

Analyzing Economic Growth and Its impact on Poverty Reduction in Africa

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Abstract:

This study currently examines some economic growth variables that interact to reduce poverty in West, East, South, Central, and North African. The review uses panel data from 1998 to 2017 based on the unit root, co-integration, fully modified ordinarily least squares (FMOLS), and granger causality to effect estimations. The study examines the association between these variables of economic Growth received and how they affect poverty. The results find economic growth promotes certain aspects of poverty reduction with the size of population and employment has been a significant factor. The granger result shows the uniqueness of the variables with bi-direction running between gross domestic product and poverty, gross capital formation and broad money, population, and broad money, and population and poverty do not Granger cause each other in the long run. It was in-line with most studies by other researchers that state these main variables has been very significant when it comes to poverty reduction in most developed countries. The study emphasized that, in the contest of Africa, these main variables helps to reduce poverty but at a minimal level.



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Introduction

Many writers assert the fact that economic growth comes in so many forms using different perimeters or measurement. In African per se, economic Growth mostly influences government intention, either direct or indirect, when it comes to budget allocation in various sectors. The evolution of labor force participation rates, labor force growth, and employment growth all play a role in determining the share of the working-age population that is in employment, referred to as the employment-to-population ratio (EPR). Differences in the employment-to-population across country income groups and demographic groups reflect mainly differences in labor force participation rates, but to some degree also differences in unemployment rates. As seen from other contest, in all country, income groups' holds the majority of the working-age population when it comes to employment. Different segment in other studies elaborate on the main types of jobs, focusing employment quality as an indicator when assessing the well-being of people. Other studies assert that various justifications of the linkages between financial market development and population inflows through developing and developed countries introduced the literature of the population (Yazdani, 2018). Moreover, the role of the community in total capital flows has increased during the past decades. In reckoning with other studies, a shift in the combination of capital flows has a change among policymakers in developing countries, particularly after the 1980s debt crisis and the recent distress in emerging market economies (EMEs). In the work of (Alfaro, L., Chanda, A., Kalemli-Ozcan, S and Sayek, 2004), they emphasized knowledge transfers, the presentation of new procedures, managerial skills, etc. in the domestic market, and access to markets. Policymakers have positive effects on population and have had significant efforts to attract it in EMEs during past decades. However, growth regressions introduced indicate that there is little support for the people as effect on economic growth at the macroeconomic level affecting exogenous factor (Borensztein, E, De Gregorio, J and Lee, 1998). The continuous per capita growth has also led to considerable declines in poverty, from 56% in 1992 to 39% in 2002 according to the study of (Appleton, 2003).

Also, some empirical studies tried to introduce and promote the role of the population in Emerging Markets Economies, including backward linkages to achieve economies of scale for existing firms and the importance of connections that multinationals firms can generate (Hirschman, 1958). Adequately, financial markets create potential linkages through useful development methods. Moreover, the empirical studies show that the development of the financial market is critical to the growth of the economy (Alfaro, L., A. Chanda, S. Kalemli-Ozcan, 2010; Alfaro, L., Chanda, A., Kalemli-Ozcan, S and Sayek, 2004; Azman-Saini WNW, Baharumshah AZ, 2010; Hermes, N, and Lensink, 2003). Other studies mostly emphasized that population is a crucial factor when it comes to economic growth. However, previous studies show a change in development leads to poverty alleviation (Daniel Makina, 2019; Sachs, 2005; Stephan Klasen, 2007).

Using a single data analysis from Uganda (Stephan Klasen 2007) emphasis that the size of the household determines the level of poverty. Other studies speculated that using Harrod-Domar and Solow Model (1960-2000) from the global perspective, and the study emphasized that first population growth has a positive impact on *overall* economic Growth (Son Hyun H., 2004). The study also used poverty elasticity to measure the extent to which economic growth reduces poverty and also offers several propositions to demonstrate that the initial levels of economic development and income inequality significantly impacts on poverty reduction. Also, changes in demographics bring opportunities and challenges which may or

may not affect the Growth of the economy (Cruz & Ahmed, 2018). Cross-country data analysis shows, there will be continued growth in the proportion of working-age people for several decades in most developing countries in Sub-Saharan Africa, and South Asia indicates, even if the working-age population portion declines in middle-income countries and high-income countries (Lee, 2003; World Bank, 2015). Population per se does not significantly impact on poverty if the level of income is not high. So far, we have focused on the impact of population growth on per capita as a variable of interest on economic growth and poverty reduction. But high population growth is also likely to affect other development goals other than economic growth. At the household level, a number of the populace associate with low human capital investment on each child; Becker called this quantity-quality trade-off. As a result of many children, households have fewer resources to send children to school, they have fewer resources to afford health care, and they have even fewer resources to save or invest in productive activities. In their two recent papers, there exist a relationship between inequality and economic growth (Berg, A, J Ostry, 2018; Cingano. F., 2014). In their work, they used newly compiled data to find that lesser net disproportion correlates with faster and more resilient development (Berg, A, J Ostry, 2018; Solt, 2009). In their further studies, unequal societies tend to redistribute more but, that redistribution does not have a significant effect on economic growth. In other studies, baseline regressions were in line with (Solt 2009), including initial income, inequality, and redistribution and added standard growth determinants such as investment, population growth, and education to verify if their results hold with a broader set of control variables. An increase in inequality harms economic growth (Cingano. F., 2014). His studies further used growth regressions only to control for initial income, education, investment, and inequality that interacts with human capital to impede Growth.

In the Harrod-Domar or the (more plausible) Solow specification, in cross-section and panel data is more viable. In connotation with these studies, the population has been a significant contributor to economic growth in most developing countries. A large market means high consumers, which adversely lead to increased profit. In the work of (Gründler, Klaus; Scheuermeyer, 2015) use GMM estimation to examine the effect of income inequality on Growth for countries at different levels of development. Rather than specifying poverty as a transmission channel that interacts with inequality to affect economic growth, as the study does, they split their sample into groups of countries at different levels of development. Furthermore, in another contest, the work of (Cepparulo, Cuestas, & Intartaglia, 2016) emphasized that the variable of poverty assessment depends on when it comes to assessing whether it will lead to reduction nor elimination. They attribute this to poor public infrastructure and capital market imperfections. They find no effect of inequality on growth for more affluent countries. On the other hand, reports on microeconomic evidence that access to essential payments and savings have beneficial results for low households while access to finance by small and young firms associate with innovation, job creation, and Growth (Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, 2015; Yin et al., 2017). However, some microeconomic studies show that financial access by women is complimentary for society generally. Employment, in one way, is the keen contributor to economic growth and poverty reduction. In a comparative analysis of some Asian countries used the treatment effect model and concluded that log per capita consumption significantly increased as a result of access to rural non-farm employment (Katsushi Imai, 2012). In their further studies, they asserted unskilled or manual non-farm work reduces poverty and vulnerability in some Asia countries. From theoretical perspective, some authors tried to

establish a link between poverty and economic development by hypothesizing that low income can curb people to a poverty trap as in (Sachs, 2005). Poverty results in individuals having no resources left over to invest in human capital, physical capital, and their health and as a result, investments in the economy is reduced, resulting in a less productive workforce. However, high population growth can be bad for development as given income level, higher population growth will mean less capital per person resulting in lower growth according to a simple Solow-Swan model. Of course, the relationship can run in both directions. Poverty can foster an increase in population, which can retard economic growth (Ravallion, 2016). Other literature shows that poverty can harm investment and GDP growth, mainly when financial markets like broad money and gross capital formation are not well developed (Perry, 2006).

From the above reviews, the researchers want to find out how the forces of the market join to help economic growth in alleviating poverty? The study tries to join some variables and make inferences from previous studies that are more connected when it comes to economic growth and its impact on poverty in Africa terrain. The variables of gross capital formation, broad money, employment, population, and gross domestic product will try to interact if these variables will reduce poverty. As this study is of the first kind, the researchers check how these variables are essential, and as other researchers have used it individually. Mostly, lessons are primarily drawn from previous experiences. However, this study tries to the aggregate impact of population, broad money, gross capital product, and employment on the economic growth impact on poverty reduction selected developing economies in Africa. In a nutshell, population (POP) is defined as the total number of people within a country at a point time, including children, youth, and adults. The size of the country's population shows how a government can utilize his or her resources effectively. Results of other studies recorded a percentage increase in population will directly lead to the rapid economic growth of about 100%, showing that community (POP) has a significant and is positively related to Economic growth. Other studies hypothesized that population (POP) has a positive impact on economic growth, and this supports the findings in the same vein (Nguyen, Ngoc Anh, and Nguyen & Binh, 2014). (Herman, 2010) argue the presence of a low employment elasticity of Economic growth in the EU, yet this has significant contrasts starting with one nation then onto the next. The study provides an empirical contribution as cited above and a rationale for consideration of the effect on the economic growth of poverty and their interaction. The novelty of our study is relative to the existing empirical literature, includes (i) checking the correlation between the GDP and other explanatory variables; (ii) also using FMOLS to check the uncorrelated with the broad money and gross capital formation, and (iii) estimating the effects of the keen component of the study that's employment and population on the exposure of ménages after taking into account.

Research Methods

This study used a dataset from the 1998 to 2017 period and contained fourteen African countries. With these, the dataset for all countries is sourced from the World Bank databased. However, except for gross capital formation, which taken from the Penn world table. Variables used are consistent with those which include GDP per capita measured as Growth in current USD as the independent variable, population (POP), broad money (BM), and gross capital formation (GCF) measured as a percentage as the control variable. Employment (EMPL) proxies as poverty (POV) measured as a percentage as the dependent variable (Gründler, Klaus; Scheuermeyer, 2015; Robinson et al., 2018). However, the foremost of this study is to develop a regression model to check the economic Growth and its impact on

poverty using an annual report from the World Bank database. The model developed is as follows:

$$pov_{it} = \alpha + \beta_1 bm_{it} + \beta_2 gcf_{it} + \beta_3 gdp_{it} + \beta_4 pop_{it} + \varepsilon_{it} \quad (1)$$

The dependent variable is pov_{it} used as employment, with bm as broad money, gcf as gross capital formation, and gdp as the gross domestic product used as explanatory variables. pop as the population as a control variable, α is the intercept, i , and t is the country and time, respectively while $\beta_1, \beta_2, \beta_3, \beta_4$ are the coefficients, and ε is the error term.

Panel unit root test. The Levin, Lin, and Chu (2002) test crucial econometric issues by checking the verification of the stationarity among variables.

According to the work of (Levin, Lin, & Chu, 2002), Levin-Lin-Chu Test (LLC) suggest the following hypotheses;

H_0 : each panel series contains a unit root

H_1 : each panel series is stationary

Fully modified least squares: In estimating the results, the used of FM-OLS regression method combines the endogeneity and serial correlation corrections. The FM-OLS modifies the least squares to account for serial correlation effects, test for endogeneity in the regressors that results from the co-integrating relationships to achieve asymptotic efficiency. In other words, FM-OLS utilizes "Kernel estimators of the Nuisance parameters that affect the asymptotic distribution of the OLS estimator (Bashier, Al-abdulrazag, 2014; Himanshu A. Amarawickrama, 2007). This method has proved useful in practice, one can use the FM corrections to determine how important these effects are in an empirical application (Phillips, 1995). For these reasons, we presented a mathematical formulation for each variable and country in equation (1) and (2). FM deals with the long run results. The following equations pertain using the FMOLS:

$$\hat{A}^+ = (Y^+ X - T^+ \Delta^+_{ox})(X^+ X)^{-1} \quad (2)$$

With a full rank integrated process, this formula is identical to the one used in the original paper (Phillips, P. C. B., 1990). From the theory, \hat{A}^+ in the study pays attention not only to the sample moment matrices of the data and their orders of magnitude (which in turn depend on the directions of stationarity and nonstationary in the regresses) but to the behavior of the kernel estimates Δ^+_{ox} that appear in the correction terms of A^+ . Using the results, it helps formulate our asymptotic theory as $A_1 = AH$, and $A_2 = AH_2$ in the model (1') that correspond to the stationary and nonstationary elements of the regresses. The statistical properties with regards to this study with underlying variables which was discussed examined the relationship among them. Also, the researchers predicted its long-run existent by implementing the following steps:

The summary of the all the variables in these studies.

The correlation matrix to determine the relationship among the variables understudy

The stationarity test using the Augmented Dickey-Fuller (ADF) and Levin Lin and Chu (LLC) Unit Root Tests.

The FMOLS to provide co-integration relationship and also long-run elasticities among the variables. The Pairwise Granger causality test used to test the direction of the connections.

Results and Discussions

The following gives a summary of the data analysis

Table 1: Descriptive statistics

	Obs	Mean	Std Dev.	Min	Max
POV	280	57.32605	11.49093	37.609	75.119
BM	280	1636.608	1224.961	102.645	5412.69
GCF	280	35.58716	26.38094	2.82223	118.633
GDP	280	0.2087598	0.1042708	0.023302	0.717739
POP	280	2.83e+07	3.84e+07	680612	1.90e+08

Source: Authors elaboration (2020)

The descriptive statistics in Table1 above clearly show the nature of the data employed for the study with the characteristics of the variables estimating the mean, median, minimum, including standard deviation. These give a fundamental summation of the relationship between the variables utilized in running the regression model. From the results, the highest and lowest mean is 1636.608 and 0.2087598, respectively. The highest standard deviation is 1224.961, and the weakest of 0.1042708, which shows most of the variables have a positive correlation. The study estimated four separate regressors that consider poverty reduction for all countries in the survey as per World development indicators.

Table 2: Correlation Matrix

	POV	BM	GCF	GDP	POP
POV	1.0000				
BM	-0.3810	1.0000			
GCF	-0.4020	0.3553	1.0000		
GDP	0.0234	0.1956	0.3323	1.0000	
POP	0.0794	-0.1161	-0.1521	-0.2684	1.0000

Source: Authors elaboration (2020)

Note: *** Significant at the 0.01 level, ** Significant at the 0.05 level, *Significant at the 0.1 level

This section of table 2 reports the empirical results on the connection between all variables. The results show a direct relationship between Gross Domestic Product (GDP) and employment, with the coefficient of the model significantly higher in magnitude, as shown in Table 2. Though, economic Growth is statistically 1% at a significant level. The results attests that, in standard macroeconomics principles, gross domestic product positively and significantly increases Growth, thereby reducing poverty. For example, a 1% increase in gross domestic reduces poverty by over 100 percent on the average. This result is inconsistent with (Dilek Durusu-Ciftci, M Serdar Ispir, 2017), who recorded debt from credit markets and equity from stock markets are two long-run determinants of GDP per capita. There is also bi-directional causality between capital formation and employment, proposing that higher engagement leads to higher gross capital formation, and increases in gross capital formation result in higher commitment. These results hold irrespective of whether the gross capital formation is a measure of the fixed capital formation or by gross capital formation. Again, a study by (Li, Appiah, & Korankye, 2020a; Uneze, 2013; Wolde-Rafael, 2009) employs gross capital formation as a control variable discovered that capital is one of the essential factors in output growth in 12 out of the 14 countries and that it increases employment. However, he continued to stress that the results are to be understood with care, as it may not be adequately robust enough. Ferociously on broad money, the results show that there is a negative association with employment while the effect on poverty which is damaging and insignificant. With this, marginal impact of broad money on poverty is more apparent (a negative sign). (Jung, 2016) confirmed the results broad money have fundamental factors

such as a transaction variable and opportunity costs. Nevertheless, contradicting the outcomes recorded by (Omane-Adjepong, Maurice and Boako, Gidoen and Alagidede, 2018), one way or the other stated that broad money has a positive relationship with economic growth. This current study suggested that broad money and gross capital formation of economic Growth has not significantly contributed to SSA to help create employment which in effect reduces poverty.

Table 3: Unit Root Test

LLC	LEVEL		1 ST DIFFERENCE	
	INTERCEPT		INTERCEPT	
VARIABLES	T.STATS	PROB	T.STATS	PROB
POV	-8.31163	0.0000***	-5.06595	0.0000***
BM	-2.17618	0.0148**	-10.6417	0.0000***
GCF	-2.97322	0.0015***	-11.6353	0.0000***
GDP	1.53983	0.9382	-10.6735	0.0000***
POP	2.92501	0.9983	-6.05527	0.0000***

Source: Authors elaboration (2020)

Note: *** Significant at the 0.01 level, ** Significant at the 0.05 level, *Significant at the 0.1 level

From the table 3, the results shows the variables of the unit roots are at level at intercept and 1st difference. If analyses of the variables are calculated inferentially, there is a need to check the panel properties of the variables. Mostly, this is done to prevent the stationarity, which is suitable for only I(0) at a level and only I(1) variables at 1st difference and not for I(2) at 2nd difference variables (Pesaran, M.H., Shin, Y., Smith, 2001). The results show that the POV, BM, and GCF were stationary at 1% and 5%, respectively, while other variables like GDP and POP were not stationary at level. However, all the variables corrected at the 1st difference intercept. The work of (Appiah, Amoasi, & Frowne, 2019; Appiah, Li, & Korankye, 2019; Coleman, Nell, & Zimmermann, 2012) are in consistent to this. These unit root results imply that the variables are of mixed stationery, i.e., I (0) and I (1) processes that the study should hypothesize whether to use the FMOLS or the granger causality to determine the long-run effects of the variables.

Table 4: Co-integration of the study

		Within dimension
Panel v-Statistic	0.300388	-0.740727
Panel rho -Statistic	-0.435099	0.532329
Panel PP-Statistic	-6.028576***	-5.649412***
Panel ADF -Statistic	-6.663925***	-2.653423***
		Between-dimensions
Group rho -Statistic		2.687155
Group PP -Statistic		-4.308245***
Group ADF -Statistic		-2.601860***

Source: Authors elaboration (2020)

Note: *** Significant at the 0.01 level, ** Significant at the 0.05 level, *Significant at the 0.1 level

From Table 4, after analyzing the results of co-integration, this section shows the co-integration of the variables. In his study, (Pedroni 1999) displays the panel v-statistic is a one-sided test where large positive values reject the null hypothesis of no co-integration. In this analysis, 4-panel variables showed within dimensions and were significant at 1% whiles the other two group statistics between sizes show substantial at 1% sign. The results indicates that six out of the eleven variables were significant, and therefore, we accept the

alternate hypothesis. Similar work was conducted by (Gülten Dursun, 2016) in west African countries, which statistics demonstrations most of the variables statistically significant, and the alternate hypothesis was accepted.

Table 5: Fully Modified Ordinary Least Squares (FMOLS)

Variable	Coefficient	Std.Error	t -Statistic	Probability
BM	0.030862	0.028982	1.064870	0.2880*
GCF	-13.94353	3.424202	-4.072052	0.0001***
GDP	0.000906	0.000303	2.995847	0.0030***
POP	-2.06E-08	3.21E-08	-0.643549	0.5205
R-Squared	0.965858		S.E of regression	
			2.198267	
Adj R-squared	0.963517		Long-run variance	
			10.04167	

Source: Authors elaboration (2020)

Note: *** Significant at the 0.01 level, ** Significant at the 0.05 level, *Significant at the 0.1 level

The results of Unit root and Co-integration tests supported the existence of long-run equilibrium relationships among the model's variables. Hence, the next step is to estimate the long-run elasticities using the FMOLS method. Table 5 reports the estimating results from FMOLS analysis. The FMOLS results reveal, at the probability level, there is a significant level at 1% for GCF and GDP at 0.0001 and 0.0030, respectively. These variables indicates a unit change employment will increase GCF and GDP. With the economic interpretation, it means African governments in this study area should help to invest in non-financial assets from the public and non-government sectors and strengthen the country's financial health by producing and rendering all services within the states. These results were in line with the work of (Bashier, Al-abdulrazag, 2014), which the result shows there is a significant positive effect of fixed capital formation on economic growth. On the other hand, using population as a way of reducing poverty (Cruz & Ahmed, 2018) suggested the poorest countries in the coming decades will have a rapid population growth but, shifts in it have the potential to boost growth and reduce poverty. However, their study was not in line with this study as a unit change will significantly affect the population at 0.5205. However, the above analysis also shows a clear indication of a positive relationship between employment and gross domestic product showing a significant level at 1%. With this, when employment is amplified by 1 unit gross domestic product in these African countries will increase by 100 percent. The results and findings of GCF are consistent with studies conducted by (Burnside, C. and Dollar, 2000; Constantin, 1974; Hansen, 2001; Minoiu & Reddy, 2010) which recorded that GCF is significantly and positively related to economic growth and development in Africa. The statistical results indicate that a 1% increase will lead to -13.94353 gross capital formation (GCF) and its' statistically significant at 1% and 5%. Economically, when the government of African countries increases the total amount of capital for businesses, it will result in a decrease in poverty by 0.001. Referring to his studies, he assumed that different variables achieve different results on their strategic default probability (Schneider, 2005). According to the analysis, GDP and POP are positively related which are consistent with the results of this study (Borensztein, E, De Gregorio, J and Lee, 1998; Ford, 2002) i.e POP has a non-significant position and negatively related to growth in Africa. However, the work of (Bengoa, M. and Sanchez-Robles, 2003) shows although POP is positively associated with economic growth, and host nations require least employment, financial stability and progressive economy for longer return. When there are 1 million US dollars in the total amount of goods

and services will effect in an increase in employment, which will reduce poverty to the minimal level. However, the effects of independent variables have a long time relation with poverty, therefore, making a compatible r-squared for the model after the effects. The R-squared shows the explaining power of the model as 96.5858%, which means that gross capital formation, broad money, gross domestic product, population, or 96.3517% of the variation in employment as poverty can ease poverty problems in Africa. Empirical evidence from (Boushnak, Rageb, Ragab, & Sakr, 2018) explains the variation in credit decision for lending can alleviate poverty if economic variables interact with each other. From the results, the researchers conclude there is a more substantial relationship on the dependent variable since there is a long-run variance of 10.04167, which is not negative. The study of (Thomas 2012) prove to this, saying an argument is valid when you can achieve results. However, the independent variables POV, BM, GCF, GDP, and POP show a strong relationship when using a significant at 1%, 5%, and 10% in the long run.

Table 6: Pairwise Granger Causality Test

Null Hypothesis	Obs	F-statistics	Probability
BM does not Granger Cause POV	252	0.10898	0.8968
POV does not Granger Cause BM		0.10404	0.9012
GCF does not Granger Cause POV	252	1.99352	0.1384
POV does not Granger Cause GCF		0.16881	0.8448
GDP does not Granger Cause POV	252	1.67363	0.1897
POV does not Granger Cause GDP		3.06827	0.0483
POP does not Granger Cause POV	252	0.35066	0.7046
POV does not Granger Cause POP		2.54127	0.0808
GCF does not Granger Cause BM	252	1.70206	0.1844
BM does not Granger Cause GCF		3.73909	0.0251
GDPP does not Granger Cause BM	252	4.72038	0.0097
BM does not Granger Cause GDPP		0.25718	0.7734
POP does not Granger Cause BM	252	0.15120	0.8598
BM does not Granger Cause POP		4.06851	0.0183
GDPP does not Granger Cause GCF	252	2.00748	0.1365
GCF does not Granger Cause GDPP		0.26455	0.7678
POP does not Granger Cause GCF	252	1.25382	0.2872
GCF does not Granger Cause POPN		0.25270	0.7769
POP does not Granger Cause GDPP	252	0.55195	0.5765
GDPP does not Granger Cause POP		0.30507	0.7373

Source: Authors elaboration (2020)

Note: *** Significant at the 0.01 level, ** Significant at the 0.05 level, *Significant at the 0.1 level

Table 6 shows the pairwise granger causality test analysis. Therefore, there is bi-direction running between gross domestic product and poverty, gross capital formation and broad money, population, and broad money, and population and poverty do not Granger cause each other in the long run. The directions of the study of proxy of poverty as employment are in lines with other studies which state the influence of employment on poverty reduction. It can be observed that, there exists a positive relationship according to (Gülten Dursun, 2016); however, these directions can be statistically insignificant at some level. The results also show a uni-direction runs through the variables which implies that, the variables do not cause each other at 1% and 5%. This study was inconsistent (Ameyaw, Yao, Oppong, & Korang, 2019), which shows the gross domestic product on carbon emission has a uni-direction.

Conclusions

This section introduces managerial implications, and conclusions regard to this study. The findings and results of the study suggest that more governmental efforts should be placed on the GCF and GDPs in speculation as a means of reducing poverty in Africa. However, the population and broad money affect poverty reduction but at a minimal level. For this study, the population area increases economic growth, and the government should provide financial policies for the citizens like the public financial management reform program (PUFMRP) in Ghana national financial inclusion strategy (NFIS) for Zambia, which has a five strategic plan for economic growth and sustainable development. For the area of employment, which helps to improve the life's of the citizenries and reduces poverty, governments should provide adequate and better employment policies and facilities for both the poor and the rich example like the introduction national youth employment program (NYEP) in Ghana by the government of Ghana. Again, quality education should be easily accessible at all levels being it primary, secondary, and tertiary education, as in the case of Ghana, as there is free education at both the primary and secondary levels. Financial development and improvement activities as well as poverty reduction strategies, for example, like LEAP (Livelihood Empowerment program) undertaken by Ghana to help alleviate poverty, help close the income inequality gap. Also, with regards to policy implications, this paper helps African governments, especially in the study areas, to invest more in a capital intensive project. This in the long run, will help employment for the populations and generate more revenue, thereby accelerating economic growth and reducing poverty.

To conclude, the model showed a positive association, statistically significant between growth and employment (evidenced by employment index) as expected, according to UNDP. Unforeseen is the positive connections between gross capital formation (GCF), broad money (BM) on growth, a possible reason being the heterogeneity. The study countries have a negative statistics of the probability value and the coefficients based on the conclusion, finding the results. The study limitations cannot be isolated because different countries have different economic structures. Moreover, the model indicated a positive influence of gross capital formation on growth, which goes contrary to most studies on gross capital formation and growth. Population stimulates economic growth in the short term and generally at socialist economic countries. The model can be used as an alternative when conducting future studies on poverty reduction.

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