

Estimating Inclusiveness of Growth in Sub-Sahara African Countries: a VAR Approach

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Abstract

The study examined the interaction among income inequality, economic growth, and poverty with a view of assessing the extent of inclusiveness of growth in selected African countries. Using a dataset from World Development Indicators (WDI) and Standardized World Income Inequality Dataset (SWIID), the study adopted Vector AutoRegression (VAR) method in its econometric analysis. Its findings show that only "West" African countries exhibit partial traits of inclusiveness of growth. Thus, the study recommends the provision and implementation of distributional and growth-oriented macroeconomic policies, as well as investment in public infrastructure to spread the benefits of growth to all in African countries.

Keywords: *Income Inequality; Economic Growth; Inclusive Growth; Poverty*

JEL Classification: O11; I32

INTRODUCTION

The relationship between poverty, growth, and inequality has created a hot debate among scholars and development economists. It was contended that the quest for equality is not just only a moral imperative, vital condition for the underprivileged, public cohesion, and welfare of society, but it is also a prerequisite for a steady economy. Moving from Dudley Seers to Amartya Sen, these factors are strong catalysts, which determine the state of development in an economy. According to Seers (1979), the reduction of poverty, inequality, and unemployment is the central purpose of development. In the view of Sen (1999), development entails a reduction of denial or expansion of choice. Deprivation connotes a complex perspective of poverty, which includes illiteracy, starvation, powerlessness, sickness and poor health, timidity, degradation, and a denial of the right to use essential infrastructure (Narayan & Tiwari, 2013). Poverty is characterized as "capability deprivation". Thus, the total elimination or reduction of poverty has been one of the most highly ranked priorities of all major institutions that are concerned with human development. This lofty objective has shaped the focus of the African Union's (AU) Agenda 2063 and Africa's common position on post-2015 documents, to achieve inclusive growth-based prosperity and people-

driven development. Hence, the investigation of interaction among the trio becomes essential in Africa. Thus, the attainment of Sustainable Development Goals (SDGs) in Africa is at risk.

Despite laudable Africa's macroeconomic achievement over the past three decades, the continent still falls behind in its drives towards poverty reduction. As of August 2018, about 430 million people in Africa live in extreme poverty, representing 67.5% of the population of the world living in abject poverty, with a current poverty escape rate of -11.8 per minute (World Poverty Clock, 2018). This indicates that more people are falling into extreme poverty than escaping it. This is a worse situation when compared with South America with 15 million people living in extreme poverty, and struggling with an escape rate of -1.9, and Asia with 175 million people in extreme poverty, with an escape rate of 775 people per minute. Thus, the attainment of SDGs in Africa is at risk. For many years, development planners and typical economists claimed that the most significant challenge facing African countries is how to attain macroeconomic stability, economic liberalization, and encourage market-based policies that would arouse economic growth. With economic growth, they maintained that more resources would be available for everyone, making it much easier to reduce the instance of poverty. "A rising sea lifts all boats" is a common metaphor. However, their view ignored how the distribution of resources is being seriously skewed by inequality.

Inequality has been identified as an integral factor arbitrating the growth-poverty nexus. This has been demonstrated by many scholars (Ravallion, 1997; Ravallion & Chen, 2003; Fosu, 2009; Odhiambo (2009; 2011); Sala-i-Martin & Pinhovskiy, 2009; Young, 2012; McKay, 2013; Ogbeide & Agu, 2015). Using the Gini coefficient as a standard proxy of within-country inequality in income, Africa's average Gini coefficient is on average of 55% which is more than that of the rest of developing countries by 1.4%, making other developing world Gini coefficient stand at 39% (WDI, 2014). Besides, the upper limit of Africa's range of Gini coefficient is higher than that of the other developing countries, suggesting an instance of high inequality is also a distinct feature on this continent. Except for North Africa, the fraction of people living with extreme poverty instances is averaged at 39–46 percent (World Bank, 2014) in Africa. When compared with the poverty rates in other developing provinces such as Latin America and the Caribbean (LAC), and South Asia, this is significantly higher.

Nevertheless, the relationship among growth, income inequality as well as poverty remains a contending global issue in the world. The early theories of development were premised on the fact that economic growth automatically trickles down towards poor people (Rostow, 1960; Ahluwalia, 1976a; Balami, 2006). The 'trickle-down theory' advanced that growth played an important function in the reduction of poverty in any specified country—on the assumption that income distribution is constant. Consequently, poverty reduction policies must be aimed at enhancing economic growth (Todaro, 1997; Aghion & Bolton, 1997; Dollar & Kraay, 2002; Ravallion & Chen, 2003; Bourguignon, 2004; Thorbecke, 2013). This school of thought believes that economic growth is beneficial to almost all citizens of a country based on its trickle-down transmission mechanism, even if unequally, would at least reduce poverty.

However, the influence of growth on poverty reduction in countries of the world is highly hampered by the existence of inequity in the distribution of

resources among the people of diverse nations. This instance is best explained by the 'trickle-up theory', which emphasizes that economic growth fails to enhance the standard of living of the very poor, however, the 'growth processes' do 'trickle-up' to both the middle classes as well as the wealthy (Todaro, 1997). This, consequently, results in deterioration of the income distribution (i. e., rise in income inequality), which then escalates poverty. In other words, the theory proclaims that there are underpinning factors that sustain poverty amidst the poor populace and inhibit them from contributing to growth.

Empirically, the finding seems to propose that the initial income inequality within an economy is vital in predicting the extent of the impact of economic growth on poverty reduction (Ravallion, 1997; Clarke, 1999; Adams, 2004). In specific terms, higher initial income inequality tends to lower the impact on poverty from economic growth, *ceteris paribus*. Similarly, Sala-i-Martin and Pinhovskiy (2009) analyzed income distributions, poverty rates, and inequality and welfare indices for African countries for the period 1970–2006. Their study revealed that the recent boost of growth in African countries was complemented by asymmetrical and sustained poverty reduction, and subsequently, had a remarkable 'trickle-down' effect.

Taking inclusive growth as gross domestic product (GDP) growth which integrates both inequality and poverty reduction (Grinspun, 2004), various studies provided proof pointing out the fact that the mix of inequality and growth is essential in alleviating poverty (e.g. Deininger & Squire, 1996; Foster & Szekely, 2001; Dollar & Kraay, 2002; Ravallion, 2002; Kraay, 2004; Bourguignon, 2004; Nguyen, 2020). In particular, Bourguignon (2004) had redirected our focus from the growth-distribution debate to the interface between growth and distribution in alleviating absolute poverty. The study was able to establish that both growth and inequality elasticity of poverty are increasing functions to the level of development and a decreasing function to the degree of relative income inequality. Ali and Tahir (1999) estimated OLS regressions to assess the long-run nexus between these three variables using a pooled dataset on Pakistan. The first of the studies estimated the links from 1963/64 to 1993/94, employing 14 Household Income and Expenditure Survey (HIES) datasets comprising 28 observations. The second study estimated the same dataset from 1990/91 to 2001/02, including seven HIES datasets using 28 observations. The results indicated a positively significant linkage between inequality and poverty reduction in Pakistan.

Africa-specific studies on the poverty-growth-inequality linkage are sparse. Fosu (2009) found that, in line with previous studies, the initial stock of inequality variances may lead to considerable variances in the poverty-growth-elasticity, not only among Sub-Sahara Africa (SSA) countries and other continents in Africa but also among economies within Sub-Sahara Africa (SSA). Recently, Fosu (2016) presents recent global evidence on the transformation of economic growth to the poverty reduction in developing countries, with emphasis on the role of income inequality. Using unbalanced panel data of 80 countries, his study found that on average income growth has been the major driving force behind both the declines and increases in poverty.

Acknowledging the various concepts of inclusive growth in the literature, the focus of the study is to analyze the inclusiveness of growth in terms of the interaction among economic growth, income inequality as well as a reduction in

poverty in Africa. This study covers 12 African countries evenly chosen on a contiguity basis over the period 1990–2015. The classifications include "Central and East" African Countries comprising of Cameroon, Ethiopia, Tanzania, and Uganda; "West" African Countries including Ghana, Nigeria, Gambia, and Niger; and "Southern "African Countries making up of Namibia, South Africa, Zambia and Malawi. In addition to the contiguity basis of selection of the countries, the choice of the countries was also informed by income level, using economies classification by per capita GNI in 2018, as well as world poverty rating (World Poverty Clock, 2018). The merging of "Central African" and " East African" countries under " Central and East African" countries classification was informed by the fact that both regions were classified as "fragile and conflict-affected" countries. For instance, out of seven countries (Burundi, Central African Republic, Chad, Comoros, Eritrea, Somalia and South Sudan) classified as such, only South Sudan fall out of the two regions (World Bank, 2014). The choice of the period 1990–2015 is significant because major restructuring and policy on poverty reduction such as Millennium Development Goals (MDGs) started between these periods, precisely in 2000, creating the basis for evaluating the poverty-reduction effects of the policy within the chosen period.

METHOD

Aligning more with the poverty-income-growth triangle hypothesis and following Datt and Ravillion's approach of disintegrating changes in poverty into "pure growth" and "redistribution" constituents, we restrict attention to poverty indices which can be wholly characterized by the poverty line, average income of the distribution, as well as relative income inequalities. The poverty rate (P_t) can be expressed as:

$$P_t = f(z, \mu, L_t) \quad (1)$$

Where :

z is the poverty line, which is taken in this study as the real consumption expenditure per capita pattern in the economy.

μ is the mean income represented by real per capita income and L_t is relative income inequalities at time t , represented by the Gini coefficient.

From Equation 1, it is obvious that the rate of change in poverty may be affected by either fluctuation in relative inequality or mean income.

Therefore, the change of the poverty rate over time ($P_{t+n} - P_t$) can be disintegrated into a growth effect and a distribution effect. The growth effect (G) connotes the changes in poverty as a result of changes in the average income of the distribution while assuming that the Gini coefficient L , which reflects relative income inequalities is constant. The distribution effect (D) is defined as the change in poverty due to change in relative income inequality while assuming the mean income remains constant at the reference level μ_r , R is the residual (Datt & Ravillion, 1992). Thus,

$$P_{t+n} - P_t = G(t, t + n; r) + D(t, t + n; r) + R(t, t + n; r) \quad (2)$$

The equation states that poverty rate is a component of growth effect, distribution effect and residual. Each of the component is a function of initial (t) and terminal dates of the decomposition period (n), and residual (r). From Equations 1 and 2, the growth and distribution effects can be defined.

Growth effect is defined as:

$$G(t, t + n; r) \equiv P(z / \mu_{i+n}, L_r) - P(z / \mu_t, L_r) \quad (3)$$

Equation 3 defines growth effect as the rate of change in poverty, which is a function of the poverty line given per capita income in the later period and Gini coefficient, less the poverty rate in the initial period. From this equation, the only impacting factor on changes in poverty is the difference in per capita income between periods. Thus, changes in per capita income cause a "growth effect".

$$D(t, t + n; r) \equiv P(z / \mu_n, L_{i+r}) - P(z / \mu_t, L_r) \quad (4)$$

Like Equation 3, equation 4, defines distribution effect as the rate of change in poverty caused by changes in income inequality. Thus, changes in the Gini coefficient cause a "distribution effect". From equations 3 and 4, we can calculate the growth as well as distribution effects. Thus, we have:

$$\Delta P = P_2 - P_1 = G(t, t + n; r) + D(t, t + n; r) + \Delta R \quad (5)$$

$$\Delta P = P_2 - P_1 = \left[P\left(\frac{z}{\mu_{i+n}}, L_r\right) - P\left(\frac{z}{\mu_t}, L_r\right) \right] + \left[P\left(\frac{z}{\mu_n}, L_{i+n}\right) - P\left(\frac{z}{\mu_r}, L_t\right) \right] + \Delta R \quad (6)$$

Where:

$$R = 0 \text{ (i.e. the institutions of fundamentals of inclusive growth is constant)}$$

Equation 6 states that a change in poverty comprises of growth effect, distribution effect, and residual value.

$$\Delta P = P_2 - P_1 = G + D \quad (7)$$

Where:

$$G = \left[P(z / \mu_{i+n}, L_r) - P(z / \mu_t, L_r) \right] \quad (8)$$

$$D = \left[P(z / \mu_r, L_{i+n}) - P(z / \mu_r, L_t) \right] \quad (9)$$

Conclusively, equation 7 categorically states that change in poverty of a country is the additive function of both growth effect and distribution effect.

Thus, to investigate the interactive causality among growth, inequality, and poverty in the selected African countries, the conceptual framework explained above is followed to examine the dynamic interaction among poverty rate, inequality, and growth in Africa. The Vector Autoregressive (VAR) approach that was utilized by this study to examine the interaction between poverty, inequality and economic growth allows an interface between all the specified endogenous variables. The included variables in the VAR are poverty (POV_{it}), Gini coefficient

(L_{it}), and growth (Y_{it}). Following the standpoint of equation 3.6, a Panel VAR model in its standard form can be written as:

$$Y_{it} = C + \sum_{i=1}^p A_i Y_{it-1} + \varepsilon_{it} \quad (10)$$

Where:

Y_t connotes the (3x1) vector of the three dependent variables represented by $Y_t = [\text{Poverty (POV}_{it}), \text{Gini Coefficient (L}_{it}), \text{Economic Growth (Y}_{it})]$, C is a (3x1) vector of constant terms, A_i is the matrix of autoregressive coefficients of order i , and the vector of random disturbances $\varepsilon_{it} \equiv [\varepsilon_{it}^{POV}, \varepsilon_{it}^L, \varepsilon_{it}^Y]'$ contains the reduced-form ordinary least squares residuals. The lag length of the endogenous variables, p , will be determined by using Schwarz Information Criterion (SIC), Akaike Information Criterion (AIC), and the Hannan-Quinn Criterion (HQC) information criteria. Imposing a set of restrictions allows possible identification of orthogonal shocks, η , for each of the variables in (1), and to estimate these orthogonal shocks through the random disturbances:

$$\eta_t = B\varepsilon_t \quad (11)$$

The estimation of (8) allows $Cov(\varepsilon)$ to be determined. Therefore, with the orthogonal restrictions and by means of an adequate normalisation.

$$Cov(\eta) = I$$

where I (3 x3) identity matrix, therefore:

$$Cov(\eta_t) = Cov(B\varepsilon_t) = BCov(\varepsilon_t)B' \quad (12)$$

$$I = BCov(\varepsilon_t)B' \quad (13)$$

A lower triangular structure to B^{-1} can then be imposed,

$$B^{-1} = D = \begin{bmatrix} d_{11} & 0 & 0 \\ d_{21} & d_{22} & 0 \\ d_{31} & d_{32} & d_{33} \end{bmatrix} \quad (14)$$

The residuals ε_{it} are written as a function of the orthogonal shocks in each of the variables which give:

$$\varepsilon_{it} = D\eta_{it} \quad (15)$$

The basic identification scheme uses a recursive VAR model (Sims, 1980) in which the ordering of the variables is $[Y_{it}, \text{POV}_{it}, L_{it}]$, where the contemporaneously exogenous variables are first ordered. The variables in the VAR are thus ordered from the most exogenous one to the least exogenous. Economic growth was ordered first so its shocks may reflect an instantaneous effect on the other endogenous variables and not vice versa. Though, economic growth does not react contemporaneously to any structural disturbances to other variables in the VAR model.

Table 1. Data Description and Sources

S/N	Variables	Description	Sources	Measurement
1	Economic Growth (GDP)	Changes in real GDP per Capita	World Development Indicator, 2017	Percentages
2	Poverty Level (Pov)	Real Consumption Expenditure per capita	Calculated	(Private Consumption Expenditure * Inflation rate)/Population. <i>See Oladipo and Olomola, (2015); Okojie, (2002)</i>
3	Income Inequality (Gini)	Gini Coefficient	World Bank: Standardized World Income Inequality Dataset, 7.0	Percentages

RESULTS AND DISCUSSION

Specification and Diagnostic Tests

Specification tests were conducted on the residuals gotten from the lag length chosen using SIC (Schwars Information Criterion) which is isolated from first-order homoscedastic, autocorrelation as well as normally distributed. There will be continuous increase in the lag length as long as the autocorrelation test shows that the residuals were auto correlated. Thus, table 2 presents the outcomes of the specification tests for the selected lag order for all the individual classifications under consideration. Based on the results analyzed, there were no indicator of residual autocorrelation and heteroscedastic residuals at 5 percent level of significant.

Table 2. VAR orders and Diagnostic tests

Classification	VAR Order Minimizing			Chosen VAR Order ^d
	AIC ^a	SIC ^b	HQ ^c	
Central & East	1	1	1	3
West Africa	6	1	1	1
Southern Africa	7	1	1	2

Note:

Unrestricted Cointegration Rank Test was Hypothesized at most one (1) No. of CE(s) based on Trace and Maximum Eigenvalue outcomes. Under the null hypothesis that there the series are not cointegrated.

^a Akaike Information criterion

^b Schwars Information criterion

^c Hanna and Quinn information criterion

^d The chosen VAR order was based on the information criteria as well as on specification tests Chosen VECM order.

Granger Causality Estimates

This test focus on the explanation of the movement of one variable is being followed by the movement of other variables, not providing answers to if the movement of a variable can be attributed to fluctuations in other variables (Brooks,

2008). The null hypothesis of F-tests stipulates that all of the lags of a given variable were jointly insignificant in a given equation as shown in the above table. The study analyzed the causal nexus among poverty level, income inequality as well as economic growth.

Table 3 shows the poverty level Granger-cause economic growth in all classifications except “Southern” African countries, while there is evidence that economic growth Granger-cause poverty level in all classifications except “Central and East” African countries. This means that there were instances of bi-directional causality instances in “West” African countries. The significance of these outcomes of the causality test in these classifications was that increase in economic growth boost reduction in poverty level in most of these countries. This is an affirmation of the trickle-down theories; a sort of inclusiveness of growth. However, there was also evidence that poverty level Granger-cause income inequality in all the classifications. Thus, only “West” African countries tend to have inclusive growth as there was co-directional movement in both economic growth and poverty level on the one hand and poverty level and income inequality on the other hand. Jointly, both economic growth and income inequality caused a reduction in poverty levels in all the classifications. Besides, economic growth causes a reduction in income inequality in all classifications, with both economic growth and poverty level jointly enhancing reduction in income inequality in all classifications.

Table 3. VAR Granger-causality for All Classifications

Class.	POV GRANGER-CAUSE:			GDP GRANGER-CAUSE:			GINI GRANGER-CAUSE:		
	GDP	GINI	ALL	GINI	POV	ALL	GDP	POV	ALL
Central And East Africa	0.000*	0.000*	0.000*	0.000*	0.505	0.000*	0.000*	0.000*	0.000*
West Africa	0.000*	0.000*	0.000*	0.206	0.006*	0.007*	0.009*	0.005*	0.011**
Southern Africa	0.209		0.000*	0.000*	0.007*	0.000*	0.519	0.002*	0.004*

Note:

- The figure 0.00 in the first row of the first column indicates that the null hypothesis that growth have no explanatory influence for the poverty level is rejected at the 1 percent degree. The numbers shown in the table represents the value of probability.
- POV is the poverty level, GDP is the economic growth and GINI is the Income inequality.

Impulse Response Function Estimates

The impulse response functions show the direction, magnitude and the time path of poverty level innovations resulting from economic growth and income inequality. From figures 1, 2, and 3; the profiles of the pre-specified variables for each of the classifications. The poverty level of the countries under various classifications are sensitive to economic growth in the VAR model. Only in “Southern” African countries classification, it was found that poverty level failed

to respond negatively to economic growth innovations. This effect was probably due to institutional factors such as democratic accountability in which most developing countries were still lagging behind when compared to developed countries.

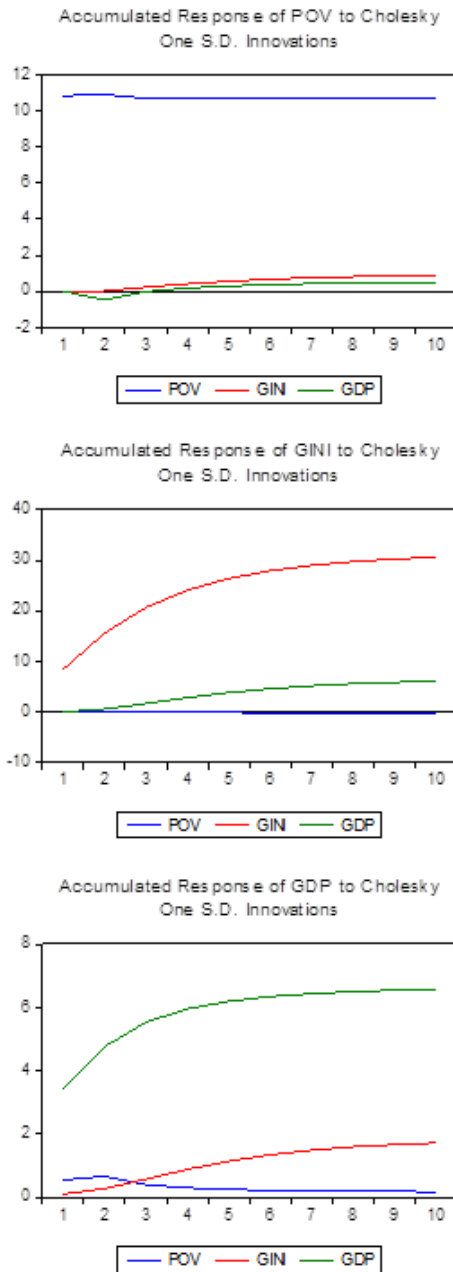


Figure 1. “Central and East” African Countries IRF

Note: Accumulated Responses on Vertical Axis while Periods on Horizontal Axis

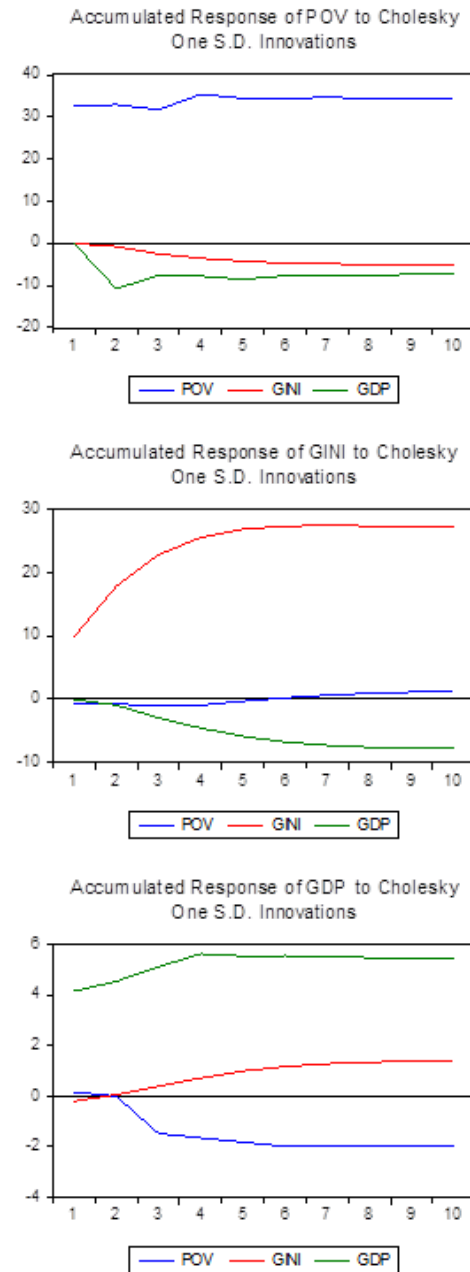


Figure 2. “West African Countries” IRF

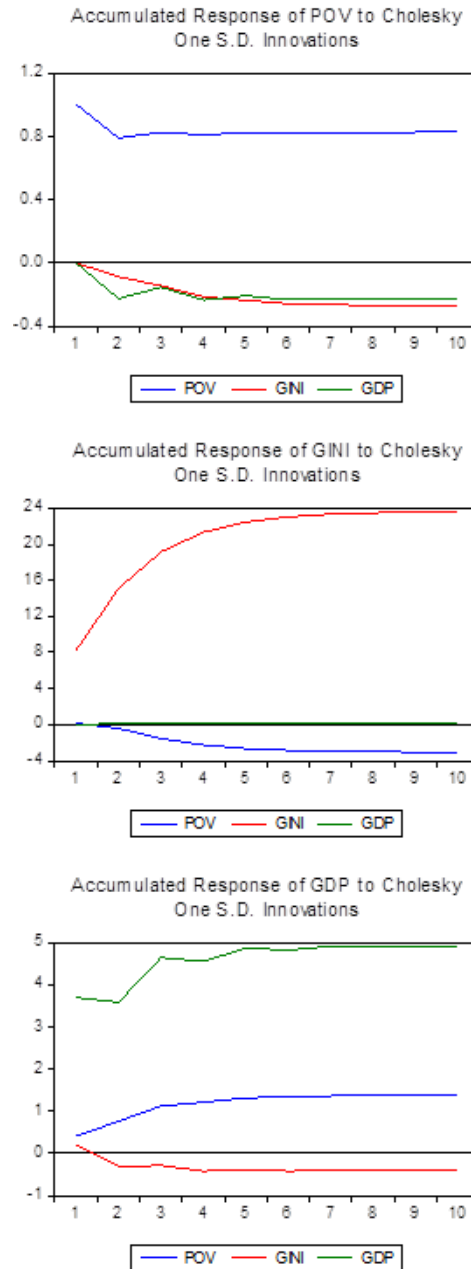


Figure 3. Southern African Countries IRF

Note: Accumulated Responses on Vertical Axis while Periods on Horizontal Axis

Responding to positive economic growth innovation, the poverty level reduces in “Central and East”, and “West”, African countries. This aligns with the traditional Classical trickle-down theory, which stipulates that increased growth will impact a noticeable poverty reduction and this finding is in line with findings of Ravallion and Chen (2003); Sala-i-Martin and Pinhovskiy (2010). A negative shock in income inequality leads to a reduction in the poverty level in "Southern" African countries. The standard proposition of typical theoretical models advocating for improved welfare through equity was also confirmed by the results of the empirical studies. This finding is consistent with McKay (2003). Conversely, except for "Central and East", African countries, economic growth improves when there is a reduction in income inequality in those classifications which conforms

with theory, on the responses of the poverty level to improved economic growth (Bourguignon, 2004). Thus, there is evidence of inclusive growth in "Southern" and "West" African countries.

In response to an improved poverty level, income inequality got reduced in "Central and East", "West", African countries. The conclusion was in line with the standard Neoclassical trickle-up theory that empowerment of economic agents with necessary infrastructural facilities reduces the disparity in access to basic economic resources thereby boosting economic growth. Moreover, improved economic growth in "West" and "Southern" African countries stimulates a reduction in income inequality. This validates the classical trickle-down theory, which is also in conformity with empirical studies such as Aghion and Bolton (1997); Dollar and Kraay (2002), as well as Thorbecke (2013). This is evidence of inclusive growth in "West" African countries classification.

Variance Decomposition Estimates

The significance of impulse response function lies in its ability to consider the signs and magnitudes of response to a particular innovation, which is better evaluated through variance decomposition analysis. These estimates were represented in figures 4, 5, and 6. In this study, the effects of shocks to the poverty level, economic growth, and income inequality were assessed through variance decomposition. Figure 4, 5, 6 give variance decompositions of the poverty rate, income inequality as well as shocks of economic growth.

The variance decomposition of income inequality shows that between 92%-99% of the forecast error of income inequality was explained by its own shocks in the short run (i.e. period 1) of estimation whereas the influence from the variable own shock dropped steadily to 70%-85% in the long run (i.e. after period 5), except for "Southern" African countries which fell to 65-45. The fluctuations in economic growth explained about 1%-10% for all the classifications of the error of variance in forecast in the inequality of income in the long run, with "Central and East" African countries accounting for less than 1% of the error of variance in forecast in income inequality after the fifth period. The shocks in poverty level accounted for between 1% and 8% in the short run (i.e., period 5). These innovations in poverty level in all classifications decrease gradually to 7%-0%.

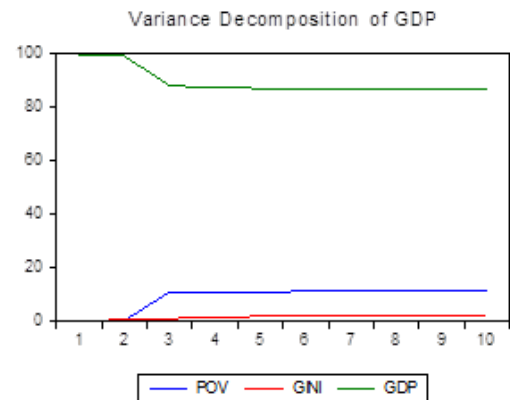
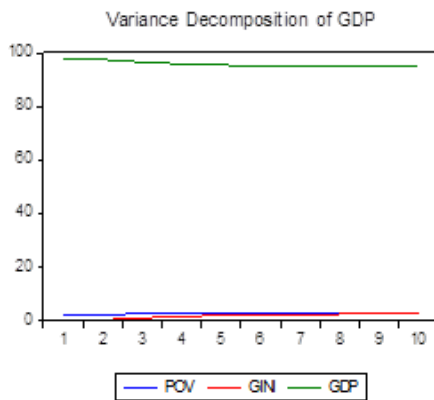
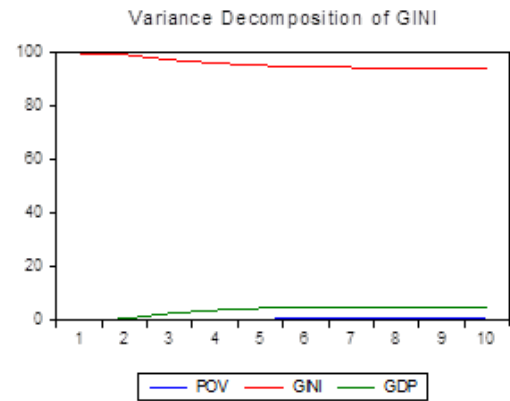
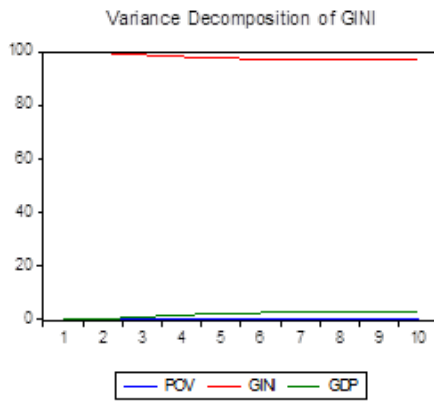
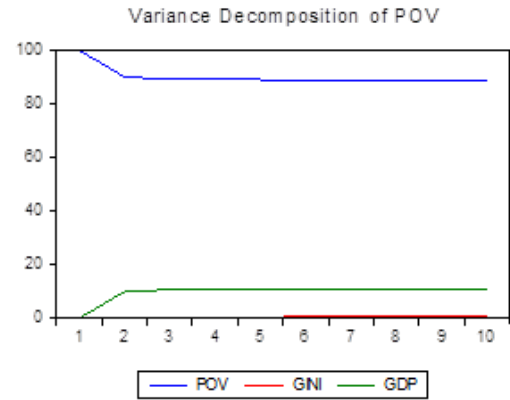
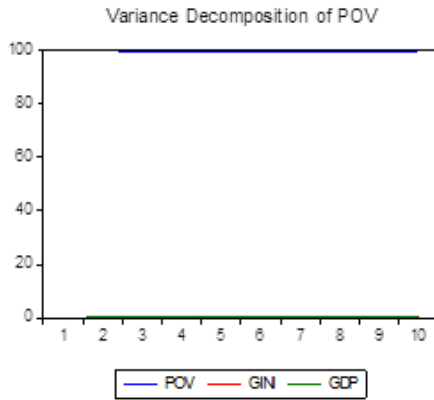


Figure 4. Central and East African Countries Variance Decomposition
 Note: Accumulated Responses on Vertical Axis while Periods on Horizontal Axis

Figure 5. West African Countries Variance Decomposition
 Note: Accumulated Responses on Vertical Axis while Periods on Horizontal Axis

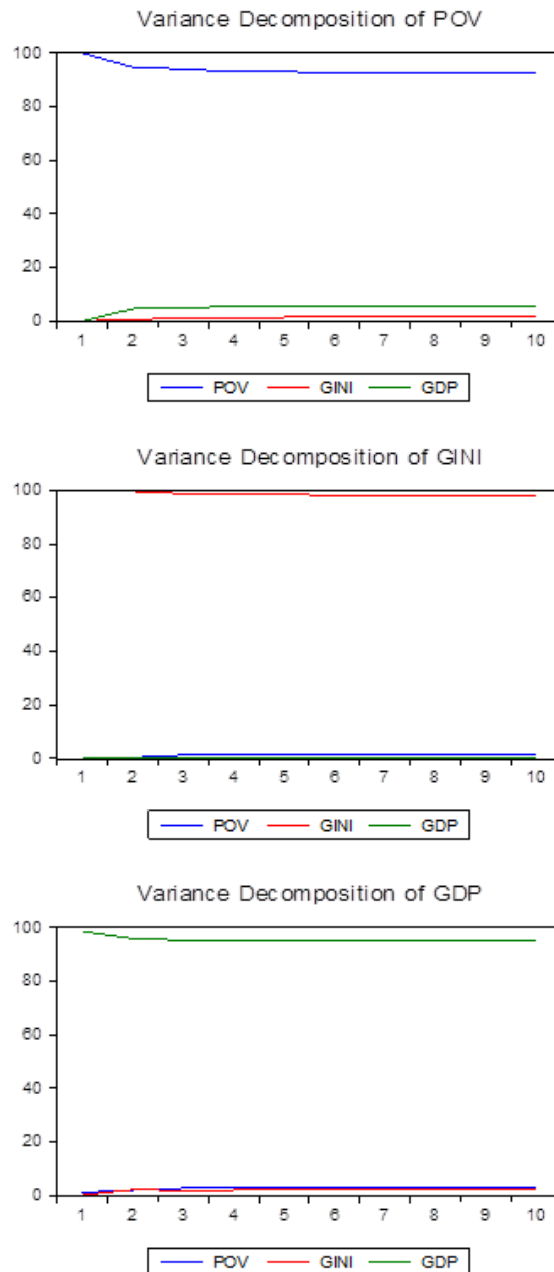


Figure 6. Southern African Countries Variance Decomposition
Note: Accumulated Responses on Vertical Axis while Periods on Horizontal Axis

A cursory look at the variance decomposition result reveals that income inequality variance to poverty level was greater than the poverty level variance to income inequality in all the classifications which implies that income inequality innovations exert a substantial impact on poverty level, with the causality running from income inequality to poverty level. Also, the variance decomposition result indicates that economic growth variance to poverty level was greater than poverty level to economic growth only in "Southern" African countries, which implies that economic growth innovations have a significant effect on poverty level in this classification.

CONCLUSION

From the outcomes of the analysis of inclusiveness of growth through the dynamic interactions among poverty, inequality, and economic growth only “West” African countries showed evidence of inclusiveness of growth. The results obtained from the appraisal and empirical examinations of the interactions between poverty, income inequality, and economic growth in the selected African countries revealed that challenges of establishing a development strategy for poverty reduction and consequently achieving inclusive growth lies more in the interaction between growth and distribution, and not in the relationship between growth and poverty. The sensitivity of measures of income inequality to changes in economic growth provides strong links among poverty, economic growth, and inequality, which gave rise to the assertion that both growth and distribution effects are the major determinants of inclusiveness of growth in African countries, even though, the distribution effects seems to be a pre-condition. The findings in the study had shown that, in some instances, where there was increased growth, this development still failed to guarantee inclusive growth, in the dynamic interaction among poverty, income inequality, and economic growth because the distribution effects eroded the growth effects.

Given the findings which emanated from this study, the study recommends the need for investment in informal and formal economic sectors, through increased investment in public infrastructure which will reinvigorate growth and consequently create a significant employment opportunity for the youth and ensure that new jobs are progressively created in both an economically advantaged and disadvantaged areas. This will go a long way in fostering inclusive growth in Africa. Besides, in specific terms, there is need for more of distributional and growth-oriented macroeconomic policy such as investing in qualitative education and healthcare programs, which will promote advancement in human capital development and consequently boosts productivity in the economies of Southern, and Central and East African countries. This can be an impetus towards inclusive growth in the African countries.

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