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# The Influence of Institutions in Poverty-Growth Nexus: Evidence from Nigeria

Zainab Abubakar<sup>1</sup>, Lawal Wasiu Omotayo<sup>2</sup> and Malarchy Udo Usoro<sup>3</sup>

<sup>1</sup>Department of Economics and Development Studies, Federal university Dutse, Jigawa State
<sup>2</sup>Department of Economics, Skyline University Kano, Nigeria.
<sup>3</sup>Department of management, Skyline University Kano, Nigeria.

## Abstract

	This paper investigates the impact of poverty on economic growth in Nigeria
	with moderating role of institutions using a time series data sourced from `the
Keywords:	World Development Indicators ranging from 1990 to 2023. The pre-
Poverty	estimation test was done using PP and KPSS, followed by the structural break
Economic growth	test using Zivot and Andrews (1992) and perron (1997) to establish break in
Institutions	series. The ARDL technique was applied to incorporate structural breaks in
Interactions	estimating the model. The result of the estimate model indicate that poverty
	has an inverse relationship and significant impact on economic growth
JEL Classification: I3. O4,	similarly, institution proxied as corruption also follows the same patter with
EO, 2 C33	no significant impact on growth. There appears to be a co-movement between
	poverty and corruption with 94.7% adjustment to equilibrium. Implying that
Corresponding author 🛛	the interaction between poverty and institution negatively affect growth.
Lawal Wasiu Omotayo	Increase in government expenditure in critical sectors of the economy such
suki4wisdom@yahoo.com	agriculture, security, infrastructure in education and transportation system
Tel: 07063011021	are suggested policy tools.

# 1. Introduction

Economic agents be it macro or micro depends on the miscalculations of its competitors as well as other unexpected events to better their story in terms of income and growth. The world has witnessed so many of such events that could be used by countries as a room for growth. The year 1990, for instance, could be described as an expectant year to those countries (Nigeria inclusive) that are involved in oil business for their economy to boom as a result of the tension in other oil producing countries specifically Iraq and Kuwait that were entangled in the Gulf War. Shehabi (2015), posited that the war in the gulf "tested the market". That a month after the

invasion of Kuwait by Iraq, the price of petroleum increased by 125% hitting annual record of 36 dollars.

Globally, the pervasive GDPGR which is an indication of the concentration of most economic and institutional reforms were aimed at stabilizing of macroeconomic environment, public sector modernization, political reforms, financial sector, trade, and privatization as well as deregulation (World Bank, 2016) amongst others, were signaling positive indications. Evidence shows that in 1990, about 1.9 billion people which amounted to 36% of the world population lived below the poverty line of \$1.9 per day (Kharas & Dooley, 2022). The global perspectives of a more industrialized nations such as United States has revealed that their apparently fair economic growth did not strictly adhere to conventional neo-classical growth theories (Martinez & Mlachila, 2013). Consequently, nearly all countries considered most successful in achieving inclusive growth have experienced significant and transformative effects due to the quality of their state institutions within their economies. These nations are widely recognized for consistently lifting a significant number of poor out of poverty, substantially reducing inequality, and lowering rate of unemployment to determined institutional capacity and the character of their state (Ghatak, 2003; Peet & Elaine, 2009).

In the aftermath of the 2008 financial crisis, the global economy faced a period of recovery. Many developed countries implemented stimulus packages to spur economic growth. The 2000s and early 2010s witnessed robust economic growth in emerging markets, particularly in Asia. Countries like China and India which played a significant role in driving global economic expansion. Also, the financial crisis led to a global recession, affecting economies worldwide. Several developed nations experienced contractions in GDP. unemployment spikes, and financial instability. In Post-2010 Recovery Following the global financial crisis, there was a gradual recovery. Low-interest rates and fiscal stimulus measures were employed by central banks and governments to stimulate economic growth, uncertainties around trade policies impacted investment decisions. More so, The COVID-19 pandemic in 2020 led to an unprecedented global economic contraction. Lockdowns, disruptions in supply chains, and reduced consumer spending contributed to a sharp decline in GDP for many countries.

In Africa however, the growth of the regional economies was not sustainable due to policy inconsistency, instability in government due to incessant military intervention, communal clashes, recent trend in insecurity which includes; insurgency, banditry, abduction, selfdetermination and secession. As stated by World Bank in 2005, that political as well as macroeconomic stability is a yardstick for other policy improvement to gain grounds. The body reported the world income per capita to be five times better than what it was in the beginning of the 19<sup>th</sup> century. It continued that many countries have experienced remarkable success as well as sustained high growth which leads to reduction in poverty significantly except the African continent which suffers from stagnation as well as decline in growth (World Bank, 2016).

The quest for sustainable economic development is a global concern, and Nigeria stands at the intersection of this pursuit, facing the challenge of persistent poverty despite periods of economic growth. Despite concerted international efforts to foster economic development and reduce poverty, disparities persist while the global community emphasizes economic growth as a driver of poverty reduction, variations in outcomes persist across nations. Nigeria, in particular, experiences complexities in this relationship, prompting the need to investigate the extent to which institutions influence poverty alleviation amidst economic growth on both the global and national scales.

Iyoboyi (2016), stressed that Poverty alleviation is at the heart of the policies in many developing countries. In the last two decades, poverty reduction has not been very successful in many parts of the world. In fact, the pandemic has actually increased in Sub-Saharan Africa, Eastern Europe, and Central Asia. It however needs to be maintained that the absolute numbers of the poor continue to increase, even though the proportion of the poor seems to have reduced .Moreover, because state control and unregulated market policies have failed to address the endemic problem, focus has shifted to the role which institutions can play in poverty reduction strategies (Narayan and Petesh, 2020).

Poverty has been an endemic problem in Nigeria, and this has been so for a long-time. Efforts at combating high poverty have remained largely unsuccessful, due largely in part by the preponderance of institutions whose quality and capacity leave much to be desired. Nigeria is not in short supply of policies and has utilized different palliative measures over time (Sala-i-Martin & Subramanian, 2010; Ayodele et al., 2013). The failure of policy to arrest structural shocks in the economy can in part be explained by the inadequacy and incapacity of existing institutions which do not respond to and shape policy formulation and thus incapable of transmitting the right signal and galvanizing the economy through incentives.

The tragedy of the Nigerian state is that poverty is increasingly becoming a monster. Academic Staff Union of Universities (ASUU, 2018) maintains that many Nigerians live a most difficult life with basic amenities such as food, water, electricity, and security almost totally absent. The proportion of the core poor rose sevenfold, from 4 million in 1980 to 30million in 1996, while the poverty rate rose from 42.7% to 65.6% between 2009 and 2014. In2017, about 70.2% of Nigerians lived on less than USD\$1 a day, while up to 91% lived on less than USD\$2 a day. With 55.5 million poor people in 1998, Nigeria had the largest number of the world's extremely poor in comparison with war torn countries such as DR Congo's and Ethiopia's 48.2 million and 37.4 million respectively.

Considering the period of this investigation, Nigeria has been marked by significant political, economic events as well as policy shifts. Some of these events such as the gulf war and suspension of some of the countries involved in oil exportation would have translated into positive economic narratives. However, the coexistence of economic growth and persistent poverty raises questions about the efficacy of existing institutions. For instance, the World Bank reported growth rate of 11.8 in 1990 and two years later the poverty in 1992 the poverty head count ratio was 52.4 percentage of the population living below \$2.15 per day. In 2003 the growth rate of 15.3% had a head count ratio of 47.9% of the population were below the poverty line. In 2021, the World Bank reported the growth of 3.6% while it reported the poverty head count ratio of 30.9 at \$2.15 per day. In the same years, the institution reported the control of corruption estimate index of -2 in 2002 and -1 from then up to date. It is as a result of this conflicting statistics that this research aims to provide answers to how poverty impacts on economic growth through the moderating role of institutions in Nigeria. Following the introductory section, section 2 treats the review of literature. Section 3 presents the methodology of the study. Section 4 presents the data and interprets it, while section 5 presents the conclusion.

#### 2. Literature review

Umar (2020), Quy (2016) and Ijirshar (2015) all sees economic growth as an escalation of the nationwide income per capital. Additionally, it highlights the expansion of national wealth, encompassing manufacturing capacity, measured in both total and comparative terms per person, also considering the structural changes within the economy. Poverty on the hand as viewed by economic experts around the world have made attempts to elucidate the concept of poverty.

However, a definitive consensus on its exact meaning remains elusive. This lack of consensus is primarily due to the fact that various definitions of poverty often reflect the unique perspectives and contexts of the authors providing these definitions. Many scholars assert that poverty is a multidimensional phenomenon with diverse interpretations. Gordon (2000), for instance, suggests that poverty can be understood as a collection of different yet interconnected meanings, contingent upon the specific subject area or discourse under examination. Sen (1983), on the other hand, links poverty to entitlements, which encompass access to goods and services, rewording with consideration for how these resources, such as currency and vouchers, are obtained and accessibility of vital commodities. Institutions according to North (1990) is a structured framework comprising regulations, compliance procedures, ethical and moral standards deliberately designed to control individual behaviour, all with the goal of advancing the interest to make best use of the wealth.

The 'institutions' quality hypothesis posits that institutional environment where economic actors engage with one another has a significant impact on economic development (Alexiou, Tsaliki & Osman, 2014). From this perspective, what matters most is the set of rules that govern behavior within the society, which are shaped by prevailing both implicit and explicit behavioral norms and their capacity to generate suitable motivations for favorable economic conduct (Rodrik and Subramanian, 2003). (Lawal, Abudel-rasaq and Iyoboyi, 2023), considered institutional quality as the required guideline necessary for the operations of both private and public institutions in order to optimize wealth. The enactment of these guiding principles are based on the act that set-up the institution, which are mostly in line with the international practice. This study is anchored on the Pro Poor Growth Theory and corruption poverty nexus theory, which were used to underpin the study on the role of quality institutions on the poverty and growth nexus in Nigeria. The choice of the Pro Poor Growth Theory is premised on the fact that it emphasizes the need for poverty and inequality reduction as a key aspect of growth. The theory suggests that growth that does not result in a reduction in poverty and inequality may not be considered successful. The idea suggests that in the context of Nigeria, strategies and policies aimed at fostering growth and eradicating poverty ought to be developed with the poor and other vulnerable sections of society in mind. The Corruption Poverty Nexus Theory is important to this study because corruption is often cited as a significant cause of poverty and can hinder economic growth. The theory suggests that corruption can undermine institutional quality, reduce public trust in government, and distort economic incentives, all of which can contribute to inequality and poverty in Nigeria, the theory implies that addressing corruption and improving institutional quality could be key to reducing poverty and promoting economic growth. In all, these theories provide a useful framework for understanding the complex nexus between poverty and economic growth, and influence of institutions in shaping this relationship.

The link between poverty and growth has been discussed extensively in the literature. For instance, Ebunoluwa and Yusuf (2018), Abduvaliev and Bustillo (2020), Priambodo (2021), Bal et. al (2022) and Babajić, Suljić and Halilbegović (2022) all explored the association between growth and poverty reduction in Nigeria, their findings revealed a significant link between the two factors through co-integration techniques. Similarly, Saidi eta al, (2023) conducted a study titled economic growth and extreme poverty in Sub-Saharan African Countries the study used a threshold for a panel data to investigate the triangular effect of poverty, the quality of governance and the growth of economy of countries found in the sub-Saharan region. Their findings show that the variables were not linear in nature and the

governance quality, poverty has a negative relationship and that a good governance performance can positively improve the growth of the economy of the region as well as reduced poverty level. Again, Bal et al, (2022) examines the factors that contributed to the increase in poverty in Nigeria. They discovered that corruption, increase of youth unemployment, the burden of debt, increased and incessant dependence on oil. They equally included the lack of political power to tackle poverty, as well as conflicts amongst the ethnic group in the country all contributes to poverty. They concluded that the country has not made any significant achievement in the reduction of poverty due to the aforementioned reasons in the year under review. For a period of 12 years, from 1990 to 2011. Onyedikachi and Chinweoke (2013), examined the effect of poverty on the rate of economic growth in Nigeria using secondary data from 1989-2012 employing the single equation Ordinary Least Squares (OLS) technique of data analysis. Findings, from the study shows no correlation between poverty, the discomfort index, and growth in Nigeria. Also, human development index and discomfort index statistically has no explanatory power on growth in Nigeria.

Previous studies on the relationship between poverty and economic growth in Nigeria did not fully explore the moderating impact of institutions on the poverty and economic growth nexus. Kassie (2021), observed that institutional quality has a moderating effect on the financial progress and economic expansion of African nations. Panel data for 35 African nations from 1985 to 2018 and GMM were used in the study. Result revealed that strengthening institutions is necessary for Africa to gain from financial development. As a result, it is essential that African nations work on developing several programs and methods to enhance institutional quality in order to increase growth. The moderating effect of institutional quality on the relationship between the shadow economy and environmental degradation in Nigeria from 1984 to 2018 was also investigated by James and The Autoregressive Folorunsho (2021).Distributed Lag (ARDL) model was used by the researchers to analyze secondary data. Revealing that the relationship between the shadow economy and environmental damage is not significantly moderated by institutional quality in practice. Interestingly, Olarewanju, Aremu and Binuyo (2020) looked at the relationship between inclusive growth and institutional quality. Using Time series data from 1998 -2017. The result shows, inclusive growth in Nigeria was significantly impacted bv institutional quality.

The economy of the country has witnessed several setbacks largely due to institutional setting; Nigeria became the African largest economy and the 26<sup>th</sup> largest in the world in 2014 and currently 9<sup>th</sup> highest exporter in the world. Despite the enormous potentials, Nigeria has largely failed to live up to the projections following the first oil boom of the 1970s and thus its macroeconomic responsibilities of high employment, low inflation, improved standard of living and reduction in poverty level. In all of this, the ambit of well functional, institutions and the accompanying structure with the mechanism are usually not giving the right attention in the empirical analysis of the country's macroeconomic performance and specifically to good economic growth.

Empirically, qualitative institution has a considerable impact on the link between poverty and growth in Nigeria. The bulk of international studies that examined the relationship between poverty and growth, particularly in Nigeria and other instance nations, produce inconsistent results. Several research, like those by Muloka et al. (2012) and Abduvaliev and Bustillo (2020), found that poverty has a positive and significant effect on growth. In contrast, research by Quy (2016) Onyedikachi and Chinweoke, (2013) discovered a link between poverty and growth in Nigeria that was negative. It is worthy of note

that, the possible reasons for the conflicting findings in the empirical literature may be attributed to use of different time horizon, sample size, methodology adopted. The country's policy and reforms geared toward reducing poverty and inclusive growth has been largely unsuccessful. It is likely that institutional quality could be the missing link which may provide the required mechanism for a low poverty rate in Nigeria. Again, one major lacuna in the previous study is that most studies didn't consider structural break, a neglect which might have a serious consequence in the validity of inference. The scope of investigation is another shortfall in previous studies, noting that the power of classical unit root and co-integration tests can be distorted when short time lags are used (Engle & Granger, 1987). Ogede (2019), evaluated the impact of institutional quality and remittance on growth in Nigeria. The findings showed that institutional quality in Nigeria positively increases inclusive growth, whereas remittances have a long-run negative association with inclusiveness growth. of Using the Autoregressive Distributed Lag co-integration technique.

Poverty was assessed through the average expenditure of households, while economic growth was gauged by the average income per individual. Finding of the study revealed that both growth and robust institutions yielded a favorable impact on household consumption in both immediate and prolonged scenarios. This implies that as growth and sturdy institutions

advanced, household consumption rose, leading to a decline in poverty in the short run. Nevertheless, the joint influence of institutions and economic growth on household consumption exhibited a negative trend. This implies that the interplay between institutions and economic growth had a beneficial impact on alleviating poverty. This underscores the notion that institutions and economic growth played complementary roles in curtailing poverty over the short term. In the long-run, the combined effect of institutions and economic growth on household consumption displayed a positive trajectory. This signifies that institutions and economic growth collaborated to bolster household consumption and alleviate poverty. Against this background therefore, this study investigated the influence of institutions as they moderates the poverty-growth nexus.

# 3. Methods

The theoretical underpinning for this study is the Pro Poor Growth Theory and corruption poverty nexus theory, which imposed the role of institutions on the poverty and growth nexus in Nigeria. This theory is necessitated as it emphasizes the need for poverty and inequality reduction as a key aspect of growth. The theory suggests that growth does not result in a reduction in poverty and inequality may not be considered successful.

On the basis of theory, the following is a dynamic specification:

$$GDPGR_t = \beta_0 + \beta_1 X_i + \sum_{i=-p}^{\rho} \delta i \Delta X_{t-1} + \varepsilon_t$$
1

Where  $\beta 0$  and  $\delta_i$ ,  $\delta_p$  are parameters to be estimated and  $\varepsilon_t$  is the disturbance term assumed to be normally and identically distributed. X is a vector of regressor as defined previously,  $\Delta$  is the lag operator. Consequently, the regressor and its associated explanatory variables are indicated in the log form in the following specification.

$$\Delta lngdppc_{t} = \alpha_{0} + b_{0}(\Delta lnphc_{t} * \Delta lncpi_{t}) + \vartheta(\Delta lnphc_{t-1} * \Delta lncpi_{t-1}) + \delta_{0}\Delta f di_{t} + \varepsilon_{0}\Delta top_{t} - \theta lngdppc_{t-1} + \rho f di_{t-t} + \sigma top_{t-1} + e_{t}$$
2

Data for this research were sourced from secondary sources and retrieved from World Bank's World Development Index. It covers the period of 1990 to 2023, spanning 33 years. Empirical data on GDPGR, Poverty Head Count Ratio, Trade Openness, Foreign Direct Investment and Corruption Perception Index were analyzed.

#### 3.1 Model Estimation Procedure

Pre-estimation of the data involves testing for stochastic properties and cointegration. Consequently, two traditional unit root tests were used in the study; the Philips Perron (PP) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS). Again, two unit root test with structural breaks were considered: Perron (1997) and Zivot and Andrew (1992). The choice of the last two stationarity tests was informed as a result of peculiar problem associated with most of the time series data with structural breaks in data. The choice of using four unit root test is to allow robustness and comparison and to avoid spurious regression. Although PP unit root test is often considered more robust in the presence of serial correlation (auto-correlation) compared to other traditional unit root test. This means that the PP test is better at handling situations where the observations are correlated with each other. In

other words the PP test is useful over other unit root test in that it allows for the possibility of heteroskedastic error term (Hamilton, 1994). However, because it has been shown that PP suffers from high size distortion, finite sample power and size, it was considered appropriate to include the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test. The paper investigates the existence of a cointergration relationship by adopting the approach developed by Perasan et al (2001), which has some econometrics advantages over other procedures. After which the model was estimated using autoregressive distributive lag model. The choice of the ARDL is anchored on its reparameterization property, which generates the error-correction model. This has become very popular in applied time series econometrics in that it is found that for non-stationary variables, co-integration is equivalent to an error-correction mechanism, so that by differencing nonstationary data and forming a linear combination, all the variables in a model are transformed equivalently into an error correction model with all series remaining stationary. According to the unrestricted error correction model which follows the order of ARDL specification of economic growth response and fiscal –monetary mix as a panacea for post-recession is given as follows:

3

$$\Delta Log(GDPGR)_{t} = \beta_{0} + \sum_{i=l}^{\rho} \beta_{1} \Delta logGDPGR_{t-i} + \sum_{i=0}^{\rho} \beta_{2} \Delta logCPI_{t-i} + \sum_{i=0}^{\rho} \beta_{3i} \Delta logFDI_{t-i}$$
$$+ \sum_{i=0}^{\rho} \beta_{4i} \Delta TOPN_{t-i} + \sum_{i=l}^{\rho} \beta_{5} \Delta logPHC_{t-i} + \sum_{i=0}^{\rho} \beta_{6} GDPGR_{t-i}$$
$$+ \beta_{7}CPI_{t-1} + \beta_{8}FDI_{t-1} + \beta_{8}PHC_{t-1} + \beta_{9}ECM_{t-1} + \mu_{t}$$

# 4. Results and discussion

As depicted in table 1, it is evident that foreign direct investment has the highest standard deviation with 9.690245. This suggests that the foreign reserves of the Nigerian economy deviate most widely from its expected values. This has lend credence to the fact that Nigerian foreign reserves is not so buoyant enough to absorb the attendant shocks grossly caused by series financial dynamic that has endangered consistent flows of financial resources that will enhance foreign direct flow over the years. Corruption perception index has the least standard deviation and it exceeded what was ordinary expected by 0.116496. The level of corruption in the country appears too higher thereby deterring growth and increasing the level of poverty in the country. The skewness value and the FDI also exceeded

what was ordinary expected by 0.141689. In fact, none of these variables are distributed normally around their distributions. GDP growth rate, poverty head account and corruption perception index have kurtosis values that exceed the 3.0 threshold values and are considered leptokurtic while all other variables have kurtosis values below the 3.0 threshold values and are considered platykurtic in distributions. However, the theoretical test of Jarcque-bera statistics suggests only the GDP growth rate has skewness and kurtosis values that tend towards normal distribution. The simple reason is that the null hypothesis of non-normal distribution is rejected for GDP growth rate as the probability of Jarcque-bera statistics is less than the 0.05 level of significance.

	1				
	GDPGR	РНС	CPI	FDI	TOPEN
Mean	4.287737	1.575907	-1.162596	35.65423	53.34347
Median	4.230061	1.450318	-1.160613	36.05871	56.15000
Maximum	15.32916	5.790847	-0.900949	53.27796	64.90000
Minimum	-2.035119	-0.039128	-1.502068	16.35219	39.10000
Std dev	3.958301	1.215174	0.116496	9.692045	8.190399
Skewness	0.465009	1.779814	-0.941709	-0.141689	-0.588443
Kurtosis	3.389531	6.716036	4.599540	2.342506	2.000278
Jarque-Bera	a 1.397917	36.40984	8.395461	0.704828	3.278693
Probability	0.497103	0.000000	0.015030	0.702989	0.194107

**Table 1: Descriptive Statistics** 

Sources: Authors' Computation

The unit-root tests as presented in the Table 2 are meant to confirm the data stability condition of the variables included in the model. For robustness of the data stability results. There is a mix of both unit-root and non-unit-root variables to be included for model estimations

The result of the unit-root with structural break point test presented in table 3 also lends credence to the submission that the variables are mix of stationary and unit-root trends. Specifically for the structural break-point test, the poverty head count (proxied PHC), corruption perception index (proxied CPI) and trade openness (proxied as *topen*) are the three variables that have unit-root and have to be integrated at order 1 before they become stationary. This implies that the null hypothesis is not rejected for all the variables except for foreign direct investment (proxied fdi). More so, the break-point periods appear to be variable-specifics. The poverty head count, corruption perception index and trade openness have their stationary breakpoints in the 1990s, specifically in the years 1991, 1997 and 1998 respectively.

able 2. Offit Ro	of test Result		
Variables	PP	KPSS	ORDER OF INTER
GDPR	-2.28	0.21	I(1)
LPHC	3.18	0.147	I(0)
CPI	-2.029	0.150	I(0)
LFDI	-2.82	0.083	I(1)
LTOP	-2.61	0.179	I(1)
∆RGDPGR	3.88	-	I(1)
$\Delta$ LPHC	-3.57	0.140	I(1)
$\Delta \text{ CPI}$	-4.73	0.113	I(1)
$\Delta$ LFDI	-6.05	0.166	I(1)
$\Delta$ LTOP	-6.89	0.50	I(1)

Table 2: Unit Root test Result

\*,\*\*, and \*\*\* indicates statistical significant at 1%, 5% and 10% level respectively. Maximum lag used is 1.

Source: Authors' computation

Table 3:	Structural	<b>Break-P</b>	oint	Test
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	Perron (1997)		Zivot and Andrews (1992)	
	<b>T-Statistics</b>	Break Date	<b>T-</b> Statistics	Break Date
Variable				
GDPGR	-5.658*	2011	-5.666*	2011
PHC	-3.754	2005	-3.329	1991
CPI	-3.375	1995	-5.632*	1997
FDI	-5.481*	2003	-5.259*	2017
POLIT_RISK	-6.217*	1999	-5.098**	1996
RESV	-5.764*	2013	-7.605*	2010
TOPEN	-4.103	1989	-4.823	1998

Notes: \*, \*\* Denotes 1%, 5% significance levels. Note: BP is the break point year. Source: Authors' computation

The next step is to test for cointegraion, It is instructive to note that several techniques from the econometrics literature has been suggested as appropriate techniques for testing cointergation in the midst of structural breaks, some of these test include, Gregory and Hansen (1996) for a single break, Hatemi-J and Roca (2012) extended their tests to two breaks, Lutkepohl and Saikhonen (2000) and Wu and Fountas (2000) for more than two breaks. However, these tests presume none stationarity of the variables. This renders them obsolete and inappropriate for this study with fractional integration. Hence, the cointergation test appropriate for this study is the bound test incorporating the structural break. This technique has been demonstrated and used by different scholars notable among them is (Giles, 2014), (Akingbade & Odhiambo, 2021).

The test for cointegration as detailed in (Table 4) was conducted with appropriate intervention dummy incorporated to account for structural break. The results confirm the presence of co-movement among the measure of institutional quality alongside gross domestic product growth rate.

Tuble II Test of Co mee		
F- Statistics	5.708963	
Critical values	I(0)	I(1)
1%	3.65	4.66
5%	2.79`	3.67
10%	2.37	3.2

 Table 4: Test of Co-integration

Sources: Author's computation

From the result, the F-statistics Bound test lends credence to the rejection of the null hypothesis of no cointegration. The results show the presence of co-movement as the F-statistics value of 5.708963 is far greater than even the 1 percent upper bound critical value of 4.66.

Die 5. Miluuri I	WO Estimation F	Coult		
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
GDPGR (-1)	0.052652	0.177061	0.297367	0.7691
LPHC	-40.91332	18.39937	-2.223626	0.0373
LPHC (-1)	41.45323	21.16841	1.958259	0.0636
CPI	-1.890250	1.169143	-1.616783	0.1208
CPI (-1)	-0.640367	1.245273	-0.514239	0.6125
LFDI	3.171403	2.208973	1.435691	0.1658
LFDI(-1)	1.663305	2.370042	0.701804	0.4905
LTOP	0.954566	2.997457	0.318459	0.7533
LTOP(-1)	1.844193	2.789006	0.661237	0.5157
С	-3.329057	16.61508	-0.200364	0.8431

**Table 5: Model Two Estimation Result** 

 $R^2 = 0.85$ , Adjusted  $R^2$ , 0.81, F- Statistics 5.31 (0.0000), DW: 2.327 Sources: Author's Computation

The Table 5 shows the model number two of this research with the combination of the Corruption Perception Index (CPI) Variable. The poverty head count as the main explanatory variable has negative relationship with the economic growth by a coefficient of approximately -40.91 and a significant probability of 0.037 in the short-run. It then suggests that when the Nigerian poverty increased by a percentage unit, the growth rate of the economic also declines by -40.91 percent on the average. It one period lag, however, returned a positive relationship with the economic growth rate with a positive relationship, meaning that a previous value of poverty affects the GDPGR in its current year by boosting it by 41.45 percent and the impact of the lag value is not significant by its probability of 0.06. The Corruption Perception Index, as the moderating variable, in the short-run has a negative relationship with the Growth Domestic Product Growth Rate as it returned the coefficient of -1.89 and an insignificant impact with a probability of 0.12. This implies that, as the corruption index of Nigeria increases by a unit (as the variable was not logged), the GDPGR decreases by 1.89 percent. The impact is however not significant as the test returned a probability value greater than the 0.05 level of significance. This explains that corruption does not have significant impact on the economic growth of Nigeria.

The Foreign Direct Investment (FDI) is one of the control variables in this research. It has a positive relationship with the economic growth in the short-run. It returned a coefficient value of 3.17 and probability of 0.16, meaning that when the FDI increases by a percentage unit the economic growth increases by 3.17 percent, though the impact is not statistically significant going by the probability been greater than 0.05. The Trade Openness is also a control variable which has a positive relationship with the economic growth as expected. It reported a coefficient of 0.95 and a probability of 0.75 which implies that when the trade openness index increases by a percentage unit, the economic growth increased by 0.95%, though the impact is not statistically significant.

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
D(LPHC)	-40.91332	13.23533	-3.091222	0.0055
D(CPI)	-1.890250	0.842986	-2.242327	0.0359
D(LFDI)	3.171403	1.666145	1.903438	0.0708
D(LTOP)	0.945566	1.894191	0.503944	0.6195
CointEq(-1)*	-0.947348	0.149169	-6.350832	0.0000
	01717210	0.117107	0.000002	0.0000

Table 6: Model Two Error Correction Result

# Sources: Authors' Computation

Table 6 shows the Error Correction Model of the ARDL model 2 estimation. The test indicated a negative speed of adjust and a significant probability of -0.94 and 0.00 respectively. The

result signifies the system would have the speed of 94.7% to correct itself to normality in the long run after the short run disequilibrium.

**Table 7: Model with Interaction Effects** 

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
GDPGR(-1)	0.053895	0.194269	0.277427	0.7842
LPHC*CPI	-8.268455	7.223990	-1.144583	0.2653
LPHC(-1)*CPI	(-1) 6.756709	7.506769	0.900082	0.3783
CPI	-5.460929	3.180501	-1.717003	0.1007
CPI(-1)	1.580503	3.376228	0.468127	0.6445
LFDI	1.479971	2.542525	0.582087	0.5667
LFDI(-1)	4.026321	2.726731	1.476611	0.1546
LTOP	0.951238	3.005409	0.316509	0.7547
LTOP(-1)	3.576698	2.800578	1.277129	0.2155
С	-8.826609	12.74130	-0.692756	0.4961

Sources: Authors' Computation

Table 7 shows the short-run model three results of the interaction effect of Institutional Quality and poverty head count on the Economic Growth of Nigeria. The interaction variable, where the log of the poverty head count multiplying the corruption perception index LPHC \* CPIindicates an inverse relationship between them and the economic growth. It reported the coefficient of -0.826 and none significant probability of 0.26. The result indicates that

when the interaction of corruption and poverty increases by a percentage unit, economic growth decreases by 0.82% but with a statistically not significant impact. This means that the null hypothesis is not to be rejected and it is theoretically implausible to say that the interaction between corruption and poverty have no significant impact on economic growth in Nigeria. The same model indicates that corruption alone maintains its negative relation and an insignificant impact as foreign direct investment and trade openness also shows their positive relationship with both impact insignificant at 5%.

# 4.1. Discussion and Findings

Time series data from 1990 to 2023 were used in this research to explore relationship between poverty and economic growth with the interaction of institutional quality in Nigeria, The Autoregressive Distributed Lag (ARDL) model was used for estimation, the short-run result indicated that, Poverty and economic growth has negative relationship in the short-run and a significant impact as indicated by a probability lesser than 5%. This result is not in line with Onyedikachi and Chinweoke (2013), that discovered a positive relationship between poverty and economic growth which could be attributed to their usage of Ordinary Least Square technique of analysis but in line with, (Bala et al., 2020), (Priambodo, 2021) and (Saidi et al., 2023) as they reported negative relationship between poverty and economic growth.. Finding of Ebunoluwa and Yusuf (2018) which established a co-integration between poverty and economic growth lend credence to this study as there exist a long-run relationship between the two variables. Interestingly, institutional quality has negative relationship with economic growth (when linearly combined with poverty) and an insignificant impact as well. Interestingly, a long-run relationship was discovered between corruption and economic growth, this finding is in line with the work of Nwogu and Ijirshar

(2016). The interaction effect of poverty and corruption however indicated a negative relationship with economic growth. The impact is though not significant. The interaction also made Foreign Direct Investment (FDI) to be positively related to the economic growth and it is statistically not significant. A positive relationship and statistically insignificant impact of trade openness was seen on economic growth in Nigeria.

The goodness of fit for the short run ARDL model is approximately 85% and the adjusted  $R^2$ is 81%, it signifies the independent variables collectively account for 85% of the total variation in growth. There is a statistically significant of all the variables employed, as indicated by the Fstatistics and the associated P-value. The JB statistic is 0.335731 while the probability of obtaining the value, on the basis of the normality assumption is 86%, noting that the null hypothesis cannot be rejected. The estimated model also satisfies the Breusch-Godfrey serial correlation LM test which was considered more appropriate in the study. This mostly occurs because at times DW test for autocorrelation is not relevant, such as when there is lagged dependent variable as a regressor, as in the case in the estimated model. In addition, the null hypothesis of homoskedascity cannot be rejected, as indicated by the ARCH test result and the associated probability value.

# 5. Conclusion

In this paper, an examination of poverty and economic growth nexus was investigated in Nigeria: with the role of institutional quality. Using annual data from 1990 to 2023, which were obtained from world development index and various issues of central bank, the study utilized the technique of autoregressive distributive lag bound test to approach to cointergration proposed by Perasan (2001). The findings of this study show poverty reduces the growth of Nigerian economy with a significant impact. Which means that poverty has significant impact on economic growth in Nigeria. It is also revealing that corruption reduces economic growth in Nigeria but not with a significant impact. The interaction of poverty and corruption also affects the Nigerian growth negatively and insignificantly. Implying that institutions and poverty level impacts on Nigerian economic growth. Suggesting that a high level of corruption increases poverty level thereby reduces the growth of the county.

On the basis of the findings, it clear that institutions play a significant role in poverty alleviation and growth of the economy. To this end, it is recommended that efforts must be geared towards improving institutions if economic growth must be improved and the level of poverty in Nigeria is to be reduced. Again, macroeconomic distortions should be removed. Policies that lower prices especially of essential commodities are required, as a high proportion of the poor spend their income on basic necessities. Lower prices therefore would increase their purchasing power with its attendant impact on the level of poverty.

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Figure 1d: CUSSUMQ Test (model 2)