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Income Distribution and Poverty Reduction in Nigeria

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Abstract

This paper analyzed income distribution and poverty reduction in Nigeria. The study examined the impact of both income inequality and wage increase on poverty reduction in Nigeria. To achieve the noble objective, secondary data from World Bank and CBN statistical bulletin were collected on poverty level, income inequality and wage increase. Based on the empirical result from GMM, the paper concluded that the coefficient of determination which showed that about 67% variation in the poverty level was explained by all the explanatory variables in the model. Also, a percentage increase in income inequality will cause poverty level to rise significantly. On the other hand, a percentage increase in wages will bring about corresponding decrease in poverty level. Based on the findings, the paper recommended amongst others that there should be sound family programme and welfare package design and implemented in order to check the growing rates of poverty and income inequality in Nigeria.

Keywords: *GMM, Poverty, Income Distribution and Development*

Introduction

Poverty reduction and income distribution are key variables that determine the development process of emerging and developed economies. This is because income inequality and incident of poverty are key challenges that face developing countries like Nigeria. Although the public sector has been identified to play a critical role in poverty reduction and narrowing income gap, its approach of achieving these key macroeconomic goals often excludes the poor from participating fully in opportunities offered. The World Bank (2012) report indicates that world poverty stood at 12.7%. This is an indication that out of 7 billion of the world population, over 800 million lives on or under the poverty line (UNDP, 2011).

In spite of reduction in poverty in some region of the world, other regions such as sub-Saharan Africa, the Caribbean and East Asia have continued to experience rising incidences of both poverty headcount and poverty gap. As a result of this, the United Nations in its Sustainable Development Goals (SDG) prioritized elimination of poverty by 2030 as the first amongst the list. This is because; the poor people find it very difficult to afford adequate food and housing, education and wellbeing which invariably make them emotionally and psychologically hopeless. Thus, the poor in the society are most susceptible to sickness, social vices and institutional abuse amongst others (Obayori, Udeorah & Aborh, 2018).

Meanwhile, the concept of poverty is composite; it denotes total or insufficient lack of fundamental desires such as food, housing and medical cares. Relatively, people are said to be poor when their income fall below the average income in a community (World Bank, 2000). Giving the concept of poverty by the World Bank, Nigeria's poverty situation is quite alarming. That is why the Human Development Report (UNDP, 2003) reveals that Nigeria is one of the poorest among the poor countries of the world. Indeed the 20th poorest country in the world and this ranking has not significantly improved for the better till date (Chikelu, 2016). Thus, the need to advocate for poverty reduction.

According to Obayori (2016), reduction in the level of poverty is the most difficult challenge facing any country in the developing world where on the average majority of the population is considered poor. Evidence in Nigeria shows that the number of those in poverty has continued to increase. For example the number of those in poverty increased from 27 percent in 1980 to 46 percent in 1985; it declined slightly to 42 percent in 1992, and increased very sharply to 67 percent in 1996 by 1999 it estimates had it that more than 70 percent of Nigerians lived in poverty. The increase in poverty level is accounted for by inequality in income distribution amongst the citizenry (Gbosi, 2005).

The Problem

Poverty and income distribution have been identified as major limitations to growth and development of the Nigerian economy. According to (CBN, 2012), despite the acclaimed growth of the Nigerian economy, the percentage of Nigerians living below the poverty line has been on the increase on the yearly basis. 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 (2012) and UNDP (2009) showed that about 15% of Nigerians 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, 112.5million 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. 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 (Central Bank of Nigeria, 2013) and (UNDP, 2013). Similarly, income distribution has also showed irregular pattern in Nigeria. According to CBN (2012), the Gini index of income inequality stood at an average of 0.447 for the country. Thus, inequality in income distribution and high poverty incidence existed at various levels among categories of individuals in the society. Persistence disparity in income distribution and continuous increase in poverty will eventually lead to inefficient allocation of resources and diminutive economic growth as well as development.

In lieu of the background above, the objectives of the study were to; examine the impact of income distribution on poverty reduction in Nigeria; and examine the impact of wage increase on poverty reduction in Nigeria.

LITERATURE REVIEW

Conceptual Clarification

The various definitions 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 Fund (UNICEF).

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 (World Bank, 2011).

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.

Theoretical Literature: The Classical Theory of Poverty

The classical theory of poverty assumes that the outcomes of the exchange taking place in the market place are efficient and hence wages faithfully reflect individual productivity. Accordingly, poverty is mainly seen as a consequence of poor individual choices that affect productivity negatively. The wrong choice made by individual may lead them to find themselves in a poverty or welfare trap. Beyond a minimum level to prevent destitution, state intervention is generally viewed adversely as a source of economic efficiency by generating incentives that are misleading between poor individuals and society as a whole. Welfare programmes are perceived as a potential cause for or reinforcement of poverty.

Government is justified to intervene whenever poor people need supportive activities or threats to correct for perverse economic incentives. A large majority of the policy prescription under this view focus on effort to raise the productivity of deprived individuals in order for them to join the labour force as soon as possible. Thus, the classical views on poverty correspond for the most market-espousing, laissez-faire principle that tends to attribute responsibility for the outcome of individual, such as their well-being, to their own economic decision. Hence, in his view, people are to be held accountable for their experiences of poverty, which are ultimately linked to purely individual deficiencies. Rank, Yoon and Hisrschl (2003) opined that these individual characteristics can range from "lack of industrious work ethic or virtuous morality to low levels of education or competitive market skills. Moreover, Blank (2010) is of the view that the underlying premise of the classical theory is that although other options are available, the poor still make choices that limit their access to economic resources, thereby raising their risk of ending up in poverty.

Empirical Review

Several empirical studies have been carried out on income distribution and poverty reduction in Nigeria. Some of the empirical works include; Obayori, Udeorah and Aborh (2018) examined the impact of human capital investment on poverty reduction in Nigeria with the use of econometric methods of unit root test and GMM. Data were collected on education expenditure, health expenditure and poverty level in Nigeria. The KPSS stationarity test showed that all the variables are stationary and the GMM result showed that both government expenditure in education and health were negatively and significantly related with poverty level were positively and significantly related. Ogbeide and Agu (2015) studied the causality between poverty and income 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.

Tsokhas (2013) examined the relationship between poverty, income inequality and inclusive growth in selected Asian countries over the 1995-2010. The results of this study revealed that there is unilateral causality relationship from income inequality to inclusive growth in these countries. In like manner, Sabyasachi (2013) showed that income inequality has negative and significant impact on the inclusive growth.

Kundu and Samanta (2011) investigated the relationship between inclusive growth and income inequality in the case of Indian cities over the 1995-2009. The main results of this study show that there is a negative nexus between these variables.

Son (2007) has analyzed the relationship between income inequality, poverty and inclusive growth in 43 developing countries over the period of 1980-2004. The econometric model in this study has been estimated by 2SLS approach in panel data. The main results of this paper suggest that in the countries with high per capita income, implementing of inclusive growth policies has led to the alleviation of income inequality and poverty.

Ravallion (2006) analyzed 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

From the literature reviewed, it is observed that most empirical researches on poverty reduction in Nigeria focused on poverty determination only without giving due consideration to income distribution. Hence, this study focused on income distribution and poverty reduction in Nigeria. Also, an econometric method of GMM was used to analyze the study.

METHODOLOGY

The study was quantitative in nature. Thus, secondary data obtained from CBN statistical bulletin and World Bank was collected and the econometrics methods of ADF unit root test and GMM was apply. The ADF test of stationarity of the variables come first before the GMM test. Meanwhile, the Generalized Method of Moments (GMM) estimation technique was employed because of its ability to avoid biased results due to correlation between the error term and the endogenous variable. The general equation for GMM using the variables under consideration was presented thus;

$$PL_t = \alpha_0 + \alpha_1 PL_{t-1} + \alpha_2 IQ_{t-1} + \alpha_3 WG_{t-1} + e \qquad (4)$$

Where; PL is Poverty Level, α_o is the constant terms, α_1 is the lag one form of the dependent variable, $\alpha_2 – \alpha_3$ are intercept parameters, IQ_t is inequality in income distribution, WG is Wage Increase (check variable), e is the error term at time.

RESULTS

The study considered a time secondary data from 1985-2018. The data were sourced from the yearly reports and briefs of the Central Bank of Nigeria. Also, the results of the descriptive statistic, unit root and GMM tests were presented and discussed as follows.

Table 1. Result of Augmented Dickey Fuller Unit Root Test at Level and First Difference

Variables	ADF @ Level	5% Critical Value	Decision	ADF @ 1st Diff	5% Critical Value	Decision
PL	-1.259948	-2.971853	Not stationary	-4.450150	-2.976263	Stationary I(1)
IQ	-2.891511	-2.991878	Not stationary	-3.454711	-2.981038	Stationary I(1)
WG	-0.450399	-2.971853	Not stationary	-5.060637	-2.976263	Stationary I(1)

Source: *Author's Computation from E- view 9*

The unit root test for stationarity of each of the series via the ADF test as presented in Table 1 showed that all the variables were not stationary at level I (0). Thus, the variables were differenced once to attain stationary at first difference prior to estimations of the GMM estimation to prevent false regressions results.

Table 2: Analysis of GMM Result

Dependent Variable: Unemployment (PL)			
Variables	**Coefficients**	**t-statistics**	**Probability**
C	8.49533	13.62644	0.0000
PL(-1)	0.79184	1.86369	0.3873
IQ	0.39335	2.74436	0.0119
WG	-8.45533	-0.62644	1.0019
R-Squared	0.6785	F-statistics	44.01900
Durbin Watson	1.4631	Prob(F-statistic)	0.0000

Source: *Author's Computation from E- view 9*

From the GMM regression result above, the lag value of poverty; PL (-1) is positively signed but not significantly related with current value of poverty (PL) in Nigeria. Thus, there is a direct link between increase in poverty and poverty level. Similarly, income inequality is positively and significantly related with poverty level. Thus, any percentage increase in income inequality will cause poverty level to rise significantly.

Meanwhile, the variable wage increase (WG) is negatively but not significantly related with poverty level in Nigeria. Thus, any percentage increase in wages will bring about corresponding decrease in poverty level. But the rate of reduction does not significantly impacts on poverty level during the period of study.

The coefficient of determination, R^2(0.6785), Showed that approximately 67% variation in the poverty level was explained by all the explanatory variables in the model, while the remaining 33% was explained by other factors affecting poverty rate not captured in the model. The F-test which is used to determine the significance of the explanatory variable in the model, showed that the Probability of F-statistics (0.000) is less than 0.05 at 5% level of significance. Thus, the model is considered to be good and adequate for forecasting and policy analysis. The Durbin-Watson value of 1.461 which is not too far from 2.0 accepted value of DW test indicated that, there is no serious presence of first order auto-correlation among the variables used in the model. Meaning that autocorrelation is not a problem in the model.

CONCLUSION

The study analyzed income distribution and poverty reduction in Nigeria. The study was necessitated by the current growing rate of poverty and income inequality. Thus, the objective of the study is to examine the impact of income inequality and wage increase on poverty reduction in Nigeria. To achieve the noble objective, secondary data from NBS and CBN statistical bulletin were collected on poverty level, income inequality and wage increase. Based on the empirical result, the paper concludes that, any percentage increase in income inequality will cause poverty level to rise significantly. On the other hand, wage any percentage increase in wages will bring about corresponding decrease in poverty level. But the rate of reduction does not significantly impacts on poverty level during the period of study. Based on findings, the following recommendations were proposed: there should be sound family programme and welfare package design and implemented in order to check the growing rates of poverty and income inequality in Nigeria. Also, empowering and strengthening of social capital formation will also help to reduce poverty and income inequality among the citizenry.

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