Abuja Journal of Economics & Allied Fields, Vol. 6(2), April, 2018
Print ISSN: 2672-4375; Online ISSN: 2672-4324

Determinants and Poverty Measurement in Nigerian Economy

Sunday Elijah

Department of Economics, Federal University Gusau, Zamfara State, Nigeria

Abstract

This study takes a critical evaluation at the measurement and determinants of poverty in the Nigerian economy. Poverty concerns individual's inability to cater adequately for the basic needs of food, clothing and shelter. It reflects inability to meet social and economic obligations; lack of gainful employment, skills, assets and self-esteem. It is anchored on limited access to social and economic infrastructures such as education, health, potable water and sanitation, thus limiting the chance of advance welfare to utmost level of capability. Despite sustained rates of economic growth in Nigeria, statistics on incomes and social indicators show poverty to be widespread, severe and almost increasing. Although government poverty alleviation programmes feature in many communities, but their effectiveness in addressing poverty is constrained by patterns of political patronage. This has led to inequality in the distribution of facilities and services, leaving the inaccessible or socially and politically marginal communities unsaved. While the alleviation of poverty still remains a major objective of development policy in Nigeria, the debate continues as to most effective way to achieve this objective. The data used in the methodology are secondary data, linear multiple regression was used, the variables used are GDP, total savings, private consumption expenditure and rate of inflation. The study concludes that no poverty alleviation programme in any country would be successful without controlling corruption, government waste, showing transparency, accountability and effective leadership, these without are among the myriad of issues facing Nigeria today. This paper recommends the necessity to minimise the effects of years of mismanagement, mounting foreign debt and low credibility rating with foreign investors and strengthen the existing poverty alleviation institutions among others

Keywords: Determinants, Poverty, Measurement, Economy
JEL Codes: 132

1. Introduction

It is hard to discuss poverty especially urban poverty without focusing on slums, as they often include most poor people in cities in the developing world, "United Nations Habitat" has developed a cross-nationally applicable definition. A set of people living under the same roof in urban areas that lack on e or more of the following: access to improved water services, structural quality or durability of housing, security etc are defined to be living in slums or informal settlements (United Nations Habitat, 2016). How long will it take for economic growth to eradicate poverty? This question is at the heart of the on-going debate about inclusive growth and equitable development. Okun's equity-efficiency trade-off, which for several decades seemed to override fairness concern, has recently lost ground to a renewed focus on "pro-poor growth" (World Bank, 2005) and "shared prosperity" (World Bank, 2015). Poverty is one of the intractable problems facing mankind today. In 1995, an estimated 1.3 billion people out of the estimated 5.8 billion people in the world were living in the shackles of extreme poverty, living on less than one dollar a day (Human Development Report, 1998)

Poverty is a plague-affecting people all over the world and it is a condition that denies individuals the right to exercise their full potentials. There is no universally accepted definition of poverty, but poverty can be defined as having insufficient income to meet the basic human needs of life. If the real national income of a country is small that country will be poor, and a higher standard of living for its people can be achieved only by an increase in the total volume of production. Poverty has often been defined as a situation of low income or low consumption.

Essentially, it is not difficult to recognize the poor. The poor are those who are unable to obtain adequate income, find a stable job, own properties or maintain healthy living condition. They also lack an adequate level of education, cannot satisfy their basic health needs and their minimum basic needs of food, clothing and shelter. Poverty amidst plenty is a striking feature of the Nigerian scene. Nigeria is the richest in the continent yet millions of her people are poor. According to the Human Development Report (1998), Nigeria is one of the 25th poorest countries in the world and more than one third of her populace is not expected to survive beyond the age of 40. This is not the Nigerian dream. It is the Nigerian paradox. Poverty is a more serious problem in our society than in societies with much less income and wealth. Poverty amidst poverty is easier to understand and even condone but in a land of abundance, it is difficult to comprehend why some people are inadequately fed, clothed and sheltered. Poverty is a reality that needs to be studied, understood, appreciated and then eradicated.

The proportion of poverty is often determined by the poverty line, usually based on the level of income or consumption expenditure by households, although poverty is felt and observed especially by the poor themselves. Poverty can be identified in two ways: Absolute and Relative Poverty. If the physical human subsistence that is nutrition, clothing and housing is not guaranteed, it can be referred to as Absolute Poverty and Relative poverty refers to a person or household whose provision with goods is lower than that of other persons or households.

Absolute and Relative poverty can also be seen from two perspective microeconomics and macroeconomics. In micro economics terms, poverty refers to a situation in which individual persons or households are not able to satisfy their basic needs. From a macroeconomics perspective, poverty exists when the average inhabitants of a country live below the minimum subsistence level. Thus, while the macroeconomics concept specifies the country, micro economics perspective is concerned with households or individuals.

Finally, the indicators of poverty in Nigeria will remain alarming. Poverty alleviation in Nigeria requires among other strategies, the access of the poor to productive assets, the raising of their returns on the assets, increasing their access to education and health services, improving their employment opportunities and supplementing their resources with income or resource transfer.

Research Problem Statement

Poverty in Nigeria has continued to growth worse and wide spread. Despite the institutionalization of several poverty alleviation programmes, which are not universal, many have performed below expectation due to insincerity of purpose on the part of the government, bureaucracy and inability to distinguish between economic development planning and social development planning.

Firstly, the degree of inequality in the Nigerian economy and its effects on the overall performance of the economy need to be highlighted. This shows fully the extent of poverty and reflects how easily the rich are getting richer while the poor are getting poorer thus widening the inequality gap.

Secondly, the effectiveness of government programmes towards poverty alleviation needs to be examined. This helps reflects how concerned the government is in the area of eradicating poverty and how fully the policies adopted are implemented to ensure a measurable size of poverty eradication in the overall economy through employment of efficient work force and encouraging them through a good wage system.

Thirdly, the problem of the determination of the magnitude of poverty in the Nigerian economy and how it is been affected by total savings, private consumption expenditures and inflation rate. This problem exposes the ugly situation of the Nigerian economy in terms of poverty and its overall effects on local consumption of Nigerians, their savings due to reduced income in form of wages and investing power of Nigerians since the little earned goes to consumption.

Therefore, the relevant problem which the study seeks to find solution to is the degree of inequality in the Nigerian economy, ineffective government programmes towards poverty alleviation and determination of the magnitude of poverty in the Nigerian economy.

Objectives of the Study

The general objective of this paper is to highlight how economic indicators can contribute to our understanding of the nature and causes of poverty among various socio-economic groups in Nigeria. Specific objectives of the research include the following. To:

i. Highlight the degree of inequality in the Nigeria society and its implication on the overall economy.

ii. Examine the relative effectiveness of government programmes towards poverty alleviation.

iii. Determine how total savings, private consumption expenditures and inflation rate affect the magnitude of poverty in the Nigerian economy.

Statement of Research Hypothesis

The following hypotheses were determined for testing:

i. H_O: That the degree of inequality in the Nigerian economy does not have an implication on the overall performance of the economy.

ii. H_O: That the government programmes are not effective in the alleviation of poverty in the Nigerian society.

iii. H_O: That total savings, private consumption expenditures and inflation rate will not affect the magnitude of poverty in the Nigerian economy.

2. Literature Review and Theoretical Framework

Concept and Nature of Poverty in Nigeria

A concise and universally accepted definition of poverty is elusive largely because it affects many aspects of the human conditions, including physical, moral and psychological. Different criteria have, therefore, been used to conceptualize poverty.

Most analyses follow the conventional view of poverty as a result of insufficient income for securing basic goods and services. Others view poverty, in part, as a function of education, health, life expectancy, child mortality etc. It is hard to discuss poverty especially urban poverty without focusing on slums, as they often include most poor people in cities in the developing world, "United Nations Habitat" has developed a cross-nationally applicable definition. A set of people living under the same roof in urban areas that lack on e or more of the following: access to improved water services, structural quality or durability of housing, security etc are defined to be living in slums or informal settlements (United Nations Habitat, 2016). How long will it take for economic growth to eradicate poverty? This question is at the heart of the on-going debate about inclusive growth and equitable development. Okun's equity-efficiency trade-off, which for several decades seemed to override fairness concern, has recently lost ground to a renewed focus on "pro-poor growth" (World Bank, 2015) and "shared prosperity" (World Bank, 2015).

Klein, Kneib, Lang, Solin (2015) in the Bayesian frame work, allow the form of the income distribution (and thus poverty rates and inequality measures) to vary with individual or household characteristics, by allowing for regression effect of all parameter (not just location scale) of the income distribution.

Blackwood and Lynch (1994), identify the poor, using the criteria of the levels of consumption and expenditure.

Further, Sen (1983), relates poverty to entitlements which are taken to be the various bundles of goods and services over which one has command, taking into cognizance the means by which such goods are acquired (for example, Money and Coupons etc) and the availability of the needed goods. Yet, other experts see poverty in very broad terms, such as being unable to meet "basic needs" – (physical; (food, health care, education, shelter etc. and non–physical; participation, identity, etc) requirements for a meaningful life (World Bank, 1996).

Poverty can be structural (chronic) or transient. The former is defined as persistent or permanent socio-economic deprivations and is linked to a host of factors such as limited productive resources, lack of skills for gainful employment, endemic socio-political and cultural factors and gender. The latter, on the other hand, is defined as transitory and is linked to natural and man-made disasters. Transient poverty is more reversible but can become structural if it persists. It is generally agreed that in conceptualizing poverty, low income or low consumption is its symptom. This has been used for the construction of poverty lines.

Various theories have been advanced in order to put in proper perspective the mechanics of poverty. The orthodox Western views of poverty, reflected in the "Vicious circle" hypothesis stating that a poor person is poor because he is poor, and may remain poor, unless the person's income level increases significantly enough to pull the person in question out of the poverty trap. To the classical school of thought, such improvement can only be real and sustained, if and only if, the population growth is checked and the "limits of growth" are eliminated. Further, the early classical theorists in the attempt to illuminate on the concept of poverty based their analytical framework on the laws of diminishing returns which was believed to be universal in content although this was later upgraded at the time of Alfred Marshall and his contemporaries when the law of increasing returns in industry was more clearly articulated.

Following Deng (1995), we can therefore categorize the following as poor especially in the Nigerian context

1. Those households or individuals below the poverty level and whose incomes are insufficient to provide for their basic needs.
2. Households or individuals lacking access to basic service, political contacts and other forms of support, including the urban squatters and "street" children.
3. People in isolated rural areas who lack essential infrastructures
4. Female-headed households (especially with pregnant women and mother's who are breastfeeding) and infants whose nutritional needs are not being met adequately.
5. Persons who have lost their jobs and those who are unable to find employment (such as school leavers and tertiary education graduates) as a result of economic reforms introduced under Structural Adjustment Programmes (SAPs) and those who are in danger of becoming the new poor.
6. Ethnic minorities, who are marginalized, deprived and persecuted

economically, socially, culturally and politically.

The Incidence of Poverty in Nigeria

In a recent survey (1996) carried out by the Federal Office of Statistics (FOS) and published by the World Bank under the auspices of the National Planning Commission (NPC), titled *'Poverty and Welfare in Nigeria 1997'*. Nigeria's festering poverty profile was described as "widespread and severe". In a comparative analysis of welfare the Report ranked Nigeria below Kenya, Ghana and Zambia and expressed concern over the dwindling purchasing power of the people and the increasing income inequality in Nigeria which have made life unbearable for the citizenry despite improved inflation rate".

Available statistics at the national level shows that poverty level in Nigeria has been extremely high, with about two thirds of the people below the poverty line in 1996. This situation might have been worse but for the damping effect the period 1985 to 1992 had on poverty, when the rising trend of the earlier period was reversed, before the upward movement resumed again. Specifically, poverty level went up 50% between 1980 and 1985, going from 28.1% to 46% between 1985 and 1992, there was a drop of about 4 percent points to 42.7%. However, by 1996, the level jumped up to 65.6%, an increase of more than 50% of the 1992 figures. Comparatively, the level skyrocketed to 71.6% in 2000.

In absolute figures however, the population in poverty continued to rise over the 16-year period. Despite the drop in poverty level in 1992, high population growth resulted in an increase of about 5 million in the population in poverty over the period 1985-1992 the estimated number of the poor therefore rose from 18 million in 1980 to 35 million in 1985, to 39 million in 1992 and to 67 million in 1996.

The movement in the per capital household expenditure (PHE) over the period determined this pattern of poverty. After normalizing for inflation the figures revealed that PHE for 1996 was not only lower than for other years, but was less than half of 1980 (PHE). The figures (in 1996 prices) were N2400 for 1980, N1270 for 1985, N1780 for 1992 and N1050 for 1996.

Over the 16-years period, poverty on sectoral disaggregation was at a higher level in the rural than in the urban. But the gap in the levels fluctuated, indicating that the two sectors had different experiences in the period. The gap was 11 percentage points in 1980, 13 percentage points in 1985, 8 percentage point in 1992 and 11 percentage point in 1996.

Urban poverty moved from 17.2% in 1980 to 37.8% in 1985 but remained at the same level in 1992. By 1996 it had risen sharply to 58.2%. Whereas, rural poverty rose rapidly between 1980 and 1985, the figures being 28.3% in 1980 and 51.4% in 1985. There was a decrease of about 5 percentage points between 1985 and 1992 but there was a big jump from the 46% in 1992 to 69.3% in 1996 while it recorded astronomical figure of 75.4% in 2000.

Household size had the most dramatic effect on poverty levels. The larger the household size, the greater the chances of that household being in poverty. Single-person households were virtually all out of poverty in 1980, the percentage of poor being at 0.2%. On the other hand, four fifths of households containing 20 or more persons live in poverty at the same time. This pattern of increase in poverty level as household size increase was maintained in the four survey years, although there was a scalar movement in the poverty levels of all size classes over the years. Thus, by 1996, poverty level for one-person households was 12% while for households with 20 or more the figure was 92%.

Over the 16-year period 1980 to 1996, female-headed households were slightly better off, poverty wise, than their male counterparts. In 1980 the poverty levels were 26.9% and 29.2% respectively, a gap of

2 percentage points in 1992. However, the gap widened again to 8 percentage points in 1996. By 2000, the proportion heightened to 63.4%.

The analysis showed that the major factor leading to this result is the fact that the average size of female-headed households is generally smaller than that of their male counterparts. Consequently, the per capital consumption (which is the basis of poverty computation) in female-headed household is higher than that of male headed households. However, the comparison here is in respect of the gender of heads of household and not the gender of all persons in general.

Although, there was a broad pattern of lower poverty level for higher level of education of the head, however, the discrimination was not very sharp. In 1996, the poverty levels ranged from 72.6% for heads with no schooling or primary school uncompleted to 49.2% for heads with post-secondary education. But as it was for gender, so it is here. The comparison is in respect of the education level of the head of household and not that of all persons. Relatively, the figure ranged from 60.1% to 80.1% in 2000.

Poverty level rose with the age of the head of the household, reaching a peak in the age group 55-64 years and thereafter declined. In 1996, the peak was in the age group 45-54 years.

Indeed, in terms of quality of life, deterioration in income, unemployment and poor social infrastructures, the poor have become poorer between 1985 and 1997. The CBN survey on poverty assessment while complementing the earlier work by the World Bank shows that the decline in poverty observed between 1985 and 1992 has been reversed in 1997. Although, skill acquisition is a prerequisite for gainful employment, high incidence of poverty among educated Nigerians reflect problems of unemployment and low wage levels. Even among those in regular or self-employment, those living below poverty line account for about 30.0 and 25.0 percent, respectively. Another significant development is the redistribution of poverty occupational categories. In spite of the fact that poverty is more prevalent in the rural areas, the proportion of farmers in the population of those who live below poverty line has declined progressively from 86.6 percent in 1985 to 67.4, 33.3 and 22.6 percent in 1992, 1997 and 2000, respectively. But the civil service, corporate establishment and trading (or informal) sector which accounted for about 11.1 and 22.3 percent of the poor in 1985 and 1992, respectively, now harbour about 52.5 percent and 60.1 in 1997 and 2000 respectively. This reflects the impact of falling real wages and inaccessibility to social services on the living standard of the people.

Poverty Incidence in Nigeria 1980-2000

National	1980	1985	1992	1996	2000
	28.1	46.3	42.7	65.6	71.6
Sector					
Urban	17.2	37.8	37.5	58.2	67.1
Rural	28.3	51.4	46	69.3	75.4
Sex of Head					
M – Headed	29.2	47.3	45.1	66.4	72.1
F – Headed	26.9	38.6	39.9	58.5	63.4
Size of House Hold					
1 person	0.2	0.7	2.9	13.1	15.1
2-4 persons	8.8	19.3	19.5	51.5	61.3
5-9 persons	30	50.5	45.4	74.8	82.5
10-20 persons	51	71.3	66.1	88.5	90.4
20 plus	80.9	74.9	93.3	93.6	94.2

National	1980	1985	1992	1996	2000
	28.1	46.3	42.7	65.6	71.6
Education of Head					
No education	30.2	51.3	46.4	72.6	80.1
Primary	21.3	40.6	43.3	54.4	69.3
Secondary	7.6	27.2	30.3	52	70.3
Post Secondary	24.3	24.2	25.8	49.2	60.1
Age of Head					
15-24	16.2	25.3	28.7	37.4	46.5
25-34	17.8	33.4	28.5	52.7	61.2
35-44	26.7	46	42.1	64.6	69.3
45-54	27.1	55.7	48.2	69.9	74.8
55-64	39.7	55.7	48.2	69.9	74.8
65 plus	28.8	49.1	49.5	68	70.5

Source: Poverty Profile of Nigeria, NBS, 2001

Distribution of Poverty by Occupational Category of Household Heads 1985 – 2000

Occupational category	Percentage of the respondents			
	1985/1	1992/2	1997	2000
Farming	86.6	67.4	33.3	22.6
Trading and Artisans	4	10.2	19.2	23.1
Public services	3.7	10.7	29	30.2
Corporate Units	3.4	5.4	4.3	4.6
Student/Apprentice	0.1	3.9	6.4	8.1
Others	2.2	2.4	7.8	11.4
Total	100	100	100	100

Sources: Nigeria: Poverty in the Midst of Plenty; A World Bank Poverty Assessment Report; CBN survey on Poverty Assessment in Nigeria, 2001

The Effect of Poverty

The effects of poverty on Nigerians are multidimensional. That is to say, it has negative influences amongst others on the socio-cultural, economic, political, moral, health, security and educational lives of the people. Using the multi-dimensional schematic framework of underdevelopment, the effects of desolate poverty manifest in: low per capital income, low consumption level, poor health services, high death rate, high birth rate, vulnerability to dependence on foreign economy, limited freedom to choose between variables that satisfy human wants, poor educational and other social services with its attendant consequences of lack of shelter, homelessness, hunger both f the body and mind, malnutrition (which could lead to kwashiorkor), target for diseases and sickness, short life expectancy, mental retardation, social outcast and political alienation, to mention but a few.

This situation, which is a self-reinforcing phenomenon, tends to perpetuate undesirable consequences, which lead to abject poverty and underdevelopment of the nation.

Reasons for Failure of the Poverty Alleviation Programmes

Issues concerning poverty and employment are essentially those concerning the core of economic development. Thus to probe the failure of Poverty Alleviation Programmes is to addresses the larger question concerning Nigeria's development laggardness. Time and space will not allow this extensive probe and therefore efforts will be limited to what we consider the key direct and indirect causes of the failure of poverty crises policy interventions. The long list of the factors may include the following:

i. Flawed Economic Policy Regimes
ii. Poor Growth Record
iii. Collapse of Investment and Crisis of Financial Intermediation
iv. Problems of the Informal Economy
v. Infrastructural Failure
vi. Mismanagement of the Human Capital
vii. Societal Indiscipline and Good Governance Deficit
viii. External Constraints and Failure to Adopt International best Practice
ix. Inherent Structural Defects of Poverty Alleviation Programmes
    a. Inadequate Targeting
    b. Inadequate Coordination
    c. Inadequate or Lack or Executive Capacity:
    d. Top-Down Approach:

Structural Composition

The first attempt to measure poverty was made more than a century ago (Booth, 1889; Rowntree, 1901). These attempts were at the household level and much still is. Basically, poverty measurement is usually undertaken to:

i. Determine a yardstick for measuring standard of living.
ii. Choose a cut-off poverty line, which separates the poor from the non-poor (indication of how many people are poor).
iii. Take account of the distribution of standard of living among the poor.
iv. Comparison of poverty over time, among individuals, group or nations.
v. Guide policy on poverty alleviation.

Measurement of poverty is complex and varied, hence any discussion of poverty measure must commence with the simple living standard measure and poverty line determination.

Living Standard: This is generally measured using current consumer spending or income. A measure of current consumer spending is generally preferred to income as a measure of current living standards. Alderman and Paxson (1992), Deaton (1992). Further, income as a measure of living standards is often questioned on the ground of incorrect rendition by the respondents. On balance, consumption expenditure is preferred to income as a measure of living standard.

Poverty Line

A poverty line can be defined as the monetary cost to a given person, at a given place and time, of a reference level of welfare.

i. Objective Poverty Line: Objective poverty line approaches can be interpreted as attempts to anchor the reference utility level to attain basic capabilities, of which the most commonly identified relate to the adequacy of consumption for living a healthy and active life, including participating fully in the society. Sen (1985, 1987). Two methods of measuring objective poverty line are food energy intake and cost of basic needs.

-The food-energy Intake Method: A popular practical method of setting poverty line involves finding the consumption expenditure or income level at which food energy intake is just sufficient to meet pre-determined food energy requirements.

-The cost-of-basic-needs method: This method stipulates a consumption bundle adequate for basic consumption needs, and then estimates its cost for each of the subgroups being compared in the poverty profile; this is the approach of Rowntree in his seminal study of poverty in York in 1899, and it has been followed since in innumerable studies for both developed and developing countries.

ii. Subjective Poverty Lines: Subjective poverty line debate has opened another issue on poverty conceptualization and measurement. Psychologists, sociologists and others have argued that the circumstances of the individual relative to others in some reference group influence perceptions of well-being at any given level of individual command over commodities. By this view, "the dividing line… between necessities and luxuries turns out to be not objective and immutable, but socially determined and ever changing" (Scitovsky, 1978).

Measures of Poverty In Nigeria

Generally, the measures of poverty can be classified into two, namely absolute poverty and relative poverty.

1. Absolute poverty can be measured as follows.

i. Head Count Ratio: Poverty can be expressed in a single index: The simplest and most common measure is the Head Count ratio (H), which is the ratio of the number of poor to total population. The poverty head count (H) can be expressed as:

$$H = q/N \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..1$$

where:

q = the number of the poor and N = total sample population.

This gives the proportion of the population with income below the poverty line. The head count ratio has been criticized for its focus only on the number of the poor and being insensitive to the severity of poverty and to changes below the poverty line. That is, it treats all the poor equally, whereas not all the poor are equally poor.

ii. The poverty gap/income shortfall ratio: The poverty gap ratio or the income gap ratio is the difference between the poverty line and mean income of the poor, expressed as a ratio of the poverty line (World Bank, 1993). The average income shortfall (I) measure the amount of money it would take to raise the income of the average poor person up to the poverty line. That is, it provides a statement on the level of income transfer to the 'poor'. If ya is the average income of the poor and z is the poverty line, then one measure of the depth of poverty, the income gap ratio is: taking the product of H and I will incorporate both the number of the poor and the depth of their poverty.

The poverty gap ratio can be expressed as:

$$I = \frac{Z-ya}{Z} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots2$$

Where:

Z = poverty line.

Ya = average income of the mean income of the poor.

iii. Composite poverty measures:

The Sen Index: This index is attributed to Sen (1976). It incorporates the headcount index, the income gap, and the Gini coefficient. Sen Poverty index (s) is:

$$S = H\,[I + (1 - I)\,Gp] \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots3$$

Where:

I = the average income shortfall as a percentage of the poverty line

y1 = income of the ith poor household

z = poverty line income

qz = number of households with incomes below z

H = q/n; headcount ratio

N = total number of households

Gp = Gini coefficient among the poor: $0 \leq Gp \leq 1$.

S is an increasing function of the headcount index and an increasing function of the income shortfall. Given that the Gp ranges from zero to one, S is also an increasing function of Gp:

$$\frac{\partial S}{\partial H > 0} \quad \frac{\partial S}{\partial I > 0} \quad \frac{\partial S}{\partial G > 0} \ldots\ldots\ldots\ldots\ldots\ldots..4$$

The Sen Index has a major drawback. It is more responsive to improvements in the headcount than it is to reduction in the income gap or to improvements in the distribution of income among the poor. This index indicates that the efficient way to reduce poverty is to help the least needy first and the most needy last.

iv. The physical quality of life index (PQLI): The PQLI is attributed to Morris (1979). It measures how well societies satisfy certain specific 'life-serving social characteristics' or 'achieved well-being' (Doessel and Gounder, 1994). Thus its focus is on social development. The PQL is based on three indicators: infant mortality, life expectancy and basic literacy. Computationally, PQL is given by:

PQL = f (IM, e, lit) ……………………5

Where:
IM = infant mortality
e = life expectancy
Lit = literacy
The indices formed from these three indicators are summed up and the average gives the PQLI (physical quality of life index).

PQLI = (IMI +el + IitI) ………………..6

Where:
IMI = Infant mortality index
el = Life expectancy index
Lit = Literacy index

v. The human development index (HDI): The HDI is the most recent composite index devised by the United Nations Development Programme (UNDP, 1990). This index focuses on human development. It incorporates income and non-income factors. Three factors- longevity, knowledge and income are the variables of the index. Longevity is measured by life expectancy at birth (e0), knowledge is measured in terms of literacy.

The third variable is per capita income. Generally, therefore, UNDP's human development HD is specified as:
HD = f (e0, lit, Y)

Where:
e0 = life expectancy at birth
lit = literacy rate
Y = per capita income

These three indicators-life expectancy (X1), literacy (X2), and the logarithm of real GDP per capita (X3) are specified at the national level as components of the index.

By looking across a range of countries, the maximum and minimum value for each indicator is established. A 'deprivation' index for the ith indicator and the jth country is then defined as:

Where: $0 < 1ij < 1$

The UNDP (1990) defined the deprivation index for country j as a simple average of the three deprivation indices for the country and the human development index (HDI) one minus this average.

2. Relative Poverty Measures: Relative poverty measures define the segment of the population that is poor in relation to the set income of the general population. Such a poverty line is set at one-half of the mean income, or at the 40th percentile of the distribution. There are two main kinds of relative measures. Average income, this is the average income of the poorest 40 percent of the population and/or the average income of the poorest 10 or 20 percent of the population. The second is the number or population of people whose incomes are less than or equal to predetermined percentage of the mean income say 50% or less of the mean income.

Determinants of Poverty in Nigeria

There is no one cause or determinant of poverty. On the contrary, combination of several complex factors contributes to poverty. They include low or negative economic growth, inappropriate macroeconomic policies, deficiencies in the labour market resulting in limited job growth, low productivity and low wages in the informal sector and a lag in human resource development. Other factors which have contributed to a decline in living standards and are structural causes or determinants of poverty include increase in crime and violence, environmental degradation, retrenchment of workers, a fall in the real value of safety nets and changes in family structures. These are examined below:

i. Low Economic Growth Performance: Growth of the economy is a must for poverty reduction. In developing countries such as Nigeria growth that is employment generating and with export base is desirable in order to achieve growth that is poverty reducing with equity. Although the economic performance of countries in the World has generally been highly volatile since the early 1980s, on the whole, growth rates have been low or negative, with overall declines in several countries.

ii Macroeconomic shocks and policy failure:- This has been a major cause of poverty in several countries of the world. As many economies in the world faced macroeconomic disequilibrium, mostly in the balance of payments due to expansive aggregate demand policies, terms-of-trade shocks, and natural disasters, it become necessary to undertake major policy reforms. In the process such economies became vulnerable to poverty.

iii Labour Markets Deficiencies: The poor's most abundant resource is their labour, a virile labour market is important to reducing poverty and income inequality. In most countries of the world the majority of poor households participate in the labour market in one way or another, and thus poverty is a problem of low wages (in the informal sector), low labour returns to rural self-employment activities, underemployment, and in some cases, protracted unemployment.

iv. Migration: Migration rates do reduce poverty especially when the majority of individuals who migrate are skilled workers. On the other hand, individuals who emigrate vacate jobs in labour markets. Thus, migration drains on skills. It reduces the pace of economic growth and thus slows the process of overall job creation and affects the long-run development potential in a country.

v. Unemployment and underemployment: Employment is a key determinant of poverty. Gainful employment is important for individual to earn income and escape from "income" poverty.

vi. Human Resource Development: This is key for human capital development and capability to escape from poverty. Continued investment in human capital with improvements in efficiency is necessary to sustain reduction in poverty changes in the labour market. Investment in people can boost the living standards of households by expanding opportunities, raising productivity, attracting capital investment, and increasing earning power: In addition, providing additional educational opportunities for adolescents may prevent some youths from becoming involved with gangs, drugs and violence, given the evidence linking the perpetrators of crime with school dropouts.

vii Health/Diseases: Good health is basic to human welfare and a fundamental objective of social and economic development. Poor health shackles human capital, reduces returns to learning, impedes entrepreneurial activities and holds back growth and economic development. Diseases cause poverty and vice versa.

viii Debt burden: In several developing countries of the world, debt burden is assuming increasing importance as a cause of poverty. In such countries servicing of the debt has encroached on the volume of resources needed for socio-economic development.

ix Governance: The persistence and pervasiveness of poverty in several countries has been linked to the lack of popular participation in governance and decision-marking as well as weak institutional base. This has led among other things to poor accountability, transparency in resource allocation, weak programme implementation and monitoring.

x. Environmental Degradation: Environmental degradation is a cause of accentuated poverty. At the same time, poverty itself can be a cause of environmental degradation.

xi. Crime and Violence: A steady increase in crime and violence has degraded the quality of life to a varying extent in many counties of the world. Although individuals of all socioeconomic groups are affected, the urban poor are particularly vulnerable to these social problems.

3. Methodology and Model Specification

Method of Data Collection

The researcher made use of secondary type of data which were extractions from journals, articles, National Bureau of Statistics and search machines.

Methods of Estimation of Analysis
In this research work, the method of estimation is based on the use of multiple regression technique using the regressand and regressor. The multiple regression model offers explanation on the relationship between an explained variable and two or more explanatory variable.

The relationship between Y and variables X_1, X_2, $X_3 \dots X_n$ is in econometric form. It can be expressed mathematically as
$Y = F(X_1, X_2, X_3 \dots X_n)$
If we want to change it to linear form, it then becomes

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots b_nX_n$ …7

The coefficient b_0 represents the intercept of the function while coefficients b_1, b_2, b_3 … b_n denotes the marginal effect of X_1, X_2 $X_3 \dots X_n$ respectively on Y.

Economic theory does not allow for random elements which might affect the relationship between the dependent and independent variables. But in econometric model, the fluctuation in random element is taken of.

A random variable "U" known as error term is introduced into the model. This is because other important variables are omitted in the model. With the modification and introduction of error term (U), we have a functional form model of the form:

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 \dots B_nX_n + U$ ….8

Least Square technique will be use to estimate the structural parameters: b0, b1, b2, b3…bn. This is because Least Square technique is the best linear unbiased estimate and the result will be unbiased. An estimator is preferred to others because it has least square property. The Least square estimator has been chosen because it is an estimator that generates a set of parameter estimates with the smallest error of the regression.

There are some assumptions of ordinary least square which must hold or else the above assertion will not hold. Therefore the following must be assumed for "U" for the estimation technique to hold. The assumptions of OLS are based on the distribution of stochastic error term.

i. Error term (U) is random and normally distributed.
ii. The error term has zero expected value.
iii. The error term has a constant variable.
iv. The error term in one period is uncorrelated with the error term in another period.
v. The explanatory variables assume fixed values, so that they are uncorrelated with the error term.

In this research work we shall make use of key economic variables such as Gross domestic Product, total savings, private consumption expenditures and rate of inflation.

The econometric analysis of estimate will be carried out using statistical test for significance. These statistical tests include: the t-ratio, coefficient of multiple determination, F-statistic and Durbin-Watson test (DW).

The coefficient of determination (R^2) examines the explanatory power of the independent variable. The F-statistic will also be used to determine the significance of the parameter of the estimates. The Durbin-Watson test is used to determine the incidence of autocorrelation or not.

Specification of the Model
$Y = F(X_1, X_2, X_3)$ under the hypothesis that:
H_O: $B_0 = B_1 = B_2 = B_3 = 0$
H_A: $B_0 \neq B_1 \neq B_2 \neq B_3 = 0$
And where:
Y = Gross Domestic Product;
X_1 = Total Savings;
X_2 = Private Consumption Expenditure;
X_3 = Rate of inflation.

From the above the null hypothesis (H_O) states that values of the estimated parameters are not significantly different from zero, which is our theoretical expectation.

Econometric Model Estimation

Thus in line with the econometrics, the study will use multiple regression analysis to investigate that:

$GDP=b_0+b_1X_1+b_2X_2+b_3X_3+U.$

This was regressed following a stepwise direction in the following ways:

Model 1

$GDP = b_0 + b_1 X_1 + U$ where;
GDP = Gross Domestic Product
b_0 = Intercept of the line
b_1 = Coefficient of X_1
U = Error term

The model waas used to examine the impact of total savings (as a basis for the degree of income inequality) on the overall performance of the economy.

Hypothesis of the Model

$H_{O:}$ The degree of income inequality in the Nigerian economy does not have effect on the overall performance of the economy.

Model 2

$GDP = b_0 +b_1X_1 + b_2 X_2 + U$ where

b_2 = Coefficient of X_2

The model was used to examine the impact of total savings and consumption expenditures as a basis for measuring the relative effectiveness of government programmes towards poverty alleviation.

Hypothesis of the Model

$H_{o:}$ The government programmes are not effective in the alleviation of poverty in the Nigerian society.

Model 3

$GDP = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + U$ where
b_3 = coefficient of X_3

The model was used to examine the effect of total savings, consumption expenditures and inflation rate on the magnitude of poverty in the economy.

Hypothesis of the Model

$H_{O:}$ Total savings, inflation rate and private consumption expenditures will not affect the magnitude of poverty in the economy.

A Priori Expectation

i. The sign of b_1 is expected to be positive since a positive relationship exists between savings level and the value of Gross Domestic Product.

ii. The sign of b_2 is also expected to be positive since a direct relationship exists between private consumption expenditures and Gross Domestic Product.

iii. Similarly, the sign of b_3 is expected to be positive since a direct relationship exists between rate of inflation and gross domestic product.

Specification Bias

The models used in this research have been specified in line with basic economic theory. But economic theory does not allow for random element which might cause some problems and inconsistencies in our result and interpretation. This is because there are some important variables that should have been included in the models. Hence the inclusion of error term "U" in the model which helps to modify the models is necessary because:

i. Omission of relevant variables as a result of measurement error and inherent human randomness may be taken care of by error term "U"

ii. Inconsistency in the aggregate data and poor collection of data in developing countries.

4. Data Analysis, Results and Interpretation of Results

Specification of Data

The data analysed varied from 1987- 2007 which covers a period of twenty one years.

Year	Gross Domestic Product At Current Market prices (Y) ₦ Million	Total Savings (X_1) ₦ Million	Private Consumption Expenditures (X_2) ₦ Million	Rate of Inflation (%) (X_3)
1987	203,037.1	18,676.3	79,628.3	10.2
1988	275,198.2	23,249.0	113,013.3	38.3
1989	403,762.9	23,801.3	136,569.7	40.9
1990	497,351.3	29,651.2	169,309.2	7.5
1991	574,282.1	37,738.2	218,692.8	13.0
1992	909,754.2	55,116.8	396,156.5	44.5
1993	1,132,181.2	85,027.9	529,623.6	57.2
1994	1,457,129.7	108,460.5	686,989.8	57.0
1995	2,991,941.7	108,490.3	1,517,235.9	72.8
1996	4,135,813.6	134,503.2	2,331306.8	29.3
1997	4,300,209.0	177,648.7	2,401,595.9	8.5
1998	4,101,028.3	200,065.1	2,712,511.3	10.0
1999	4,779,966.0	277,667.5	2,089,505.3	6.6
2000	6,850,228.8	385,190.9	2,331,878.2	6.9
2001	7,055,331.0	488,045.4	4,225,976.9	18.9
2002	7,984,385.3	592,094.0	5,805,085.9	12.9
2003	10,136,364.0	655,739.7	4,979,560.0	14.0
2004	11,673,602.2	797,517.2	5,372,560.0	15.0
2005	3,643,059.7	1,078,330.1	3,613,115.6	17.9
2006	4,636,148.7	1,604,174.5	4,335,625.3	8.2
2007	22,586,710	2,500,159.9	5,095,795.7	5.4

Source: National Bureau of Statistics (NBS) and Central Bank of Nigeria (CBN); Note: Figures for Private Consumption Expenditures from 2005-2007 were derived using the 4-point Moving Averages.

Interpretation of the Regression Results

In this section the model is analysed in details. In presenting the estimated equations, the figures in parenthesis represent t-ratios.

Model 1

$GDP = B_O + B_1X_1 + U$

$GDP = 1689812.0 + 6.912X_1$

$R^2 = 0.672$, Adjusted $R^2 = 0.655$, $F = 39.004$

$DW = 1.396$ (2.020)(6.245) N= 21

Model 2

$GDP = B_O + B_1X_1 + B_2X_2 + U$

$GDP = 208639.46 + 4.360X_1 + 1.120X_2$

$R^2 = 0.761$, Adjusted $R^2 = 0.735$, $F = 28.692$

$DW = 1.893$ (0.224)(3.151)(2.587) N=21

Model 3

$GDP = B_O + B_1X_1 + B_2X_2 + B_3U$

$GDP = 263183.14 + 4.352 X_1 + 1.114 X_2 - 1605.091X_3$

$R^2 = 0.761$ Adjusted $R^2 = 0.719$ $F = 18.069$

$DW = 1.894$ (0.172)(3.034)(2.412)(-0.046) N=21

Interpretation and Analysis of Results

Model 1

This model examine the impact of total savings (as a basis for the degree of income inequality) on the overall performance of the economy. From the result R^2 is 0.672 which shows that total savings will affect the overall performance of the economy to the tune of 67% within the period being studied. The adjusted R^2 also shows a positive relationship of 65% while F-statistic is 39.004 and DW is 1.396 which falls within the acceptance region and shows no presence of autocorrelation. Therefore the hypothesis that the degree of income inequality in the Nigeria economy will affect the overall performance of the economy is accepted.

Model 2

Model 2 examines the effectiveness of government poverty alleviation programmes using total savings and private consumption expenditures as a yardstick. The two variables combined together gave R^2 of 76% which implies a 9% increase as compared to model 1.This means that total savings and private consumption expenditures combined will affect the level of poverty to the tune of 76%. However adjusted R^2 increases to 74% while F-statistic is 28.692 and DW is 1.893 showing no autocorrelation. The decrease in the value of F-statistic means that there might be some hidden parameters unknown to the researcher but one fact stands out that there exists a positive relationship between total savings and private consumption expenditures and the level of poverty in the economy. Thus the hypothesis that the government programmes are not effective in the alleviation of poverty in the Nigerian economy is accepted.

Model 3

This model examines the effect of total savings, private consumption expenditures and inflation rate on the magnitude of poverty in the economy. R^2 is 0.761 which shows that the three variables combined will affect the poverty level to the tune of 76%. Both values for the adjusted R^2 and F-statistic decrease to 0.719 and 18.069 respectively in contrast to their values in model 2. The adjusted R^2 of shows a positive relationship among the variables while the DW means that there is no autocorrelation. Therefore the hypothesis that total savings, private consumption expenditures and inflation rate will have effect on the magnitude of poverty in the economy is accepted.

4.1 Empirical Results

Models	R^2	Adjusted R^2	F-Statistic	DW	T	T Sig
1	0.672	0.655	39.004	1.396	2.020, 6.245	0.058, 0.000
2	0.761	0.735	28.692	1.893	0.224, 3.151, 2.587	0.825, 0.006, 0.019
3	0.761	0.719	18.069	1.894	0.172, 3.034, 2.412, -0.046	0.866, 0.007, 0.027, 0.964

4.2 Interpretation of A priori Results

Variables	Slope	A priori	Results	Conformity
B_1	4.352	+	+	√
B_2	1.114	+	+	√
B_3	-1605.091	+	-	X

Key: √ = Conformity; X = Non-conformity

5. Summary, Conclusion and Recommendations

Summary of Major Findings

This research work has examined the measurement and determinants of poverty in the Nigerian economy. It has also analysed the consequences of poverty on the overall performance of the economy.

Poverty incidence is significantly greater and the depth of poverty deeper in rural areas. About 63% of people living in the rural areas are poor, compared with 42% in urban areas. The primary livelihood of the rural populace is agriculture (85%); the majority of the farmers are uneducated, and they use few inputs to support their farming. For many in Nigeria, life has been stagnant for decades.

Poverty in Nigeria seems to have worsened over the 1990s, and then reduced in the early part of this century. However, population growth rates have meant a steady increase in the number of poor from 39 million in 1992 to 69 million in 2004. Specifically, the following were observed during the course of this work:

i. There is no one cause of poverty but combinations of several complex factors contribute to poverty. They include low or negative economic growth, inappropriate macroeconomic policies, deficiencies in the labour market resulting in limited job growth, low productivity and low wages in the informal sector and a lag in human resource development. Other factors which have contributed to a decline in living standards and are determinants of poverty include increase in crime and violence, environmental degradation, retrenchment of worker, a fall in the real value of safety nets and changes in family structure.

ii. Although various approaches have been tried to fight poverty, not much has been achieved as evidenced by the rising trends of poverty throughout the country.

iii. For poverty reduction, economic growth is a necessity but not a sufficient condition. Hence, for growth to be an effective strategy, it has to be accompanied by a deliberate provision of enabling infrastructural environment that can sustain economic development.

iv. For Nigeria to deal effectively with her poverty problems, it is crucial that sustainable long term solutions are devised to salvage the current trend. Fighting poverty is a daunting challenge that requires a multifaceted approach in line with the multi-dimensional nature of poverty.

v. The degree of income inequality in the Nigerian economy will have an effect on the overall performance of the economy. Despite the institutionalisation of several poverty alleviation programmes, many have performed below expectation due to insincerity of purpose on the part of government, bureaucracy and inability to distinguish between economic development planning and social development planning.

Conclusion

In conclusion, I wish to categorically state that until Nigeria do away with plastic policy options and cosmetic implementation and face the reality of poverty, any programme billed to address the issue (of poverty) will remain a myth of a utopian philosophy. And this will consequently, affect adversely the degree of development and growth in the country.

The adoption of people-oriented and pro-poor social policies, investment in rural areas and in agriculture, increase investment in information technology and health care, provision of non-interruptible electricity for cottage industries, good roads for distribution of goods and services, investment in human capital and skills training (and retraining) for jobs that are available are ways to assist in poverty alleviation. The leaders of Nigeria should develop a compelling vision that would create a sense of purpose in citizenry, teach the children the values of hard work, creativity and pride in our country and encourage and reward honesty. This will enable individuals to change their behaviours and actions that are inimical to the nation's prosperity.

Finally, no poverty alleviation programme in any country would be successful without controlling corruption, government waste, showing transparency, accountability and effective leadership. These, without a doubt, are among the myriad of issues facing Nigeria today.

Recommendations

The multidimensional nature of poverty demands multifarious policy options, the recommendations include:

i. The necessity to minimize the effects of years of mismanagement, mounting foreign debt and low credibility rating with foreign investors;

ii. Rehabilitate and provide infrastructural facilities;

iii. Strengthen the existing poverty alleviation institutions.

iv. Ensure political stability through democratic system which should provide good governance characterized by transparency and accountability;

v. Ensure macroeconomic stability and growth with development which is the first practical means of reaching the poor since without growth there can be no expansion which will create employment and increase income for distribution;

vi. Institute policies which are directly focused on the poor such as: evolving schemes that would increase their productivity and wages through for instance increased supply of critically needed inputs and lay increased emphasis on making basic socio-economic infrastructure (education and health services, roads, potable water, and electricity) availability to the poor.

References

Afonja, B and Oguwimike, O. F (1995): Poverty; Meaning, Measurement and Causes: A Paper Presented at NCEMA.

Amina Khan, Paula Lucci,Tanvi Bhatkal (2018); Are we underestimating poverty?. Journal of World Development, World Developmet 103 (2018) 297 – 310. Content list available at ScienceDirect. Journal home page: www.elsevier.com/locate/worlddev

Ajakaiye, D. O and Adeyeye, V. A. "Concepts, Measurement and Causes of Poverty", CBN Economic and Financial Review, vol. 39, No. 4.

Background Paper on Employment and Poverty Alleviation in Nigeria (2004) "Being a Paper Presented by Federal Ministry of Labour and Productivity for African Union Extraordinary Summit on Employment and Poverty Alleviation in Africa.

Bakare, I.A.O (2003) "Incidence of Poverty and Development in Nigeria", LASU Journal of the Social Sciences, vol.4.

Bullion Publication of the Central Bank of Nigeria, Vol. 23, No.4, "Poverty Alleviation in Nigeria. Pp3-66, October/December 1999.

Central Bank of Nigeria: Statistical Bulletin 2007.

Filippo Domma, Francesca Condino, Sabrina Giordano (2018); A new formulation of the dagum distribution interms of income inequality and poverty measures.

Kehinde, O. Joseph (2006) "Poverty Alleviation Strategies and the Challenges of Governance in Nigeria: The Way Forward from Legion of Failed Policies", International Journal of Social and Policy Issues vol.4, No 1 and 2.

Nigeria Millennium Development Goals (MDGs) Report (2006).

Nnaa, B. G. (2006) "Mythology of Poverty Eradication: The Nigerian Experience", International Journal of Economic and development Issues; vol. 6, No. 2.

Publication of Nigerian Economic Society; Poverty Alleviation in Nigeria, Selected Papers for 1997 Annual Conference.

Victor E. Dike (2005), "The Global Economy and Poverty in Nigeria".