, the debate on the impact of globalization on economic growth persists.

While numerous studies have examined the linkages between globalization and economic growth, little empirical evidence specific to Nigeria has been produced. Much remains unknown as Nigeria becomes more integrated into the global economy. Additionally, previous studies in Nigeria have not distinguished between financial and trade globalization as this study does using broad indicators. Therefore, this study aims to add value to the existing literature by providing empirical evidence on the impacts of financial and trade globalization on economic growth in Nigeria. The research questions addressed are: What is the impact of financial globalization on economic growth in Nigeria? What is the impact of trade globalization on economic growth in Nigeria? The specific objectives are: (i) To examine

the impact of financial globalization on economic growth in Nigeria, and (ii) To determine the impact of trade globalization on economic growth in Nigeria.

Theoretical Literature

The Solow Growth Model

The study is based on the Solow growth theory, which was introduced by Nobel Prize-winning economist Robert Solow in 1957. This model analyzes the progression of an economy over time. The central concept of Solow's framework is that economic growth results from capital accumulation and autonomous technological advancements. According to Solow, with variable technical coefficients, the capital-labor ratio is likely to adjust over time towards an equilibrium. If the initial capital-labor ratio is high, capital and output will grow more slowly than the labor force, and vice versa if the initial capital-labor ratio is low. Solow's perspective leads to convergence towards a steady state.

In Solow's model, output YYY, which represents real income, is divided between consumption and savings, with a constant saving rate sss. The portion of income that is saved is sY(t)sY(t)sY(t), and the capital stock is K(t)K(t)K(t). Thus, net investment corresponds to the rate of increase in the capital stock, dKdt\frac{dK}{dt}dtdK. Since output is generated using both capital and labor, technological capabilities are described by the production function.

$$Y = F(K, L) \quad . \quad . \quad . \quad (1)$$

Where:
K = capital stock and
L = labour-force.

Solow postulated that the production function exhibits constant returns to scale, meaning that doubling all inputs will result in a doubling of output. However, if only one input, such as labor, is held constant while capital is doubled, the increase in output will be less than double, which is known as diminishing marginal returns. When savings per worker surpass capital adequacy, productivity and the capital-labor ratio increase. When savings per worker are equal to capital adequacy, both productivity and the capital-labor ratio remain stable. Conversely, when savings per worker fall short of capital adequacy, productivity and the capital-labor ratio decline.

The core conclusion of the model is that real returns to factors will adjust to ensure full employment of labor and capital, allowing the production function to determine the current output rate. The savings propensity dictates the portion of net output that will be saved and invested, indicating the capital accumulation during the current period. This, combined with the existing capital stock, determines the capital available for the next period, and the process repeats. In the long run, the economy's growth rate equates to the sum of the labor force growth rate and the rate of technological progress. Importantly, the savings rate influences the GDP level but not the long-term growth rate. Higher savings temporarily boost growth by increasing labor productivity and GDP levels, but eventually, the growth rate stabilizes to match the labor force growth rate plus the rate of technological progress.

The model suggests that differences in growth rates among countries arise because they are at various stages of approaching the steady state. A steady state is where the economy's output per worker, consumption per worker, and capital stock per worker are constant (Abel and Bernanke, 1995). Consequently, wealthier countries should grow more slowly than poorer ones, leading to a convergence of per capita incomes over time (Gould and Ruffin, 1993; Jhingan, 2004). The steady-state capital-labor ratio positively correlates with the savings rate and negatively with the population growth rate.

A key short-term implication of the Solow model is conditional convergence, based on the assumption of diminishing returns to capital. The model predicts that each economy converges to its own steady state, and the speed of this convergence is inversely related to the distance from the steady state (Barro and Sala-i-Martin, 2004). Thus, a lower initial real income per worker tends to lead to higher GDP growth per worker, once steady-state determinants are accounted for. In the Solow model, income per worker growth depends on the initial income level and the determinants of the ultimate steady state.

Neoclassical Growth Theory

The neoclassical growth theory emphasizes the role of capital accumulation and its connection to savings decisions. It considers the savings rate, population growth, and technological progress as external variables. The theory identifies capital and labor as the two inputs required for producing marginal products (Ding and Knight, 2008; Koutun and Karabona, 2013).

According to the theory, the long-term economic growth rate is determined externally by the rate of technological progress, with endogenous changes in factor accumulation facilitating the adjustment to stable steady-state growth. Savings and investment decisions, as well as factor accumulation and technological growth, are treated as exogenous factors (Ding and Knight, 2008). The neoclassical aggregate production function is expressed as follows:

$$Y(t) = [A(t), K(t), L(t)] \quad . \quad . \quad . \quad (2)$$

Where:
Y(t) = the aggregate output or real income at time t
K(t) = capital input at time t
L(t) = labour input at time t
A(t) = level of technology at time t

The influence of time on output occurs through A, K, and L. Technology enhances labor, so AL represents effective labor. Based on these specifications, the neoclassical production function can be expressed as a Cobb-Douglas production function at time ttt, with constant returns to scale, as shown in equation (3):

$$Y(t) = [A(t), K(t)^{\alpha}), L(t)^{1-\alpha} \quad 0 < a > \quad . \quad . \quad . \quad (3)$$

Where:
α = a share of capital in total output and
1-α = a share of output paid to labour.

Capital and technology grow at exogenous rates nnn and ggg, respectively, where nnn represents the population growth rate and ggg denotes the growth rate of labor productivity. It is assumed that a constant fraction sss of the output is saved and invested. Thus, the capital stock per unit of labor is defined as follows:

$$K = \frac{K}{AL} \quad . \quad . \quad . \quad (4)$$

While the level of output per effective unit of labour is as follows:

$$y = \frac{Y}{AL} \quad . \quad . \quad . \quad (5)$$

This indicates that capital accumulation is the primary driver of economic growth. Changes in capital directly affect the total income level. Net investment is thus defined as the rate of increase in the capital stock, dKdt\frac{dK}{dt}dtdK or K˙\dot{K}K˙, and is determined by the following equation:

$$dK/dt = sf(K) - (n + g + \delta)K = sK^{\alpha} - (n + g + \delta)K. \quad . \quad . \quad (6)$$

Here, sf(K)sf(K)sf(K) represents the fraction of income that is saved and subsequently invested. Equation (3.4) shows that the growth in capital is positively related to the level of investments and negatively related to the depreciation rate δ\deltaδ, the population growth rate nnn, and the rate of technological change ggg (Koutun and Karabona, 2013; Solow, 1956). It is also established that KKK converges to its steady-state value as:

$$K_{scl} = \left(\frac{s}{n+g+\delta}\right)^{\frac{\alpha}{1-\alpha}} \quad . \quad . \quad . \quad (7)$$

Where K_{scl} is a steady state level of capital per unit of labour.

In order to get the steady state income level of the country, substitute equation (6) into the production function specified in equation (1) and then takes the logs of it:

$$\ln\left(\frac{Y^*}{L}\right) = \ln A(0) + gt + \frac{\alpha}{1-\alpha}\ln(s) - \frac{\alpha}{1-\alpha}\ln(n + g + \delta) \, . \quad . \quad . \quad (8)$$

Where:
$\left(\frac{\alpha}{1-\alpha}\right)$ = elasticity of output with respect to s, and

$E - \left(\frac{\alpha}{1-\alpha}\right)$ = elasticity with respect to $(n + g + \delta)$

In summary, an increase in the national savings rate sss implies higher actual investment. Additionally, a country with a higher population growth rate will have less capital and output

per worker because its savings are consumed to sustain the capital-labor ratio. According to the Solow version of the neoclassical growth theory, a country that saves a larger portion of its output will have more capital due to increased investment, resulting in higher output and, consequently, higher economic growth, assuming all other variables remain constant.

Harrod-Domar Growth Theory

The Harrod-Domar model was independently developed by Sir Roy Harrod in 1939 and Evsey Domar in 1946. This growth model asserts that the economic growth rate in an economy is influenced by the level of savings and the capital-output ratio. A high level of savings in a country provides firms with the funds needed to borrow and invest. Such investment can increase the capital stock of an economy, thereby generating economic growth through increased production of goods and services. The capital-output ratio measures the productivity of the investments made. If the capital-output ratio decreases, the economy becomes more productive, as higher output levels are generated from fewer inputs, which, in turn, leads to higher economic growth. Thus, net national savings (S) are a proportion (s) of national income (Y). This relationship is expressed in the following simple equation:

$$S = sY \quad . \quad . \quad . \quad (9)$$

Where:
S = Net national savings
S = Proportion of national income, and
Y = National income

Net Investment (I) is defined as the change in the capital stock, **k** and represented as in equation (10):

$$I = \Delta k \quad . \quad . \quad . \quad (10)$$

but, total capital stock, k**,** relates to output Y, as expressed by the capital-output ratio:

$$k\backslash y = c, \text{ or } \Delta k = c\Delta Y \quad . \quad . \quad . \quad (11)$$

Finally, because net national savings, S, must equal net investment, I, we can write as:

$$S = I \quad . \quad . \quad . \quad (12)$$

The model suggests that if developing countries aim to achieve economic growth, their governments should encourage saving and support technological advancements. The Harrod-Domar model offers a framework for understanding economic growth and has significantly influenced government policies.

Empirical Literature

A study by Beeharry & Demir (2023) analyzed the impact of economic globalization on Mauritius from 1981 to 2019, utilizing the Autoregressive Distributed Lag (ARDL) approach. Their findings indicated that in the short term, Foreign Direct Investment (FDI) inflows stimulated GDP growth, while in the long term, the opposite trend occurred. Additionally, a long-term relationship was observed between global trade and GDP growth.

Sevinç, Polat, Sevil & Sevil (2023) investigated the effects of deglobalization on economic growth in 34 OECD countries from 2000 to 2019 using panel data analysis. They found that trade and social deglobalization negatively impacted economic growth, whereas financial deglobalization and certain subdimensions of social deglobalization positively influenced growth. Zhang, Li, Ali & Wang (2023) examined the impact of social, economic, and political globalization on the renewable energy-economic growth nexus in a panel of six Asian emerging economies from 1975 to 2020. Their study, employing the ARDL approach, revealed that economic and political globalization hindered economic growth, while social globalization directly promoted it. Moreover, nonlinear effects of globalization on economic growth were observed, confirming the inverted U-shaped relationship between political and economic globalization and economic growth, and the U-shaped relationship between social globalization and economic growth.

Yitirla (2023) investigated the effects of globalization on economic development in the UK using descriptive techniques. Their findings indicated that globalization led to an increase in the production of various goods and services. Beri, Mhonyera & Nubong (2022) analyzed the relationship between globalization and economic growth in a panel of 47 selected African countries from 2001 to 2018 using the two-step systems Generalized Method of Moments (GMM) technique. Their study found an insignificant relationship between globalization and economic growth. Günay & Sülün (2022) focused on whether globalization influenced economic growth in Euro Area countries and the direction of this effect. Their study, covering the period from 2000 to 2017, utilized the Augmented Mean Group Estimator (AMG) and found varying effects of globalization on economic growth across Euro Area countries, with some experiencing increasing effects while others observed decreasing effects.

Lawal & Yusuf (2022) examined the relationship between globalization, economic growth, and income disparity in Nigeria from 1986 to 2019 using the Autoregressive Distributed Lag (ARDL) Technique. Their findings suggested that globalization had a significant negative impact on economic growth. Similarly, Yusuf & Oluwaseun (2022) investigated the relationship between globalization, economic growth, and income disparity in Nigeria over the same period, finding a statistically significant negative impact of globalization on Nigerian economic growth. Heimberger (2021) conducted a meta-analysis on the effects of globalization on growth, revealing a selection bias in favor of positive growth effects of globalization. Additionally, while the effect of economic globalization on output growth was reduced by more than half, it remained positive. However, no significant effect of financial globalization on growth was found.

Kingsley, Toyosi & Babatunde (2021) explored the impact of globalization on the Nigerian economy from 1988 to 2019 using the Ordinary Least Squares (OLS) technique. They found direct relationships between exchange rate and balance of trade with Gross Domestic Product per Capita (GDPPC), while external debt showed an inverse relationship. Xu, Abbas, Sun, Gillani, Ullah & Raza (2021) examined the impact of globalization on GDP growth in 45 Asian economies from 2003 to 2017, finding a positive influence of globalization on economic growth.

Cervantes, López & Rambaud (2020) investigated the impact of globalization on the economic development of 217 countries across different income levels from 2000 to 2016. They found a causal relationship between globalization and public expenditure on health, except in high-income countries. Nwosa (2020) explored the impact of globalization on economic growth and income inequality in Nigeria from 1981 to 2018 using Vector Error Correction Modeling (VECM) and Autoregressive Distributed Lag (ARDL) techniques. They identified a unidirectional causation from inequality and globalization to economic development in the long run, with globalization and economic growth being significant predictors of inequality in Nigeria.

Swadźba (2020) examined the impact of globalization on economic growth and socio-economic development in 16 Western European countries from 1990 to 2018, finding no evidence of a positive impact of globalization on economic growth and socio-economic development.

Bataka (2019) investigated the effects of globalization on economic growth in 40 Sub-Saharan African countries from 1980 to 2015, distinguishing between de jure and de facto aspects of globalization. They found a positive effect of overall globalization on economic growth, with de jure globalization increasing growth and de facto globalization undermining it. Hasan (2019) explored the impact of globalization on the economic growth of South Asian countries from 1971 to 2014, finding that overall globalization, economic globalization, and political globalization accelerated economic growth in the long run. Huh & Park (2019) empirically examined the effects of globalization on economic growth and income inequality in 158 economies from 2006 to 2014. They found that while globalization promoted economic growth, it also exacerbated income inequality, with high-income countries benefiting the most.

Nguea (2019) investigated the relationship between economic globalization and economic growth in CEMAC countries from 1970 to 2015, finding a positive and significant impact of economic globalization on economic growth, which was independent of democracy and financial development levels. Ulucak (2019) examined the impact of globalization on economic growth in a panel of emerging economies from 1970 to 2014, finding positive effects of globalization index, economic globalization, and social dimensions of globalization on economic growth, while the political dimension had a negative effect. Kılıçarslan & Dumrul (2018) studied the impact of globalization on economic growth in Turkey from 1980 to 2015, finding a negative and statistically insignificant effect of economic globalization on economic growth.

Savrul & İncekara (2017) explored the impact of globalization on economic growth in ASEAN member countries from 1970 to 2015, finding a significant positive effect of globalization on economic growth. Suci, Asmara & Mulatsih (2016) investigated the impact of globalization on economic growth in ASEAN countries from 2006 to 2012, finding positive and significant impacts of globalization on economic growth, particularly economic and political globalization. Adesoye, Ajike & Maku (2015) examined the impact of economic

globalization on output growth in Nigeria from 1970 to 2013, finding that exchange rate, inflation rate, and foreign direct investment enhanced output growth.

Shuaib, Ekeria & Ogedengbe (2015) explored the impact of globalization on economic growth in Nigeria from 1960 to 2010, finding a negative relationship between growth of external debt and economic growth. In Kilic's (2015) research on 74 developing countries spanning from 1981 to 2011, the investigation focused on the repercussions of economic, social, and political globalization on growth levels. Utilizing fixed effects least squares method and Granger causality test techniques, the study unveiled that economic and political globalization positively impacted economic growth, whereas social globalization exhibited a negative effect. Moreover, a two-way causality relationship between political and social globalization and economic growth was observed, along with a one-way causality between social globalization and economic growth.

Samimi & Jenatabadi (2014) delved into the influence of economic globalization on economic growth within 33 Organization of Islamic Cooperation (OIC) countries from 1980 to 2008. Employing the generalized method of moments (GMM) estimator and a dynamic panel data approach, the study disclosed a statistically significant impact of economic globalization on economic growth in OIC nations. Furthermore, it noted that this positive effect was amplified in countries with higher levels of education among workers and well-developed financial systems, alongside increased national income. In the case of Pakistan, Ullah, Rauf & Rasool (2014) scrutinized globalization's impact on economic growth from 1980 to 2009 using the Autoregressive Distributive Lag technique. Results indicated that economic globalization fostered long-term growth in Pakistan, while social globalization exhibited a negative influence. Political globalization, however, appeared to be insignificant in affecting Pakistan's economic growth. In the short term, both economic and social globalization negatively affected growth.

Ying, Chang & Lee (2014) investigated the impact of social and political globalization on economic growth across ASEAN countries from 1970 to 2008, employing the Fully Modified Ordinary Least Squares (FMOLS) technique. Their findings suggested a positive overall effect of globalization on economic growth, yet social and political globalization exerted negative influences. Examining Nigeria's economy from 1962 to 2009, Umaru, Hamidu & Musa (2013) discovered through descriptive analysis that globalization positively influenced the country's economy as a whole. However, this impact varied across sectors, with positive effects observed in agriculture, transportation, and communication, but negative effects in the petroleum, manufacturing, and solid minerals subsectors. Similarly, Umaru, Ahmadu & Musa (2013) explored the impact of globalization on Nigeria's economic performance over the same period, employing descriptive techniques. Their findings echoed those of Umaru, Hamidu & Musa (2013), highlighting negative effects on the petroleum, manufacturing, and solid mineral sectors, while the agriculture, transportation, and communication sectors experienced positive impacts.

Research Design

The research adopts a time-series design, analyzing variables spanning from 1981 to 2022. This approach entails the systematic collection, analysis, and interpretation of data measured at regular intervals over the specified timeframe. Through this design, the researcher consistently measures the same variable(s) over the study period to accomplish the research objectives utilizing time series data.

Source of Data

The study gathers annual time series data for the variables in the model from multiple editions of the Statistical Bulletin published by the Central Bank of Nigeria (CBN). This dataset encompasses the years spanning from 1981 to 2022, providing a comprehensive overview of the variables' trends and patterns over the specified timeframe.

Model Specification

Multiple regression analysis is employed to investigate objectives one and two. The functional form of the model for both objectives is outlined as follows:

$$\text{RGDPG} = FINGLO, TRADGLO, \text{GTXP}, \text{PGROWT}, \text{BCPS} \quad . \quad . \quad . \quad (1)$$

Where:

RGDPG= real GDP growth (annual %)
FINGLO = financial globalization, measured by the ratio of capital inflows to GDP (sum of FDI and external debt inflows as a ratio of GDP).
TRADGLO = trade globalization (measured by total external trade as a ratio of GDP)
GTXP = government total expenditure
PGROWT = population growth rate
BCPS = banks credit to the private sector

The econometric model is specified as:

$$\text{RGDPG} = b_0 + b_1 FINGLO + b_2 \text{TRADGLO} + b_3 \text{GTXP} + b_4 PGROWT + b_5 \text{BCPS} + u_t \quad (2)$$

Where all the variables remained as defined earlier
u_t = error term
b_1, b_2, b_3, b_4 and b_5 are parameters to be estimated. The a priori expectation of all the parameters is positive except population growth, which can be positive or negative. Equation (3.2) is the model for estimation. The model is specified to capture objectives one and two.

Definition of variables in the Models

Financial globalization (FINGLO): This refers to a nation's integration into international capital markets. Typically, it's quantified by the ratio of capital inflows to GDP, which includes foreign direct investment (FDI) and external debt inflows relative to GDP. This metric provides a comprehensive measure of financial globalization according to the International Monetary Fund (IMF, 2003). Trade globalization (TRADGLO): This represents the extent to which a country's production is oriented towards external markets,

and the reliance of domestic employment on international trade. In literature, it's often assessed by the total volume of external trade as a percentage of GDP.

Population Growth (PGROWT): This reflects the rate at which a country's population increases over time. In this study, population growth rate is utilized as a proxy for labor force growth, as a growing population typically corresponds to an expanding labor force. Total Government Expenditure (GTXP): This encompasses all government spending, including both capital and recurrent expenditures. It serves to enhance both physical and human capital, contributing to overall economic development. Real GDP Growth (annual %): This indicates the annual rate of growth in a country's real gross domestic product. Widely accepted as a key indicator of economic growth, it reflects the expansion or contraction of the economy over time. Bank Credit to the Private Sector (BCPS): This denotes the amount of credit or capital extended by banks to the private sector, encompassing businesses and individuals. It plays a crucial role in facilitating private sector investment and economic activities.

Estimation Technique

The Ordinary Least Squares (OLS) technique will be employed to estimate the regression equations for objectives one and two. OLS is a widely used estimator for linear regression models, aimed at determining unknown parameters by minimizing the sum of squared differences between observed and predicted responses. It is considered the Best Linear Unbiased Estimator (BLUE) under certain conditions, particularly when variables exhibit linear relationships, and the expected values of the estimators are equal to the true values, with minimum variance compared to other linear unbiased estimators. OLS is also a maximum likelihood estimator.

Estimation Technique

Furthermore, OLS is known for its efficiency in estimating linear regression equations, particularly when errors have finite variances, regressors are exogenous and free from multicollinearity, and errors are homoscedastic and serially uncorrelated. By minimizing the sum of squared residuals, OLS ensures unbiased estimation, assuming errors follow a normal distribution.

Results and Discussion

Descriptive Statistics of the Variables

The descriptive statistics of the variables were estimated to provide knowledge about the data set and the results are reported in Table 1.

Table 1: Descriptive statistics

Variables	Obs	Mean	Standard Deviation	Minimum value	Maximum value	P-value (Skewness)	P-value (Kurtosis)
RGDPG	42	3.0465	5.3195	-13.1278	15.3292	0.0227	0.0305
FINGLO	42	65081.97	44646.87	3.3958	176242.6	0.0175	0.6818
TRADGLO	42	59.1218	27.0398	21.1158	133.6891	0.2945	0.9971
GTXP	42	3657.582	5900.242	9.6365	24431.21	0.0000	0.0017
PGROWT	42	2.6070	0.0748	2.4491	2.7565	0.5431	0.0823
BCPS	42	7341.734	10706.75	8.5701	38952.43	0.0007	0.1601

Source: Estimated by the authors

The mean values of real GDP growth, trade globalization, and population growth rate exhibit coefficients close to those of their respective standard deviations. This suggests that the data points for these variables are clustered around their mean values. Conversely, financial globalization, government total expenditure, and bank credit to the private sector display significant disparities between their mean values and standard deviation coefficients, indicating that their data values are not centered around their means.

Observing the minimum and maximum values of the variables reveals that some data points fall below their mean values while others exceed them, demonstrating variability in the dataset.

Skewness probability values highlight significant departures from normal distribution for real GDP growth, financial globalization, government total expenditure, and bank credit to the private sector at the 5% significance level. Rejection of the null hypothesis indicates asymmetry in the distribution of these variables, skewing either to the right or left. Conversely, trade globalization and population growth rate exhibit statistically insignificant skewness probability values, suggesting adherence to a normal distribution. In terms of kurtosis, real GDP growth and government total expenditure are found to be significant, rejecting the null hypothesis of normal distribution at the 5% level. This indicates that the tails of their distributions differ from those of a normal distribution. Conversely, the remaining variables display statistically insignificant kurtosis values, implying conformity to the tails of a normal distribution.

Unit Root Test

The Augmented Dickey-Fuller and the Phillips-Perron tests were employed to test for the stationarity of the time series variables. The test result is reported in Table 2.

Table 2: Augmented Dickey-Fuller and Philips–Perron unit root test results

Variable	Augmented Dickey-Fuller Result		Philips–Perron Result		Lag order	Order of Integration
	Level	1st Difference	Level	1st Difference		
RGDPG	-2.884	-5.257	-3.089	-10.704	1	I(1)
FINGLO	-0.990	-5.163	-1.445	-9.042	1	I(1)
TRADGLO	-3.396	-6.519	-3.012	-5.770	1	I(1)
GTXP	-2.624	-3.817	-3.134	-4.800	1	I(1)
PGROWT	-2.236	-3.754	-2.088	-4.099	1	I(1)
BCPS	-2.158	-3.721	-2.674	-3.836	1	I(1)

Where * denotes significance at 5% and the rejection of the null hypothesis of the presence of unit root. The optimal lag length of 1 was chosen using Akaike's Final Prediction Error (FPE), and Akaike's information criteria. The ADF 5% critical value at levels is -3.540, while at 1st difference is -3.544. The Philips–Perron critical value at levels and 1st difference are -3.536 and -3.540. A trend was included in both the Augmented Dickey -Fuller and Philips –Perron unit root test models estimated.

Source: Estimated by the authors

At the 5% significance level, the Augmented Dickey-Fuller critical value exceeds the test statistics for all variables, indicating statistical insignificance. Consequently, the null hypothesis, suggesting the presence of a unit root and thus nonstationarity, is accepted at the level. Subsequently, the variables were differenced once, and the test was re-conducted at the first difference. Upon differencing, the test statistics for all variables surpassed the 5% critical value. Thus, the null hypothesis of a unit root presence is rejected at the first difference, signifying that all variables are stationary at the first difference. Similarly, the Philips-Perron test yielded consistent results with the Augmented Dickey-Fuller test, both at the level and first difference, confirming the stationarity of all variables at order 1.

Impact of Financial and Trade Globalization on Economic Growth

Objective one aims to investigate the influence of financial globalization on economic growth, while objective two focuses on exploring the impact of trade globalization on economic growth. To commence the analysis, we conduct a cointegration test of the variables in the model utilizing the Johansen tests for cointegration. This test aims to assess the null hypothesis of no cointegration among the variables. The findings are presented in Table 3.

Table 3: Result of Johansen tests for cointegration

Maximum rank	Eigenvalue	Trace statistic	5% Critical value
0	-	95.2501	82.49
1	0.62137	56.4025*	59.46
2	0.42995	33.9213	39.89
3	0.36506	15.7523	24.31
4	0.19840	6.9065	12.53
5	0.14208	0.7769	3.84
6	0.01923	-	-

Source: Estimated by the authors

Upon comparing the trace statistics with the corresponding 5% critical values, we observed that the trace statistics for maximum rank 0 exceed the respective critical values. This indicates a significant trace statistic, suggesting the presence of a long-run relationship among the variables. Consequently, we conclude that the variables in the model possess one cointegrating equation, leading to the rejection of the null hypothesis of no cointegration at the 5% significance level.

The primary results for objectives one and two are depicted in Table 4. Notably, the coefficient for population growth rate is negative, while the coefficients for the remaining variables are positive.

Table 4: Estimates of the impact of financial and trade globalization on economic growth

RGDPG	Coefficient	Standard error	t-value	p-value
FINGLO	0.0312	0.0123	2.52	0.016
TRADGLO	0.0505	0.0178	2.84	0.000
GTXP	0.0851	0.2505	0.34	0.739
PGROWT	-11.1703	16.0736	-0.69	0.492
BCPS	0.2402	0.0942	2.55	0.019
Constant	32.3796	43.9708	0.74	0.466
R-squared		0.6768		
Adj R-squared		0.5624		
F-statistics		31.55 (p = 0.0003)		
Durbin–Watson d-statistic (6, 42)		2.0849		
Breusch–Godfrey LM test		0.355 (p = 0.5117)		
Breusch–Pagan/Cook–Weisberg test		0.58 (p = 0.6103)		

Source: Estimated by the authors

The coefficient for financial globalization stands at 0.0312, accompanied by a significant t-value of 2.52 and a p-value of 0.016, both significant at the 5% level. This implies the rejection of the null hypothesis in favor of the alternative hypothesis, indicating a positive and significant impact of financial globalization on real GDP growth. Specifically, a 1% increase in financial globalization leads to a significant 0.03% increase in real GDP growth. Similarly, trade globalization exhibits a positive coefficient of 0.0505 with a significant t-value of 2.84 and a p-value of 0.000, both significant at the 5% level. This reinforces the rejection of the null hypothesis, suggesting a positive and significant effect of trade globalization on real GDP growth. A 1% increase in trade globalization results in a significant 0.05% increase in real GDP growth.

Conversely, government total expenditure displays a positive but insignificant coefficient of 0.0851, indicating a negligible impact on real GDP growth. Additionally, the population growth rate presents a negative and insignificant coefficient of -11.1703 with a t-value of -0.69, implying an insignificant effect on real GDP growth. Specifically, a 1% increase in population growth rate leads to an insignificant decrease of 11.17% in real GDP growth. The coefficient for bank credit to the private sector is 0.2402, accompanied by a significant t-value of 2.55 and a p-value of 0.019, both significant at the 5% level. This suggests a positive and

significant impact of banks' credit on real GDP growth. A 1% increase in banks' credit to the private sector results in a significant 0.24% increase in real GDP growth.

The coefficient of determination (R2) value is 0.5624, indicating that the variables collectively explain approximately 56.24% of the variation in real GDP growth, while the remaining 43.76% is determined by other variables not included in the study. The F-statistics of 31.55 (p = 0.0003) is significant, indicating that the independent variables jointly exert a significant effect on real GDP growth. The Durbin-Watson d-statistic of approximately 2 suggests the absence of autocorrelation, corroborated by the insignificant Breusch-Godfrey LM chi2 value, implying the acceptance of the null hypothesis of no serial correlation. The Breusch–Pagan test statistic of 0.58 with a corresponding p-value of 0.6103 suggests the acceptance of the null hypothesis of homoscedasticity or constant variance, further validating the reliability of the estimated coefficients.

Multicollinearity testing using the Variance Inflation (VIF) test is also conducted, and the results are presented in Table 5.

Table 5: Results of the model one VIF test for multicollinearity

Variable	VIF	1/VIF
BCPS	1.85	0.540541
GTXP	1.90	0.526316
TRADGLO	4.12	0.242758
PGROWT	2.23	0.447826
FINGLO	1.28	0.783471
Mean VIF	2.28	

Source: Computed by the authors

The variance inflation values for the variables are notably lower compared to the conventional threshold of 10. Consequently, we accept the null hypothesis of no multicollinearity, indicating that the independent variables do not exhibit multicollinearity issues.

Summary, Conclusion and Recommendations

Summary of Findings

The key findings of this study can be summarized as follows:

i. Regarding objective one, the analysis revealed that financial globalization exerted a positive and significant influence on real GDP growth.
ii. Objective two findings indicated that trade globalization had a positive and significant effect on real GDP growth.
iii. Additional findings showed that government total expenditure demonstrated a positive yet insignificant impact on real GDP growth. Conversely, the population growth rate exhibited a negative and insignificant effect on real GDP growth. Moreover, the study revealed that banks' credit to the private sector had a positive and significant impact on real GDP growth.

Conclusion

This study has delved into the impact of globalization on economic growth in Nigeria, employing the Ordinary Least Squares technique for data analysis. The findings underscore the significant contribution of globalization, encompassing both financial and trade aspects, to Nigeria's economic growth. Consequently, it is inferred from the results that opening up the economy to international financial markets and trade can serve as effective measures to foster economic growth.

However, the study suggests that government spending does not effectively stimulate sustainable and inclusive economic growth in Nigeria. Nonetheless, there remains potential for effective spending to spur desirable economic growth rates. Furthermore, the study indicates that the population in Nigeria is not efficiently utilized to influence economic growth. It is posited that a considerable portion of the population, particularly the working-age segment, may be underemployed, or there may exist inadequate levels of human capital development to drive a positive and significant impact of the population on economic growth. Moreover, the availability of credit emerges as a pivotal factor influencing economic activity, underscoring the importance of a well-functioning banking sector in augmenting sustainable economic growth in Nigeria.

Recommendations for Policy

The following recommendations are put forward based on the study's findings:

i. Policymakers should address concerns such as capital volatility, financial instability, and regulatory harmonization to capitalize on the advantages of globalization while mitigating associated risks.
ii. It is imperative for policymakers to meticulously assess the composition and efficacy of government spending, ensuring that it aligns with objectives of sustainable and inclusive economic growth.
iii. Policymakers ought to implement strategies that foster productivity, innovation, and investment in human capital as key drivers of economic growth, rather than solely relying on changes in population size.

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