



POVERTY AND INCOME INEQUALITY IN NIGERIA: ANY CAUSALITY?

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ABSTRACT

The issue of poverty has continued to pose serious threat to the continued cordial existence of an economy like Nigeria. Issues pertaining to poverty and inequality have also continued to receive wider attention among scholars in various economies of the globe. However, there seems to be a gap in literature as to the existence of a causal relationship between poverty and inequality. Should there be causality; the direction of causality is yet to be known, especially as it pertains to Nigerian economy. Therefore, this study seeks to establish whether or not there is a causal relationship between poverty and inequality in Nigeria. Adopting Granger causality techniques, this study finds out that there is a direct line of causality between poverty and inequality as well as indirect channels through unemployment and low life expectancy on inequality which exacerbate poverty in Nigeria.

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Keywords: Poverty, Inequality, Gini, Unemployment, Granger causality, Life expectancy rate.

JEL Classification: I32, D63.

Contribution/ Originality

This study contributes to the existing literature on poverty and inequality. It adopts the Granger causality approach to find out which of the two economic problems causes the other. The primary finding of this study is that there is a two-way causality flow between inequality and poverty in Nigeria.

1. INTRODUCTION

Poverty in the face of abundance is now the world's greatest challenge and major developmental objective is the achievement of equality in the distribution of income and reduction

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of poverty. About 2.8 billion persons of the world's population live on less than \$2 a day, and 1.4 billion on less than \$1 a day (World Bank, 2009). Poverty is a major limitation of economic development and the dearth of economic opportunity is seen to increase the poverty level of an individual or household. This dearth of opportunities is strengthened by inequality. Analysts have argued that solving the problems of poverty and inequality needs appropriate policies that aims at the gaps and ensures that the poor in a given population can benefit from it.

However, there are regional variations in poverty incidence and the level of income inequalities in the globe. Sub-Saharan African countries have had the highest levels of poverty and inequality in income in the past years. According to the UNDP (2013) of United Nations Development Programme, human development index for the region was 0.475 in 2012 from 0.366 in 1980 which has been the worst since 1980 as compare to other regions. It had the lowest life expectancy rate of 54.9, lowest mean years of schooling of 4.7, and highest number of youths as well as the highest number of youth unemployment of 50% in 2012 as compared to other regions and the Sub-Sahara average youth unemployment of 12%..

Absolute poverty (income less than \$1 per day) in sub-Saharan Africa increased from 288 million in 1981 to 516 million in 2001, increasing from 42 % to 47 % which is about 13% of the world's total poor population. In 2006, 34 of the 50 nations on the UN list of least developed countries are in Sub-Sahara Africa and a more sobering statistic is that about 14.6 million children (simply, one in every five) live in absolute poverty as at 2007 data (World Bank (2009).

In Nigeria, this situation is contradictory given the large resources (human and physical) that the country is endowed with. The country has increasing rate of poverty both at the regions and at the national level, high unemployment rate, high income inequality, low quality human capital, high percentage of population on welfare and high out migration in the face of high economic growth measured by GDP. Information from the National Bureau of Statistics - NBS (2006; 2012) and UNDP (2009) showed that about 15% of Nigeria's population was poor in 1960. Poverty rates in Nigeria increased from 27.2 percent in 1980 to 42.7 percent in 2004 and further to 65.6 percent in 2010. While the 27.2 percent for 1980 equals 17.7 million persons, in 2010, 112.5 million persons were found poor in absolute terms.

Unemployment rate increased from 2.3 in 1980, to 18.1 in 2000. This however dropped to 11.8 in 2004 but rose to 21.1 in 2010 and about 25% in 2012. Manufacturing capacity utilization was only 55.4% in 2010 in comparison to the amount of resources that is in the country. Life expectancy has been so low over the period, between 45 and 51 from 1980 to 2010 unlike other developing countries like Kenya, Pakistan, Ethiopia to name but few with increasing life expectancy rate (National Bureau of Statistics, 2006; Central Bank of Nigeria, 2013);(UNDP, 2009; 2013). According to World Bank (2011) of the World Bank, Human Development Index (HDI) in 2011 puts Nigeria at 156th position among 177 countries as compared to the 151st position in 2002, Nigeria's human poverty index (HPI) for 2009 was only 36.2% placing Nigeria at the 114th position and among the 7th poorest nations in the world while the ratio of the richest 10 percent to the poorest 10 percent was 16.3 with Gini index from 42.9 in 2004 to 44.7 in 2010

(National Bureau of Statistics - NBS, 2012; UNDP, 2013). Yet the country ranks 6th and 7th as oil producer and exporter and ranks 10th as the most populous country in the world with a real GDP growth rate of 7.0 in 2009 which grew to 8.0 in 2010 which however dropped to 6.3 in 2013.

The extent of poverty depends on the income level and the extent of inequality in income distribution as have been shown by past studies thus income inequality was found to be vital in the poverty reduction measures (Bourguignon, 2003; Adams, 2004; Kalwij and Verschoor, 2007). In analyzing the link between poverty and inequality, Valentine (1968) as cited in Bradshaw (2006) noted that “the essence of poverty is inequality. In slightly different words, the basic meaning of poverty is relative deprivation”.

Studies have also been carried out on inequality and poverty reduction in Nigeria (see (Obadan, 1997; Aigbokhan, 1997;2000; Bulama, 2004; Obi, 2007); among several of such studies). Aigbokhan (2000), investigating the profile of poverty in Nigeria, found that polarization in distribution contributes to increase in poverty and there was no evidence of “trickle down” phenomenon based on the data he used. On the other hand, the study of Bulama (2004) showed the existence of correlation between poverty, inequality and economic growth. In like manner, Obi (2007) showed that government expenditure is an effective tool for reduction of poverty.

While many studies have examined the relationship between inequality and poverty (e.g., (Bourguignon, 2003; Adams, 2004; Kalwij and Verschoor, 2007)), the question of whether a causal relationship exists between, inequalities and poverty, has received less attention, particularly for African countries, the direction of the causality and any other possible variable that may be found in the linkage. Knowledge of this will help policy makers in the development of correct policy that will tackle these world problems. In this research we aim at filling this gap by extending the existing literature on this matter using Nigerian data. Given the rising poverty and inequality trend in Nigerian it becomes imperative to ask: is there any causal relationship between poverty and inequality? If yes, what is the nature of the causality? Indeed, the main objective of this study is to determine if there is any causality between inequality and poverty in Nigeria.

This study therefore provides a deeper understanding of the poverty-inequality relationship in Nigeria. Our research findings provides a quantitative policy framework to tackle the poverty and inequality problems that have eaten deep into the economy. We also intend to devote an essential component of this study to establishing the basis for long-term and sustainable development in Nigeria.

The paper is divided into five sections. Following this introduction is section two, which reviews recent literature on the issues of poverty and inequality. Section three is built on the methodology for our empirical investigation while section four shows our result. We summarise the study in section five, where we also make policy recommendations for the way forward.

2. REVIEW OF RELATED LITERATURE

2.1. Theoretical Issues

2.1.1. The Concept of Poverty

There is no single acceptable definition of poverty because of the nature of poverty and its multi-dimensional effect on the individual/household. According to [World Bank \(2011\)](#), “poverty is the economic condition in which people lack sufficient income to obtain certain minimal levels of health services, food, housing, clothing and education which are necessities for standard of living”. The various definitions/measures of poverty lead to two perspectives which are “income poverty” and “lack of basic need poverty”. Income poverty occurs when an individual does not have enough money to meet up with the a certain standard of living while lack of basic need poverty occurs when one is unable to meet some of the basic needs such as food, shelter and clothing as identified by United Nations, Children’s Fund (UNICEF). For this study we are using income poverty as a result of the easy in its measurement and it has the availability of international measuring standard like the \$1 and \$2 per day.

2.1.2. Theories of Poverty

In analyzing poverty, researchers have come up with two basic theories of poverty which classified poverty based on the causes. They are individual/cultural and structural/economic theory of poverty.

2.1.2.1. Individual/Cultural Theory of Poverty

The major proponent of this theory is Oscar Lewis in 1966. The theory believes that the individuals are the cause of their poor state. They are poor because poverty is in them (inherited) and their actions such as being lazy, not educated, teen parent, single female headed family and many more which makes them unable to compete for economic opportunities. These attitudes of the individual that made them poor, becomes a way of life/ culture for them which they pass on to their next generation leading to ‘vicious cycle of poverty’ [Jordan \(2004\)](#). This theory is however still controversial among scholars of poverty and policy makers.

2.1.2.2. Structural/Economic Theory of Poverty

This theory believes that poverty is as a result of the structure of the economy. Among these factors are different employment level and the nature of the distribution of income. Thus an individual is poor not because he is not hard working but does not have the opportunity to work. He is made poor as a result of the economic system that denied him his share of the income and inequitable distribution of income. A major proponent of this theory is Rainwater Lee ([Jordan, 2004](#)).

2.1.3. The Concept of Income Inequality

Inequality has to do with differences in the share of something between/among two or more persons where the share of one/some is greater than that of the others. According to Ray (1998), economic inequality occurs when one individual is given some material choice/resources and another is denied the same thing. Inequality can be in income, consumption, wealth, gender, employment, health variables and many more. But for this study we are interested in income inequality. Income inequality is defined as the inequitable distribution of income among the members of a particular group, an economy or society. Income inequality can be measured generally using the Lorenz curve, the Gini coefficient and General Entropy class. The Gini coefficient is most frequently used measure and it is close to the Lorenz curve. The Gini coefficient measures income inequality based on the Lorenz curve and has values between 0 and 1 (0 and 1 inclusive) where figures closer to 0 signifies more equality in the distribution, values closer to 1 shows higher inequitable distribution of income while 0 signifies absolute equality in the distribution. Income inequality can be within the country or between two or more countries. Some of the factors that lead to inequality as noted by scholars are gender, globalization, educational level and the level of technology in the country. According to the neoclassical school, income inequality is as a result of different productive capacity of an individual or group of individuals and this leads to different wage levels and income levels.

2.1.4. Poverty and Inequality Linkage – Theoretical Issues

Poverty and income inequality have theoretically been identified to be inextricably linked and that the existence of one often implies the existence of the other (Burtless and Smeeding, 2002; Bourguignon, 2004). A better income distribution helps people of the lowest income group to increase their income so that they can exit from their poverty. Basic economic theories that try to explain income and consumption are the life cycle analysis and permanent-income hypothesis but they fail to explain inequalities in income which affects the consumption pattern of the individuals. Inequality can have a direct and indirect link with poverty. The direct link is more obvious when we look at the individual. Inequitable distribution of resources in the society hinders the person or group of persons affected negatively so that they will not have enough to take care of the basic needs of life as well as care for their children in terms of human capital development (education and health) thus they are classified as being poor. The indirect link between inequality and poverty are through growth, employment among others. The link through growth is based on the notable Kuznets's theory of the "inverted U shaped" relationship between inequality and growth (although not generally accepted empirically). At the early period of economic development where the economy is growing and increase in inequality, those affected by the rising inequality are classified as poor hence the negative impact of growth on inequality also leads to an increase in poverty given that there is a positive relationship between the level of inequality and poverty affecting an individual or in a country.

2.2. Related Empirical Studies

Literatures on the poverty inequality link are most times connected to growth as a result of the theoretical link between inequality and growth. The literature on the empirical analysis of the relationship between poverty, inequality and economic growth has become quite substantial since early 1980's. Empirical evidence has been conflicting with contradictory findings as a result of differences in samples used, econometric techniques, measurement of poverty, specifications and country peculiarities. Earlier studies before the past two decades tend to support Kuznets's inverted-U curve of an increase in income inequality at the early stage of growth of the economy which will decline as the economy grows. Most of these studies were done on cross-sectional basis.

However, most studies in the last two decades do not support the Kuznets's hypothesis mostly on country specific factors and some found no methodical relationship between growth and inequality Bourguignon (2003); Deininger and Squire (1998); Li *et al.* (1998); Ravallion (1997) among others). The study carried out by Ravallion (1997) concludes that in the presence of high inequality, poverty may still rise irrespective of the high growth .

Using 1983/84 and 1991 data, Aigbokhan (1997), examined poverty and poverty alleviation in Nigeria in a micro data analysis that links macro model to micro analysis. He found that inequality was found higher in the rural areas and during the Structural Adjustment Programme period. Inequality was also higher among males in urban areas but higher among females in the rural areas. Aigbokhan (2000) also extended his studies analyzing the profile of poverty in Nigeria based on the introduced structural policy reforms in 1986 and the reversal introduced in January 1994. He made use of national consumer survey data sets for 1985/86, 1992/93 and 1996/97 from the Federal Office of Statistics on the food energy intake (FEI) variant of the consumption-based method in poverty analysis. He also examined the polarization of income distribution. The study found evidence of increased poverty, inequality and polarization in distribution for the period of study. Poverty and inequality was found higher among male-headed households, in rural areas and the northern geographical zones. It was also found that the country experienced positive real growth in the period with rising poverty and inequality thus the "trickle down" hypothesis was not supported.

Lin (2003) reported China's experience during the period of 1985-2001. It was reported that economic growth effectively reduced poverty. However, at the same time, the increasing income inequality that was created by the economic growth decreased the effectiveness of the effort to reduce poverty. Ravallion (2006) studied the effects of income inequality on poverty in India and China in 1980-2000. He found that, similar to Lin's findings, economic growth reduced poverty in the two countries, and income inequality reduced the effectiveness of poverty reduction. Furthermore, he also reported that poverty reduction needed a combination of economic growth, a sort of "pro-poor" pattern of economic growth, and income inequality reduction.

Le (2008) examined the relationship between poverty and growth on the one hand and initial inequality on growth on the other hand in the provincial level of Vietnam. Poverty was negatively related to growth while there was no relationship between initial inequality and later growth. Poverty and inequality was found to be positively linked thus reducing one entails the reduction of

the other. Poverty reduction and inequality was also found to be determined by human capital, investment, GDP growth rate and trade openness. He concluded that policy on poverty reduction in the country will bring about more equitable society.

3. METHODOLOGY

This study aims at understanding how interrelated or otherwise inequality and poverty are in Nigeria. That is to say, this study finds out if it is poverty that causes inequality or inequality that causes poverty in Nigeria. The findings help to improve on the approaches to policies for poverty reduction.

To achieve the aim of this study, we carry out stationarity test to determine the time series properties of the variables. On ascertaining the stationarity of the variables, we proceed to carry out cointegration test on the dataset. The study adopts the cointegration techniques on time series data in Nigeria on national poverty index measured by head count index, Inequality captured by Gini coefficient, adult literacy rate and unemployment rate for the period 1980 to 2010. Furthermore, Granger pair-wise causality tests are carried out on each pair of the variables.

It may not be said that Granger causality approach is the only approach to a study of this nature. Several scholars have approached the issue of poverty and inequality using various techniques. For instance, [Le \(2008\)](#) shows that poverty and inequality could be affected by a vector of some control variables like GDP per capita level, initial inequality, the ratio of investment to GDP, trade openness and a measure of human capital (average schooling years in the adult population). The nature of [Le \(2008\)](#) study necessitates the adoption of least square method of estimation. In our study, our understanding of the nature of relationship that exists between poverty and inequality is important, but we are more concerned with understanding which variable causes the other. Better still, we are more interested in understanding which of the two variables precedes the other. Once it is found that inequality causes poverty, the needed policy recommendations focus on how best to reduce inequality so as to also reduce poverty.

In order to do the above, we formulate the causality equations of this study as shown below:

$$\text{INEQ} = \sum_{i=1}^n \alpha_i \text{NAPOV}_{t-i} + \sum_{j=1}^n \beta_j \text{INEQ}_{t-j} + \mu_{1t} \quad (1)$$

$$\text{NAPOV} = \sum_{i=1}^n \lambda_i \text{NAPOV}_{t-i} + \sum_{j=1}^n \delta_j \text{INEQ}_{t-j} + \mu_{2t} \quad (2)$$

where:

INEQ = Inequality, derived from the National Gini Index.

NAPOV = National Poverty index, derived from the National poverty head count.

There are other two seemingly related variables to the issue of poverty and inequality that we include in this study – life expectancy rate at birth and unemployment rate. We ask the question: do poverty and inequality cause unemployment or is it unemployment that causes poverty and inequality in Nigeria? There is a general acceptance of the existence of correlation between poverty

and unemployment but the direction of the causality is not conclusive. The general question asked is if the employment status of an individual/household causes poverty and/or inequality OR poverty and/or inequality cause the employment status? These questions help us to formulate another set of causality equations as shown below:

$$\text{INEQ} = \sum_{i=1}^n \alpha_i \text{UNEMP}_{t-i} + \sum_{j=1}^n \beta_j \text{INEQ}_{t-j} + \mu_{1t} \quad (3)$$

(

$$\text{UNEMP} = \sum_{i=1}^n \lambda_i \text{UNEMP}_{t-i} + \sum_{j=1}^n \delta_j \text{INEQ}_{t-j} + \mu_{1t} \quad (4)$$

and

$$\text{NAPOV} = \sum_{i=1}^n \alpha_i \text{UNEMP}_{t-i} + \sum_{j=1}^n \beta_j \text{NAPOV}_{t-j} + \mu_{1t} \quad (5)$$

(5)

$$\text{UNEMP} = \sum_{i=1}^n \lambda_i \text{UNEMP}_{t-i} + \sum_{j=1}^n \delta_j \text{NAPOV}_{t-j} + \mu_{1t} \quad (6)$$

where:

UNEMP = National unemployment rate.

In like manner, we understand how low life expectancy rate at birth had been in Nigeria over the study period. This is accompanied by rising inequality and poverty indices. It is also necessary to ask if there is a causal relationship between poverty and inequality on one hand and life expectancy rate at birth on the other hand. We therefore ask the question: is low trend of life expectancy rate at birth caused by poverty and inequality or is it low life expectancy rate at birth that causes poverty and inequality in Nigeria?

We therefore formulate our causality equations as in the set of equations below:

$$\text{INEQ} = \sum_{i=1}^n \alpha_i \text{LEXP}_{t-i} + \sum_{j=1}^n \beta_j \text{INEQ}_{t-j} + \mu_{1t} \quad (7)$$

(7)

$$\text{LEXP} = \sum_{i=1}^n \lambda_i \text{LEXP}_{t-i} + \sum_{j=1}^n \delta_j \text{INEQ}_{t-j} + \mu_{1t} \quad (8)$$

and

$$\text{NAPOV} = \sum_{i=1}^n \alpha_i \text{LEXP}_{t-i} + \sum_{j=1}^n \beta_j \text{NAPOV}_{t-j} + \mu_{1t} \quad (9)$$

(9)

$$\text{LEXP} = \sum_{i=1}^n \lambda_i \text{LEXP}_{t-i} + \sum_{j=1}^n \delta_j \text{NAPOV}_{t-j} + \mu_{1t} \quad (10)$$

where:

LEXP = Life Expectancy Rate at birth.

We source all the data for this study from the Nigeria National Bureau of Annual Abstract of Statistics, the Central Bank of Nigeria Annual Report and Statement of Accounts and the World Bank World Development Indicators. In event where there are some missing observations, we fill the missing gap by extrapolation using 4-year moving average. This is method is widely acceptable method of extrapolation. All the diagnostic tests and analyses are carried out with the use of Eviews econometric software.

4. FINDINGS AND POLICY IMPLICATIONS

When we tested the stationarity of the dataset used for this study using the Augmented Dickey-Fuller test and Phillips-Perron test. The Augmented Dickey-Fuller tests reveal that Inequality and poverty data are stationary in their second difference; unemployment data are stationary in their first difference, whereas life expectancy at birth data were not found to be stationary at all. On the other hand, Phillips-Perron tests reveal that inequality, poverty and unemployment are stationary at their first difference, while data on life expectancy at birth are stationary at their second difference. Below is a tabular presentation of the abridged unit-root tests carried out on the variables.

Table-1. Abridged presentation of Unit-Root Tests using ADF and PP techniques

Variable	Augmented Dickey-Fuller				Phillips-Perron			
	Level	1 st Diff	2 nd Diff	Remark	Level	1 st Diff	2 nd Diff	Remark
INEQ	-1.0884	-2.6855	-6.3967	I(1)*	-1.2303	-5.0300	-	I(1)
NAPOV	-1.1456	-1.9359	-4.5074	I(1)*	-1.0180	-3.1904	-	I(1)
LEXP	-0.6374	-2.5292	-1.5733	**	3.7059	-0.6920	-1.7061	I(1)*
UNEMP	-0.6067	-2.8843	-	I(1) *	-0.4691	-4.4849	-	I(1)

Going by the results obtained by the two unit-root diagnostic techniques for stationarity of the data, employing Johansen method of cointegration test may not be suitable. This is because of the various problems associated with this method when the variables are of various orders. Adopting the Engle-Granger two-step method of cointegration test (otherwise known as the residual technique), we observe that the variables are cointegrated.

Table-2. Abridged presentation of Co-integration Test

Variable	Augmented Dickey-Fuller		Phillips-Perron	
	Level	Remark	Level	Remark
D(RESID)	-5.902841	I(0)*	-6.760552	I(0)*

The Granger causality test carried out for this study yields the following:

Table-2. Abridged presentation of the Granger Causality Tests; lag 1

Test Hypotheses	F-Statistics	Decision
NAPOV does not Granger Cause INEQ	3.11518	Reject**
INEQ does not Granger Cause NAPOV	21.4522	Reject*
UNEMP does not Granger Cause INEQ	4.70071	Reject**
INEQ does not Granger Cause UNEMP	0.41628	Accept
UNEMP does not Granger Cause NAPOV	0.81787	Accept
NAPOV does not Granger Cause UNEMP	2.88095	Accept***
LEXP does not Granger Cause INEQ	5.83209	Reject*
INEQ does not Granger Cause LEXP	2.69683	Accept***
NAPOV does not Granger Cause LEXP	2.24701	Accept***
LEXP does not Granger Cause NAPOV	0.39104	Accept

Notes: *indicates significant at 1% **indicates significant at 5%. and *** indicates significant at 10%.

From the table above, there is bi-directional causality between poverty and inequality in Nigeria using 5% level of significance. This is because the null hypothesis of NAPOV does not Granger Cause INEQ was rejected just like the null hypothesis of INEQ does not Granger Cause NAPOV was also rejected. This is in line with the result of some scholars (Gries and Redlin, 2010). Further investigation into the results obtained is needed by establishing the channels which may still link the variable and needed for effective policy making is important. This is why we go further to find the direction of causality between poverty and inequality on one hand and unemployment on the other hand.

Our empirical result shows uni-directional causality between unemployment and inequality with unemployment causing inequality and a uni-directional causality between life expectancy rate (LEXP) and inequality (INEQ) with LEXP causing inequality at 5% level of significance. This is in line with studies carried out by Leite *et al.* (2006) for South Africa on earning inequality and unemployment. It is true that inequality index used in this study represents income inequality, but inequality cuts across various sectors of the economy. There could be assets inequality and access inequality. However, all these other forms of inequality are closely linked to income inequality. For instance, usually there is inequality in access to employment opportunities (maybe due to variations in academic qualifications), but such variation in academic attainment might have been brought about by income inequality. Thus the inequality in employment leads to high rate of unemployment which further leads to inequality in income and rising poverty profile in the country. The result of the relationship between LEXP and INEQ is however not strange. A low life expectancy rate portrays low health status, this leads to low employment opportunity as no employer will like to employ an unhealthy person, low level of income sets in and in relative to others, income inequality is unavoidable.

The result of the causality test shows no causality between poverty and unemployment on the one hand and shows no causality between life expectancy and poverty on the other hand at 5% level of significance. This is however strange and contrary to the findings of other studies as uni-directional causality was found between poverty and life expectance with LEXP causing poverty while others found a feedback relationship between the two. The result of the relationship between

unemployment and poverty is in line with the finding of some other studies for Nigeria (Osinubi, 2005; Iyoko, 2012; Nnaemeka *et al.*, 2012). This is because when some people are unemployed officially, they sometimes depend on remittance from abroad and depend on the other relatives. This tends to increase the rate of dependency in Nigeria. Also, some engage in miniature jobs which tend to remove them from the list of the poor even when they are officially unemployed.

The above conclusion can best be explained with the figure below:

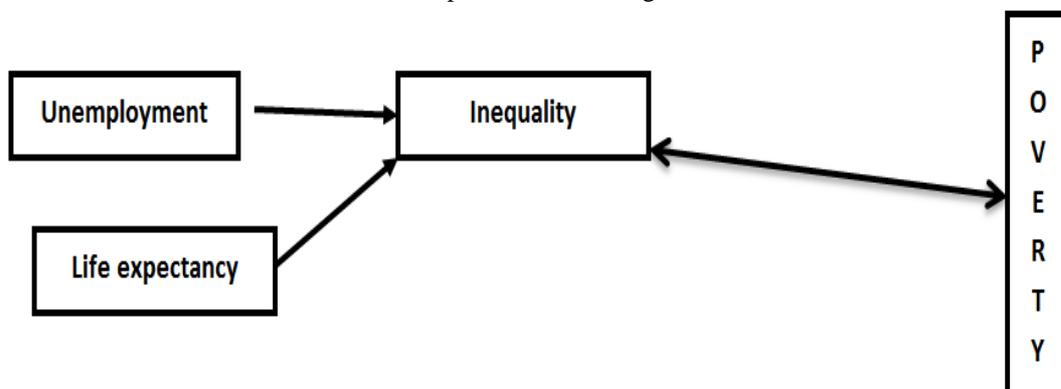


Figure-1. Observed Line of Causality between Inequality and Poverty

The following policy implication and recommendations are drawn from the result of this study;

- 1) The bi-directional causality between poverty and inequality show that policy measures toward the reduction of poverty in Nigeria should not only concentrate on poverty but also incorporate policies of equitable distribution to reduce inequality through progressive taxes and subsidies on basic necessities.
- The problem of unemployment has been a major economic problem in the country. Although several efforts have been put in by past government to reduce the unemployment rate in the country, the fight against poverty should also be channelled at the fighting unemployment in the country. The increase in employment will reduce inequality and further lead to a fall in poverty profile in the country.
 - The health status should not be overlooked in the formulation of policy measures to reduce poverty. The three mortality rates have been so high while life expectancy has so low in comparison to other countries. A healthy society is a society that can work where inequality as well as poverty will be reduced. Improved accessible and affordable healthcare service delivery that can help to improve on the prevalent low life expectancy rate at birth in the country is highly recommended

5. CONCLUSION

Poverty and inequality have been identified as two evils that are highly related with feedback impacts which seem indisputable and must be fought at together. This study focused on investigating on the causal relationship between inequality and poverty using Nigeria. The result of the study showed clearly that there is a very high level of poverty and inequality in Nigeria and that

there is a feedback causality effect between inequality and poverty in Nigeria, these are consistent with the few studies that have investigated on the causal relationship between two. The result of the study further showed that unemployment and life expectancy rate causes inequality while there is no causality between poverty and unemployment in Nigeria. Thus there is a direct link between poverty and inequality as well as an indirect link between them through unemployment causing inequality and inequality causing poverty.

It recommends that employment should be one of the major tools to be considered in the fight against poverty and inequality in Nigeria. This should not be left for the government alone, the private sectors are also encouraged to be actively involved in this as well as individuals through imbining the spirit of entrepreneurship.

This study thus concludes that since inequality and poverty are two major macroeconomic problems that are eating up the country and are inter woven and the indirect channel of unemployment contributing to the problem, policy measure toward the combat of one should not neglect the other as the efficacy of the policy measures is related to the other problem. Employment has been identified as an important outcome of any welfare intervention.

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Appendix

Pairwise Granger Causality Tests

Date: 03/08/14 Time: 16:10

Sample: 1980 2010

Lags-1.

Null Hypothesis:	Obs	F-Statistic	Probability
LEXP does not Granger Cause INEQ	30	5.83209	0.02278
INEQ does not Granger Cause LEXP		2.69683	0.11215
NAPOV does not Granger Cause INEQ	30	3.11518	0.08888
INEQ does not Granger Cause NAPOV		21.4522	8.2E-05
UNEMP does not Granger Cause INEQ	30	4.70071	0.03913
INEQ does not Granger Cause UNEMP		0.41628	0.52425
NAPOV does not Granger Cause LEXP	30	2.24701	0.14548
LEXP does not Granger Cause NAPOV		0.39104	0.53700
UNEMP does not Granger Cause LEXP	30	0.38430	0.54051
LEXP does not Granger Cause UNEMP		6.74104	0.01506
UNEMP does not Granger Cause NAPOV	30	0.81787	0.37380
NAPOV does not Granger Cause UNEMP		2.88095	0.10113

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