

*Full Length Research Paper*

# **Towards reducing poverty in Nigeria: The case of Igboland**

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**This paper studied poverty in Igboland (Abia, Anambra, Ebonyi, Enugu, and Imo States) of Nigeria, using the 1996 National Consumer Survey data set. The results show that by 1996, the proportion of the Igbo States' population living under the poverty line stood at 55.1%, up from 40.9% in 1992. The depth of poverty in Igbo States was 21.6% in 1996, again an increase from 16.2% in 1992. The severity of Igbo States' poverty rose from 8.7% in 1992 to 11.4% in 1996. Also, both urban and rural incidence of poverty in Igboland rose between 1992 and 1996, from 38.3 to 49.2% and 43.3 to 58.8% for urban and rural areas, respectively. In addition, mirroring the national outlook, rural poverty in Igboland was more widespread, deeper, and more severe than urban poverty in 1996. Our empirical analysis indicate that it is only in Abia State that increases in household head's age significantly reduce poverty (albeit at a decreasing rate) but showing that household size is the most important factor increasing poverty in Igboland. Also, rural location in Anambra State has a statistically significant negative effect on poverty while the results with respect to Imo state show that the probability of being poor increases if the household is located in a rural area. Our results show that generally, male-headed households are less likely to be poor than female-headed households in Igboland but education does not significantly affect the level of poverty. However, farming occupation has a high significant negative effect on the level of poverty in the entire Igboland taken together as well as in Anambra and Enugu/Ebonyi States. But, in Imo state, farming occupation very significantly increases the poverty level. Based on these results, we suggested a number of policy interventions necessary to reduce poverty in Igboland of Nigeria.**

**Key words:** Poverty, Igboland, Nigeria.

## **INTRODUCTION**

Successive governments in Nigeria have initiated measures aimed at poverty (rural and urban) reduction since 1980. These include: The Green Revolution (1980); programs to alleviate the pains of Structural Adjustment Programme (SAP) through the Directorate of Food, Road and Rural Infrastructure (DFRRI) and the National Directorate of Employment (NDE) (1986); the People's Bank of Nigeria (1990) (Anyanwu and Uwatt, 1993); community banks; the Better Life Programme (BLP); Family Support Programme (FSP) and Family Economic Advancement Programme (FEAP); establishment of National Agricultural Land Development Authority (NALDA) (1993) as well as the Agricultural Development Programmes (ADP) and the Strategic Gains Reserves Programmes (SGRP). Another key measure was the establishment of the Poverty Alleviation Programme (PAP) (2000) which later metamorphosed into the

Poverty Eradication Programme (PEP) and culminated in the National Poverty Eradication Programme (NAPEP) (2001). NAPEP has been organized around four schemes, namely, the Youth Empowerment Scheme (YES), Rural Infrastructure Development (RIDS), Social Welfare Schemes (SOWESS) and the National Resource Development and Conservation Scheme (NRDCS). We have also had periodic reviews of salaries/wages and tax rates and allowances as well as pensions for increasing the purchasing power of civil and public servants. In addition, there is the Interim Poverty Reduction Strategy Paper (IPRSP) with the aim of building on the gains of PAP and PEP. One of the recent measures that attracted a lot of attention was the National Economic Empowerment and Development Strategy (NEEDS), which was built on the interim PRSP. This medium term strategy (2003-2007) derived from the long-term goals of

poverty reduction, wealth creation, employment generation and value re-orientation, being a national coordinated framework of action in close collaboration with the state and local governments and other stakeholders. The main strategies were anchored on: Empowering people (Social Charter or Human Development Agenda); promoting private enterprise, and changing the way the government does its work (Reform Government and Institutions). The equivalent of NEEDS at State and Local Government levels were the State Economic Empowerment and Development Strategy (SEEDS) and Local Government Economic Empowerment and Development Strategy (LEEDS). Though some of measures and reforms made some positive impacts, they proved unsustainable while at the same time failed to result in sustainable poverty reduction. A number of factors have been identified to contributing to the failure of these measures to achieve sustainable poverty reduction, including poor targeting mechanisms, lack of focus on the poor, programme inconsistency, poor implementation, and corruption (Ugoh, and Ukpere, 2009; Ogwumike, 2002). Indeed, these earlier efforts to address poverty failed largely because they were badly implemented and had no particular focus on the poor in terms of design and implementation. The programs were also short in the areas of pro-poor growth and resource redistribution. The programs were not also evidence-based both in terms of national or other geographical analyses. In this paper, we estimate a poverty model to identify the key drivers of poverty in Igboland of Nigeria.

The Igbo nation ranks as one of the largest in the whole of Africa. They occupy a very considerable area of Southeastern Nigeria and they are commonly estimated to make up over 27% of the total population of Nigeria. Apart from the large group of Igbo of the east, there are other Igbo settlements on the west bank of the River Niger. The states that make up the Igbo states are Abia, Anambra, Ebonyi, Enugu, Imo and a good part of the Delta and Rivers States as well. Their readiness to travel and tenacity of purpose, especially when seeking employment and business advancement, have carried many of them far beyond their native environment. When abroad, they maintain close contact, cement and sustain a strong bond. They are generous and are also astute businessmen and women. The Igbos are survivors. They adapt quite easily to any environment and before too long, they make their presence felt in that community.

The incidence of income poverty in Nigeria has been on the increase. Analysis of national levels of poverty showed that the incidence of poverty increased sharply between 1980 and 1985, declined slightly between 1985 and 1992, but increased sharply between 1992 and 1996 (Okojie et al., 2001). The proportion of the population living in poverty based on the head count index rose from 27% in 1980 to 46% in 1985, declined slightly to 42% in 1992 but increasing sharply to 67% in 1996. The rising

poverty in Nigeria has been described ironically as "poverty in the midst of plenty" (World Bank, 1996, 1998). The zonal indices of poverty have also behaved in a similar pattern. Thus, an understanding of the various dimensions of poverty in Igboland (Igbos of the southeast of the Nigeria) is a precondition for effective pro-poor development strategies in that geopolitical zone.

The determinants of poverty in the Igbo nation are not only complex but also multi-dimensional, involving, among other things, gender, age, location/ethnicity, education and occupation. To understand Igbo poverty and to be able to delineate policy options, we need to study these dimensions. Thus, we study the incidence of poverty in Igboland of Nigeria, what accounts for it, and what specific measures can be taken to reduce it.

## THE CONCEPTUAL FRAMEWORK

Different criteria have been used to conceptualize poverty over time. Most analysts follow the convention of regarding poverty as a function of income levels insufficient for securing basic goods and services. From this perspective, it is concerned with individuals' ability to subsist and to reproduce themselves as well as individual ability to command resources to achieve this (Sen, 1981; Amis and Rakodi, 1994). Historically, this involves a transition from a situation where subsistence depends upon wages with which to then purchase food. Many other experts have conceptualized the poor as that portion of the population that is unable to meet basic nutritional needs (Ojha, 1970; Reutlinger and Selowsky, 1976). Others like Singer (1975) view poverty in part, as a function of education and/or health: life expectancy, child mortality, etc. Others like Musgrove and Ferber (1976) identify the poor using the criteria of the levels of consumption and expenditures. Poverty is also related to "entitlements" (Sen, 1983), which is 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 (e. g., money, 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 nonphysical (participation, identity, etc) requirements of a "meaningful life" (Streeton, 1979; Blackwood and Lynch, 1994).

Thus, Table 1 presents a schema of poverty concepts. It is meant to illustrate the fundamental problems of determining the scale of poverty and deriving effective measures to alleviate poverty. The first conceptualization in the table is to see poverty as a consequence of the deficient provision of goods, based on the absolute or conventional economic approach and measured by expenditure/consumption-, income- and basic needs-oriented indices.

The second conceptualization sees poverty as a consequence of deprivation and lack of rights, based on the

**Table 1.** Schematic overview of the concepts of poverty.

Concepts of poverty		
Conceptual basis	Approach	Index
Poverty as a consequence of deficient provision of goods	Absolute approach or conventional economic approach	Consumer-oriented indices: Income, achievable consumption level, food supply, medical care; basic needs: Food, clothing, health, accommodation, etc
Poverty as a consequence of deprivation and lack of rights	"Relative deprivation", "earning capacity", and "entitlement" approaches	Income from wage labor, income from the sale of assets, resources from own production, the cost of purchasing resources (food), social security claims, lack of rights or opportunities, control of resources, etc
Poverty as a consequence of insufficient capability	Capability approach	How goods are used (e.g. markets for goods, products and labor) and benefits derived from goods, freedom and capability of transforming resources into a higher quality of life
Poverty as a consequence of social and economic exclusion mechanisms	Socio-economic exclusion mechanisms based on the paradigms of solidarity, specialization and monopolization; vulnerability, and short-term shocks	Participation in social, economic and political (e.g. democratic processes) development; net assets; investments, stores and claims.
Poverty as a consequence of lack of primary and secondary basic needs resulting in powerlessness, helplessness, despair, discrimination, deprivation (economic, social, cultural and political) marginalization, vulnerability, loss of dignity and self-respect, desperation and hopelessness	Normalcy approach - human progress and betterment or social welfare approach	A combination of income and nutritional (including food deprivation) requirements, and the quality of life or level of human development

Source: Anyanwu (1998).

relative deprivation, earning capacity and entitlement approaches and measured by income from various sources, rights to and control of resources, cost of producing resources, social security claim, etc.

The third conceptualization sees poverty as a

consequence of insufficient capability, based on the capability approach and measured by freedoms and capability of individuals. The fourth group of definitions sees poverty as a consequence of social and economic exclusion mechanisms. This is based on the socio-economic exclusion mechanism, which

in turn stands on three paradigms: Solidarity paradigm, specialization paradigm, and monopoly paradigm. In the solidarity paradigm, exclusion mechanisms are attributed to troubled relationships between the community and specific groups or individuals, the community being defined in terms of

A package of common values, rights and institutions and a social order ensuing there from. In the specialization paradigm, exclusion is seen as the result of the conduct of the individual, which is again dependent on his interests and capabilities, so that the social structure is based on a specific form of division of labor and which essentially plays a part in determining how and to what extent the individual and society interact. Exclusion therefore appears in terms of discrimination, market refusal or unenforceable rights and voluntary conduct. In the monopolization paradigm, various interest groups exert control over the input of available resources, and as insiders determine access to resources and establish barriers to access, for example on goods and labor markets, at the same time fostering solidarity within the respective interest groups. Therefore, the rules limiting membership of the groups represent exclusion mechanisms, which may be of a nature (von Hauff and Kruse, 1994). Exclusion is also based on vulnerability, long-term trends (long-term unemployment) and short-term shocks. This means that poverty goes beyond want or lack to defencelessness, insecurity, and exposure to risk, shocks and stress. This is measured also by participation in the development process, net assets such as investment (human skills and economic assets like animals), stores (money, granaries) and claims (on patrons or the governments).

As von Hauff and Kruse (1994) have noted, there is a current predominance of economic definitions of poverty, and consequently material aspects of poverty alleviation take precedence; the covering of deficiencies in provision is seen as a priority. The view is therefore gradually establishing itself that there is a need for more refined concepts of poverty with more comprehensive understanding of poverty. Thus explains why some national governments are reconceptualizing poverty. For example, in 1992, Germany stated that people affected by poverty are unable "to lead a decent life" and hence "poverty means not having enough to eat, a high rate of infant mortality, a low life expectancy, low educational opportunities, poor drinking water, inadequate health care, unfit housing and a lack of active participation in decision-making processes" (Federal Ministry for Economic Cooperation and Development, 1992:13). It is in this sense that Deng (1995) argued that poverty should be conceptualized broadly to have both quantitative and qualitative dimensions and to include political, social and economic dimensions.

As a beginning, one can define poverty as a deviation from a normal situation for, say, an individual in the Nigerian society. O'Boyle (1991) articulated this by asking: "What does it mean to be a person?" This means to have "basic needs of a normal human being". These basic needs consist of primary and secondary needs. The former comprises of food (including water and clothing) and shelter; and the latter consists of economic, social, cultural, liberty; freedom of expression and religion, individual rights to own property, to have access to productive employment,

credit, etc. Primary and secondary basic needs can be met through one's own resources, family, community and/or through a combination of these sources. The lack of these resources leads to a state of powerlessness, helplessness and despair, and thus the inability to protect oneself against economic, social, cultural and political discrimination, deprivation and marginalization (Deng, 1995). Thus, the inability to meet basic primary and secondary needs constitutes a state of poverty. This predicament leads to desperation and hopelessness if the community/society is indifferent to the plight of its poor, which could in turn produce violence, theft, thuggery and other forms of family and social values breakdown and decay. It must be noted that this more comprehensive and quantitative and qualitative conceptualization of poverty is different from the usual primary basic needs approach which is a partial measurement and conceptualization of poverty. Following Deng (1995), therefore, we categorize the following as poor, especially in the Nigerian context: (1) Those households or individuals below the poverty level and whose income are insufficient to provide for basic needs; (2) Households or individuals lacking access to basic services, political contacts and other forms of support, including the urban squatters and "street" children; (3) People in isolated rural areas who lack essential infrastructure such as basic services; (4) Female – headed households (especially pregnant and lactating mothers 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 various economic reforms introduced by government, that is, those who are in danger of becoming the "new poor"; and (6) Ethnic minorities who are marginalized, deprived and persecuted economically, socially, culturally and politically.

## METHODOLOGICAL ISSUES

### Data sources

The analysis of evolution of poverty and welfare over time in Nigeria has been difficult in the past because of data considerations. Under the National Integrated Survey of Households (NISH), four consumer expenditure surveys have been conducted by the Federal Office of Statistics (FOS). These surveys were conducted in 1980, 1985, 1992, and 1996 and they provide data, which can be used to address in some detail issues of household and individual welfare. The National Consumer Surveys, which are supplemental modules of the National Integrated Survey of Households, have been part of FOS activities for a number of decades, the first was in 1953. Surveys were conducted on an *ad hoc* basis until 1980 when the first National Consumer Survey was conducted as part of NISH. In 1985, another enlarged survey was carried out, others followed in 1992 and 1996, respectively. The NISH program is run in line with the United Nations Household Survey Capability Program. The design of the National Consumer Surveys follows the general NISH design. Each National Consumer Survey (NCS) covers all the states in the Federation, including the Federal Capital Territory (Abuja). In each state, 120 Enumeration Areas (EAs) are covered annually, with 10 EAs randomly allocated to each month of the

**Table 2.** Sample sizes for the NCS data set.

Year	Sample design	Urban		Rural		Total
		No.	(%)	No.	(%)	
1996	Two stages-EAs, HHs	3,037	21.1	11,358	78.9	14,395

Source: FOS, 1999, Data Files.

survey. From the selected EAs, a sample of households (10) is covered each month for the General Household Survey (GHS), with five households sub sampled for the NCS. A national household sample of 10,000 is aimed at. However, by 1996, with the number of states increasing to thirty, the sample size was increased (FOS, 1996, 1999). The actual figures for data sizes processed for this paper are provided in Table 2. Out of a national sample size of 14,395, the four Igbo states had a sample of 1775, representing 12.38%.

**Derivation of poverty lines**

In the paper, the nationally defined poverty line is used. Total real per capita expenditure was used as a proxy for the standard of living of households interviewed. Households were classified as poor or non-poor in relation to their level of total expenditure (food or non-food). To do this, two lines were set relative to the standard of living in the country: a moderate poverty line equal to two-thirds of the mean per capita expenditure, and a core poverty line equal to one-third of the mean per capita expenditure. Households were then classified into one of three groups – core (extreme) poor, moderately poor and non-poor as determined by these poverty lines. To derive poverty lines for 1996, a raising factor equal to the ratio of CPI (Consumer Price Index) - 28.56 - for the year relative to that for 1985 was used.

**Poverty indices**

The  $P\alpha$  index measures proposed by Foster et al. (1984) which can be used to generate the headcount ratio ( $\alpha= 0$ ), as well as the depth ( $\alpha= 1$ ), and severity ( $\alpha= 2$ ) of poverty were used in this paper. The simplest and most common measure of poverty is the headcount ratio or the “incidence of poverty”. The poverty headcount is the number of people in a population who are poor while the poverty headcount ratio (H) is the fraction who are poor. That is:

$$H = (q/n). \tag{1}$$

where: q = the number below the poverty line; n = the population size.

The poverty headcount and the headcount ratio are only concerned with the number of people below the poverty line. They are insensitive to the depth or severity of poverty and to changes below the poverty line. That is, they do not satisfy the axioms of “strong monotonicity” or “distributional sensitivity”. However the headcount ratio is the most commonly used measure of poverty because of its simplicity and ease of calculation (Fields, 1997).

The  $P\alpha$  index proposed by Foster et al. (1984) incorporates some degree of concern about poverty through a “poverty aversion” parameter  $\alpha$ . The  $P\alpha$  class measure can be written as:

$$P\alpha = \frac{1}{n} \sum_{i=1}^q \frac{(Z - Y_i)^\alpha}{Z} \tag{2}$$

Where, Z is poverty line; q is the number of persons/households below the poverty line. Y is income of the person/household;  $\alpha$  is the FGT parameter which takes the value 0, 1, 2 depending on the degree of concern about poverty; Z-Y is the proportionate shortfall below the poverty line.

This figure is raised to power  $\alpha$ . By increasing the value of  $\alpha$ , the “aversion” to poverty is measured. When there is no aversion to poverty that is  $\alpha = 0$ , the index is simply:

$$P\alpha = \frac{1}{n} (q) = q/n = H. \tag{3}$$

H is the headcount ratio, which measures the incidence of poverty. When  $\alpha = 1$ ,  $P\alpha$  measures the depth of poverty; when  $\alpha = 2$ ,  $P\alpha$  measures the severity of poverty.

The  $P\alpha$  index satisfies the Sen transfer axiom, which requires that when income is transferred from a poor to a richer household, measured poverty increases. Another advantage of the  $P\alpha$  measure is that it is decomposable by population subgroups. Thus, the overall measure of poverty can be expressed as the sum of group measures weighted by the population share of each group. That is,

$$P\alpha = \sum_{j=1} K_j P\alpha_j \tag{4}$$

where:  $j = 1, 2, 3, \dots m$  groups,  $K_j$  = population share of each group,  $P\alpha_j$  is the poverty measure of each group.

From this, the contribution of each group  $C_j$  to overall poverty can be calculated as follows:

$$C_j = \frac{K_j P\alpha_j}{P\alpha} \tag{5}$$

This property of the index implies that when any group becomes poorer, aggregate poverty will increase. In this paper, the  $P\alpha$  index is used:  $P_0$  (the headcount or poverty incidence),  $P_1$  (the depth of poverty), and  $P_2$  (the severity of poverty) were calculated. The contributions of various sub-groups in the population to overall rural poverty were also calculated.

**POVERTY PROFILE IN IGBOLAND OF NIGERIA**

**Levels of poverty in Nigeria and Igboland**

In 1996, the proportion of the Nigerian population living under the poverty line stood at 66.9%, significantly up from 42.7% in 1992. The depth of poverty was 30.4% in 1996, again a significant increase from 16.4% in 1992. The severity of national poverty more than doubled from

8.6% in 1992 to 17.4% in 1996. However, both urban and rural incidence of poverty increased between 1992 and 1996, from 37 to 59.3% and 46 to 71.7% for urban and rural areas, respectively. More importantly, rural poverty was more widespread, deeper, and more severe than urban poverty in 1996. For example, apart from the wide disparity in the headcount index, the depth of rural poverty was 33% as against 26.3% in urban areas just as the severity of rural poverty was 18.9% compared with 15% in urban areas of Nigeria.

In the same vein, in 1996 (Table 3), the proportion of the Igbo States' population living under the poverty line stood at 55.1%, up from 40.9% in 1992. The depth of poverty in Igbo States was 21.% in 1996, again an increase from 16.2% in 1992. The severity of Igbo States' poverty rose from 8.7% in 1992 to 11.4% in 1996.

### **Poverty in Igboland and the urban and rural sectors**

Both urban and rural incidence of poverty in Igboland rose between 1992 and 1996, from 38.3 to 49.2% and 43.3 to 58.8% for urban and rural areas, respectively. Mirroring the national outlook, rural poverty in Igboland was more widespread, deeper, and more severe than urban poverty in 1996. For example, while urban headcount index was 49.2% that of the rural areas was 58.8%. Also, the depth of urban poverty was 18.4% as against 23.7% in rural areas just as the severity of urban poverty was 9.6% compared with 12.6% in rural areas of Igboland.

While the proportion of the population living in urban areas of Igboland was 39.12%, the rural proportion was 60.89% (Table 4). However, the urban areas' contribution to total poverty was 34.94% in 1996 compared with the rural area's contribution of 65.06%. These results again suggest that poverty in Igboland is more pronounced in rural than in urban areas.

### **Poverty in Igboland and gender of household head**

As Table 3 shows, in terms of gender distribution of poverty in Igboland, the headcount and poverty gap indices showed that rural poverty was more pronounced in the female-headed households in 1996. For example, the headcount, gap and severity indices in 1996 were 56.0, 21.9 and 11.1%, respectively for female-headed households as against 54.9, 21.5 and 11.5%, respectively for the male-headed households. Generally, the differences in levels did not seem to be much. However, it must be noted that the contributions of the two groups to total poverty were almost in proportion to their population shares. For example, while the male-headed households made up 83.23% of the rural population, they contributed 82.96% of the poverty incidence. In the same

vein, while female-headed households were only 16.78% of the population, their contribution to poverty was only 17.05% (Table 4).

### **Poverty in Igboland and household size**

Tables 3 to 4 also demonstrate that there is correlation between the levels of poverty and the size of the households in Igboland. Thus, while households with one person showed the least incidence of poverty, households with more persons especially those with 20 persons and above showed the highest incidence of poverty. Using the headcount index, for instance, the incidence of poverty with the least size (that is, one person) was 3.4% for 1996. This is against households with more than 20 persons whose incidence of poverty was estimated at 73.2% in that year. However, in terms of contribution to poverty levels, it is a different story. Households between 5 and 9 persons contributed the highest shares of poverty of 67.41%.

### **Poverty in Igboland and education of household head**

Tables 3 and 4 show that the level of education in Igboland is not an important determinant of poverty. For instance, household heads with no education have a higher proportion of poverty than those with at least primary education but the difference is small when compared to those with primary education alone while those with post-secondary education are poorer than those with secondary education alone. Among household heads with no education, their proportion in terms of poverty was 61.7% in 1996. For those with primary education, their proportion was 55.4% during the same year, those with secondary education 47.2% and those with post-secondary education 50.5%. In terms of contribution to poverty, each group contributed in proportion to its population, showing that those with primary education only (46.16%) contributed the highest figure of 46.42% as against 29.86% for those without education – and only 6.32% for those with post-secondary education.

### **Poverty in Igboland and age group of household head**

For poverty in Igboland and age group of household head, the figures in Table 3 showed that while the level of poverty falls after the age of 24 years it rises again from the age of 35 to 44 years. It however maintains continuous slight falls thereafter. This presents a picture that at higher age brackets, poverty tended to decline marginally. In terms of poverty share, those in the age brackets 45 to 54 years seem to contribute most.

**Table 3.** Headcount, depth and severity of poverty in Igboland by sector and household head characteristics.

Variable	1996		
	Head count	Depth	Severity
<b>Igboland</b>	0.551	0.216	0.114
Sector			
Urban	0.492	0.184	0.096
Rural	0.588	0.237	0.126
<b>Gender</b>			
Male-headed HH	0.549	0.215	0.115
Female headed HH	0.560	0.219	0.111
<b>Household size (person)</b>			
1	0.034	0.007	0.002
2-4	0.370	0.119	0.057
5-9	0.652	0.261	0.137
10-20	0.732	0.337	0.199
<b>Educational attainment</b>			
No education	0.617	0.247	0.134
Primary	0.554	0.227	0.121
Secondary	0.472	0.174	0.088
Post secondary	0.505	0.148	0.070
<b>Age group</b>			
15- 24	0.438	0.247	0.152
25- 34	0.307	0.125	0.067
35- 44	0.516	0.190	0.094
45- 54	0.607	0.227	0.119
55- 64	0.603	0.243	0.129
65+	0.587	0.270	0.157
<b>Occupation</b>			
Professional / technical	0.404	0.140	0.060
Administration	0.000	0.000	0.000
Clerical	0.594	0.232	0.118
Sales worker	0.406	0.136	0.071
Service Industry	0.627	0.152	0.107
Agric./forestry	0.629	0.254	0.134
Production/transport	0.456	0.202	0.102
Manufacture/processing	0.180	0.075	0.041
Others	0.531	0.263	0.166

Source: Computation from National Consumer Survey, 1996.

### Poverty in Igboland and employment characteristics of household head

Table 3 shows that those heads of Igbo States' households who engage in agricultural activities/farming have the highest incidence of poverty of 62.9%. Table 4

also shows that Igbo States' household heads in the agriculture and the forestry sector contributed the largest share of poverty of 65.61%, using the headcount index. Ironically, the survey data show that the greatest proportion of the people in Igboland is engaged in farming activities.

**Table 4.** Distribution of poverty in Igboland by sector and household head characteristics: Headcount index (Percentages).

Variable	1996(%)		
	Dist	Index	Cont
<b>Sector</b>			
Urban	39.12	49.18	34.94
Rural	60.89	58.84	65.06
<b>Gender</b>			
Male-headed HH	83.23	54.88	82.96
Female-headed HH	16.78	55.95	17.05
<b>Household size</b>			
1 person	4.66	3.40	0.29
2-4 persons	28.52	36.97	19.15
5-9 persons	56.92	65.21	67.41
10-20 persons	9.90	73.15	13.16
<b>Educational attainment</b>			
No education	26.65	61.68	29.86
Primary	46.16	55.37	46.42
Secondary	20.30	47.20	17.40
Post secondary	6.89	50.54	6.32
<b>Age group</b>			
15- 24	0.78	43.83	0.62
25- 34	9.33	30.72	5.21
35- 44	26.32	51.59	24.66
45- 54	32.67	60.72	36.03
55- 64	19.03	60.29	20.83
65+	11.87	58.68	12.65
<b>Occupation</b>			
Professional/technical	40.43	13.97	2.20
Administration	0.00	0.00	0.00
Clerical	59.35	23.19	11.50
Sales worker	40.57	13.57	16.06
Service industry	62.68	15.19	0.85
Agriculture/forestry	62.88	25.36	65.61
Production/transport	45.62	20.17	0.74
Manufacture/processing	17.97	7.47	0.70
Others	53.11	26.26	2.34

Dist, Weighted population share; Index, poverty headcount index; Cont, contribution to total poverty; HH, house hold. Source: Computation from National Consumer Survey1996.

### Levels of poverty by Igbo states

Tables 5 and 6 show the distribution of poverty by Igbo States of Nigeria. The tables show that the highest incidence of poverty of 60.3% was in Abia State. Enugu/Ebonyi States followed closely with 59.6% while Imo State came third with 53.3%. Anambra State was the

least poor of the Igbo States with 43.9%, incidence. However, while the poverty depth/gap was highest again in Abia State with 26.4 percent, ImoState followed with 23.0 percent. Enugu/Ebonyi States had the third worst poverty depth of 21.9% while the least poverty depth was recorded again in Anambra State, with 14.2% (Figures 1 to 3). The severity of poverty followed a similar pattern



**Table 5.** Headcount, depth and severity of poverty by states in Igboland.

Variable (States)	1996(%)		
	Head count	Depth	Severity
Abia	0.603	0.264	0.151
Anambra	0.439	0.142	0.064
Enugu/Ebonyi	0.596	0.219	0.112
Imo	0.533	0.230	0.124
All Igbo States	0.551	0.216	0.114

Source: Computation from National Consumer Survey, 1996.

with the depth of poverty. Sectorally, apart from Anambra State, poverty incidence was more predominant in rural areas: 66.87% in Abia State, 61.88% in Enugu/Ebonyi State, and 65.61% in Imo State. In the case of Anambra State, poverty was largely an urban phenomenon, 51.45% as against 39.59% in rural areas. Poverty with respect to household size in the individual states mirrored the combined data whereby poverty incidence increased with household size. Though household heads with post-secondary education in Anambra State especially (less so in Imo and Enugu/Ebonyi States) experienced the least incidence of poverty, poverty appeared to be general across educational levels of attainment. In most of the states poverty incidence increased with age at least up to age 45 to 54 years. Generally, those engaged in agricultural occupation experienced the largest levels, apart from Enugu/Ebonyi State where it occurred among the clerical category.

**Tests for differences in urban and rural poverty in Igboland of Nigeria**

To test whether rural-urban poverty differences observed in Igboland are significant, we conducted a test of the equality of the means. It tests that:

$$[\text{Headcount}]_{\text{urban}} - [\text{Headcount}]_{\text{rural}} = 0.$$

Table 7 presents the results of the test. The results clearly show that there is significant difference (at one percent significance level) between urban and rural headcount indices in Igboland of Nigeria in 1996.

**DETERMINANTS OF POVERTY IN IGBOLAND OF NIGERIA: EMPIRICAL RESULTS**

**Variables in the empirical estimation**

The discussion in “poverty profile in Igboland of Nigeria” relied largely on tabulated data, exploring relationships between variables without holding other factors constant.

Although many of the relationships in the data seem clear, correlations among key variables potentially could obscure the relationship between poverty and a single factor of interest. Consequently, it is useful to analyze the impact of the relevant variables on poverty holding all other factors constant.

The dependent variable is defined as 1 if average per capita household expenditure is below the poverty line and 0 if it is above the poverty line. A logistics model is run following the works of Mason (1996), Anyanwu (1997, 1998, 2005, 2010), Anyanwu and Erhijakpor (2010), Rodriguez (2002) Ghazouani and Goaid (2001) and Gang et al. (2004) to examine the importance of each of the major variables among personal characteristic (age), demographic characteristic (household size), geographical residence (urban or rural), gender (male or female), educational attainment (none, primary, secondary, and post-secondary), and occupation (farming or non-farming since the main occupation in Igboland is farming).

Thus, in the model, the response variable is binary, taking only two values, 1 if the household is poor, 0 if not. The probability of being poor depends on a set of variables listed above and denoted as x so that:

$$\begin{aligned} \text{Pr } ob (Y = 1) &= F(\beta'x) \\ \text{Pr } ob (Y = 0) &= 1 - F(\beta'x) \end{aligned} \tag{6}$$

Using the logistic distribution we have:

$$\begin{aligned} \text{Pr } ob (Y = 1) &= \frac{e^{\beta'x}}{1 + e^{\beta'x}} \\ &= \Lambda(\beta'x) \dots\dots\dots \end{aligned} \tag{7}$$

where  $\Lambda$  represents the logistic cumulative distribution function. Then, the probability model is the regression:

$$\begin{aligned} E[y/x] &= 0[1 - F(\beta'x)] + 1[F(\beta'x)] \\ &= F(\beta'x) \end{aligned} \tag{8}$$

The results are meant to strengthen and clarify the descriptive analysis.

**Table 6.** Poverty headcount in Igboland by State and household head characteristics (1996) (Percentage).

Variable	1996) (%)			
	Abia State	Anambra State	Enugu/Ebonyi States	Imo State
<b>Sector</b>				
Urban	52.73	51.45	56.36	25.53
Rural	66.87	39.59	61.88	65.61
<b>Gender</b>				
Male-Headed HH	58.43	45.14	61.42	50.33
Female Headed HH	68.38	36.64	46.34	62.78
<b>Household size (persons)</b>				
1	7.90	0.00	1.48	2.34
2-4	44.52	20.66	34.79	43.67
5-9	71.93	56.23	66.40	65.12
10-20	90.62	46.45	73.39	85.68
20+	-	-	-	-
<b>Educational level</b>				
No education	72.03	40.46	60.63	66.24
Primary	62.37	44.30	60.66	56.09
Secondary	38.90	50.75	57.76	43.13
Post secondary	67.80	9.25	55.92	35.54
<b>Age group</b>				
15- 24	27.14	81.45	38.89	4.83
25- 34	32.43	16.57	33.28	34.28
35- 44	52.89	47.15	54.54	48.70
45- 54	60.92	50.85	62.73	70.50
55- 64	70.10	36.63	74.94	54.23
65+	84.07	43.46	52.54	59.70
<b>Occupation</b>				
Professional/ technical	65.45	11.76	17.42	62.02
Administration	-	-	-	0.00
Clerical	42.26	16.83	76.14	37.32
Sales worker	44.19	47.34	24.24	37.19
Service industry	100.00	0.00	55.68	0.00
Agriculture/forestry	72.34	48.57	65.64	64.43
Production/transport	15.06	0.00	-	-
Manufacturing /processing	77.79	0.00	11.80	-
Others	71.00	27.46	73.41	7059

Source: Computation from National Consumer Survey, 1996.

## Empirical results

Our empirical results are summarized in Table 8. The OLS results provide strong support for earlier descriptive analysis.

Our empirical results are summarized in Table 8. Since the logistic model is not linear, the marginal effects of each independent variable on the dependent variable are

not constant but are dependent on the values of the independent variables (Greene, 2003). Thus, to analyse the effects of the independent variables upon the probability of being poor, we looked at the change of odds ratio as the dependent variables change. The odds ratio is defined as the ratio of the probability of being poor divided by the probability of not being poor. This is computed as the exponent of the logit coefficients ( $e^{\beta}$ ).

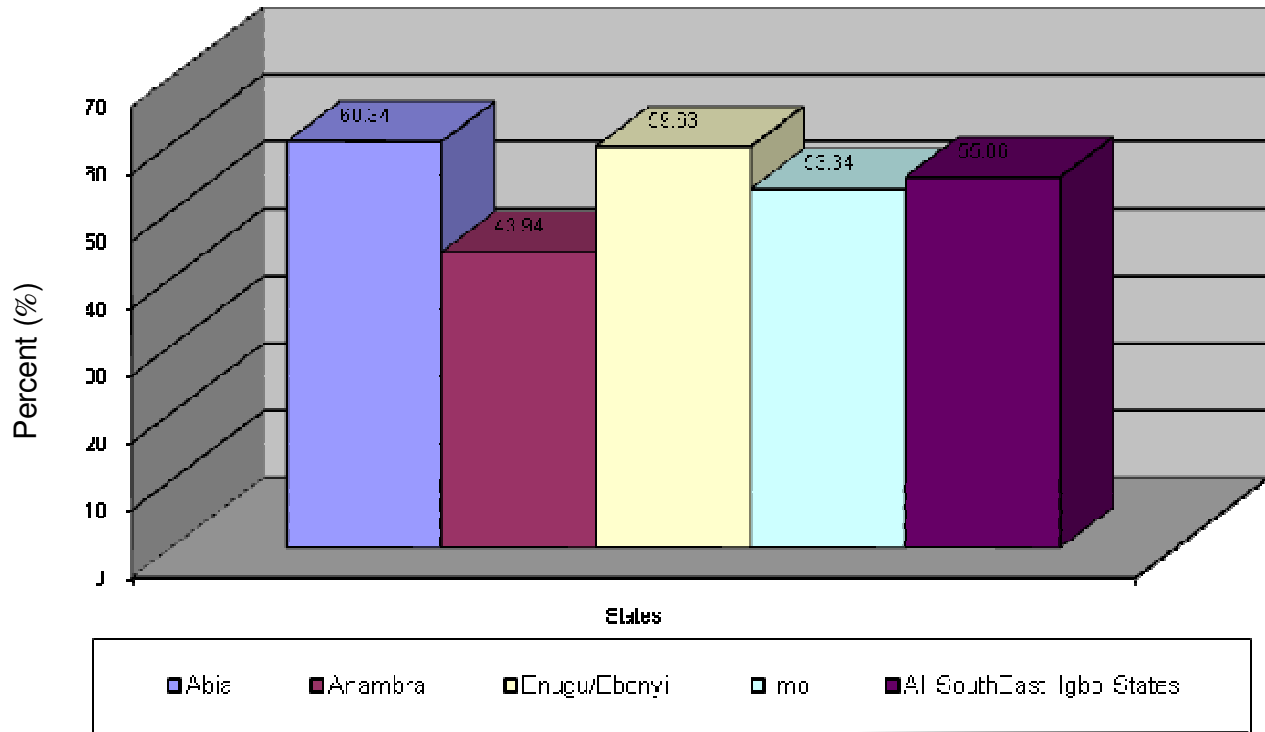


Figure 1. Poverty headcount index in Igbo States, 1996.

Table 7. Tests of differences in urban and rural poverty in Igboland of Nigeria, 1996.

Year	Headcount differences between urban and rural poverty (%)	t-Statistic	p-Value	[95% confidence interval]
1996	-21.77***	-5.34	0.000	-29.76 -13.78

\*\*\* Significant at 1% level. Source: Computations from survey data.

The logistic results provide strong support for earlier descriptive analysis. The odds ratios and the predicted probabilities are also presented in Table 8. All odd ratios greater than one means that the associated variables are positively correlated with the probability of being poor while odd ratios lower than one means that the associated variables are negatively correlated with the probability of being poor. The empirical results provide strong support for earlier descriptive analysis.

### Poverty and age

It is argued that poverty increases at old age as the productivity of the individual decreases and the individual has few savings to compensate for this loss of productivity and income. However, the relationship between age and poverty may not be linear, as would be expected that incomes/expenditures would be low at relatively young age, increase at middle age and then decrease again.

Thus, according to the life-cycle hypothesis, we would expect that poverty is relatively high at young ages, decreases during middle age and then increases again at old age. However, using the 1996 survey data, we found no evidence for the life-cycle hypothesis (since the quadratic term was insignificant throughout) but found that it is only in Abia State's case that increases in household head's age significantly reduce poverty but at a decreasing rate. This result is consistent with those of Datt and Jolliffe (1999), Rodriguez (2002), and Gang et al. (2004).

### Poverty and household size

The literature is full of evidence that large households are associated with poverty (World Bank, 1991a, b; Lanjouw and Ravallion, 1994; Cortes, 1997; Szekely, 1998; Anyanwu, 1997, 1998; Gang et al., 2004). The absence of well-developed social security systems and low savings in developing countries (especially those in Africa) tends to

**Table 8.** Determinants of poverty in Igboland of Nigeria (By State and All Southeast Igbo states), 1996.

Variable	Abia		Anambra		Enugu/Ebonyi		Imo		All Igbo states	
	Coefficient	Odds-ratio	Coefficient	Odds-ratio	Coefficient	Odds-ratio	Coefficient	Odds-ratio	Coefficient	Odds-ratio
<b>Age</b>										
Age	-16.326**	8.12e-	1.326	3.766	3.456	31.699	-8.525	0.0002	-6.147	0.002
Age <sup>2</sup>	2.110**	08**	-0.241	0.786	-0.424	0.654	1.076	2.933	0.774	2.167
<b>Household size (HHsize)</b>										
HHsize	2.222***	8.247**	5.921***	372.905***	2.690***	14.725***	2.581***	13.206***	2.633***	13.923***
HHsize <sup>2</sup>	0.095	9.223***	-1.051	0.350	-0.408	0.665	-0.217	0.805	-0.303**	0.738**
<b>Sector</b>										
Urban		1.099			0.262	1.300				
Rural	0.516		-1.750***	0.174***			1.961***	7.105***	-0.032	0.969
<b>Gender</b>										
Male	-0.483*	1.676			-0.121	0.886	-0.675**	0.509**	-0.456***	0.634***
Female		0.617*	0.228	1.255						
<b>Education</b>										
None	0.653		0.003	1.003	-0.272	0.762	0.919	2.507	0.201	1.223
Primary	0.225	1.922	-0.056	0.945	0.222	1.249	0.431	1.538	0.071	1.074
Secondary		1.252			0.201	1.223	-0.188	0.829	-0.065	0.937
Post-secondary	0.130		-0.919	0.399						
<b>Occupation</b>										
Farming	-0.359	1.139	-2.204***	0.110***	-0.955***	0.385***	0.852**	2.344**	-0.504***	0.604***
Constant	28.641*	0.698	-4.514		-8.660		11.066		9.951	
Pseudo R <sup>2</sup>		0.2737	0.2713		0.1548;		0.2541		0.1820	
LR chi <sup>2</sup> (10)		167.33	127.04		113.68		149.01		445.79	
Log likelihood		-221.983	-170.640		-310.343;		-218.688;		-1001.676	
Prob. >chi <sup>2</sup>		0.0000	0.0000		0.0000;		0.0000;		0.0000	
N		441	381		530		423		1775	

\*\*\* Significant at 1% level; \*\* Significant at 5% level; \* Significant at 10% level. Source: Author's Estimations from NCS Data of 1996.

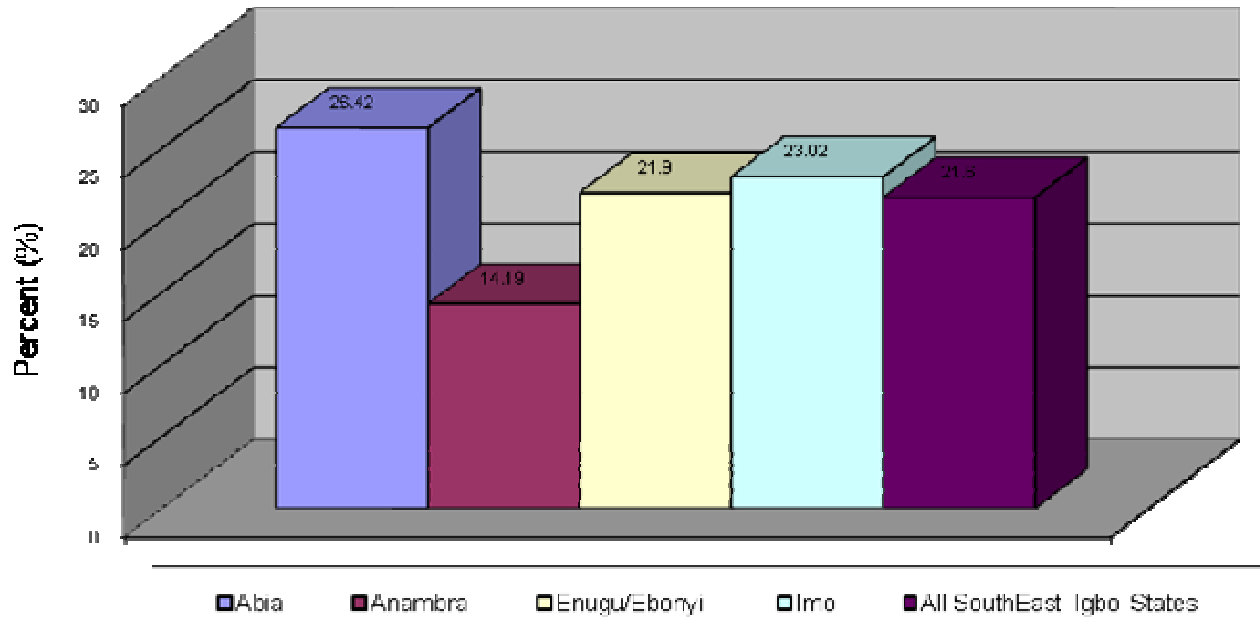


Figure 2. Poverty depth in Igbo States, 1996.

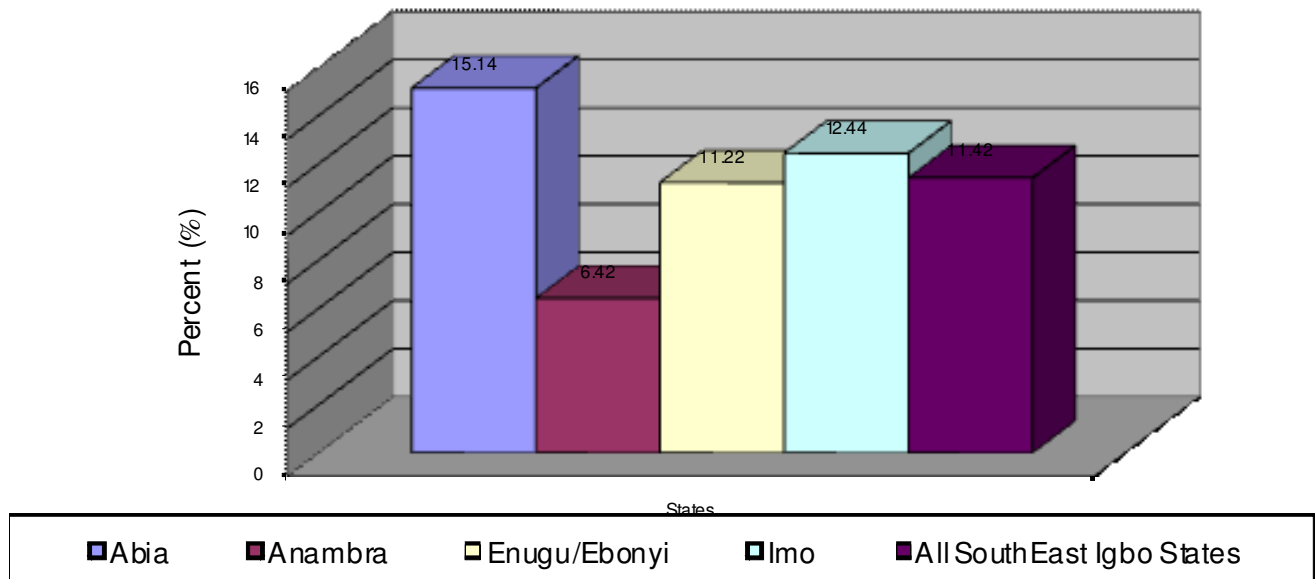


Figure 3. Poverty severity in Igbo States, 1996.

increase fertility rates, particularly among the poor, in order for the parents to have some economic support from children when parents reach old age. This is one of the rationales for parents to increase the number of children so that they will have high probability of getting support when they are old. Also, as Schultz (1981) had indicated, high infant mortality rates among the poor tends to provoke excess replacement births or births to insure against high

infant and child mortality, which will increase household size. In this study, we find that household size is the most important factor determining poverty in Igboland; the higher the family size the greater the level of poverty. This is true in each of the five states of Igboland and in the combined data. Our results are consistent with those of Gupta and Dubey (2003), Schoummaker (2004), Aassve et al. (2005), and Kates and Dasgupta (2007).

### Poverty and rural-urban location

A number of recent studies, including the World Bank (1990, 1991a,b) and the African Development Bank (2002) have indicated that poverty in Africa (and other developing countries) is higher in rural areas than in urban areas. Some of the reasons advanced for this include that historically government policy has been biased against rural areas; rural areas are heavily dependent on agricultural production, which in Africa is characterized by low labor productivity and hence low incomes; and natural disasters such as flooding and drought tend to affect rural areas more heavily than they affect urban areas.

Our estimates indicate that in the combined data, and in Abia and Enugu/Ebonyi states geographical location of households is unimportant in determining poverty. However, this masks significant differences in some other states. For example, the state results indicate that urban location in Anambra State has a statistically significant positive effect on the probability of being poor.

Contrariwise, the results with respect to Imo state show that the probability of being poor reduces if the household is located in an urban area.

### Poverty and gender

The feminization of poverty, a phenomenon, which is said to exist if poverty is more prevalent among female-headed households than among male-headed households – has been the focus of many studies in recent times. Some of the reasons advanced for this existence of feminized poverty include: The presence of discrimination against women in the labor market, or that women tend to have lower education than men and hence they are paid lower salaries. Our results for all the Igbo states show that male-headed households are less likely to be poor than female-headed households. The same results are true for Imo and Abia states but not so for Anambra and Enugu/Ebonyi states. These results conform with the observation by Bastos et al. (2009) that poverty is not a gender neutral condition as the number of poor women exceeds that concerning men and women and men experience poverty in distinctive ways.

### Poverty and education

The literature shows that education increases the stock of human capital, which in turn increases labor productivity and wages. Since labor is by far the most important asset of the poor, increasing the education of the poor will tend to reduce poverty. In fact, there appears to be a vicious cycle of poverty in that low education leads to poverty and poverty leads to low education (Bastos et al., 2009). The poor are unable to afford their education, even if it is provided publicly, because of the high opportunity cost that

they face. Many times they cannot attend school because they have to work to survive.

Unfortunately, our results indicate that education does not significantly affect the level of poverty in both Igboland as a whole and in the individual states. This result is similar to the findings of Sadeghi et al. (2001) for rural Savejbolagh farmers of Iran. The reason advanced by the authors for the insignificance of education was that for current farming activities, education, especially the formal type, was not seriously needed.

However, in the case of Igboland, the reason for the insignificance of education in poverty determination is linked to the mass abandonment of education particularly by the male Igbo population in search of quick wealth through trading since the introduction of the structural adjustment programs in 1986. They have come to see education as a waste of time (given mass graduate unemployment) and a very long route to wealth accumulation. In addition as Appleton et al. (2009) had noted, when a comparison is made between investing in education and other forms of investment, the returns from investing in education are on average lower.

### Poverty and occupation

It is hypothesized that occupation has a high correlation with poverty because occupations which require low amounts of capital, either human or physical, will be associated with low earnings and therefore with higher poverty rates. Since two-thirds of Igbos is engaged in farming, we estimated the effect of being a farmer on poverty levels. Our results show that farming occupation has a high significant positive effect on the level of poverty in the entire Igboland taken together as well as in Imo state. However, in Anambra, Enugu/Ebonyi, and Abia states, farming occupation very significantly reduces the poverty level, though less than so in the latter state.

### POLICY IMPLICATIONS

This study investigated poverty in Igboland, using the 1996 National Consumer Survey data set. The results show that by 1996, the proportion of the Igbo states' population living under the poverty line stood at 55.1%, up from 40.9% in 1992. The depth of poverty in Igbo states was 21.6% in 1996, again an increase from 16.2% in 1992. The severity of Igbo states' poverty rose from 8.7% in 1992 to 11.4% in 1996. Also, both urban and rural incidence of poverty in Igboland rose between 1992 and 1996, from 38.3 to 49.2% and 43.3 to 58.8% for urban and rural areas, respectively. Also, mirroring the national outlook, rural poverty in Igboland was more widespread, deeper, and more severe than urban poverty in 1996.

The multivariate analysis indicate that it is only in Abia

State that increases in household head's age significantly reduce poverty (at a decreasing rate) but showing that household size is the most important factor increasing poverty in Igboland. Also, rural location in Anambra State has a statistically significant negative effect on poverty while the results with respect to Imo state show that the probability of being poor increases if the household is located in a rural area. Our results show that generally, male-headed households are less likely to be poor than female-headed households in Igboland but education does not significantly affect the level of poverty. However, farming occupation has a high significant negative effect on the level of poverty in the entire Igboland taken together as well as in Anambra and Enugu/Ebonyi states. However, in Imo State, farming occupation very significantly increases the poverty level.

These results suggest that policy interventions are necessary to reduce poverty in Igboland of Nigeria. First, given that poverty increases with the number of household members (or family size), there is urgent need to intensify family planning services efforts and activities in Igboland so as to improve knowledge, acceptance and practice (KAP) of family planning. This will involve not only increased financial outlay but also research on fertility determinants as well as decentralized planning, delivery and supervision of family planning services.

Second, since poverty in Igboland does have important spatial implications, geographic targeting can play an important role in government anti-poverty efforts. Moreover, geographically targeted programs are attractive partly because they are more cost-effective than untargeted programs. Thus, by making financial capital, physical infrastructure (especially roads and electricity) and technological innovation available in poor rural areas (especially in States like Imo) and poor urban areas (such as Anambra) will lead to important contribution to government's efforts to reduce poverty in Igboland.

Third, the above has become imperative given that farming in Imo state in particular, is poverty accelerating. This can be explained by the vicious cycle of poverty given low capital, inadequate inputs and lack of access to modern techniques both in the farms and other non-farm occupations. Investing in the agricultural sector to reduce poverty should be a matter of great priority. There is also need to encourage productivity and access in both farm and non-farm occupations through direct input supply, strengthening and expanding of agricultural research and extension services, adapting agricultural technology and extension services to poor farmers, and by improving physical infrastructure such as rural roads and irrigation. At the same time, income sources diversification should be encouraged.

Fourth, government should design socio-economic policies to promote long-term employment. Government can assist ruralites (especially in Imo state) through increased and broadened National Agricultural and Rural Development Bank's, Community Banks' and Employment

Creation Fund's financial assistance for small-scale enterprises, complemented by school curricula orientation towards skill acquisition, among other measures.

Fifth, given that male-headed households had lower likelihood of poverty compared to the female-headed households, there is need to focus gender-based poverty interventions among female-headed households. Thus, in Igbo states, "headship" should seriously be considered a useful criterion for targeting anti-poverty interventions.

Sixth, in the educational sector, there is very urgent need to re-orientate the thinking and value system of both parents and their children through mass educational campaign regarding the importance of education and the need for parents to insist on their children (male and female) going to school (at least up to first degree) before seeking employment or going into business. In addition, apart from quantitative expansion (may be through private participation), is a fundamental reform of content (e.g. curriculum reforms, availability of school books equipment/facilities, and other teaching materials) towards more emphasis on skill acquisition and problems faced by the poor. It will also be necessary to devise means to assist poor households with school fees, textbooks and other school materials for their children. Non-formal education programs should also be expanded to help the poor gain literacy and most importantly, to acquire skills. These will have to be complemented with increased employment opportunities through public works and infrastructural development so as to encourage children to go to school and hence assurance of finding jobs on graduation. Indeed, as Levy (2006) and Kanbur (2008) have shown, there is abundant evidence to show that conditional cash transfers and expenditures (for education, for example) are effective levers of poverty reduction and redistribution.

Conclusively, the solution to poverty in Igboland is not less government but more. This requires not only the political will to execute its own policies but also to empower the poor themselves to initiate, design, execute and manage their own priorities. This multi-dimensional empowerment involves political empowerment (through public administration institutions, village and neighborhood councils, participation in democratic processes, and hence with a voice and right to vote), economic empowerment (through easy access to economic resources and institutions: Provision of basic assets-equity-enhancing land reform measures, micro-credit, physical infrastructure, extension services, etc), and social empowerment (e.g. provision of secondary basic needs, especially education and health; and involvement of the rural poor in non-governmental organizations (NGOs), private voluntary organizations (PVOs), and other community-based and grassroots institutions).

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