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Poverty drivers and Nigeria's development: Implications for policy intervention

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Abstract: Several policies and programmes have been put in place to address the issue of poverty both in developing and developed countries of which Nigeria is not exempted. This study using data from World Development Indicators (WDI) for the period of 1992–2016 examined the key principles influencing poverty rate in Nigeria and their implications for policy interventions. The result of the Autoregressive Distributed Lag (ARDL) model using several equations showed that unemployment increases poverty by approximately 1.4, 1.5 and 3.3 percent in the short run while inflation reduces poverty by approximately 0.08 percent in the short run. This implies that unemployment causes poverty while inflation, public resources devoted to austerity programmes and economic growth reduces poverty in the short run. The study recommends that government should put in place adequate measures and conducive environment to encourage more business operations in the country.

Subjects: Development Studies; Sustainable Development; Development Policy; Economics and Development

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Azuh Akunna is a social and environmental accountant with a flair for community-based monitoring, social sustainability business practices, and public health services.

This current research work is important in driving the economy to the path of development as it is observed that poverty and unemployment are major problems that plague the economy.

PUBLIC INTEREST STATEMENT

The issue of poverty is a serious problem that plagued not only Nigeria economy but also other countries in the world. The severity of poverty in Nigeria's economy calls for attention from government and policy makers in order to combat the problem. The empirical analysis from this paper showed that unemployment is a serious issue that influences poverty in Nigeria economy. This shows that government and policy makers should make more effort in addressing the issue of rising unemployment which will afterwards reduce or eliminate poverty in the country. Also, the assertion that the rise in general price of goods (inflation) will increase poverty level is not applicable in Nigeria situation.

Keywords: Poverty; Development; Nigeria; SDGs

1. Introduction

The importance of poverty is reflected in the fact that it is the first sustainable development goal (SDG) that seeks to end poverty in all forms by 2030. Poverty is a multidimensional and multi-faceted phenomenon and one of the major problems against development (Ogunniyi et al., 2017; Oluwatayo, 2014). Omobowale (2014) described poverty as a state where the people are deprived of good things of life and the ability to achieve the desired state of wellbeing and socially acceptable standard of living. Incidentally, the poverty prevalence is generally intense in rural areas, close to 80% or huge proportion of the population lives below the poverty line, with constricted social and infrastructural amenities (A.A. Ogundipe et al., 2019; Aderounmu, 2018).

Globally, the number of people living in extreme poverty as at 2015 were 767 million (UNDP, 2016) which reduced to less than 600 million people by 2019 (Kharas et al., 2018). Billions of people across the globe live in dehumanizing unclean conditions enriched with hunger, disease, desperation, and degradation. Despite all the amazing development in eradicating poverty over the past 25 years, 766 million people of which 385 million of them are children lived on less than US$ 1.90 a day in 2013 (World Bank, 2017; World Food Programme, 2016). No doubt, the problem of poverty is not only a plague of developing countries only, it is also on the increase in advanced countries, as estimates in 2012 revealed that over 300 million people lived in poverty (ILO, 2012; UNDP, 2016). However, there is prevalence of poverty in developing countries than developed countries and Nigeria being inclusive; despite her rich endowment with human, agricultural, petroleum, gas, and large untapped solid mineral and other natural resources.

Nigeria is a country with an abundance of resources, copious arable land, and plentiful river water, a large land area for building and a vast pool of human resources and other endowment. Demographically, Nigeria is the most populous country in Africa, the seventh world-wide with an estimated population of over 200 million in 2020 (Population Reference Bureau [PRB], 2017; Worldometer, 2020) and 8th as the largest exporter of crude oil in the world with many other resources. Nigeria as at 2018 ranks low on human development index, 158th out of 189th countries and 39.1% of her population living below income poverty line of US$1.90 a day despite enormous resources, far below other sub-Saharan African countries like Rwanda (60%), Zambia (64.4%) and Mozambique (68.7%) (UNDP, 2018; UNDP, 2016). The June report of 2018 world poverty World Poverty Clock (2018) indicated that 86.9 million people in Nigeria spend less than 1.90 USD per day and while by February 2019, there was an addition of over 3 million people that slipped into poverty making over 91 million Nigerians (people) live in extreme poverty. Compared to some other African countries, Nigeria has the largest proportion of people living in extreme poverty (86.9) million while Tanzania, Kenya, South Africa and Zambia have about 19.9 million, 14.7 million, 13.8 million and 9.5 million people respectively living in extreme poverty (Worldwide Poverty Clock, 2018).

According to Brookings Institution annual report (2018), Nigeria categorized as one of the poorest countries in the world above India. Prior to independence in Nigeria (1960), the level of poverty was really low. However, 60 years after gaining independence, Nigeria rose from a low poverty level to become one of the countries with the highest incidence of poverty in the world today. Nigeria did not achieve the Millennium Development Goals (MDGs) poverty targets by 2015 in spite of the measures initiated by successive administration to reduce poverty since 1980. No matter how hard successive governments both military and democratic have tried to reduce poverty, it has been to no avail. Thus, poverty is a major impediment to Nigeria's socio-economic development and has been persevered despite various interventions (Danaan, 2018).

Nigerian government is unable to sustain her development in key sectors like agriculture, infrastructure, education, health, housing and many other sectors in spite of several intervention

measures since 1970s (Amaechi, 2018; Benyin & Ugochukwu, 2015). How then can a country with abundant resources have a significant proportion of its citizens living in abject poverty? Is there any link between poverty, availability of resources and development? One of the most noteworthy task facing Nigeria today is its inability to provide quality life to its citizenry comparable to developed societies. The failure of Millennium Development Goals of halving the poor by 2015 led to a summit that brought about the Sustainable Development Goals where the issue of poverty eradication is the first goal since one of the drivers of non-sustainable development is poverty (Amoo, 2018; Amoo et al., 2019). The above scenario raises the issue that Nigeria's poverty case requires attention and that there is need to have an insight into the problem of poverty and its implications on the nation's development. Moreover, investigating each of the competing factors will enhance informed policy intervention towards poverty reduction.

The gap this study intends to fill is to examine the key drivers underlying the persistence of poverty and how to evolve informed intervention to alleviate poverty pervading the nation's developmental agenda, leading to the achievement of SDGs on poverty using the Keynesian theory.

2. Literature review

Nwosa and Ehinomen (2020) examined the nexus among income inequality, poverty and economic growth in Nigeria from 1981 to 2018 using autoregressive distributed lag method of estimation. The result showed that while inequality has a positive and significant effect on economic growth in Nigeria, poverty has an insignificant impact on economic growth. Adeleye et al. (2020) carried out a comparative analysis on growth, poverty and inequality in sub-Saharan Africa, Latin America and Caribbean countries using pooled ordinary least square, fixed effects and system generalized method of moment for the period 2000 to 2015. The result of the study shows inequality growth rate increases poverty and economic growth reduces poverty. Also, there is difference across group and region in the growth-poverty-inequality trilemma. However, the study concludes that income inequality is a great determinant of poverty.

Olowa (2012) examined the measurements and causes of poverty in Nigeria. The review identified the causes of poverty to include low economic growth, unemployment, low productivity and wages in the informal sector, inappropriate macroeconomic policies, economic degradation, crime and violence, workers' retrenchment among others. In the same vein, Addae-Korankye (2014) carried out a review on the causes of poverty in Africa. The study discovered that corruption, poor governance, inadequate opportunities in employment, poor use of resources and infrastructure, inadequate policies, wars and conflicts are some of the causes of poverty in Africa. However, these studies failed to carry out any empirical investigation of these factors.

Osabohien et al. (2019) using generalized method of moments for 15 West African countries examined agricultural development in Nigeria, in relationship with job creation and poverty alleviation. The result of the panel data for the period 2000–2016 showed that agriculture value-added have a negative impact on poverty in the selected countries. In a similar study by A. Ogundipe et al. (2016), the study examined the nexus between agricultural productivity, poverty reduction and inclusive growth in for the period between 1991 and 2015. Using ordinary least square and generalized method of moments estimation techniques, the result of the study showed that food productivity index negatively and significantly affects poverty indicators.

Dada and Fanowopo (2020) using autoregressive distributed lag examined the impact of institutions on the relationship between economic growth and poverty reduction in Nigeria using data from 1984 to 2018. The result of the study showed that economic growth and institutions (proxied by corruption control and political stability) positively affect poverty reduction both in the short run and the long run. Thus, the study found that both economic growth and strong institutions are significant factors that can be used in reducing poverty in Nigeria.

Fosu (2017) examined the role of income inequality in the transformation of economic growth to poverty reduction using data for both country specific and regional developing countries from the early 1990s. Poverty headcount ratios of 1.25 USD and 2.50 USD per day were used. The study found that the major factor driving increase and decline in poverty is the average income growth. Also, evidence showed that in states where the major driver of poverty reduction has been growth there is an opinion that more progress can be achieved when there is even distribution of income.

In an empirical analysis study using National Consumer Survey data, J.C. Anyanwu (2013) examined the relationship between poverty and poverty model at individual gender basis, urban and rural basis as well as at a national level. The result of the analysis using multivariate regression as well as descriptive analysis showed that household size, lack of education, not married, living in the North as well as being a Muslim contributed significantly to the tendency of an individual being poor. However, an individual living in other regions or zones of the country aside from the North, residency in the urban area, a Christian, education above secondary level as well as age reduces the tendency of being poor. Aiyedogbon and Ohwofasa (2012) using ordinary least square method of analysis for data spanning 1987–2011 examined poverty and unemployment situation in Nigeria. The result of the analysis showed that poverty level in Nigeria is influenced by the contribution of unemployment, population as well as services to real GDP while the contribution of the manufacturing sector reduces poverty in the country.

Wbldemariam et al. (1999) using family of poverty indices examined the faces of poverty in 21 urban sub-Saharan African countries. The study employed data set from African Development Indicators of 1998/1999. Applying ordinary least square regression method on the family of poverty indices and Gini index to establish the relationship between urban poverty, growth and inequality, the result showed that 43% of the urban population in SSA is living below the poverty line of about 47 USD per month per person, the poverty-ratio and squared poverty gap ratio, respectively, were 16% and 8% while the mean expenditure of the poor is 29 USD per person per month, which is 62% of the poverty line. These facts show the depth and severity of urban poverty in SSA.

Ighodalo (2012) carried out a review of poverty and socio-economic development in Africa with particular reference to Nigeria using dependency theory. The study identified several factors that impede the growth of a country among which are corruption, lack of national integration, ethnic and religious crisis, conflicts among others. The study identifies the need for empowering the people and allowing them to participate in decision making in order to foster development. However, the study did not carry out any empirical analysis to justify its findings. Ucha (2010) argued that unemployment among graduates, non-diversification in the economy, corruption in public offices, inequality in income, low quality of education and idleness are the key factors that affect poverty in Nigeria. They buttress that despite the multi-dimensional nature of poverty within the country, these various causes of poverty are related to each other and they reinforce each other. For instance, the interrelatedness of poverty, low-quality education and unemployment is such that individuals who lack the right quality and quantity of education lack the opportunity of having good employment, hence no or low income thereby leading to a cycle. The study suggests that for poverty to be tackled and progress to be made, all correlating factors must all be tackled together. Danaan (2018) explores the theoretical nature of poverty in Nigeria. The study argues that poverty is complex and multidimensional phenomena because the factors that affect it cut across the social, psychological, economic and cultural spheres of existence. The study suggests the knowledge of these factors that causes poverty in creating pro-poor strategies and a hydra-headed method of addressing its effect increasingly and excellently. The paper argues that empowering people to develop resilience to manage and overcome it within the range of their resources and capabilities is a means of reducing poverty.

With the use of qualitative and quantitative research, the study of Nyandoro and Dube (2013) argues that despite the level of poverty in most African countries, Africa has experienced economic growth since post-independence. It argues that the success of the continent to achieve growth or

poverty reduction can be observed through the lens of other continental human-poverty trends rather than the income distributional processes measure. It contends that research provides insights on how poverty in Africa has been spreading through the income level assessment. Furthermore, income level poverty has persisted due to overdependence by the continent on the production of primary goods which generate inadequate revenue to maintain the growing demands for increased incomes because of decreased prices and changes in the continent's economic capacity caused by structural adjustment policies. Large rural-populations in Africa and rapid urbanisation contributed to extreme poverty causing the provision of basic social-services on the continent to be restricted by government budgetary-constraints and the insufficient ameliorative and palliative public-policy to meaningfully affect poverty-reduction (Bracking, 2004), thus worsening the situation in Africa.

The study of Ogbeide and Agu (2015) sought to establish the existence of a causal relationship between poverty and inequality in Nigeria for the period of 1980 to 2010. The study adopted the Granger causality technique and used data from the Central Bank of Nigeria, National Bureau of Statistics and the World Development Indicators of the World Bank. The result of the study showed that there is a response causality effect between poverty and inequality with no causality between poverty and unemployment in the country. Hence, the relationship between poverty and inequality is direct, while there exists an indirect relationship between them through unemployment and life expectancy leading to inequality and inequality producing poverty. Thus, the study suggests that employment should be one of the major instruments to be put into consideration in fighting poverty and inequality in Nigeria. With the use of documentary source of data, the study of Kaka (2013) argued that poverty in women is a severe challenge which must be addressed especially as it relates to lack of income, access to land and properties, opportunities by the governments and international communities. Furthermore, the study argued that poor governance due to fraud and corruption in the majority of African countries, which drains their resource and deny the access to social services, will reduce the distress and poverty of the populace.

3. Methodology

The specified model is based on the Keynesian theory of poverty. The theory states that poverty is mainly explained by unemployment. The econometric model of this relationship is in equation 1.

$$Pov_t = \beta_0 + \beta_1 Unem_t + \varepsilon_t \quad (1)$$

Where Pov is poverty, Unem is unemployment, ε is the error term, and β_0 and β_1 are the parameters.

According Davies and Sanchez-Martinez (2014), macroeconomic factors like inflation and public resources devoted to austerity programmes have been identified by supporters of the Keynesian theory of poverty to trigger poverty. Aside from depicting the role of government in economic stabilization, inflation would affect poverty when the nominal wages of low income earners cease to rise as prices (of basic items like food, accommodation and clothing) increase. If substantial public resources are devoted to poverty alleviation, it would suppress poverty rate in the economy, vice versa. These macroeconomic factors are introduced into equation 1 as control variables in equation 2.

$$Pov_t = \beta_0 + \beta_1 Unem_t + \beta_2 Inf_t + \beta_3 lnPRAP_t + \varepsilon_t \quad (2)$$

Where Inf is inflation rate and PRAP is public resources devoted to austerity programmes. PRAP is log transformed because it is in monetary terms and not in rates like other variables.

The Keynesian theory of poverty further states that economic growth is the most effective factor to end poverty. It proposes that public investment (on education, capital projects, etc.) leads to economic growth which in turn should have a downturn effect on poverty. Based on the reliance of Nigeria on debts to finance public investment (especially) since the year of global financial crisis to

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Table 1. Indicators

Variables	Indicators	Source
Poverty	Depth of food deficit (DFD)	World Development Indicators (WDI)
Unemployment	Unemployment rate (ILO estimate)	WDI
Inflation rate	Inflation rate (consumer prices)	WDI
Public resources to austerity programmes	Net Official Development Assistance and Aid received (constant 2015 US$) (ODA)	WDI
Economic Growth	GDP per capita growth rate	WDI
Public Debt	External and Internal Debt (₦ Billion)	Central Bank of Nigeria Statistical Bulletin

Source: As compiled by the authors

reduce poverty, the study considers the effect of public debt on economic growth. This is specified in equation 3 where EcoG is economic growth, PD is public debt, μ is the error term, and α_0 and α_1 are the parameters. Public debt is log transformed because it is in monetary terms while economic growth is in rates. This serves as a robustness check as the theory states that the burden of public debt can worsen poverty by negatively contributing to economic growth (Davies & Sanchez-Martinez, 2014).

$$EcoG_t = \alpha_0 + \alpha_1 lnPD_t + \mu_t \tag{3}$$

Based on the argument that economic growth may reduce absolute poverty but not relative poverty as increase in economic growth may not translate to a reduction in the variance of income distribution (Granville & Mallick, 2006), economic growth is introduced into equation 2 in equation 4. This is to test the hypothesis that poverty rates can still persist despite economic growth.

$$Pov_t = \beta_0 + \beta_1 Unem_t + \beta_2 Inf_t + \beta_3 lnPRAP_t + \beta_4 EcoG_t + \varepsilon_t \tag{4}$$

The study applies the indicator of depth of food deficit (i.e. the calories that are needed to lift the undernourished). High depth of food deficit depicts high poverty level and vice versa. The selection of the indicator supports Alkire et al. (2016) who identified that the face of poverty in West African countries like Nigeria is the need for more action on boosting good health. Due to data availability, the study period is 1992–2016. Other indicators and their sources are outlined in Table 1. Due to the difficulty of identifying what portion of the Nigerian government expenditure goes to austerity programmes, the net official development assistance and the official aid received are employed.

To know the time series properties of the data, descriptive statistics, correlation matrix, and Phillips-Perron unit root tests were conducted. Based on the feature of the unit root tests at level and first difference, the Autoregressive Distributed Lag (ARDL) estimation method is applied to estimate the short and long-run relationships. The cointegration bound test, serial correlation, and heteroscedasticity test are the diagnostic tests conducted.

4. Results

The results of this study are presented in Table 2 to Table 5. Table 2 shows the descriptive statistics of variables used in this study, the correlation matrix is presented in Table 3, Table 4 shows the unit root test result while the autoregressive distributed lag model results are displayed in Table 5.

5. Discussion

The descriptive statistics in Table 2 shows that as the Nigerian economy grows at an average of 1.945% between 1992 and 2016, unemployment rate (Unem) was at an average of 4.43%, an average of US$1.60 billion was received as net official development assistance and aid received

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Table 2. Descriptive statistics of selected variables addressing poverty in Nigeria economy

	DFD	Unem	Inf	ODA	EcoG	PD
Mean	59.68	4.43	19.21	1.60E+09	1.945	4029.67
Maximum	140.00	7.06	72.84	1.13E+10	12.46	12,315.91
Minimum	35.00	3.70	5.38	1.94E+08	−4.46	444.65
Std. Dev.	27.79	0.65	17.95	2.39E+09	3.79	3137.97

Source: As compiled by the authors

Table 3. Correlation matrix of selected variables addressing poverty in Nigeria economy

	DFD	Unem	Inf	ODA	EcoG	PD
DFD	1					
Unem	0.2608	1				
Inf	0.7651	0.1672	1			
ODA	−0.3771	−0.0519	−0.2636	1		
EcoG	−0.4527	−0.3867	−0.5091	0.1255	1	
PD	−0.5926	0.3265	−0.4413	0.1231	0.0948	1

Source: As compiled by the authors

(ODA), and an average of ₦4,029.67billion was in public debt (PD). Table 3 displays the correlation between the variables. All the statistics are below 0.8. The highest statistic is between depth of food deficit (DFD) and inflation rate (Inf). The two variables have a positive relationship and they strongly move in the same direction.

The results of the unit root tests are presented in Table 4. The depth of food deficit integrates at level at 1% level of significance. The net official development assistance and aid received and economic growth (EcoG) integrate at level at 5% level of significance. There is unit root for unemployment rate, inflation rate, and public debt. While unemployment rate and inflation rate integrate at first difference at 1% level of significance, public debt integrates at first difference at 10% level of significance. The ARDL estimation method is conducted because it admits both I(0) and I(1).

Table 5 presents the ARDL estimation and diagnostic tests results. The models were estimated using the Akaike Information Criteria to identify the optimum lag order. The error correction mechanism parameters of all the estimated models are significant at 5%. All the models are confirmed to have a long-run relationship by the ARDL Bounds Test, except for equation 3. The F-statistic is lower than the bound at level (I(0)) and first difference (I(1)). Although the t-statistic of the ECM(−1) suggests that there is a long-run relationship in equation 3, the study takes into

Table 4. Phillips-Perron unit root tests of selected variables addressing poverty in Nigeria economy

	DFD	Unem	Inf	ODA	EcoG	PD
PP t-statistic	−8.5931	−4.4151	−4.9648	−2.1063	−2.0363	−1.8838
Probability	0.0000	0.0021	0.0006	0.0361	0.0421	0.0580
Level of Integration	I(0)	I(1)	I(1)	I(0)	I(0)	I(1)

Source: As compiled by the authors

Table 5. ARDL estimation results of Variables addressing poverty in Nigeria economy

Variables	Equation 1	Variables	Equation 2	Variables	Equation 4	Variables	Equation 3
Short-run coefficients							
D(DFD(−1))	0.4445** (0.1622)	D(Unem)	1.4993** (0.5509)	D(DFD(−1))	−0.6020* (0.1887)	Dln(PD)	−0.8348 (1.9972)
D(DFD(−2))	0.0271 (0.1491)	D(Inf)	−0.0805** (0.0294)	D(Unem)	3.3151* (0.5527)	ECM(−1)	−0.5035** (0.1959)
D(DFD(−3))	−0.2642** (0.1081)	Dlog(ODA)	−0.7332 (0.5114)	D(Unem (−1))	8.9343* (2.0521)		
D(Unem)	1.4205** (0.5515)	ECM(−1)	−0.2248* (0.0112)	D(Inf)	−0.0763* (0.0218)		
D(Unem (−1))	3.3521*** (1.7674)			Dlog(ODA)	−0.9995** (0.3377)		
ECM(−1)	−0.0937* (0.0225)			Dlog(ODA (−1))	0.9066** (0.4044)		
				D(EcoG)	−0.2468** (0.0807)		
				D(EcoG (−1))	−0.4218* (0.1087)		
				ECM(−1)	−0.2082* (0.0283)		
Long-run coefficients							
Unem	−25.793 (34.313)	Unem	5.3907*** (2.8630)	Unem	−40.594*** (18.955)	lnPD	0.6913 (1.8033)
C	137.39 (137.25)	Inf	−0.1397 (0.1834)	Inf	−0.3472 (0.2198)	C	−3.5319 (14.5306)
		log(ODA)	−6.2297* (1.6337)	log(ODA)	−13.517* (2.5560)		
		C	149.28* (37.009)	EcoG	2.5436 (1.4706)		
				C	478.01* (119.83)		
ARDL Bounds Test							
F-statistic	4.9963	F-statistic	58.483	F-statistic	8.1442	F-statistic	2.0614
I0 Bound@5%	3.62	I0 Bound@5%	2.79	I0 Bound@5%	2.56	I0 Bound@5%	3.62
I1 Bound@5%	4.16	I1 Bound@5%	3.67	I1 Bound@5%	3.49	I1 Bound@5%	4.16
Breusch-Godfrey Serial Correlation LM Test							
F-statistic	0.0690 [0.9337]	F-statistic	0.3507 [0.7091]	F-statistic	2.3048 [0.1620]	F-statistic	0.2533 [0.7787]
ARCH Heteroscedasticity Test							
F-statistic	2.3395 [0.1435]	F-statistic	0.1088 [0.7448]	F-statistic	0.0364 [0.8506]	F-statistic	0.0060 [0.9388]
CUSUMQ	Stable	CUSUMQ	Stable	CUSUMQ	Not Stable	CUSUMQ	Stable

Source: As compiled by the authors

Note: * indicates 1% level of significance, ** indicates 5% level of significance, and *** indicates 10% level of significance. The standard error is in parenthesis () while probability is in [].

account that the long-run coefficients in equation 3 may be spurious. The problems of serial correlation and heteroscedasticity are absent in all the specified models.

The study observed that unemployment rate significantly increases depth of food deficit in equation 1, 2, and 4 in the short run and in equation 2 in the long run. This supports the Keynesian theory that poverty is caused mainly by unemployment. This is in line with the study of Aiyedogbon and Ohwofasa (2012) and Ucha (2010) whose finding showed that poverty is caused by unemployment. Although inflation rate and the depth of food deficit (poverty) have a strong association, inflation rate has a significant negative effect on depth of food deficit only in the short run in Nigeria (equation 2 and 4). This implies that changes in prices of goods and services do not worsen the level of poverty in Nigeria. This holds that the poor in Nigeria have little or no savings and as such their poverty status may not be worsened but rather improved. The poverty status improves because the middle- and high-income class whose cash savings would be badly affected by inflation would rather invest in real assets which would create jobs, employ the poor, and end up reducing the poverty level in Nigeria. Thus, the argument that inflation increases poverty does not hold in Nigeria. However, inflation may widen the gap in income distribution in Nigeria, this needs to be empirically tested.

Under equation 4, net official development assistance and aid received has a significant negative effect on poverty proxied by the depth of food deficit in the short run. However, the net official development assistance and aid received does not have a lasting negative effect on poverty as its previous period value has a significant positive effect on the depth of food deficit. Thus, the effect of net official development assistance and aid received on the depth of food deficit is spread between the immediate short run and a period lag. Adding the two effects shows that the net official development assistance and aid received still has a negative impact of −0.0929 (−0.9995 + 0.9066) in the short run. In the long run, the net official development assistance and aid received has a significant negative effect on the depth of food deficit. Whereby, a percent increase in net official development assistance and aid received may result into a reduction on the depth of food deficit between 6.23 and 13.52 kilocalories per person per day in Nigeria. This empirical evidence endorses the proposition of the supporters of the Keynesian theory of poverty that substantial public resources devoted to poverty alleviation would suppress poverty rate in an economy, vice versa.

The results under equation 4 also provide evidence that, as the Nigerian economy grows, the level of poverty reduces in the short run while there are no significant changes in the level of poverty in the long run. Hence, economic growth has a downturn effect on poverty only in the short run. The fact that public debt does not contribute to economic growth neither in the short run nor the long run (under equation 3) and economic growth does not make poverty level to decline in the long run implies that the poverty rate might have been growing or the poor might have been left off the "growth wagon" (Dickens & Ellwood, 2001). However, it is not statistically proven that the burden of public debt is worsening poverty by negatively contributing to economic growth. It is also noted that the previous poverty level(s) may increase or decrease the current poverty level. This depends on other factors that reduce poverty. The speed of adjustment shows that it could take between 4.4 years and 10.7 years for deviations from the long-run equilibrium between the level of poverty and its selected factors to be corrected.

6. Conclusion and recommendations

Poverty issue calls for serious attention in Nigeria. Although several studies have examined causes or determinants of poverty from both empirical and theoretical perspectives, there is a need to reexamine the existence of poverty in Nigeria despite the abundance of natural endowment resource in the country. This study, based on the Keynesian theory of poverty, empirically justifies that unemployment is the root cause of poverty in Nigeria as the Autoregressive Distributed Lag (ARDL) result showed that unemployment increases poverty both in the short run and long run. The study also found that inflation, public resources devoted to austerity programmes and economic growth reduces poverty in the short run. This study therefore recommends that policies addressing the employment situation of the country should be enforced, such as providing enabling environment for private sector businesses to grow and boost employment opportunities

by small and big industries. Also, policies on substantial public resources devoted to poverty alleviation should be implemented. Such a situation will facilitate the achievement of sustainable development goals particularly as it pertains to poverty, zero hunger, decent work and economic growth as well as industry innovation and infrastructure which are sustainable development goals 1, 2, 8 and 9 respectively.

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