# Poverty profile of farm households in Cross River State Nigeria

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## ABSTRACT

There is endemic poverty in Nigeria particularly in the rural areas where majority of the poor smallholder farmers whose main source of income are derived from agricultural activities reside. This study examined the extent of poverty among farm households in Nigeria. The study was conducted in Cross River State, one of the thirty-six states in Nigeria. Both primary and secondary data were used for the study. A multi-stage random sampling technique was employed to select 260 rural farmers who were administered with questionnaires for the study, while simple frequencies and percentages as well as Foster, Greer and Thorbecke index were used for data analysis. The findings revealed that majority of the respondents are male (83.0%), aged 41-60 years (52.0%) attained primary education (42.0%), belonged to several social organizations (92.0%); had household sizes of 1-5 (67.0%), owned farm land (83.0%) with an annual income of between N 41,000 - 60,000 (63.0%). Based on a poverty line of N 37, 232.31, the result showed the incidence, depth and severity of poverty among the respondents to be 30.78%, 3.03%, and 3.84% respectively. The implication of these results is that, on average, to lift a poor person out of poverty in the state will require the sum of N 112, 813.90. It was recommended that poverty alleviation in the state requires proper targeting and focusing on the rural areas with high incidence and severity before others.

Key words: Farm households, Nigeria, poverty, rural areas, smallholder farmers

#### **INTRODUCTION**

Sub-Saharan Africa has abundant agricultural resources. But in all corners of the region, millions of people remain hungry and malnourished-the result of glaringly uneven local food production and distribution and chronically deficient diets, especially among the poorest (Africa Human Development Report (AHDR), 2012). Available statistic showed that as much as 1.4 billion people, out of the 6.5 billion people around the world in 2005 lived on less than US\$1.25 a day and are thus classified as extremely poor with over 850 million people going to bed without sufficient food (Human Development Report Nigeria, (HDRN), (2008); Development Programme United Nations (UNDP), (2008). The situation in Sub-Saharan Africa (SSA) has been the most deplorable; not only is the incidence of extreme poverty much higher, the region was reported to have recorded about 100 million more extremely poor

people in 2005 than in 1990 unlike the experience in other regions where both the incidence of extreme poverty and the actual number of the extremely poor fell between 1990 and 2005 (Millennium Development Goals Report (MDGR), (2009). In essence, one can conclude that SSA contributed more to the extreme poverty in the World more than any region (Idowu, Awoyemi, Omonona and Fausi, 2011). According to Amalu (1998), Africa's poverty is captured in a single statistic: the total Gross National Product (GNP) of the 45 countries of Sub -Saharan Africa in 1985 was slightly less than the total GNP of Spain, a nation of about 40 million people. This implied that Africa need to work harder to reduce the level of poverty in the continent as we take a closer look at the poverty profile for Nigeria in Table 1 and Table 2.

With reference to Table1 and 2, Nigeria's statistical agency, the National Bureau of Statistics (NBS), has been conducting poverty surveys

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since 1980, the more nationally representative ones being those conducted in 1980, 1985/86, 1992/93 and 1996/97 as well as the living standard survey conducted in 2003/2004 (Human Development Report Nigeria, 2008). The total poverty head count in Nigeria rose from 27.2 per cent in 1980 to 65.6 per cent in 1996, an annual average increase of 8.83 per cent over the 16-year period. However, between 1996 and 2004, the head count declined by an annual average of 2.1 per cent to 54.4 per cent. Over the same period, the percentage of the core poor rose from 6.2 to 29.3 per. cent, and declined to 22.0 per cent in 2004. The fact that over 50 per cent of total population is officially poor should be of great concern to policy makers (HDRN, 2008). Considering the challenge of poverty in Nigeria first by looking at the geographical dimension, the urban poor rose from 17.2 per cent in 1980 to 58.2 percent in 1996, but declined to 43.2 per cent in 2004. From 1980-2004, the core poor in urban areas rose from 3.0 per cent in 1980 to 25.2 per cent in 1996 and declined. The corresponding the figures in the rural areas were 6.5 per cent, has 31.6 per cent and 27.1 per cent (Table 1) whereas the decline in core poor was 38 per cent in the urban areas, it was only 14 per cent in the rural areas, which is lower than national average of 25 per cent. Also rural areas accounted for 65 per cent of national poverty incidence (HDRN, 2008). By implication, it appears that being resident in the rural areas and in the Northern geopolitical zones increases the likelihood of being poor. Taking a cursory look at the human development statistics in Nigeria could give another better picture

of the situation as shown in Table 3. Table 3 showed some selected human benchmarks across the six (6)development States in South-South geo-political zone in terms human development index (HDI), human poverty measure (HPM), gender development index (GDI); gender empowerment measure (GEM) and inequality measure (IM). Beginning with human poverty index data, poverty is most pronounced in Bayelsa State (32.5) and Cross River State (31.9) listed in order of intensity while other states have better HPI. Cross River State ranked second in this order indicating the endemic nature of poverty in the state. Similarly, Cross River State places fifth position in the human development index score with Rivers State topmost and Edo state the least. With regard to gender development index, Rivers, Akwa Ibom, Bayelsa, and Delta states all

ranked high while Cross River State ranked fifth though followed by the least Edo state. Just like gender development index, Cross River and Edo states ranked fifth each in gender empowerment measure whereas Rivers state scored the highest (0.367) followed by Delta state (0.316), Akwa Ibom (0.310) and Bayelsa state (0.219). The whole scenario shows a clear picture of what the state of poverty and human development is in Cross River State, hence the need for this research on non-farm employment diversification and poverty in the state).

There is a high incidence of poverty in Nigeria and this has been largely traced to the adverse macroeconomic performance of the economy especially as dictated by the effects of negative external shocks and the adjustment reforms that were initiated in response to the shocks; succeeding governments have not been able to adequately cope with this deep-rooted problem (Olaniyan, 2000); he further stated that, studies on poverty in Nigeria have not been given priority until recently. According to IFAD (2007), stressed Nigeria has a population of 150 million, the largest in Africa and a fast-growing economy. Therefore, in spite of Nigeria's plentiful agricultural resources and oil wealth, poverty is widespread in the country and has increased since the late 1990s. Over 70 per cent of Nigerians are now classified as poor, and 35 per cent of them live in absolute poverty. The rural areas of the country are the worst hit by poverty where up to 80 percent of the population lives below the poverty line and social services and infrastructure are limited. About 90 per cent of Nigeria's food is produced by small-scale farmers who cultivate small plots of land and depend on rainfall rather than irrigation systems (IFAD, 2007). In other words, there is much dependence on agriculture for food and income by the poor rural population.

In spite of the importance of agriculture to the Nigerian economy and that of Cross River State in particular for poverty reduction, the sector has performed below its potential for generations neglected by government policies and held back by low farm productivity, hence, the knowledge gap this study intend to fill by examining the poverty profile of farm households in Cross River State Nigeria. Specifically, it described the socioeconomic characteristics of the farmers and determines the extent of poverty among the farming households in the state.

#### MATERIALS AND METHODS

This study was conducted in Cross River

State one of the 36 states in Nigeria. The State comprises of eighteen (18) Local Government Areas, namely: Abi, Akamkpa, Akpabuyo, Bakassi, Bekwarra, Biase, Boki, Calabar Municipal, Calabar South, Etung, Obanliku, Obubra, Obudu, Odukpani, Ogoja, Ikom, Yala, and Yakurr. The state is also multi-ethnic with diverse cultural groups and languages. Cross River State is situated within the tropics sharing common boundaries with Cameroon Republic in the East, Benue State in the North, Enugu and Abia States in the West and Akwa-Ibom State in the South. The State has a population of about 2.6 million (1.8 by 1991 Census with an annual growth rate of 3.0 percent). Cross River State cover an area of 23,074.425 sq.km and lies between latitudes 5°32' and 4°27' North and longitudes 7°50' and 9°28' EastThere is an Obudu plateau in the State with an altitude of 1,575.76 metres above sea level which enjoys a temperate climate like other temperate regions of the world (CRS Government Dairy, 1996).

Cross River State has a typical tropical humid climate characterized by distinct wet and dry seasons known as the rainy and dry seasons. The state is also noted with a two-peak wet season having a short dry spell of 2-3 weeks, referred to as "August break". The annual rainfall distribution varies greatly throughout the state. It is lowest in the Northern zone (less than 1700 mm) and highest in the forest of coastal zone (above 3000 mm). A mean annual maximum temperature of 26° is recorded for the State with a relative humidity of about 70-80 percent (CRADP, 1992; and Abang et al., 1994). Large hectares of land are yearly being brought under cultivation, thereby allowing for only isolated patches of natural vegetation (CRADP, 1992). Cross River State holds about a third of Nigeria's total forest area. A total of 22.4 percent of the total land area of the state is thickly forested. Animal breeding pastures are extensive on the grassland of Obudu Plateau and Gabu in Yala Local Government Area.

Both primary and secondary data were used for this study. Primary data was collected through the use of questionnaire. The instrument with 20 items was tested for reliability using the Cronbach's Alpha test statistic analysed through the use of SPSS package. The coefficient of reliability (consistency) was 0.816, suggesting that the items had relatively high internal consistency. Cronbach (1951) determines the internal consistency or the average correlation of items in a survey instrument to gauge its reliability. The coefficient usually ranges from 0-1. A multi-stage random sampling technique was employed to select samples for the study. The first stage involved the purposive selection of three agricultural blocks from each of the three agricultural zones in State making a total of nine (9) blocks. The blocks selected were among the populated blocks with high agricultural activities. The second stage was a random selection of five (5) cells each from the nine (9) selected agricultural blocks resulting in a total of forty-five (45) cells. The third stage was the random selection of six (6) farmers each from the selected 45 cells to make a total of two hundred and seventy (270) farmers as sample size (respondents) as shown in Table 5. However, out of a total of 270 questionnaires administered, only 260 were retrieved and used for the analysis resulting in questionnaire return rate of 96.3%. Data obtained were analyzed using simple frequencies and percentages as well as the Foster, Greer and Thorbecke (FGT) index, for poverty analysis (Foster et al., 1984)

 $P^{(x)}(y, Z) = ...(1)$ 

Where Z = poverty line

Y = Income of the household i (i = 1, 2,... q) q = No of household below the poverty line (poor)

n = total number of sampled households  $\alpha$ = parameters of the FGT index (P).  $\alpha > 0$  and it can take three values of 0,1 and 2.

These values give different implications.

If  $\alpha = 0$  then, measures the headcount or incidence of poverty

Poq=...(2)

If  $\alpha = 1$ , then, FGT measures the depth of poverty

P1...(3)

If  $\alpha = 2$ , then FGT measures the severity of poverty

P2=...(4)

#### RESULTS

The result of Table 4 revealed that 25.0% of the respondents were aged between 20 and 40 years, 52.0 % were aged between 41 and 60 years while 23.0 % were aged between 61 years and above. In terms of sex, 83.0% of the respondents were male while 17.0% were female. The educational status of the respondents shows that 21.0% of the respondents had no formal education, 42.0% attained primary

education; 29.0% attained secondary education while 8.0% attained tertiary education. Membership of social organization revealed that 92.0% of the respondents are members of social organizations and 8.0% of respondents do not belong to any social organizations. The household size of respondents indicate that household size of 1-5 recorded 67.0%, household size of 6 -10 was 25.0% while household size of 11 and above was 8.0%. Land ownership result showed that majority of the respondents in the study area owned their farm lands accounting for 83.0%, rented land 13.0% and leased land only 4.0%. The annual income earned by respondents shows that 27.0% earned annual income of between 20-40 thousand Naira, majority (63.0%) of the respondents in the study area earned annual income of between 41-60 thousand naira while 10.0% of the respondents earned annual income of 61 thousand Naira and above. The state poverty incidence was 30.78%, the poverty depth was 0.0303 (3.03%) and the severity of poverty was 3.84%.

#### **DISCUSSION**

In other words, the age structure presented indicates that a large proportion of the respondents belonged to the age bracket of 41-60 years which is their active age confirming results of earlier studies by Angba, (2000) and HDRN, (2008) that Nigerian farmers are over 50 years. Sex result implies that majority of the respondents were males while females only accounted for small proportion. Although women make up the greater percentage of people involved in agriculture in Nigeria (HDRN, 2008), this result could be explained by the fact that the majority of households in Nigeria are headed by males. Another reason could be that more female-headed households have limited resources and are likely to be cash-and creditconstrained, lack extension services thereby affecting their ability to produce (Ndifon, Patrick and Idiku, 2012). Higher attendance of primary education can be attributed to previous government regimes which promoted free (Universal) Primary education in the country. It can therefore be concluded that the majority of the respondents from the study area did not attain higher levels of education such as tertiary education. Education also helps illiterate farmers to increase their agricultural output by changing their attitude towards the adoption of modern agricultural techniques and inputs as well as an increase in income generation thereby confirming results earlier studies such as (Knight *et.al.*,

2003; World Bank, 2008) that education raises income as it enables individuals to obtain and process information. As pointed out by Ekong (2003), there is a positive correlation between farmers' Nigerian level of participation (membership of social organizations) and adoption of agricultural innovations as several studies showed that Nigerian farmers belong to a number of formal and informal organizations. This result therefore agreed with the recommendations that extension agencies should train their officers to be proactive in helping farmers to develop skills in social organization and club development (Akpabio, Okon, Angba and Akpabio, 2007).

Household size of 1-5 accounted for the highest percentage while the mean household size in the study area was 5.0. Family or household size is more linked to family labor supply as almost all farming activities in West Africa are not mechanized (Edriss and Simtowe, 2003). This result confirmed the study that the average household size has a bearing on availability of labor and efficiency, especially considering that most smallholder farmers depend on family labor (Wang et al., 1996). Land ownership results indicate that the typical land tenure practice in the area is the customary style of inheritance. However, Idiku and Angba (2010) found that food production in Nigeria throughout the year is becoming a necessity due to the large expanse of land available for agricultural production. The result of this study confirms earlier research that land tenure system greatly influences the organization and efficiency of agricultural production and particularly, customary (inheritance) land tenure is the predominant system among smallholder farmers in West Africa (Kachule, 1994). The mean household income in the study area was N60, 502.50K. The result shows that only very few respondents earned income above the mean income. This low income earning capacity might be attributed to several factors including lack of access to credit, education, and other production input, as well as farm experience as noted by Dorosh, et al. (1998).

Table 5 showed the poverty status of respondents across the agricultural zones and the State. The highest poverty incidence of 37.16% was recorded in Ogoja agricultural zone followed by Calabar agricultural zone with 22.68% while Ikom agricultural zone had the least poverty incidence of 19.52%. On the other hand, the entire state poverty incidence was 30.78%. Among the three agricultural zones, Ogoja zone was more rural than the other two and also very

far from the administrative headquarters, lacking several institutions and infrastructure; therefore it was likely to have had the highest poverty incidence. These result shows that poverty levels at each of the agricultural zone were quite different from one another and also went further to conformed to results of studies that poverty in Nigeria is more concentrated in the rural areas. In order to understand further these poverty measures, it became necessary to analyze the data in terms of absolute number of poor persons in each category (zone) and the relative contribution of each zone to the overall poverty incidence in Cross River State. Therefore, with regards to absolute numbers, the relative contribution of respondents in each zone to the total state poverty incidence indicated that respondents in Ogoja agricultural zone contributed 12.69% (33 poor persons), Ikom agricultural zone contributed 6.5% (17 poor persons) and Calabar agricultural zone contributed 7.3% (19 poor persons). These results clearly showed that the challenge of tackling poverty in the State lies squarely in Ogoja agricultural zone. The poverty depth for Cross River State was 0.0303 (3.03%); disaggregating by agricultural zones indicate that Ogoja zone has the highest poverty depth of 3.08% followed by Calabar zone with a poverty depth of 2.03% while Ikom zone has the least poverty depth of 1.46%. In

other words, Cross River State will require the sum of N112, 813.90 (which is the poverty depth value of 3.03 multiplied by the poverty line value of N37, 232.31). Therefore, on average, to lift a poor person out of poverty in Ogoja, Ikom and Calabar agricultural zones will require the sum of N114, 675.50, N54, 359.17 and N75, 581.59 respectively. The results so far indicate that tackling poverty challenge will require more resources in Ogoja than the other two zones. Severity of poverty in the study area, Ogoja agricultural zone again recorded the highest value of poverty severity with 4.29%, Ikom zone 1.97% and Calabar zone 3.47%. The severity of poverty at the State level was 3.84%. In other words, apart from the headcount measure (incidence), poverty depth and severity measures underscored the need for other measures of poverty.

#### CONCLUSION

Poverty was widespread in the study area, thus, in cases where poverty incidence was high, it becomes difficult to target intervention at the poor simultaneously, rather, with the poverty depth and severity measures, targeting intervention at the poor become a matter of those whose poverty depth and severity are higher before others. In conclusion, poverty in Nigeria and Cross River State to be specific is a rural phenomenon.

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Year	Estimated population (Million)	Population in poverty (Million)	Poverty level (%)
1980	65	17.7	28.1
1985	75	34.7	46.3
1992	91.5	39.7	42.7
1996	102.3	67.1	65.6
2004	126	68.7	54.7

## Table1. Population and poverty (1980-2004)

Source: NBS, 2006

## Table2. Incidence of poverty by sector and zones in Nigeria 1980-2004

S/N	Sector/Z	Zones	1980	1985	1992	1996	2004
1	National	Total poor	28.1	46.3	42.7	65.6	54.4
		Core poor	6.2	12.1	13.9	29.3	22.0
2	Urban	Total poor	17.2	37.8	37.5	58.2	43.2
		Core poor	3.0	7.5	10.7	25.2	15.7
3	Rural	Total poor	28.3	51.4	66.0	69.3	63.3
		Core poor	6.5	14.8	15.8	31.6	27.1
4	South-South	Total poor	13.2	45.7	40.8	58.2	35.1
		Core poor	3.3	9.3	13.0	23.4	17.0
5	South East	Total poor	12.9	30.4	41.0	53.5	26.7
		Core poor	2.4	9.0	15.7	18.2	7.8
6	South West	Total poor	13.4	38.6	43.1	60.9	43.0
		Core poor	2.1	9.0	15.7	27.5	18.9
7	North Central	Total poor	32.2	38.6	46.6	64.7	67.0
		Core poor	5.7	9.0	14.8	28.0	29.8
8	North East	Total poor	35.6	5.8	54.0	70.1	71.2
		Core poor	11.8	16.4	18.5	34.4	27.9
9	North West	Total poor	37.7	52.1	36.5	77.2	71.2
		Core poor	8.3	14.2	9.0	37.3	26.8
10	Population in poverty	(Million)	17.7	34.7	39.2	67.1	68.7

Source: NBS, 2005, Poverty profile for Nigeria

S/No.	States	Human devel- opment index (HDI)	Human pov- erty index (HPI)	Gender de- velopment index (GDI)	Gender empowerment measures(GEM)	Inequality measure (IM)
1.	Akwa Ibom	0.616	27.1	0.622	0.310	0.34
2.	Bayelsa	0.593	32.5	0.600	0.219	0.40
3.	Cross River	0.539	31.9	0.544	0.148	0.40
4.	Delta	0.592	23.6	0.591	0.316	0.40
5.	Edo	0.465	21.7	0.475	0.148	0.40
6.	Rivers	0.633	22.8	0.616	0.367	0.50

Table 3. Human development statistics by States in South-South Nigeria

Source: Extracted from NBS, (2005), Human Development Indicators, (2008)

S/No.	Variable	Frequency	Percentage (%)
1.	Age (years)		
	20-40	65	25.0
	41-60	135	52.0
	61 & Above	60	23.0
	Total	260	100.0
2.	Mean age=51 years Sex		
	Male	216	83.0
	Female	44	17.0
	Total	260	100.0
3.	Educational status		
	No formal Education	55	21.0
	Primary Education	109	42.0
	Secondary Education	75	29.0
	Tertiary Education	21	8.0
	Total	260	100.0

# Table 4. Socioeconomic characteristics of respondents

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4.	Membership of organization		
	Yes	239	92.0
	No	21	8.0
	Total	260	100.0
5.	Household size		
	1-5	174	67.0
	6-10	65	25.0
	11 &Above	21	8.0
	Total	260	100.0
	Mean Household Size=5		
6.	Land ownership		
	Owned	216	83.0
	Rented	34	13.0
	Leased	10	4.0
	Total	260	100.0
7.	Annual income (N000)		
	20-40	70	27.0
	41-60	164	63.0
	61 & Above	26	10.0
	Total	260	100.0
	Mean income =N60,502.50		

Source: Field Survey, 2013

## Table5. Poverty status of respondents

Poverty index	Ogoja zone	Ikom zone	Calabar zone	Total
Po (alpha=0)	0.3716	0.1952	0.2268	0.3078
P1 (alpha=1)	0.0308	0.0146	0.0203	0.0303
EDE (Naira/	114,675.50	54,359.17	75,581.59	112,813.90
P2 (alpha=2)	0.0429	0.0197	0.0347	0.0384
Poverty line (N)	37,232.31	37,232.31	37,232.31	37,232.31

Source: Extracted from poverty analysis in DAD software, 2013