ECONOMIC GROWTH AND POVERTY REDUCTION IN NIGERIA

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Abstract

Studies on economic growth indicates that economic growth is essential for poverty reduction, especially when it leads to increase in employment and improvement in opportunities for productive activities among the people that are poor. Using a multiple regression analysis this paper therefore examines the impact of economic growth on poverty reduction in Nigeria by taking into consideration a time subscript and a difference-in-difference estimator that describes poverty reduction as a function of changes in economic growth. The result obtained indicates that the initial level of economic growth is not prone to poverty reduction, while a positive change in economic growth is prone to poverty reduction. To therefore improve and sustain the rate of economic growth in Nigeria from which poverty could be reduced measures, such as, stable macroeconomic policies, huge investment in agriculture, infrastructural development and good governance are suggested.

Keywords: Nigeria, Economic growth, Poverty reduction, Difference-in-difference

1. Introduction

In most cases the growth in the economy of any nation is a clear indication of an improvement in the socio-economic well-being of its people. A deterioration in the growth rate as shown in most developing countries is thus a manifestation of the fall in the standard of living of the people that cumulates into poverty. The Nigeria’s experience (in recent times) is pathetic having witnessed a fall in its Gross Domestic Product (GDP) from an annual average rate of 10.5 percent in 1985 to 3.2 percent in 2007 (ADB 2008). Subsequently, the country also witnessed a decline in its per capita income from US $1600 in 1980 to US $1160 in 2008 (ADB 2010) One of the consequences of these declines is the rate of poverty which has increased from 28.1 percent in 1980 to about 88 percent in 2002 (FOS various issues). In spite of this pathetic situation, it is still apparent to examine the influence of changes in the nation’s economic growth over time on poverty reduction using a time subscript and a difference-in-difference estimator.

The rest of the paper is structured as follows: a conceptual and empirical overview of poverty, poverty reduction strategies and economic growth are discussed in section two. Section three provides the data source and the methodology. Section four presents and discusses the results. Conclusion and recommendations are contained in the last section.

2. Conceptual and Empirical Overview of Poverty, Poverty Reduction and Economic Growth

2.1. Poverty

a. Meaning, Measurement, Causes and Consequences

According to Encyclopedia Americana (1989) poverty can be seen from two different perspectives: (i) “moneylessness” which means both an insufficiency of cash and chronic inadequacy of resources of all types to satisfy basic human needs, such as, nutrition, rest, warmth and body care; and (ii) “powerlessness” meaning those who lack the opportunities and choices open to them and whose lives seem to them to be governed by forces and persons outside their control. That is, in positions of authority or by perceived “evil forces” or “hard luck”

Aku, et. al (1997) saw poverty from five dimensions of deprivation: (i) personal and physical deprivation experienced from health, nutritional, literacy, educational disability and lack of self confidence; (ii) economic deprivation drawn from lack of access to property, income, assets, factors of production and finance; (iii) social deprivation as a result of denial from full participation in social, political and economic activities;

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(iv) cultural deprivation in terms of lack of access to values, beliefs, knowledge, information and attitudes which deprives the people the control of their own destinies; and (v) political deprivation in term of lack of political voice to partake in decision making that affects their lives. Related to the definition of poverty is the measurement of poverty. According to Foster, et .al (1984), the most frequently used measurements are: (i) the head court poverty index given by the percentage of the population that live in the households with a consumption per capita less than the poverty line; (ii) poverty gap index which reflects the depth of poverty by taking in to account how far the average poor person’s income is from the poverty line; and (iii) the distributionally sensitive measure of squared poverty gap defined as the means of the squared proportionate poverty gap which reflects the severity of poverty. Recent studies by United Nations Development Programme (UNDP) advocates the use of the Human Development Index (HDI). According to UNDP (2009), HDI combine three components in the measurement of poverty: (i) life expectancy at birth (longevity); (ii) education attainment and; (iii) improved standard of living determined by per capita income. The first relates to survival-vulnerability to death at a relatively early age. The second relates to knowledge being excluded from the world of reading and communication. The third relates to a decent living standard in terms of overall economic provisioning.

Poverty has various manifestations which include among others: lack of income and productive resources sufficient to ensure sustainable livelihood, hunger and malnutrition, ill health, limited or lack of access to education and other basic services, increased morbidity and mortality from illness, homelessness and inadequate, unsafe and degraded environment and social discrimination and exclusion. It is also characterized by lack of participation in decision making in civil, social and cultural life (World Bank 1990; United Nations 1995) Yahie (1993) reiterates that the factor that causes poverty include; (i) structural causes that are more permanent and depend on a host of (exogenous) factors such as limited resources, lack of skill, location disadvantage and other factors that are inherent in the social and political set-up. The disables, orphans, landless farmers, household headed by females fall into this category; (ii) the transitional causes that are mainly due to structural adjustment reforms and changes in domestic economic policies that may result in price changes, increased unemployment and so on. Natural calamities such as wars, environmental degradation and so on also induce transitory poverty.

Discussing the consequences of poverty Von Hauff and Kruse (1994) highlighted on three major consequences: (i) consequences for those affected. That is, for the people affected, poverty leads to physical and psychological misery caused inter-alia by inadequate nourishment, lack of medical care, a lack of basic and job related education and marginalisation in the labour market; (ii) consequences for the national economies of countries affected arising through the formation of slums in cities, a worsening of ecological problems particularly as a result of predatory exploitation in the agricultural sector and through the failure to use the available human resources; and (iii) consequences for the political and social development of the countries affected. That is, mass poverty tends to preserve or re-enforce the existing power structures and thus also the privileges of a minority of the population. In some cases, this involves corrupt elites. These privileged minorities in the population are not generally interested in structural changes for the benefit of the poor population. As a consequence, mass poverty tends to inhibit the development of democratic structure and a higher level of participation. As observed by Aku, et. al (1997) with mass poverty there tend to be a general loss of confidence in the constituted authority there by generating disrespect and rendering government policies ineffective; political apathy among contending forces; and social disillusion with respect to what the societal objectives are and people’s responsibilities towards the attainment of these objectives.

b. Trends of Poverty in Nigeria

A critical look at some of these causes and consequences discussed above provide some peculiarity with the poverty situation in Nigeria. As indicated in Table 1, the incidence of poverty in Nigeria increased from 28.1 percent in 1980 to 88.0 percent in the year 2002. This percentage rate represent in absolute term 86 million people out of an estimated population of about 116.4 million people. The poverty situation in Nigeria also depicts regional variation. For example, within these periods the poverty rate was higher in the northern agro-climatic zone at 40 percent compared with the middle and southern zones at 38 percent and 24 percent respectively (Francis, et. al.1996; FOS various issues). Similarly, Nigeria’s rank in the Human Development Index in the year 2008 remained low (0.470), being the 158th among 182 countries (ADB 2010). The use of socio-economic indicators like per capita income, life expectancy at birth (years), access to health care services, access to safe water, access to education, access to sanitation facilities, and electricity also depicts the extent of poverty in Nigeria. As indicated in Table 2, the rate of poverty in Nigeria have not shown any remarkable reduction when viewed form these indicators and when compared with some countries in Africa. For instance, apart from the early 1980s when the nation’s per capita income witnessed an increase the situations in the 1990s and early 2000 were pathetic.
The life expectancy at birth (years) does not provide a better level of well-being in the country (47 years in 2007), moreso when compared with those of countries like Mauritius and Tunisia that had 73 and 74 years respectively in 2007 (ADB 2010).

2.2. Poverty Reduction Strategies in Nigeria

To reduce poverty various schools of thought advocates a number of measures. For instance, the Mercantilists laid emphasis on foreign trade which according to them is an important vehicle for the promotion of economic growth and poverty reduction. The Classical economists’ (Adam Smith, David Ricardo, Thomas Malthus, Karl Marx, etc.) views on poverty reduction brought to fore the social changes brought about by technological changes resulting from the industrial revolution that took place between 1750-1850. The early development economists of the 1940s and the 1950s advocate the theory of forced-drift industrialization via Big push, Balanced growth and Labour transfer (Ijaiya 2002). In the 1970s Chenery,et.al (1974) advocates redistribution of income. To them, poverty can better be reduced if radical redistribution of income or land is allowed to take place in view of the interlocking power and self-interest of the rich and the bureaucracy in the handling of the nations’ resources. The World Bank (1983; 1990; 1991) emphasizes on the need for stable macroeconomic policies and economic growth. To the World Bank, sound fiscal and monetary policies will create a hospitable climate for private investment and thus promote productivity which in the long-run would lead to poverty reduction (see also Dollar and Kraay 2000; Sandstorm 1994; Edwards 1995). This approach is what is referred to as pro-poor growth approach to poverty reduction.

The 1980s to the 2000s had witness the introduction of new strategies/approaches to poverty reduction. Key among them are the basic needs and capabilities/entitlements approaches, participatory development, social capital, community self help, good governance and human right approaches to poverty reduction ( Boeninger 1991; Picciotto 1992; Woolcock and Narayan 2000; United Nations 2002; United Nations 2004). In Nigeria, various efforts were made by the government, non-governmental organizations and individuals to reduce poverty in the country. According to Ogwumike (2001) poverty reduction measures implemented so far in Nigeria focuses more attention on economic growth, basic needs and rural development strategies. The economic growth approach focuses attention on rapid economic growth as measured by the rate of growth in real per capita GDP or per capita national income, price stability and declining unemployment among others, which are attained through proper harmonization of monetary and fiscal policies. The basic need approach focuses attention on the basic necessities of life such as food, health care, education, shelter, clothing, transport, water and sanitation, which could enable the poor live a decent life. The rural development approach focuses attention on the total emancipation and empowerment of the rural sector.

In furtherance to his discussions on the measures, Ogwumike (2001) grouped the strategies for poverty reduction in Nigeria into three eras – the pre–SAP era, the SAP era and the democratic era. In the pre-SAP era, the measures that were predominant were the Operation Feed the Nation, the River Basin Development Authorities, the Agricultural Development Programmes, the Agricultural Credit Guarantee Scheme, the Rural Electrification Scheme and the Green Revolution. In the SAP era the following poverty reduction measures were introduced; the Directorate for Food, Roads and Rural Infrastructures, the National Directorate of Employment, the Better Life Programme, the Peoples’ Bank, the Community Banks, the Family Support Programme and the Family Economic Advancement Programme. The democratic era witnessed the introduction of the Poverty Alleviation Programme (PAP) designed to provide employment to 200,000 people all over the country. It was also aimed at inculcating and improving better attitudes towards a maintenance culture in highways, urban and rural roads and public buildings. By 2001 PAP was phased out and fused into the newly created National Poverty Eradication Programme (NAPEP) which was an integral part of the National Economic Empowerment and Development Strategy (NEEDS).

2.3. Economic Growth and Poverty Reduction

According to Herrick and Kindleberger (1983) economic growth involves the provisions of inputs that lead to greater outputs and improvements in the quality of life of a people. Jhingan (1985) refers to it as a quantitative and sustained increase in a country’s per capita output or income accompanied by expansion in its labour force, consumption, capital and volume of trade and welfare (see also Thirlwall 1972).

According to Todaro (1977) and the World Bank (1997) to determine the growth of any country’s economy certain indicators are usually taken into consideration. These indicators include: (i) the nation’s Gross Domestic Product (GDP); (ii) the nation’s per capita income (iii) the welfare of the citizens; and (iv) the availability of social services and accessibility of the people to these services. Gross Domestic Product refers to the total output of final goods and services produced in a country during any given period of time by residence of a country irrespective of their nationality.
Per capita income is the total national income divided by the population of a country. Welfare is usually determined by the increased and sustained flow of goods and services consumed by the people with the resultant effects of an increase in life expectancy at birth, reduction in infant and maternal mortality. Availability of and accessibility to social services include health care services, education and clean water. (see also Thirlwall 1972; Meire 1982; World Bank 2005).

According to Calamitsis (1999), Hernandez-Cata (1999) Ouattara (1999) and Dollar and Kraay (2001) the progress in the above indicators are better determined by the following factors; good rule of law, a well-defined property rights for landholders and informal entrepreneurs, openness to international trade, developed financial markets that strengthens savings mobilization and intermediation and promote sound banking systems, macroeconomic stability, moderate size of government, political stability and security of life, a capable and efficient civil service, a transparent and predictable and impartial regulatory and legal system, and good governance with emphasis in tackling corruption and inefficiency and in enhancing accountability.

Drawn from the views of the neo-classical, Atoloye (1997) reiterates that the progress in these indicators are also determine by a stable macro-economic environment and with the right combination of factors of production most especially labour and capital. Thus, the standard neo-classical model begins from the premise of a fixed technological co-efficient and elasticities of labour and capital that can be altered depending on the combination of the two factors. The state of evolution of technology alters the value of the constant co-efficient at any point in time. The capital component is made up of the stock of human and physical capital. The more the output given the right combination of the basic factors of production the more possibility of extending supply beyond the frontiers of the economic. The production function in the neo-classical growth model is therefore given as:

\[ Y = A^u K^L L^{1-u} \]

Where:
- \( Y \) = Gross Domestic Product
- \( K \) = the stock of human and physical capital
- \( L \) = unskilled labour used in production
- \( 1-u \) = the parameters that represent technology
- \( A \) = constant reflecting the initial static endowment of capability
- \( u \) = the rate of evolution of technology

As a poverty reduction mechanism higher technological capabilities will permit greater amount of output from any given level of input, while the increase in output permitted by improve technology will go along way to increase standard of living of the people and thereby reduce poverty. Atoloye (1997) further stated that economic growth enhancing strategies such as import substitution and export-led growth strategies are also important for poverty reduction. For instance, the emphasis on export-led growth is in the pursuit of the international competitiveness which make it possible for a country to control its domestic production process, increase productivity and generate surpluses which are transmitted across its national borders in return for foreign exchange. The maintenance of the tempo in addition to development of adequate human capital would help to accelerate and sustain income level and enables man to take control of his environment and pave the way for sustainable poverty reduction.

According to FOS (1996) the economic growth approach is based on the assumption that economic deprivation caused by lack of access to property, income, assets, factors of production and finance are the root cause of all poverty and that non-economic causes of poverty are only secondary arising from the primary economic causes. Attention is therefore focused on rapid economic growth as measured by rate of growth in real per capita or per capita national income, price stability and declining unemployment, among others. All these are to be attained through proper harmonization of monetary and fiscal policies. Furthermore, FOS stated that the approach could work through trickle-down effects, which holds that as economic growth continues the effects will progressively trickle down to the core poor and most disadvantaged in the society.

As observed by Edwards (1995) economic growth can reduce poverty through two channels; (i) when there is increase in employment and improvement in the opportunities for productive activities among the poor. This suggest that growth that emphasized labour-intensive strategy is generally more effective in reducing poverty than growth that is biased against export; (ii) when economic growth is associated to increase in productivity it will improve wages and under most circumstance the poor segments of the society will see an improvement in their living condition. This form of approach (economic growth approach) is evidence in most East Asian countries e.g. Japan, Hongkong, South Korea, Malaysia, Singapore and Indonesia, which given the remarkable increase in their GDP, per capita income, welfare and improvement in the quality of their social services, inequality and poverty have reduced.

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For instance, Malaysia was able to reduce income poverty from 29 percent in 1980 to 13 percent in 1995 and lowered its Gini-coefficient from 0.49 in 1980 to 0.46 in 2002. The income of the poorest 20 percent has increased from $431 in 1970 to $14275 in 2010. By 2004, 88 percent and 99 percent of the population have access to health care services and clean water respectively. Infant mortality rate dropped from 16 per 1000 live birth in 1990 to 10 per 1000 live birth in 2006. Life expectancy at birth rose from 70 years in 1990 to 74 years in 2006 (World Bank 1997; World Bank 2008; Wikipedia 2010).

3. Data Source and Methodology

3.1. Data Source

Time series data for the period 1980 to 2008 on household consumption-expenditure proxied as a measure of poverty reduction and Gross National Income (GNI) per capita income, proxied as a measure of economic growth in Nigeria were used. The data were obtained from the African Department Bank Selected Statistics on African Countries for the year 2008, Central Bank of Nigeria Annual Abstract of Statistics for various year, World Bank African Development Indicators for the year 2008 and World Bank World Development Indicators also for the year 2008.

3.2. The Model

In specifying the model emphasis is placed on whether the nation’s economic growth has any significant influence on poverty reduction. Having established this link, the first equation is formulated as:

\[ \ln\text{POVR}_t = f (\ln\text{EG}_t) \]  

(1)

Following Barro and Sala (1995) and Grootaert, Kanbur and Oh (1995) methods of analysis that uses a time subscript (\( t \)) and first difference operator (\( \Delta \)), we therefore model the relationship between poverty reduction and economic growth as follows:

\[ \ln\Delta\text{POVR}_t = f (\ln\Delta\text{EG}_t) \]  

(2)

Equation (2) thus describes the changes in poverty reduction as a function of changes in economic growth.

The introduction of the initial conditions of economic growth in Nigeria, i.e.\((\ln\text{EG}_t)\) into equation (2) therefore gives the following equation:

\[ \ln\Delta\text{POVR}_t = f (\ln\text{EG}_t, \ln\Delta\text{EG}_t) \]  

(3)

The transformation of equation (3) into a linear equation then become:

\[ \ln\Delta\text{POVR}_t = \beta_0 + \beta_1 \ln\text{EG}_t + \beta_2 \ln\Delta\text{EG}_t + U \]  

(4)

Where:

- \( \ln\text{POVR}_t \) = log of the initial reduction in poverty in Nigeria proxied by initial household consumption-expenditure.
- \( \ln\Delta\text{POVR}_t \) = log of changes in poverty reduction in Nigeria proxied by changes in household consumption-expenditure.
- \( \ln\text{EG}_t \) = log of the initial conditions of economic growth in Nigeria proxied by initial per capita income (US$).
- \( \ln\Delta\text{EG}_t \) = log of changes in economic growth in Nigeria proxied by changes in per capita income (US$).
- \( \beta_0 \) = the intercept.
- \( \beta_1 \) and \( \beta_2 \) = the parameter estimates that stands for the speed of convergence or divergence of economic growth in Nigeria, with a positive value indicating convergence of economic growth towards poverty reduction, while a negative value indicates a divergence.
- \( U \) = the error term.

To estimate the model, a multiple regression analysis is used in order to reflect the explanatory nature of the variables. To verify the validity of the model, two major evaluation criteria were used: the a–priori expectation criteria which is based on the signs and magnitudes of the coefficients of the variables under investigation; and (ii) statistical criteria which is based on statistical theory, which in other words is referred to as the First Order Least Square (OLS) consisting of R-square (R\(^2\)), F–statistic and t–test. The R-square (R\(^2\)) is concerned with the overall explanatory power of the regression analysis, the F–statistic is used to test the overall significance of the regression analysis and the t–test is used to test the significant contribution of the independent variables on the dependent (Oyeniyi 1997). Drawn from the model, our a–priori expectations or the expected pattern of behaviour between the dependant variable (\( \ln\Delta\text{POVR}_t \)) and the independent variables (\( \ln\text{EG}_t \) and \( \ln\Delta\text{EG}_t \) are: \( \ln\text{EG}_t > 0, \ln\Delta\text{EG}_t > 0 \).
Indicating that an increase in the initial level of economic growth and a positive change in economic growth are expected to reduce poverty in Nigeria.

4. Results and Discussion

The results of the regression analysis are presented in Table 3. A look at the model shows that it has an $R^2$ of 0.56 which in other words means that 56 percent variation in the dependent variable (InAPOVR$_t$) is explained by the independent variables (InEG and InAEG$_t$), while the error term take care of the remaining 44 percent, which are variables in the study that can not be included in the model because of their qualitative features. At 5 percent level of significance, the F-statistic shows that the model is useful in determining the influence of economic growth on poverty reduction, as the computed F-statistic which is 8.30 is greater than the tabular F-statistic (2, 20) valued at 5.85. The co-efficient estimates of the variables (initial level of economic growth and changes in economic growth) are negatively and positively significant respectively. An indication that the initial level of economic growth is not prone to poverty reduction, since it did not improved on the consumption-expenditure of the households in Nigeria, while the positive change in economic growth is prone to poverty reduction. Statistically, this implies that at a point estimate of 100 percent, a positive change in economic growth would have the cumulative effect of increasing household consumption-expenditure in Nigeria by 54 percent in the following year.

5. Conclusion and Recommendations

Using a multiple regression analysis that includes the initial level of economic growth and changes in economic growth, this paper explored the relationship between economic growth and poverty reduction in Nigeria. From the analysis, our findings indicate that the initial level of economic growth is not prone to poverty reduction, while an increase in economic growth is prone to poverty reduction, a situation that can only be sustained and improved upon if certain policy measures are put in place. Prominent among policy measures are stable macroeconomic policies, such as, sound fiscal and monetary policies that would create a hospitable climate for private investment and thus promote productivity that the poor and non-poor would benefit from. The policies should also be such that would emphasis on labour-intensive strategy given its ability to reduce poverty by increasing employment and improving the opportunities for productive activities among the poor. And if the strategy is associated with increase productivity it will improve wages and under most circumstances the poorest segments of the society will see an improvement in their life conditions.

Beyond macroeconomic stability are sound legal and regulatory framework that are necessary in ensuring that both domestic and foreign investors are effectively protected against sudden and arbitrary changes in the economic environment and the rules of the game. There is also the need for renewed emphasis on government interventions in the nation’s economic activities that would help the poor particularly those found in the agricultural and the informal sectors. In this regard, the government should intensify effort in the provision of more infrastructural facilities and the maintenance and repair of existing ones. Efforts should also be made to improve the agricultural sector through resuscitation of agricultural produce marketing board, intensive research and technological innovations, provision of credit facilities to farmers (to be channeled through micro-finance institutions and cooperative societies) and provision of quality health care services.

The issue of good governance that has eluded the nation and corruption that has ruined the nation’s economy should also be address. When good governance is allowed to thrive civil and economic liberties that are essential for individual initiative and development would be enhanced. Similarly, with good governance, the rulers will be able to provide necessary opportunities to the poor including social services, employment, safety nets and security and information that will permit accountability, transparency and openness which in the long run would help increase economic growth and reduce poverty.

References


Federal Office of Statistics (FOS) (various issues) National Household Consumer Survey Lagos: FOS


Table 1: Estimated Total Population and Rate of Poverty in Nigeria (1980-2002)

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated Total Population (in million)</th>
<th>Absolute No. of Poor People (in million)</th>
<th>Percentage (%) that are Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>64.6</td>
<td>18.1</td>
<td>28.1</td>
</tr>
<tr>
<td>1981</td>
<td>66.7</td>
<td>21.3</td>
<td>32.0</td>
</tr>
<tr>
<td>1982</td>
<td>68.4</td>
<td>24.2</td>
<td>35.5</td>
</tr>
<tr>
<td>1983</td>
<td>70.6</td>
<td>27.5</td>
<td>39.0</td>
</tr>
<tr>
<td>1984</td>
<td>73.0</td>
<td>31.4</td>
<td>43.0</td>
</tr>
<tr>
<td>1985</td>
<td>75.4</td>
<td>34.9</td>
<td>46.3</td>
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<td>1989</td>
<td>84.9</td>
<td>37.7</td>
<td>44.5</td>
</tr>
<tr>
<td>1990</td>
<td>86.6</td>
<td>38.0</td>
<td>44.0</td>
</tr>
<tr>
<td>1991</td>
<td>88.5</td>
<td>38.5</td>
<td>43.5</td>
</tr>
<tr>
<td>1992</td>
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<td>1998</td>
<td>106.3</td>
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<td>1999</td>
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<td>2000</td>
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<td>77.0</td>
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<td>2002</td>
<td>116.4</td>
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<td>88.0</td>
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Sources: (a) National Population Commission 1993; Central Bank of Nigeria. Annual Report and Statement of Account (various issues) and Federal Office of Statistics Annual Abstract of Statistics (various issues). (b) Computed by the author from (a) and (c). (c) Federal Office of Statistics’ National Household Consumer Survey (various issues)

Table 2: Socio-economic Indicators in Nigeria-1970-2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Access to Health Care (%)</th>
<th>Access to Water Care (%)</th>
<th>Adult Illiteracy (%)</th>
<th>Access to Sanitation (%)</th>
<th>Life Expectancy at Birth (Years)</th>
<th>Per Capita Income ($)</th>
<th>Infant Mortality (Per 1000)</th>
<th>Daily Calorie Intake (Per Capita)</th>
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</thead>
<tbody>
<tr>
<td>1970-74</td>
<td>-</td>
<td>-</td>
<td>89.7</td>
<td>-</td>
<td>43.2</td>
<td>350.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1975-79</td>
<td>-</td>
<td>-</td>
<td>84.9</td>
<td>-</td>
<td>45.3</td>
<td>660.0</td>
<td>122.0</td>
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<tr>
<td>1980-84</td>
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<td>-</td>
<td>67.1</td>
<td>-</td>
<td>47.4</td>
<td>410.0</td>
<td>112.0</td>
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<td>1985-89</td>
<td>40.0</td>
<td>15.9</td>
<td>62.1</td>
<td>-</td>
<td>49.2</td>
<td>270.0</td>
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<td>1990-95</td>
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<tr>
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Sources: ADB 2008; ADB 2010

Table 3: Regression Results of Poverty Reduction and Economic Growth in Nigeria.

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t-values in parentheses
* statistically significant at 10 percent level