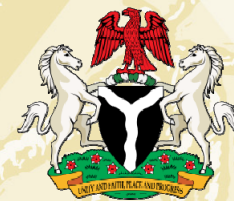




INTERNATIONAL FOOD  
POLICY RESEARCH INSTITUTE  
*sustainable solutions for ending hunger and poverty*  
Supported by the CGIAR



## Quantitative Analysis of Rural Poverty in Nigeria

Bolarin Omonona

In spite of Nigeria's abundant natural and human resource endowment, poverty remains pervasive, multifaceted, and chronic. Given the most recent data available, it is estimated that approximately 69 million (or 54.4 percent) Nigerians lived in poverty in 2004, an increase of more than 24 percent since 1980. This brief deals with poverty in Nigeria and focuses on the determinants of poverty in rural households by identifying the household/community characteristics (such as the status of women) and region-specific risks that affect rural poverty and how they have changed over time.

### Introduction

The measurement and analysis of poverty are necessary to: (a) know what the situation is, (b) understand the factors determining this situation, (c) help design interventions best adapted to the situation, and (d) assess the effectiveness of current policies and to determine whether the situation is changing. Various definitions and concepts exist for this purpose, but this brief focuses on the incidence, depth and severity of poverty.

The **incidence of poverty (headcount index)** is the share of the population whose income or consumption is below the poverty line; that is, the share of the population that cannot afford to buy a basic basket of goods. The **depth of poverty (poverty gap)** provides information regarding how far households are from the poverty line. This measure captures the mean aggregate income or consumption shortfall relative to the poverty line across the whole population. The **poverty severity (squared poverty gap)** takes into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor; that is, a higher weight is placed on those households further away from the poverty line.

### Dimension of Poverty in Nigeria

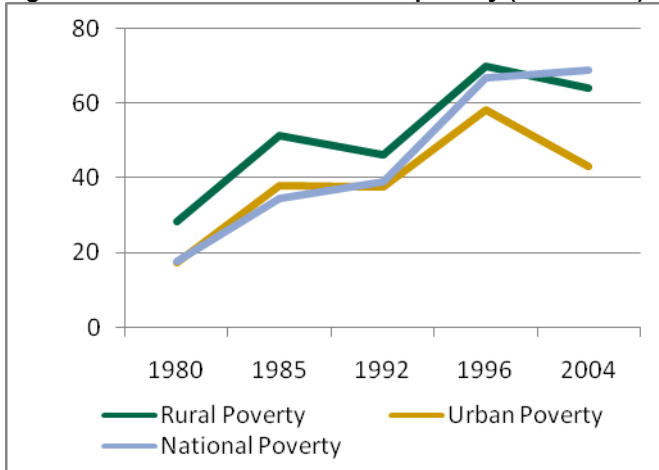
Nigeria's national poverty profile (as well as those of the urban and rural areas) is illustrated in Figure 1 for 1980-2004 (based on available data). The incidence of poverty has generally been on the rise since 1980, with two significant dips during 1985-1992 and 1996-2004. Focusing on the most recent surveys (1996 and 2004), the national poverty incidence was 65.6 percent in 1996 and declined to 54.4 percent in 2004. Similarly, in 1996, the poverty depth (P1) and poverty severity (P2) were 0.358 and 0.207, but these decreased respectively to 0.225 and 0.122 in 2004 (Figure 2).

Estimates of inequality also indicate that Nigeria has more unequal distribution of income than Ethiopia, Madagascar, India, and Niger. Further analysis also suggests that poverty in Nigeria is predominantly a rural phenomenon, with rural poverty increasing from 28.3 percent in 1980 to 63.8 percent in 2004. However, the proportion of the urban poor also rose from 17.2 percent in 1980 to 43.1 percent in 2004 (Figure 1).

Thus, within rural areas approximately 44.4 percent of households in 2004 could not meet their food expenditure requirements. Another 19.4 percent could meet their food expenditure requirements, but not the minimum expenditure to cover other basic

needs (NBS, 2007). In the case of urban households, 26.7 percent were not able to meet their required food expenditure requirements while 16.4 percent could meet their food expenditure but not other non-food basic expenditure needs.

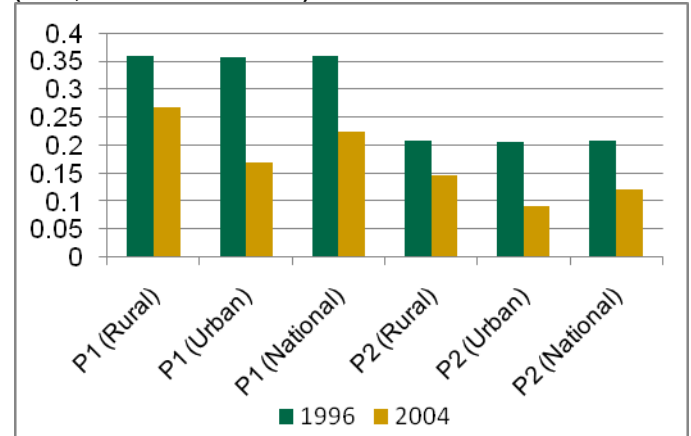
**Figure 1. Trends in rural and urban poverty (1980- 2004)**



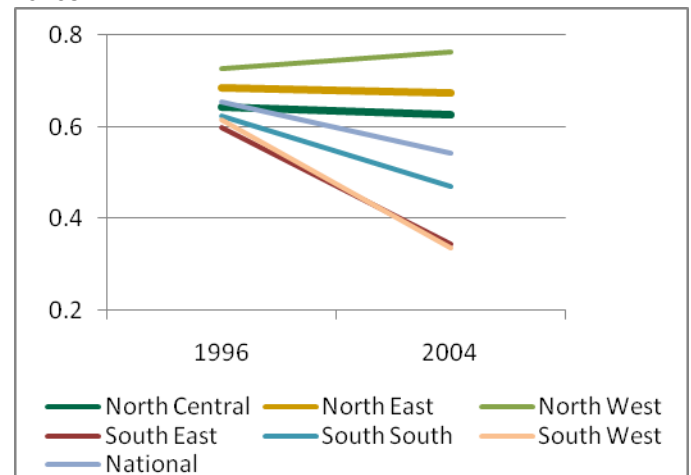
The predominance of rural poverty over urban has been consistent during 1996 to 2004. In 1996, about 70 percent of rural households were poor, as compared with 58 percent of the urban households. In 2004, the incidence of urban poverty declined more rapidly than rural poverty with 64 percent of rural households being poor (a 6 percent decrease) while urban poverty decreased by 15 percent to 43 percent. The same pattern holds true for the other poverty indices (depth and severity). It is important to note that the incidence, depth and severity of poverty among rural households are higher than the national poverty figures, while those of the urban households are lower, as shown in figure 2.

In terms of geopolitical classification, poverty incidence, depth, and severity are higher in all three northern Nigeria regions than in the three southern regions for 1996 and 2004 (Figure 3, 4, and 5).

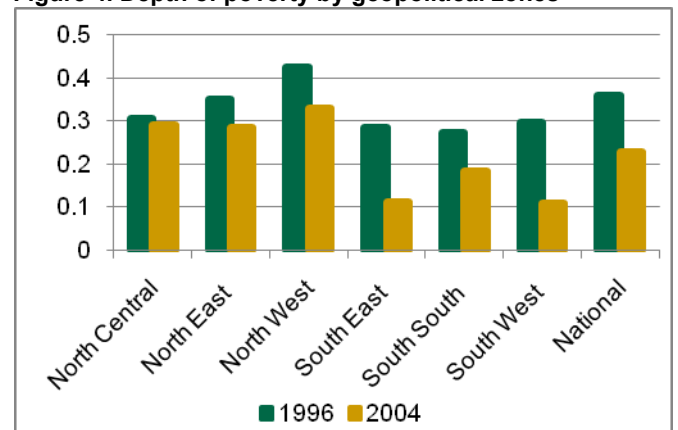
**Figure 2. Poverty depth (P1) and Severity (P2) by location (rural, urban and national)**



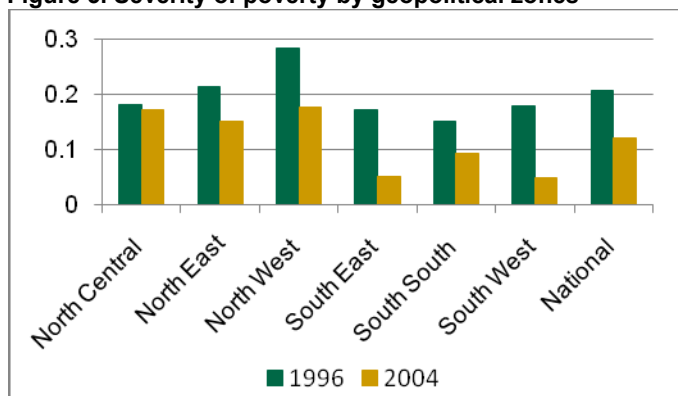
**Figure 3. Incidence of poverty by geopolitical zones**



**Figure 4. Depth of poverty by geopolitical zones**



**Figure 5. Severity of poverty by geopolitical zones**



The North West, North East and North Central zones have the highest poverty incidence, depth and severity in descending order while the South West, South East, and South South have the lowest poverty incidence, depth and severity in ascending order. All zones witnessed reductions in their poverty measures (incidence, depth and severity) from 1996 to 2004 except the North West where poverty incidence increased from 72.7 percent to 76.4 percent. The reductions in the poverty incidence, depth, and severity for rural households in the southern zones are greater than those achieved by their northern counterparts. Hence, it could be concluded that poverty is more prevalent in the northern zones than in the southern zones.

The poverty estimates also indicate that rural households headed by males are poorer than female-head households, with all three poverty measures higher for male-headed households in 1996 and 2004. It is also important to note that there was a general reduction in poverty incidence, depth and severity from 1996 to 2004 for both male- and female-headed rural households. But the reductions in these poverty measures between the two periods were far greater (even quadrupling in some cases) for the female-headed households than male-headed households.

### Determinants of Welfare in Rural Nigeria

The major causes of Nigeria's poverty go beyond low incomes, savings, and growth—which are usually associated with a poor country—to include high level of inequality attributable to unequal access to income opportunities and basic

infrastructure, and poor education and health status.

Using the fixed-effect regression model, the study identified some factors that influence poverty and the nature of their influence on poverty in rural households for 1996 and 2004 (Table 1).

**Table 1: Determinants of welfare in Nigeria**

	Variables	Influence on poverty
1.	Size of household	Generally, large family size reduces welfare in most regions of Nigeria. The larger the household size, the poorer the family.
2.	Dwelling type	Decent accommodation also influences welfare positively. Poverty is common among household dwelling in huts than those dwelling in decent houses.
3.	Safe toilet	There is also a positive relationship between safe toilet and welfare. Poverty is more pervasive in household with an unsafe toilet than those with a safe toilet.
4.	Marital status and type of family	Polygamous families generally are poorer than monogamous family type. Also, welfare is higher in households headed by someone who is monogamous, polygamous or by those in the divorced/separated/widowed category than households headed by never-married persons.
5.	Education	Households with formal education have higher welfare than households without formal education.
6.	Gender and age	The gender of the head of the household impacts on the nature of household poverty. Similarly, the age of the head of the household has an overall positive effect on the welfare of the household.

Given the fact that differences in gender and geopolitical factors have implications for the determinants of welfare in rural Nigeria, the analysis was extended to account for the gender and geopolitical dimensions of those determinants as described below.

### Gender Dimensions of Determinants of Rural Welfare in Nigeria

The following are important determinants of welfare for households headed by males and females in rural Nigeria:

With respect to *age, education levels, dwelling type, and access to safe water and toilet*, there are no significant gender differences. All the above factors have equal favorable influence on the welfare of male- and female-headed rural households in Nigeria. Generally, households without access to the above factors (either male- or female-headed) have lower welfare than those with access.

*Male-headed* households engaged in farming have lower welfare than those engaged in nonfarm occupations while female-headed households engaged in farming have higher welfare than those engaged in nonfarm occupations.

### ***Geopolitical Dimensions of Determinants of Rural Welfare in Nigeria***

The following factors are important determinants of rural welfare in the six geopolitical zones of Nigeria:

*Education and Occupation:* Across the six geopolitical zones, education improves the welfare of rural households, while households engaged in agricultural activities have lower welfare than those engaged in nonagricultural activities.

*Size of Household:* Large household size reduces welfare in all the geopolitical zones except in the rural South South zone, where the size of household does not influence welfare.

*Gender:* Male-headed households have higher welfare than female-headed households in North Central and South South zones in rural Nigeria but lower welfare in North West. Gender does not have any influence on welfare in the North East, South East and South West zones.

*Dwelling type:* Households living in descent accommodations have higher welfare than those living in huts in the North East and South West zones but lower in North Central. Dwelling type does not have any impact on welfare in the North West, South East and South South zones.

*Access to safe water:* Households with access to safe water have higher welfare than those without safe water in the North Central, North West and South East zones but lower in South South.

Access to safe water does not affect welfare in North East and South West.

*Access to safe toilet:* Households with access to safe toilet facilities have higher welfare than those without safe toilets in all the geopolitical zones of rural Nigeria except in North Central, where it is lower, and North East where it does not affect welfare at all.

*Age of household head:* As the age of the household heads increases, welfare improves in households in North West and South East but reduces for households in South South rural Nigeria. Age of household head does not affect welfare in the North Central, North East and South West zones.

### **Policy Implications**

Three major findings could be drawn from this study:

First, education is a key factor in the reduction of rural poverty in general, whether the households are headed by men or women and regardless of the zone in which the household resides. Welfare levels increase as educational attainment increases, so households whose heads attained tertiary education were the least poor while those without any formal education were the poorest. In line with this finding, existing educational efforts by government and nongovernmental organizations should be geared toward every person of school-going age, so that no one is left out.

Second, larger households were found to have a significantly decreased level of welfare among rural households. Awareness building on reproductive health knowledge that could empower household heads to make quality decision regarding their family size may be useful.

Third, geopolitical factors are important determinants of welfare. The poverty profile revealed that poverty was lower in the southern zones than the northern zones. Although poverty exists in all the geopolitical zones, the determinants vary across zones, so poverty eradication policies should be flexible to address specific challenges of each zone rather than generalized for the whole country.

*This brief is excerpted from the background paper “Quantitative Analysis of Rural Poverty in Nigeria.” This brief was written with the assistance of Babatunde Olaniyan, Valerie Rhoe, and James Sackey. It is intended to promote discussion; it has not been formally peer reviewed, but it has been reviewed by at least one internal and/or external reviewer.*

*The Nigeria Strategy Support Program (NSSP) of the International Food Policy Research Institute (IFPRI) supports the Agricultural Policy Support Facility (APSF), an initiative to strengthen evidence-based policymaking in Nigeria in the areas of rural and agricultural development. In collaboration with the Federal Ministry of Agriculture and Water Resources and funded by the Canadian International Development Agency (CIDA), APSF supports the implementation of Nigeria’s national development plans by strengthening agricultural-sector policies and strategies.*

*Copyright © 2010, International Food Policy Research Institute. All rights reserved. This material may be reproduced for personal and not-for-profit use without permission from but with acknowledgment to IFPRI. For other use, contact [ifpri-copyright@cgiar.org](mailto:ifpri-copyright@cgiar.org).*

### **For more information:**

IFPRI-Abuja  
International Food Policy Research Institute  
c/o International Center for Soil Fertility and Agriculture Development  
No.6/ Plot 1413 Ogbagi Street  
Off Oro-Ago Crescent  
Cadastral Zone 11, Garki, Abuja  
Nigeria  
E-mail: [ifpri-nigeria@cgiar.org](mailto:ifpri-nigeria@cgiar.org)  
[www.ifpri.org](http://www.ifpri.org)