The nexus between economic growth, institutional quality, and poverty in Nigeria

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ABSTRACT

Poverty, institutional quality, and economic growth are all crucial to a country's development and have garnered attention from scholars and policymakers over the years. This study looked at the relationship between poverty, institutional quality, and economic growth in Nigeria from 1996 to 2018, applying the techniques of Fully Modified OLS (FMOLS) and Causality test. The two institutional quality variables that were used are rule of law and corruption control. Consequently, the study established that an increase in control of corruption (a corruption-free environment), GDP growth, government expenditure, and gross capital formation had reducing effects on poverty in the short run. Also, control of corruption had a negative effect on relative poverty, indicating that a corrupt free environment limits the spread of poverty in the country. Hence, it was recommended, amongst others to encourage people to do the right thing and prioritise basic human values such as honesty and integrity. Therefore, the government is advised to embark on mind orientation, especially in primary and secondary school, in order to build the future of the nation from the ground. Also, the administration and implementation of the rule of law and the judicial system of the nation should be revisited with the intention of causing them (the law, the judicial system, and the institution governing the land) to favor the rights and good of the people.

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1. Introduction

The actual direction of the nexus among institutional quality, poverty, and economic growth has raised much concern in literature over the past decades. Most economists and policymakers view economic growth in terms of GDP per capita or expenditure, the major determinant affecting poverty (Adams Jr, 2004; Balisacan & Fuwa, 2003; Dollar & Kraay, 2002; Kraay, 2006; Sembiring, 2023; Balasubramanian et al., 2023). The growth elasticity in the 1990s was between negative 2.0 and 3.0. ogn implies that 10% increase in economic growth brings about a 20% to 30% reduction in poverty, but in developing countries with a high rate of their population living in poverty, a 10% increase in economic growth causes poverty to decline by 35% to 40%. Bhalla (2002) suggested a growth elasticity of around negative 5%. However, in most developing countries, an increase in economic growth of 10% prompts poverty to fall by 25%. This estimate shows that economic growth should have a significant effect on poverty. However, despite the global economic growth of the 1990s, poverty still exists in quite a number of households. Despite its richness of human and natural resources, Nigeria has struggled to uphold sustainable economic growth over the years. Nigeria should, in all fairness, be among the world's high-income countries, however, its people continue to live in poverty. According to statistics, over 70% of her population lives below the poverty line. The political institutions of Nigeria, especially the government, have been characterized by corruption since the very beginning of the nation's independence in 1960. Currently, Nigeria's Corruption index ranks 146 out of 154 (a high rate of corruption) in 2020. One may easily attribute the country's high poverty rate to low institutional quality, particularly corruption, and a lack of a politically stable climate in which businesses may thrive and people can move securely within the country. This study, on the other hand, will reveal the link between economic growth, institutional quality, and poverty in Nigeria, not just for academic purposes but also to present facts that policymakers can use as a guide in any decision-making process aimed at improving people's welfare.

Fast growth may not be the best thing for the poor because of the high risk of being overlooked or marginalised by the structures of change that come with it (Todaro & Smith 2009). Several surveys have established that there is a link between economic growth and poverty reduction, however, Nigeria is an outlier in this regard. The slope of the link between these two economic factors is debatable and ambiguous; some researchers agree that the two variables have a positive link, but they dispute the causation direction (Hassan, 2012). Others believe that GDP and poverty are unconnected and that determining their relationship is difficult due to low data quality. It is also quite surprising that a country like Nigeria exists where poverty continues to linger freely for decades despite past growths in the economy, in addition to several policies, plans, and programs of governments against poverty, yet the world of literature has failed to look into this problem. This study therefore seeks to investigate the nexus between institutional quality, economic growth, and poverty in Nigeria. This paper is sectionalized as follows: Section 2 presents the literature review; Section 3 presents the methodology and data; Section 4 presents the results; while Section 5 presents summary, conclusion, and recommendation.

2. Literature review

2.1 Theoretical review

Progressive social Theory, Cyclical interdependence Theory, Endogenous growth Theory, Neoclassical growth Theory, Elite theory of poverty, Keynesian growth Theory, and Harrod-domar growth Theory are the main theories that address poverty and economic growth. According to progressive social Theory, poverty results from unfavorable social, economic, and political structures that act or function to render the poor's efforts ineffective. Comparably, the Cyclical interdependence Theory holds that unfavorable circumstances such as joblessness, business failure, inadequate education, low tax revenue, unskilled labor, and slowed technological advancement are directly related to the well-being of individuals and society as

a whole. All of these factors, along with many more, contribute to increased rates of unemployment and the perpetuation of the poverty cycle.

Additionally, the goal of endogenous growth theory is to explain how an economy grows over the long term and the key elements that can accelerate economic growth, especially the forces and factors that control the incentives and possibilities for the creation of technological knowledge. According to neoclassical growth theory, the rate of economic growth is determined by the long-term increases in labor (L), capital (K), and technological advancement (T). Furthermore, the elite theory of poverty holds that the distribution and severity of poverty within a society are determined by the political power structure. Similar to this, the Keynesian theory places special emphasis on the idea that effective demand is the primary cause of economic growth. Lastly, Keynesian short-term analysis is extended by the Harrod-Domar theory.

2.2 Empirical review

2.2.1 Relationship between poverty and economic growth

Numerous previous studies have examined the relationship between poverty and economic growth, as well as their respective contributions and effects. Research utilizing cross-national time series data has demonstrated a favorable correlation between economic progress and the decrease in poverty. Using a co-integration technique, Ebunoluwa and Yusuf (2018) investigated how economic growth affected poverty from 1980 to 2016 and discovered a substantial relationship between economic growth and the decline of poverty. According to the study, the government's monetary and fiscal policies have a significant impact on resource allocation, security, and stabilization. Nwosa and Ehinomen (2020) examined the relationship between poverty, income inequality, and economic growth in Nigeria from 1981 to 2018. The final results, obtained using the Autoregressive distributed lag (ARDL) technique, showed that income inequality favorably impacts economic growth, but poverty had no effect on either measure. According to the study, poverty and income disparity have a favorable and considerable impact on economic growth. In a similar study, Asongu and Eita (2023), examined the influence of conditional poverty, inequality, and economic growth, sampling 42 countries in the SSA region. The data for the study covered the period of 1980-2019. Findings from the study revealed that poverty incidence decreased as the rate of economic growth increased.

2.2.2 Relationship between institutional quality and poverty

In Nigeria, Adaramola and Dada (2020) investigated the relationship between poverty alleviation and economic growth in relation to the quality of institutions. Using the Autoregressive distributed lag (ARDL) with Bounds Test, the impact of institutions and economic growth on poverty was determined in the short- and long-term between 1984 and 2018. The results showed that while political stability, institutional quality, and increased corruption control all had short-term effects on poverty reduction, long-term poverty reduction is a joint effort of institutions and economic growth. In conclusion, it was discovered that robust institutions and economic growth were both crucial instruments for reducing poverty in Nigeria.

Using three financial institutions and institutional quality, Cepparulo et al. (2017) looked into the impact of financial development and the quality of institutions on poverty reduction in 58 countries between 1984 and 2012. The study's use of GMM showed that the relationship between institutional framework and economic growth had a major and advantageous impact on reducing poverty. Ajisafe (2016) investigated how corruption affects the fight against poverty. The study employed autoregressive distributed lag as an estimation approach and principal component analysis to create an indicator of poverty using secondary data from 1986 to 2014. It has been discovered that corruption lowers people's welfare, demonstrating how corruption exacerbates poverty.

2.2.3 Relationship between economic growth and institutional quality

In 28 EU member states, Marzanna Poniatowicz et al. (2020) investigated the relationships between institutional elements related to the standard of governance and GDP per capita. Utilizing cross-sectional data from 2018, the study took into account the following variables: GDP, political stability, voice and accountability, government efficacy, regulatory quality, and corruption control. Through the use of multiple regression analysis, the study discovered that nations with high GDP per capita also had high levels of accountability and voice.

Qiang and Jian (2020) employed panel data from provinces between 2005 and 2018. Their research examines the relationship between natural resources, institutional quality, and economic growth experimentally. Along with classifying institutional quality into three categories—degree of market resource allocation, market openness, and diversification of property rights—the study also took into account actual production, the quantity of natural resources available, physical capital stock, and labor stock. The study's conclusive results demonstrated that sound institutional design may support economic expansion. Yusuf et al.(2021) conducted a study on the effect of institutional quality on bilateral trade flow between Malaysia and 25 other member nations of the Organization of Islamic Cooperation (OIC) between 1985 and 2016. The study used the Poisson Peusdo-Maximum Likelihood Method (PPML) approach and the gravity model of trade. The outcome showed that political stability, government effectiveness, and the ability to combat corruption all had a negative impact on bilateral trade between OIC member states. In contrast, regulatory quality was seen as a strong indicator of economic growth, and the main reason why trade between OIC member states is negatively impacted is because these African nations' government institutions are not operating effectively.

By examining the relationship between poverty in Nigeria, economic growth, and institutional quality, this study aims to fill a vacuum in the literature. The relationship between economic growth and poverty has been the subject of numerous studies by different researchers; some examples are Ebunoluwa and Yusuf (2018), Akanbi and Du Toit (2011), Fosu (2017), and Stephen and Simoen (2013), all of whom conducted empirical investigations; however, they were unable to demonstrate the significance of a top-notch institution in their research.

A few researchers have Identified the significance of examining the relationship between institutional quality and poverty, including Cepparulo et al. (2016), Olofin et al. (2015), and Tebaldi and Mohan (2010). However, this study criticizes these researchers for failing to point out how the relationship between institutional quality and poverty affects GDP growth and development. Additionally, there aren't many articles discussing the relationship between institutional quality and economic growth; such examples include Valeriani and Peluso (2011), Kilishi et al. (2013), and Perera and Lee (2013). Individually, Yusuf et al. (2014), Alexiou et al.(2014), Yildirim and Gokalp (2016), and others effectively investigated the effects of institutions, civil liberties, corruption, the caliber of bureaucracy, and the efficacy of government on economic performance in terms of growth and development, however, they ignored the issue of poverty to a large extent.

This study is indeed capable of filling the existing gap in the literature due to the fact that, to the best researchers' knowledge, there is no previous record of this type of research on Nigeria's economy. Therefore, this study holds significant importance for researchers, academicians, and policymakers. This study addresses the underexplored inquiry by investigating the nexus between institutional quality, economic growth, and poverty in Nigeria. This study fills the gap by providing a comprehensive analysis of the relationship among these three variables in the case of Nigeria.

3. Methodology and data

This study employs a quantitative research approach to effectively achieve its objective. The current study uses time series data from 1986 to 2018 to assess the relationship between poverty, institutional quality, and economic growth in Nigeria. The study collected the data from reputable database such as the Federal Office of Statistics and the World Bank. The study also analyse the relationship between the dependent variable (poverty) and the independent variables (rule of law and corruption control—institutional quality, economic growth, government spending, gross capital formation, and population). This will be determined through the application of the Fully modified least squares approach.

3.1 Model specification

The study builds on progressive social theory. Progressive social theory proposes that poverty results from unfavorable social, economic, and political structures that hinder the effectiveness of the poor's efforts. This study adopts the framework employed in the studies by Perera and Lee (2013) and Cepparulo et al. (2016), but with some modifications. This study presents the model specification as follows:

POVERTY=F(INSTQ,GOV-EXP,POP,GCF)   1
Thus, the functional relationship stated above can be represented below as:
POVERTY=F(CORR,RLW,GDPG,GOV-EXP,POP,GCF)   2
Structural form:
$$\llbracket poverty \rrbracket_t = \beta_0 + \beta_1 \llbracket gdp\text{-}gro \rrbracket_t + \beta_2 \llbracket rlw \rrbracket_t + \beta_3 \llbracket corr \rrbracket_t + \beta_4 \ln \llbracket pop \rrbracket_t + \beta_5 \llbracket gov\text{-}exp \rrbracket_t + \beta_6 \llbracket gcf \rrbracket_t + \epsilon_t \qquad 3$$
Where;
POVERTY t = Poverty at time t
CORR t = Control of corruption at time t
RLWt = Rule of law at time t
GDP-GROt = Gross domestic product growth rate at time t
GOV-EXPt= Government expenditure at time t
POPt= Population at time t
GCFt = Gross capital formation at time t
μt = Stochastic error term at time t

In this model, poverty is the dependent variable, while institutional quality, proxied as control of corruption and rule of law, GDP growth rate, government expenditure, population and gross capital formation are the independent variables. It is necessary to find the natural log of population in order to minimise variability among the values of the variables and ensure a reasonable figure in the regression result. In accordance with the study's goal, four unique models will be detailed. In the first, among other explanatory variables, government spending and institutional quality were regressed as the dependent variables on which poverty was measured. The second model exhibits a similar trend, with the exception that it treats institutional quality and other characteristics as explanatory variables and uses economic growth as the dependent variable. The third variable looks at the links between poverty, economic growth, and institutional quality. The analysis for the procedure will be in different stages. The descriptive statistics of the variables will be done first before any other inferential analysis. However, the main estimation techniques will be the cointegration test, the Fully modified OLS, and the Granger causality test. The purpose of this method is to correctly estimate the values of the parameters and eliminate spurious regression errors arising from non-stationary series.

3.2 Definitions of variables

The poverty index measures household poverty. It concentrates on deprivation in the three essential elements of human life longevity, knowledge, and a decent standard of living. Poverty is often defined as a situation of low consumption or low income, with various measures adopted (Akinbobola and Saibu, 2004; Amaghionyeodiwe, 2009). Gross capital formation describes the net capital accumulation during an accounting period for a particular country, and the term refers to additions of capital stock, such as equipment, tools, transportation assets, and electricity. Generally, the higher the capital formation of an economy, the faster it can grow its aggregate income. It is measured in billions of naira. Gross domestic product growth represents the rate at which the total value of all final goods and services produced within Nigeria changes. GDP is commonly used as an indicator for economic growth, and it captures the value of output produced and services rendered in an economy. Institutional quality are control of the corruption index and the rule of law index. The corruption control index measures the rate at which a country is ranked on the basis of their perceived level of corruption on a scale of 0 (highly corrupt) to 6 (clean). The rule of law measures the confidence the people have in adhering to social norms, it considers the quality of enforcing contracts, property rights, police, and courts of law, as well as the likelihood of crime and violence. The term government expenditure is used to mean public or government expenses or government spending. This is the amount in percentage that flows out of the government purse annually. They are meant to run public activities for the common good of all. Population is the total number of people inhabiting a certain location at a particular point in time.

Table 3.1 Source of data and unit of measurement

Variable	Description	Source	Unit of Measurement
GDP-GRO	Gross Domestic Product growth rate	World Bank databank, 2018	Annual (%)
POVERTY	Number of people living in relative poverty	Federal Office of Statistics	Estimate
CORR	Control of Corruption	World Bank databank, 2018	Estimate
GCF	Gross capital formation	World Bank databank, 2018	(annual % growth)
GOV-EXP	General government final consumption expenditure	World Bank databank, 2018	(annual % growth)
POP	Population, total	World Bank databank, 2018	Estimate
RLW	Rule of Law	World Bank databank, 2018	Estimate

4. Empirical results and discussion

This section deals with the review and interpretation of the results of the variables of the data collected for the study. The analysis was based on the required steps taken using time-series data. The chapter presents the Augmented dickey-fuller root test performed to test for the stationary and the ARDL bound tests for the long relationship between the variables. The cointegration of Fully modified ordinary least squares (FMOLS) technique was used to approximate the model used.

4.1 Descriptive analysis

The summary statistics evaluates the data using measurements of central tendency and dispersion, namely, the mean, and the standard deviation. Table 4.1 presents the summary statistics of the variables utilised in this study.

Table 4.1: Descriptive of the variables

	POVERTY	GDP_GRO	RLW	CORR	POP	GOV_EXP	GCF
Mean	57.6942	1.5475	-1.1794	-1.1757	18.7792	60.5533	10.2919
Median	55.21	1.8016	-1.158	-1.1729	18.7751	1.6999	7.8165
Maximum	66.9	2.7297	-0.8715	-0.8918	19.0671	565.5388	59.3007
Minimum	52.99	-0.5376	-1.4272	-1.4312	18.5220	-23.9262	-23.9829
Std. Dev.	4.8474	0.7651	0.1494	0.1262	0.1637	155.0016	22.0101
Skewness	0.6223	-1.4278	0.0080	-0.0121	0.0813	2.3754	0.6193
Kurtosis	1.7877	4.7942	2.3947	2.9829	1.8512	7.3714	2.8004
Jarque-Bera	2.6414	9.9530	0.3208	0.0007	1.1779	36.4705	1.3775
Probability	0.2669	0.0068	0.8518	0.9996	0.5549	0.0000	0.5022

Source: Author's findings

In Table 4.1, the descriptive statistics for the various variables were analysed. The mean value representing the average value of the variables, indicates that there is a significant variation among the average values of the variables. The value of the respective standard deviation suggests a wider dispersion among the variables. Furthermore, the skewness which measures the degree of asymmetry of the series, shows that poverty, rule of law, population, government expenditure and gross capital formation exhibit a normal skewness pattern with positive values close to zero. This suggests that these variables have a longer right tail and that the individual distribution is likely to have values higher than the sample mean. Conversely, GDP growth and corruption exhibit negative values, indicating that the distributions have a long left tail. This suggests that the individual distributions are likely to have values lower than the sample mean for maize. The Jarque-bera statistics probability suggests that the model follows a normal distribution, as seen by the probability values being lower than the standard 5% significance level.

4.2   The correlation matrix

Table 4.2 The correlation matrix

	POVERTY	GDP_GRO	RLW	CORR	POP	GOV_EXP	GCF
POVERTY	1						
GDP_GRO	-0.3203	1					
RLW	-0.1509	-0.4205	1				
CORR	-0.4114	-0.2508	0.6591	1			
POP	-0.5275	-0.0027	0.6645	0.3453	1		
GOV_EXP	-0.3903	0.2595	-0.3526	-0.1447	-0.0963	1	
GCF	-0.2534	0.2742	0.0692	0.0886	-0.0219	-0.1937	1

Source: Author's findings

A correlation matrix table displays values along the major diagonal. By definition, the correlation of a variable with itself is always 1. The entries outside the main diagonal represents the pairwise correlations between the variables. High values of pairwise correlations indicate the presence of a significant collinearity

issue. Therefore, the findings from Table 4.2 indicated that there was no presence of multicollinearity in the model.

4.3   Granger causality test

Table 4.3 Pairwise Granger causality test

Null Hypothesis: The dependent variable does not cause independent variable.	F-Statistic	Prob.
LGDP_GRO does not Granger Cause POVERTY	7.2685	0.0076
POVERTY does not Granger Cause LGDP_GRO	0.0873	0.9169
CORR does not Granger Cause POVERTY	1.8273	0.1949
POVERTY does not Granger Cause CORR	3.6514	0.0510
RLW does not Granger Cause POVERTY	1.9838	0.1720
POVERTY does not Granger Cause RLW	1.9693	0.1740
CORR does not Granger Cause LGDP_GRO	0.0184	0.9817
LGDP_GRO does not Granger Cause CORR	0.7823	0.4777
RLW does not Granger Cause LGDP_GRO	0.1621	0.8520
LGDP_GRO does not Granger Cause RLW	1.9220	0.1857
RLW does not Granger Cause CORR	0.7785	0.4757
CORR does not Granger Cause RLW	0.4544	0.6428

Source: Author's findings

Based on Table 4.3, it can be concluded that Gross domestic product growth rate, granger cause poverty at the 5% level of significance. However, poverty does not granger cause Gross domestic product growth rate. Meanwhile, control of corruption and rule of law have no effect on poverty. Poverty, on the other hand, does not granger cause Gross domestic product growth rate, control of corruption, and rule of law. Furthermore, there is no evidence that other variables are granger cause each other at the 5% significance level.

4.4   Unit root test

Unit root test is performed to verify whether the variables are stationary. This is done to prevent the result of spurious regression. If the variable is stationary, the current values are not determined by past values. The unit root test used in this analysis is the Augmented dickey-fuller tetheThe result from the unit root suggests that the model is stationary at I(0) and I(1) i.e. stationary at level and after first differencing. Therefore, the utilisation of the Fully modified OLS (FMOLS) technique was justified.

Table 4.4 Augmented dickey-fuller unit root

Series	ADF test statistics	5% critical values	10% critical values	Order of integration	Remarks
LGDP-GRO	-2.9846	-3.0206	-2.6504	I(0)	Stationary at first difference
GOVEX	-4.8519	-3.0123	-2.6461	I(1)	Stationary at first difference
GOV-EXP	-4.8519	-3.0123	-2.6461	I(1)	Stationary at first difference

GCF	-9.8889	-3.0206	-2.6504	I(1)	Stationary at first difference
CORR	-4.0626	-3.7880	-2.6461	I(1)	Stationary at first difference
RLW	-3.8443	-3.0123	-2.6461	I(1)	Stationary at first difference
POVERTY	-4.2452	-3.0206	-2.6504	I(1)	Stationary at first difference
LPOP	-4.7821	-3.0123	-2.6461	I(0)	Stationary at level

Source: Author's findings

4.5   Cointegration test

The ARDL bound test was carried out to ascertain whether a long-run relationship exists among the variables that have been observed to be stationary at level and first difference. This result implies that using the Fully modified ordinary least squares (FMOLS) method to estimate the parameters will lead to spurious regression results since there are non-stationary series in the model. This necessitated a test of co-integration to check if at all there is a long-run relationship among the variables used in the model. Since the variables are combinations of the I(0) and I(1) series, the ARDL bound test is the most suitable for ascertaining whether or not a long-run relationship exists among the variables. However, if the F-statistics value is greater than the upper bound value (I1 bound) at the 5% significance level, then there exists a long-run relationship. But if the F-statistic falls in between the lower bound and upper bound values at the 5% significance level, then the result is inconclusive. From the results above, 4.9461 exceeds the upper bound I(1) bound value of 3.61 at the 5% significance level, resulting in the rejection of the null hypothesis. The conclusion, therefore, is that there exists a long-run relationship between the variables.

Table 4.5. Results of the bounds test

Test Statistic	Value	K
F-statistic	4.946066	6
Critical Value Bounds		
Significance	I(0) lower bound	I(1) Upper bound
10%	2.12	3.23
5%	2.45	3.61
2.50%	2.75	3.99
1%	3.15	4.43

Source: Author's findings

Since the ARDL bound test result revealed that a long-run relationship exists among the variables, the researcher proceeded to the estimation of the parameters using a co-integration regression of the Fully modified ordinary least square (FMOLS) technique because the pre-test results have shown that the variables are non-stationary and are co-integrated.

This empirical result presented in Table 4.6 shows the estimated parameters, variable coefficient, standard error, t-statistics, and probability value. The result obtained from the estimation technique (FMOLS) is presented below:

Table 4.6: Fully Modified Least Squares (FMOLS) regression result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP_GRO	1.1952	0.4540	2.6325	0.0219
RLW	21.1007	3.2294	6.5338	0.0000
CORR	-21.3218	2.4842	-8.5829	0.0000
POP	-27.5626	2.3627	-11.6655	0.0000
GOV_EXP	-0.0131	0.0016	-7.9404	0.0000
GCF	-0.0771	0.0115	-6.7037	0.0000
C	574.4994	46.1412	12.4508	0.0000
R-squared	0.8721	Mean dep.var		57.2042
Adjusted R-squared	0.8082	S.D. dependent var		4.8270
S.E. of regression	2.1138	Sum squared resid		53.6188
Long-run variance	1.0008			

Source: Author's findings

4.6 Interpretation of results

It is important to note that population, which is an independent variable, is transformed using a logarithm to reduce variability among its values and provide more reliable findings in the regression analysis. The result shows that are a significant and negative coefficient of 21.6649 control corruption. A higher level of control over corruption in Nigeria leads to a significant reduction in poverty incidence. The study also found that there is a presence of a direct correlation between economic growth and poverty in Nigeria. shows that there exists a positive relationship between economic growth and poverty in Nigeria. However, the result shows that economic growth cannot be said to be a key variable that affects poverty in Nigeria. In addition, the rula of law plays a crucial role in shaping poverty levels in Nigeria. It is evident that the presence of an inverse correlation between population and poverty. Finally, government expenditure and gross capital formation shows that there are a negative and significance relationship with poverty in Nigeria. It can be deduced that most of the variables conformed to the priori expectations except population and the rule of law.

4.7 Diagnostic tests

Several residual diagnostics tests were conducted to assess the validity of the model presented in Table 4.8.

Table 4.8 Diagnostic test results

	Statistics	Probability
Jarque-Bera Normality Test	3.5751	0.1673
Breush-Godfrey serial Correlation LM Test	2.1384	0.1803
Heteroskedasticity Test: Breush Pagan Godfrey	0.7796	0.6410
Ramsey RESET	0.5086	0.4938

Source: Author's findings

In summary, the findings from Table 4.8 indicate that the residual does not exhibit serial correlation, absence of heteroskedasticity and specification error. These results suggest that the model follows a normal distribution. Given the behaviour nature of the error component, it is concluded that the inferences drawn from the estimated model are valid.

5.   Conclusion and recommendation

Population is increasing at a very fast pace, with little to no change in poverty, making the impact of various policies on alleviating poverty not significant and hardly felt. The specific objectives of the study were to examine the relationship between economic growth and poverty, to investigate the impact of institutional quality on poverty, and to examine the direction of causality between institutional quality, economic growth, and poverty in Nigeria. From the works of literature reviewed, it has been shown that economic growth has a positive but weak impact on poverty, whereas institutional quality, especially corruption, has to a great extent contributed to poverty in Nigeria.

This study made use of both descriptive and inferential analysis. The descriptive analyses used were the measures of central tendency, measures of dispersion, correlation matrix, and the Causality test. These were used to determine the relationship and growth pattern among the variables used for this study. The inferential analysis used was the Fully Modified Ordinary Least Square (FMOLS), while testing for stationarity and long-run relationship using the Augmented dickey-fuller test for unit root and ARDL bound test respectively. It was revealed that institutional quality has a major role and impact on poverty as well as economic growth has no significant impact on poverty in Nigeria. The findings revealed that an increase in control of corruption (a corruption-free environment), GDP growth, government expenditure, and gross capital formation had reducing effects on poverty in the short run. Furthermore, control of corruption had a negative effect on relative poverty, indicating that a corrupt free environment limits the spread of poverty in the country, whereas on the part of the rule of law, it had a positive effect on poverty, signifying that there exists a biassed judicial system, if the laws of the land that govern the people cause the people to suffer, then there is something unusual and wrong about the law (or the activities of the law). The result from this study also shows that the prosperity of the people in the country is to a great extent tied to the bad rule of the law, the lack of transparency, and the presence of bias in the law and its judicial s ogn. This shows that over time, the people has adapted to model their lives to be in sync with the bad judicial institutions of the land, and these two have begun to walk side by side with each other, indicating that the law's ineffectiveness in carrying out its activities and implementation adds to the problem of poverty in Nigeria.

Therefore, it is recommended that in order to effectively and efficiently addresses the issue of poverty in Nigeria, the society should promote ethical behaviour and prioritise fundamental human values such as honesty and integrity. The government is recommended to embark a progrognitiveognative education, particularly in primary and secondary school, with the aim of cultivating the future of the nation starting from its foundation. The administration and implementation of the rule of law and the judicial system of the nation should be revisited with the objective of ensuring promote the welfare and rights of the people. The study established that the greater the control of corruption (a corruption-free environment), the better improvement in GDP growth, government expenditure, and gross capital formation. In the same vein, it was discovered that the rule of law had a positive effect on poverty, signifying that there exists a biassed judicial system- if the laws of the land that govern the people cause the people to suffer, then there is something unusual and wrong about the law (or the activities of the law). This is indeed a huge contribution to this area, as it affords the relevant stakeholders an understanding of the role of a corruption-free economy and the rule of law in ensuring an effective and efficient economy capable of improving the welfare and standard of living of the entire population in society.

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Conflict of interest statement

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Authors' contributions

Olawale is involved in the research investigation, methodology, formal analysis, visualization and wrote the original manuscript. Kehinde and Lola are involved in reviewing and editing the manuscript. All authors have read and agreed to the published version of the manuscript.