Agricultural Production and Economic Growth in Nigeria: Implication for Rural Poverty Alleviation

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Abstract

This research was carried out to provide empirical information on the relationship between agricultural production and the growth of Nigerian economy with focus on poverty reduction. Time series data were employed in this research and the analyses of the data were done using unit root tests and the bounds (ARDL) testing approach to cointegration. The result of the data analysis indicated that agricultural production was significant in influencing the favourable trend of economic growth in Nigeria. Despite the growth of the Nigerian economy, poverty is still on the increase and this calls for a shift from monolithic oil-based economy to a more plural one with agriculture being the lead sector. It was recommended that pro poor policies should be designed for alleviating rural poverty through increased investments in agricultural development by the public and private sector.

Keywords: agriculture, cointegration, development, economic growth, poverty
JEL: E31, O11, O47, O55, Q10

1 Introduction

With 75% of the world's poor in rural areas and most of them dependent on farming, agriculture must be part of world economic growth, poverty reduction, and environmental sustainability (UNDP, 2012). Agriculture is critical to achieving global poverty reduction targets and it is still the single most important productive sector in most low-income countries, often in terms of its share of Gross Domestic Product and almost always in terms of the number of people it employs (IDA, 2009). In countries where the share of agriculture in overall employment is large, broad-based growth in agricultural incomes is essential to stimulate growth in the overall economy, including the non-farm sectors selling to rural people. Hence, the ability of agriculture to generate overall GDP growth and its comparative advantage in reducing poverty will vary from country to country (FAO, 2012). The majority of the poor and food insecure in Africa live in rural areas, and most of them depend on agriculture for their livelihoods. To support broad-based poverty reduction and food security in Africa, smallholder agriculture must be a central investment focus (GARVELINK et al., 2012). The sheer size of agriculture in most African economies suggests that strategies designed to promote the early stages of economic growth cannot ignore agriculture. The promotion of the rural economy in a sustainable way has the potential of increasing employment opportunities in rural areas, reducing regional income disparities, stemming pre-mature rural-urban migration, and ultimately reducing poverty at its very source (ANRÍQUEZ and STAMOULIS, 2007). The potential of agriculture to generate a more pro-poor growth process depends on the creation of new market opportunities that most benefit the rural poor (HANJRA and CULAS, 2011). Nigeria is a vast agricultural country "endowed with substantial natural resources" which include: 68 million hectares of arable land; fresh water resources covering about 12 million hectares, 960 kilometres of coastline and an ecological diversity which enables the country to produce a wide variety of crops and livestock, forestry and fisheries products (AROKOYO, 2012). Poverty in Nigeria is concentrated in rural areas, which are home to more than 70% of the nation's poor. Development indicators for rural areas lag behind those for urban areas: incomes are lower, infant mortality rates are higher, life expectancy is shorter, illiteracy is more widespread, malnutrition is more prevalent, and greater proportions of people lack access to clean water and improved sanitation services (TSIGAS and EHUI, 2006).

One sector that has a critical role to play in poverty reduction in Nigeria is the agriculture sector as over 40% of the GDP comes from the sector and it employs about 60% of the working population (NWAFOR et al., 2011). However, the agriculture sector has the highest poverty incidence and tackling poverty entails tackling agricultural underdevelopment. Economic growth in Nigeria has largely been accounted for by resilient agricultural growth associated with performance in four constituent sub-sectors: crops, livestock, fisheries and forestry (EBOH et al., 2012). While the agricultural sector may have in recent years contributed significantly to improved growth performance in Nigeria, its actual contribution appears to be much short of overall potential.

Although several studies have outlined the theoretical relationship between agriculture and economic growth, disagreements still persist (AWOKUSE, 2009). The causal dynamics between agriculture and economic growth is an empirical question worthy of further investigation. As TIMMER (2005) noted, part of the controversy of the role of agriculture in development stems from the fact that structural transformation is a general equilibrium process that cannot be explained by looking at agriculture alone. The issue of how and under what conditions agriculture is a driving force of rural growth has received scant attention or has given mixed messages including in the position of major multilateral financing institutions (ANRIQUEZ et al., 2003). Despite the myriads of existing literature on the between agriculture and economic growth across the globe and in particular sub-Saharan Africa, there exists a relative dearth of empirical information on the relationship between agriculture and economic growth in Nigeria with a bigger picture on rural poverty. Therefore, this research was designed to fill the existing research gap by providing empirical information on agriculture-economic growth nexus and its implication for poverty reduction.

2 Literature Review

2.1 Agriculture and Economic Growth Linkages

Scholarly literature exists on the relationship between agriculture and economic growth (JOHNSTON and MELLOR, 1961; THORBECKE and JUNG, 1996; DATT and RAVALLION, 1998; IRZ et al., 2001; GOLLIN et al., 2002; TIMMER, 2002; THIRTLE et al., 2003; TIFFIN and IRZ, 2006; SANDRI et al., 2007; WORLD BANK, 2008). Growth in agricultural output can fuel growth in the non-agricultural economy through a variety of mechanisms, some direct and some indirect. Previous studies have concentrated on market-based inter-sectoral linkages as the source of agriculture's contribution to economic growth. JOHNSTON and MELLOR (1961) observe that agriculture contributes to economic growth and development through five inter-sectoral linkages.

The sectors are linked via: (i) supply of surplus labor to firms in the industrial sector; (ii) supply of food for domestic consumption; (iii) provision of market for industrial output; (iv) supply of domestic savings for industrial investment; and (v) supply of foreign exchange from agricultural export earnings to finance import of intermediate and capital goods. BLOCK and TIMMER (1994) added a short list of non-market based inter-sectoral linkages through which agriculture contributes indirectly to economic growth. These linkages arise from governmental learning by doing, increased economic stability, food security, and the relative efficiency of rural household decision-making. TIMMER (1995) also emphasized the importance of indirect non-market linkages that improves the quality of the major production factors (labor and capital). He observes that agriculture indirectly contributes to economic growth via its provision of better caloric nutrient intake by the poor, food availability, food price stability, and poverty reduction. He argued that the role of agriculture has been underestimated because of data limitations that preclude explicit quantitative analyses of the indirect effects of agriculture’s contributions to capital and labor efficiency and total factor productivity.

However, agriculture is not always a panacea for economic development and poverty reduction. A country which relies on agricultural export can be adversely affected by global economic shocks (CUONG, 2009). Despite urbanisation, Africa is still a predominantly rural continent, with more than 60% of 906 million persons living in rural areas in 2005; where most households live in villages and farm, even if they undertake other activities for their livelihoods as well (WIGGINS, 2009). Although Sub-Saharan Africa experienced unprecedented economic growth in recent decades, this did not always translate into less poverty or improved nutrition (PAUW and THURLOW, 2011).

Higher agricultural productivity is vital for economic growth, especially in Africa, because of strong growth linkages and comparative advantages in trade. Higher agricultural productivity can deliver a triple dividend; sustained food security, higher human development and lower pressure on land and water (UNDP, 2012).

2.2 Agriculture and Poverty Linkages

Globally, extreme poverty continues to be a rural phenomenon despite increasing urbanization. Of the world's 1.2 billion extremely poor people, 75% live in rural areas and for the most part they depend on agriculture, forestry, fisheries and related activities for survival (ANRÍQUEZ and STAMOULIS, 2007). World agricultural productivity, particularly in poor countries, is key to global food security and the fight against hunger and poverty (VON BRAUN et al., 2008). There is wide consent that agriculture plays an important role in economic development and poverty reduction (CUONG, 2010). Theoretical postulations and country experiences in developing regions underscore the crucial role of agricultural growth for poverty reduction (EBOH et al., 2012). While growth is essential for poverty reduction, it should be noted that it does not always lead to rapid poverty reduction and two scenarios can serve to illustrate this (NWAFOR et al., 2011). In one scenario, a country grows at 5% p.a. and reduces the poverty rate by 50% after 5 years. In another scenario, the same country can grow at the same 5% per annum and reduce poverty by 10% in 5 years. The growth in the first scenario is normally said to be more pro-poor because it is more able to reduce poverty. This difference in the poverty outcomes of growth results from the sources of growth in the different scenarios. Using Nigeria as an example, a 5% growth coming primarily from the oil sector would have much lesser impact on the poverty level compared to the same 5% which comes primarily from the agriculture sector. This is because the agricultural sector is a major employer of a larger proportion of Nigerian population (USAID, 2009; TERSOO, 2013; DIM and EZENEKWE, 2013). Hence, when growth comes from sectors that most poor people work in (the agriculture sector in Nigeria's case), poverty is reduced faster. However, an exception to this is when the revenue from the oil sector is investment for the development of the non-oil sectors especially agriculture. This is a better option as growth in agriculture induced solely from revenue generated from the agricultural sector cannot be sustained because low produce prices will lead discourage further production. However, growth in agriculture induced from investments from other sectors is very sustainable even when agricultural produce prices falls.

Agriculture's contribution to poverty reduction is sometimes thought to be small, because its relative economic importance usually falls when low-income countries successfully develop and this view is misleading (DFID, 2005). Strong agricultural growth, particularly increased productivity, has been a feature of countries that have successfully reduced poverty. Agriculture contributes to poverty reduction because it provides employment to the poor, who have also generally low skills and education. Growth in agriculture also contributes to greater supply of food-stuffs and lower food prices, and benefits both rural and urban poor (GREWAL and AHMED, 2011).

In most poor countries, especially in sub-Saharan Africa, large majorities of the population live in rural areas and earn their livelihoods primarily from agriculture (GOLLIN, 2009). Beyond productivity and agriculture's role as a productive sector, there are other reasons to focus on African agriculture as a sector that affects growth and poverty. One particularly important issue is the sector's central role in feeding Africa's population – and its impacts on poverty via this channel. In recognition of the serious challenges of African agriculture, the African Heads of State have committed themselves through the Comprehensive Africa Agriculture Development Program, CAADP to urgently address the problems in order to ensure food security and significantly reduce poverty (AROKOYO, 2012). CAADP is "a continental initiative endorsed by the African Heads of States and Government in July 2003 in Maputo, Mozambique as an African-owned framework for the restoration of agricultural growth in Africa through commitment of 10% of their annual budgets to agriculture.

3 Methodology

3.1 Description of Study Area

Nigeria has a population of 166.6 million people (UNDESA, 2011) with a total area of 923,800 sq km and occupies about 14 per cent of land area in West Africa. The country lies between 4^{o}N and 14^{o}N, and between 3^{o}E and 15^{o}E. Nigeria is located within the tropics and therefore experiences high temperatures throughout the year. The mean for the country is 27^{o}C. Average maximum temperatures vary from 32^{o}C along the coast to 41^{o}C in the far north, while mean minimum figures range from 21^{o}C in the coast to under 13^{o}C in the north. The climate of the country varies from a very wet coastal area with annual rainfall greater than 3,500 mm to the Sahel region in the north western and north eastern parts, with annual rain fall less than 600 mm.

3.2 Description of Data

This study employed time series data on the index of agricultural production, real gross domestic product, interest rate, exchange rate and inflation rate extending over the period of 1970 to 2011 in Nigeria. The mean annual time series data of the selected variables were employed in the study. The data were sourced from the publications of CENTRAL BANK OF NIGERIA annual reports and statistical bulletin (CBN, 2008, 2010, 2011) and the NATIONAL BUREAU OF STATISTICS (NBS, 2010).

3.3 Analytical Framework

This study used the autoregressive distributed lag (ARDL) bound testing procedure to examine the cointegration (long run) relationship between economic growth and its determinants(agricultural production, interest rate, exchange rate and inflation rate) as well as the short run dynamics. The bound test is basically computed based on an estimated error correction version of autoregressive distributed lag (ARDL) model, by Ordinary Least Square (OLS) estimator (PESARAN et al., 2001). The bound testing procedure was chosen over other approaches to cointegration due to the following:

(i) The bounds testing procedure does not require that the variables under study must be integrated of the same order unlike other techniques such as the Johansen cointegration approach. It is applicable irrespective of whether the regressors in the model are purely $I(0)$, purely $I(1)$ or mutually cointegrated.

(ii) The bounds testing approach is suitable for small or finite sample data unlike other conventional cointegration approach. Its suitability for small sample study is worth noting given that the sample period of this study is limited (42 years).

(iii) The bounds test is a simple technique because it allows the co-integration relationship to be estimated by OLS once the lag order of the model is identified unlike other multivariate co-integration methods.

(iv) The long and short run parameters of the model can be estimated simultaneously.

An F-test of the joint significance of the coefficients of the lagged levels of the variables was used to test the hypothesis of no cointegration among the variables against the presence of cointegration among the variables. The null hypothesis of no cointegration between economic growth, agricultural production, interest rate, exchange rate and inflation rate was given as:

$$H_0: \varphi_1 = \varphi_2 = \varphi_3 = \varphi_4 = \varphi_5$$

The alternative hypothesis was given as

$$H_a: \varphi_1 \neq \varphi_2 \neq \varphi_3 \neq \varphi_4 \neq \varphi_5$$

The F-test has a nonstandard distribution irrespective of whether the variables are 1(0) or 1(1). PESARAN et al. (2001) put forward two sets of adjusted critical values that provide the lower and upper bounds used for inference. One set assumes that all variables are 1(0) and the other assumes that they are all 1(1). If the computed F-statistics falls above the upper bound critical value, then the null of no cointegration is rejected. If it falls below the lower bound, then the null cannot be rejected. Finally, if it falls between the lower and upper bound, then the result would be inconclusive. The optimal lag length for the specified ARDL model was determined based on the Akaike Information Criterion (AIC).

3.4 Model Specification

The relationship between economic growth, agricultural production, interest rate, exchange rate and inflation rate is expressed implicitly as:

$$ECG = f(AGP, ITR, ECR, IFR) \quad (1)$$

The choice of interest rate, exchange rate and inflation rate as explanatory variables is based on economic theory. These variables are monetary policy variables that determine the rate of economic growth. As, they have been selected in addition to agricultural production to determine their influence on economic growth over the period under study. Trend is not included as an explanatory variable as it was not considered as a variable of interest in this study.

Following PESARAN et al. (2001), the ARDL model specification of equation (1) is expressed as unrestricted error correction model(UECM) to test for cointegration between the variables under study:

$$\Delta lnECG_t = \varphi_0 + \sum_{i=1}^{p} \varphi_1 \Delta lnECG_{t-i} + \sum_{i=0}^{p} \varphi_2 \Delta lnAGP_{t-i} + \sum_{i=0}^{p} \varphi_3 \Delta lnITR_{t-i} + \sum_{i=0}^{p} \varphi_4 \Delta lnECR_{t-i} + \sum_{i=0}^{p} \varphi_5 \Delta lnIFR_{t-i} + \beta_1 lnECG_{t-1} + \beta_2 lnAGP_{t-1} + \beta_3 lnITR_{t-1} + \beta_4 lnECR_{t-1} + \beta_5 lnIFR_{t-1} + u_t \quad (2)$$

Once cointegration is established, the long run relationship is estimated using the conditional ARDL model specified as:

$$lnECG_t = \varphi_0 + \beta_1 lnECG_{t-1}\, \beta_2 lnAGP_{t-1} + \beta_3 lnITR_{t-1} + \beta_4 lnECR_{t-1} + \beta_5 lnIFR_{t-1} + u_t \quad (3)$$

The short run dynamic relationship is estimated using an error correction model specified as:

$$\Delta lnECG_t = \varphi_0 + \sum_{i=1}^{p} \varphi_1 \Delta lnECG_{t-i} + \sum_{i=0}^{p} \varphi_2 \Delta lnAGP_{t-i} + \sum_{i=0}^{p} \varphi_3 \Delta lnITR_{t-i} + \sum_{i=0}^{p} \varphi_4 \Delta lnECR_{t-i} + \sum_{i=0}^{p} \varphi_5 \Delta lnIFR_{t-i} + \delta ecm_{t-1} + u_t \quad (4)$$

Where:

ECG = Economic growth given by real GDP (naira)
AGP = Agricultural production given by the index of agricultural production
ITR = Interest rate (per cent)
ECR = Exchange rate (naira per US dollar)
IFR = Inflation rate (per cent)
φ_0 = Constant term
u_t = White noise
$\varphi_1 - \varphi_5$ = Short run elasticities (coefficients of the first-differenced explanatory variables)
$\beta_1 - \beta_5$ = Long run elasticites (coefficients of the explanatory variables)
ecm_{t-1} = Error correction term lagged for one period
δ = Speed of adjustment
Δ = First difference operator
ln = Natural logarithm
p = Lag length

The analysis of the data was carried out using Eviews 7.2 and Microfit 5.0 statistical packages.

4 Results and Discussion

4.1 Unit Root Test

Although the bounds testing procedure does not require the pre-testing of the variables included in the model for unit roots owing to its suitability irrespective of whether the regressors in the model are purely $I(0)$, purely $I(1)$ or mutually cointegrated, the application of unit root tests in the ARDL procedure might still be necessary in order to ensure that the regressand is integrated of order one and none of the variables is integrated of order 2 or beyond because the computed F-statistics provided by PESARAN et al. (2001) are valid for only variables that are $I(0)$ or $I(1)$.

The unit root test was carried out using Augmented Dickey Fuller (ADF) unit root test and Phillips-Perron(PP) unit root test. The result of the ADF test and PP test as shown in Table 1 and 2, respectively, indicated that ECG, AGP, ECR and ITR were integrated of order one while IFR was integrated of order zero. Therefore, the variables under study are not integrated of the same order and this justifies the use of bounds approach to cointegration over other conventional approaches that require the variables to be integrated of the same order.

Table 1. Result of Augmented Dickey Fuller Test

Variable	ADF Statistic	Lag	Test Critical value(5%)	Decision
Level				
lnECG	-2.108588	0	-3.523623	Non-stationary
lnAGP	-3.001725	0	-3.523623	Non-stationary
lnIFR	-3.829021	0	-3.523623	Stationary
lnECR	-2.002911	0	-3.523623	Non-stationary
lnITR	-2.823300	0	-3.523623	Non-stationary
First difference				
ΔlnECG	-6.203834	0	-3.526609	Stationary
ΔlnAGP	-6.787438	0	-3.526609	Stationary
ΔlnECR	-5.104358	0	-3.526609	Stationary
ΔlnITR	-6.798679	1	-3.529758	Stationary

NB: ln = natural logarithm, Δ = difference operator
Lag length selection was automatic based on Schwarz information criterion (SIC)
Source: authors computation using Eviews 7.2

Table 2. Result of Phillips-Perron Unit Root Test

Variable	PP Statistic	Bandwidth	Test Critical value(5%)	Decision
Level				
lnECG	-1.977430	17	-3.523623	Non-stationary
lnAGP	-3.017888	1	-3.523623	Non-stationary
lnIFR	-3.589997	6	3.523623	Stationary
lnECR	-2.002911	3	-3.523623	Non-stationary
lnITR	-2.865493	4	-3.523623	Non-stationary
First difference				
ΔlnECG	-6.820320	16	-3.526609	Stationary
ΔlnAGP	-6.812494	1	-3.526609	Stationary
ΔlnECR	-5.166240	1	-3.526609	Stationary
ΔlnITR	-9.250334	1	-3.526609	Stationary

NB: ln = natural logarithm, Δ = difference operator
Bandwidth selection was automatic based on Newey-West using Bartlett kernel.
Source: authors computation using Eviews 7.2

4.2 ARDL Bounds Test for Cointegration

The computed F-statistics; F_{lnECG}(lnAGP, lnEXC, lnIFR, lnITR) as shown in Table 3 is = 4.97. This value is above the upper bounds of the critical value of 4.01 at 5% level of significance. This implies that there is cointegration (long run relationship) between economic growth, agricultural production, interest rate, exchange rate and inflation rate and therefore, the null hypothesis of no cointegration between the variables is rejected and the alternative hypothesis is accepted**.**

Table 3. ARDL Bounds Test for Cointegration

Critical value	Lower bound value	Upper bound value
1%	3.74	5.06
5%	2.86	4.01
Computed F-statistic: F_{lnECG}(lnAGP, lnEXC, lnIFR, lnITR) = 4.97		

Note: Critical Values are cited from PESARAN et al. (2001), Table CI (iii), Case 111: Unrestricted intercept and no trend for K = 4.

Source: authors computation using Microfit 5.0

4.3 Estimated Long Run Relationship

The result of the estimated coefficients of the long run relationship in Table 4 indicates that agricultural production has a positive and significant influence on economic growth at 5% probability level. The estimated coefficient of agricultural production (3.3764) implies that 1% increase in agricultural production will increase economic growth by approximately 3.38%, all things being equal. Inflation rate was found to be negatively related to economic growth and significant at 10% with an estimated coefficient of -3.4685. This implies that a unit increase in inflation rate will lead to a decrease of economic growth by a magnitude of 3.4685. Interest rate had the expected negative sign but not significant at 1, 5 and 10% probability levels. Exchange change rate was found to be positively related to economic growth but not significant at the chosen probability levels of this study.

Table 4. Estimated Long Run Coefficients using the ARDL Approach

Dependent variable: LGDP

Regressor	Coefficient	Standard Error	T-Ratio	Prob
LAG	3.3764	1.4272	2.3657 **	0.048
LIF	-3.4685	1.8373	-1.8879 ***	0.087
LIR	-1.3980	3.0809	-0.4537	0.653
LEX	0.4400	0.4178	1.0531	0.299
C	1.3428	0.5422	2.4766	0.037

NB: *P<0.01, **p<0.05, ***P<0.01

ARDL(1,0,0,0,0) selected based on Schwarz Bayesian Criterion

Source: authors computation using Microfit 5.0

4.4 Estimated Short Run Relationship

The results of the short run dynamic coefficients associated with the long run relationships obtained from the error correction model given in Table 5. The signs of the short run dynamic interactions are consistent with that of the long run relationship. The estimated error correction coefficient of -0.6837 (0.003) is highly significant, has the correct sign, and imply a fairly high speed of adjustment to equilibrium after a shock. Approximately 68% of disequilibria from the previous year's shock converge back to the long run equilibrium in the current year. Agricultural production and inflation rate were found to be significant in influencing economic growth at 5 and 10% probability levels, respectively. Interest rate was found to be insignificant just as in the case of the long run relationship. Exchange rate was found to possess similar with the long run relationship but was significant at 10% probability level with an estimated coefficient of 2.8432.

Table 5. Results of the ARDL Short-run Relationship

Dependent variable: LGDP

Regressor	Coefficient	Standard Error	T-Ratio	Prob
ΔLAG	2.8745	1.1767	2.4428 **	0.031
ΔLIF	-1.9236	1.0669	-1.8029 ***	0.065
ΔLIR	-1.8432	2.4113	-0.7644	0.487
ΔLEX	2.8432	1.4708	1.9331 ***	0.059
ecm(-)	-0.6837	0.0212	3.2264 *	0.003

R-Squared	0.6810	R-Bar-Squared	0.6499
S.E. of Regression	0.3236	Residual Sum of Square	3.7696
Log-likelihood	-9.2509	DW-statistic	1.9577
Akaike Info. Criterion	-14.2509	Schwarz Bayesian Criterion	-18.5348
F-Stat. F(4,36)	12.7411[0.0062]		

NB: *P<0.01, **p<0.05, ***P<0.01

ARDL(1,0,0,0,0) selected based on Schwarz Bayesian Criterion

Source: authors computation using Microfit 5.0

4.5 Diagnostic Tests

The outcome of the Lagrange multiplier test of residual serial correlation, Ramsey's RESET test, Jarque Bera normality test and Heteroscedasticity test as presented in Table 6 indicates the model passed all the tests and this implies that it has a correct functional form, its residuals are serially uncorrelated, normally distributed and homoscedastic.

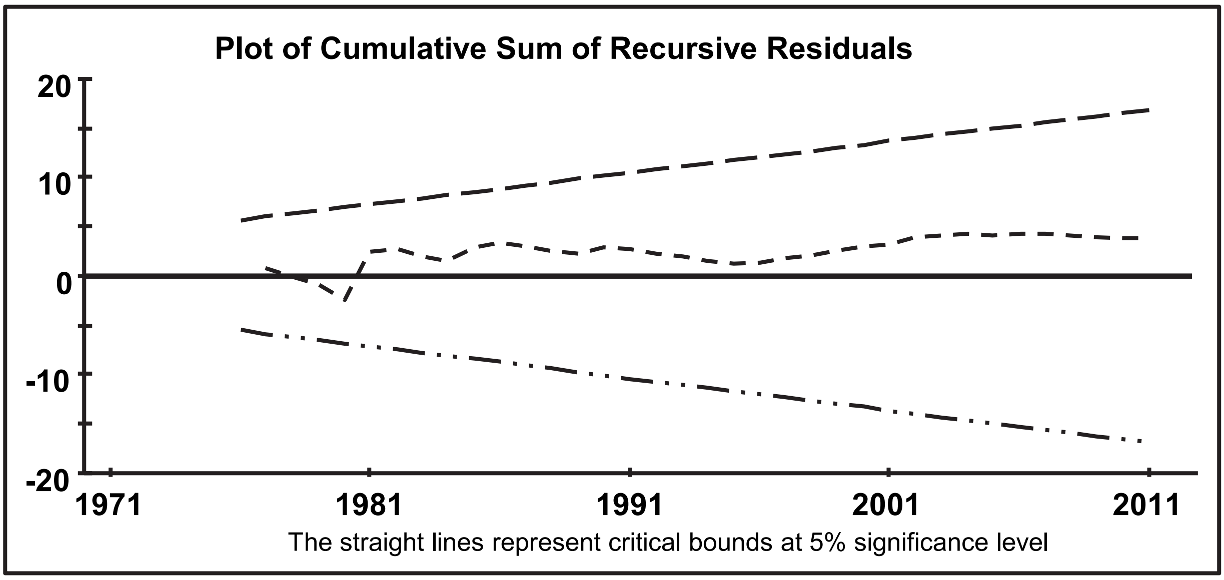
Table 6. ARDL Model Diagnostic Tests

LM Test Statistics		Prob
A:Serial Correlation	χ^2 (1) = 0.6110E-3	[0.980]
B:Functional Form	χ^2 (1) = 0.3270	[0.567]
C:Normality	χ^2 (2) = 1.0199	[0.670]
D:Heteroscedasticity	χ^2 (1) = 1.2183	[0.881]

NB: A:Lagrange multiplier test of residual serial correlation
B:Ramsey's RESET test using the square of the fitted values
C:Based on a test of skewness and kurtosis of residuals
D:Based on the regression of squared residuals on squared fitted values
Source: authors computation using Microfit 5.0

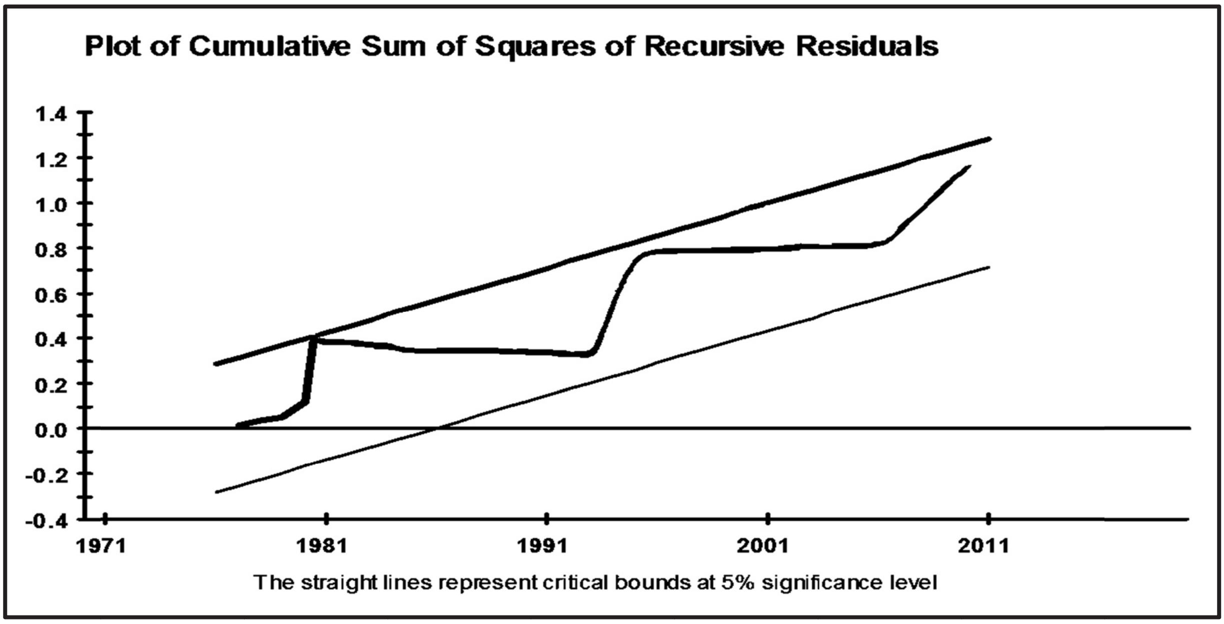
The cumulative sum (CUSUM) and cumulative sum of square (CUSUMQ) plots from a recursive estimation of the model is shown in Figures 1 and 2, respectively. This indicate stability in the coefficients over the sample period as the plot of the CUSUM and CUSUMSQ statistic fall inside the critical bands of the 5% confidence interval of parameter stability.

Figure 1. Test result for model stability (CUSUM Test)



Source: authors computation using Microfit 5.0

Figure 2. Test result for model stability (CUSUM Squares Test)



Source: authors computation using Microfit 5.0

4.6 Implication for Rural Poverty Alleviation

This study has succeeded in establishing the significant influence of agricultural production in enhancing economic growth in Nigeria. However, economic growth does not always translate into poverty reduction as is evident in Nigeria with an increase in the proportion of poor from 54% in 2004 to 69% in 2010 and this is not uncorrelated to the monolithic petroleum-based economy of Nigeria. Therefore, there is the need for appropriate policy measures aimed at diversifying the economy. This calls for well thought out investments in the agricultural sector by all tiers of government and the private sector geared towards ensuring sustainable agricultural production that promotes economic growth and ultimately bring about poverty reduction. This is in line with BADIENE (2008) who noted that agricultural growth has been and will remain, key to reducing poverty and hunger in Africa. However, to significantly reduce poverty, Africa needs to sustain, broaden, and accelerate its recent growth performance and boost its investments in agriculture. Therefore, to achieve economic growth that will translate into poverty reduction, agriculture has to be prioritized as a pivot to the economy because a larger proportion of the population of Nigeria rely directly or indirectly on agriculture as a means of livelihood especially in rural Nigeria.

5 Conclusion

An understanding of the nexus of agricultural production and economic growth in Nigeria with a view to drawing up lessons for poverty reduction was the kernel of this research. Using time series data on the index of agricultural production, real gross domestic product, interest rate, exchange rate and inflation rate, the bounds testing (ARDL) approach to cointegration was employed to analyse the data leading to the key finding of the study. It was established that agricultural production was positively related to economic growth in Nigeria and the relationship was significant both in the long run and in the short run. However, the trend in economic growth of Nigeria have not yielded a tangible improvement in the well-being of a larger proportion of the population especially the rural populace whose primary occupation is agriculture and therefore, an economic growth that translates into poverty reduction, enhanced food security, health status, educational capacity and empowerment of youths and women in rural Nigeria should be embraced. It is recommended that pro poor policies should be designed for alleviating rural poverty and this should be centred on diversifying the Nigerian economy with agriculture as the driver of the economy so that the benefits of economic growth will trickle down to the agro-based rural population that constitute a larger proportion of the population of Nigeria. Therefore, all tiers of government and the private sector should be fully involved in pursuing the course of agricultural development for the growth of Nigerian economy and ultimately poverty reduction.

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