

## **Globalization and Economic Growth in Nigeria: An ARDL Cointegration Approach**

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### **Abstract**

Among the advantages of globalization facilitated by the interplay of innovation and technology, are access to foreign capital and new markets. In order to improve their lots and increase their prospects of survival, countries and organizations are embracing the new trend. This study aims at evaluating the long and short run effects of globalization on the Nigerian economy. The study uses, unlike other similar studies, a number of econometric methods of autoregressive distributed lag (ARDL), cointegration bound tests, and unit root tests, to examine the long and short run relationship between globalization and economic growth. The presence of a long-run relationship between the variables is supported by cointegration bound tests. The sources of annual time series data used are World Bank Database (WDI), the KOF Swiss Economic Institute Database and the Nigerian Central Bank Statistical Bulletin. Findings show that Nigeria's economic growth is positively and significantly affected by the globalization index, foreign direct investment and international remittances. Capital accumulation is found to be significant but with negative signs. The effects of trade openness on economic growth is however found to be insignificant. The study recommends that individuals and the government should utilize technical and global opportunities presented by globalization to strengthen the country's productive capacity, leveraging on productive use of remittance inflows.

**Keywords:** Globalization, Trade openness, Remittance, Cointegration.

**Word Count:** 212

## **1.0 Introduction**

Globalization has become a defining feature of the modern era, profoundly influencing the economic landscape of countries around the world. By facilitating the flow of goods, services, capital, and technology across borders, globalization has opened up new opportunities for economic growth and development. However, its impacts have not been uniform; while some nations have experienced rapid industrialization and rising incomes, others especially the developing countries and Nigeria in particular, are struggling with increased inequality, capital account deficit and dependency on developed countries.

Increased cross-border movements of man, capital, information and technology, goods and services are hallmarks of globalization which has defined the modern global economy. It has played a significant role in the economic development of any country and has changed the economic environment of both industrialized and developing countries during the last few decades, offering both opportunities and challenges to governments, corporations, and humanity. The consequences of this worldwide phenomena have also affected Nigeria, one of Africa's biggest economies. There have been major political and economic shifts in Nigeria over the late 20th and early 21st centuries. The country had to diversify its economy away from its dependence on oil exports, deal with political unrest and with changes in the price of oil throughout the world, among other economic difficulties. Globalization emerged as a key factor influencing Nigeria's economic future in the face of these difficulties (Jarigbe, Oladipo & Yusuf, et al., 2024).

There are several facets of globalization, including greater foreign direct investment, trade liberalisation, migration's remittances, financial integration, and technical improvements. These forms of globalization elements contribute in various way to labour and capital which are the key factors of production and economic growth of a country. The connection between globalization and economic growth has been the focus of much discussion and research in Nigeria.

Researchers believe that globalization is a major factor influencing the future of the world and that it currently dominates the world (Amaegberi, & Krokeyi, 2024). The commerce and communication obstacles that formerly prevented global integration have decreased. In the modern, interconnected world, no country can be in an autarky (Ulucak, 2019). Our world has become increasingly intertwined due to foreign direct investment (FDI), remittances, international technology inflows, unparalleled global integration, autonomy, internet connectivity worldwide, and greater international trade.

The idea that globalization and economic growth are related seems very valid and this is predicated on the idea that, by promoting the specialisation of economic activity among nations with comparative advantages, globalization directly boosts growth through efficient resource distribution. Through additional foreign capital and financial development, it indirectly fosters growth. By encouraging international trade, lowering trade tariffs, and changing subsidies and other trade restrictions, globalization boosts economic growth. It also boosts economic growth by lowering consumer costs, increasing international competition, and creating jobs. Additionally, globalization encourages competition and deters monopolistic practices (Erixon, 2018).

Recent views, however, challenge the earlier belief that freer commerce was a system that would benefit everyone by viewing globalization as a possible no-win situation. According to critics, among other things, globalization raises prices, leads to inflation, produces shortages in the marketplace, lowers economic development rates, and puts diplomatic ties and cross-cultural interactions at risk (Günay & Sülün, 2022).

Nigeria's present policy approach is based on the coordinated liberalisation of the economy that is observed in most globalized economies and, in fact, in most areas of the world. The Nigerian government is now focusing on providing incentives, policies, and infrastructure that are required to strengthen the private sector's position as the engine of growth, reducing its participation in private-sector-oriented activities and assuming the position of an intermediary (Shamsu, 2023). According to the globalization policy, these Nigerian government's economic policy aims to boost the private sector's involvement, create productive jobs and productivity, boost exports of domestically produced goods, enhance the nation's technological know-how and capacity, draw in foreign direct investment, and ultimately stimulate economic growth (Imandojemu, Akinlosotu and Aina, 2021).

## **1.2 Statement of the problem**

The general consensus among proponents of globalization is that it should accelerate economic growth, particularly in emerging nations like Nigeria. Given Nigeria's possible competitive advantages in sectors like labour-intensive commodities production, it is anticipated that globalization will directly encourage economic activity specialisation, which will result in a notable increase in growth (Beeharry & Demir, 2023). Globalization-driven increases in capital flows and international commerce should boost Nigeria's output of goods and services, create jobs,

and lower consumer prices, among other benefits which should accelerate the country's growth rates. However, Nigeria has frequently seen underwhelming growth, with economic recessions often lasting more than four quarters in a row especially between 2014 and 2019. For example, despite the enormous globalization resources, the GDP of Nigeria stood at N24.56 trillion in the last quarter of 2014, it declined to N23.1 trillion in the second quarter of 2015. It further declined to 22.4 in the first quarter of 2016. The situation in Nigeria and other developing nations make people wonder if globalization is actually helping these countries. Globalization's effects on the growth of developing nations' economies are a significant issue that has attracted fresh attention from scholars and decision-makers. According to studies, there are winners and losers in globalization, meaning that emerging nations gain from it as long as complementing policies remain in force.

Regarding the effects of globalization on economic growth, there are essentially two schools of thought in the literature. The first proponents believe that globalization is in fact essential to developing nations' economic development. According to this school of thought, globalization and economic growth are positively correlated. According to this school, globalization helps to acquire capital and consumption products for industrial growth from other nations while also complementing native resources, such as foreign direct investment, remittances and so forth. It is also thought that a nation's access to managerial expertise and contemporary digital technology is made possible by globalization (Heimberger, 2021).

The other supporters believe that globalization has a major detrimental impact on recipient nations' economic development. They argue that rather than enhancing local output, globalization hinders it and replaces it with domestic resources. They further assert that globalization distorts the distribution of domestic revenue in underdeveloped nations and introduces unsuitable technologies (Kingsley, et al., 2021).

Globalization's impact on economic growth in Nigeria has been the subject of a variety of empirical research. Some have found a positive association between globalization and growth, while others have found a negative one (Ulucak, 2019). Therefore, considering the inconclusiveness in the previous studies, it becomes important to evaluate the impact of globalization on Nigeria's economic growth holistically, taking into account the differences in the short run and long run effects as well as methodological innovation (ARDL with bounds test). These constitute the gap in literature this study wants to fill.

### **1.3 Objectives of the Study**

The main objective of this study is to examine the effect of globalization on economic growth in Nigeria. Specifically, the study investigates the distinction between the long run and short run effects of globalization on economic growth. It also examines the results of ARDL cointegration approach in looking at the effects as different from other methodologies adopted by other authors in the subject matter.

### **1.4 Hypothesis**

**H<sub>0</sub>:** Globalization does not have statistically significant long and short run ARDL cointegration effects of on economic growth in Nigeria.

## **2. Theoretical Review**

The study reviews of the theories posing a relationship between globalization and economic growth. These are Rodrik's Hyper-Globalist theory of globalization, theory of innovation and the Heckscher-Ohlin model and the Stolper-Samuelson theorem

### **2.1 Rodrik's Hyper-Globalist Theory of Globalization**

According to Rodrik's hyper-globalist theory, economic interconnectedness and integration between nations have increased to the point that national borders are no longer significant. According to the thesis, globalization's forces, such as international investment, trade, and information flows, are so strong and widespread that they are transforming the world into a single global system without major opposition from national institutions or governments. According to hyper-globalists, a fully linked global economy enables more effective resource allocation, heightened competition, and expanded market accessibility for companies. For nations that actively engaged in the global economy, this may lead to higher rates of economic growth and prosperity. This provides a greatest opportunity for a country like Nigeria in their effort to achieve growth. Nigeria with the largest population in Africa has the potential of active participation in trade, foreign capital attraction and technology transfer in the world integration and employ the resources to increase its output capacity and economic growth level.

## **2.2 Theory of Innovation**

A fundamental idea in economics and management, innovation theory has its origins in the writings of a number of significant economists and academics, with Joseph Schumpeter playing a key role. The Austrian-American economist Joseph Schumpeter was credited with developing the notion. By highlighting the dynamic role of innovation in propelling economic advancement, Schumpeter's thesis challenged conventional wisdom in economics. He maintained that the main driver of economic development is innovation, especially disruptive innovation brought about by entrepreneurs. Schumpeter's observations established the groundwork for comprehending how innovation may revolutionise economies and civilisations.

The digital economy has globalized competition. Companies can now access international markets with relative ease, and Innovation Theory underscores the importance of competition in driving innovation. In the digital age, companies must continually innovate to gain a competitive edge, resulting in a dynamic global economic landscape. This globalization of competition accelerates technological advancements and benefits consumers worldwide by offering a wider array of innovative products and services. Nigeria has been an active participant and beneficiary of technological inflows in the area of digital trade, production technology as well as money and banking transactions innovations which have led to improvement in both private and public sectors of the Nigerian economy.

## **2.3 The Heckscher-Ohlin model and the Stolper-Samuelson Theorem**

Trade is one of the main factors of globalization and it has the potential to bring about distributional income changes within countries. The Heckscher-Ohlin model (H-O model) gives an explanation on international trade patterns between countries given the relative factor endowments. It proposes that countries specialize in the goods in which they are more efficient and they have a comparative advantage, depending on the allocation of resources.

As the theoretical implications of the H-O model suggest, a country will export goods produced intensively using the abundant factors of production and import goods produced using scarce factors of production. Therefore, trade increases the real return to the factor that is relatively abundant in each country and it lowers the real return to the other factors. An extension of the model, known as the Stolper-Samuelson theorem, relates the changes in prices of goods to the changes in the return to factors of production. It states that trade liberalization raises the demand

for exported goods and therefore their price, which in turn increases the return to the abundant factor in countries involved in the trade. At the same time, it decreases the return to the scarce factor as its demand falls.

Trade openness increases the relative price of abundant factors to scarce factors in each country because abundant factors are used intensively in the production of exported goods as they have a comparative advantage. Therefore, trade rises the income of factors of exported goods and lowers the income of factors of imported goods. As a result, if human capital is industry-specific, wages of workers in exporting sectors experience a rise while workers in importing sectors tend to see their wages decrease. Nigeria is a labour endowed nation with one of the largest population in the world. The country is a net exporter of manufactured goods as this provides the teeming population with wide varieties of goods availability at relatively cheaper prices. At the same time, agriculture, which employs a vast majority of the population, and natural resources, largely crude oil production, provide the country with enormous export revenue to cater for the resource needs of the country's growth efforts. Global trade has thus been of greatest importance to Nigeria.

## **2.4 Empirical Studies**

Several empirical studies have been conducted on the relationship between globalization and economic growth in many countries of the world. Some came up with positive influence of globalization on growth while some obtained negative relationship. The results of some of these studies indicated a non-significant effect of globalization on growth.

Heimberger (2021) applies meta-analysis and meta-regression methods to a dataset consisting of 5542 estimates on globalization–growth nexus in a 516 data point primary studies. The result shows a bias in favour of positive growth effects of globalization. After correcting for this bias, the size of the effect of economic globalization on output growth is more than half, but it remains positive. The growth-promoting effect, however, is due to trade globalization, as we cannot reject the hypothesis that the impact of financial globalization on growth is, on average, zero. The meta-regression results also reveal that the growth effects of economic globalization have varied over time, and that education and institutions serve as significant moderator variables Akpan, Francis, Peresuo & Francis (2022) carry out a research on globalization and economic growth in Nigeria between the period 1991 and 2019. An examination of key aspects of

globalization and how they affect Nigeria's economic growth is the aim of this study. The study uses secondary data from the World Bank's 2021 database and the Central Bank of Nigeria's 2019 Statistical Bulletin. The study uses the Ex Post Facto research design. Real Gross Domestic Product (RGDP) is the dependent variable in descriptive and regression analysis and globalization, as exemplified by the exchange rate, trade openness, external reserves, remittances, and foreign direct investment, is the independent variable. The findings indicate that while trade openness has a negative impact on economic growth, the exchange rate, external reserve, migrant remittances, and foreign direct investment all have favourable effects. In summary, the overall result indicates that globalization supports and drives economic growth in Nigeria.

*Ajayi et al (2023) empirically assesses the effects globalization on economic growth of Nigeria. This study specifically highlights the ways in which globalization impacts Nigeria's economic development. The study empirically examines whether economic globalization and Nigeria's economic growth are related in the short and long terms. The study looks at how much Nigeria's economic growth is impacted by social and political globalization. The relationship between general globalization, economic globalization, social globalization, political globalization, and economic growth in Nigeria is examined using Autoregressive Distributed Lags (ARDL) models. The study uses annual data series from 1988 to 2022 that were obtained from the Swiss Economic Institute database and the World Development Indicators (WDI) database. The study findings reveal that general globalization, economic globalization, social globalization and political globalization have a significant positive effect on economic growth in Nigeria. The results supports a positive globalization-economic growth relationship as obtained by Heimberger (2021) and Akpan, et al (2022).*

While the above results claims positive globalization-growth relationship, some studies findings are negative. Yusuf & Oluwaseun (2022) conducted to determine whether globalization, economic growth, and income inequality in Nigeria were related. To draw logical and statistical conclusions about Nigeria's performance in the face of globalization, the Auto-Regressive Distributed Lag (ARDL) Technique was utilised. Additionally, Nigeria's degree of inequality (disparity) was assessed using the Lorenz curve before, during, and after SAP and Democratic Rule. According to the ARDL assessment, globalization has a statistically significant but non-increasing impact on Nigeria's economic growth. In addition, the Lorenz curve showed that

inequality in Nigeria has been increasing over time. The study concludes that, because globalization is inescapable and hence creates economic disparity.

Feridun, Olusi & Folorunso (2006) looks at how Nigeria's economic growth has been impacted by globalization. Error Correction Modelling (ECM), an econometric approach, was used for the analysis, which took place between 1986 and 2003. The outcome shows that all other conventional factors that determine economic growth, including debt series, public and private investment, and trade openness and financial integration, are non-stationary, as are measurements of economic integration. They are indeed I(1) series. The study also demonstrates that trade openness significantly boosted Nigeria's economic growth. At the ten percent significance level, financial integration has a negative and insignificant effect on the economy. The study comes to the conclusion that if Nigeria's economy were fully integrated with the rest of the globe, it would gain more from globalization. The result is in line with findings of Yusuf & Oluwaseun (2022).

Kingsley, Toyosi & Babatunde (2021) examine the relationship between globalization, economic growth, and income disparity in Nigeria from 1986 to 2019 using the Autoregressive Distributed Lag (ARDL) Technique. Their findings suggest that globalization has a significant negative impact on economic growth.

It is clear from the summary of the empirical review presented above that the views of the existing studies on the relationship between globalization and economic growth are mixed and contradictory, with globalization having diverse effects on economic growth. Some of the studies are of the opinion that globalization do not cause economic growth, while some studies are of the opinion that globalization bring about economic growth and development. For instance, some studies reported positive linear relationship, some reported negative and significant relationship between globalization and economic growth. These studies failed to decomposed globalization effect into long and short run effects so as to see the time horizon of the effects. The inconsistency in the findings from these studies could also be attributed to differences in methodology adopted, differences in data choice, and variation in the time period of the studies. This is however an important reason to further the empirical studies on the relationship between globalization and economic growth especially in the case of Nigeria.

### **3. Methodology**

The study adopts neoclassical theory as its theoretical framework in determining the impact of globalization on economic growth in Nigeria. It sources time series annual data for the period 1993 to 2023 from Central Bank of Nigeria's statistical Bulletin and World Bank Development Indicators. The model for the study is specified in line with Kingsley, Feridun, Olusi & Folorunso (2006) and Toyosi & Babatunde (2021) which relates the growth rate of Gross Domestic Product as a function of the growth rate of capital, growth rate of labour force, globalization index, trade openness, foreign direct investment and remittances. the model is specified as:

$$GDPGR_t = f(CAPGR_t, LABFORGR_t, GLOB_t, OPN_t, FDI_t, REM_t) \dots\dots\dots(i)$$

The linear form of the above model can be expressed in econometric form as specified as:

$$GDPGR_t = \beta_0 + \beta_1 CAPGR_t + \beta_2 LABFORGR_t + \beta_3 GLOB_t + \beta_4 OPN_t + \beta_5 FDI_t + \beta_6 REM_t + \epsilon_t \dots\dots(ii)$$

where GDPGR, the dependent variable, is the growth rate of gross domestic product, CAPGR is the growth rate of capital, LABFORGR is the growth rate of labour force, GLOB is globalization index, OPN is trade openness, FDI is the foreign direct investment, REM represents remittances and  $\epsilon$  is error term,  $\beta_0$  is intercept,  $\beta_1$  to  $\beta_6$  are the coefficients of the independent variable.

Equation (ii) relates globalization and economic growth with one another. The parameters of the equation are estimated and the various coefficients are analysed. The a priori expectation hypothesizes that capital stock, labour force and globalization have positive effects on economic growth. The growth theory stated that growth occurs from the accumulation of physical capital, likewise labour theory pre-supposes that the size and quality of the labour workforce are key factors in the economy's expansion of a nation, the higher the quantity and quality, the higher is the expected growth of the economy. Globalization is also expected to increase the level of a country's output in accordance with the innovation theory. As the nation is exposed to international activities, their productivity is anticipated to grow leading to rise in the economy's output. In essence,  $\beta_1$ ,  $\beta_2$ , and  $\beta_3 > 0$

The international trade theory as well as the remittance theory advocate that trade variables including remittances and capital inflows also have positive links with economic growth. However, studies have shown that the relationship can also be negative in that in the case of trade openness

depending on the aggregates of exports and imports, hence trade openness can be positive or negative. Therefore  $\beta_5, \beta_6 > 0$  and  $\beta_4 > /< 0$ .

### 3.1 Estimation Technique

The estimation technique adopted is the autoregressive distributed lag (ARDL). This technique has been found to be more efficient when the variables of a model exhibit different stationary properties particularly a combination of I(0) and I(1) (Agya, Ojiya and Samuel, 2017; Nagawa, Wasswa and Bbaale, 2020). ARDL technique has the advantage in its appropriateness for small samples ( $n = 30$ ). There are also some diagnostic and robustness tests beyond standard serial correlation for example **heteroscedasticity, and stability checks** with explicit figure references, all of which make the technique more appropriate for estimating the effect of globalization on economic growth. The empirical analysis involves estimating directly the long-run and the short-run variants of equation (ii). An ARDL model of the economic growth equation is therefore specified as follows

$$\begin{aligned} \Delta GDPGR_t = & \alpha_0 + \sum_{i=0}^n \alpha_{1i} \Delta GDPG_{t-i} + \sum_{i=0}^n \alpha_{2i} \Delta CAPGR_{t-i} + \sum_{i=0}^n \alpha_{3i} \Delta LABFORGR_{t-i} + \\ & \sum_{i=0}^n \alpha_{4i} \Delta GLOB_{t-i} + \sum_{i=0}^n \alpha_{5i} \Delta OPN_{t-i} + \sum_{i=0}^n \alpha_{6i} \Delta FDI_{t-i} + \sum_{i=0}^n \alpha_{7i} \Delta REM_{t-i} + \\ & \delta_1 GDPGR_{t-1} + \delta_2 CAPGR_{t-1} + \delta_3 LABFORGR_{t-1} + \delta_4 GLOB_{t-1} + \delta_5 OPN_{t-1} + \\ & \delta_6 FDI_{t-1} + \delta_7 REM_{t-1} + u_t \end{aligned} \quad (iii)$$

where  $\Delta$  denotes the first difference operator,  $\alpha_0$  is the drift component,  $u_t$  is the usual white noise residuals.

The ARDL bounds testing approach to cointegration depends on the tabulated critical values by Pesaran et al. (2001) in order to take decision about cointegration among variables. The null hypothesis of no cointegration is  $\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$  in the model while the alternative hypothesis of cointegration among variables is  $\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq 0$ . Next, is to compare the calculated F-statistics with lower critical bound and upper critical bound by Pesaran *et al.* (2001). There is cointegration among variables if calculated value of F-statistics is more than upper critical bound. If lower critical bound is more than computed F-statistics then hypothesis of no cointegration may be accepted. Finally, if calculated F-statistics is between lower and upper critical bounds then decision about cointegration is inconclusive.

The error correction version of ARDL model pertaining to the variables in equation 3.3 is specified as follows:

$$\Delta GDPGR_t = \alpha_0 + \sum_{i=0}^n \alpha_{1i} \Delta GDPGR_{t-i} + \sum_{i=0}^n \alpha_{2i} \Delta CAPGR_{t-i} + \sum_{i=0}^n \alpha_{3i} \Delta LABFORGR_{t-i} + \sum_{i=0}^n \alpha_{4i} \Delta GLOB_{t-i} + \sum_{i=0}^n \alpha_{5i} \Delta OPN_{t-i} + \sum_{i=0}^n \alpha_{6i} \Delta FDI_{t-i} + \sum_{i=0}^n \alpha_{7i} \Delta REM_{t-i} + \gamma ECM_{t-1} + u_t \quad (iv)$$

where  $\gamma$  is the speed of adjustment parameter and ECM is the residuals that are obtained from the estimated cointegration model of equation (iv).

#### 4.0 Results and Discussion

The study starts the analytical procedure with preliminary examination of the statistical properties of the variables used for the analysis since the data are time series data. Augmented Dickey Fuller (ADF) test is used to test for unit-root. The table below presents the results of the unit root tests.

**Table 1: ADF Unit root/stationarity test**

Variables	t-Statistic		Prob	Remark
	Level	1 <sup>st</sup> Difference		
<b>GDPGR</b>	-2.874729	-7.347835*	0.0000	I(1)
<b>CAPGR</b>	-4.148489*	-	0.0031	I(0)
<b>LABFORGR</b>	-1.025562	-3.130607*	0.0357	I(1)
<b>GLOB</b>	-3.419512*	-	0.0181	I(0)
<b>OPN</b>	-2.171789	-5.231343*	0.0002	I(1)
<b>FDI</b>	-2.429895	-6.999530*	0.0000	I(1)
<b>REM</b>	-1.754901	-5.384808*	0.0001	I(1)

Note: The MacKinnon (1996) 5% critical value = -2.9224 for level stationary and -2.9238 for first difference stationary, \* denotes the rejection of the hypothesis of a unit root

Augmented Dickey Fuller results show that the t-statistics for growth rate gross domestic product, growth rate of the labour force, trade openness, foreign direct investment, and remittances are -7.3478, -3.1306, -5.2313, -6.9995 and -5.3848 at first difference, all of which are negative greater than the MacKinnon(1996) 5% critical value of -2.9238. This means that they are just stationary at first difference at 5%. It can be seen from the table that all their probability values are also less than 0.0500, to reject the null hypothesis of non-stationary. Growth rate of capital accumulation and globalization index on the other hand, have level t-statistics of -4.1485, and -

3.4195 which are more negative greater than the 5% critical value of -2.9224 hence they are stationary at level at the same 5% significant level.

The optimal lag length for the model was determined before proceeding to other tests of the statistical properties of the variables. The result of the selection criteria shows that lag 2 should be adopted as more of the results of sequential modified LR test, Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC) and Hannan-Quinn Information Criterion (HQ) produce a unanimous decision suggesting that lag 2 is optimal. The study therefore adopted lag 2 mainly to improve the degree of freedom.

#### **4.1 Results of Cointegration Test**

After the issues of stationarity and optimal lag length have been settled the study proceeds to conduct cointegration test to ascertain if there is a long run relationship between the study variables. The tables below present the results of ARDL bound approach to co-integration.

<b>Test Statistic</b>	<b>Value</b>	<b>K</b>
F-statistic	5.852774	6

<b>Critical Value Bounds</b>		
<b>Significance</b>	<b>I(0) Bound</b>	<b>I(1) Bound</b>
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

**Source:** **Author's Computation (2025)**

The results of the bound test reveals that the F- statistic tabulated value is 5.85 for the relationship among economic growth, globalization and other control variables, which is greater than Perasan (intercept and no trend) critical Upper Bound value of 3.61 and lower bound value of 2.45 at 5% significance level. This thus establish long run relationship among variables in the model.

#### 4.2 Long Run ARDL Regression Results

After the existence of long run relationship among variables has been established, the study proceeds to estimate the long and short run parameters of the variables. Table 4 presents the results of the estimated long-run growth equation. As shown in table 4, globalization index coefficient is positively signed and significant at 5% critical level, showing that it stimulates economic growth in the long run. Apart from globalization index, the growth rate of capital, foreign direct investment and remittances are also found to be significant in their effects on economic growth. While foreign direct investment and remittances exact positive influences on economic growth, capital if found to be negative

**Table 4: Long-run Regression Results**

<i>Dependent Variable: GDPGR</i>				
<i>Variables</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-statistics</i>	<i>Prob.</i>
C	1.808863	24.531180	0.073737	0.9419
CAPGR	-0.114122*	0.052675	-2.166511	0.0457
LABFORCEGR	-5.362976	2.935454	-1.826967	0.0820
GLOBE	1.127473*	0.504736	2.233787	0.0401
OPN	0.161789	0.112934	1.432596	0.1667
FDI	5.682217*	1.481124	3.836421	0.0015
REM	0.789411*	0.197950	3.987940	0.0011
R-squared	0.581361	D-W	2.103080	
F. Stat.	3.645315	F.Prob	0.008231	

**Source :** Authors' computation, 2025: \* denotes that the variable is significant at 5% level.

#### 4.3 Short Run Relationship

The study proceeds to find the dynamic equilibrium between the short run and the long run relationship, the error correction model (ECM) is estimated and the result is presented in the following tables 5 below. The Error Correction Term (ECT) indicates the speed of adjustment from disequilibrium to equilibrium in the following year. The sign of ECT is negative and statistically significant in economic growth models as expected. The economic implication of this result is that about 61.08% of the discrepancy between the long run and short run dynamics is

corrected within the following year, revealing a high speed of adjustment between the economic growth and the independent variables.

**Table 5: Short-run Regression Results : FCPI = ODA**

<i>Variables</i>	<i>Dependent Variable: DGDPR</i>			
	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-statistics</i>	<i>Prob.</i>
D(CAPGR)	0.014324	0.039502	0.362618	0.7205
D(LABFORCEGR)	0.613135*	0.147232	4.164407	0.0006
D(GLOBE)	13.58778*	4.577649	2.968288	0.0082
D(OPN)	-0.040993*	0.012022	-3.409881	0.0031
D(FDI)	-0.021965*	0.009850	-2.229899	0.0387
D(REM)	-0.217438	0.288032	-0.754910	0.4587
CointEq(-1)	-0.610821	0.198979	-3.069779	0.0058

**Source:** Authors' computation, 2025: \* denotes that the variable is significant at 5% level.

The table also shows that in the short run, globalization index is significant and positive, this indicates the importance of globalization in improving the economy of Nigeria in the long and short run. In the short run, the growth rate of labour force is significant unlike in the long run, it is equally positive in sign. This implies that though labour force is not actually influencing the economic growth in the long run it has its effect in stabilizing disequilibrium in the short run. Trade openness and foreign direct investment are also found to be significant though they are negative.

#### **4.4 Diagnostic Tests**

Various diagnostic tests are conducted to ensure goodness of fit of the model. These tests include serial correlation test, normality test, heteroscedastic test and stability test. It also includes the Ramsey reset test for model specification. The results are presented in table 6 below. As it can be seen from the table, diagnostic tests suggest that the analysis results from the model is free from serial correlation with F stat of 1.84, a probability value of 0.2945 in the model.

The residuals are normally distributed with Jacque-Bera statistic of 2.45 (probability value of 0.2293). The results are also found to be heteroscedastic free with Breusch-Pagan-Godfrey F-statistic of 0.90 (a probability value of 0.5307). Considering the model specification, the model

ramsey reset test shows a coefficient of 3.84 with a probability value of 0.0641, supporting a well specified model. For the stability of the models CUSUM and square of CUSUM tests are examined, it can be observed from their diagrams below, that the plot of CUSUM and square of

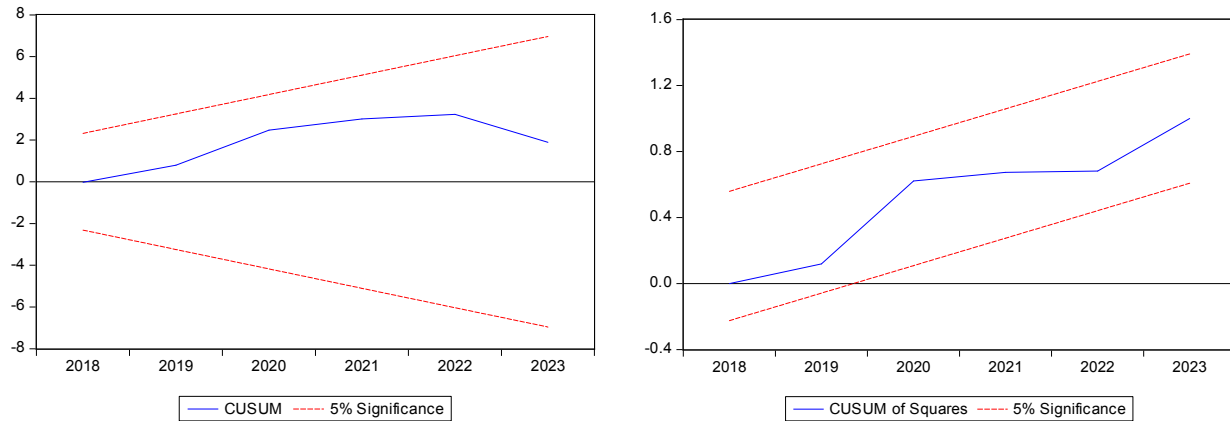
**Table 6: Diagnostic Tests**

<i>Variable</i>	<i>F - value</i>	<i>Prob.</i>
Serial Correlation LM Test	1.840879	0.1859
Normality (Jarque-Bera Stat)	2.45317	0.2293
Heteroscedasticity	0.904772	0.5307
Ramsey Reset Test	3.841456	0.0641

**Source:** Authors' Computation, 2025.

CUSUM fall within critical bound of 5% in each case confirming the long run association among the variables as well as stability of the coefficients in the models.

**Figure 1: The Model's Cusum and Square of Cusum**



**Figure 1: Cusum and Square of Cusum for Growth Model**

### 5.0 Conclusion and Recommendation

In this study, an examination of the effect of globalization on economic growth in Nigeria was carried out. An autoregressive distributed lag model was developed and estimated. The long run

results revealed that globalization plays an important role in economic growth in Nigeria. This in line with neoclassical postulation indicating that technology within and imported from outside the country is one of the pathways to economic growth in a country. The results also affirm the Rodrik's Hyper-Globalist and Schumpeter theories. Likewise in the short run its coefficient is found significant. The results also reveal that capital growth rate, labour growth rate foreign direct investment and remittances are all contributing to the improvement of the Nigeria economy at either at short or long run.

This study recommends that liberalization should continue to be the nation's external policy and government should continue to attract more foreign capital inflows into the country so as to maximize the nation's global advantage. The individuals as well as the government should also utilize technical and global opportunities presented by globalization to strengthen the country's productive capacity, leveraging on productive use of remittance inflows and other forms of capital inflows.

### **5.1 Limitation of the Study**

This study did not exhaust all the economic globalization aspects. It only factors in the significant variables of economic globalization that impact economic growth. It means that other variables which affect economic globalization are not considered in the study. The extension of the study to cover financial globalization as well as political globalization cannot be factored in due to time and space dimension.

### **5.2 Suggestions for Further Studies**

The study suggests that future research should disaggregate the globalization analysis into economic, financial and political globalization to determine which type of globalization impact more on economic growth and development in Nigeria.

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