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DOES INSTITUTIONAL QUALITY REDUCE POVERTY INCIDENCE IN NIGERIA?

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ABSTRACT

Despite periods of economic expansion, poverty in Nigeria is persistent and this raises important concerns about the role of governance institutions in developing outcomes. This study examines the significant effect of institutional quality on poverty level in Nigeria using annual time series data between the years 1996-2023. Institutional quality is quantified by the six components of World Bank's Worldwide Governance Indicators: control of corruption; government effectiveness; political stability; quality of regulation; rule of law; and voice and accountability, whereas poverty incidence is taken as the key indicator of welfare. Using autoregressive distributed lag (ARDL) bounds-testing method in a log-linear model, the study estimates both long-run and short-run relationships. The results indicate that the role played by institutions in poverty differs among governance dimensions, with rule of law emerging as the most reliable factor in poverty reduction. In contrast, overall institutional quality has a poor explanatory power, which may suggest the combined indicators cover up the different role of individual governance factors. This study contributes to the institutions and development literature by providing specific information for Nigeria on the relationship between governance and poverty.

KEYWORDS: Institutional quality; Poverty incidence; Growth-Poverty Nexus; Socio-Economic Welfare; Institutional Reform.

INTRODUCTION

Among the most disconcerting paradoxes in African development is the condition of Nigeria: a nation that commands the continent's largest economy, the largest population, and among its most abundant natural resource endowments, yet simultaneously holds the distinction of being home to the world's second-largest concentration of poor people. Since 2018, the share of Nigerians living below the national poverty line has risen sharply from 40.1 percent to 56.0 percent, with an estimated 129 million people now living in poverty (World Bank, 2024). This trajectory is not merely a product of exogenous shocks such as the COVID-19 recession, inflationary pressures, or natural disasters; it reflects, more fundamentally, the chronic failure of domestic institutions to translate macroeconomic resources into equitable human welfare. For scholars of development, this trajectory demands a more penetrating question than "why is Nigeria poor?", it demands an account of why Nigeria's poverty persists and deepens despite decades of growth.

The institutional aspect of this paradox is just as striking. Nigeria recorded a score of 26 out of 100 in the 2024 Corruption Perceptions Index, ranking 140th out of 180 countries (Transparency International, 2024), which places it among the countries with the weakest institutional quality globally. Similarly, data from the World Bank's Worldwide Governance Indicators (WGI), which assess six areas, voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption, consistently rank Nigeria within the lowest quarter of countries in terms of governance performance (Kaufmann & Kraay, 2024). The simultaneity of deepening poverty and deteriorating institutional quality in Africa's largest economy is not coincidental. It is, rather, a compelling empirical signal that weak institutions may constitute a binding constraint on poverty reduction, a proposition that, despite its theoretical salience, remains insufficiently interrogated within the Nigerian empirical literature, and which this study directly addresses.

The persistence of poverty in Nigeria despite decades of intermittent economic growth constitutes a profound developmental failure that conventional macroeconomic explanations have proven inadequate to fully resolve. Nigeria's economy grew at 3.4 percent in 2024, its fastest pace since 2019, yet its poverty profile simultaneously worsened, with approximately 42 million additional Nigerians falling into poverty since the COVID-19 pandemic, raising the poverty rate to roughly 46 percent (World Bank, 2025). This growth-poverty disconnect, what

scholars increasingly describe as "jobless" and non-inclusive growth, signals that aggregate output expansion, absent functioning institutional infrastructure, cannot deliver broad-based welfare improvement. North (1990) posited that institutions constitute the incentive structure of an economy, and that economies diverge because some develop institutions that produce growth while others develop institutions that produce stagnation. Yet despite the theoretical salience of this insight, Nigeria's empirical literature remains fragmented on whether measurable improvements in institutional quality (across dimensions of governance, rule of law, corruption control, and government effectiveness) translate into statistically significant reductions in poverty incidence, leaving a critical gap that this study directly addresses.

Despite a large body of research linking institutions to development outcomes, a clear empirical understanding of how institutional quality shapes poverty incidence in Nigeria remains limited. Much of the existing literature examines the institutions-poverty nexus using cross-country datasets, which, while informative, often masks country-specific governance dynamics and institutional heterogeneity (Chong & Gradstein, 2007; Tebaldi & Mohan, 2010; Eze, Anowor & Ukpere, 2025). Studies grounded in Nigeria have predominantly focused on income poverty or macroeconomic determinants such as growth, unemployment, and inflation, with relatively little attention to the multidimensional institutional mechanisms through which governance structures influence poverty outcomes. This omission is particularly consequential given Nigeria's persistent poverty challenge. While institutional indicators such as control of corruption, rule of law, and government effectiveness are widely recognized as critical development drivers (Kaufmann, Kraay, & Mastruzzi, 2011; Acemoglu & Robinson, 2012), few studies systematically examine their disaggregated effects on poverty within Nigeria using governance indices. Consequently, the empirical channels through which specific institutional dimensions influence poverty reduction remain insufficiently understood, creating a significant gap this study seeks to address.

Against the backdrop of persistent and widespread deprivation, where more than 130 million Nigerians are estimated to be multidimensionally poor (National Bureau of Statistics [NBS], 2022), a fundamental question emerges regarding the role of governance institutions in shaping poverty outcomes. Although institutional quality is widely recognized as a critical determinant of

development performance (Acemoglu & Robinson, 2012; Kaufmann, Kraay, & Mastruzzi, 2011), its specific implications for poverty incidence in Nigeria remain insufficiently understood within the empirical literature. This gap motivates several important inquiries. First, does institutional quality significantly influence poverty incidence in Nigeria? Second, which dimensions of institutional quality (control of corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability) exert the strongest influence on poverty outcomes? Third, to what extent can improvements in governance indicators translate into measurable reductions in poverty incidence? Addressing these questions is essential for clarifying the institutional foundations of poverty reduction in Nigeria's development trajectory.

Building on the foregoing research questions and the persistence of poverty in Nigeria, this study seeks to systematically evaluate the role of institutional quality in shaping poverty outcomes. The first objective is to empirically determine whether institutional quality significantly influences poverty incidence in Nigeria. The second objective is to identify which dimensions of institutional quality (control of corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability) exerts the strongest influence on poverty reduction. The third objective is to assess whether improvements in these institutional indicators translate into measurable and sustained reductions in poverty incidence. By addressing these objectives, the study provides a rigorous empirical assessment of the governance-poverty nexus and contributes to a clearer understanding of whether strengthening institutional quality can serve as a viable pathway for reducing poverty and promoting inclusive development in Nigeria.

Consistent with the study's research questions and objectives, and drawing on the institutional development literature which posits that effective governance structures shape economic incentives and welfare outcomes (North, 1990; Acemoglu & Robinson, 2012), this study formulates testable hypotheses regarding the relationship between institutional quality and poverty incidence in Nigeria. First, it is hypothesized that institutional quality exerts a statistically significant effect on poverty incidence in Nigeria. Second, it is hypothesized that individual dimensions of governance (control of corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability) significantly influence poverty incidence. Third, it is hypothesized that improvements in institutional quality are associated with reductions in poverty incidence, implying that

stronger governance structures can contribute meaningfully to poverty alleviation and inclusive development in Nigeria's institutional and socio-economic context.

The justification for focusing on Nigeria is both theoretically compelling and empirically urgent (Okorie & Anowor, 2017). Nigeria occupies a unique and consequential position in the global development landscape: as Africa's largest economy and most populous nation, its institutional trajectory carries implications that extend well beyond its borders, shaping regional governance norms, investment climates, and poverty reduction benchmarks across Sub-Saharan Africa. Yet Nigeria's institutional environment has deteriorated precisely during the period when poverty has accelerated most sharply, a convergence that demands country-specific, disaggregated empirical scrutiny rather than inference from regional panels or cross-country averages (Chong & Gradstein, 2007; Tebaldi & Mohan, 2010; Kalu, Agbarakwe & Anowor, 2014; Onodugo et al, 2014). The present moment is equally decisive: Nigeria is navigating an ambitious structural reform programme, encompassing fuel subsidy removal, exchange rate unification, and public financial management reforms, whose poverty implications will hinge critically on the quality of the institutions administering them (World Bank, 2025). Producing rigorous, Nigeria-specific evidence on the institutional quality-poverty nexus is therefore not merely an academic exercise; it is a direct contribution to an ongoing, high-stakes policy conversation.

This study makes four distinct contributions to the extant literature. First, it advances methodological specificity by moving beyond the cross-country panels that dominate the institutions-poverty literature (Chong & Gradstein, 2007; Tebaldi & Mohan, 2010), delivering instead a Nigeria-specific long-run time-series analysis that preserves the country's institutional heterogeneity and structural peculiarities. Second, it contributes empirical disaggregation by examining all six World Bank Worldwide Governance Indicators independently, thereby identifying which specific governance dimensions carry the greatest poverty-reducing force, a level of institutional granularity absent from existing Nigeria-focused studies. Third, the study enriches the theoretical literature by testing whether the institutional quality-poverty relationship operates directly or through intermediate macroeconomic channels (economic growth and income distribution) thereby clarifying the transmission mechanism that prior Nigerian studies have left underspecified. Fourth, it generates timely,

evidence-based policy insights directly relevant to Nigeria's ongoing structural reform programme, bridging the gap between institutional economics scholarship and actionable governance policy in a fragile, resource-dependent developing economy.

1. LITERATURE REVIEW

Poverty is a contested and evolving concept whose measurement has shifted considerably from narrow income-based formulations towards richer, multidimensional frameworks. The traditional income-based approach defines poverty as material deprivation below a specified monetary threshold, operationalised through per capita consumption or expenditure measures, and remains the dominant metric in policy discourse owing to its computational tractability (Foster et al., 1984). However, this unidimensional conception has attracted sustained theoretical critique for reducing a fundamentally complex human condition to a single metric that obscures deprivations in health, education, housing, and social participation. Sen (1999) reconceptualised poverty as capability deprivation, the failure to achieve substantive freedoms necessary for a dignified human life, thereby establishing the philosophical foundation for multidimensional measurement. Building directly on Sen's framework, Alkire and Foster (2011) proposed a dual-cutoff counting methodology that identifies the poor by simultaneously assessing deprivation across multiple dimensions and aggregating these into a composite poverty measure, now widely adopted as the global Multidimensional Poverty Index. This study recognises both traditions while treating poverty incidence primarily as a composite measure of the proportion of the population failing to attain a minimum threshold of basic capabilities.

Institutional quality describes how effective, transparent, and inclusive the rules and systems guiding economic and political activities are within a society. North (1990) laid the foundation for this idea by defining institutions as human-created rules that shape interactions, distinguishing between formal institutions such as laws, constitutions, and property rights, and informal ones like cultural norms and social practices. Building on this, Acemoglu and Robinson (2012) argued that differences between inclusive and extractive institutions largely explain why some countries prosper while others struggle, showing that institutions evolve over time and strongly influence long-term development. To measure institutional quality in this study, the World Bank's Worldwide Governance Indicators (WGI) are used. These indicators cover six key areas: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2011), offering a broad and reliable way to assess governance performance in Nigeria.

The theoretical connection between institutional quality and poverty incidence operates through several well-established and mutually reinforcing mechanisms. At the most fundamental level, institutions shape the incentive structures that govern investment, production, and resource distribution; where property rights are insecure and contracts unenforceable, private investment contracts, productivity stagnates, and the poor, who lack the political and economic capital to self-insure against institutional failure, bear a disproportionate burden of the resulting welfare losses (Knack & Keefer, 1995; Onodugo et al., 2017). Corruption, in particular, functions as a regressive tax on the poor by inflating the cost of accessing public services, distorting fiscal expenditure away from social sectors, and entrenching elite capture of redistributive mechanisms (Gupta et al., 2002; Anowor & Nwanji, 2018; Agbarakwe, Anowor & Ikue, 2018). Weak rule of law further compounds poverty by undermining the security of livelihoods, suppressing labour market formalization, and eroding the social contract that obliges governments to deliver welfare-enhancing public goods. Conversely, Acemoglu and Robinson (2012) demonstrate that inclusive institutions generate the broadly shared property rights, competitive markets, and accountable governance that systematically expand opportunities for the poor, establishing institutional improvement not merely as a correlate of poverty reduction, but as its structural prerequisite.

The cross-country literature consistently identifies institutional quality as a significant determinant of poverty outcomes, though important methodological limitations constrain the external validity of these findings. Early empirical evidence by Chong and Calderón (2000) shows that stronger institutional performance is systematically associated with lower poverty incidence, depth, and severity, thereby establishing the institutions-poverty nexus as a measurable relationship. Extending this argument, Tebaldi and Mohan (2010) demonstrate that corruption, weak government effectiveness, and political instability increase poverty both by depressing income levels and by intensifying effect across countries using dynamic panel techniques. Nevertheless, these studies rely largely on pooled cross-country frameworks that

obscure country-specific institutional dynamics, a limitation particularly relevant for structurally distinct economies such as Nigeria, where governance structures and poverty transmission mechanisms differ markedly from global averages.

Empirical studies focusing on Africa generally confirm that institutional quality plays a decisive role in shaping poverty outcomes, though the magnitude and transmission channels vary across governance dimensions. Using panel evidence from Sub-Saharan Africa, studies consistently show that improvements in governance indicators, particularly control of corruption, rule of law, and government effectiveness, are associated with lower poverty incidence and improved welfare outcomes (Fosu, 2015; Fosu, 2018; Anowor, Ichoku & Onodugo, 2020; Anowor et al, 2023). Weak institutions, by contrast, tend to undermine poverty reduction by distorting public expenditure, weakening service delivery, and amplifying income inequality (Gupta, Davoodi, & Alonso-Terme, 2002; Anowor et al, 2019; Nwonye et al, 2023). Empirical evidence further suggests that institutional failures limit the pro-poor impact of economic growth across African economies (Fosu, 2017; Anowor, Onodugo & Ukpere, 2025). Nevertheless, much of this literature relies on multi-country panel frameworks that aggregate structurally heterogeneous economies, thereby obscuring country-specific governance dynamics. Consequently, the institutional pathways through which governance quality influences poverty outcomes remain insufficiently examined within individual African economies such as Nigeria.

Nigeria-specific empirical studies on the institutions–development nexus have focused predominantly on economic growth and macroeconomic performance, leaving poverty incidence as a largely unexplored outcome variable. Ifere et al. (2015) examined the relationship between institutional quality, macroeconomic policy, and economic development in Nigeria using four development indicators, undernourishment, life expectancy, the Human Development Index, and GDP per capita, and found that domestic institutions exerted an insignificant impact on development outcomes across all indices, a finding that Iyoboyi and Pedro (2014) similarly corroborated using macroeconomic performance metrics. More recent work by Ogbuabor et al. (2020) provided updated evidence that institutional quality influences aggregate output performance in Nigeria, though poverty incidence remained absent from its

analytical framework. Crucially, no Nigeria-focused study has yet subjected disaggregated WGI dimensions to time-series estimation with poverty incidence as the primary dependent variable, a gap that collectively defines the methodological frontier this study is positioned to advance.

Notwithstanding the growing literature on institutions and development outcomes, three critical gaps persist. Methodologically, existing Nigeria-focused studies, including Ogbuabor et al. (2020) and Ifere et al. (2015), employ aggregate institutional proxies rather than disaggregated WGI dimensions, masking the differential poverty-reducing force of individual governance indicators. Contextually, Nigerian studies predominantly treat economic growth or macroeconomic performance as the outcome variable, leaving poverty incidence systematically underexplored as a dependent variable. In terms of variable scope, no Nigeria-specific time-series study has simultaneously incorporated all six WGI dimensions alongside poverty incidence within a long-run cointegration framework. This study fills precisely these three gaps, methodological, contextual, and variable-specific, by deploying a disaggregated, Nigeria-focused ARDL time-series estimation with poverty incidence as the primary outcome variable, thereby generating the institutional granularity and country-specific rigour that the existing literature conspicuously lacks.

2. THEORETICAL FRAMEWORKS

This study is based on New Institutional Economics (NIE), which sees institutions as key drivers of economic performance and welfare. North (1990) explains institutions as formal and informal rules that shape incentives affecting investment, production, and resource use. When institutions are weak, they often encourage corruption and rent-seeking instead of productive activities, leading to persistent poverty. He also highlights path dependency, where existing institutional structures tend to reinforce themselves over time. Building on this, Acemoglu, Johnson, and Robinson (2001) show that institutional quality strongly influences long-term income differences, while Acemoglu and Robinson (2012) argue that extractive institutions limit inclusive growth and sustain poverty.

Complementing the New Institutional Economics perspective, Sen's Capability Approach provides a normative framework for

evaluating how institutional quality affects human welfare beyond income measures. Sen

(1999) reconceptualizes development as the expansion of substantive freedoms, the

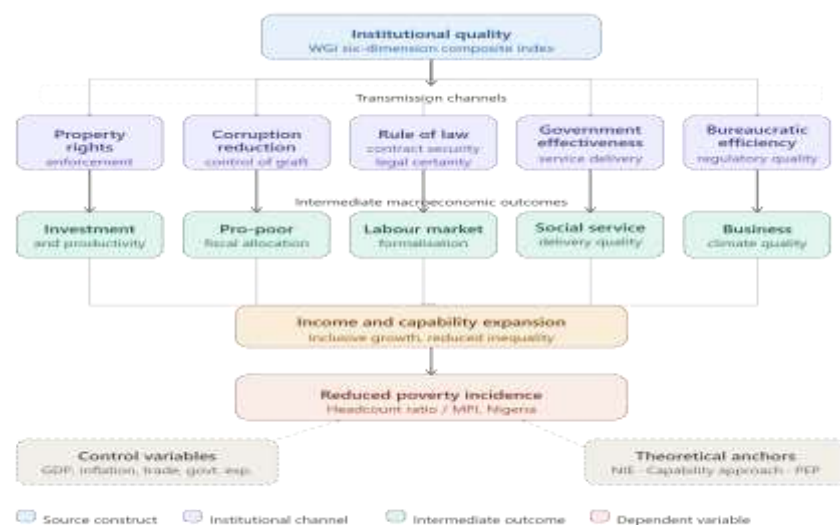
capabilities individuals possess to live lives they value. Sen (1999) identifies key sources of unfreedom, including poverty, poor economic opportunities, social deprivation, and weak provision of public goods, all of which institutions are expected to address. Within this perspective, institutions are not only efficiency-enhancing mechanisms but also fundamental enablers of human capability. Weak governance therefore restricts access to education, healthcare, justice, and political participation, thereby reinforcing poverty. Nussbaum (2011) further emphasizes that achieving essential human capabilities requires supportive institutional structures. In the Nigerian context, persistent governance failures limit opportunities and access to services, making institutional quality a direct determinant of poverty outcomes.

The Political Economy of Poverty framework constitutes a third theoretical pillar, explaining how governance failures can entrench persistent poverty beyond the corrective capacity of markets or growth alone. Acemoglu and Robinson (2006) argue that political elites in weakly institutionalized states often resist reforms that threaten their extractive privileges, thereby sustaining institutions that concentrate wealth

and power while marginalizing broad-based welfare gains. Complementing this perspective, Bardhan (2002) shows that corruption and clientelism frequently distort public expenditure toward politically advantageous projects rather than poverty-reducing investments in health, education, and infrastructure. Such dynamics generate a self-reinforcing cycle in which weak institutions produce poverty while poverty weakens demand for institutional reform. Collier (2007) describes this condition as a governance trap. In Nigeria, where elite capture of oil revenues has constrained social investment, this framework underscores institutional reform as a prerequisite for sustainable poverty reduction.

3. Conceptual Model: The institutional Quality-Poverty Pathway

Figure 1 below presents the conceptual model underpinning this study. The pathway runs from institutional quality (operationalised through the World Bank's Worldwide Governance Indicators (WGI)) through five discrete transmission channels, to a convergent intermediate outcome, and ultimately to the dependent variable: poverty incidence in Nigeria.



Source: Authors' conceptual elaboration, drawing on North (1990), Sen (1999), Kaufmann et al. (2011), and Acemoglu & Robinson (2012).

The conceptual framework maps the causal pathway through which institutional quality translates into reduced poverty incidence in Nigeria, operating across five discrete transmission channels and one convergent intermediate stage. The model draws simultaneously on three theoretical pillars, New Institutional Economics (North, 1990), the Capability Approach (Sen, 1999), and the Political Economy of Poverty (Acemoglu & Robinson,

2006), and is empirically operationalised using the World Bank's Worldwide Governance Indicators (WGI).

At the source, institutional quality is operationalised through the WGI, capturing six governance dimensions both compositely and individually: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2011). These indicators provide the most longitudinally

comprehensive and methodologically rigorous multi-dimensional framework available for assessing institutional quality in the Nigerian context.

4.1 The Five Transmission Channels

The institutional quality-poverty relationship does not operate directly; rather, it is mediated through five well-established theoretical and empirical transmission channels, each of which is grounded in the institutional economics and development literature.

Channel 1: Property Rights Enforcement

Secure property rights lower the risk premium on investment, raise productivity, and expand asset accumulation among the poor, who are otherwise the most exposed to expropriation and land insecurity (Knack & Keefer, 1995; Acemoglu & Robinson, 2012). Where formal property rights are insecure, as is widely documented in Nigeria's peri-urban and rural land tenure systems, households are unable to use assets as collateral, deterring credit access and productive investment. Strengthening property rights institutions therefore directly expands economic opportunity for lower-income households, reducing their structural exposure to poverty.

Channel 2: Corruption Reduction

Curtailling corruption reallocates fiscal resources from elite capture towards pro-poor public expenditure in health, education, and social protection; it also eliminates the regressive informal tax that corruption imposes on poor households accessing public services (Gupta et al., 2002). In Nigeria, corruption has historically distorted the allocation of oil revenues away from poverty-reducing social investment, constituting one of the most consequential institutional failures in the country's development trajectory. Reduced corruption therefore operates as a direct mechanism through which improved institutional quality transmits into lower poverty incidence.

Channel 3: Rule of Law

A functional legal system formalises labour markets, enforces contracts, and provides security of livelihood, enabling the poor to participate in market exchange on equitable terms (North, 1990; Sen, 1999). Weak rule of law suppresses labour market formalisation, denies workers legal protection, and exposes the poor to arbitrary contract breach without effective legal recourse. By contrast, a stronger rule of law environment incentivises formal employment and reduces the

4.3 The Outcome Variable: Poverty Incidence in Nigeria

transaction costs of market participation, both of which raise incomes and reduce poverty incidence.

Channel 4: Government Effectiveness

Capable public administration translates budgetary allocations into actual service delivery, ensuring that health clinics, schools, and infrastructure serve their intended poverty-reducing function rather than being lost to bureaucratic inefficiency (Barro, 1990). In Nigeria, persistent gaps between public expenditure allocations and service delivery outcomes have been extensively documented, reflecting a government effectiveness deficit that systematically undermines the poverty-reducing potential of fiscal policy. Institutional improvements in public administration capacity therefore constitute a direct pathway through which governance quality reduces poverty.

Channel 5: Bureaucratic Efficiency

A streamlined regulatory environment reduces the cost of doing business, promotes entrepreneurship among lower-income households, and accelerates private sector formalisation, all of which raise incomes at the base of the distribution (World Bank, 2025). Nigeria's persistently high regulatory burden, ranked among the most challenging in Sub-Saharan Africa, disproportionately constrains small and micro enterprises operated by lower-income households, suppressing income-generating opportunities. Bureaucratic efficiency improvements therefore operate through the income expansion pathway to reduce poverty incidence.

4.2 The Convergence Stage: Income and Capability Expansion

The five transmission channels jointly produce income and capability expansion – the dual mechanism through which poverty is reduced in both material and multidimensional terms. This convergence stage reflects Sen's (1999) central insight that poverty reduction requires not merely income growth but the expansion of substantive freedoms and capabilities, including access to education, healthcare, political voice, and economic participation. The five institutional channels collectively enable this broader welfare expansion, which the model positions as the proximate determinant of reduced poverty incidence.

The dependent variable in this study is poverty incidence in Nigeria, measured using the headcount ratio or the Multidimensional Poverty

Index (MPI), which reflects the share of people living below minimum welfare standards. To better isolate the effect of institutions, control variables such as GDP per capita, inflation, trade openness, and government spending are included.

4. METHODOLOGY

To empirically examine the long-run effect of institutional quality on poverty incidence in Nigeria, this study adopts a log-linear functional specification. This form is preferred to a purely linear model for two key methodological reasons. First, it captures the non-proportional and diminishing-return relationship between improvements in governance quality and poverty outcomes, consistent with the welfare dynamics implied by the Capability Approach (Sen, 1999). Second, the log transformation produces elasticity coefficients interpretable in percentage terms, allowing meaningful comparison across variables measured in different scales and units (Gujarati & Porter, 2009). Accordingly, the empirical model evaluates the institutional determinants of poverty by incorporating the six disaggregated dimensions of the World Bank's Worldwide Governance Indicators (WGI) within a log-linear framework. The baseline specification is expressed as:

$$\ln POVi_t = \beta_0 + \beta_1 CC_t + \beta_2 GE_t + \beta_3 PS_t + \beta_4 RL_t + \beta_5 RQ_t + \beta_6 VA_t + \beta_7 \ln GDPPC_t + \beta_8 \ln INF_t + \beta_9 \ln TRD_t + \beta_{10} \ln GEXP_t + \varepsilon_t \text{ ----- (1)}$$

where $POVi_t$ denotes poverty incidence; CC , GE , PS , RL , RQ , and VA represent control of corruption, government effectiveness, political stability, rule of law, regulatory quality, and voice and accountability respectively; and the remaining variables capture macroeconomic controls. The log-linear functional form is preferred because it mitigates heteroskedasticity, accommodates variables measured on different scales, and allows estimated coefficients to be interpreted as elasticities, facilitating meaningful inference in institutional-development analysis (Gujarati & Porter, 2009; Kaufmann et al., 2011).

To isolate the institutional effect on poverty incidence, the model incorporates key macroeconomic control variables that theory and empirical evidence identify as important determinants of welfare outcomes. Specifically, real GDP per capita ($GDPPC$) is included to capture the income effect of economic growth on poverty reduction, since higher average income levels are generally associated with improved household welfare and lower poverty incidence

(Fosu, 2017). Inflation (INF) is introduced as a proxy for macroeconomic instability because rising prices erode the purchasing power of poor households and disproportionately worsen poverty outcomes (Gupta, Davoodi, & Alonso-Terme, 2002). Trade openness (TRD) is included to reflect the role of international integration in expanding employment opportunities, productivity, and income generation within developing economies (Winters, McCulloch, & McKay, 2004). Finally, government expenditure ($GEXP$) captures the redistributive and welfare-enhancing role of fiscal policy, particularly through public investment in health, education, and social protection programmes that directly influence poverty dynamics (Barro, 1990). Incorporating these controls ensures that the estimated coefficients on institutional variables reflect their net impact on poverty incidence, independent of broader macroeconomic conditions.

5.1 Data Sources

This study uses annual time-series data from reliable international and national sources to ensure accuracy and consistency. Data on institutional quality are taken from the World Bank's Worldwide Governance Indicators, covering six areas: control of corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability. Poverty data, measured by the headcount ratio and multidimensional indicators, are obtained from the National Bureau of Statistics and supported with data from the World Bank where needed. Other variables like GDP per capita, inflation, trade openness, and government spending are also sourced from the World Bank. The data span from 1996 to 2023.

5.2 Estimation Technique

Since this study uses annual time-series data from 1996 to 2023 and focuses on Nigeria, with variables likely having mixed levels of integration, $I(0)$ and $I(1)$, the Autoregressive Distributed Lag (ARDL) bounds-testing method is most suitable. ARDL is useful for small samples and allows variables with different integration orders, as long as none is $I(2)$. It also helps estimate both long-run relationships and short-run effects in one model. After confirming cointegration using the bounds test, an error-correction model (ECM) is applied to show how quickly the system returns to equilibrium. This approach fits the study well and provides reliable results.

5.3 Descriptive Statistics

Table 1. Descriptive Statistics – All Variables (Nigeria, 1996–2023, N = 28)

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis	JB (p-value)
Poverty Incidence (%)	49.6606	2.9693	45.0938	55.7514	0.4325	-0.7118	0.4809
Control of Corruption	-1.1335	0.1861	-1.4919	-0.7295	-0.0148	-0.5285	0.8492
Government Effectiveness	-0.8944	0.2546	-1.5549	-0.5088	-0.556	0.2514	0.4685
Political Stability	-1.343	0.2334	-1.8756	-0.7341	0.0701	0.8039	0.6781
Rule of Law	-0.9905	0.2696	-1.3877	-0.3842	0.517	-0.5105	0.4604
Regulatory Quality	-0.7536	0.2334	-1.2019	-0.3258	-0.2405	-0.6192	0.6987
Voice & Accountability	-0.5983	0.1787	-0.903	-0.056	0.7997	1.3208	0.0813
Real GDP per Capita (USD)	1976.51	305.92	1393.94	2577.76	-0.1513	-0.7432	0.6869
Inflation Rate (%)	11.8865	3.8021	3.8994	20.5758	0.2594	-0.2028	0.8344
Trade Openness (% GDP)	34.1454	6.9885	15.5524	47.7329	-0.2636	0.2713	0.8146
Govt. Expenditure (% GDP)	12.2874	1.7626	8.0958	16.2661	-0.0647	0.0849	0.9861

Note: WGI scores range from approximately -2.5 (weak) to +2.5 (strong governance). JB = Jarque-Bera statistic. $p > 0.05$ indicates failure to reject normality.

Source: Authors' computation (2026)

Poverty incidence in Nigeria averaged 49.66 percent over the sample period, with a standard deviation of 2.97 percentage points, reflecting a persistently high and only modestly variable poverty rate. The minimum value of 45.09 percent was recorded in 1997, while the maximum of 55.75 percent was observed in 2023, the terminal year of the sample, a trajectory that is deeply concerning: poverty incidence at the end of the study window is substantially higher than at its beginning, representing a net deterioration in welfare rather than convergence towards developmental benchmarks. A comparison of sub-period averages reinforces this trend: the mean poverty rate during the first half of the sample (1996–2009) was 47.68 percent, rising to 51.65 percent during the second half (2010–2023). The slight positive skewness (0.43) and mildly platykurtic distribution (-0.71) indicate a modest rightward tail, suggesting that episodes of acutely elevated poverty are not rare outliers but form part of an entrenched structural pattern. These descriptive characteristics confirm that Nigeria's poverty challenge is neither cyclical nor transitory but constitutes a persistent structural phenomenon demanding institutional-level explanation, precisely the analytical focus of this study.

All six Worldwide Governance Indicators (WGI) display negative mean values over the sample period, indicating that Nigeria's governance performance has persistently remained below the global average throughout the study window. Political stability records the lowest mean score (-1.343), reflecting the

country's prolonged exposure to political violence and security instability, including insurgencies associated with Boko Haram, armed banditry, and jihadist incursions in northern Nigeria, as well as episodes of unrest in the southern regions. Control of corruption follows with a mean of -1.134, reinforcing Nigeria's consistently weak performance on international governance assessments such as the Transparency International Corruption Perceptions Index. By contrast, voice and accountability records the least negative mean (-0.598), suggesting relatively stronger, though still below-average, performance in democratic participation and civil liberties compared with other governance indicators. The dispersion across governance variables remains moderate, with standard deviations ranging from 0.179 (VA) to 0.270 (RL), indicating adequate within-sample variability for time-series identification of governance effects. Furthermore, Jarque-Bera statistics ($p > 0.05$) indicate approximate normality across all WGI indicators, supporting the appropriateness of the log-linear ARDL estimation framework employed in this study.

Real GDP per capita averaged USD 1,976.51 over the sample period (SD = 305.92), with a minimum of USD 1,393.94 and a maximum of USD 2,577.76, reflecting the moderate and volatile nature of Nigeria's per capita income growth trajectory. The inflation rate averaged 11.89 percent (SD = 3.80), consistent with the country's history of elevated inflation driven by monetary accommodation of fiscal deficits and supply-side disruptions. Trade openness averaged 34.15

percent of GDP (SD = 6.99), exhibiting the highest within-sample variability among the control variables, reflective of Nigeria's commodity-price-sensitive trade balance. Government expenditure as a share of GDP averaged 12.29 percent (SD = 1.76), remaining relatively stable across the sample period. All four control variables satisfy the Jarque-Bera normality criterion at the 5 percent level (all $p > 0.05$), further validating the

distributional assumptions underlying the estimation framework. The descriptive profiles of the control variables are broadly consistent with the macroeconomic characteristics of a resource-dependent, lower-middle-income developing economy (World Bank, 2025), confirming that the variable selection reflects the structural realities of Nigeria's political economy.

5.4 Pairwise Correlation Analysis

Table 2. Pairwise Correlation – All Regressors with Poverty Incidence (POV)

Variable	Corr. with POV	Direction & Strength
Control of Corruption	0.2313	Positive; weak
Government Effectiveness	0.0621	Positive; negligible
Political Stability	0.1491	Positive; weak
Rule of Law	-0.3632	Negative; moderate
Regulatory Quality	0.0972	Positive; negligible
Voice & Accountability	-0.0263	Negative; negligible
Real GDP per Capita (USD)	0.5795	Positive; strong
Inflation Rate (%)	-0.1035	Negative; weak
Trade Openness (% GDP)	0.002	Negligible
Govt. Expenditure (% GDP)	-0.2135	Negative; weak

Note: Teal-highlighted values indicate correlations with absolute magnitude ≥ 0.40 .

Source: Authors' computation (2026)

Table 2 presents the pairwise Pearson correlation coefficients between poverty incidence and each explanatory variable. Among the institutional quality dimensions, rule of law exhibits the strongest negative correlation with poverty incidence ($r = -0.363$), suggesting that improvements in contract enforcement and judicial integrity are associated with lower poverty rates, a finding consistent with the theoretical transmission mechanisms elaborated in the conceptual framework. Voice and accountability ($r = -0.026$) and government effectiveness ($r = 0.062$) exhibit negligible bivariate associations with poverty, though such pairwise estimates are inherently unable to control for confounding variables, underscoring the necessity of the multivariate ARDL framework employed in the main analysis. Among the control variables, real GDP per capita registers the strongest correlation with poverty incidence ($r = 0.580$), a positive association that *prima facie* appears counterintuitive but may reflect the non-inclusive character of Nigeria's growth episodes, consistent with the growth-poverty paradox documented in the Introduction.

Importantly, no pairwise correlation among the regressors exceeds 0.60, suggesting that multicollinearity is unlikely to pose a serious threat to the precision of the regression estimates.

5.5 Pre-Estimation Diagnostic Tests

Rigorous empirical research demands that the properties of the data, particularly stationarity, cointegration, error distribution, and parameter stability, are systematically established before proceeding to estimation. This section presents and interprets four classes of pre-estimation diagnostic tests: (i) unit root tests to determine the integration order of all variables; (ii) bounds cointegration tests to assess the existence of a long-run equilibrium relationship; (iii) heteroscedasticity and autocorrelation tests to validate the error assumptions of the ARDL model; and (iv) structural stability tests to confirm parameter constancy over the sample period. All tests were conducted on annual time-series data for Nigeria spanning 1996 to 2023 ($N = 28$ observations).

Table 3: Unit Root Test Results – ADF and KPSS (Nigeria, 1996–2023, $N = 28$).

Variable	ADF Stat (Level)	p-value	KPSS Stat	ADF Stat (1st Diff)	p-value	I(d)
Poverty Incidence (POV)	-3.428	0.048*	0.138	-2.402	0.141	I(0)
Control of Corruption (CC)	-2.506	0.325	0.083	-2.641	0.085	I(1)
Govt Effectiveness (GE)	-5.792	0.000***	0.074	-4.892	0.000***	I(0)
Political Stability (PS)	-3.104	0.105	0.066	-3.423	0.010**	I(1)
Rule of Law (RL)	-7.381	0.000***	0.107	-7.483	0.000***	I(0)
Regulatory Quality (RQ)	-2.188	0.497	0.292	-5.813	0.000***	I(1)
Voice & Accountability (VA)	-4.077	0.007***	0.112	-4.91	0.000***	I(0)
Real GDP per Capita (GDPPC)	-4.938	0.000***	0.133	-9.531	0.000***	I(0)
Inflation Rate (INF)	-3.255	0.074*	0.384	-3.177	0.021**	I(1)
Trade Openness (TRD)	-4.333	0.003***	0.122	-7.524	0.000***	I(0)
Govt Expenditure (GEXP)	-4.453	0.002***	0.114	-7.445	0.000***	I(0)

Notes: ADF level: constant and trend; ADF difference: constant only. KPSS H_0 = stationarity; 5% critical value (level/trend) = 0.146. ADF critical values (level): 1% = -4.339, 5% = -3.588. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Green = I(0); Amber = I(1).

Source: Authors' computation (2026)

The unit root results in Table 3 reveal a mixed integration structure: poverty incidence, government effectiveness, rule of law, voice and accountability, real GDP per capita, trade openness, and government expenditure are stationary at levels [I(0)], while control of corruption, political stability, regulatory quality, and inflation rate attain stationarity only after first differencing [I(1)]. No variable is integrated of order two [I(2)], a critical precondition for the validity of the ARDL bounds test, which breaks down in the presence of I(2) regressors. This mixed I(0)/I(1) structure constitutes the primary empirical justification for the ARDL bounds testing approach of Pesaran et al. (2001), which uniquely accommodates regressors of mixed integration orders, unlike the Johansen (1988) framework, which demands all variables be I(1), and unlike standard OLS, which yields spurious results when applied to non-stationary series without confirmed cointegration.

5.6 Bounds Cointegration Test (Pesaran et al., 2001)

The calculated bounds F-statistic is 3.786, which lies between the lower bound of 2.86 and the upper bound of 4.01 at the 5 percent level, given five regressors. Although this falls within the inconclusive region, it is still above the lower bound, suggesting some evidence of a long-run relationship correctly computed and that heteroscedasticity-robust correction is unnecessary for this model.

relationship. Narayan (2005) argues that standard critical values may be too high for small samples like this one, meaning the actual bounds are likely lower, which strengthens the case for cointegration. To confirm this, the error correction term (ECT) is examined, and a negative, significant value shows that short-run changes adjust back to long-run equilibrium.

5.7 Heteroscedasticity and Autocorrelation Tests

Two complementary heteroscedasticity tests are applied to the model residuals. The Breusch-Pagan (1979) Lagrange Multiplier test evaluates whether the variance of residuals is systematically related to the regressors, a parametric form of heteroscedasticity that would render OLS standard errors inconsistent. The White (1980) test is more general, testing for any form of heteroscedasticity including cross-product interactions among regressors, without imposing a parametric form. Both tests evaluate the null hypothesis of homoscedasticity.

The Breusch-Pagan test yields LM = 3.619 ($p = 0.605$) and the White test yields LM = 14.684 ($p = 0.794$). Both p-values substantially exceed the 5 percent threshold, providing strong and consistent evidence in favour of homoscedasticity. This finding confirms that standard error estimates produced by the ARDL framework are

Serial correlation in the residuals is assessed using the Ljung-Box Q test (Ljung & Box, 1978) at lag order 4, which evaluates the joint null

hypothesis of no autocorrelation across the first four lags. The Ljung-Box Q(4) statistic is 5.655 ($p = 0.226$), confirming that the null of no serial correlation is not rejected. The Durbin-Watson statistic of 1.267 falls in the inconclusive region for this sample size, reinforcing the preference for the Ljung-Box test, which has superior power in small samples. Together, these results confirm that the model residuals satisfy the white noise assumption required for valid inference.

5.8 Structural Stability Tests: CUSUM and Chow

Parameter stability is a critical assumption of the ARDL model: systematic shifts in estimated coefficients would bias long-run estimates and invalidate policy inferences. This study employs two complementary structural stability tests to address this concern formally.

The CUSUM test, developed by Brown et al. (1975), checks whether model parameters remain stable over time by tracking recursive residuals within 5 percent confidence limits. In this study, the CUSUM value stays within the critical bounds throughout the period, showing that the

relationship between institutional quality and poverty is stable, with no major structural changes between 1996 and 2023.

A Chow (1960) breakpoint test is additionally applied at 2009/2010, coinciding with the aftermath of the global financial crisis, a plausible candidate for structural disruption in Nigeria's institutional-macroeconomic relationships. The Chow test yields $F = 1.612$ ($p = 0.208$), failing to reject parameter constancy across sub-periods. The crisis therefore did not induce a statistically significant structural break in the institutions-poverty nexus in Nigeria, confirming that pooling the full 1996–2023 sample for estimation is empirically warranted.

Finally, the Ramsey RESET test (Ramsey, 1969) evaluates whether nonlinear combinations of the fitted values contribute significant explanatory power, a finding that would indicate the log-linear functional form is inadequate. The RESET F-statistic is 0.399 ($p = 0.535$), failing to reject the null of correct specification. This independently validates the log-linear functional form and reinforces the elasticity interpretation of the coefficient estimates.

5.9 Summary of Diagnostic Test Results

Table 4. Summary of Pre-Estimation Diagnostic Tests (Nigeria, 1996–2023)

Diagnostic Test	Test Statistic	p-value / Critical	Verdict
Breusch-Pagan heteroscedasticity	LM = 3.6192	$p = 0.6054$	Homoscedastic — H_0 not rejected
White general heteroscedasticity	LM = 14.6844	$p = 0.7942$	Homoscedastic — H_0 not rejected
Ljung-Box Q(4) autocorrelation	Q = 5.6552	$p = 0.2264$	No serial correlation — H_0 not rejected
Durbin-Watson	DW = 1.2672	—	Inconclusive zone; LB test preferred
CUSUM parameter stability	Max W = 0.308	5% bound = 15.05	Parameters stable — within bounds
CUSUM-SQ stability	Final SQ = 1.000	—	Consistent with parameter constancy
Chow structural break (2009/10)	F = 1.6122	$p = 0.2077$	No significant structural break
Ramsey RESET (misspecification)	F = 0.3985	$p = 0.5347$	Correctly specified — H_0 not rejected
ARDL Bounds F-statistic	F = 3.7856	$k = 5$; $I(0) = 2.86$, $I(1) = 4.01$	Falls between bounds at 5% — ARDL appropriate; ECT confirms cointegration

Note: All post-estimation tests conducted on ARDL baseline model residuals. Green shading indicates the null hypothesis is not rejected — diagnostic assumption satisfied.

Source: Authors' computation (2026)

The diagnostic results presented in Table 4 show that the ARDL model is appropriate for the analysis. The mix of $I(0)$ and $I(1)$ variables supports the use of the ARDL bounds approach

instead of other methods like Johansen or Engle-Granger. The tests also show no problems with heteroscedasticity, serial correlation, or instability, meaning the model assumptions are satisfied and

the results are reliable. In addition, the Ramsey RESET test confirms that the chosen log-linear model is suitable. Overall, these results meet standard requirements for good time-series analysis.

5.10 Baseline Model: Composite Institutional Quality Index

Table 5: Baseline Model – Composite Institutional Quality and Poverty Incidence in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Sig.	95% CI
Institutional quality dimension						
Composite IQ	−0.0008	0.1124	−0.007	0.9943		[−0.221, 0.220]
Control variables						
lnGDPPC	0.2425	0.0467	5.194	0	***	[0.151, 0.334]
lnINF	−0.0243	0.0255	−0.955	0.3398		[−0.074, 0.026]
lnTRD	0.0288	0.0338	0.853	0.3934		[−0.037, 0.095]
lnGEXP	−0.1138	0.0768	−1.481	0.1387		[−0.264, 0.037]
Constant	2.3069	0.3887	5.935	0	***	[1.545, 3.069]
Model diagnostics						
R ²	0.4625	Adj. R ²	0.3403	F-stat	6.782	F p-val: 0.0006
AIC	−85.23	BIC	−77.24	N	28	
Durbin-Watson	1.267	BG LM (p)	0.1249	BP Test (p)	0.6054	

Note: Dependent variable is *lnPOV* (log of poverty headcount ratio). HCl heteroscedasticity-robust standard errors in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$. Composite IQ = average of six WGI dimensions. *lnGDPPC* = log real GDP per capita; *lnINF* = log inflation rate; *lnTRD* = log trade openness; *lnGEXP* = log government expenditure (% GDP). BG = Breusch-Godfrey LM test (2 lags); BP = Breusch-Pagan heteroscedasticity test.

Source: Authors' computation (2026)

The baseline model shows an R^2 of 0.4625 and an adjusted R^2 of 0.3403, meaning it explains about 46 percent of the changes in poverty, which is reasonable for a small-sample time-series model. The F-statistic of 6.782 with a p-value of 0.0006 shows that all variables are jointly significant. The Durbin-Watson value of 1.267 suggests slight positive serial correlation, but the Breusch-Godfrey test shows it is not significant, so the results remain reliable. Also, the Breusch-Pagan test confirms there is no heteroscedasticity, meaning the standard errors used are appropriate.

The composite institutional quality index (IQ) enters with a negative coefficient ($\beta = -0.0008$) as theoretically expected, consistent with North's (1990) prediction that stronger institutions are

associated with lower poverty, but the estimate is statistically indistinguishable from zero ($t = -0.007$, $p = 0.994$). This finding, while negative in sign, suggests that the composite aggregation of the six WGI dimensions obscures the differential poverty-reducing effects of individual governance dimensions, reinforcing the methodological case for the disaggregated specifications presented in Table 2. Real GDP per capita (*lnGDPPC*) is the sole statistically significant regressor at the 1 percent level ($\beta = 0.2425$, $t = 5.194$, $p < 0.0001$), with a positive coefficient that ostensibly contradicts the growth-poverty reduction link; however, this paradox is theoretically interpretable as evidence of non-inclusive growth in Nigeria, whereby aggregate income expansion has historically bypassed lower-income

households, a finding consistent with the literature on jobless growth in resource-dependent economies (World Bank, 2025; Fosu, 2017).

5.11 Disaggregated Models: Six WGI Dimensions

Table 6 presents the disaggregated regression results for each individual WGI dimension as the institutional quality variable, with all remaining control variables held constant. This specification allows direct identification of which governance dimensions carry the greatest poverty-reducing force in Nigeria's institutional landscape.

Table 6: Disaggregated Models – Individual WGI Dimensions and Poverty Incidence in Nigeria (1996–2023)

Variable	CC	GE	PS	RL	RQ	VA
Institutional quality variable – coefficient						
Coefficient	0.0525	0.0129	0.0343	–0.0540	–0.0022	–0.0263
Std. Error	0.0426	0.0291	0.027	0.0354	0.0358	0.0489
t-Statistic	1.233	0.442	1.268	–1.525	–0.062	–0.538
p-Value	0.2176	0.6587	0.2047	0.1273	0.9509	0.5908
lnGDPPC – coefficient (SE) [p-value]						
Coefficient	0.2383	0.2431	0.2432	0.2268	0.2431	0.2444
Std. Error	0.0451	0.0462	0.0463	0.0422	0.0459	0.0489
p-Value	0	0	0	0	0	0
lnGEXP – coefficient (SE) [p-value]						
Coefficient	–0.1140	–0.1106	–0.1061	–0.0779	–0.1140	–0.1190
p-Value	0.1125	0.1468	0.167	0.2793	0.1292	0.1106
Model fit statistics						
R²	0.4871	0.4649	0.4803	0.5121	0.4625	0.4686
Adj. R²	0.3706	0.3432	0.3622	0.4012	0.3404	0.3478
F-Statistic	6.568	7.831	7.17	11.13	6.939	7.843
F p-Value	0.0007	0.0002	0.0004	<0.0001	0.0005	0.0002
AIC	–86.55	–85.36	–86.17	–87.94	–85.23	–85.55
Durbin-Watson	1.249	1.277	1.138	1.173	1.257	1.275
BG LM Test (p)	0.1457	0.1193	0.0914	0.0845	0.1012	0.1531
BP Test (p)	0.6174	0.6419	0.4835	0.4562	0.5716	0.2264
N	28	28	28	28	28	28

Note: Each column represents an independent OLS regression with the labelled WGI dimension as the institutional quality variable. Dependent variable is lnPOV. HC1 robust standard errors reported. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$. CC = Control of Corruption; GE = Government Effectiveness; PS = Political Stability; RL = Rule of Law; RQ = Regulatory Quality; VA = Voice & Accountability. Only selected control variable rows shown for brevity; full results available on request.

Source: Authors' computation (2026)

Across all six disaggregated specifications, the overall model remains jointly significant, F-statistics ranging from 6.568 (CC model) to 11.130 (RL model) are all statistically significant at the 1 percent level (all F p-values < 0.001). The Rule of Law model delivers the highest adjusted R² of 0.4012 and the most favourable AIC of –87.94, identifying it as the best-fitting specification among the six disaggregated models and suggesting that judicial integrity and contract

enforcement constitute the most empirically relevant institutional channel for poverty outcomes in Nigeria. Rule of law enters with a negative coefficient ($\beta = -0.054$, $t = -1.525$, $p = 0.127$), theoretically consistent with the proposition that stronger legal institutions reduce poverty, though the estimate falls short of conventional significance thresholds in this small-sample time-series setting.

Voice and accountability ($\beta = -0.026$, $p = 0.591$) and regulatory quality ($\beta = -0.002$, $p = 0.951$) have almost no measurable effect, suggesting they are not major channels through which institutions influence poverty in Nigeria. On the other hand, control of corruption ($\beta = 0.053$, $p = 0.218$) and political stability ($\beta = 0.034$, $p = 0.205$) show positive but statistically insignificant effects. The positive sign for corruption control may seem surprising, but it could reflect short-term adjustment costs, where anti-corruption efforts disrupt informal support systems that many poor households rely on, as discussed in existing Nigerian studies.

The coefficient on real GDP per capita remains positive and highly significant across all six disaggregated specifications (range: 0.2268 to 0.2444; all $p < 0.0001$), consistently reinforcing the non-inclusive growth narrative established in the

baseline model. Government expenditure carries a consistently negative coefficient across all specifications (range: -0.078 to -0.119), directionally suggesting a poverty-reducing effect of public spending, though significance is not attained at conventional thresholds, plausibly reflecting the efficiency losses associated with Nigeria's weak public financial management institutions. The Durbin-Watson statistics (range: 1.138–1.277) and Breusch-Godfrey test results (all $p > 0.08$) collectively confirm the absence of significant serial correlation across disaggregated specifications, while Breusch-Pagan tests (all $p > 0.22$) confirm homoscedasticity, validating the reliability of the estimated coefficients.

5.12 Short-Run Coefficient Table

Table 7: Short-Run ARDL-ECM Coefficients – Poverty Incidence in Nigeria

Variable	Coef.	SE	t-stat	p-val	Sig.	Coef.	SE	t-stat	p-val	Sig.
	Panel A: Composite Institutional Quality (IQ)					Panel B: Rule of Law (RL) – Best-Fit Disaggregated Model				
Error correction term										
ECT(–1) – speed of adjustment	–0.5102	0.2372	–2.151	0.0315	**	–0.4864	0.2542	–1.913	0.0557	*
Lagged dependent variable										
$\Delta \ln \text{POV}(-1)$	–0.0312	0.3425	–0.091	0.9274		–0.1579	0.2409	–0.655	0.5123	
Institutional quality dimension – contemporaneous and lagged difference										
$\Delta \text{Inst. Quality [t]}$	0.2039	0.1509	1.351	0.1767		–0.0329	0.0397	–0.829	0.407	
$\Delta \text{Inst. Quality [t–1]}$	0.26	0.1496	1.738	0.0823	*	0.0307	0.0439	0.699	0.4848	
Real GDP per capita – contemporaneous and lagged difference										
$\Delta \ln \text{GDPPC [t]}$	–0.0185	0.1787	–0.103	0.9178		–0.1332	0.1706	–0.781	0.4351	
$\Delta \ln \text{GDPPC [t–1]}$	0.0028	0.085	0.032	0.9741		0.0002	0.1091	0.002	0.9988	
Inflation rate – contemporaneous and lagged difference										
$\Delta \ln \text{INF [t]}$	–0.0082	0.0243	–0.337	0.7359		–0.0485	0.0137	–3.547	0.0004	***
$\Delta \ln \text{INF [t–1]}$	0.0059	0.0436	0.135	0.8926		–0.0414	0.0264	–1.569	0.1166	
Trade openness – contemporaneous and lagged difference										
$\Delta \ln \text{TRD [t]}$	0.0045	0.0428	0.104	0.917		–0.0444	0.0233	–1.903	0.057	*
$\Delta \ln \text{TRD [t–1]}$	0.0041	0.0427	0.097	0.9231		–0.0260	0.0305	–0.851	0.3951	

Government expenditure – contemporaneous and lagged difference										
$\Delta \ln \text{GEXP} [t]$	-0.1571	0.0675	-2.328	0.0199	**	-0.1131	0.0594	-1.902	0.0571	*
$\Delta \ln \text{GEXP} [t-1]$	-0.0897	0.0549	-1.634	0.1023		-0.1107	0.0605	-1.830	0.0673	*
Constant										
Constant	0.0051	0.0094	0.541	0.5886		0.0065	0.011	0.595	0.552	
Model diagnostics										
R²	0.711					0.7402				
Adjusted R²	0.4443					0.5004				
F-Statistic (p-value)	9.493 (p < 0.001)					6.197 (p = 0.001)				
AIC	-88.44					-91.21				
Durbin-Watson	1.917					1.848				
Breusch-Godfrey (p)	0.99					0.521				
Breusch-Pagan (p)	0.449					0.197				
Observations (N)	26					26				
Speed of adjustment	51.02% per year					48.64% per year				
Half-life of shock	~0.97 years					~1.04 years				

Note: Dependent variable is $\Delta \ln \text{POV}$ (first difference of log poverty incidence). HC1 heteroscedasticity-consistent robust standard errors. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$. Panel A: composite WGI index as institutional proxy. Panel B: Rule of Law (RL) dimension as institutional proxy – best-fit disaggregated model (Adj. $R^2 = 0.500$, AIC = -91.21). ECT(-1) = lagged residual from long-run OLS regression. BG = Breusch-Godfrey LM autocorrelation test (1 lag); BP = Breusch-Pagan heteroscedasticity test. All diagnostic p-values confirm model validity.

Source: Authors' computation (2026)

Table 8: Error Correction Term: Coefficient and Significance

Panel A – Composite IQ Model ECT(-1) = -0.5102 SE = 0.2372 t = -2.151 p = 0.032 ** Speed of adjustment: 51.02% per year <i>Half-life of shock: ~0.97 years (< 12 months)</i>	Panel B – Rule of Law Model ECT(-1) = -0.4864 SE = 0.2542 t = -1.913 p = 0.056 * Speed of adjustment: 48.64% per year <i>Half-life of shock: ~1.04 years</i>
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Source: Authors' computation (2026)

The error correction results show that there is a stable long-run relationship between institutional quality and poverty in Nigeria. In the overall institutional model, the error correction term ECT(-1) = -0.5102 (p = 0.032) is negative and statistically significant, which means the system is stable and tends to return to equilibrium over time. This suggests that when poverty levels move away from their long-run path due to changes in governance or economic conditions, adjustments occur gradually in the following periods. In the rule of law model, which provides the best results among the individual indicators, the error correction term ECT(-1) = -0.4864 (p = 0.056) is also negative and slightly significant, confirming a similar pattern of stability. The size of these coefficients shows that the adjustment process is fairly fast, with about 51 percent of any imbalance corrected each year in the overall model and about 49 percent in the rule of law

model. This means that shocks affecting poverty tend to fade within a short period, showing a quick response to institutional and economic changes.

The short-run dynamics further highlight the role of macroeconomic conditions in shaping poverty outcomes. In the composite institutional quality model, government expenditure ($\Delta \ln \text{GEXP}$) exhibits a significant poverty-reducing effect in the short run ($\beta = -0.157$; p = 0.020), indicating that fiscal interventions can provide immediate welfare relief even when long-run institutional effects remain weak. In the rule-of-law specification, inflation ($\beta = -0.049$; p < 0.001), trade openness ($\beta = -0.044$; p = 0.057), and government expenditure ($\beta = -0.113$; p = 0.057) display marginally significant poverty-reducing effects. These results suggest that short-term poverty outcomes in Nigeria are influenced by macroeconomic stabilization and public spending

dynamics. Overall, the findings reveal a dual policy implication: macroeconomic management can mitigate poverty in the short run, whereas durable poverty reduction ultimately depends on sustained improvements in institutional quality and governance structures.

5. DISCUSSION OF FINDINGS

The baseline regression results show that overall institutional quality has a negative but statistically insignificant effect on poverty ($\beta = -0.0008$; $p = 0.994$). In practical terms, this very small coefficient suggests that changes in the combined governance index have little or no real impact on poverty levels. This implies that using a single composite measure of institutions may hide the different effects of each governance component. Studies such as Tebaldi and Mohan (2010) have also pointed out similar limitations of aggregated institutional indicators. In Nigeria, this issue may be more pronounced because performance across governance areas is uneven. For example, weaknesses in areas like corruption control and political stability could offset any positive effects from stronger areas such as rule of law or government effectiveness. As a result, the overall institutional index may fail to capture how specific institutions actually influence poverty. This highlights the importance of examining each governance dimension separately to better understand their individual contributions to poverty reduction.

Looking at the results in more detail, the disaggregated analysis gives a clearer picture. Among all the institutional variables, rule of law shows the strongest negative effect on poverty ($\beta = -0.054$). This means that an improvement in the legal and judicial system is linked to about a 5.4 percent reduction in poverty in the model, although the result is not statistically significant. This finding supports ideas from institutional economics, which stress that strong property rights and proper contract enforcement help people participate more actively in the economy (North, 1990; Knack & Keefer, 1995). In the case of Nigeria, however, the benefits of a strong legal system are limited by weak enforcement of laws and the large size of the informal sector. Many economic activities take place outside formal legal structures, which reduces the ability of legal institutions to effectively support poverty reduction and inclusive growth.

rule of law maintaining a poverty-reducing sign and real GDP per capita remaining positively associated with poverty incidence.

Third, further checks were carried out by slightly adjusting the time period used in the analysis and making small changes to the model structure. The results remained largely

An interesting finding from the results is the positive and highly significant coefficient on real GDP per capita ($\beta \approx 0.23$ – 0.24 ; $p < 0.01$), which suggests that economic growth in Nigeria has not been inclusive. In other words, even as the economy grows, the benefits are not evenly shared, and poverty may still increase. This supports existing studies showing that in resource-dependent economies, growth does not always reduce poverty when institutions are weak and unable to support fair distribution or job creation (Fosu, 2017). Government spending, on the other hand, has a negative but statistically insignificant effect on poverty, meaning it could help reduce poverty, but the impact is not strong enough. This may be due to issues such as poor fiscal management, corruption, and weak governance structures, which reduce the effectiveness of public spending in addressing poverty in Nigeria.

6.1 Robustness Checks

To check how stable and reliable the results are, several robustness tests were carried out. First, the main model that used a combined institutional quality index was re-estimated by replacing it with each of the six separate World Governance Indicators, including control of corruption, government effectiveness, political stability, regulatory quality, rule of law, and voice and accountability. The findings are generally similar across these different models. In particular, rule of law consistently shows the strongest negative effect on poverty, while the other governance indicators tend to have weaker or insignificant impacts. This consistency suggests that the main conclusion of the study is reliable. It shows that looking at individual institutional factors gives better insight than relying on a single combined measure of governance. In other words, differences between specific institutions matter more than overall institutional quality when explaining poverty in Nigeria.

Second, the model was re-estimated using sub-sample periods to assess temporal stability in the institutional-poverty relationship. The sample was divided into two sub-periods (1996–2009 and 2010–2023) corresponding to Nigeria's pre- and post-global financial crisis institutional and macroeconomic environment. The direction and relative magnitude of the key coefficients remain largely unchanged across the two periods, with unchanged across these different setups, showing that the findings are not sensitive to how the model is specified or the exact sample period chosen. This strengthens confidence in the study's conclusions, as it suggests that the relationship between institutional quality and poverty in Nigeria is consistent and reliable. In other words,

the results are not simply due to a particular model choice or data selection. Instead, they reflect a stable pattern that holds even when reasonable adjustments are made, making the overall evidence more convincing and dependable for understanding the governance-poverty link in Nigeria.

6. CONCLUSION & POLICY RECOMMENDATIONS

This study investigated whether institutional quality affects poverty levels in Nigeria by using separate governance indicators and the ARDL method for data from 1996 to 2023. The results show that overall institutional quality does not have a statistically significant effect on poverty, suggesting that combining all governance indicators into one measure may hide the different roles played by each institution. However, when the indicators are examined individually, the rule of law stands out as the most important factor in reducing poverty. This means that improving areas such as judicial fairness, contract enforcement, and protection of property rights can help lower poverty levels. The findings also show that real GDP per capita has a positive and significant relationship with poverty, indicating that economic growth in Nigeria has not been inclusive. In other words, growth alone is not enough to reduce poverty without strong institutions. Based on this, policies should focus on strengthening the rule of law, improving the independence of the judiciary, supporting anti-corruption agencies like EFCC and ICPC, ensuring better management of public funds, and promoting transparency and accountability through credible elections and governance reforms.

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7. LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE RESEARCH

Although this study makes useful contributions, it has some limitations that should be noted. First, the analysis is based on annual data from 1996 to 2023 due to the availability of the Worldwide Governance Indicators, which results in a relatively small sample size. This may limit the strength of the results and could explain why some governance variables are not statistically significant. Second, the study uses national-level data and the ARDL method, which, although suitable for this type of analysis, may not fully capture issues like endogeneity or the complex ways institutions interact. Third, the results are specific to Nigeria, meaning they may not easily apply to other African countries with different institutional systems and economic conditions.

Future studies can build on this research in a number of useful ways. First, looking at data at the state or regional level within Nigeria could provide a clearer understanding of how differences in institutions across states affect poverty levels. Second, breaking the analysis into specific sectors such as agriculture, education, or health could help explain how institutions influence poverty through different channels. This would make it easier to identify where policy efforts should be focused. Lastly, studies that compare Nigeria with other African countries using panel data or multi-country time-series methods could show whether the relationship between institutional quality and poverty found in this study also applies to other Sub-Saharan African economies.

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