

# **Induced Urbanization, Agricultural Productivity and Poverty Incidence Nexus: A Further Test of Kuznets Hypothesis in Nigeria**

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## ***Abstract***

*This paper examined the nexus between urbanization, agricultural productivity and the incidence of poverty in Nigeria using the Kuznets Hypothesis for the period 1980 to 2013. The result of the analysis once again validates the existence of Kuznet's hypothesis in Nigeria and thus indicates the continuous movement of Nigerians from the rural agricultural community to the urban centres mostly in search of greener pastures. Rural agriculture has not been able to improve the living conditions of many in the sector as its practice remains subsistent and crude leading to the heavy dependent of the Nigerian economy on food imports from other parts of the world. Urbanization has brought about grave challenges in Nigeria as many that left for the cities and towns were unable to find their ways to schools; get jobs or improve their living conditions and consequently an escalation of social vices in the cities and towns in Nigeria. The study advocates the restructuring of development policies in Nigeria to yield the desired goal of sustainable rural development which could engender better living for over 70 percent of Nigerians in this part of the society.*

## **Introduction**

Nigeria is predominantly an agrarian economy with over 70% of its population engaged in agricultural activities. This sector however is challenged in a number of ways including limited capacity building for practitioners, inaccessibility to productive enhancing technologies, poor accessibility to markets and infrastructures. The government of Nigeria has for decades battled the tasks of addressing these challenges and at the same time eradicating poverty especially in the rural areas brought about by the persistent movement of people way from the rural areas to the urban areas. Since the 1970s oil boom in the country, rural-urban migration become commonplace leading to explosion of many cities and towns in Nigeria. Meanwhile, majority of the inhabitants of most cities in Nigeria, come from agrarian rural communities. With the subsistent farming practice in Nigeria especially in the rural communities, rural-urban migration has come to stay as it is driven in most cases by the desire of the people for decent job, quality standard of living; access to variety of products, quest for self-development and modernity amongst other factors. No country has been able to sustain a rapid transition out of poverty without raising productivity in its agricultural sector (if it had one to start—Singapore and Hong Kong are exceptions). The process involves a successful structural transformation where agriculture through higher productivity provides food, employment and even savings to the process of urbanization and industrialization.

Urbanization has been on the increase in both the developed and developing countries (Ukwayi: 2008 and Olalekan: 2010). People in more disadvantaged region of an economy move to the city

centre seeking for greener pastures (Bakere: 1997–2008) The movement has particularly led to rapid growth and development of large cities in terms of population, infrastructure, employment, skilled labour and modernity (Henderson:2002). People who are ordinarily nobody in the rural agrarian communities in Nigeria move to urban centres to secure a future for themselves (Olalekan: (2010). According to UNDP (2010), more than half of the world population lives in urban areas at the end of 2010 and that the figure is likely to rise to 60% (4.9billion) by 2030. According to the UN 2007 Report statement on the world population, the majority of people worldwide will be living in towns or cities, for the first time in history; this is referred to as the arrival of the "urban millennium" or the 'tipping point'. It estimated that 93% of urban growth will occur in developing nations, with 80% of urban growth occurring in Asia and Africa.

However, this mass movement to the cities and towns is not without challenges especially in the developing economies where significant proportion of the movement is taking place. The urban centres in the third world lacked the capacity to accommodate the influx of people from the rural communities and this result into problems of unemployment, poverty, inadequate health care, poor sanitation, urban slums and environmental degradation. There are also concerns for food, security, water supply, shelter and sanitation, especially the disposal of waste (solid and liquid) that the cities produce, which are staggering (UNCED, 1992). The concern is also how to sustain and accommodate the urban growth considering these accompanying urban challenges especially in the developing countries.

Drawing from the early theories that linked urbanization and agricultural poverty incidence, one of the most espoused theories that remained relevant to today's policy is the Kuznet's theory of poverty or rural migration. Kuznet gave an insight into the way urbanization (urban migration) can solve social problems and improve human condition especially those coming from the rural agrarian divide of the society. Many studies have examined the validity of the Kuznets hypothesis in Nigeria but none have analysed the specific contributions of the agricultural sector to rural urban migration and poverty reduction. This study is therefore an attempt at testing the validity of the Kuznets hypothesis in Nigeria and whether agricultural production reduced poverty and improved the living standard of the people in Nigeria. Apart from this introductory section, the remainder of this paper is divided into four parts with the second part being dedicated to conceptual and review of related literatures while the third part is the Analytical Framework and Methodology, the fourth part is the discussion of empirical results, while the conclusion and policy recommendations forms the final part.

## **The Concept of Urbanization**

Urbanization is a global phenomenon that has transformed and continues to alter landscapes and the ways in which societies function and develop (Griffith: 2009). Cities offer the lure of better employment, education, health care, and culture; and they contribute disproportionately to national economies (Rivedi, Sareen and Dhyoni: 2008) Urbanization is one of the major demographic and economic phenomena in developing countries, with important consequences for economic development, energy use, and well being (O'Neal Et al: 2012). According to Potts (2012), definitions of "urban" vary from country to country. Basically, urbanization is the shift from a rural to an urban society, and involves an increase in the number of people in urban areas during a particular period. The United Nations Habitat in 2006 described it as the increased concentration of people in cities rather than in rural areas. Urbanization is the outcome of social, economic and political developments that lead to urban concentration and growth of large cities, changes in land use and transformation from rural to metropolitan pattern of organization and governance. Urbanization also finds expression principally in outward expansion of the built-up area and conversion of prime agricultural lands into residential and industrial uses. This process usually occurs when a nation is still developing.

Literature suggests three features which distinguish the current trend of global urbanization. Firstly, it is taking place mainly in developing countries; secondly it is occurring rapidly and thirdly the severance of its occurrence and impact appear unevenly distributed across the globe, as Cohen (2006) observed. Lagos for instance is projected to have a population of 18.9 million which will place it as the 11th most populous city. This implies that most of the expected urban growth will actually take place in developing countries. Unfortunately, these are the countries that are ill-equipped to handle such enormous surge in population. Consequently, majority of the population increase will be accommodated via informal strategies. Amongst continents and even within a country or a city, urban growth is not uniform. Although the world has attained the 50% urbanization in 2007, Asia will achieve that feat by 2020, while Africa is likely to reach the 50 per cent urbanization rate benchmark in 2035 (UN: 2012). According to the 2011 Revision of the World Urbanization Prospects the urban areas of the world are expected to gain 1.4 billion people between 2011 and 2030, 37 per cent of which will come from China (276 million) and India (218 million). The report predicts that between 2030 and 2050 another 1.3 billion people will be added to the global urban population. With a total addition of 121 million people, Nigeria will be the second major contributor next to India (270 million). Together, these two countries are expected to account for 31 per cent of urban growth during 2030-2050 (Cohen: 2006).

### **The Concept of Poverty**

Poverty in its multidimensional nature is the source of all human and social ills. Poverty could constrain the creative ability of man and make him think of just mere existence which in some circumstances he even fails to barely exist (Aiyedogbon and Ohwofasa: 2012). It could rip man of his self-worth or esteem, it could even spur men into all forms of illegal acts to keep body and mind together. Poverty according to the Department of International Development (DFID) and the World Bank is the lack of access to resources by individuals which leads to a state of powerlessness, helplessness and despair, inability to subsist and protect oneself against economic shocks, social, economic, political and cultural discrimination and marginalization amongst others. In simple terms, poverty is the inability to achieve certain minimal standards of living. Amakom (2008) records that poverty in Nigeria has many dimensions and includes inadequate access to government utilities and services, environmental issues, poor infrastructure, illiteracy and ignorance, poor health, insecurity, social and political exclusion.

### **Incidence of Poverty in Nigeria**

Poverty is still pervasive in Nigeria. Available statistics reveals that the poverty incidence in Nigeria has been on the increase since the 1980s. As reported by the UNDP (2010), between 1980 and 1996, the percentage of the core poor rose from 6.2 percent to 29.3 percent, and declined to 22.0 percent in 2004. According to Omotola (2008), about 70% of the population now lives in abject poverty. There is the geographical dimension of poverty in Nigeria. According to Aigbokhan (2000), poverty is higher in the rural areas than in urban areas. In 2004, the urban population with access to water was 67 percent, while it was 31 percent in the rural areas. In terms of sanitation services, 53 percent of the urban population had access to sanitation services and 36 percent in the rural areas. This is worse than the situation in Cameroon, South Africa, Zambia, and Zimbabwe (World Bank, 2008). Given the figures above, the rural dwellers in Nigeria grapple with difficult living conditions compared to the urban dwellers. This explains why there is prevalence of diseases among the rural poor in the country.

As observed by Garba (2006), the world's per capita income as of 2003 was \$7,140. Compared to this, Nigeria's per capita of \$290 makes the country one of the poorest in the world. This relegated Nigeria to the ranks of Togo (\$270), Rwanda (\$220), and Mali (\$210). Other indicators of development, such as life expectancy, for which Nigeria is ranked 155th out of the world's 177 countries, and infant mortality, for which Nigeria is ranked 148th among 173 countries, were consistent with Nigeria's low rank in income per capita (CIA, 2009). Based on these empirical

data, Nigeria has been classified as a poor nation; a situation which can be described as a bewildering paradox given the vast resource base of the country.

According to Earth Trends (2003), 70.2 percent of the Nigerian population lives on less than \$1 a day, while 90.8 percent lives on less than \$2 a day. The total income earned by the richest 20 percent of the population is 55.7 percent, while the total income earned by the poorest 20 percent is 4.4 percent. This explains the alarming increase in poverty and the sharp inequality between the rich and the poor. Looking at the area with the highest measure of welfare per capita, the leading area in Nigeria, which is Bayelsa with a poverty incidence of 26.2 percent between 1995 and 2006, is still below the leading areas in Ghana (Greater Accra-2.4 percent), Cameroon (Douala, Capital of Littoral-10.9 percent) and South Africa (Baoteng-19.0 percent) (World Bank, 2008).

In terms of the human development index, Nigeria is ranked 158th of the 159 countries surveyed in 2005 (CIA, 2009). Using selected world development indicators, the life expectancy at birth in 2006 for male and female in Nigeria was 46 and 47 years, respectively. Between 2000 and 2007, 27.2 percent of children under five were malnourished. This is alarming compared to 3.7 percent between the same periods in Brazil, another emerging economy. Worse still, the mortality rate for children under five years old is given as 191 per 1,000 births in 2006. This situation is very ridiculous compared to the figures of 69 per 1,000 births in South Africa, 108 per 1,000 births in Togo, 120 per 1,000 births in Ghana, and 149 per 1,000 births in Cameroon (World Bank, 2008). This implies that there is a generalized high level of poverty in the country.

### **Review of Relevant Literature**

Dinye and Kasanga (2013) examined the impact of rapid urbanisation on agricultural lands in developing cities, drawing empirical evidence from Ghana. Contrary to the mainstream view that the polygamous nature of Northern region is the main source of increment in the population and thus urbanisation in Ghana, stakeholders' perception was different as responses indicated that the rapid urbanisation is as a result of increased commercial activities this rapid urbanisation sparked up a succession syndrome where prime agricultural lands have been converted to other land uses believed to be the highest and best use. The pressures of urbanization have negative implications on predominantly poor farming households in Ghana.

Byerlee et al (2012), argued that agriculture was seen as a source of contributions that helped induce industrial growth and a structural transformation of the economy. However, We argue that a new paradigm is needed that recognizes agriculture's multiple functions for development in that emerging context: triggering economic growth, reducing poverty, narrowing income disparities, providing food security, and delivering environmental services. Yet, governments and donors have neglected these functions of agriculture with the result that agriculture growth has been reduced, 75% of world poverty is rural, sectoral disparities have exploded, food insecurity has returned, and environmental degradation is widespread. Mobilizing these functions requires shifting the political economy to overcome anti-agriculture policy biases, strengthening governance for agriculture, and tailoring priorities to country conditions.

Sadoulet et al. (2011) examined the fundamental role that agriculture plays in development and industrial growth, particularly the structural transformation of the economy. The study however argued that due to globalization, integrated value chains, rapid technological and institutional innovations, and environmental constraints, the role of agriculture since changed. Further, it argued that a new paradigm is needed that recognizes agriculture's multiple functions for development in that emerging context: triggering economic growth, reducing poverty, narrowing income disparities, providing food security, and delivering environmental services.

Oyinbo et al. (2014), explored the empirical relationship between agricultural production and the growth of Nigerian economy with focus on poverty reduction using unit root tests and the bounds (ARDL). 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 diversified economy with agriculture being the growth led sector.

Nchuchuwe and Adejuwon (2012), asserts that agriculture contributes immensely to the African economy in various ways including provision of food; supply of raw materials to a growing industrial sector; a major source of employment; generation of foreign exchange earnings; and, provision of a market for the products of the industrial sector among others. The study concluded that the agric sector has a strong rural base; hence, concern for the sector and rural development become synonymous, with a common root and that the bedrock of agriculture and agricultural development in Africa is rural development, without which all efforts at agricultural yield no fruits.

In the same vein, Olajide et al. (2012), analysed the relationship between Agricultural resource and economic growth in Nigeria using the The Ordinary Least Square regression method. The result of the analysis revealed a positive cause and effect relationship between gross domestic product (GDP) and agricultural output in Nigeria. Agricultural sector is estimated to contribute 34.4 percent variation in gross domestic product (GDP) between 1970 and 2010 in Nigeria. The World Bank also corroborated these in 1998 when it said the agricultural sector contributes immensely to the Nigerian economy in various ways, namely, in the provision of food for the increasing population; supply of adequate raw materials to a growing industrial sector; a major source of employment; generation of foreign exchange earnings; and, provision of a market for the products of the industrial sector. (World Bank, 1998).

Timmer (2007), explores the reasons why agriculture takes the back seat on the policy agenda for donors and poor countries particularly in Asia. He adduced that the most important factor for this to be the new understanding that economic growth is the main vehicle for reducing poverty and that growth in the agricultural sector plays a major role in that overall growth as well as in connecting the poor to the growth process. Despite this historical role of agriculture in economic development, both the academic and donor communities lost interest in the sector, starting in the mid-1980s. This was mostly because of low prices in world markets for basic agricultural commodities, caused largely by the success of the Green Revolution in Asia. Thirtle et al. (2001), concluded from a cross-country regression analysis that, on the average, every point increase in labour productivity in agriculture reduced the number of people living on less than a dollar a day by between 0.6 and 1.2 percent. No other sector of the economy shows such a strong correlation between productivity gains and poverty reduction.

(Titilola: 2008 and Nchuchuwe: 2012) opined that, for Nigeria to realize the broad goals of agricultural and rural development, the Nigerian government usually focuses on specific objectives. While the attainment of specific agricultural goals encompasses the provision of adequate food, fibers and industrial raw materials, employment and foreign exchange generation, the goals of rural development embrace in addition a systematic improvement of the other institutional, physical and social infrastructures in such rural communities. Gallup et al. (1997), opined that every point growth in per capita agricultural Gross Domestic Product (GDP) led to a more significant growth in the incomes of the poorest 20% of the population –much greater than the impact of similar increases in the industrial and service sectors. Datt and Ravallion (1996), showed that rural sector growth in India reduced poverty in both rural and urban areas in the country but economic growth in urban areas did little to mitigate poverty in rural India. Warr (2001), provided explained that growth in agriculture in a number of South East Asian economies endanger poverty reduction in these economies, but this was not met with the anticipated industrial growth.

**Theoretical Framework**

The theoretical base for this study is the Kuznets’s model of Poverty. ‘The original Kuznet’s hypothesis examined the relationship between income inequality and income per capita. Kuznets curve shows that as an economy develops, market forces first increase and then decrease economic inequality. The hypothesis was first advanced by economist Simon Kuznets in the 1950s and '60s.

Figure 1: Kuznets curve



The Kuznets curve implies that as a nation

undergoes industrialization – and especially the mechanization of agriculture – the center of the nation’s economy will shift to the cities. As internal migration by farmers looking for better-paying jobs in urban hubs causes a significant rural-urban inequality gap (the owners of firms would be profiting, while laborers from those industries would see their incomes rise at a much slower rate and agricultural workers would possibly see their incomes decrease), rural populations decrease as urban populations increase. Inequality is then expected to decrease when a certain level of average income is reached and the processes of industrialization – democratization and the rise of the welfare state – allow for the trickle-down of the benefits from rapid growth, and increase the per-capita income. Kuznets believed that inequality would follow an inverted “U” shape as it rises and then falls again with the increase of income per-capita.

The Kuznet’s model has been employed with regard to explaining the relationship between Poverty and income (Moller et al: 2003, Beck, Demirguc-kunt and Levine: 2006).

A Kuznet’s model, consisting of a single equation, is given as follows;

$$P = a + bY + cY^2 \dots\dots\dots 1$$

Where: P = poverty and Y = income (GDP)

The model merely states that poverty depends linearly on income and income squared. The signs of and the magnitudes of the coefficients are crucial with regard to the relationship between poverty and income, and for testing for the existence of a Kuznets U style relationship between poverty and income.

- If the coefficient on income, b, and the coefficient of income squared, c, equals zero, then there is no relationship at all between poverty and income

- If the coefficient on income, b, differs from zero, but coefficient on income squared, c, equals zero, then poverty only depends on income, but not on income squared.
- If the coefficient on income (b) is positive and the coefficient on income squared (c) is negative, then a standard Kuznets U style relationship between poverty and income exists.
- If the coefficient on income is negative (b) and the coefficient on income squared (c) is positive, then an inverted Kuznets style relationship is present.

## Methodology

In cognizance of theoretical based adopted (Kuznet's Poverty-Income Relationship), the study employed the Error Correction Modeling (ECM) as the principal methodology. All estimations were conducted using the Classical Least Square (CLS) regression procedure. The stationarity (suitability) profile of the research variables data were appraised using the Augmented Dickey-Fuller (Unit root) criterion, just as the longrun relationship in function was appraised with the Johansson Cointegration criterion. This study employed annual time series data Poverty proxy with GDP per capital, Real Gross Domestic Product (measure for urban size), Inflation Rate (measure urban stability), Exchange Rate (proxy of external urban influence) and agricultural sector output 1970-20012. The data were sourced from National Bureau of Statistics Review, Central Bank of Nigeria (CBN) Statistical Bulletin and Academic Journals.

## Model Specifications

Two models were specified to examine the relational value between poverty and income within this period. The first model considered specifically, the Poverty-Income model, used to establish appraised the existence of Kuznet's law in Nigeria, while the second model incorporated other variables employed in the study as inflation, exchange rate agricultural output (proxy for and food production) and on which detailed analysis was carried on. Below are the baseline models:

### Model I

$$POV = F(RGDP) \dots \dots \dots (1)$$

$$POV = \beta_1 + \beta_2 RGDP + u \dots \dots \dots (2)$$

(-)

### Model II

$$POV = p(RGDP, INFL, EXR, AGOUT) \dots \dots \dots (3)$$

$$POV = \beta_1 + \beta_2 RGDP + \beta_3 INFL + \beta_4 EXR + \beta_5 AGOUT + u \dots \dots \dots (4)$$

(-)                    (±)                    (±)                    (-)

Where:

POV = Poverty proxy with GDP per capital.

RGDP = Real Gross Domestic Product in Nigeria.

INFL= Inflation.

EXR = Exchange Rate.

AGOUT = Output of major agricultural product.

U= Error term

## Empirical Results

This section of the study presents the outcome of analysis as contained in the research methodology. The Kuznet's hypothesis test was conducted for Nigeria, and other complementary tools of analysis used in the study include Augmented Dickey-Fuller (ADF) for Unit Root appraisal, Johansson Cointegration and Error Correction Mechanism for both longrun and shortrun appraisal of the relevant relationships. The results of analyses are presented and discussed below;

### ADF Unit Root Test Results

Variable	ADF Tau Statistic	Order of Integration
LPOV	-4.909826**(0) [-3.661661]	1
LRGDP	2.224042*(6) [-2.960411]	1
LINFL	-3.425809*(9) [-3.653736]	1
LEXR	-1.674024*(5) [-3.653736]	1
LAGOUT	-1.644570**(0) [-3.89194]	1

Note: \* = 1%; \*\* = 5%;

The lagged numbers shown in brackets are selected using the minimum Schwarz and Akaike Information criteria.

An Augmented Dickey-Fuller (Unit Root) test was conducted on the research data variables to appraise their stationarity profile. From the result, it was observed that all the variables Poverty (POV), Real GDP (RGDP), Inflation Rate (INFL), Exchange Rate (EXR) and Agricultural Output (AGOUT) are non-stationary at their levels. However, Poverty, Real GDP, Inflation Rate and Exchange Rate were integrated at their first differences. Agricultural Output was integrated at its second difference. The integration versions of the all variables were solely employed in the Kuznet's Hypothesis evaluation and Error Correction Model estimation.

### Result of estimate based on Kuznet's Hypothesis

Dependent Variable: D(LPOV)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-0.012110	0.008532	-1.419396	0.1664
$\Delta$ LRGDP	0.550118	0.131508	4.183142	0.0002
$\Delta$ LRGDP <sup>2</sup>	-0.338309	0.069348	-4.878431	0.0000
R-squared	0.602439	Mean dependent var		0.006669
Adjusted R-squared	0.575021	S.D. dependent var		0.052670
S.E. of regression	0.034336	Akaike info criterion		-3.816180
Sum squared resid	0.034190	Schwarz criterion		-3.678767
Log likelihood	64.05888	Hannan-Quinn criter.		-3.770632
F-statistic	21.97241	Durbin-Watson stat		1.841059



The Kuznets's Hypothesis Analysis for Nigeria for period 1980 to 2012 is presented above. Kuznets used Income (Real GDP) and Income squared (Real GDP squares) as determinants of poverty. The condition for validation of the Kuznets Hypothesis is that the coefficient of Income (Real GDP) should be positive, while that of Income squared should be negative. Interestingly, an observation of the result in table 4.2 shows that the coefficient of real GDP is positive and different from zero ( $\beta=0.550118$ ;  $p-V=0.0002$ ) and the coefficient of Real GDP squares is negative and different from zero ( $\beta=-0.338309$ ;  $p-V=0.0000$ ). By implication therefore, the result confirms the existence of Kuznet's dogma in Nigeria for the period under study.

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.831516	167.0782	95.75366	0.0000
At most 1 *	0.767473	111.8697	69.81889	0.0000
At most 2 *	0.633109	66.64847	47.85613	0.0004
At most 3 *	0.540437	35.56506	29.79707	0.0097
At most 4	0.210625	11.46323	15.49471	0.1846
At most 5 *	0.124770	4.131311	3.841466	0.0421

The table above presents the co integrated analysis result conducted on the research variables data - Poverty (POV), Real GDP (RGDP), Inflation Rate (INFL), Exchange Rate (EXR) and Agricultural Output (AGOUT) - using the Johansson Cointegration framework. From the result, it was observed that Trace statistic indicated Five (5) cointegrating vectors; thus suggesting that the variables are cointegrated. Specifically, the result shows that Poverty has longrun relationship with the variables under consideration.

**Discussion of Results**

There is no doubt that poverty in Nigeria has remained on the increase over the years. During this period per capita income has increase in nominal terms but in real terms it has lost values. The various policies of the Nigerian aimed at halting this trend has not really yield the desired objectives due mainly to policy inconsistencies and rigidities on the part of policy makers in particular. These various policies and Programmes show the zeal and willingness of successive different governments and in some cases non-government organizations (NGOs). Despite the countless numbers of rural development programmes introduced at different times by successive governments and at various levels of governance. Even with the huge human and material resources employed on some of these policies and programmes, little or nothing is felt in terms of impact at the rural level as many of these policies are thrown away as soon as the government that initiated it before it starts to yield dividends for the rural dwellers (Ogidefa, 2010).

However, over the years, notwithstanding the poor performance of the national economy, a certain middle class has emerged in Nigeria whose income have become substantial as compared to what obtained hitherto. This emerged middle class ply their trade in the banking industry, oil

companies, in the academia, government parastatals; some are successful entrepreneurs who own their companies. Over the period industrial activities have increased in Nigeria presenting so many people the opportunity of advancing their income. The 2013 rebasing of Gross Domestic Product (GDP) in the Nigeria underscored this opportunity as new sectors of entertainment and ICT were discovered. Interestingly, this trend corroborated the outcome of this study that established the existence of Kuznet's hypothesis in Nigeria; a situation where income inequality rises and later declines due largely to industrialization, democratization and the rise of the welfare state that allows the benefit of economic growth reach down to the people and increase their income per capita (Todaro and Smith (2009). Haveman and Schwabish (2000), in Adebisi and Ishola (2006) found that poverty rate was responding significantly to economic conditions. This study corroborates the outcome of the current study that found income to be a significant determinant of poverty on the longrun in Nigeria.

Again, the study tests the relational value between agricultural productivity, urbanization and poverty incidence in Nigeria, interestingly, Agricultural out growth and Real GDP growth lead to declining poverty on the longrun. According to Rodrik (2005) poverty reduction cannot be achieved without economic growth. Therefore, it is increase in the growth of Real GDP that brings about decrease in poverty; thus his study also corroborated the outcome of the current study. By implication, the expansion of economy as evidenced by the GDP rebasing in Nigeria should necessarily lead to reduced poverty through a more even spread of increasing per capita income. Todaro and Smith (2009) conclude that policies focused towards reducing poverty levels must encourage faster growth rate of the economy. The conclusion of this work also underscored the outcome of the current study. Inflation on the other hand has significant positive impact on poverty on the longrun. A result that suggests that the rising cost of living in Nigeria erodes the real value of per capita income thereby worsening the living standard of the people. Exchange rate remains passive in the analysis of the study as it has significant impact on poverty on the long run as well.

## **Conclusion and Recommendations**

This paper examined the validity of the Kuznets Hypothesis in Nigeria with specific focus on the relationships between agricultural productivity and urbanization on the incidence of poverty in Nigeria. The study once again validates the existence of Kuznets hypothesis in Nigeria and thus indicates the movement of Nigerians from the rural agricultural community to the urban centres mostly in search of greener pastures. Rural agriculture has not been able to improve the living conditions and reduce poverty in Nigeria as agricultural practice remains subsistent and crude leading to the heavy dependent of the Nigerian economy on food imports from the other parts of the world. Urbanization notwithstanding its challenges has benefited most people that left the rural community to the urban centres over the years. Although, most of the people that moved to the urban centres live in the city slums, many find their ways to schools; find work and to some extent pull themselves away from the shackles of poverty in the rural areas. The study is not standing against agricultural production; rather it advocates that its practice should be mechanized to enhance productivity and help reduce poverty through employment generation.

The process of urbanization is a continuous process; hence, the government should be proactive to urban development policies and programmes that will accommodate rural-urban migrants at all times. A major realistic approach to the development of Rural based agriculture is the formulation of an integrated model which strategically links the economy of both the rural and the urban centres of together. This model will be all encompassing in the sense that, some of the pull factors in the urban centres- especially basic infrastructures are made available in the rural areas and the government also comes in to regulate output prices in the rural areas to safeguard the income of the sector and mitigate against losses in the case of external shocks that could crop up from their interactions with the market. Appropriate policies for adequate integration of the different strata of the economy, particularly those disadvantaged groups in the rural sectors (the

women, elderly and children), these groups of people could suffer if neglected and hinder the poverty reduction agenda of such policies. This integration is necessary because, no matter the amount of progress made in other sectors of the economy, if the country still experiences higher inequalities as it is, currently, such progress is rootless and it is immaterial in the real sense of the world.

This study concludes therefore that, a more proactive strategy towards development of the agricultural sector is necessary at this point in time in Nigeria. For instance, the land tenure system requires an urgent review to suit modern day needs and ensure a more equitable distribution of land and other rural resources. This step will make these resources that were hitherto unavailable to certain segment of the community to be readily available and further boost productivity. In line with this, cooperative organizations and other interest groups could be established with the aim of empowerment for members- especially in areas such as agricultural techniques and financial skills necessary for modern agricultural practice in the contemporary world. More importantly, a more functional social welfare programmes aimed at building capacity, educating and providing infrastructure at the rural areas in order to strategically link them with the rest of the economy and protect the legitimate interest of the rural dwellers is necessary at this point in time in the economy. These efforts will not only boost agricultural productivity and decongests the cities and towns but also help improve the living standards of over 70 percent of Nigerians that depend heavily on agriculture for survival.

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