Economic Growth, Poverty and Income Inequality Matrix in Nigeria: A Further Investigation

Okafor, H. O.*

Abstract

This paper examined the existing relationship among economic growth, poverty and income inequality in Nigeria. Using the Vector Auto-regressive (VAR) model and the Engle-Granger technique to test for the causality existing among the variables, the results revealed that economic growth had no impact on poverty reduction and income distribution in Nigeria due its non-inclusive nature. There was, however, evidence of a unidirectional causality, running from income inequality to increased poverty. This implied that inequality would lead to increase in poverty in Nigeria. Therefore, the paper recommended that government should develop stronger economic institutions that are capable of reorganising the productive base and reward system in the economy so as to promote and guarantee economic efficiency, equity and macroeconomic stability and inclusive growth.

Keywords: Variance Decomposition, Impulse Response Function, Equity, Macroeconomic stability

JEL Classification: C51, D63, I32, O43

I. Introduction

Economic growth and development are among the main macroeconomic objectives pursued by most developed and developing nations of the world. The debate about whether growth precedes development or development leads to growth appears to have been settled around the priorities and stages of development of nations, while the distributional effects of both remained largely unsettled in the literature. For a developing country like Nigeria, achieving sustainable growth that promotes employment and poverty reduction is a justifiable purpose given the increasing incidence of poverty in the midst of natural resource endowment of the country. Consequently, the Government over the years initiated series of reform programmes aimed at promoting job and wealth creation with the ultimate objectives of boosting economic growth, reducing poverty and narrowing income inequality in the system.

The overriding philosophy is that increased output is expected to reduce poverty and narrow the gap between the rich and the poor. The channel runs through increased output and income to the redistributive impacts of eco-

* *The author is a staff of the Macroeconomic Modeling Division of Research Department, Central Bank of Nigeria. The usual disclaimer applies.*

nomic expansion by way of economic rent to the agents of production. In the literature, however, several schools of thought have emerged within different ideological perspectives on the nature of relationship existing among economic growth, poverty and income inequality. Some argued that economic expansion leads to increase income, which ultimately reduces poverty and inequality (Aghion, Carol and Garrcia-Penalosa, 1999). On the other hand, Ravallion (2001) suggested that economic growth could even result in higher income disparity and increased poverty. Nonetheless, there is also another view in the literature, which argued that high income inequality leads to economic growth (Galor and Zeira, 1993; Persson and Tabelini, 1994; and Alesina and Rodrik, 1994). In contemporary economics literature, however, there appears to be a consensus that inclusive growth propels higher income, which could narrow the gap between the rich and the poor, as well as reduce poverty.

The 2014 National Bureau of Statistics report indicated that Nigeria's GDP grew at an annual average of 5.6 per cent between 2006 and 2013[1]. Interestingly, that steady growth could not create wealth and jobs to improve the overall standard of living, narrow poverty levels and reduce income inequality. In contrast, poverty level rose from 53.3 per cent in 2003 to 61.2 per cent in 2010, while income inequality widened from 40.0 per cent in 2004 to 42.95 per cent in 2010. Unemployment rate also increased from 18.0 per cent in 2006 to 27.1 per cent in 2014, while per capita GDP narrowed from US$3,200 in 2007 to US$2,970 in 2014.

Consequently, more than 70 million Nigerians, representing about 45.0 per cent of the entire labour force, were either unemployed or underemployed. Over 73.0 per cent of this population is between the productive ages of 18 and 45 years. More so, industrial and infrastructural developments have also been relatively weak with manufacturing capacity utilisation slowing from 58.0 per cent in 2007 to 49.2 per cent in 2014. The consequences of these macroeconomic challenges are the fast creeping wave of crime, economic depression, weak infrastructural base, poverty and insecurity.

Against this background, this study examined the link between economic growth, poverty and income inequality matrix in Nigeria. Several studies on the subject matter in Nigeria had relied largely on non-parametric analysis of the issues. The method adopted in this study is different from previous studies for two folds. First, the paper tried to provide insight on the behavioural pat-

[1] CBN Statistical Bulletin, 2014.

tern of growth, poverty profile and income distribution in Nigeria. Second, a reduced form VAR models and the Engle and Granger causality techniques were applied to analyse the relationship existing among growth, poverty and income inequality in Nigeria.

Understanding the nature of causality and the response of each variable on the changes in the other variables could help provide greater insight on how to advance sound policy prescription. In other words, it could help in making growth more inclusive and distribution more effective and efficient for overall societal wellbeing. Following this introduction, Section 2 deals with a survey of related literature, Section 3 provides some stylised facts about growth, poverty and inequality in Nigeria while Section 4 anchors the methodology of the analysis. The empirical results and discussion of findings are contained in Section 5, and Section 6 concludes the study with some policy implications.

II. Literature Review

The relationship between economic growth, poverty and income inequality has received the attention of economist and policy makers in the literature within the last five decades. The original debate on this relationship was heralded by the pioneering work of Kuznets (1955). According to the popular Kuznets hypothesis, an inverted-U relationship existed between income and inequality. This implied that the degree of inequality would increase first and then decrease with level of income or economic growth. Nonetheless, the seeming economic expansion witnessed by most emerging and developing countries, alongside with growing inequality and high profile poverty incidence, has put the Kuznets hypothesis into contention.

Since, the pioneering work of Kuznets, several schools of thought have emerged within different ideological perspectives on the nature of relationship between economic growth, poverty and income inequality. Some studies such as Galor and Zeira (1993), Persson and Tabelini (1994) and Alesina and Rodrik (1994) argued that income inequality created economic growth, while others argued that economic expansion would lead to increased income, which ultimately would reduce poverty and income inequality (Aghion, Carol and Garrcia-Penalosa, 1999). On the other hand, Ravallion (2001) suggested that economic growth could even result in higher income disparity and increase poverty profile. In general, this showed that the channels and determinants of these variables still vary in the literature.

According to Bourguignon (2003), there is yet no consensus throughout the economics profession on the relationship between income inequality and growth. Early thinking on the effects of inequality on growth suggested that greater inequality might be good for growth, for example by redistributing in-

come to the rich, who save, from the poor, who do not. This view implied a trade-off where more growth could be bought for the price of more inequality, with ambiguous effects on poor people. Bourguignon (2004) presented three different approaches through which income inequality affected growth: The classical approach (see, Kaldor, 1957 and Bourguignon, 2002), suggested that the marginal propensity to save of the rich was higher than that of the poor, implying that a higher degree of initial inequality would yield higher aggregate savings, capital accumulation, and ultimately increased economic growth.

In contrast, the modern approaches emphasised the main four channels through which income inequality lowers growth namely: inequality encourages rent seeking activities that reduce the security of property rights as evident in most African democratic systems, particularly in the MENA region (Ncube, Anyanwu and Hausken, 2013); unequal societies are more prone to difficulties in collective action—possibly reflected in political instability, a propensity for populist redistributive policies, or greater volatility in policies—all of which lower growth; the median voter in a more unequal society is relatively poorer and favours a higher (and thus, more inefficient) tax burden; and to the extent that inequality in income or assets coexists with imperfect credit markets, poorer people may be unable to invest in their human and physical capital, with adverse consequences for long-run growth.

Galor (2000), however, popularised a "unified model" which provided an inter-temporal reconciliation for the above two conflicting approaches. The author argued that the classical approach holds at low income levels, but not at later stages of development. In the early stage of development, inequality would promote growth because physical capital is scarce at this stage and its accumulation requires savings. Inequality in income would then result in higher savings and rapid growth. In later stages of economic development, however, as the return to human capital increases, owing to capital-skill complementarity, human capital becomes the main engine of growth. As argued by Bourguignon (2004), credit constraints, however, become less-binding as wages increase, and the adverse effect of income inequality on human capital accumulation subsides, and thus, the effect of inequality on the growth process becomes insignificant.

Nonetheless, the propensity of growth to reduce poverty and income inequality is predicated on a case where inclusive growth would produce some kind of redistributive mechanism or in-kind-transfer. As argued earlier, the possibility

of this condition would depend on income disparity in the society and the nature of policy interventions. If for instance, such policy interventions focus more on the pro-poor sectors of the economy, the poverty reducing coefficients may be high. In the case of Nigeria, income inequality is high and policy intervention programmes, such as the Subsidy Reinvestment and Empowerment Programme (SURE-P), Youths Empowerment Scheme (YES), and the Youth Enterprise with Innovation in Nigeria (You-win), among others, seem inadequate for proper and effective redistribution of wealth. This is because they do not target strong job creating activities such as agriculture, manufacturing and industry that could lead to inclusive growth.

Although the relationship between economic growth and poverty reduction is assumed to be clear in the literature, there are significant differences across countries and over time, how much poverty reduction occurs at a given rate of economic growth and vice versa. The extent of poverty reduction depends on how the distribution of income changes with growth and on initial inequalities in income and the sources or quality of growth. In theory at least, if income inequality increases, it is possible for a country to enjoy positive economic growth without significant benefit to its poorest segment of population—the rich get richer, while the incomes of the poor stagnate. Therefore, establishing the relationship between economic growth and income distribution is critical for poverty reduction.

Thus, there has been a substantial interest in the literature to empirically determine the nature of the relationship between growth, poverty and inequality (Aigbokhan, 2000, 2008; Datt and Ravallion, 1992; Ogunmike, 1995; Okojie, Anyanwu, Ogunmike and Alayande 2000; Adams, 2004; and Kakwani, 1993). Most studies employed simple correlation analysis, Gini coefficient approach and computable general equilibrium methods to test for relationship between and among these variables. More so, these studies utilised different variables to measure and estimate these models.

For instance, Aigbokhan (2000, 2008) and Kakwani (1993) had separately developed methodologies that measure the impact of changes in average income and income inequality on poverty, by deriving analytical formulae for that purpose. Both approaches used in obtaining poverty elasticity of growth, holding inequality constant, have two disadvantages: it gives only the point elasticity by use of single survey; and it requires knowledge of the probability density of income at the poverty threshold, which is not always available. Kakwani (1993) was able to derive this density only for a special parametric form of the Lorenz curve by utilising its second derivative under particular assumptions. This method may be fraught with some difficulties as the assumptions may be peculiar to the environment.

Datt and Ravallion (1992) provided another much simpler method to decompose change in poverty into growth and inequality components. Their method had the advantage that it did not require any assumptions about the functional form of the Lorenz curve or the probability distribution. Moreover, it was applicable even to discrete changes in poverty between two surveys. But again it provided a measure of short-run relation and did not possibly capture the long-run effects. Moreover, in the Kakwani (1993) formulation, the short-run effect of growth on poverty was calculated in such a way that possible interaction of growth on inequality could subsequently influence poverty in the form of elasticity was ignored. Nigeria Institute of Social and Economic Research (NISER, 2003) also attempted to show the differences between absolute poverty and relative poverty. The study indicated that the various government intervention programmes had led to substantial poverty reduction in Nigeria. A possible way to overcome all these shortcomings is to apply regression methods or other empirical techniques.

Aigbokhan (2008) found poverty elasticity of growth to be high in Nigeria. The author argued that economic growth in Nigeria propelled poverty, probably due to its non-inclusive nature. The empirical links between the variables were, however, not clearly specified in his models. Fosu (2008) showed that poverty reduction in sub-Saharan Africa had been less-efficient, due to the poor distributional mechanisms of income in the region. Furthermore, a study by Ncube, Anyanwu and Hausken (2013) also found that income inequality reduced economic growth and increased poverty in the Middle East and North African (MENA) region. From the divergences of methods applied in the literature and the results found, it was clear that a wide gap existed in the subject matter, particularly in Nigeria. Therefore, establishing both the theoretical and empirical relationship among economic growth, income distribution and poverty are necessary and critical for economic policy making, particularly as it relates to the challenges put forth by the 2015 Global Development Agenda in Nigeria.

III. Stylised Facts about Growth, Poverty and Income Inequality

Nigeria, like many other developing countries, has implemented series of policy development programmes to improve economic growth and development. The introduction of the Structural Adjustment Programme (SAP) in 1986 was designed to entrench a market-driven economy that could spur growth in the productive sectors. The SAP resulted in an impressive average growth of about 5.56 per cent from 1986 and 1990, as against the negative average growth rate of 6.45 per cent from 1980 to 1985. Between 1990 and 1995, growth, however, fell to an annual average of 2.76 per cent and declined

further to 1.92 per cent between 1995 and 2000. This was due largely to global recession during the period. Since the re-emergence of democratic government in 1999, GDP had grown at an average of 3.92 per cent and 6.56 per cent during the period 2000-2004 and 2005-2011, respectively. Growth buoyed to over 5.5 per cent during 2012-2014. A major factor responsible for the modest improvement was the commitment to structural economic reform programmes of the Government.

Government also introduced several policy programmes such as the Nigeria Economic Empowerment and Development Strategy[2] (NEEDS) in 2003 to reduce poverty and income inequality. Since the implementation of NEEDS and other structural adjustment policies and reforms, the country's economic growth has significantly improved. Thus, government further initiated key policy framework to permeate the distributional impact of growth in the economy. For instance, the introduction of the Poverty Alleviation Programme (PAP) which metamorphosed into the National Poverty Eradication Programme (NAPEP) in 2001, Youth Empowerment Scheme (YES), Rural Infrastructure Development Scheme (RIDS), and Social Welfare Services Scheme (SOWES). These policy initiatives were targeted mostly at the poor, youths and women in the society with the primary aim of creating jobs and wealth.

Table 1: Relative Poverty Headcount (1980-2013)

Year	Poverty Incidence (%)	Population (Million)	Population in poverty (Million)
1980	27.2	65	17.1
1985	46.3	75	34.7
1992	42.7	91.5	39.2
1996	65.6	102.3	67.1
2004	54.4	126.3	68.7
2010	69.0	163	112.47
2013	33.1	172	115.06

Source: National Bureau of Statistics HNLSS 2010 and World Bank 2013.

Despite the improvement in economic growth performance and the anti-poverty initiatives, poverty and inequality have been on the increase in Nigeria, especially since the initiation of recent economic reforms. Available data from the NBS indicated that the incidence of poverty doubled between 1980 and 2004, and had been more in the rural areas of the country. The NBS standard of living survey indicated that the population was 91.5 million in 1992, while it grew to 102.3 million in 1996 and reached 126.3, 163 and 167 million in 2004, 2010, and 2012, respectively. Similarly, the data showed that the population in poverty as 17.1, 39.2, 67.1, 112.47 and 112.52 million in 1980, 1992, 2004,

[2] *The objective of the programme was to build and consolidate solid institutions and infrastructure that could promote private sector-led growth.*

2010 and 2012, respectively. Thus, these figures indicated that the incidence of poverty increased from 27.2 per cent in 1980 to 65.6 per cent in 1996. Table 1 showed that poverty incidence declined to 54.4 per cent in 2004, before rising significantly to 69.0 per cent in 2010, and thereafter, declined markedly to 33.1 per cent in 2013. More so, the relative headcount of spatial poverty in Nigeria revealed that poverty was more in the rural areas than the urban areas (see Table 2). This suggested that poverty in Nigeria was growing in tandem with the growth in the GDP and population in Nigeria.

Table 2: Spatial Incidence of Poverty in Nigeria 1980 – 2013

Year	Urban	Rural
1980	17.2	28.3
1985	37.8	51.4
1992	37.5	46.0
1996	58.2	69.8
2004	43.2	63.3
2010	-	43.3
2013	12	65.3

Source: NBS on Nigeria Poverty Profile 2010 Report

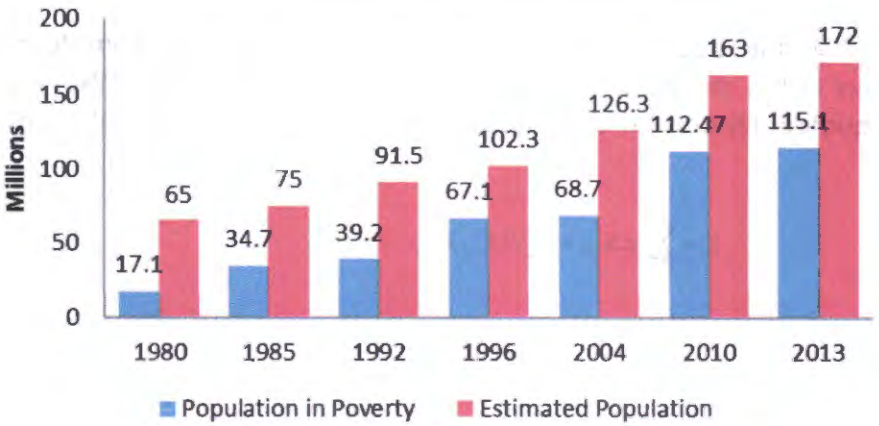
Table 3: Income Inequality for 1999 to 2014

	Income Inequality				% change
Year	**1999**	**2004**	**2010**	**2014**	**2004 to 2010**
National Gini	0.416	0.430	0.447	0.430	4.1

Source: NBS 2010 and WDI, 2015

Similarly, income inequality has also increased from 38.0 per cent in 1995 to 43.0 per cent and 45.0 per cent in 2002 and 2005, respectively. Specifically, income inequality worsened in Nigeria since the return to democratic governance. There are two dimensions to this. First, only a handful of Nigerians are meaningfully engaged in productive activities, which has led to the erosion of the middle class. Second, government reform programmes have more of short-run effects on the poor. Therefore, there is need to restructure the economy to address some of these issues. These should include special and targeted intervention programmes for the poor and development of the high job creating sectors.

Figure 2: Population and Population in Poverty



IV. Methodology

This study utilised parametric method to examine the relationship among economic growth, poverty and income inequality in Nigeria. There are three main routes of this relationship: the relationship between economic growth and poverty, the relationship between economic growth and income inequality, and the link between poverty and income inequality.

IV. 1 Model and Estimation Technique

Given that the theoretical links between and among these variables are not very clear in the literature, we rely on the VAR-based Engle Granger Causality technique and variance impulse response mechanism to determine the nature of causality and the response of each variable to the dynamics of other variables. The method assumed that the information relevant to the prediction of the respective variables (X and Y) is contained solely in the series.

We start with a typical reduced-form VAR as proposed by Sims (1980, pp. 15) in a system of equations written in the form:

$$Y_t = A(L)Y_{t-1} + \varepsilon_t \qquad (1)$$

Where Y_t is the column vector of observations at time (t) on all variables and is known as the vector of endogenous variables. $A(L)$ is the matrix of coefficients to be estimated and the symbol ε_t represents the column vector of random disturbances values called innovations that may be contemporaneously correlated with each other and assumed to be non-autocorrelated over time.

Equation (1) can be expressed further as:

$$Y_t = A_1 Y_{t-1} + A_2 Y_{t-2} + A_3 Y_{t-3} + ... + A_k Y_{t-p} + \varepsilon_t \quad (2)$$

Further from the reduced-form-VAR equation, it is possible to estimate the parameters in the structural form equation in many ways. Sims (1995) showed that Equation (2) can be estimated in a pair of regressions and it is specified as;

$$Y_t = \sum_{i=1}^{n} \alpha_i X_{t-1} + \sum_{j-1}^{n} \beta_j Y_{t-j} + u_{1t} \quad (3)$$

$$X_t = \sum_{i=1}^{n} \lambda_i Y_{t-1} + \sum_{j-1}^{n} \delta_j X_{t-j} + u_{1t} \quad (4)$$

$$u_{1t} \neq u_{1j} = 0$$

Where, X and Y are endogenous variables of interest (GDP, poverty and income inequality), and U_i's are assumed to be uncorrelated. Equations (3) and (4) help to account for the impact of the lags of the dependent variables and the lags of the exogenous variable(s) on the dependent variables. The equations help to determine whether there is causal relationship between and among the variables.

Prior to the estimation of this relationship, however, the stochastic properties were tested, using Augmented Dickey Fuller Test and the Johansen Multivariate Procedure for the co-integration test.

IV.2 Data

Data for the study were the growth rate of gross domestic product (GDP), incidence of poverty employed as a measure of poverty and Nigeria's Gini coefficient used to measure income inequality. The incidence of poverty is based on the World Bank standard, defined as poverty gap to the ratio of US$1.25, while the Gini is defined as the deviation from the Lorenz curve. The data spanned 1980-2014 and were obtained from the World Bank development Indicator (WDI, 2014), various issues of the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS) Statistical Bulletins. Given the challenges of data quality in Nigeria, however, the missing figures were filled using extrapolation method. To ensure that results obtained from the data were meaningful and verifiable in a systematic manner, a trend approach was adopted to reflect developments within the periods for the missing data. Again, diagnostic tests were carried out to check for the behaviour of the da-

ta. Furthermore, descriptive statistics of the selected variables were examined to describe the pattern and general trend in the variables and understand the rationale for their inclusion in the equation.

V. Empirical Analysis

The descriptive statistics of the selected variables are presented in the appendix. However, the correlation matrix result is presented in Table 4 below. The result showed a positive correlation between gini coefficient and poverty as well as a low negative correlation between gini and output growth. Nevertheless, there is evidence of a positive correlation between output growth and poverty rate in Nigeria.

Table 4: Correlation Matrix Result

	Gini	Poverty	Output growth
Gini	1.000000	0.268213	-0.011248
Poverty	0.268213	1.000000	0.336559
Output growth	-0.011248	0.336559	1.000000

Source: Author's computation

Table 4 revealed that economic growth, measured by the growth rate of gross domestic product, was stationary at level, while poverty and income inequality were stationary at first difference within five per cent level of significance. This implied that the stochastic properties of the variables were integrated of order zero, I(0) and one, I(1).

Given the challenges in obtaining institutional and demographic data in Nigeria, we examined the stochastic properties of the data. Thus, the Augmented Dickey-Fuller (ADF) test of unit root was conducted to determine whether or not the series were integrated of order (d), where d represents the number of times the variable is differenced. The results of the ADF tests were presented in Table 5.

Table 5: Result of the Unit Root Tests

Variable	Test Statistic (5%)	Critical Value	Order of Integration
GDP	-2.9604	-4.0746	I(0)
POV	-2.9677	-6.2501	I(1)
INE	-2.9639	-4.5112	I(1)

Source: Author's computation

Consequently, we proceeded to investigate whether the combination of the variables was integrated or rather they possess a long-run relationship. The Johansen procedure for multivariate co-integration test was applied to determine the long-run relationship among the variables. The result in Table 6, indicated that there was at least one co-integrating equation, suggesting the existence of a long-run relationship among the variables.

Table 6: Johansen Co-integration Test Result

H0	Eigenvalue	Trace Statistic	5 Per cent Critical	Hypothesis No. of CE(s)
r=0	0.4781	18.86	21.13	None*
r=1	0.2692	9.097	14.26	At most 1
r=2	0.1479	4.644	3.841	At most 2

Source: Author's computation

As an important principle in econometrics, existence of a long-run relationship is one criterion necessary to carry out a causality test. Therefore, the study moved further to determine the causal relationship among/between the variables.

The Engle Granger Causality tests showed that the sets of GDP and poverty coefficients were not statistically significant in either of the regressions. Thus, there was no feedback mechanism between economic growth and poverty reduction in Nigeria. Table 7 also indicated that there was no causal relationship between economic growth and inequality in Nigeria, as the result suggested statistically insignificant relationship between the variables. In other words, the result showed that there was independence or no causal relationship between economic growth and poverty, and inequality and economic growth in Nigeria. This implied that there could be growth and poverty as well as growth and income inequality simultaneously in Nigeria. The intuition here is that growth is not inclusive, hence the distributional impact is weak.

Furthermore, the Granger results indicated that there was no causality running from poverty to income inequality rather the result suggested that there was unidirectional causality running from income inequality to poverty in Nigeria. This implied that income inequality Granger causes poverty in Nigeria. Intuitively, high income inequality exacerbated poverty. This could be the reason why there is no linkage between economic growth and poverty reduction in Nigeria. This result corroborated the finding of Ncube, Anyanwu and Hausken (2014) and the argument of Ravallion (2001) that high inequality was capable of engendering high poverty. As argued earlier, only a few quintile of the society were benefiting from the growth of the economy, while larger segments of the population were still deprived of the economic benefit.

Table 7: Causality between GDP, Income Inequality and Poverty

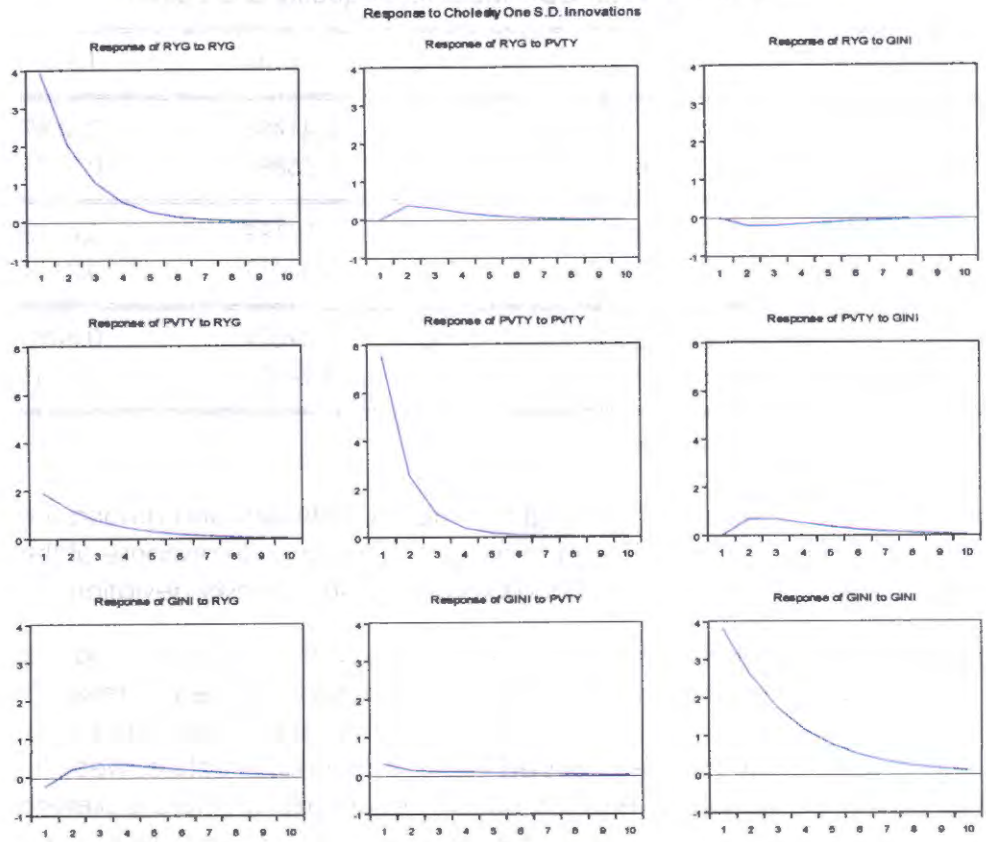
Null Hypothesis:	Obs	F-Statistic	Prob.
INE does not Granger Cause GDP	30	0.41482	0.6649
GDP does not Granger Cause INE		1.65895	0.2106
POV does not Granger Cause GDP	30	0.50199	0.6113
GDP does not Granger Cause POV		0.34519	0.7114
POV does not Granger Cause INE	30	1.09829	0.3490
INE does not Granger Cause POV**		4.24203	0.0259

Source: Author's computation

In an attempt to provide greater insight to the link between and among the variables, the analysis was extended to determine the impulse response of the variables on the changes of the residuals known as the Cholesky deviation.

Figure 4 indicated that growth did not impact on poverty reduction in Nigeria. This reinforced the fact that the fundamental institutions needed to redistribute growth fallouts were weak. The main factors that may be responsible for this kind of relationship can be grouped into 3: economic structure, weak industrial base, and inequality. First, the nation's economic structure is skewed toward total dependence on oil and tradeables. This makes growth to be non-inclusive in production and distribution (Djemoah, 2012 and Umo, 2012). Second, weak and poor industrial base and third, growing income inequality in the system are the main culprits. Given the imperatives of the 2015 post-Global Development Agenda, there is the need to reverse the trend. Policy measures required to address these imbalances must recognise these constraints and develop strong economic reorganisation of the economic structure supported by high industrial base and large reliance on domestic made goods.

Figure 4: Impulse Response Results



VI. Conclusion and Policy Recommendations

Nigeria has witnessed significant growth alongside widening income inequality and wide spread poverty particularly, among the rural populace within the last three decades. Huge oil resources and human capital required for growth and development, however, abound in Nigeria. In the same vein, government has initiated series of policy programmes to promote growth and enhance robust equitable distribution of the national income. This study carried out an empirical analysis of the relationship among economic growth, poverty and inequality in Nigeria. Consequently, the results indicated that economic growth has no significant impact on poverty reduction and income inequality in Nigeria. There was evidence that poverty was, however, largely promoted by income inequality in Nigeria. In other words, the paper established that non-inclusive growth and high income inequality were the main reasons for the poor distributional impact of growth on poverty reduction in Nigeria. The paper concluded that policy measures required to address these imbal-

ances should recognise these and develop strang strategies to reorganise the economic structure. This shauld be supported by high expansion in industrial base and manufacturing capacity of the economy. The nation needs to reorganise the productive system to promote industrialisation through significant investment in job and growth enhancing sectors of the economy as well as intensity the provision of basic infrastructure to create jobs and income Meanwhile, the current redistributive programmes, such as SURE-P and youwin, should be expanded in terms of the quality and volume of funds to reduce poverty of jobs rather than poverty of consumption through the development of quality database to improve distribution and guarantee efficiency. Furthermore, sound institutions that would promote the rule of law and serious war against institutional corruption public would also promote economic efficiency. This could guarantee equitable distribution of national resources and national stability as well as put the nation on the path way to achieving the 2015 Global Development Agenda in the long-run.

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Appendix 1: Descriptive Statistics Result

	GINI	Poverty	Output
Mean	45.72743	48.17029	4.532286
Median	45.40000	48.90000	5.310000
Maximum	56.00000	69.00000	14.60000
Minimum	35.60000	27.50000	-7.580000
Std. Dev.	5.138224	8.829960	4.375557
Skewness	0.100610	-0.208051	-0.212526
Kurtosis	2.251687	3.436189	3.445704
Jarque-Bera	0.875673	0.529962	0.553178
Probability	0.645431	0.767221	0.758366
Sum	1600.460	1685.960	158.6300
Sum Sq. Dev.	897.6459	2650.919	650.9470
Observations	35	35	35