

The Impact of Poverty Alleviation Programmes on Economic Growth in Nigeria 1981 - 2013

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Abstract

This study is aimed at investigating the impact of poverty alleviation programmes on economic growth in Nigeria. Using data covering the period 1981 to 2013. Based on empirical study, it is observed that poverty is multidimensional and its persistence is due to lack of productive resources. The paper notes that successive regimes in Nigeria have been introducing different programmes to alleviate poverty. The Nigerian case reveal that the major constraint to improving the standard of living of the poor is capital (finance). This has restricted their extensive participation in economic activities which could improve their lives. This study therefore adopts the Bounds Testing (Autoregressive Distributed Lag, ARDL) approach to long-run analysis, the result shows that in the short-run PRCEA and PRCESCS contributed positively to changes in RGDP but FD showed negative sign. This means that government expenditure on economic services and per capita expenditure on other social and community services contribute positively in alleviating poverty in Nigeria. While Fiscal Deficit which represents the level of good governance impacts negatively on economic growth, this implies that (FD) does not contribute to alleviating poverty in the short run but does at the long run. However, this paper maintained that continuous improvement and re-structuring of programmes targeted at alleviating poverty through increase in capital expenditure on economic, social and community services and qualitative governance would alleviate poverty in Nigeria.

Keywords: Poverty Alleviation Programmes, Economic growth, Nigeria.

1.0 Introduction

Poverty alleviation is one of the most difficult challenges facing any country in developing world where, on the average, majority of the population is considered poor. Evidences 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% in 1980 to 46% in 1985 and to 67% in 1996, by 1999 it increased to more than 70% (Baghebo, 2001). Although the Nigeria economic report released in July 2014 by the World Bank put poverty rate at 33.1% for a country with massive wealth and a huge population to support commerce. The report seems inconsistent with reality. Income inequality worsened from 0.43 to 0.49 between 2004 and 2009. The report also shows that, the dept and severity of poverty is more in the rural than in the urban.

Poverty alleviation programmes in Nigeria are means through which the government aims to revamp and reconstruct the economy. The high incidence of poverty in the country has made poverty alleviation strategies important policy options over the years with varying results. Poverty alleviation strategies ranging from Operation Feed the Nation of 1978, the Green revolution of 1982, the directorate of Foods, Roads and Rural Infrastructures (DFRI), the National Directorate for Employment (NDE), Poverty Alleviation Programme (PAP), up to the national poverty eradication Programme, (NAPEP) were all attempts made by various governments in the country to curb the menace of poverty.

It has been known in Nigeria that every government embarks on one form of poverty alleviation programme or the other. However, what has remained unanswered is the extents to which these programmes have impacted on the poor or how far these programmes have successfully reduce the rate of poverty in Nigeria.

Recent studies on the subject poverty and its reduction agencies as well as programmes indicate that considerable gap exists between the target objective – alleviating or eradicating poverty – and achievement. It seems that the efforts of various governments are ineffective and therefore not much has been done to actualize the benefits. For poverty reduction agencies, their results do not seem to justify the huge financial allocations to them. Poor people's perceptions of formal poverty reduction institutions are largely that of ineffectiveness and irrelevance in their lives as government poverty alleviation activities contribute little in their struggles to survive and rarely help them to escape poverty. More disturbing is the fact that despite the colossal amount of resources committed to those programmes, the poverty situation aggravates, and more and more people fall into the poverty region instead of escaping.

Achieving significant results in reducing poverty often hinges on what is done, how it is done, when it is done and whom it is targeted at. It is obvious from several studies that Poverty Reduction Strategies in Nigeria have failed to achieve their stated objectives. It therefore requires concerted efforts by all to contribute to the success of this all-important but elusive goal. Such efforts can only be meaningful if it stems from an empirical study in order to support the government to realize the global lofty objective of eradicating poverty by the year 2019.

1. The study is expected to be a concerted effort to identify, articulate and highlight the existence, the causes and effects of poverty in Nigeria.
2. It is a quest to streamlining poverty alleviation strategies towards making them more potent.
3. The study is also expected to be of benefit to a number of groups especially stakeholders of poverty alleviation efforts such as public and private sectors strategists, planners, managers, coordinators and monitors of poverty alleviation agencies and the poor who are the ultimate beneficiaries of the efforts and indeed the general public.
4. The research is expected to be part of data bank for operators as well as policy makers in poverty alleviation strategies.
5. It will arouse the interest of academic scholars to conduct more research in this field of study. Achieving significant results in reducing poverty often hinges on what is done, how it is done, when it is done and whom it is targeted at. It is obvious from several studies that Poverty Reduction Strategies in Nigeria have failed to achieve their stated objectives. It therefore requires concerted efforts by all to contribute to the success of this all-important but elusive goal. Such efforts can only be meaningful if it stems from an empirical study in order to support the government to realize the global lofty objective of eradicating poverty by the year 2019.

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The overall objective of the study is to assess the various strategies and tools or instruments used to implement the various poverty alleviation programmes between 1981 and 2013.

Specifically, the objectives are:

1. To examine the role of poverty alleviation programmes on the economic growth of Nigeria;
2. To measure their effectiveness and impact of poverty alleviation programmes on the poor or target group;
3. To identify the various poverty alleviation strategies;
4. To identify reasons for their failure or success; and
5. To suggest and recommend appropriate poverty alleviation strategies for Nigeria.

The research hypotheses that will guide the study are as follows:

H_{01} : there is no significant positive relationship between poverty alleviation programmes and economic growth in Nigeria

H_{02} : Poverty Alleviation Strategies in Nigeria have not succeeded in reducing poverty.

2.1 Literature review

Central to the quest for policies and programmes that will reduce poverty is the issue of the conceptualization of poverty. Conceptually, three dominant views are identified as the meaning of poverty in the literature. The first view sees poverty as a severe deprivation of some basic human needs at the individual or household level.

Put differently, poverty is a material deprivation and this can be assessed in monetary terms. While this conceptualization of poverty makes the quantitative analysis of poverty straightforward and permits comparisons over time and between countries, it fails to recognize non-material forms of deprivation such as illiteracy and social discrimination among others. Aliyu, (2002).

The second view defines poverty as the failure to achieve basic capabilities such as being adequately nourished, living a healthy life, possession of skills to participate in economic and social life, permission to take part in community activities to mention a few. This conceptualization forms the basis for the belief that 'poverty is multi-dimensional'. Although, the capabilities framework offers many advantages over the income/consumption conceptualization, yet it is argued that it requires a greater variety of data and that no consensus exists on how capability deprivation at the household level is to be computed.

The third conceptualization of poverty came into limelight in the 1990s and has a fundamentally different approach to the understanding of poverty: subjective poverty assessments. The core of this view of poverty is that poverty must be defined by the poor themselves or by the communities that poor people live in. According to Chambers (1994), the view came out of the work on participatory appraisal of rural projects and has direct relationship with a publication known as 'Voices of the Poor series'

The subjective view of poverty posits that, poverty has both physical and psychological dimensions. Poor people themselves strongly emphasize violence and crime, discrimination, insecurity and political repression, biased or brutal policing, and victimization by rule, neglectful or corrupt public agencies (Narayan et al, 1999). Estache, Foster and Wodon (2002) explore the connections between infrastructure reforms (especially private sector participation) and poverty alleviation in Latin America. In the study, both macroeconomic and microeconomic linkages between infrastructure reforms and poverty reduction are examined. The authors conclude that service expansion made possible through privatization would lead to poverty reduction if such infrastructural developments were affordable to the poor.

Gomanee et al. (2003) investigate the effects of government expenditure in different sectors on US\$1/day poverty headcount, holding the level of GDP per capita constant. Using cross-country data, the regression estimates indicate that higher government expenditure on education, agriculture and housing and amenities (i.e., water, sanitation and social security) all have a positive and statistically significant impact on poverty when one shifts the distribution of income in a pro-poor direction by holding aggregate income constant.

2.1.1 Classification of Poverty

Poverty can be classified, based on different criteria, as absolute poverty, relative poverty, rural poverty and urban poverty. Absolute poverty is refers to lack of minimum physical requirements for existence; relative poverty on the other hand refer to a situation in which a persons' or households' provision of goods is lower than that of other, Rural poverty is characterized by poor material condition, low level of education, lack of infrastructures, poor health condition, underemployment, low investment and high out-migration. Urban poverty on the other hand is characterized by environmental degradation, overcrowded accommodation, low per capita income, and other problems associated with urban areas such as slums, ghettos and shanties (Baghebo, 2001) Poverty lines according to the FRN (2001) represent the value of basic (food and non food) need considered essential for meeting the minimum socially acceptable standard of living within a given society. Poverty lines can also said to be the minimum generally acceptable standard of living given in unit of currency. Thus, any individual whose income or consumption falls below the poverty line is regarded as poor. This means that there is a minimum acceptable poverty line at which an individual income or consumption falls to be classified as poor. It went further to state levels of line for varying categories of income thus: The most common poverty line for international comparison is US\$1 a day for low income countries US\$2 for middle income and US\$4 for transition economies.

The poverty lines as stated could generate misleading ideas of poverty as most countries' currencies if converting to US\$1 will give significant value for that country to escape the poverty line. This presuppose that most countries have their own poverty line reflecting different social, economic and climate condition to effectively determine what an acceptable minimum income should be. On the other hand, the report of the presidential panel on streamlining and rationalization of poverty alleviation institution and agencies in Nigeria (1999) revealed the fact that the national bureau of statistic may not have carried out its survey based on the US\$1 poverty line but based on the amount of naira required to procure a basket of goods that meets FAO basic standard consumption for existence of 2,100 calories per person per day.

It asserted that any person who earn below N394.40 per annum in 1985 prices can be categorized as poor, while any person who earns below N 197.70 in 1985 prices can be categorized as been extremely poor. These prices have to be varied as prices change for instance, according to the reports in 1996 price translate to about N11, 292.96 and 5,646.48 per person per year for the poor and core poor respectively. Although the income dimension of poverty definition is practically the most fundamental, other incidence of poverty are also important and are equally discussed.

2.1.2 Poverty Alleviation Approaches

There are many approaches to poverty alleviation, some of which are:

Economic Growth Approach: Given the low labour absorptive capacity of the industrial sector, broad based economic growth should be encouraged. This should focus on capital formation as it relates to capital stock, and human capital. Human capital formation has to do with education, health, nutrition and housing needs for labour. This is obvious from the fact that investment in these facets of human capital improves the quality of labour and thus its productivity. Thus to ensure growth that takes care of poverty, the share of human capital as a source growth in output has to be accorded the rightful place.

Basic Needs Approach: This calls for the provision of basic needs such as food, shelter, water, sanitation, health care, basic education, transportation etc. unless there is proper targeting, this approach may not directly impact on the poor because of their inherent disadvantage in terms of political power and the ability to influence the choice and location of government programmes and projects.

Rural Development Approach: this approach sees the rural sector as a unique sector in terms of poverty reduction. This is because majority of the poor in developing countries lives in the area. In addition, the level of paid employment in this area is very low, this means that traditional measures of alleviating poverty may not easily work in the rural sector without radical changes in the assets ownership structure, credit structure, etc. emphasis in this approach to development has focused on the integrated rural development modeling. This approach recognizes a multi-dimensional and therefore requires a multi-pronged approach. The approach aims at the provision of basic necessities of life such as food, shelter, safe drinking water, education, health care, employment and income generating opportunities to the rural dwellers in general and the poor in particular.

Target Approach: This approach favours directing poverty alleviation programmes at specific groups within the country. It includes such programmes as Social Safety Nets, Micro Credits, and School Meal programme.

2.1.3 Poverty Reduction Strategies in Nigeria

In Nigeria, the poverty alleviation measures implemented so far have focused more on growth, basic needs and rural development approaches. They can be looked at from two perspectives; that is those in the pre SAP era and those in the SAP era.

The Pre-SAP Era

During the pre-SAP era, poverty reduction was never the direct focus of development planning and management. Government only showed concern for poverty reduction indirectly. For example, the objectives of the first National Development Plan in Nigeria included the development of opportunities in health, employment and education as well as improvement of access to these opportunities. These objectives, if achieved, could no doubt lead to poverty alleviation. Similarly, the Fourth National Development Plan, which appeared to be more precise in the specification of objectives that are associated with poverty reduction, emphasized increase in real income of the average citizen as well as reduction of income inequality, among other things (Ogwumike1987, 1991, 2001, 2005)

During this era's national development plans, many of the programmes which were put in place in Nigeria by the government had positive effects on poverty reduction although the target populations for some of the programmes were not specified explicitly as poor people or communities. Some of such programmes are, the River Basin Development Authorities (RBDA), the Agricultural Development Programmes (ADP), the Agricultural Credit Guarantee Scheme (ACGS), the Rural Electrification Scheme (RES), and the Rural Banking Programmes (RBP), most of these were designed to take care of such objectives as employment generation, enhancing agricultural output and income, and stemming the tide of rural-urban migration, which no doubt affected poverty reduction.

Despite some significant degree of success made by some of these programmes, most of them could not be sustained. In fact, with time, many of them failed as a result of diversion from the original focus.

For instance, the Rural Banking and the Agricultural Credit Guarantee Scheme at many stages failed to deliver the desired credit for agricultural and rural transportation because a lot of savings were mobilized in the rural areas only to be diverted to urban areas in form of credit/investments.

Other notable poverty reduction related programmes that were put in place in Nigeria before the advent of Structural Adjustment Programme (SAP) include Operation Feed the Nation (OFN) set up in 1977, Free and Compulsory Primary Education (FCPE) set up in 1977, Green Revolution established in 1980, and Low-Cost Housing Scheme. Both OFN and Green Revolution were set up to boost agricultural production and improve the general performance of the agricultural sector among other things. These programmes made some laudable impacts; they enhanced the quality of life of many Nigerians. But the programmes could not be sustained due to lack of political will and commitment, policy instability and insufficient involvement of the beneficiaries in these programmes.

The SAP Era

Conscious policy effort by government towards poverty alleviation began in Nigeria during the era of the Structural Adjustment Programme (SAP). The severe economic crisis in Nigeria in the early 1980s worsened the quality of life of most Nigerians. The government made a determined effort to check the crisis through the adoption of SAP. However, the implementation of SAP further worsened the living conditions of many Nigerians especially the poor who were the most vulnerable group. This made the government to design and implement many poverty alleviation programmes between 1986 and 1993. Also, under the guided deregulation that spanned the period 1993 to 1998, more poverty reduction programmes were put in place by government. Oladeji and Abiola (1998) identified them as: The Directorate for Foods Roads and Rural Infrastructures (DFRRI), the National Directorate for Employment (NDE), Better Life Programme (BLP), and People's Bank of Nigeria (PBN), Community Banks (CB), Family Support Programme (FSP) and the Family Economic Advancement Programme (FEAP).

2.1.4 The Poverty Alleviation Programme (PAP)

This programme was introduced in 2000 to address the problems of rising unemployment and crime rates especially among the youth. The primary objectives of PAP, are as follows;

- (a) Reduce the problem of unemployment and hence raise effective demand in the economy.
- (b) Increase the productiveness of the economy and
- (c) Drastically reduce the embarrassing crime wave in the society.

The targets/components of PAP as identified by Obadan (2001) include the followings;

- Provide jobs for the unemployed,
- Create a credit delivery system from which farmers will have access to credit facilities
- Increase the adult literacy rate from 51% to 70% by 2003
- Shoot up health care delivery system from its present 40% to 70% by year 2003
- Increase the immunization of children from 40% to 100%
- Raise rural water supply from 30% to 60% and same for rural electrification.
- Embark on training and attainment of at least 60% of tertiary institutions' graduates and
- Development of simple processes and small scale industries.

Several measures were put forward in order to achieve the above objectives and they include among others; increase in the salary of public workers, rationalization of organizations and methods within the system, particularly that of the existing poverty alleviation institutions, encouraging and rewarding all deserving Nigerians for industry and enterprise, substantial reduction of avenues for easy and illegitimate acquisition of wealth and the launching of the Universal Basic Education Programme.

2.1.5 Appraisal of Poverty Alleviation Programme (PAP)

Looking carefully at the objectives of PAP, one can deduce that it was designed to touch almost all aspect of poverty ranging from absolute to regional poverty. It was however more specific in curbing unemployment hence raising the income of individuals so that their spending would increase and hence their needs be satisfied. However like in most programmes, PAP was hindered by poor implementation and being short term in nature it lacked continuity. The aim of the programme was defeated as credits given to finance micro enterprises were not utilized by the beneficiaries in such enterprises meaning that the target for employment generation was missed.

PAP was also perceived as initiative of the ruling party's programme and therefore was not given much attention and, in some cases, resisted by chief executives of states controlled by the opposition parties. For example, Obadan (2001) observed that in the year 2000, "there were reports that the Alliance for Democracy (AD) governors of south west zone of the country were apprehensive that the People's Democratic Party (PDP) at the center might have conceived of the PAP for strategic political gains. Indeed there were allegations of AD governors working against the PAP in order to frustrate the PDP federal government. Despite the problems encountered in the course of implementation of PAP, it has succeeded in providing 82,000 jobs to different kinds of people across the country.

2.1.6 National Poverty Eradication Programme (NAPEP)

The programme was introduced in 2001. It was aimed at the provision of "strategies for the eradication of absolute poverty in Nigeria" (FRN, 2001) It was complemented by the National Poverty Eradication Council (NAPEC) which was to coordinate the poverty reduction related activities of all the relevant Ministries, Parastatals and Agencies. The council had the mandate to ensure that the wide range of activities were centrally planned, coordinated and complement one another so that the objectives of policy continuity and sustainability were achieved. The poverty reduction related activities of the relevant institutions under NAPEP have been classified into four, namely;

- Youth Empowerment Scheme (YES) which deals with capacity acquisition, mandatory attachment, productivity improvement, credit delivery, technology and development and enterprise promotion.
- Rural Infrastructure Development Scheme (RIDS) this deals with the provision of potable and irrigation water, transport (rural and urban), rural energy and power support
- Social Welfare Service Scheme (SOWESS) this deals with special education, primary healthcare services, establishment and maintenance of recreational centers, public awareness facilities, youth and students hostels development, environmental protection facilities, food security provisions, micro and macro credits delivery, rural telecommunications facilities, provision of mass transit, and maintenance culture.
- Natural Resource Development and Conservation Scheme (NRDCS) this deals with harnessing of agricultural, water, solid mineral resources, conservation of land and space particularly for convenient and effective utilization by small scale operators and the immediate community.

2.2 Theoretical Framework

In the literature, three theories abound on the effectiveness of public infrastructure on poverty reduction. The first theory argued that investment in education and health, which embraces investment in education and health, is more relevant to the goal of poverty reduction than physical infrastructure (Jahan and McCleery, 2005; Ogun, 2010). The second theory upholds that investment in both physical and social infrastructures reduce poverty (Jalilian and Wesis, 2004). The last theory maintains that investment in infrastructure in general has no effect in poverty (Jerome and Ariyo, 2004).

As earlier analyzed, infrastructure is important for ensuring that growth is consistent with poverty reduction. Access to at least minimal infrastructure services is one of the essential criteria for defining welfare. The poor can be identified as those who are unable to consume a basic quantity of clean water and who are subject to unsanitary surroundings with extremely limited mobility or communications beyond their immediate settlement. As a result they have more health problems and fewer employment opportunities. Access to clean water and sanitation has the most obvious and direct consumption benefits of reduction in mortality rate and morbidity. It also increases the productive capacity of the poor and can affect men and women in different ways. For example, the poor women in particular must commit large shares of their income or time to obtaining water and fuel as well as to carrying crops to the market. This time could otherwise be devoted to high priority domestic duties such as child care, or to income earning activities. Having access to transport and irrigation can contribute to higher and more stable incomes, enabling the poor to manage risks.

It is a reality to assert that, raising the productivity of farms and improving rural transport system, the incomes of rural workers will increase and food prices will reduce thereby making the living condition of the urban poor better off. These were the results and consequences of the integrated rural development launched by 'the Babangida's administration in 1985. An adequate transport network reduces regional variation in food prices and the risk of famine by facilitating the movement of food from surplus to deficit areas.

It has been observed (from studies carried out by the USA Agency for International Development in Botswana, Cape Verde and India) that the construction and maintenance of some infrastructure - especially roads and waterworks-can contribute to poverty reduction by providing infrastructure and would lead to a higher level of economic development. Relaxation centre, city halls, biological and botanical gardens designed for easing stress and holiday travel also helps indirectly in the workforce contribution to economic development. In 1984, 81 percent of the total populations of household's in Nigeria were provided with electricity, out of 376km per million persons paved roads in 1988, 60 percent was in good condition (world development indicators. 1994). As these indicators improved, economic welfare and other development indicators improved notably.

While there is still no consensus on the magnitude or on the exact nature of the impact of infrastructure on growth many studies on the topic have concluded that the role of infrastructure on growth is substantially significant, and frequently greater than that of investment in other forms of capital (World Development Report, 1994). In a way, one would suggest that improvement in infrastructure will lead, to a higher economic growth. The relationship has not been confirmed yet in many developing countries, the provision of improved infrastructures, which leads to improvement in infant mortality rate, leading to rise in population figure, which consequently results in increased level of unemployment in developing countries would not lead to increase economic growth but would instead lead to a fall in real per capita: income (Real GNP/Population). It should however be noted that, public infrastructures benefits outweighs its consequences.

Sectoral studies focusing on rural infrastructures effect on the local economy in certain developing countries have revealed more about the nature of the apparent benefits. It has been discovered by researchers that lower transport costs, increased farmers' access to market can lead to considerable agricultural expansion and that modern irrigation methods brought higher yields. At the same lime, because, improved communications (through roads) lowered banks' cost of doing business, banks expanded lending to fanners and farmers used the funds to buy fertilizer, further increasing yields.

While households with electricity increased from 48 percent to 81 percent in 1984 and the population with access to safe water grew to 42 percent, of the total population in 1990 (World Development Indicators, 1994), growth of production averaged 4.6 percent in between 1970-80 and 2.3 percent in between 1980-92. These relationships suggest a potential payoff in terms of economic growth, yet they do not provide a basis for prescribing appropriate levels, or sectoral allocations, for infrastructure investment. Other evidence confirms that investment in infrastructure alone does not guarantee growth; several studies have revealed a low level returns for infrastructures on economic growth (Aschauer, 1993).

A number of studies have found also the causation runs in both directions (growth and infrastructures). Yet more sophisticated estimates that address these issues either have concluded that the positive results were not much affected by different economic methods or have found no noticeable impact of infrastructure on growth, a study of the economic returns to individual World Bank project shows that, when overall economic policy conditions are poor the returns to infrastructure investment decline. Returns are lower by 50 percent or more in countries where conditions are more favourable. In this case, most developing countries (Nigeria inclusive) fall into the category of countries with restrictive trade policies and therefore would not expect infrastructure development impact, felt much on the indices of economic growth (GDP).

Infrastructure spending cannot, therefore overcome a weak climate therefore overcome a weak climate for economic activity immediately, but overtime, an improved or multiplier effect on productive activities. It has been noted also that the adequate quantity and reliability of infrastructure are key factors in the ability of countries to compete international trade even in traditional commodities. In pact, because of infrastructure problems, shipping costs from African to Europe are 30 percent higher for plywood than those from Asia to Europe.

These costs are being borne by exporters. In this sense, imported items cost relatively higher than what would obtain in Asia. The completion for new export markets is especially dependent on high-quality infrastructure. During the past two decades, increased globalization of world trade policies has arisen not only from the liberalization of trade policies in many countries but also from major advances in communications, transport, and storage technologies. These advances center on management of logistics to achieve cost savings in inventory and working capital and to respond in inventory and working capital and to respond more rapidly to customer demand. It is in this capacity that we can justify the direct relationship between infrastructure investments and a sustained economic growth.

3. Methodology and Data

3.1 Research Method

Macroeconomic time series are often times trending and non-stationary. Estimating a regression with two or more non-stationary, I (1) series often times lead to the spurious regression phenomenon. But if we can find a linear combination of these series that is stationary then they could be said to have a long-run relationship. The appropriate estimation technique is then to incorporate the long-run equilibrium into a short-run dynamic model. Such models are error correction model. If the variables of interest are two we talk of the Engel-Granger (EG) approach but if they are more than two we talk of the Johansen's approach. However, a more flexible approach which allows for a mixture of I(1) and I(0) explanatory variables has been developed by Pesaran, Shin & Smith (2001) known as the Bounds Testing (Autoregressive Distributed Lag, ARDL). This study therefore adopts the Bounds Testing (Autoregressive Distributed Lag, ARDL) approach to long-run analysis.

The use of the bounds technique is based on three validations. First, Pesaran *et al.* (2001) advocated the use of the ARDL model for the estimation of the level of relationships because the model suggests that once the order of the ARDL is determined the relationship can be estimated by OLS. Second, the bounds test allows a mixture of I (1) and I(0) variables as regressors. Third, this technique is suitable for small or finite sample size (Pesaran *et al.*, 2001).

The bounds testing approach involves estimating the following equation

$$\Delta y_t = \mu + \phi y_{t-1} + \delta x_{t-1} + \sum_{i=1}^p \gamma_i \Delta y_{t-i} + \sum_{i=1}^p \phi_i \Delta x_{t-i} + \varepsilon_t \quad . \quad . \quad . \quad (1)$$

Where:

y_t = is the dependent variable

x_t = explanatory variables

Δ = First-difference operator.

The lag length p is determined empirically using the model selection criteria of Akaike information.

The test hypothesis is

$$H_0: \phi = \delta = 0 \text{ (no long - run relationship)}$$

Against the alternate

$$H_0: \phi \neq \delta \neq 0 \text{ (a long - run relationship exists)}$$

After estimating (1), the Wald test (F -statistic) is computed to test for the long-run relationship between the variables. The computed F -statistic value is then evaluated with the critical values tabulated in Table CI (iii) of Pesaran *et al.* (2001). According to Pesaran *et al.* (2001) the lower bound critical values assumed that the explanatory variables x_t are integrated of order zero, or I(0), while the upper bound critical values assumed that x_t are integrated of order one, or I(1). Therefore, if the computed F -statistic is smaller than the lower bound value, then the null hypothesis is not rejected and the conclusion is that there is no long-run relationship between x and y . Conversely, if the computed F -statistic is greater than the upper bound value, then x and y share a long-run level relationship. But, if the computed F -statistic falls between the lower and upper bound values, then the results are inconclusive. If a long-run relationship is established then the long-run impact of x on y can be derived as δ/ϕ and the short-run impact is simply the sum of the coefficients on change in x_{t-i} .

3.2 Data Sources

To capture the effect of poverty alleviation programmes on economic growth, Economic growth was proxied by the RGDP as the dependent variable while Real per Capita Expenditure on Economic Service and Real per Capita Expenditure on Social and Community Services are used as proxy for Poverty alleviation. The data covers the period from 1981 to 2013. All the variables are taken on annual basis from various issues of Central bank of Nigeria (CBN) Statistical Bulletin.

3.2.1 Model Specification

The functional form of the model is stated as:

$$PRGDP = f(PRCEA, PRCESCS, FD) \quad . \quad . \quad . \quad (2)$$

Where:

PRGDP = real per capita gross domestic product

PRCEA = real per capita expenditure on economic services used as proxy for programmes on poverty alleviation.

PRCESCS = real per capita expenditure on social and community services, another proxy for programmes targeted at alleviating poverty.

FD = fiscal deficit

The extent to which programmes targeted at alleviating poverty leads to poverty reduction through Economic growth depends on the quality of governance and the institutional setting.

Therefore, the quality of good governance proxy by level of fiscal deficit (FD) is included as an important explanatory variable on the model.

Following the bounds testing approach the following ARDL model is estimated:

$$\Delta PRGDP_t = \alpha_0 + \alpha_1 PRGDP_{t-1} + \alpha_2 PRCEA_{t-1} + \alpha_3 PRCESCS_{t-1} + \sum_{i=1}^p \gamma_i \Delta PRGDP_{t-i} + \sum_{i=1}^p \varphi_i \Delta PRCEA_{t-i} + \sum_{i=1}^p \beta_i \Delta PRCESCS_{t-i} + \sum_{i=1}^p \theta_i \Delta FD_{t-i} + \varepsilon_t \quad (3)$$

Where other variables remain as previously defined:

Δ = First difference operator

p = maximum lag length to be used

ε = a random error term

4. Results and Discussion

Pre-estimation (unit root test) results are presented on table 1. The results showed that whereas PRGDP, PRCEA and FD became stationary after differencing once, I(1) PRCESCS was stationary at level, I(0). This therefore validated the use of the Bounds Testing technique. Results for the bounds testing techniques are presented on tables 2 and 3. Whereas table 2 has the ARDL results, results for the Wald test F-statistics is presented on table 3.

Results Table 1: Unit Root Test

Variable	ADF-Statistic		PP-Statistic		Lagged difference	Model	~I(d)
	Level	1 st Diff.	Level	1 st Diff.			
PRGDP	-1.6978	-4.4497*	-1.7803	-4.3507*	0	Trend	I(1)
PRCEA	-3.0720*	-	-2.9989	-8.0740*	0	Trend	I(1)
PRCESCS	-3.8952**	-8.8023*	0.0251**	-9.0535*	0	Trend	I(0)
FD	-1.2852	-4.9607*	-1.3193	-4.9301*	0	Trend	I(1)

Source: Author’s computation

The short-run results showed that fluctuations in PRCEA and PRCESCS contributed positively to changes in PRGDP but FD showed negative sign. Specifically, one percent change in the fluctuations of PRCEA and PRCESCS increased changes in PRGDP by 0.01 and 0.28 percent, respectively but a percentage increase in FD retards PRGDP by 1.63E-07 percent. The F-statistic of the Wald test (4.1612) presented on table 3, is greater than the 95% upper bound critical value (3.30) with nine (9) estimated parameters. This therefore showed the existence of a long-run relationship between PRGDP, PRCEA and PRCESCS. The coefficient of PRGDP (-1) showed a negative sign as expected. Specifically, it indicates that PRGDP adjusts to long-run equilibrium at the speed of 12 percent each period. In other words 12 percent of previous errors are corrected in the current period.

Further results showed that, in the long-run after steady state is attained a percentage increase in PRCEA and FD increases PRGDP by 0.457 (-0.055124/-0.120541) and 3.11E-07 (-3.75E-07/-0.120541) percent, respectively. Also, a percent increase in PRCESCS retards PRGDP by 3.544 (0.427217/-0.120541) percent. The R-squared (0.5588) indicate that about 56 percent of the changes in PRGDP is captured by the model, which is a good fit. The overall regression is also statistically significant as indicated by the F-statistic (3.007) and F-statistic probability value (0.023). Further, the AR (1) process is statistically not significant and Durbin-Watson statistic (2.197) showed no robust to serial correlation and are therefore relevant for policy analysis.

Table 2: Estimation Results

PRGDP	Coefficient	Std. Error	t-Statistic	Prob.
D(PRCEA)	0.011163	0.043772	0.255029	0.8014
D(PRCESCS)	0.281284	0.173299	1.623120	0.1210
D(FD)	-1.63E-07	2.01E-07	-0.808823	0.4286
C	0.000527	0.000434	1.213829	0.2397
PGDP(-1)	-0.120541	0.107839	-1.117790	0.2776
PRCEE(-1)	-0.055124	0.045852	-1.202202	0.2441
PRCESCS(-1)	0.427217	0.195904	2.180743	0.0420
FD(-1)	-3.75E-07	2.02E-07	-1.849772	0.0800
AR(1)	0.061810	0.241075	0.256393	0.8004
R-squared	0.558754	Mean dependent var		0.000102
Adjusted R-squared	0.372966	S.D. dependent var		0.000177
S.E. of regression	0.000140	Akaike info criterion		-14.65382
Sum squared resid	3.73E-07	Schwarz criterion		-14.22561
Log likelihood	214.1534	Hannan-Quinn criter.		-14.52291
F-statistic	3.007483	Durbin-Watson stat		2.197164
Prob(F-statistic)	0.023262			
Inverted AR Roots	.06			

Sources: author's computation

Table 3: Wald Test F-statistic and the Bounds test Critical Values

Bounds Test Critical values	Wald Test F-statistic (4, 19)	
	Lower Bound	Upper bound
1%	3.74	5.06
5%	2.06	3.24
10%	1.83	2.94

Generally, the result shows that in the short-run PRCEA and PRCESCS contributed positively to changes in PRGDP but FD showed negative sign. This mean that government expenditure on economic services and per capita expenditure on other social and community services contribute positively in alleviating poverty in Nigeria. While Fiscal Deficit which represents the level of good governance is negative to economic growth, this implies that (FD) does not contribute to alleviating poverty in the short run.

Furthermore, in the long-run after steady state is attained a percentage increase in PRCEA and FD increases RPGDP by 0.457 (-0.055124/-0.120541) and 3.11E-07 (-3.75E-07/-0.120541) percent, respectively. A percent increase in PRCESCS retards RPGDP by 3.544 (0.427217/-0.120541) percent. This means that per capita expenditure on social and other community services didn't contribute to poverty alleviation due to slack in the long term effort of government in sustaining this programmes. But per capita expenditure on economics services such as infrastructure and FD contribute positively in alleviating poverty.

5. Conclusion and Recommendation

The paper has empirically attempted to investigate the effect of programmes targeted at alleviating poverty: an approach to poverty alleviation and economic development in Nigeria by employing the Bounds Testing (Autoregressive Distributed Lag, ARDL) approach to long-run analysis; using annual data for the period 1981-2013.

The Wald Test F-statistic and the Bounds test Critical Values indicates a long run relationship between poverty alleviation proxy by real per capita expenditure on economic service and real per capita expenditure on social and community services on poverty alleviation and economic development in Nigeria. The results suggest that real gross domestic product in Nigeria increases as government expenditure on poverty alleviation increases. Policies that are designed to foster economic growth will significantly aimed at specifically alleviating poverty. As expenditure on poverty alleviation increases, there is also the increase in gross domestic product, hence a decline in the level of poverty. This means that if government expenditure on poverty alleviation fall, the real gross domestic product of the country will equally fall. This may result to poverty incidence.

Given the result of the analysis therefore, the following are **recommended**:

- a. Government expenditure on economic and other community service should be made more effective in solving the problems of poverty.
- b. That government at all levels (Local Government, State and Federal) in Nigeria should direct attention towards improving the quality of education, making education easily accessible to the poor as well as encouraging entrepreneurship development through small scale businesses.
- c. The issue of corruption has to be tackled holistically in order to ensure that all efforts by government towards alleviating poverty in Nigeria are achieved.
- d. A rural targeted poverty alleviation programme such as improved infrastructural facility will increase commercial agriculture.
- e. Efforts should be made to effectively target the poor in all considerations and at all levels of articulation, implementation, monitoring and review of the poverty alleviation strategies
- f. Finally, various poverty alleviation programmes of government should be made public and informative. Poverty alleviation institutions should be more accountable for the failure or success.

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Appendix

Wald Test:

Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	4.161234	(4, 19)	0.0138
Chi-square	16.64494	4	0.0023

Null Hypothesis: $C(5)=C(6)=C(7)=C(8)=0$

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(5)	-0.120541	0.107839
C(6)	-0.055124	0.045852
C(7)	0.427217	0.195904
C(8)	-3.75E-07	2.02E-07

Restrictions are linear in coefficients.

Table 1: The Bounds Testing Critical Values (Table CI (iii) of Pesaran *et al.* (2001))

K	90%		95%		97.5%		99%		Mean		Variance	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
0	6.58	6.58	8.21	8.21	9.80	9.80	11.79	11.79	3.05	3.05	7.07	7.07
1	4.04	4.78	4.94	5.73	5.77	6.68	6.84	7.84	2.03	2.52	2.28	2.89
2	3.17	4.14	3.79	4.85	4.41	5.52	5.15	6.36	1.69	2.35	1.23	1.77
3	2.72	3.77	3.23	4.35	3.69	4.89	4.29	5.61	1.51	2.26	0.82	1.27
4	2.45	3.52	2.86	4.01	3.25	4.49	3.74	5.06	1.41	2.21	0.60	0.98
5	2.26	3.35	2.62	3.79	2.96	4.18	3.41	4.68	1.34	2.17	0.48	0.79
6	2.12	3.23	2.45	3.61	2.75	3.99	3.15	4.43	1.29	2.14	0.39	0.66
7	2.03	3.13	2.32	3.50	2.60	3.84	2.96	4.26	1.26	2.13	0.33	0.58
8	1.95	3.06	2.22	3.39	2.48	3.70	2.79	4.10	1.23	2.12	0.29	0.51
9	1.88	2.99	2.14	3.30	2.37	3.60	2.65	3.97	1.21	2.10	0.25	0.45
10	1.83	2.94	2.06	3.24	2.28	3.50	2.54	3.86	1.19	2.09	0.23	0.41

Source: Pesaran *et al.* (2001).