Trade Openness, Government Regulations, and Economic Growth: The Nigeria Experience

[1]Agada, Franklin Ayibatunimibofa [2]Ekiye Ebipuamere & [3]Tema Lucky
[1]Department of Banking and Finance, Federal Polytechnics Ekowe, Bayelsa State, Nigeria.
[2]Department of Banking and Finance, Federal Polytechnics Ekowe, Bayelsa State, Nigeria.
[3]Department of Marketing, Federal Polytechnics Ekowe, Bayelsa State, Nigeria.

Abstract

Trade openness as an indicator of growth in the Nigerian economy has caused grave concern among all stakeholders in the economy and the global business community at large. Nigeria's trade openness, governance, and economic growth were examined using quarterly time series data from 1996Q1 to 2021Q1. The study emphasised the role of governance in promoting long-term growth in Nigeria through trade openness. In this study, governance is proxied by three variants of good governance indicators: corruption control, rule of law, and government effectiveness, while the exchange rate was used as a control variable. The hypothesis was tested using the in autoregressive distributive lagged technique due to the mixed stationarity condition of the series. The estimated result revealed that trade openness is a negative predictor of economic growth and that government effectiveness promotes economic growth in the short run while control of corruption improves economic growth amidst a decreasing impulse generated by the rule of law in the long run. The study concludes that trade openness causes a reduction in economic growth in Nigeria while governance has a mixed effect on economic growth. Therefore, the study recommends that the government should enhance trade openness value and ranking through the export of capital-intensive commodities. Also, institutional efficiency should be enshrined Nigeria.

Keywords*: Trade, Governance, Economic growth, Corruption, ARDL, Nigeria*

1.0 Introduction

Following World War II, many less developed countries (LDCs) pursued the route of import substitution industrialization (ISI), with the majority of these nations exporting primary commodities in general and agricultural items in particular. The LDCs' import substitution industrialization plan necessitated increasing imports of machinery and technology, which necessitated more foreign exchange than growth in export profits. As a result, the LDCs began to experience balance-of-payments deficits. LDCs became more reliant on rich countries to cover their deficits (DCS). The Bretton Woods institutions recommended that the LDCs open up their economies to attract the desired level of economic growth and

development.

Trade openness demonstrates a country's inclusion in the global economy and is affected by a variety of other variables, such as the economy's structure, degree of financial development, domestic and foreign direct investment, institutional quality, human capital, trade policy, and resource endowment, among others. As a result, identifying long-term patterns in sub-regional trade openness is preferable to the basic cross-country comparisons frequent in openness-growth studies. Institutions, according to North (1991), are the human-created limitations that organise and manage political, economic, and social interactions among diverse economic players. They are made up of both informal (sanctions, taboos, conventions, traditions, and standards of conduct) and official norms (constitutions, laws, property rights). They are a collection of economic, political, and social forces, norms, ideals, values, and institutions that work together to promote consistency in individual and group behaviour (Greif, 2006).

The weakness of governance has been found to be one of the causes of the limited growth consequences of trade openness. Indeed, one school of thought in the growth literature has argued for the primacy of governance in economic growth (Easterly and Levine, 1997; Dollar and Kraay, 2003; Rodrik, Subramanian, and Trebbi, 2004). According to the findings of empirical studies, governance is critical to the success of economic reforms in developing nations (Acemoglu, Johnson, & Robinson, 2003). The findings of these studies are also clearly sensitive to the variables used, such as population rather than human capital, as well as the theoretical framework assumed, such as bivariate models and ad hoc production functions rather than an augmented neoclassical production function, and estimation techniques that fail to draw out individual country differences and similarities. Given the variety of economies in terms of institutions, government policy, financial development, and other economic factors, the cross-sectional homogeneity assumption is likely to be broken in such a setting. An empirical analysis of the influence of trade openness and governance on economic growth in Nigeria using time series data from 1996 to 2021 is required. No known previous study sought out to ascertain trade openness, governance and economic growth. This paper, however, seeks to show the extent to which trade openness and governance affect economic growth in Nigeria. The objectives are trade openness, government effectiveness, control of corruption, rule of law, and exchange rate. In light of the foregoing, this paper investigates how Nigerian institutions may contribute effectively so that trade liberalisation can have a notable influence on economic growth and raise the rate of investment, thereby boosting aggregate output growth. The other sections of this paper are organised as follows: following section one, which is the introduction, in section two, which is the literature review. Section three is dedicated to research methodology, while Section four is dedicated to data analysis, interpretation, and conclusion.

2.0 Literature Review
Conceptual Clarifications
Trade Openness:

"Trade openness" refers to how dependent an economy is on international commerce and financial flows (Romer, 1986). The volume of a country's traded sectors in proportion to total output is a typical metric for measuring trade openness (Edwards, 1998). The openness of trade measures a country's international competitiveness in the global market (Gwartney, Skipton & Lawson, 2001). Greater openness enables greater integration into global markets.

Trade openness is interpreted in varying degrees of broadness to include import and export taxes, as well as explicit non-tariff trade distortions, or to cover issues such 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). However, in this paper trade openness is the ratio of export plus import over gross domestic product.

Economic Growth

Todaro (2000) defined economic growth as a rise in national production of goods and services or an increase in the rate at which yearly output of goods and services increases in real terms. GNP (gross national product), often known as gross national income, is commonly used to quantify economic growth (GNI). The GDP is essentially the monetary value of all products and services generated within an economy during a given period, which is typically one year. Economic growth is regarded as a measure of real gross domestic product for this study. Real GDP is a macroeconomic measure of the value of economic production that has been adjusted for price fluctuations (that is, inflation or deflation). This adjustment converts nominal GDP, a money-value indicator, into an index of total output quantity. It is also known as "constant dollar GDP," "constant-price GDP," or "inflation-corrected GDP" (Todaro, 2000).

Theoretical Literature
Endogenous Growth

Solow's Theory of Economic Growth Robert Solow, an American economist, expanded on the Harrod-Domar formulation in his 1956 book, A contribution to the theory of economic growth by adding a second factor, labour, and a third independent variable, technology, to the growth equation. Solow offers a continuous production function that relates output to interchangeable capital and labour inputs. Unlike the Harrod-Domar model's fixed-coefficient, constant-return-to-scale assumption, Solow's neoclassical growth model indicated diminishing returns to labour and capital individually and constant returns to both parts collectively. Solow believed that technical development was determined exogenously, that is, independently of all other variables, and that its level was determined exogenously, that is, independently of all other factors.

Solow's growth theory is a multi-factor productivity model that assumes just one commodity, total output, whose rate of production is denoted by the letter Y (t). This output is referred to as the community's "actual revenue." A portion of each output is consumed at any given time, while the remainder is saved and invested.Because the proportion of production saved is constant, the rate of saving is sY. (t). The country's stock of capital, K (t), takes the shape of a composite commodity accumulation. Net investment is thus just the rate of increase of this capital stock, dK/dt or K, and we have the essential identity at each moment in time:

$K = sY\ (1)$

Output is produced with the help of two factors of production: capital and labour, whose rate of input is *L (t)*. Technological possibilities are represented by a production function.

$Y = f (K, L) (2)$

Output is defined as net output after accounting for capital depreciation. Solow's growth theory is predicated on a constant return to scale. The production function is first-degree homogenous because it has a constant return to scale. This entails presuming that there are no scarce non-augmentable resources, such as land. The scarce-land situation would result in lower returns to scale in capital and labour, making the model more Ricardian (Solow, 1956). The Solow model is quite simple. It excludes government, a wide range of goods, changes in employment, natural resources, geography, social institutions, and globalization, all of which are important features of the model. This simplification, however, enables us to better comprehend the roles of capital, labour, and knowledge in our study of economic progress.

Institution Theory

The institution theory was propounded by North in 1990. The theory state that, institutions are 'humanly devised constraints that structure political, economic, and social interactions in any society. This implies that, institutions are the rules that govern human interaction in the society. To strengthen the institution theory is the exposition of Acemoglu and Robinson in 2012. They were of the view that institutions strongly influence human behaviour and therefore have a strong relevance for the growth and development of an economy. it is in lure of the precipice of this theory that prompted Kilishi (2017) to assert that institutions are divided into economic and political institutions. To this end, it is imperative to state that good institution is a panacea for economic growth in developed and developing countries. The main intuition behind the institution's theory is centred on it relevant in organizing, coordination and enforcing agreed principles and laws for the good of human society.

Sand the Wheels Theory of Corruption

The sand in the wheel's theory of corruption was propounded by Mauro (1995); Mo, (2001). The theory states that the presence of corruption in an economy harms the system. This implies that corruption serves as a leakage in the national income of the economy. Put differently, the theory further asserts that the distortions caused by corruption mitigate more profound distortions that are deeply rooted in the malfunctioning of a country's governance. Going by the provisions of this theory, the presence of corruption in any economy has the tendency to reduce economic growth and retard development, especially in developing countries where stealing and diversion of public funds are seen as the new normal. Theoretical analyses and empirical evidence supporting this view abound, showing that corruption sands the wheels of growth. Mauro (1995) argues that corruption reduces investment across developing countries, thereby negatively affecting growth. Reinikka and Svensson (2004, 2005) find that corruption has detrimental effects on human capital accumulation. The "sandin the wheels" theory argues that corruption is detrimental to investment and economic growth (Tanzi, 1998). It sees bribery as adversely affecting firms' performance, resulting from rent-seeking, resource misallocation, and poor investments. This argument is supported by the works of Frye & Shleifer, 1996; Mauro (1995); and Rodrik, Subramanian, and Trebbi (2).

Grease the Wheels Theory of Corruption:

The "Grease the Wheels theories of corruption" were propounded by Meon & Weill (2008). The theory states that graft may act as a trouble-saving device, thereby raising efficiency, hence

investment and eventually economic growth. Greasing hypotheses argue that corruption facilitates trade that may not have happened otherwise and that it promotes efficiency by allowing private sector agents to circumvent cumbersome regulations (Leff 1964; Huntington 1968). Opponents of this view have built a solid theoretical rebuttal by arguing that the grating effect of corruption is only possible as a second-best option in a bad institutional setting. Thus, in order to properly evaluate the effects of corruption, we have to recognise its endogeneity with respect to institutions (Aidt 2009). Yet, the empirical evidence on the economic consequences of corruption is still inconclusive (Svensson 2005). For example, the literature still provides support for phenomena such as the so-called Asian paradox (a positive correlation between corruption and growth in a number of fairly successful Asian economies, including China), even after accounting for the crucial intermediate effect of institutions that shape the more recent versions of the greasing the wheel's hypothesis (Rock and Bonnett 2004, Li and Wu 2007).

Empirical Literature

Egbulonu and Ezeocha (2018) used the Granger causality tests and the autoregressive distributed lag technique to investigate the link between trade openness and economic development in Nigeria from 1990 to 2015. The Granger causality test results revealed unidirectional causation from GDP to FDI, trade openness to FDI, gross fixed capital formation to trade openness, and the exchange rate to gross fixed capital formation. The findings revealed a long-run link between trade openness, foreign direct investment, gross fixed capital creation, and economic development. The findings also showed a positive association between trade openness and economic growth, as well as a negative relationship between gross fixed capital creation and economic growth.

Keho (2017) used a multivariate framework using capital stock, labour, and trade openness as regressors to analyse the influence of trade openness on economic development in Cote d'Ivoire from 1965 to 2014. The autoregressive distributed lag limits test for cointegration and the Toda Yamamoto Granger causality tests were utilised in the investigation. The findings suggested that trade openness had a favourable impact on economic growth in both the short and long run. The findings also revealed a bidirectional causal relationship between capital formation and trade openness in boosting economic growth in Côte d'Ivoire. As a result, the report advised that trade barriers be reduced further by simplifying procedures and restrictions, that investments in capital-intensive industries be encouraged, and that human capital be developed.

Zahanogo (2017) used a dynamic model using data from 1980 to 2012 to study how trade openness influences economic growth in 42 Sub-Saharan African nations (including Côte d'Ivoire, Ghana, and Nigeria). For the heterogeneous panels, the study used the Pooled Mean Group (PMG) estimate approach. The empirical data suggests that there is a threshold below which increasing trade openness has a positive effect on economic growth and above which the trade effect on growth diminishes, and the conclusion is robust to various trade openness metrics.

Briguglio and Vella (2016) examined the relationship between trade openness and GDP growth volatility, using annual data for 172 countries spanning the years from 2010 to 2014 and keeping other relevant variables constant. The ordinary least squares regression (OLS) estimation reflects the possibility that GDP growth volatility is influenced by trade openness, economic governance, and political governance. The latter variables also proxy the stage of development. The panel data analysis convincingly showed that openness does lead to economic growth volatility, but good governance could attenuate and even reverse this effect. The main implication of these

results is that countries that are highly dependent on international trade, including most small states, would be exposed to GDP growth volatility, which has various downsides. While Briguglio and Vella (2016) advance the researcher's thinking substantially on the effect of openness on growth, the sample period of the study is 5 years, which is rather limited to fully accounting for long-run growth dynamics.

Nwinee and Olulu-Briggs (2016) examined the relationship between trade openness, financial development, and economic growth in Nigeria using annual time series data for the period 1981–2013. The study employed the Granger causality test, the Johansen cointegration test, and the Vector Error Correction Model for data estimation. The evidence from the results indicated bi-directional causality between the real effective exchange rate and total trade; and unidirectional causality from GDP to total trade and total trade to FDI. There was also a short-run and long-run relationship between trade openness, real exchange rate, FDI, and economic growth, and impulse response and variance decomposition tests revealed both positive and negative shocks.The study recommended flexibility in policies, regulations in the financial sector, and reforms in foreign policies to attract an inflow of FDI. Despite the study being country specific and limited to Nigeria, the choice of the regressors is also limited to trade openness, FDI, and real exchange rate, which is contrary to the new economic growth framework. Therefore, another useful extension of this research would be to include other relevant variables like investment and human capital.

Mputu (2016) investigated the relationship between terms of trade, trade openness and economic growth in sub-Saharan African (SSA) countries using fixed and random effects models on 13 countries from 1980 to 2011. The study employed OLS regression for the estimation of data for individual countries and panel data analysis for cross-country estimations. The results of the analysis indicated a positive relationship between terms of trade, gross fixed capital formation and GDP level in SSA, while trade openness had a negative relationship with the GDP, implying that openness to international trade was not beneficial to SSA. The study concludes that diversification in exports seems to be the ideal solution for sub-Saharan Africa. The general approach is plausible, more so as Nigeria, Ghana, and Côte d'Ivoire are among the countries examined. However, the study only looked at labour force, investment, and trade terms, which limits its ability to fully reflect openness growth dynamics.

Gnoufougou (2013) investigated the casual relationship between trade and GDP growth in Togo and applied the ADF unit root test, Pearson correlation, Granger causality test and multiple regression techniques based on annual data for the period of 30 years (1982–2012). The result indicated evidence of bi-directional causality between trade and GDP growth. The study concluded that there is evidence in support of the trade-led growth hypothesis in Togo. Though the findings of this study are consistent with the endogenous growth theory, the focus is on the effects of imports and exports on economic growth, which is rather limited in analysing the trade openness-economic growth nexus, aside from the specificity of the scope.

Falvey et al. (2012) investigate whether an economic crisis at the time of trade liberalisation affects a country's subsequent growth performance. The study employed annual data for a panel of (up to) 75 countries within the period 1960–2003, using threshold regression techniques on five crisis indicators to identify the "crisis values" and to estimate the differential growth effects in the crisis and non-crisis regimes. The estimated short-run coefficients generally supported the conclusion of a J-curve effect (whereby growth initially declines or remains stable following liberalization, and then increases after a period) found in the earlier literature. Although trade

liberalisation in both crisis and non-crisis periods raises subsequent growth, the findings indicate that an internal crisis implies a lower acceleration and an external crisis, a higher acceleration relative to the non-crisis regime. Though Falvey, Foster, and Greenaway (2012) suggested the relationship between trade and economic performance, the focus of the investigation is not directly on the effect of trade openness on economic growth but on how economic crisis at the time of liberalisation can affect economic performance.

Marelli and Signorelli (2011) analysed the economic growth of China and India in terms of their integration into the global economy using time series data for the period 1980 to 2006. The study employed panel data and two-staged least squares techniques for data estimation. The results indicated that opening up and integrating into the world economy has positive effects on the economic growth of China and India. Aside from the specificity of the scope of the study, limited to China and India, the empirical argument is how these findings can be substantiated in the interaction of a panel group of West African countries.

Using bi-annual data for the period 1989 to 2009, they scrutinised the relationship between trade liberalisation and economic growth in Mauritius using a vector error correction model (VECM) and Granger causality test in the short-run. The results indicated the existence of a causality between trade liberalisation and economic growth in the short run. Apart from the scope of the study being country-specific and limited to Mauritius, it fails to present the long-run analysis of the relationship between trade liberalisation and economic growth.

Using firm-level panel data, Njikam and Cockburn (2011) examined the effects of Cameroon's trade liberalisation from the late 1980s to late 1990s on productivity growth in the manufacturing sector. The study applied the Olley and Pakes (1996) methodology, and firm indexes were derived, which were examined via the OLS regression framework. Results from the estimations showed that trade liberalisation has a positive and significant effect on productivity growth in Cameroon. The findings in Njikam and Cockburn (2011) support trade liberalisation and economic performance. However, the approach of this study differs from the endogenous growth theory approach that considers other variables like trade share and FDI. Aside from the fact that the scope of the study is country specific and limited to Cameroon, the long run analysis is absent from the work.

Abdebary (2018) investigated governance issues and economic growth in Egypt after the revolution. He investigates the interrelationship between inclusive governance and economic and social inclusion by experimentally examining the relationship between governance indices and Egyptian economic growth. Using Worldwide Governance, the study used a vector error correction model (VECM) to analyse the causal link between the two important factors.

3.0 Methodology

The study uses the empirical framework of Dao (2014) who tested the effect of trade openness on economic growth based on the neoclassical growth model using OLS regression.

Model Specification and Theoretical Model

The following estimation equation is used for my study:

$$rgdpg_{it} = Constant + \beta * X_{it} + \gamma * tr_{it} + a_i + \tau_t + \epsilon_{it} \qquad 1$$

Where:

$rgdpgit$ = Real per-capita growth rate of GDP for a country i at time t,

Xit = A set of control variables;

$trit$ = Trade share (openness measure);

ai = Country dummy;

τt = the time dummy; and

ϵit = The random component.

Whereas the functional specification of our model is expressed as thus:

RGDP = f(TOP, ROL,COC, GOE, EXR)   2

The econometric form of the empirical model is expresses as thus:

$$RGDP = \beta_0 + \beta_1 TOP + \beta_2 ROL + \beta_3 COC + \beta_4 GOE + \beta_5 EXR + \mu$$ 3

Where:

RGDP = Real Gross Domestic Product Proxy for Economic Growth

TOP = Trade Openness (Proxy for exports and imports over GDP)

GOE = Government effectiveness

COC = Control of corruption

ROL = Rule of law   Proxy for Governance.

EXR = Exchange rate (control variable)

μ = Error term

The research followed tree step procedure with time series. Data was sourced from the Central Bank of Nigeria Statistical bulletin and world development indicator, a publication of the world bank covering the period spanning 1996 to 2021. The justification for the use of autoregressive distributed lag (ARDL) method of analysis is premised on the presence of variables with different order of integrations.

Description of Variables in the Model

Dependent Variables

Real gross domestic product: This is the monetary value of goods and services produced within an economy over a specified period of time using a given base year as to take care of inflation. This will be used as proxy for economic growth.

Explanatory Variables

Rule of law: This **measures** the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement

Control of Corruption (COC): The Corruption Perceptions Index (CPI) is an index which

ranks countries "by their perceived levels of public sector corruption, as determined by expert assessments and opinion surveys." The CPI generally defines corruption as an "abuse of entrusted power for private gain "Rule of Law(ROL): This measures the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police and the courts, as well as the likelihood of crime and violence

Government Effectiveness (GOE): The government effectiveness index is an index elaborated by the World Bank Group which measures the quality of public services, civil service, policy formulation, policy implementation and credibility of a government's commitment to raise these qualities or keeping them high.

Exchange Rate (EXR): There are many ways to measure an exchange rate. The most common way is to measure a bilateral exchange rate. A bilateral exchange rate refers to the value of one currency relative to another. Bilateral exchange rates are typically quoted against the US dollar (USD), as it is the most traded currency globally

Nature and Sources of Data

The nature of data used in this study is basically secondary data which were obtained from the World Bank website (www.worldbank.org) and Central Bank Statistical to measure the effect of trade liberalization and institution on the Economic growth of Nigeria.

Technique of Data Analysis

The variables were subjected to a stationarity test through a unit root procedure proposed by Phillip and Perron. The outcome of the unit root test prompted the adoption Autoregressive Distributed Lagged (ARDL) model. The ARDL bound test was estimated to ascertain the presence or absence of a long run cointegration or convergence.

4.0 Analysis and Interpretation
Descriptive Statistics

	LNRGDP	TOP	COC	ROL	GOE	EXR
Mean	258206.8	49.86165	9.720826	7.061495	27.12769	146.7728
Median	162596.0	54.21500	10.90047	5.238095	27.69953	132.4850
Maximum	556286.1	81.81000	19.41748	26.59575	35.46798	325.0000
Minimum	24100.54	21.12000	0.000000	2.415459	7.000000	21.88000
Std. Dev.	211392.7	19.10576	4.977995	5.073535	7.041364	67.99085
Skewness	0.276049	-0.299148	-0.419807	0.101115	-0.351385	0.280724
Kurtosis	1.321648	1.657523	2.276912	3.828760	3.514519	3.076470
Jarque-Bera	12.61679	8.730819	4.962392	13.06192	3.794880	1.297661
Probability	0.071821	0.052709	0.083643	0.078417	0.087141	0.522657
Sum	25046058	4836.580	942.9202	684.9650	2631.386	14236.96
Sum Sq. Dev.	4.29E+12	35042.89	2378.922	2471.113	4759.757	443784.5
Observatios	97	97	97	97	97	97

Source: E-view 10.0

The mean or average value of Nigeria's real gross domestic product RGDP, TOP, COC, ROL, GOE, and EXR is 25806.8, 49.86165, 9.720826, 7.061495, 27.12769, and 146.7728, while the median values are 162596.0, 54.21500, 10.90047, 5.238095, 27.69953, and 132.4850. 556286.1, 81.81000, 19.41748, 26.59575, 35.46798, 325.0000 and 24100.54, 21.12000, 0.000000, 2.415459, 7.000000, 21.88000 are the maximum and least numbers, respectively. LNRGDP, ROL, and EXR with skewness values of 0.276049, 0.101115, and 0.280724 indicate the existence of a long right tails series, whereas TOP, COC, and GOE with skewness values of -0.299148, -0.419807, and -0.351385 indicate the presence of a long left tails series. Kurtosis values of 2.276912, 3.828760, 3.514519, and 3.076470 for COC, ROL, GOE, and EXR are leptokurtic, but LNRGDP, TOP, and COC are plytikurtic (1.321648, 1.657523). Finally, the Jacque-Bera statistic and its associated probability values suggest that the series in question adhered to the normal distribution.

Stationarity Test Result (PP)					
Variables	Level		First Diff.		Order
	T-Stat.	Crit. Value 5%	T-Stat.	Critical Value 5%	
LnRGDP	-0.646282	-2.893589	-2.883701	-1.944404	1(1)
COC	-1.696598	-2.893589	-2.700273	-1.944404	1(1)
EXR	0.511958	-2.893589	2.745230	-1.944574	1(1)
ROL	-3.516608	-2.895109	-	-	1(0)
TOP	-0.651072	-2.895109	-2.352099	-1.944574	1(1)
GOE	-2.786608	-2.893589	-2.539855	-1.9444404	1(1)

Source: E-view 10.0

According to the test data, the model featured a sequence of integration orders of varying complexity. RGDP, COC, EXR, TOP, and GOE became stationary after initial differencing. However, ROL stayed stationary at the level. Because the ROL is stationary at that level, it implies that Nigeria's political stability and lack of violent series are reverting, while others are not. This lends credence to the widely used autoregressive distributed lag (ARDL) model. Pearson and Smith (2001) developed the ARDL model to estimate dynamic models. Researchers can use the ARDL bounds co-integration test to assess whether or not the series in the model have a long-run cointegrating connection. If there is one, the researcher establishes their long-and short-run causalities in order to evaluate the hypotheses.

Bounds Cointegration Test.

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	10.64056	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

Source: E-view 10.0

The table depicts the bounds cointegration test for assessing the relationship between trade openness, governance, and economic growth in Nigeria, using data from the Central Bank of Nigeria's quarterly bulletin from 1996Q1 to 2021Q1. The fact that the f-statistics value of 10.64056 is bigger than the upper limits criterion value of 3.28 at 5% indicates the presence of a long-run relationship between the series. Given the predominance of convergence, the researcher is expected to investigate the long- and short-term implications of the cointegrating connection.

Short-Run and ECM Result

Included observations: 23

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(RGDP(-1))	0.556841	0.082773	6.727292	0.0000
D(TOP)	-0.007256	0.001470	-4.935845	0.0000
D(TOP(-1))	0.003825	0.002832	1.350559	0.1808
D(TOP(-2))	0.002308	0.002630	0.877393	0.3830
D(TOP(-3))	-0.002831	0.001375	-2.057997	0.0430
D(COC)	-0.005021	0.003099	-1.620354	0.1092
D(ROL)	0.001014	0.001102	0.920747	0.3601
D(GOE)	-0.000433	0.000442	-0.980440	0.3299
D(GOE(-1))	-0.014149	0.004439	-3.187683	0.0021
D(EXR)	-0.015419	0.011232	-1.372836	0.1738
CointEq(-1)	-0.023839	0.004787	-4.980547	0.0000

R-squared	0.819436	Mean dependent var	23077.56
Adjusted R-squared	0.724177	S.D. dependent var	39732.45
S.E. of regression	6384.849	Akaike info criterion	20.64036
Sum squared resid	3.67E+08	Schwarz criterion	21.33154
Log likelihood	-223.3642	Hannan-Quinn criter.	20.81419
Durbin-Watson stat	3.039361		

Source: E-view 10.0

The adjusted R^2 value of 0.724177 indicates that 72 percent of the change in RGDP is attributable to the combined influence of the series in the model, with the remaining 28 percent determined externally or in the error term, and the R^2 value of 0.819436 indicates that the model is well-fitted. The Error Correction Term (ECM) is denoted by a minus sign (-) and is statistically significant at 5%. In the short term, the historical disequilibrium generated by the aforementioned connection will be adjusted at a speed of 2 percent quarterly. In the short run, the trade openness coefficient is -0.007256, indicating that it is a negative predictor of

real GDP (a proxy for economic growth) in the short run, and it is statistically significant because the probability value of 0.0000 is less than the 5% threshold. As a consequence, an increase in trade openness will result in a decrease in real GDP of 0.007256, assuming all other parameters stay constant (a proxy for economic growth in Nigeria). This presentation violates theoretical predictions since economic theory predicts that trade openness will increase investment and boost the economy, particularly in emerging nations with a high number of business prospects but low capital formation. Investors throughout the world have negative perceptions of Nigeria due to insecurity and corruption in virtually every area of the economy, which might explain part of the oddity. As a result, variations in the real gross domestic product over time may be related to trust feedback. To this end, we conclude that trade liberalisation has a temporal effect on economic growth in Nigeria.

In the short term, the coefficient of government effectiveness (GOE) has a positive influence on real gross domestic product (RGDP), and it is statistically significant since the probability value of 0.0021 is less than the 5% threshold. As a result of improved government efficacy, Nigeria's economic growth would increase by 0.014149 units. This implies that government effectiveness has a marginal influence on economic growth in Nigeria, in line with theoretical appriori.

Long-Run Result

Levels Equation Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOP	1957.828	2883.090	0.679073	0.5671
COC	13883.69	3929.436	3.533254	0.0316
ROL	-38293.42	11153.97	-3.433165	0.0454
GOE	-7942.549	7480.103	-1.061824	0.3996
EXR	1281.475	1116.809	1.147443	0.3699
C	662525.0	208670.9	3.174976	0.0865

Source: E-view 10.0

The evidence presented above indicates that the coefficient of control of corruption has a favourable influence on economic growth and is statistically significant. This means that strengthening anti-corruption legislation will boost economic development in the long run. This result is consistent with the researcher's theoretical expectations. On the other hand, the rule of law coefficient -38293.42 has a negative long-run impact on real GDP, and it is statistically significant at 5% since the probability of 0.0464 is less than the 5% limit. As a result, contrary to predictions, an increase in the rule of law will result in a decrease in economic growth. This causation in Nigeria might be linked to institutional failure and justice racketeering in the courts. The Nigerian courts and police have institutionalised corruption, undermining the administration of justice to inhabitants of the country and outside.

Post Estimation Result

s/n	Test	F-State	Prob-value	Obs-Rq	Prob-Value

1	Normality test	Jb(0.263820)	2.664977		
2	Serial correlation test	0.009986	0.9901		
3	Heteroscedasticity test	0.185694	0.9865	14.94942	0.7793

Authors Compilation from EViews 10.0

The evidence presented above suggests that the residual of the series followed a normal distribution. This is based on the fact that the probability of 0.263820 and the Jarque-Bera statistic value of 2.664977 are both more than the 0.05 cutoff. The absence of heteroskedasticity is shown by the F- statistics value of 0.185694 and probability values of 0.9865, as well as the Obs* R-square values of 14.94942 and 0.7793. The Breusch-Pagan-Godfrey heteroskedasticity test demonstrates this. The Breusch-Godfrey Serial Correlation LM Test results show that there is no serial correlation in the estimation. This explanation is based on the fact that the F-statistic value of 0.009986 and its related probability value of 0.9901 are much more than the 0.05 limit. Finally, the cusum and cusum of square tests revealed that the estimation is within.
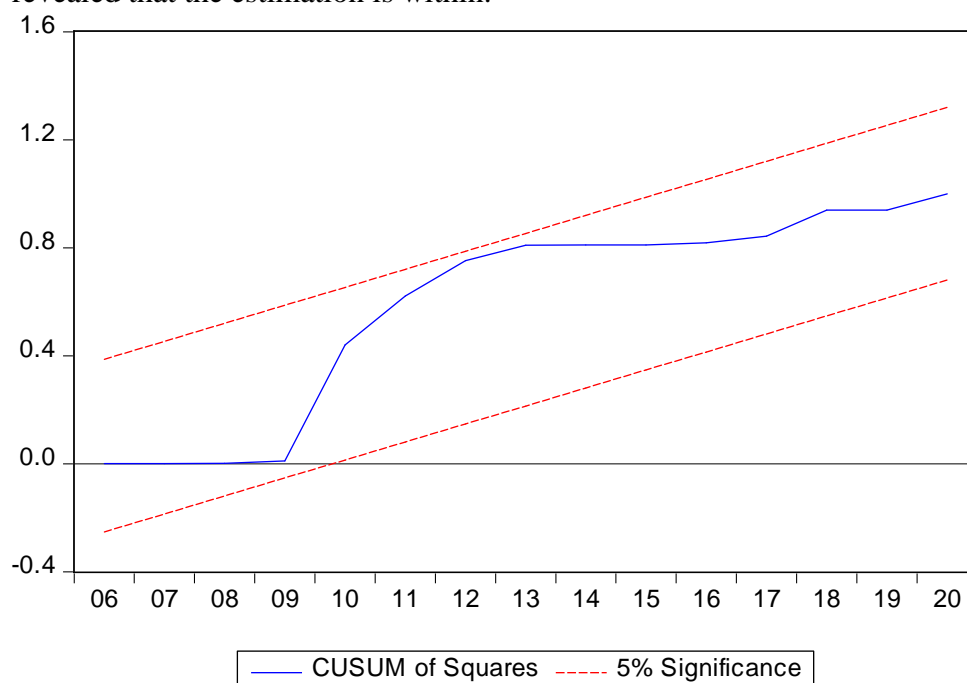
Source: E-view 10.0

5.0 Conclusion

According to the research on the influence of trade openness and governance on economic growth in Nigeria, an improvement in trade openness will reduce economic growth in the short run while government effectiveness will stimulate economic growth. Furthermore, governance in the form of corruption control boosts economic growth in Nigeria, but while rule of law reduces economic growth in Nigeria.

Recommendations

- To gain the benefits of enhanced trade openness value and ranking, Nigeria's federal and state governments should support the production of capital-intensive commodities.

- To spur further progress in Nigeria, the governing institution should be enhanced.

- To combat corruption without political involvement, the Economic and Financial Crime Commission should be reinforced through legal mechanisms.

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