

THE RELATIONSHIP BETWEEN SOCIAL FACTORS AND THE POVERTY EXPERIENCED BY FARMING HOUSEHOLDS IN BORNO STATE, NIGERIA.

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ABSTRACT

Many social characteristics of households relates to the poverty experienced by households. Hence, this study examined the poverty profile and social factors that relate with it among the farming households in Borno State, Nigeria. Using multistage sampling technique, 360 farming households were randomly sampled from 12 villages spread across six Local Government Areas of the three agro-ecological zones in the State. Primary data generated from farming households through well-structured questionnaires were mainly used for the study. The data were analysed using descriptive statistics and Foster, Greer and Thorbecke (FGT) P alpha measures of poverty. The monthly mean per adult equivalent household expenditure (MPAEHE) of the households was ₦2,972.77 out of which a poverty line of ₦1,982.84 was estimated. The FGT poverty measures showed that 62% of the farming households of the study area were poor; the average depth of the poor households from the poverty line was 44% of the poverty line, while 18% of the poor farming households were critically or severely poor. The findings revealed that poverty level among farming households increased with increase in the age of household heads, years of farming experience, household size; child dependency ratio and adult dependency ratio. On the other hand, poverty level decreased with increase in the household heads' years of formal education and number of extension contacts per season. The study further revealed that poverty level in the study area was relatively higher among households headed by males, married persons and among households whose heads were not member of any cooperative society. Based on these findings the study recommended that policies aimed towards increasing access of households to educational facilities and provision of better family planning should be given adequate attention.

KEYWORDS: Relationship, Social factors, Poverty, Farming households, Nigeria.

INTRODUCTION

Poverty remains a global problem that has continued to insult human dignity by making life to be degrading. Poverty experienced by Nigerians is pervasive, multifaceted and chronic, affecting the lives of a large proportion of the populace (FOS, 2004; Na'Allah, 2004). The Nigerian situation presents a paradox because the country is rich yet the people are poor. This has been captioned, "poverty in the midst of plenty" by Adewumi *et al.* (2007). CEDDERT (2003) ranked Nigeria number 148 out of 173 poorest countries and amongst the poorest twenty five (25) countries in the World. All these point to the fact that poverty is a serious problem in Nigeria and has continued to increase over the years

FOS (2004) reveals that between 1980 and 2004 in Nigeria, rural poverty was higher than urban poverty and the majority of the rural poor derive their livelihood from subsistence agriculture. Similarly the FOS study further reveals that in 1980, 1985, 1992, 1996, and 2004, the incidence of poverty were 32.1%, 43.1%, 38.7%, 72.3% and 64.1%, respectively, for Nigerian farming households and 16.3%, 37.2%, 36.0%, 59.2% and 35.4% for non-farming households, respectively. This shows that poor families are in higher proportion amongst farming households compared with non-farming households for the period 1980 to 2004 in

Nigeria.

Therefore, it is important to investigate the nature of poverty and its relationship with social factors among the farming households in Borno State. This is because if effective policy to reduce poverty in the state is to be formulated and successively implemented, more knowledge about the status of poverty and the social factors associated to it is required. Hence, the study determined the characteristics of the farming households; the expenditure pattern; and the poverty line which is the cost of minimum living requirements of an adult person in the study area. The poverty line was then used to determine poverty status and how it related with social factors among farming households in the State.

METHODOLOGY

The Study Area

The study was carried out in Borno State, located in the northeastern corner of Nigeria. The State shares international borders with three countries. It shares borders with Republics of Niger to the north, Chad in the northeast, and Cameroon in the east. Within Nigeria, its neighbouring States are Adamawa to the south, Gombe to the southwest and Yobe to the west. Borno State is made-up of 27 Local Government Areas

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spread over three major agro-ecological zones. The arid or Sahel to the north, Sudan Savanna in the middle and the Guinea Savanna to the south of the State.

Agriculture is the main economic activity of the state. Majority of the people of the State are farmers, herdsmen and fishermen. The major crops cultivated in the State include; millet, sorghum, maize, wheat, rice, cowpea, groundnut, vegetables (onions, pepper, tomatoes, garden egg, and other leafy vegetables). The major livestock consists of cattle, camel, sheep and goats. Substantial amount of household income is also generated from natural resources such as forest products and wild life.

Data Collection and Sampling Procedure

Primary data were mainly used for this study. These were generated from farming households through the use of pre-tested, well-structured questionnaires by trained enumerators under the supervision of the researcher over a period of 3 months. Information on households' income (farm income and off-farm income) and consumption expenditure formed the bulk of the data collected. The latter include expenditure on food which was produced by respondents and those purchase. Similarly, expenditure on non-food items like clothes, health, education, transportation, farm inputs, marriages and funeral were considered as well as values of the free environmental resources such as firewood, wild animals/birds, wild fruits/vegetables, medicinal plants, livestock browse/graze, and fish.

Information was also generated on social characteristics of the households. Data were collected on weekly and monthly basis. Where data were not available monthly, they were collected on weekly basis and then converted to monthly for ease of analysis. Secondary data were also used for the study. These were generated from publications and records of national and international organizations.

A multistage sampling technique was used for selecting the representative farming households that were used for the study. Borno State falls into three (3) fairly defined agro-ecological zones namely Guinea Savannah, Sudan Savannah and Sahel. The first stage was therefore the random selection of two LGAs from each of the three agro-ecological zones. The second stage was the selection of twelve villages (i.e. two villages per LGA), based on their sizes (not less than 50 household and relative importance in farming). Information on their sizes and relative importance in farming was obtained from the LGA Authorities and Borno State Agricultural Development Programme (BOSADP). The third stage was the random selection of 35 households from each of the villages, giving a total of 420 farming households. Only 360 farming households responded positively and therefore, used for the study.

Analytical Technique

Measuring the standard of living

The standard of living of households in the study area was measured based on consumption expenditure. The focus was clearly on consumption goods and non-food items. Other sources of household expenditure that were considered are the values of the free environmental resources (Fire wood, wild animals/birds, wild fruits/vegetables, medicinal plants, livestock

browse, fish, etc.) consumed. The households' expenditures were then summed up to get the total expenditures of the households.

The total household expenditure was divided by the number of members of the household to get the per capita expenditure as used by World Bank (1996). This was further converted into adult equivalent based on the nutritional requirement, sex and age of the members of the households, using the nutritional based adult equivalent scales provided by FOS (2004). Multiplying the nutrition equivalent scales with the number of household members that fall in any of the age and sex categories, the monthly mean per adult equivalent household expenditure (MPAEHE) for the sampled households were arrived at. By this method, the expenditure patterns of the farming households were investigated.

Estimation of absolute poverty line

The poverty line used for this study was calculated from the MPAEHE of the sampled households. Two-third of the means of MPAEHE of the sampled households was used as the poverty line for the study as also used by host of other studies in Nigeria (World Bank, 1996; FOS, 1999a, 1999b; Omonona, 2001; FOS, 2004; and Bandabla, 2005). This was done by ranking MPAEHE of the households and then dividing the population into equal increments. For this study, the divisions were based on deciles or 10% increments. The MPAEHE of the deciles were then summed up and divided by ten to get their mean. Two third of the mean was then computed to arrive at the MPAEHE that served as the poverty line for the study.

FGT weighted poverty measure.

The Foster, Greer and Thorbecke weighted poverty index were used for the quantitative poverty assessment (Foster *et. al.*, 1984). The P-alpha measures in analysing poverty relate to different dimensions of the indices of poverty, P_0 , P_1 and P_2 and used for headcount, depth and severity of poverty respectively. The three measures are all based on a single formula, but each index puts different weights on the degree to which a household or individual falls below the poverty line. This measure is also useful due to its decomposability among sub-groups. To see how the measures are defined, the consumption or household expenditures were arranged in ascending order, from the poorer Y_1 , next poorest Y_2 ... with the least poor Y_q . The poverty index is defined mathematically as follows:

$$P_\alpha = 1/n \sum_{i=1}^q (Z - Y_i/Z)^\alpha - \dots - \dots - 1$$

Where:

- α = the FGT index and takes values 0,1,2.
- n = total number of households
- q = number of households below the poverty line
- Z = poverty line
- Y_i = the MPAEHE of the household in which individual i^{th} lives.

The contributions (C_i) of each sub-group's weighted poverty measure to the whole group's weighted poverty measure were determined by using:

$$C_i = n_i P_{\alpha i} / n P_{\alpha} \quad - \quad 6$$

The weighted poverty measures (P_{α}) was calculate using the 1998 Microsoft Excel package.

RESULTS AND DISCUSSION

The Expenditure Pattern of the Sample Households

The estimated households' welfare indicators by consumption level as monthly MPAEHE is presented in Table 1. The result shows that sample households that

fell in the first deciles or the bottom 10 per cent survived on an average of ₦888.86 per month and their share of the total monthly MPAEHE was 2.99% while those in the last deciles spent on an average, ₦7892.70 per month and their share of the total monthly MPAEHE was 26.55%. The first deciles represented the poorest thirty six households from the sampled three hundred and sixty households, while the tenth deciles represented the presumably thirty six richest households of the sample. The poverty line of ₦1982.84 which was the $\frac{2}{3}$ of the means of monthly MPAEHE was located within the thirty six households of the seventh deciles. The MPAEHE of the remaining deciles and their corresponding percentages are as presented in Table 1.

Table 1: Distribution of the Monthly MPAEHE by Deciles

Deciles	MPAEHE(₦)	Expenditure Distribution (%)
1 st	888.86	2.99
2 nd	1144.52	3.85
3 rd	1215.86	4.09
4 th	1530.98	5.15
5 th	1780.69	5.99
6 th	1872.85	6.30
7 th	2535.77	8.53
8 th	4352.14	14.64
9 th	6513.34	21.91
10 th	7892.70	26.55
Total	29727.70	100.00
Mean	2972.77	
$\frac{2}{3}$ MPAEHE	1982.84 (Poverty line)	

Estimated poverty line and poverty profiles

The poverty line used for this study was calculated from the monthly MPAEHE of the sampled households. Two third (₦1982.84) of the monthly MPAEHE (₦2972.77) of the sampled households was used as the poverty line.

Using the estimated poverty line, the results of three classes of poverty measurement for the study area were 62% (P_0), 44% (P_1) and 18% (P_2). This means that 62% of the farming households in the study area were poor, the average depth of the poor households from the poverty line was 44% of the poverty line and among the poor households 18% were severely poor. This shows that the poor households were not equally poor but they vary in their degree of poverty. Decomposition of poverty among the farming households by environmental, health and living condition characteristics as well as the contributions of the sub-groups to the whole group's poverty indices were also calculated and discussed in the subsequent sub-sections.

Sex of household heads

In Table 2 the households' poverty were decomposed into male and female headed households. The result shows that poverty incidence, depth and severity were higher among male headed farming households than female headed households. A

proportion of 68% of the male headed households were poor, while 50% of the female headed households were poor. The poverty depth and severity follows the same pattern with that of poverty incidence. Similarly, the contribution of the male headed households to the whole group's poverty incidence was 73% while it was 27% for the female headed households.

Poverty profiling among the farming households in the study area by sex of the household heads revealed that poverty was more associated to male headed households than female headed. This was due to the fact that most females that head households were single parents either widows or divorcees, and most of such households have fewer members compared with male headed households. Since poverty is positively related to family size, and male headed households as observed during the field survey and also reported by Omonona (2001) have larger family size compared with female headed households, it may be possible that poverty will tend to be more among male headed households than female headed households. This finding conforms to the findings by FOS (1999a and 1999b), Dercon and Krishnan (1998) and Bandabla (2005) who reported in their various studies that probability of poverty was more among male headed households than female headed.

Table 2: Comparison of Poverty by Sex of Household Heads

Household Head Sex	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
Male	0.68	0.32	0.12	0.73	0.73	0.67	162
Female	0.50	0.12	0.06	0.27	0.27	0.33	61
Total				1.00	1.00	1.00	223

Age of household heads

Age of the household heads was also used to profile poverty among the households. Age of the household heads was grouped into three sub-groups. These were 21 – 40 years, 41 – 60 years and 61 - 80 years. Table 3 shows that poverty incidence was highest among households falling within the age interval of 60 - 80 years (72%), followed by age group of 41 - 60 years (68%) and the least in the age group of 21 - 40 (46%). Poverty incidence was lower in the age group of 21 – 40 because these were younger households with smaller family sizes. The age group 41- 60 and 60 - 80 years on the average had larger household sizes with more dependants, hence higher incidence of poverty. The poverty depth and severity however, were higher in the age group 20 – 41 because most of the poor households (63.68%) came from this age group.

Just like the poverty depth and severity, the higher contributor to whole group's poverty incidence, depth and severity were households within the age interval of 41 - 60 years. The reason was also similar to that given for the poverty depth and severity.

Decomposition of poverty by age grouping of household heads revealed that poverty was positively related to age of the household head. This was consistent with the results of World Bank (1996), and FOS (2004). This result could also be attributed to the fact that the ability to do hard and difficult work, of which farming is one, decreases with increase in age. Dercon and Krishnan (1998) in their study on changes in poverty in rural Ethiopia revealed that the poverty incidence, depth and severity were lower among households headed by person aged below 45 years (41%) than those that were at least 45 years (50%).

Table 3: Comparison of Poverty by Age of the Household Heads

Age of Household Head (Years)	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
21 – 40	0.46	0.06	0.02	0.24	0.14	0.11	53
41 – 60	0.68	0.30	0.13	0.63	0.68	0.72	142
61 – 80	0.72	0.08	0.03	0.13	0.18	0.17	28
Total				1.00	1.00	1.00	223

Educational level of the household heads

The educational level of the household heads was another factor used for profiling poverty among the farming households. The result shows that the poverty incidence reduces as the educational level or years of schooling of the household heads increases. Table 4 reveals that households headed by persons with no formal education had the highest incidence of poverty (68%) while those headed by persons with university degree had the lowest (14%). Though, the poverty incidence of households headed by persons with no formal education and those who had attended primary were almost the same (68% and 67%); their poverty depth and severity were clearly distinct. The gap or expenditure shortfall from the poverty line of the households headed by person with no formal education was so wide compared with households whose heads had at least primary certificate. The contribution to the whole group's poverty incidence, depth and severity were highest among households headed by persons

who had not attended formal education, and it reduces as the educational level of the household heads increases (Table 4).

The results of poverty profiling by educational status of the household heads showing that poverty decreases as the educational level of the household heads increases, was consistent with the findings of Manson (1996), Dercon and Krishnan (1998), FOS (1999a, 2004), Cavendish (1999), and Bandabla (2005) who in their various studies indicated that poverty reduces with the increase in the years of schooling of the household head. The significance of education was also reported by Amaza (2000) who stressed that the level of education (years of schooling) helps farmers to use production information efficiently, as more educated person acquires more information and to that extent, is a better producer. Such farmers will tend to have relatively better incomes and welfare status and therefore less poverty.

Table 4: Comparison of Poverty by Educational Status of the Household Heads

Educational Status	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
Non formal education	0.68	0.28	0.12	0.56	0.63	0.67	125
Primary certificate	0.67	0.08	0.03	0.21	0.18	0.16	46
Post Primary	0.59	0.07	0.02	0.18	0.16	0.11	40
OND/NCE	0.38	0.01	0.006	0.04	0.02	0.05	10
University Degree	0.14	0.002	0.001	0.01	0.01	0.01	2
Total				1.00	1.00	1.00	223

Household size

The result in Table 5 shows that poverty as expected was highest among farming households with relatively large household sizes. The households were grouped into sub-groups of 1- 4, 5 – 8, 9 - 12 and above 12 members. Analysis of the table shows that 31%, 66%, 85% and 90% of the farming households fell within

size group; 1 – 4, 5 – 8, 9 - 12 and above 12 were poor respectively. The poverty depth and severity were highest in the sub-group 5 – 8 members (20%), followed by the sub-group 9 - 12 (19%). However, the contribution to whole group's poverty incidence was highest in the sub-group 5 – 8, because most of the poor households fell within this sub-group.

Table 5 Comparison of Poverty by Household Size

Household Size	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
1 – 4	0.31	0.02	0.01	0.14	0.05	0.05	31
5 – 8	0.66	0.20	0.07	0.50	0.45	0.40	111
9 – 12	0.85	0.19	0.09	0.28	0.44	0.39	63
13 & above	0.90	0.07	0.03	0.08	0.16	0.16	18
Total				1.00	1.00	1.00	223

The result of poverty profiling by household size reveals that poverty incidence increases with the increase in the household size. This conform the studies conducted by FOS (1999b) and Cavendish (1999). The findings of the FOS (1999b) revealed that households with more than 20 members had poverty incidence of 85% while those with 2 to 6 had poverty incidence of 65% and those with one member households had 27% poverty incidence.

decomposed into those with 0, 1 and 2 adult dependants. The poverty incidence shows that 55%, 68%, and 81% of households with 0, 1, and 2 adult dependants respectively were poor, with their respective contribution to the whole group's poverty incidence being 50%, 36%, and 14% (Table 6). The contrasting percent between their poverty incidence and contribution to poverty incidence was due to the fact that majority of the poor households (113) had no adult dependants; hence the contribution of this subgroup to the whole groups' poverty was higher compared to those households with 1 and 2 adult dependants.

Adult dependency

To characterize poverty incidence based on adult dependency, farming households were

Table 6: Comparison of Poverty by Adult Dependency

Number of Dependent Adults	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
0	0.55	0.13	0.06	0.50	0.30	0.33	113
1	0.68	0.21	0.09	0.36	0.47	0.51	81
2	0.81	0.10	0.03	0.14	0.23	0.16	29
Total				1.00	1.00	1.00	223

The decomposition of poverty among the farming households by adult dependants shows that poverty was highest among households with relatively more adult dependants. The results agrees with the finding of Omonona (2001), who reported poverty incidences of 48% and 86% of households without and with adult dependants respectively were poor. This as explained earlier could be attributed to the fact that aged adult dependants were net consumers.

Poverty among the farming households was also profiled according to child dependency ratio. Poverty incidence among the farming households as presented in Table 7 increases with increase in child dependency ratio. Poverty incidence of 35%, 60%, 75% and 84% were profiled in households' sub-groups with zero (0), 0.01 – 0.49, 0.50 – 0.99 and above 1.0 child dependency ratios respectively. Their respective contributions to whole group's poverty incidence were 8%, 45%, 38% and 9%. However, poverty depth and severity was highest among households in the sub-group with child dependency ratio of 0.50 – 0.99 (20%)

Child dependency

and lowest in the households in the sub-group with child dependency ratio of 0 (1%).

The finding of this study reveals that poverty increases with increase in child dependency ratio. Poverty is mostly associated with households that had higher number of children. This finding is also in

consonance with the findings of Omonona (2001), who reported that the incidence of poverty was least in households where there were no child dependants (49%) and highest among households where the child dependency ratio was above one (62%)

Table 7: Comparison of Poverty by Child Dependency Ratio

Child Dependency Ratio	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
Zero (0)	0.35	0.01	0.004	0.08	0.02	0.02	20
0.01 – 0.49	0.60	0.16	0.06	0.45	0.36	0.32	102
0.50 – 0.99	0.75	0.20	0.09	0.38	0.44	0.48	80
1 & above	0.84	0.08	0.04	0.09	0.18	0.18	21
Total				1.00	1.00	1.00	223

Number of extension contact by households

Based on the number of contacts the household heads had with extension agents, the households were grouped into four classes: 0, 1-4, 5-8 and above 8 contacts. These groups were then used to decompose poverty among households' by the number of contacts with extension agents per 2005 cropping season. Table 8 reveals that poverty incidence was more prevalent

among households who had no contact with extension agents (77%), while households who had at least 9 contacts with extension agents had the least poverty level of 17%. Poverty depth and severity also followed the same pattern as that of poverty incidence. Their contribution to the whole group's poverty incidence, depth, and severity were similar with that of poverty profile.

Table 8: Comparison of Poverty by Household's Number of Contacts to Extension Services.

Number of Contacts	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
0	0.77	0.31	0.13	0.62	0.70	0.73	141
1 – 4	0.63	0.09	0.03	0.30	0.20	0.16	73
5 – 8	0.54	0.05	0.02	0.08	0.10	0.11	28
9 & above	0.17	0.001	0.0002	0.001	0.002	0.001	2
Total				1.00	1.00	1.00	223

The results presented in the table shows that poverty was more associated with farming households that did not have access to extension services. This is due to the fact that access to extension services by farming households accords them the opportunity to have better knowledge of improved technologies as well as techniques of farming, including access to markets. This will enhance their productivity and incomes thereby improving their welfare. The finding of this study is also consistent with the Manson (1996) in Rural Java, Indonesia. This study revealed that poverty incidences were less among households that had access to extension contact.

Household heads membership of Cooperative

Table 9 shows that 63% of farming households whose heads did not belong to any cooperative were poor, while 56% of the households whose heads belong to cooperative were poor. Their poverty depth and

severity also followed the same pattern. The table further shows that their contribution to the whole group's poverty incidence, depth and severity were higher in households whose heads were not members of cooperative than households' whose heads were members.

The poverty profiling reveals that poverty was slightly lower in households whose heads belongs to a cooperative. This may be due to the fact that cooperatives were not fully developed in this region compared to the other parts of the country, particularly the Western Nigeria, where members benefit relatively compared to the study area. However, according to Gandhi and Marsh (2003), membership of formal institution such as service cooperatives as well as informal institutions such as saving groups, community associations and labour groups play a significant role, in enhancing incomes and capital assets, hence reducing poverty.

Table 9: Comparison of Poverty by Household Head's Membership of Cooperative

Membership of Cooperative	P ₀	P ₁	P ₂	Contribution to			No. of Poor Households
				P ₀	P ₁	P ₂	
Member	0.56	0.10	0.05	0.23	0.25	0.27	49
Non-member	0.63	0.32	0.13	0.77	0.75	0.73	174
Total				1.00	1.00	1.00	223

CONCLUSION AND RECOMMENDATIONS.

The study revealed that 62% of the farming households of the study area were poor; the average depth of the poor households from the poverty line was 44% (N872.45) of the poverty line and those that were severely or critically poor constituted 18% of the sampled households.

The findings further revealed that the age of household heads, years of farming experience, household size; child dependency ratio and adult dependency ratio were directly related to the poverty status of the households in the study area. This means that poverty levels were relatively higher among households headed by older persons, more years of farming experience, larger household size, and higher adult and child dependency ratios. On the other hand, household heads' years of formal education and number of extension contacts per season were inversely related to the poverty status of the farming households. This implies that poverty level among households headed by those with more years of formal education and had more contacts with extension agents per cropping season had lower poverty profile. The study further revealed that poverty level in the study area was relatively higher among households headed by males, married persons and among households whose heads were not members of any cooperative societies.

Based on the findings of this study, the following policy measures aimed at reducing poverty among farming households in the study area were recommended.

Large household sizes and high dependency ratio were found to affect household poverty in the study area. Therefore, policy measures directed towards the provision of better family planning should be given adequate attention and priority by the government. In view of this, education that encompasses all aspects of training and which brings about attitudinal changes is important for farming households in the study area. Also, strategies for an effective community participation in the design of concepts and messages aimed at imparting knowledge about family planning to households are recommended.

This study showed that poverty decreases as the level of education increases. Therefore, policy measures aimed at providing relevant training opportunities and education schemes to the poor should be encouraged. It is observed that poverty reduction in the long run is not likely to achieve more success without major investment in human capital. Even for the self-employed farmers, the levels of income that can be earned depend critically on the level of education. Efforts towards revitalization or establishment of community vocational centre for the youth, women and men to provide an opportunity for skills acquisition which will empower them for gainful employment and sustainable living are encouraged.

REFERENCES

- Adejobi, A.O., 2004. Rural Poverty, Food Production and Demand in Kebbi State, Nigeria. Ph.D. Thesis, Department of Agricultural Economics, University of Ibadan. Pp.121-130.
- Adwumi, O. E., Ayide, O. E., and Yusuf M. B. O., 2007. Determinants of Poverty among Families in Kwara State, Nigeria. *Global Journal of Agricultural Science* 6, (1): 49-53.
- Amaza, P. S., 2000. Resource-use Efficiency in Food Crop Production in Gombe State, Nigeria. Ph.D. Thesis, Department of Agricultural Economics, University of Ibadan. Pp.1-187.
- Bandabla, T., 2005. Comparative Study of Statistical Distribution and Efficiency of some poverty Estimators in Ibadan North-East Local Government Area, Oyo State, Nigeria. M.Sc. Dissertation, Department of Mathematical Sciences, College of Natural Sciences, University of agriculture, Abeokuta. Pp. 1-146.
- Cavendish, W., 1999. Poverty, Inequality and Environmental Resources: Quantitative Analysis of Rural Households. WPS/99-9. Pp.1-29.
- Centre for Democratic Development and Research Training (CEDDERT), 2002. Poverty Alleviation in Nigeria – A Perspective. P7.
- Dercon, S. and Krishnan, P., 1998. Change in Poverty in Rural Ethiopia 1989 –1995: Measurement, Robustness, Tests and Decomposition. Centre for the Study of African Economies Working Paper Series 98-7.
- Federal Office Statistics., 1999a. Poverty Profile for Nigeria 1980-1996. Federal Office of Statistics, Abuja Nigeria. Pp.12-15.
- Federal Office Statistics., 1999b. Poverty and Agricultural Sector in Nigeria. Federal Office of Statistics, Abuja Nigeria. Pp.17-21.
- Federal Office Statistics., 2004. Nigeria Living Standard Survey 2003/2004. Report prepared by FOS in Collaboration with EU, World Bank, Department for International Studies. Pp.9-24
- Foster, J., Greer, J. and Thorbecke, E., 1984. A Class of Decomposable Poverty Measure. *Econometrica*, 52, 761-766.

- Gandhi, V. P. and Marsh, R., 2003. Development and Poverty Reduction: Do Institutions Matter? A Study on the Impact of Local Institutions in Rural India. Paper presented at the 25th International Conference of Agricultural Economists (IAAE), 16-22 August, Durban, South Africa. Pp. 1476-1480.
- Manson, A.D., 1996. Targeting the Poor in Rural Java". In Baulch, B. (ed) Poverty, Policy and Aid. IDS Bulletin 27(1): 67-82.
- Na'Allah, S., 2004. Defining Poverty in Nigerian Context: The Grassroots Perspective. Paper presented at the North East Zonal Workshop on "Who is poor in Nigeria?". International Hotel, Maiduguri. 8th & 9th December.
- Omonona, B.T., 2001. Poverty and its Correlates among Rural Farming Households in Kogi State, Nigeria. Ph.D. Thesis, Department of Agricultural Economics, University of Ibadan. 61-237.
- World Bank., 1996. Nigerian Poverty in the Midst of Plenty. The Challenge of Growth with Inclusion. A World Bank Poverty Assessment. Population and Human Resources Division, West Africa Department, Africa Region. Report No. 14733 UNI. Pp.20-63