Impact of Institutional Framework on Economic Growth of Nigeria (1996 to 2022)

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ABSTRACT

The presence of institutional gaps in the Nigerian economy has enhanced the need to investigate the impact of institutional framework on economic growth from 1996 to 2022. Under the theoretical framework of the endogenous growth model, the dependent variable in this study was economic growth proxied by real gross domestic product while the independent variables of interest were gross fixed capital formation, labour force, research and development and the six indicators of institutional framework (voice and accountability, rule of law, regulatory quality, government effectiveness, control of corruption and political stability. The fully modified ordinary least square was used as the method of analysis and the results revealed that labour force, research and development and regulatory quality have a positive and significant impact on economic growth. Contrary, control of corruption, government effectiveness and gross fixed capital formation have a negative significant impact on economic growth. More so, voice and accountability and rule of law have an insignificant but positive and negative impact on economic growth respectively. Following these findings, this study concludes that institutional framework has a significant impact on economic growth and hence recommends that the federal government should implement extensive institutional reforms that cut across all the arms and levels of government, with emphasis on the autonomy of ministries, agencies, parastatals and commissions to exercise discretion effectively to enhance the implementation of anti-corruption measures, the rule of law and promote good governance practices which in all would foster sustainable economic growth.

INTRODUCTION

Among the macroeconomic objectives of an economy, the foremost goal is economic growth, which stands as a precondition to propel nations toward long-term prosperity and development. Auzina- Emsina (2014) emphasized its significance in maintaining and enhancing the international competitiveness of any economy. Consequently, economic growth serves as a benchmark for ranking the world's largest economies. Developed nations like the United States of America, Japan and Germany have consistently been ranked the top largest economies due to their substantial gross domestic products. World Bank (2023) statistics indicate real gross domestic products of \$25,439, \$4,232, and \$4,082 trillion, respectively, solidifying their positions as leading economic powerhouses as of 2022.

Nigeria stands as the 31st largest economy globally and the leading economy in Africa, with a nominal gross domestic product of \$477 billion in 2022 (World Bank, 2023). Examining the actual economic growth, the Nigerian economy has experienced a substantial surge in its real gross domestic product from \$161.09

billion in 1996 to $535.34 billion in 2022, despite facing escalating inflation rates (World Bank, 2023). This reaffirms Nigeria's status as the giant of Africa once more. Therefore, given the abundant natural and human resources within the economy, Nigeria possesses the potential to secure a position among the top 10 largest economies globally. However, its current status as a developing country raises concerns, especially when compared to less populated developed nations like Brazil and Singapore (Okoye, Nwoye, Chukwunonso & Obiorah, 2018). This prompts the question as to why Nigeria has not yet achieved such a remarkable status.

Numerous theoretical and empirical studies have endeavored to provide explanations, considering various factors such as physical capital, human capital, government expenditure, capital flows, and more (Ekpo, Ekere & Inibeghe, 2022; Euphemia, 2022; Olayiwola, 2022; Urama, Ezema, Obodoechi, Ukwueze, Eze, Mba & Ibrahim, 2022). However, few empirical studies such as Utile, Ijirshar and Adoo (2021) and Majewski (2023) have posed an argument that differences in institutional framework and its quality have contributed to Nigeria's present global position with respect to economic growth. This is because institutional framework and its quality is a fulcrum upon which other drivers of inclusive growth must rest and revolve (Nguyen, Su & Nguyen, 2018; Olanrewaju, Tella & Adesoye, 2019).

Abayomi and Chidiebere (2021) defined institutional framework as a focused social structure comprising rules that influence people's behaviors and lifestyles. This emphasizes institutions as crucial for interactions between individuals and their environment. As a result, the quality of the institutional framework is vital for regulating and implementing political, social, and economic activities globally, along with effective monitoring (Utile et al., 2021). Majewski (2023) aligns with this perspective, asserting that institutions play a pivotal role in national economic growth and development, as well as addressing development gaps. Therefore, high institutional quality is seen as a driving force for economic growth by incentivizing activities such as consumption and investment, improving efficiency, resource allocation, protecting property rights and supporting freedom of choice (Zhang, 2016; Farhadi, Islam &Moslehi, 2015; Lucifora & Moriconi, 2015).

This above premise is starkly different for the Nigerian economy where institutional framework is plagued with bad governance, including corruption and abuse of power, as well as a disregard for the rule of law (Okoye, et al. 2018; Mobosi et al. 2017; Adewuyi & Adeleke 2016). This is evident in the different institutional quality indicators such as the rule of law, government effectiveness, control of corruption, regulatory quality, voice and accountability and political stability, which have all been trending negative throughout the 21st century (World Bank, 2021 as cited in Utile et al, 2021). Therefore, confirming Abubakar (2020) statement that countries with weak institutions find it difficult to evolve rapidly enough to enjoy economic growth and development. It is based on this backdrop that this study investigates the significant impact of institutional framework on economic growth in Nigeria.

Statement of the Problem

The role of institutions is very crucial in the attainment of inclusive growth in any economy, especially in a resource-rich country that is vulnerable to abuse of power and opportunities. The role of institutions is very crucial in the attainment of inclusive growth in any economy, especially in a resource-rich country like Nigeria that is vulnerable to abuse of power and opportunities (Adewuyi & Adeleke, 2016). However, the role of institutional framework in Nigeria has been undermined due to the presence of white space in the judicial system, corruption, bribery, tax evasion, ill-defined property rights and inefficient institutions (Luiz, 2009 & Charnock, 2009 as cited in Utile et al., 2021). Therefore, retarding the growth potential of the economy through non growth-enhancing policies.

To address these gaps in institutional framework, the Nigerian government has tried to enhance the institutional quality to that of the developed nations by establishing several commissions (Rodrik, 2008).

For instance, the Economic and Financial Crimes Commission (EFCC) in 2003, the Nigerian Financial Intelligence Unit (NFIU) in 2004, the Fiscal Responsibility Commission in 2007 and the National Anti-Corruption Strategy (NACS) from 2017 to 2020. All aimed to ensure prudence and accountability in resource utilization in both public and private sectors towards sustainable economic growth (Utile et al, 2021). However, these efforts have been proven to be futile as recent happening and statistics show that these commissions have not lived up to their expectation due to government interference, lack of autonomy, poor funding, bureaucracy and more. This confirms that there is yet a consensus on whether these improvements are effective and that the institutional framework in Nigeria is at a dearth state (Andrews, 2013). This brings this study to re-examine what impact institutional framework have on economic growth in Nigeria.

Research Objectives

This study's objective is to investigate the impact of institutional framework on economic growth in Nigeria.

Research Hypothesis

The research hypothesis following the research questions and objectives is stated as follow.

H_0: Institutional framework does not have a significant impact on economic growth.

H_1: Institutional framework has a significant impact on economic growth.

LITERATURE REVIEW

Conceptual Framework

a) Economic Growth: The concept of economic growth has been defined differently based on the perception of various scholars. Earlier studies such as Jhingan (2005) defined economic growth as a gradual long-run change that increases savings and population. Dwivedi (2004) argues that economic growth is a sustained increase in per capita national output or net national product over a long period which must be greater than the rate of population growth. As stated by Seer (2013) in Austine, James, Adetokun and Abdul kamaru (2022), economic growth involves the quantitative increase in the monetary value of goods and services produced in an economy within a given year. It also represents an upsurge in the economy's capacity to produce goods and services for a specific period compared to another period (Efe, 2021). Previous studies have captured economic growth using several measurements. For instance, Illyas and Siddiqi (2010) measure economic growth in monetary terms without considering other aspects of development. In the case of this study, economic growth is considered in its real terms and is measured with the real gross domestic product (RGDP). Real gross domestic product is the total value of goods and services produced in an economy in a specific period after adjusting for inflation. It shows the true growth of an economy over time.

b) Institutional Framework: North (1981), a trailblazer in institutional economics cited by Abubakar (2021), defined institutions as a collection of rules, compliance measures, procedures, moral and ethical standards, and behavioral norms designed to restrict individuals' actions in the pursuit of maximizing the wealth or utility of principals. Institutions operate within a formal and informal framework referred to as the institutional framework. Bruinshoofd (2016) asserts that the quality of institutional framework is contingent on its capacity to encompass legal structures, individual rights and governmental regulations and services. A collapse in these attributes undermines and weakens the institutional framework supporting economic development, thereby making it difficult for development to take place as expected (Utile et al, 2021). In this light, Santarelli and Tran (2020) asserted that robust institutional frameworks, particularly in developing

nations, can contribute positively to economic growth and development. As such frameworks serve to establish fundamental rules for human interaction, facilitating the optimal utilization of scarce resources.

For this study, institutional framework is assessed through the utilization of the Worldwide Governance Indicators (WGI). These WGI indicators encompass factors such as political stability, absence of violence, voice and accountability, control of corruption, government effectiveness, regulatory quality and rule of law. The scaling of these six measures in the Worldwide Governance Indicators ranges from -2.5 (lowest) to 2.5 (highest). Consequently, the institutional framework is broken down into the six indicators mentioned above, aligning with the World Bank Governance Indicators (WGI) recommendations.

Review of Basic Theories

a) Endogenous growth model: Endogenous growth theory is associated with economists such as Arrow (1962), Lucas (1988), and Romer (1990). This theory posits that economic growth is primarily driven by internal factors within the economy (Abayomi & Chidebere, 2021). Unlike previous models, such as neoclassical theory, which emphasizes external factors, this theory asserts that knowledge, innovation, and human capital are key determinants of economic growth. Specifically, Romer's (1990) model, building on Lucas' (1988) work, assumes technological changes and innovative ideas as endogenous, underscoring the importance of research and development for national technological advancements and economic improvement. Critics, like Krugman (2013), challenge the theory's empirical validation while others question the distinctiveness between physical and human capital in the model.

Relating to this study, Romer's (1990) model incorporates institutions, such as the market, property rights, and the state, using economic tools like subsidies to understand their impact on the speed of technological change and its influence on the growth rate of the economies. According to Schilirò (2019), the rationale for this institutional arrangement lies in the idea that expanding the workforce committed to research pushes the frontier of technological knowledge, potentially leading to an increase in the rate of growth. Additionally, Saidu and Jaffer (2022) emphasize the role of government effectiveness, particularly through well-funded education and health sectors, in developing human capital which is necessary for economic growth. In all, this model posits that economic output growth depends on enhancing both physical and human capital, along with institutional frameworks and the technological level of the economy.

b) Institutional Quality Theory: Institutional Quality Theory is closely linked to North's (1990) influential work 'Institutions, Institutional Change and Economic Performance,' which explores the impact of institutions on economic outcomes. The theory asserts that the strength, efficiency and fairness of institutions significantly influence economic performance. The basic assumption of this theory is that institutional framework governs the interactions among economic agents which shape economic development (Alexiou, Tsaliki & Osman, 2014). In this light, Rodrik and Subramanian (2003) cited in Utile et al. (2021) elaborated that these interactions are guided by societal 'rules of the game,' encompassing explicit and implicit behavioral norms that create incentives for desirable economic behavior. Critics highlight the theory was not precise in defining and measuring institutions as well as understanding their relationships with economic outcomes. Despite criticisms, this theory underscores the pivotal role of institutions, particularly their quality and effectiveness, in shaping economic outcomes and development.

Empirical Literature Review

In a recent study, Akıncı, Usta and Kaplan (2023) examined the relationship between economic growth and institutional variables using a panel cointegration analysis for European Union countries between 1996 and 2019. According to the findings of the study, there is a positive and statistically significant relationship between economic growth and political stability, the absence of violence and control of corruption for the EU

countries in the long run.

Gasimov, Asgarzade and Jabiyev (2023) examined the impact of institutional quality on economic growth for a sample of post-Soviet countries from 1996 to 2021. Using the Auto regressive Distributive Lag Model, the study observed a similar link for four out of six institutional factors as political instability and violence, government effectiveness, rule of law, and control of corruption had a positive significant impact on economic growth while the other two dimensions such as regulatory quality and voice and accountability exhibited inverted u-shaped impact on the dependent variable. Moreover, control variables such as trade openness had a positive impact while inflation and population growth rate both had negative impacts on economic growth.

Abayomi and Chidiebere (2021) accessed the effect of institutional quality on economic growth in Ghana and Nigeria, using panel data covering 1996 to 2019. Using the auto regressive distributed lag as the method of analysis, the study found that control of corruption was very effective in Ghana while the reverse was the case in Nigeria thereby promoting economic growth in Ghana and retarding growth in Nigeria. Regulatory quality was also found to promote economic growth in Nigeria, whereas it retarded growth in Ghana. This study also found that there was government ineffectiveness has a negative impact on economic growth in both countries.

Relating to Nigeria, Utile, Ijirshar, and Adoo, (2021) studied the impact of institutional quality on economic growth from 2001 to 2019 utilizing the auto-regressive distributed lag (ARDL) model. The key variables examined include institutional quality and economic growth. Their findings include that institutional quality exerts a significant negative influence on economic growth.

Wandeda, Masai and Nyandemo (2021) assessed the impact of institutional quality on economic growth for sub-Saharan African countries from the period of 2006 to 2018 using the Two-step system GMM (Generalized Method of Moments) method. The findings revealed that institutional quality is more effective in driving income growth in the West African region than the other three regions of Eastern Africa and Central Africa. An improvement in intuitional quality is more likely to improve the economic performance of low-income SSA economies than the middle-income SSA countries.

Abubakar (2020) analysed the impact of institutional quality on economic growth in Nigeria from 1979 to 2018 using the ordinary least square. The findings showed a positive and significant impact of institutional quality and domestic investment on economic growth; the effective governance index exerts a positive and insignificant influence on economic growth while foreign direct investment exerts a negative but significant on economic growth.

Appiah, Li and Frowne (2020) examined the relationship between financial development and economic growth taking into consideration the roles played by institutional quality in 15 emerging countries in the ECOWAS region from 1996 to 2017. Employing the two-step SYS GMM (SGMM) estimators, the study discovered that financial development has no significant and positive impact on economic growth in the ECOWAS region. Also, regulatory quality and capital formation have a positive association with growth while control of corruption and labour force have a negative impact on economic growth.

Ogbuabor, Onuigbo, Orji and Anthony-Orji (2020) investigated the relationship between institutional quality and economic performance in Nigeria from 1981Q1 to 2016Q4. The study adopted the ARDL approach and the findings indicate that institutional quality impacts negatively but insignificantly on growth in Nigeria, both at the aggregate and sectoral levels. However, initial output growth levels, capital and labour were found to have a positive impact on economic growth while trade had a negative impact on economic growth.

Nguyen, Su and Nguyen (2018) investigated the impact of institutional quality on economic growth for 29 emerging economies from the period of 2002 to 2015 using the System Generalized Method of Moments (SGMM). The findings revealed a significant positive impact of institutional quality on economic growth. The institutional quality impedes the positive effects of foreign direct investments (FDIs) and trade openness on economic growth. However, institutional quality improvement can mitigate the competition brought by trade openness in the areas FDIs operate to optimize their spill-over effect.

Udah and Ayara (2014) studied the relationship between institutions, governance structure and economic performance in Nigeria from 1970 to 2011 using the ordinal least squares estimation technique and factor analysis. The results showed that government effectiveness, voice and accountability were not only significant but entered the regression line with the correct a priori signs. Applying factor analysis to the model the result showed that the two factors- government effectiveness and voice and accountability-loaded high.

Research Gap

Previous studies have investigated the relationship between institutional framework and economic growth specifically in Nigeria, other countries and regional-based analysis. However, research on this study is mostly regional based, with a dearth of literature specifically on Nigeria. Based on the methodology gap, the few literatures for Nigeria which include Udah and Ayara (2014) and Abubakar (2020) used the ordinary least squares estimation technique and factor analysis as a method of analysis while Ogbuabor et al. (2020) and Utile et al. (2021) used the auto regressive distributed lag technique. The OLS technique usedis limiting as the OLS results only showed the linear relationship between institutional framework and economic growth in Nigeria.This current research fills this gap as it used to fully modified ordinary square (FMOLS) which is an advanced ordinary least square technique that accounts for endogeneity and the presence of serial correlation. The choice of this method was based on an empirical gap discovered in these identified Nigeria literature as they did not investigate the several components of institutional quality or framework. Hence, this study went ahead to consider the six core dimensions of institutional framework which included voice and accountability, rule of law, regulatory quality, political stability, control of corruption and government effectiveness. Furthermore, this study filled a theoretical gap by adopting the Romer (1990) model of endogenous theory against the neoclassical and the Arrow model of endogenous growth theory as done by previous theory. This was achieved by considering research and development in the model of this study.

RESEARCH METHODOLOGY

Theoretical Framework

This study was anchored on the endogenous growth theory which simply states that economic growth is driven by strong influences within the economy. The underlying assumption is that economic prosperity is primarily determined by internal or endogenous factors as opposed to external exogenous factors. The traditional endogenous growth model is the Arrow model which is defined as

$Y_i = f(K_i, L_i,)$

Where Y denotes the output, K denotes the stock of capital, and L denotes the stock of labour. However, this study is anchored on the Romer (1990) model which is an advanced version of the Arrow model (AK model) as it considers knowledge as an input in the production function which follows this form

$$Y = f(K_i, L_i, R_i)$$

Where R represents the stock of knowledge from expenditure on research and development. It is important to note that the output in any economy will be influenced in one way or another by the institutional framework represented by IF. Hence, there is a need to introduce an institutional framework into the equation as follows

$$Y = f(K_i, L_i, R_i, IF_i)$$

It is important to note that IF_i is a vector of institutional framework comprising of the six indicators which includes voice and accountability, regulatory quality, rule of law, political stability, government effectiveness and control of corruption.

Model Specification and Estimation Technique.

To meet the core objective of this study, this study adopted the model of Abayomi and Chidiebere (2021) adjusting the Romer's model (1986); and it is explicitly specified in its functional form as

RGDP = f (GFCF, LF, RD, VA, ROL, REGQ, GE, PSTAB, COC)

The mathematical model is stated as;

RGDP = GFCF + LF + RD + VA+ ROL + REGQ + GE + PSTAB + COC

Its econometric form is stated as;

$$Ln\ RGDP_i = \beta o + \beta_1 GFCF_t + \beta_2 LnLF_t + \beta_3 RD_t + \beta_4 VA_t + \beta_5 ROL_t + \beta_6 REGQ_t + \beta_7 GE_t + \beta_8 PSTAB_t + \beta_9 COC_t + \mu_t$$

Where, RGDP which is real gross domestic product is used to proxy economic output (Y); GFCF is gross fixed capital formation; LF is labour force; VA is voice and accountability; ROL is rule of law; REGQ is regulatory quality; GE is government effectiveness; PSTAB is political stability and COC is control of corruption; βo is the intercept, $\beta_1 - \beta_9$ are the parameters of the variables included in the model Ln is the logarithm which is to smooth out the data series and make sure that it is not negatively or positively skewed and μ_t represents the error term.

The study employs the use of fully modified ordinary least squares (FMOLS) to estimate the model. The FMOLS was originally designed by Phillips and Hansen (1990) to provide optimal estimates of cointegrating regression. This method is adopted because it modifies least squares to account for serial correlation effects and for the endogeneity in the regressors that results from the existence of a cointegrating relationship.

Data Sources and Explanation of Variables

This study relied on secondary data extracted from the World Governance Indicators and World Bank Indicators (WDI) publications, covering the period from 1996 to 2022. The primary variable under examination is the **Real Gross Domestic Product (RGDP)**, serving as a metric for economic growth and functioning as the dependent variable. It represents the overall value of all goods and services produced adjusted for inflation within a given country and is measured annually in billions of dollars. The independent variables included **gross fixed capital formation (GFCF)** which is a proxy for physical capital produced in an economy over a specific period of time; **labour force (LF)** which is the total number of

people who are either employed or actively seeking employment; **research and development (RD)**proxied by government expenditure on research and development and institutional framework which was disaggregated into **voice and accountability (VA)**: refering to the extent citizens are able to participate in the political process and hold their leaders accountable; **rule of law (ROL)**: assesses the extent to which the government and private sector are bound by legal frameworks that are predictable, impartial and enforceable; **regulatory quality (REGQ)**: measures the effectiveness of government regulations in promoting private sector development and protecting public health, safety, and the environment; **government effectiveness (GE)**: access the capacity of government institutions to formulate and implement policies; **political stability (PSTAB):** measure the likelihood of political instability or violence and **control of corruption (COC)**: measures the extent to which public officials are held accountable for corrupt activities, and the effectiveness of anti-corruption measures in preventing such activities. All institutional framework variables are measured as estimates from -2.5 to 2.5.

DATA PRESENTATION, ANALYSIS AND RESULT

The study employed the use of econometric tools in the analyses of the variables as shown in the model. The E-views package was used in the estimation process and results are presented in tables. The time series data were analysed and are shown in the appendix.

Data Analysis and Presentation:

a) Descriptive Statistics: Descriptive statistics is a summary statisti cthat quantitatively describes or summarizes the features of a dataset. The result is presented in Table 4.1 and the Jacque-Bera show that real gross domestic product (RGDP), gross fixed capital formation (GFCF), labour force (LF), rule of law (ROL), regulatory quality (REGQ) and government effectiveness (GE) are normally distributed while voice and accountability (VA), political stability (PSTAB), control of corruption and research and development are not normally distributed.

Table 4.1: Summary of Descriptive Statistics

	RGDP	GFCF	LF	VA	ROL	REGQ	GE	COC	PSTAB	RD
Mean	3.51 E+11	24.66962	52874610	-0.698519	-1.132407	-0.923148	-1.044444	-1.093333	-1.733889	0.115801
Median	3.57 E+11	24.96612	52748865	-0.66	-1.14	-0.92	-1.03	-1.12	-1.87	0.087471
Maximum	5.35 E+11	40.5534	73272344	-0.32	-0.84	-0.68	-0.9	-0.47	-0.59	0.95758
Minimum	1.61 E+11	14.16873	37675613	-1.55	-1.51	-1.29	-1.21	-1.5	-2.21	0.001222
Std. Dev.	1.34 E+11	8.511586	10225964	0.27605	0.18639	0.15541	0.088734	0.245773	0.413934	0.185448
Skewness	-0.114442	0.319729	0.364185	-1.347117	-0.394517	-0.648829	-0.352808	1.21796	1.397768	3.650567
Kurtosis	1.463545	1.865613	2.15786	5.1998	2.454866	3.060479	2.156617	4.468447	4.093112	17.08543
Jarque-Bera	2.714717	1.907706	1.394689	13.61027	1.034713	1.898522	1.360338	9.101293	10.13616	283.1692
Probability	0.25734	0.385254	0.497906	0.001108	0.596094	0.387027	0.506531	0.01056	0.006295	0
Sum	9.49 E+12	666.0797	1.43 E+09	-18.86	-30.575	-24.925	-28.2	-29.52	-46.815	3.126627

Sum Sq. Dev.	4.66 E+23	1883.625	2.72E+15	1.981291	0.903269	0.627957	0.204717	1.570512	4.454867	0.894162
Observations	27	27	27	27	27	27	27	27	27	27

Source: Authors' Computation from E Views

b) Unit Root Test: This study adopts the Phillip Perron unit root was used test to determine the stationarity of all the variables as seen in Table 4.2. The Phillip Perron test is used given that it is appropriate for a small sample size of less than 30 observations.

Table 4.2: Summary of PP Unit root test.

Variable	**PP Critical value @ 5%**	**PP Statistic**	**Order of Integration**
RGDP	-1.954414	3.509410	I (0)
GFCF	-2.986225	-3.548377	I (1)
LF	-1.954414	7.614618	I (0)
VA	-2.981038	-3.750652	I (0)
ROL	-2.986225	-3.852245	I (1)
REGQ	-2.986225	-5.812005	I (1)
GE	-2.981038	-3.453529	I (0)
COC	-2.981038	-5.887070	I (0)
PSTAB	-2.986225	-4.701815	I (1)
RD	2.981038	-4.404699	I (0)

Source: Authors' Computation from E-views 10.

Table 4.1 shows that the variables have a mixed order of level and order 1. Real gross domestic product (RGDP), labour force (LF), voice and accountability (VA), government effectiveness (GE), control of corruption (COC) and research and development (RD) are stationary at level while gross fixed capital formation (GFCF), rule of law (ROL), regulatory quality (REGQ) and political stability (PSTAB) are stationary at first difference.

c) Estimation Technique:

This study employed the fully modified ordinary least square technique (FMOLS) which is an advanced ordinary least square to accounts for endogenity in the model as well as the problem of auto correlation. This method is a cointergating equation technique, thus proves the existences of a long run relationship between economic growth and the independent variables in the model as well as generates the long-run covariance estimate for the regression model. The result is summarized in table 4.3 below:

Table 4.3: Summary of Fully Modified Ordinary Least Square Result

Dependent Variable: LNRGDP		
Method: Fully Modified Least Squares (FMOLS)		
Sample (adjusted): 1997 2022		
Included observations: 26 after adjustments		
Cointegrating equation deterministics: C		
Long-run covariance estimate (Prewhitening with lags = 1, Bartlett kernel,		

Newey-West fixed bandwidth = 3.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFCF	-0.017105	0.000542	-31.57432	0.0000
LNLF	1.880109	0.030976	60.69473	0.0000
VA	0.012085	0.013541	0.892497	0.3854
ROL	-0.029285	0.028206	-1.038249	0.3146
REGQ	0.157562	0.020494	7.688327	0.0000
GE	-0.139729	0.027600	-5.062568	0.0001
COC	-0.140779	0.010009	-14.06559	0.0000
PSTAB	0.099077	0.014214	6.970594	0.0000
RD	0.114354	0.014076	8.124262	0.0000
C	-6.508658	0.547775	-11.88199	0.0000
R-squared	0.979546	Mean dependent var		26.53107
Adjusted R-squared	0.968041	S.D. dependent var		0.410894
S.E. of regression	0.073456	Sum squared resid		0.086332
Long-run variance	9.84E-05			

Source: Authors' Computation from E Views 10.

The results presented in Table 4.3 show that the regression line has a negative intercept as presented by the constant (c) = -6.51. This means that if all the variables are held constant or fixed (zero), real economic growth in Nigeria decreases at a rate of about 6.51% per annum in the long run. Thus, the a-priori expectation is that the intercept could be positive or negative, so it conforms to the theoretical expectation.

From Table 4.3, it is evident that gross fixed capital formation, a proxy for physical capital, has a negative impact on real gross domestic product (RGDP) which does not conform to economic expectations. Thus, an increase in gross fixed capital formation reduces real economic growth by 0.017% on average in the long run. On the other hand, labour force and research and development are observed to have positive impacts on real gross domestic product which conforms to economic expectations. As such, a 1% increase in labour force and research and development increases real economic growth by 1.88% and 0.11% respectively on average.

Institutional framework indicators such as rule of law (ROL), government effectiveness and control of corruption have been shown to exhibit a negative relationship with real gross domestic product in Nigeria. Thus, an increase in voice and accountability, government effectiveness and control of corruption, decrease in real gross domestic product in Nigeria by 2.92%, 13.97% and 14.08% respectively and vice versa. Other institutional framework indicators like voice and accountability, regulatory quality (REGQ) and political stability (PSTAB) show a positive impact on real gross domestic product in Nigeria. This implies that an increase in rule of law, regulatory quality and political stability lead to an increase in real gross domestic product by 1.2%, 15.76% and 9.908% respectively in the long run in Nigeria. It is observed that gross fixed capital formation, rule of law (ROL), government effectiveness and control of corruption do not conform to a prior expectation while labour force, research and development, voice and accountability, regulatory quality and political stability conform to economic expectation.

The statistical criterion was tested using the R^2, `adjusted R^2 and F- statistics. The R^2 and adjusted R^2 as seen in table 4.3 is shown to be approximately 0.98 and 0.97 respectively. The R^2 indicated that the model is an extremely good fit and the independent variables accounted for the variations in the dependent variable (real gross domestic product) at 98% while other possible variables not captured in the model explain about

2% of the variation in the real GDP in Nigeria. The adjusted R^2 supported this showing that the independent variables (the re gressors) explain variation in the real GDP at 97%. The F-statistics obtained from the Wald test presented in Table 4.4, showed a probability value of 0 which is less than the 5% level of significance. Therefore, all the independent variables jointly have a significant impact on real GDP in Nigeria.

Table 4.4: Summary of Wald Test and Multi-collinearity Test

Test Statistic	Value	Df	Probability
F-statistic	18597222	(10, 16)	0.0000
Chi-square	1.86E+08	10	0.0000
MULTICOLLINEARITY TEST			
	Coefficient	Uncentered	Centered
GFCF	2.93E-07	50.65481	5.180459
LNLF	0.000960	80174.89	8.331465
VA	0.000183	23.77452	2.290018
ROL	0.000796	273.8987	7.097523
REGQ	0.000420	96.91503	2.671668
GE	0.000762	223.1485	1.460990
COC	0.000100	33.02886	1.589650
PSTAB	0.000202	173.5704	8.181677
RD	0.000198	2.530416	1.773799
C	0.300058	79317.77	NA

Source: Authors' Computation from E Views 10

The econometric criteria involve testing the model to ensure it is robust for prediction and forecasting. Hence, the multi-collinearity and normality tests were analysed given that the fully modified ordinary least square naturally accounts for auto correlation, heteroscedasticity and endogeneity problems. Multi-collinearity was tested using the variance inflation factor presented in Table 4.4; it can be seen that variance inflation factors were all below 10. Hence no multi-collinearity in the model. The analysis was concluded by conducting the normality test which can be seen in Fig 4.1 below.
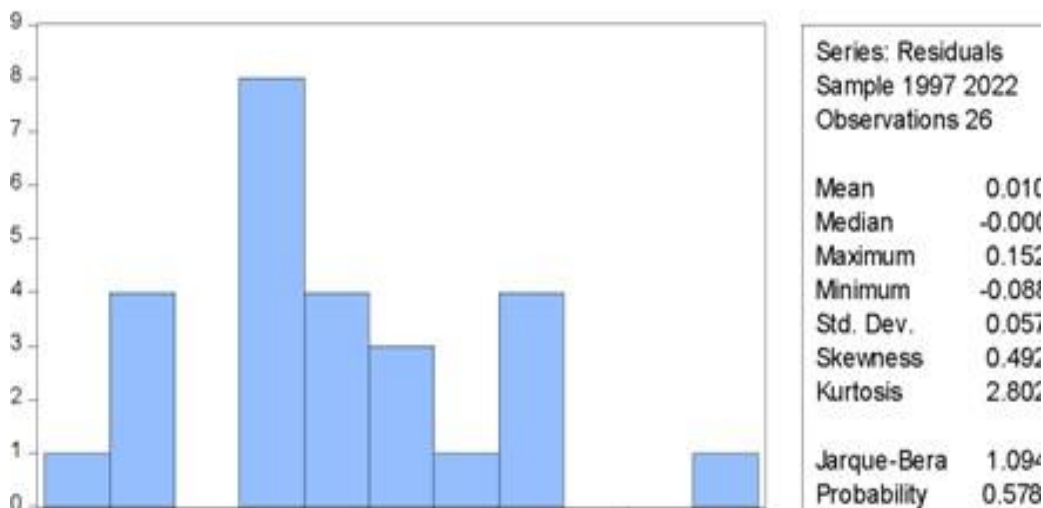

Fig 4.1: Diagram of Normality Test

The normality test showed that the model was normally distributed at the 5% level of significance and concluded that the results are fit for predictions and are reliable.

Evaluation of Research Hypotheses.

The research hypotheses proposed earlier in this study would be tested using the probability value of the f-test and the t-statistics.

Hypothesis one

In testing hypothesis one, the probability value of f-statistics obtained from the Wald test is used as it assesses the joint significant impact of institutional framework variables on the dependent variable (economic growth) in the model. Here, the study compares the estimated or calculated probability value of f-statistic to 5% level of significance. The decision rule is to reject the null hypothesis if the probability value is less than 0.05, otherwise accept the alternative hypothesis. The result from the Wald test is presented in Table 4.5 and Appendix 14 for the hypothesis statement below.

H_0: Institutional framework does not have significant impact on economic growth.

H_1: Institutional framework have significant impact on economic growth.

Table 4.5: Summary of Wald Test of institutional framework variables on RGDP

Test Statistic	Value	Df	Probability
F-statistic	53.11133	(6, 16)	0
Chi-square	318.668	6	0
Null Hypothesis: C(3)=C(4)=C(5)=C(6)=C(7)=C(8)=0			
Null Hypothesis Summary:			
Normalized Restriction (= 0)	Value	Std. Err.	
C(3) VA		0.012085	0.013541
C(4) ROL		-0.02929	0.028206
C(5) REGQ		0.157562	0.020494
C(6) GE		-0.13973	0.0276
C(7) COC		-0.14078	0.010009
C(8) PSTAB		0.099077	0.014214

Source: Authors' Computation from E Views 10

Based on the summarized results, we would reject the null hypothesis (H0) of the first hypothesis. The Wald test results indicate that voice and accountability (VA), regulatory quality (REGQ), rule of law (ROL), political stability (PSTAB), control of corruption (COC) and government effectiveness (GE) jointly and significantly affect real gross domestic product (economic growth) in Nigeria, given that the probability value of f-statistics is less than 0.05. This suggests that there is evidence to support the alternative hypothesis (H1) that institutional framework have a significant impact on economic growth in Nigeria.

DISCUSSION OF FINDINGS

The discussion is done based on the hypothesis testing of this study. From the research question and

research hypothesis, it was found that institutional frameworks have a significant impact on the economic growth in Nigeria. This indicates the importance of a strong institutional framework in driving economic growth in the economy. This concurs with the previous empirical findings of Utile et al. (2021); Abubakar (2020) and Udah and Ayara (2014) but contradicts that of Ogbuabor et al. (2020) who found an insignificant impact of institutional quality on economic growth. Specifically for the indicators of institutional framework, the long result of the FMOLS indicates the presence of institutional lapses in the Nigerian economy ranging from poor adherence to rule of law, government inefficiency and the presence of corruption in the economy which are principal institutional factors in deterring long-run real economic growth. Appiah et al. (2020) and Abayomi and Chidiebere (2021) support these findings as they also discovered regulatory quality and control of corruption to have a positive and negative impact on economic growth respectively in a sample of 15 ECOWAS countries and in comparison between Nigeria and Ghana respectively. Also, Abayomi and Chidiebere (2021) also noted the government's ineffectiveness in retarding economic growth in Nigeria. More so, Akıncı, Usta and Kaplan's (2023) findings of a positive and significant impact of institutional variables on economic growth for European Union countries prove the differences between the developed and developing countries- Nigeria. Given that European countries such as Great Britain and the rest have been able to achieve sustained economic growth due to a strong institutional framework despite little resources as compared to Nigeria.

CONCLUSION, POLICY IMPLICATION, AND RECOMMENDATION

The general conclusion and policy implication from the above findings during the period under review is that policy shifts on the significant variables of institutional framework should be expected to bring about significant changes in economic growth in Nigerian and as such careful attention must be given to institutional frameworks in Nigeria if the economy is to attain the standard of a developed nation. Based on this, this study recommends that the federal government should implement extensive institutional reforms that cutacross all the arms and levels of government, with emphasis on the autonomy of ministries, agencies, parastatals and commissions to exercise discretion to enhance the implementation of anti-corruption measures, the rule of law and promote good governance practices which in all would foster sustainable economic growth.

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