

Trade Openness and Economic Growth Nexus: The Role of Bank Credits in Nigeria

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Abstract

It has been argued by economists that the more open economies tend to grow faster than the closed ones. This is because trade openness promotes efficiency in resource allocation, thereby stimulating local and international competition. This study empirically investigates the role of private sector credit in determining trade openness and economic growth nexus in a developing country such as Nigeria, using time series data spanning from 1981 to 2020. To achieve the objective, the Augmented Dickey-Fuller (ADF) test was conducted to check the stationarity, which was a mix of orders $I(1)$ and $I(0)$. The Auto-Regressive Distributed Lag (ARDL) test and the Error Correction Mechanism were also employed to check the relationship among the variables. The study concludes that trade openness, when moderated by a reduction in bank credit will stimulate economic growth, while reducing both Gross fixed capital formation and exchange rates. In the short run however, exchange rate and Gross fixed capital formation both reduce economic growth. The study therefore recommends that governments at all levels should work to increase gross fixed capital formation in order to spur investment in export commodities. Also, commercial banks should give single digit credits to investors in export-led industries.

Key words: Trade openness, economic growth, bank credit, gross fixed capital formation, exchange rate

INTRODUCTION

Economists have traditionally It has been argued traditionally by economists that economies that are more opened grow faster than the ones that are closed. Countries that are opened to foreign trade normally benefit because they can export more of their locally made goods and services as also buy more of foreign goods. Trade openness helps to promote efficiency in resources allocation. It also helps to facilitate the transfer of knowledge and technical progress, by promoting competition locally and internationally (Chang, et al. 2005). Since the 1990s, most Developing countries in the 90s regarded trade as an necessary component of economic reform; nevertheless, trade expansion is impossible without credit from financial institutions. Over the period 1950 through 1998, countries that have liberalized their trade regimes have experienced, on the average, a rise in annual growth rates of 1.5% compared to pre-liberalized times (Wacziarg and Welch, 2003). In the neo-classical analysis of openness and growth, trade

can increase the rate of technological progress and, hence, productivity growth, either by expansion of the market for output or the market for input (Dowrick and Golley, 2004).

The correlation that exists between trade policies and economic growth has been the subject of severe empirical investigation over time. Rodrik and Rodriguez (2000) asserted that the nature of the relationship between trade policy and economic growth remains very much an open question. The issue has not been settled whatsoever on empirical grounds. In line with this assertion, Rodrik (1997), argued that there are clear restrictions to what trade policy, or outward orientation, can achieve. According to him, economic growth depends majorly on investment in human capital, infrastructures, and institutions of macroeconomic management, which take time to realize. Allowing an economy to foreign trade has never be a quick solution that can be taken for these harder tasks. Rather, excessive emphasis on trade liberalization can boomerang if it diverts the scarce energies and political resources of government leaders from the fundamentals of growth. Oskam et al. (2004) observed four arguments that are considered not to be favourable for open trade policies: (i) Inadequate institutions, governance, and infrastructure hamper the positive effects of outward-oriented policies; (ii) The "infant industry" argument: the development of non-agricultural sectors in the growth process of poor countries or LFAs is crucial, not only to increase national or local income but also to absorb the migrating rural labour force, whereby it contributes to poverty alleviation; (iii) Trade-driven development paths increase relative income differences and make LDCs even less competitive—countries with relative open trade policies make clear that a trade-driven path is insufficient to develop less developed countries, a trade-driven path is insufficient to develop even in situations where infrastructure and institutions are functioning rather well.

The economy of Nigeria has always drawn global attention, both in the past and in recent times. This development may be attributed to the size of the Nigerian economy and the strategic importance of the country as an oil-producing nation. It is a truism that the Nigerian economy is a mono-economy and trade-dependent. The country highly depends on the export of crude oil to finance the government budget and as a source of foreign earnings. 65% of the government's total revenue is contributed by the oil and gas sector contributes. With a production capacity of Nigeria is Africa's largest producer of oil and the 13th largest oil-producing country in the world based on the production capacity of 2.5 million crude oil barrels per day (Nigerian Extractive Industries Transparency Initiative, NEITI). This overdependence on oil and gas has made the country susceptible and vulnerable to global oil price volatility, with great consequences for the macroeconomic performance of the country. Yet, Nigeria is highly known for corruption, poor human capital, rising unemployment, inequality and rising poverty.

Although there has been an array of empirical literature relating to the aforesaid relationship, For instance, the studies by Hya and Lau (2014), Talur and Ali (2014), Karrias and Georgios (2018), and Malefane and Odhiambo (2018) reported the presence of a positive relationship between trade openness and economic growth. It was concluded that through an empirical study that trade openness has an unstable effect on economic growth amid a negative impulse, as was reported by Hye (2012), However, none of these studies took into account the role of private sector credit in determining trade openness and economic nexus in a developing country such as Nigeria. Hence, a gap in the literature existed, and to close that gap, this study

investigated the relationship between trade openness and economic growth in Nigeria by examining the role of bank credit to the private sector from 1981 to 2020.

LITERATURE REVIEW

Conceptual Literature

Trade Openness

Trade openness is the level of reliance of a country or an economy on foreign trade and financial flows (Romer, 1986). According to Edwards (1998), defines trade openness as the volume of a country's traded sectors in relation to total output. It assesses a country's international competitiveness in the global market (Gwartney, et al. 2001). When there is an increase in trade openness, it facilitates greater integration into global markets. Trade openness is seen to include imports and exports taxes as well as explicit non-tariff distortions of trade, or in varying degrees of broadness, to cover such matters as exchange-rate policies, domestic taxes and subsidies, competition and other regulatory policies, education policies, the nature of the legal system, the form of government, and the general nature of institutions and culture (Baldwin, 2002).

Economic Growth

Economic growth is defined as the increase in the production of goods and services over a specific period. It is an increase in an economy's capacity to produce goods and services from one period of time to the other. It is a positive change in the output, or production of a country or an economy. Considering the above description, it turns out that the only way of ascertaining economic growth would be to calculate it as a numerical value. Therefore, economic growth can be calculated as a percentage increase in the GDP of a given economy. However, the above calculation in itself may not reflect the real situation in the given economy. In the context of this study, economic growth is defined as the increase in the real output of Nigeria measured in monetary terms. Economic growth is measured by the Gross GDP in Nigeria, economic growth is the rise in the gross domestic product as the major quantitative measure of production for one year, whereas economic development includes both quantitative and qualitative improvements in a country's economic position (Ivic, 2015).

Bank credit:

The term bank credit means the amount of credit available to a business or individual from a banking institution in the form of loans. Bank credit, therefore, is the total amount of money a person or business can borrow from a bank or other financial institution. A borrower's bank credit depends on their ability to repay any loans and the total amount of credit made available to lend by the banking institution. Therefore, bank credit is the total amount of funds a person or business can borrow from a financial institution for the purpose of executing a business.

Theoretical Literature:

Loanable Fund Theory

The loanable fund as a concept in economics is crucial to the theory of interest rates. It explains how the demand for, and supply of credit decides the financial market interest rate. Bamocks et al (1998) defined loanable fund as the money that is available for lending to individuals,

government, and institutions in the financial markets. It comprises of current savings of private individuals and firms, discharging and an increase in money supply made available by the actions of depository institutions, governments, and monetary authorities in the financial markets. Thus, loanable funds represent a flow of money into the financial markets for loans of all kinds. According to Pearce (1992), loanable funds or credit is strictly the term used for funds that are available for lending in the money and capital markets and is usually considered within the context of the theory of interest rate. According to Uremadu (2005), loanable funds result out of planned and mobilized savings; accumulated savings when invested, translate into the capital formation which is a stock of real productive assets. Capital formation is the background for real economic growth and development of developed economies (Jhingan, 1998). The modern theory of loanable funds, in a simple version, explains the determination of interest rate in terms of the demands for, and supply of credit. The relationship between financial development and economic growth has extensively been studied by researchers, especially for many developing countries.

The Export-Led Growth (ELG) Hypotheses

The export-led growth hypothesis is at least as old as the classical school, as both Adam Smith and David Richards supported it (Richards 2001). It is noteworthy to find out whether export growth can enhance growth to help curtail the payment deficit and to definitely establish whether there is any causal relationship between exports and economic growth in countries such as Nigeria. Idowu (2005), asserted that the export-led growth (ELG) hypotheses stipulate the expansion and promotion of exports as an important factor in nurturing long-run economic growth. This hypothesis has been put forward as the rationale for an efficient alternative to import substitution, which is an inward-looking strategy of development. Previously, developing countries adopted inward-oriented development strategies for enhancing industrial development, and that would translate into growth and development, which are intended to replace imported manufactured goods and merchandise with domestically produced goods in order to conserve foreign exchange and promote development.

Empirical Literature

Tyokosu, & Abakpa, (2023), examined the relationship between trade openness and economic growth in Nigeria from 2000 to 2020. Using secondary data analyzed with SmartPLS 12.1 software. Findings of the study reveal that there is no significant relationship between export and both gross domestic product and per capita income in Nigeria.

Ejike, et al. (2018) examines the effect of trade liberalization on economic growth in Nigeria, using the GDP as a proxy for economic growth. The data used in the study ranged from 1980 to 2015. Ordinary Least Squares (OLS) was used in estimating the effect of trade liberalization on economic growth in Nigeria with a view to ascertaining whether a cointegration between the two and also in verifying for structural change that may have occurred within the implementation period of a free trade regime that started in 1986. Data for the study was sourced from the World Development Indicators (WDI) of the World Bank and the Statistical Bulletin of the Central Bank of Nigeria (CBN) in various issues. Results indicate that liberalisation has had a positive and significant effect on economic growth in Nigeria, with

evidence of a long-run relationship. Similarly, strong evidence was found to support the structural change that took place in 1986 when free trade policy was adopted.

Keho and Wang (2017) investigated the impact of trade openness on economic growth in Cote d'Ivoire over the period 1965–2014 in a multivariate framework including capital stock, labor, and trade openness as regressors. It uses the autoregressive distributed lag bounds test for cointegration and the Toda and Yamamoto Granger causality tests. The findings show that trade openness boosts economic growth in both the short and long run. Furthermore, they reveal a positive and strong complementary relationship between trade openness and capital formation in promoting economic growth.

Tahir and Ali (2014) surveyed the available empirical literature on the relationship between trade openness and economic growth. The study was motivated by persistently conflicting results, mostly on the empirical side, which have caused confusion among researchers and policymakers regarding the trade-growth relationship. Overall, this paper concludes that the available literature provides an affirmative answer to the question of whether or not trade openness causes economic growth. However, various issues still exist in the current literature that need an appropriate approach to handle them in order to establish an explicit relationship between trade openness and economic growth.

Hye (2012) investigated the long-term effect of trade openness on economic growth in the case of Pakistan from 1971 to 2009. A composite trade openness index is developed by using principal component analysis (PCA) and is employed in the Johansen cointegration, autoregressive distributed lag (ARDL) approach to cointegration, dynamic OLS, and variance decomposition. The results suggest the existence of a negative and significant association between trade openness and economic growth. But new evidence provided by this study indicates that there is a strong complementary relationship between human capital and the trade openness index in terms of enhancing real GDP.

Karras and Georgios (2008) investigate the issue using two panel data sets: one of 56 countries covering the period 1951–1998 and another of 105 countries over the period 1960–1997. The results show that the effect of trade openness on economic growth is positive, permanent, statistically significant, and economically sizable. This effect is robust across the two data sets used and a number of different estimation methods and lag lengths. Specifically, it is shown that increasing trade (exports plus imports) as a fraction of GDP by 10 percentage points permanently increases the real growth rate of GDP per capita by 0.25 to 0.3 percent.

METHODOLOGY

Research Design:

Research design is generally categorised into qualitative and quantitative research designs depending on whether or not the research is purely descriptive (explanatory) or quantitative aimed at establishing a causal effect or relationship. This study will combine both descriptive and quantitative methods. The quasi-experimental approach is justifiable as model variables cannot, on any account, be held constant as in a laboratory experiment to explain changes in the dependent variable.

Model Specification:

This study adopted the modified version of Olaifa, et al. (2013) model. This particular study used time series data covering the period between 1970 and 2012 in investigating the effect of trade liberalization on economic growth in Nigeria. Variables used for the study are, openness, foreign direct investment, exchange rates and total population.

The ordinary least squares regression estimated was presented as:

$$GDP_t = b_0 + b_1OPN_t + b_2FDI_t + b_3EXP_t + b_4IMP_t + u_t \quad (3.1)$$

Where:

GDP_t = Gross Domestic Product

OPN = Openness (Import + export/GDP),

FDI = Foreign Direct Investment

EXP = Export,

IMP is Import,

u_t = the residual terms.

A priori, $b_1 > 0$, $b_2 > 0$, $b_3 > 0$ and $b_4 > 0$.

Whereas, the modified version of the study that captured the Nigeria economy made use of real gross domestic product as the dependent variable that capture the Nigeria economy. The explanatory variables in the model are trade openness (TOP) foreign direct investment (FDI), exchange rate (EXR) and credit to the private sector (CPS) respectively.

The functional form of the model is expressed as thus:

$$RGDP = F(TOP, GFCF, EXR, CPS)$$

The mathematical form of the equation is expressed as:

$$RGDP = \alpha_0 TOP_t^{\beta_1} GFCF_t^{\beta_2} EXR_t^{\beta_3} CPS_t^{\beta_4} \mu_t$$

The econometrics form of the model is expressed as:

$$RGDP = \alpha_0 + \beta_1 TOP_t + \beta_2 GFCF_t + \beta_3 EXR_t + \beta_4 CPS_t + \mu_t$$

Where:

RDGP_t = Real Gross Domestic Product at time t

TOP_t = Trade openness at time t

GFCF_t = Gross Fixed Capital Formation at time t

EXR_t = Exchange Rate at time t

CPSt = Credit to the private Sector at time t.

The apriori expectation is that, $\beta_1, \beta_2, \beta_4 > 0$ while $\beta_3 < 0$.

Data Analysis Method

. Unit Root Test

| s/n | Variables | LEVEL | | IST. DIFFERENCE | | ORDER |
|-----|-----------|-----------|-------------|-----------------|-------------|-------|
| | | T.Stat. | Crit. Value | T.Stat. | Crit. Value | |
| 1 | LOG(RGDP) | -0.207605 | -3.529758 | -5.571358 | -3.533083 | I(1) |
| 2 | LOG(FDI) | -3.144897 | -3.529758 | -9.834475 | -3.533083 | I(1) |
| 3 | LOG(CPS) | -0.987591 | -3.529758 | -5.649447 | -3.533083 | I(1) |
| 4 | EXR | -1.984896 | -3.529758 | -6.009612 | -3.533083 | I(1) |
| 5 | TOP | -1.813015 | -2.938987 | -8.687213 | -2.941145 | I(1) |
| 6 | LOG(GFCF) | -4.485786 | -3.529758 | - | - | I(0) |

The series were subjected to a stationarity test using the augmented dickey-Fuller test (ADF) to determine the characteristics of the time series data used for the study. The unit root test shows that almost all the variables were stationary after they were subjected to first differencing, except for gross fixed capital formation. This implies that gross fixed capital formation was reverting to its mean value or was stationary at its level. Hence, we conclude that there is a combination of variables of mixed order of integration in the model, which justifies the adoption of the autoregressive distributed lag (ARDL) model.

Bounds Cointegration Test

Null Hypothesis: No long-run relationships exist

| Test Statistic | Value | K |
|----------------|----------|---|
| F-statistic | 5.321951 | 4 |

Critical Value Bounds

| Significance | I0 Bound | I1 Bound |
|--------------|----------|----------|
| 10% | 2.45 | 3.52 |
| 5% | 2.86 | 4.01 |
| 2.5% | 3.25 | 4.49 |
| 1% | 3.74 | 5.06 |

Inferences drawn from table 3 show that the f-statistical value of 5.321951 is greater than the upper bound of the critical value of 4.01 at 5 percent. Therefore, we reject the null hypothesis of no long-run relationship and accept the alternative hypotheses of the existence of a long-run relationship. By implication, there is a long-run cointegration among the series in the hypotheses, and in the long run, there will be convergence. Since there is a long-run association, we then proceed to ascertain their long-run and error-correction regressions.

Long Run Test

Long Run Coefficients

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|-----------|-------------|------------|-------------|--------|
| TOP | 0.045008 | 0.009284 | 4.847657 | 0.0001 |
| LOG(CPS) | -0.858061 | 0.394448 | -2.175349 | 0.0418 |
| LOG(GFCF) | -6.016131 | 1.428731 | -4.210822 | 0.0004 |
| EXR | 0.013732 | 0.004885 | 2.810779 | 0.0108 |
| C | 39.975470 | 9.731926 | 4.107663 | 0.0005 |

In the long run, the coefficient of trade openness had a positive effect on the dependent variable real GDP, with a significance of 5%. Therefore, an increase in trade openness, which is the ratio of the sum of exports and imports to the GDP, will increase economic growth by 0.045008 (4%) in the long run. This stance corresponds to economic apriori. The coefficient of credit to the private sector, which served as the moderating factor in the model, affected the dependent variable negatively and was statistically significant at 5 percent. An increase in credit to the private sector will, all things being equal, amount to a 0.858061 (85%) reduction in economic growth in Nigeria. Contrary to expectations, economic growth is reduced by a greater percentage as credit to the private sector expands. Relatively, the coefficient of gross fixed capital formation affected real gross domestic product negatively, and its statistical significance was 5 percent. Therefore, an increase in gross fixed capital formation will, all things being equal, amount to a 6.016131 reduction in economic growth in the long run. The coefficient of exchange rate affected the dependent variable positively in the long run; a devaluation of the naira will increase economic growth by 0.013732 in the long run, *ceteris paribus*.

Short Run Test

Cointegrating Form

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------------|-------------|------------|-------------|--------|
| D(TOP) | 0.006164 | 0.003466 | 1.778301 | 0.0906 |
| D(TOP(-1)) | -0.002343 | 0.003376 | -0.693969 | 0.4957 |
| D(TOP(-2)) | -0.005311 | 0.003543 | -1.499087 | 0.1495 |
| DLOG(CPS) | -0.055273 | 0.092630 | -0.596703 | 0.5574 |
| DLOG(CPS(-1)) | 0.183284 | 0.097542 | 1.879028 | 0.0749 |
| DLOG(GFCF) | -0.923102 | 0.365275 | -2.527144 | 0.0200 |
| DLOG(GFCF(-1)) | 0.459112 | 0.389915 | 1.177467 | 0.2528 |
| DLOG(GFCF(-2)) | 0.694347 | 0.327212 | 2.122009 | 0.0465 |
| D(EXR) | -0.001322 | 0.001538 | -0.859634 | 0.4002 |
| D(EXR(-1)) | 0.003875 | 0.003065 | 1.264190 | 0.2207 |
| D(EXR(-2)) | -0.005607 | 0.002647 | -2.118169 | 0.0469 |
| CointEq(-1) | -0.264694 | 0.090842 | -2.913788 | 0.0086 |

| | | | |
|--------------------|----------|-----------------------|-----------|
| R-squared | 0.897092 | Mean dependent var | 10.63141 |
| Adjusted R-squared | 0.794766 | S.D. dependent var | 2.209372 |
| S.E. of regression | 0.159834 | Akaike info criterion | -0.525632 |
| Sum squared resid | 0.510936 | Schwarz criterion | 0.214519 |
| Log likelihood | 26.72420 | Hannan-Quinn criter. | -0.264694 |
| F-statistic | 428.6659 | Durbin-Watson stat | 2.054096 |
| Prob(F-statistic) | 0.000000 | | |

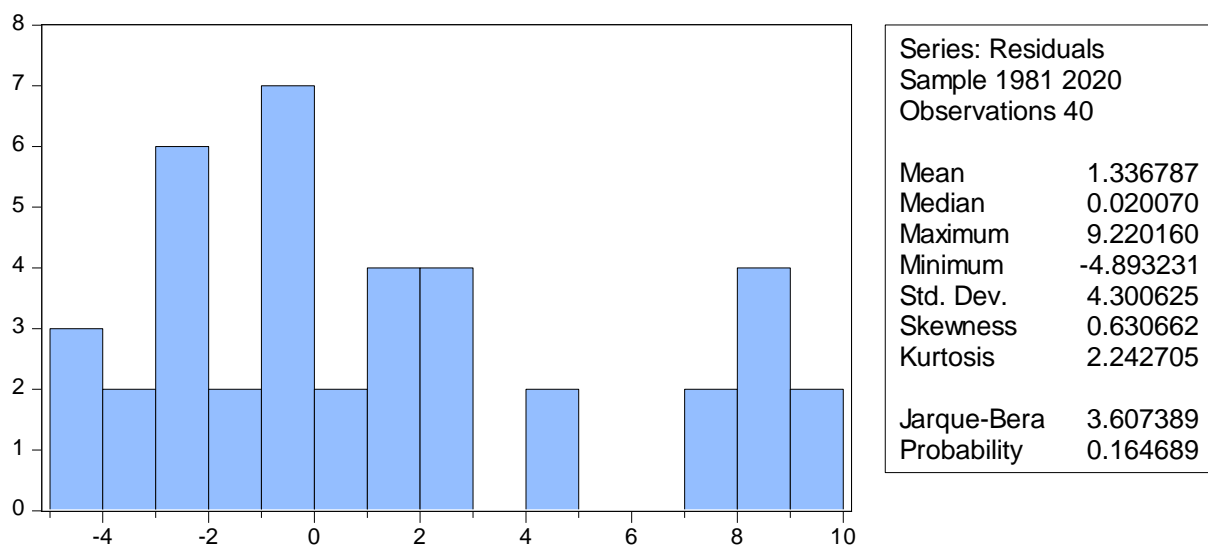
*Note: p-values and any subsequent tests do not account for model selection.

In the short run, the R-square value is 0.897092, while the adjusted R-square value is 0.794766. By implication, 79 percent of the variation in economic growth is attributed to the interplay of variables in the model, while the remaining 21 percent is captured in the error term. The goodness of the entire model is validated by the F-statistic value of 428.6659 and its significant probability value of 0.000000, while the Akaike information criterion of -0.525632 is adjudged to be the best information criterion for the model. The error correction term appeared with the normal sign, and its statistical significance is 5 percent. Therefore, the past disequilibrium will, all things being equal, herald a long-run equilibrium at a rate of 26 percent annually.

Econometrically, the contemporaneous effect of trade openness on economic growth is insignificant enough to cause any variation in the Nigerian economy in the short run, whereas the coefficient of gross fixed capital formation (GFCF) had a negative effect on the dependent variable, causing a 0.923102 reduction. Finally, the second-year lag value of the exchange rate causes a reduction of -0.005607 on economic growth in Nigeria in the short run, which is statistically significant.

Post estimation Test

Normality of the residual:



In testing the validity of regression, researcher check the normality of the regression residual. This very post estimation test will enable the researcher check if the estimated equation is in line with the basic assumption of the ordinary least square. Given the value of the Jarque- Bera statistic 3.607389 and its probability value of 0.164689, we assert that the residual are normally distributed.

Serial correlation test:

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 1.166600 | Prob. F(2,17) | 0.3351 |
| Obs*R-squared | 4.344609 | Prob. Chi-Square(2) | 0.1139 |

In testing the serial independence of the error term, we employed Breusch- Godfrey Serial Correlation LM Test. Given the fact that the F- statistic value of 1.166600 and observed R-square value of 4.344609 are statistically insignificant with probability values of 0.3351 and 0.1139. we assert that there is no evidence of serial correlation in the residual of the study and we conclude that the estimated equation is BLUE.

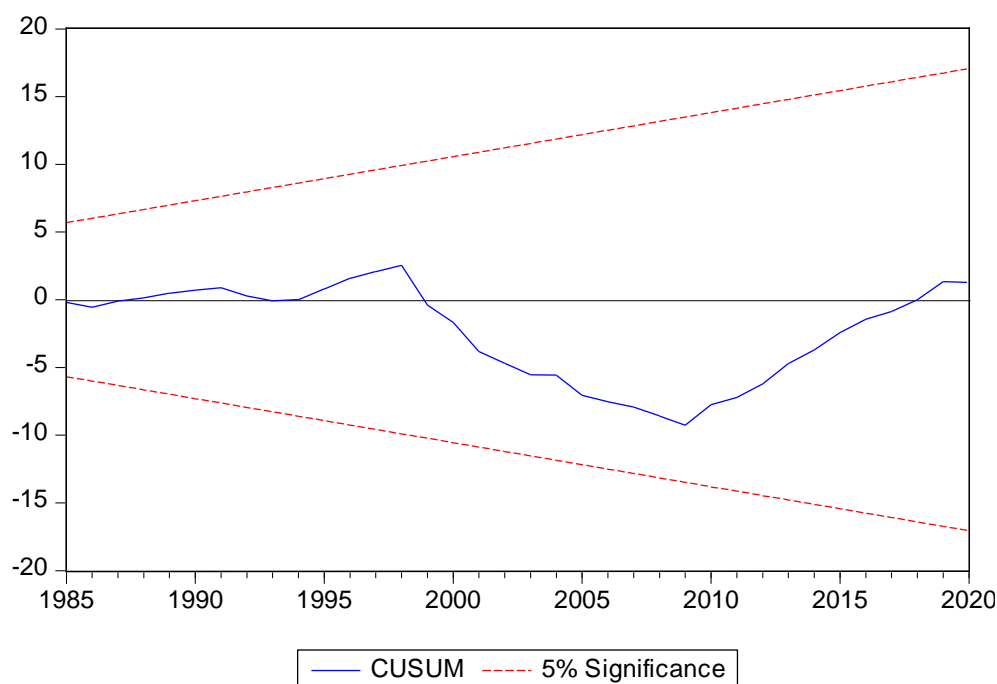
Heteroskedasticity test:

Heteroskedasticity Test: Breusch-Pagan-Godfrey

| | | | |
|---------------------|----------|----------------------|--------|
| F-statistic | 0.559242 | Prob. F(16,19) | 0.8775 |
| Obs*R-squared | 11.52587 | Prob. Chi-Square(16) | 0.7759 |
| Scaled explained SS | 4.859367 | Prob. Chi-Square(16) | 0.9964 |

in testing the equality of the variance of the residual as required in the basic classical least square assumption, we employed Heteroskedasticity Test: Breusch-Pagan-Godfrey. This test is an opposite of homoskedasticity test and its valid to ascertain the validity of the classical least squares assumptions. Given the fact that the F statistic value of 0.559242 , Obs*R-squared value of 11.52587 and Scaled explained SS value of 4.859367 and their probability values of 0.8775 , 0.7759 and 0.9964. Hence, we conclude that, there is evidence of homoskedasticity in the residual and we conclude that the estimated equation is BLUE.

Model stability test (Cusum of square test):



Finally, we conclude that the equation of economic growth evidence by trade openness and bank credit falls within the acceptable interval.

Discussion of Findings and policy implication

From the study, the long run result shows the coefficient of trade openness had a positive effect on the dependent variable real GDP, with a significance of 5%. Therefore, an increase in trade openness, which is the ratio of the sum of exports and imports to the GDP, will increase economic growth by 0.045008 (4%) in the long run. This stance corresponds to economic apriori because trade openness can potentially enhance economic growth by providing access to goods and services, achieve efficiency in resource allocation, reduce unemployment and poverty, as evidenced in the period under review. This view is supported by the findings of Keho and Wang (2017); and Ejike, et al. (2018) who affirmed that there is a positive relationship between Trade openness and economic growth.

The coefficient of credit to the private sector, which served as the moderating factor in the model, affected the dependent variable negatively in the long run. An increase in credit to the private sector will, all things being equal, amount to a reduction in economic growth in Nigeria. Contrary to expectations, economic growth is reduced by a greater percentage as credit to the private sector expands. This could be because the bulk of the borrowed funds are not invested into ventures that can enhance economic growth through job creation. Also, borrowed fund that enhances consumption more than investment will increase spending and demand for goods, causing inflation as evidenced by the persistent rise in inflation in the period under review.

Relatively, the coefficients of gross fixed capital formation affected real gross domestic product negatively in both the short run and long run. An increase in gross fixed capital formation will, all things being equal, amount to a reduction in economic growth. By implication, the Nigerian

growth trajectory has been affected by continued capital formation at all levels. Although the sign of this parameter is inconsistent with theoretical expectations, its significant posture is important for policy making. The possible reason for such an anomaly however could be that the increase in capital formation is not enough to stimulate the required level of investment that will drive the desired economic growth in Nigeria or that the available capital was invested in ventures that cannot drive the required growth in Nigeria.

The coefficient of exchange rate affected the dependent variable positively in both the short run and long run. This implies that devaluation of the naira will increase economic growth *ceteris paribus*. This conforms to *a priori* expectation because devaluation makes a nation's export more competitive in the global markets and higher export volumes spur economic growth. The period under review therefore recorded significant improvement in export volume, which enhanced economic growth.

Conclusion:

The research on the effect of trade openness on economic growth in Nigeria when moderated by bank credit is an extension of endogenous growth models. The study concludes that trade openness, when moderated by a reduction in bank credit, will stimulate economic growth while reducing gross fixed capital formation in the long run. This, according to the long-run cause, will be attained despite the positive effect of the exchange rate. In the short run, the exchange rate and gross fixed capital formation both reduce economic growth. In Nigeria, despite the macroeconomic policies of successive governments, we assert that trade openness has a permanent effect on the Nigerian economy, especially when private sector credit is having a negative effect. The implication of this research is that the Nigerian economic growth projection will continue to expand as the trade openness index increases. These also imply that commercial bank credits are negative determinants of economic growth in Nigeria, especially when emphasis is placed on trade viability. This particular study supports the views of scholars like Hya and Lau (2014) and Malefane and Odhiambo (2018), who reported the presence of a positive relationship between trade openness and economic growth, but contradicts the view of Hye (2012). To these ends, we add to the endogenous growth model by establishing that trade openness promotes economic growth only when investors have access to credit facilities from commercial banks.

Recommendations:

Given the above, the following recommendations were made:

- i. Governments at all levels should work to increase gross fixed capital formation in order to spur investment in export commodities.
- ii. The government should strengthen her macroeconomic policies to reduce the instability in the exchange rate.
- iii. Commercial banks should give single-digit credits to investors in export-led industries.

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