

ASSESSMENT OF POVERTY LEVEL AMONG RICE MILLERS IN KWANDE LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA

AKIGHIR, David Terfa.

Department Of Economics, Benue State University
Makurdi, Nigeria

E-mail: akighirdavidterfa@yahoo.com, Phone: 08169587920

NGUTSAV, Ayila S.

Department Of Economics , Benue State University
Makurdi, Nigeria.

ASOM ,S. T.

Department Of Economics, Benue State University
Makurdi, Nigeria.

Abstract

The failure of governments' programs to alleviate poverty in the country has made poverty a very serious issue. Thus, many people have resorted to various ways of curbing the scourge. This paper attempts to assess the poverty level among rice millers in Kwande Local Government Area of Benue State, Nigeria. The study used both primary and secondary data in achieving the set objective; stratified random sampling technique was used to select three hundred and fifty respondents in the study area. Descriptive statistical tools such as tables, percentages and poverty measurement indices as well as logit regression were used to analyse the data. It was found out that the poverty level of the respondents has improved as a result of involving in rice milling activities. It was recommended that enabling environment be created by the government for millers to operate favourably with a view of alleviating poverty.

KEY WORDS: Poverty, Assessment, Rice Milling, Income

1.1 Introduction

Poverty remains one of the intractable problems facing mankind ever since .However, this challenge is more severe in developing countries such as Nigeria. According to UNDP Report (2009), Nigeria has Human Poverty index (HPI) of 36.2% which ranks her 114 out of 135 countries measured. In Benue state, Benue Advanced plan (2003), observed that, poverty has been a major feature of the lives of the majority of Benue people. Approximately, 65% of the people of the state live below the poverty line. In the same vein, the Department for International Development (DFID, 2002), recorded that Benue State is the 8th poorest of the thirty six states of the Federation. According to the Department, the reasons for this are complex, but may in part be sought in the dependence of the state on agriculture, and the government neglect of the sector.

The table below indicates dramatically the substantial growth in the proportion of households in Benue suffering income poverty over the last two and half decades.

Table 1: Percentage Poverty Headcount in Benue State from 1980 to 2005.

Year	Extremely	Moderately poor	Non-poor
1980	1	22	77
1985	14	29	57
1992	15	26	59
1996	25	39	36
2000	34	47	19
2005	42	50	8

Source: FOS, 2007

The table above shows how the percentage poverty headcount in Benue has increased over time. The table basically grouped the percentage poverty Headcount into extremely poor, moderately poor and non-poor. For the extremely poor, the percentage increased from 1 percent in 1980 to 42 percent in 2005; while the poverty headcount for the moderately poor rose from 22 percent in 1980 to 50 percent in 2005. Conversely, the poverty headcount for the non-poor declined from 77 percent in 1980 to 8 percent in 2005. This implies that, people in Benue state are getting poorer with the passage of time.

Thus, as poverty systematically deepens among the people as a result of the failure of governments' efforts aimed at curbing the scourge in the state; the people of Benue state have engaged in various activities to earn a living. In Kwande, for instance, many households are involved in rice milling business to help them overcome poverty. Given the dire need to combat the incidence of poverty, through bottom- top approach, this study became imperative. The objective of this study is to assess the impact of rice milling on the poverty status of rice milling households in Kwande Local Government with a view to helping poverty alleviation policies. In pursuit of the objective of the study, the paper is structured as follows, following the introduction; section II deals with brief literature review, section III is the methodology, section iv contains the results and discussion, while section v presents the recommendations and conclusion.

2.1 Brief Literature Review

2.1.1 Poverty: Definition, Measurement, Causes and Effects.

According to Hazell and Haddad (2001), poverty consists of two interacting deprivations– physiological and social. Physiological deprivation describes the inability of individuals to meet or achieve basic material and physiological needs which can be measured either as a lack of income, which limits access to food and to education, health, housing, water and sanitation services. Social deprivation refers to absence of elements that are empowering, such as autonomy, time, information, dignity and self-esteem. Schubat (1994), classified poverty into absolute and relative poverty. Absolute poverty being that which could be applied at all time in all societies, such as, the level of income necessary for bare subsistence; while relative poverty relates to the living standards of the poor to the standards that prevails elsewhere in the society in which they live.

Related to the definition is the measurement of poverty. According to Noah, Gafar and Muftan (2009), the importance of the measurement of poverty is to know; who is poor, how many people are poor and where the poor are located. Foster et al (1984) opined that, the most frequently used measurements are: (i) The headcount poverty index given by the percentage of the population less than the poverty line. (ii) Poverty gap index which reflects the depth of poverty by taking into account how far the average poor person's income is from the poverty line; and the distributionally sensitive measures of squared poverty gap defined as the mean of the squared proportionate poverty gap which reflects the severity of poverty. Ajakaye and Adeyeye (2001), identified factors that cause poverty in Nigeria to include; low or negative economic growth, macroeconomic shocks and policy failure, labour markets deficiencies, migration, and unemployment and underemployment. In the same vein, the Central Bank of Nigeria (2003), identified specific causes of poverty to include lack of employment opportunities, inadequate access to physical assets, inadequate access to social and infrastructural facilities, ineffective public policy on natural resource management, lack of beneficiary participation in development programmes as well as inadequate attention to social security.

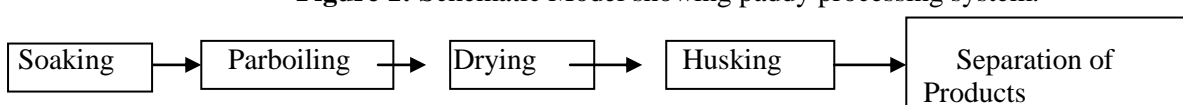
In discussing the effect of poverty, Evbuomwan (1997), observed that, poverty has a lot of detrimental effects; hence it is a very undesirable condition. Poverty leads to fear, depression, despondency and suicides. Persistent chronic poverty has been responsible for most revolutions. Relatedly, Okumedewa (1999), adds that poverty leads to a state of powerless, helplessness, and despair and inability to subsist and protect oneself against economic shocks, social, economic cultural and political discrimination and marginalization. Thus, if the society is indifferent to the plight of its poor, this could in turn produce violence, high rate of robbery, theft, snuggery and other deviant behaviours.

2.1.2 Rice Processing System

Titilola (2003) observed that, rice milling in Nigeria is a 'Cottage industry' mainly carried out by small-scale millers with an average hourly capacity of 200kg of milled rice.

He explained that rice processing involves all the activities that make paddy rice ready for cooking. It consist of soaking paddy rice in hot or cold water in a drum, followed by a rapid exposure of the soaked paddy to steam, and gradual drying for at least one day. The purpose of these processes is to respond to consumer preferences. Akbar and Mikuni (1998), Presents a chronological steps in paddy processing system as depicted in the figure below.

Figure 1: Schematic Model showing paddy processing system.

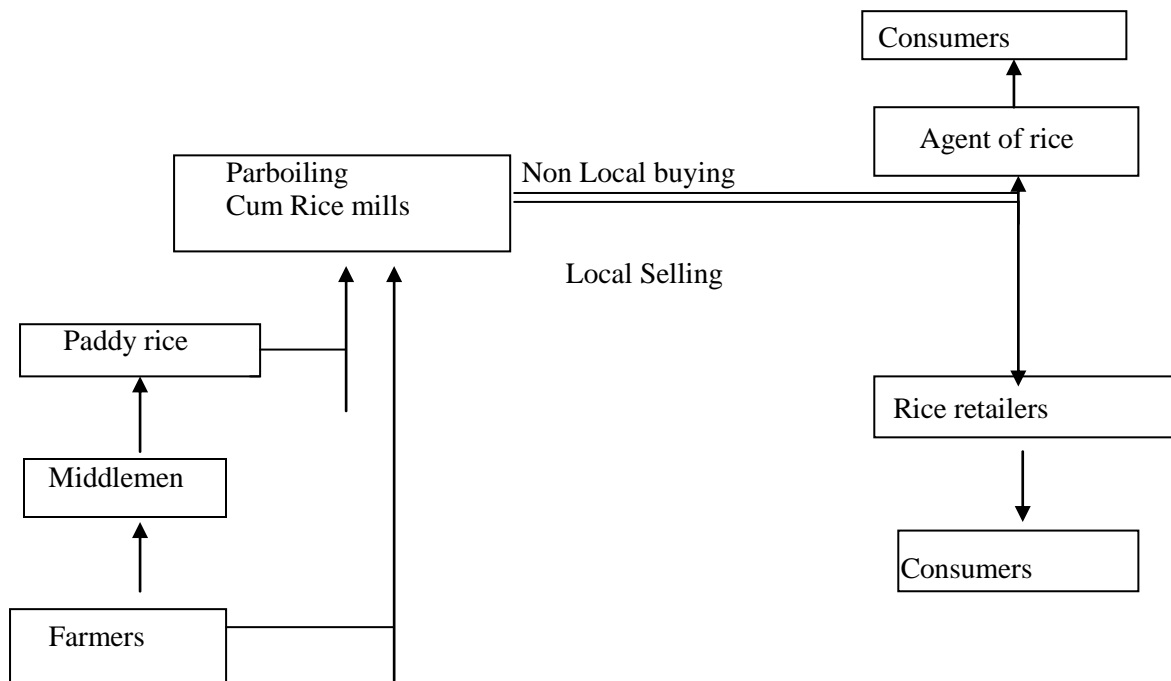


Sources: Akbar and Mikuni (1998)

They explained that paddy rice is soaked in a tank with hot water and is left there for about 24 hours. The saturated paddy is again steamed for about 10-30 minutes. After parboiling, paddy is then allowed to dry on cement covered drying yards by the sun light.

After drying paddy is husked and polished using rice milling engines; then it is winnowed (Separation of Chaffs from the grains) for sale. Clarence and Quentin (2008), analysed marketing pattern of paddy and rice of parboiling firms. According to them, the analysis of marketing channel is intended to provide a systematic knowledge of the flow of paddy and milled rice from their origin (producer) to their final destination (Consumer). The figure below depicts a schematic model showing the place and mode of transportation of paddy and milled rice.

Figure 2: Schematic model showing the place and mode of transportation of paddy and milled rice.



Source: Clarence and Quentin (2008)

2.1.3 Rice milling and poverty Reduction

Akbar and Mikuni (1998), explained that the expansion of the business of paddy millers will provide more employment opportunity in the rural areas especially for women in the local area; and for food security for the hard-core poor. Biyi (2005) posits that the potential benefits of rice production and processing will accrue to all the key players and stakeholders including paddy farmers, paddy traders, rice millers, rice processors, destoners, transporters, consumers, government and international donors. Ali (1998), observed that each parboiling firm is immensely generative of female employment. Out of 5 labourers required for each parboiling plant, 3 – 4 laborers are women, from paddy soaking to post milling winnowing are totally conducted by women labourers. Omotola and Ikechukwu (2006), opined that many employment opportunities exist in the rice milling sector if there is an inclination to invest in better processing technologies. The returns would be attractive thereby reducing the poverty situation of the participants

2.1.4 Problems Faced by Rice Millers.

According to Akbar and Mikuni (1998:35), problems faced by entrepreneurs and marketing functionaries of rice processing are: lack of capital, rainy season, electricity disturbances and its associated high cost, and shortage of paddy rice during off-harvesting periods. Omotola and Ikechukwu (2006) succinctly observed that, Nigeria is the largest producer of rice in West Africa, but the country with a population of 140 million people still relies on a massive rice importation. Importation of rice affects adversely the local production.

3.1 Methodology

3.1.1 Area of the Study

This study was carried out in Kwande Local Government Area of Benue State. The local government is bordered on the West by Vandeikya and Ushongo local governments on the south by the cross-River, on the North-East by Taraba State and Republic of Cameroon. Rice is generally cultivated at least twice in a year in the area; while rice milling is the major industry in the local government.

3.1.2 Sampling procedure

Stratified random sampling technique was used to select 350 respondents of rice milling in the study area. The sample comprises 126 millers, 95 parboilers, 61 winnowers, 38 engine owners and 30 sewers/porters. Questionnaires were used to elicit information from the respondents.

3.1.3 Analytical techniques used

The major tools employed for data analysis were descriptive statistics (percentages) and Foster, Green and Thornbecke (FGT) index and logistic regression analysis. Poverty was measured using FGT Index (Foster et al 1984). This method subsumes the headcount ratio and poverty measurement of the population below the poverty line while the poverty gap measures the depth of poverty (Anyanwu, 1997)

The headcount ratio is stated as follows:

$$H = Q/N \quad \text{---} \quad \text{---} \quad \text{---} \quad (1)$$

Where, H = Headcount ratio with values ranging from 0 to 1. the closer the value to 1, the higher the proportion of people below the poverty line.

Q = Number of households below the poverty line.

N = Total number of household in the studied population.

The poverty gap is measured as follows:

$$P\alpha = 1/n \sum (Z - Y_i)^\alpha \quad (2)$$

Where,

P α = Poverty gap

Z = Poverty line

Y_i = Income of the ith household in poor population

α = The FGT parameter with values from 0, 1, and 2.

n = Total numbers of population studied

Logistic Regression

Logit regression analysis was used to determine the correlates of poverty of rice millers in the study area. Logit regression analysis is usually used to analyse the determinants of poverty. In logit model, the endogenous variables is a dichotomous or dummy variable with (1) representing the household as poor and (0) if the household is not poor (Imran, Shahnawaza and Abo, 2009). This approach is in line with Allen and Thompson (1990), coulombe and Mckay (1996). Appleton (1996); Manson, (1998), Imran, schahnawaza and Abo (2009), and Yusuf, Adesanoye and Awotide (2008). The parameters of logistic regression were estimated by the maximum likelihood, with the likelihood function formed by assuming independence over the observations.

Yusufu, Adesanoye and Awotide (2008) implicitly specified a logit regression model as:

$$P(Y) = \frac{e^{X\beta}}{1 + e^{X\beta}} \quad (3)$$

Y measures poverty status, Y might be poor (1) or non-poor (0). By taking logs of both sides and simplifying equation (3), the log likelihood model was simplified as:

$$\ln \frac{Y_i}{1 - Y_i} = \beta_0 + \sum \beta_k X_{ki} + U_i \quad (4)$$

Where Ln Y_i = Natural log of Y (poverty status)

X_{ki} = A set of household socio-economic characteristics.

B_k = Parameters

U_i = A random disturbance term.

3. 1.3.1 Model specification

A rising from the analysis of the logistic regression specification, the model for this study was explicitly stated as follows:

$$P_i = \frac{POV}{1 - P_i} = I(x_1, x_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9,) \quad (5)$$

Where, POV is dependent variables (poverty status), calculated as:

$$POV = \frac{\text{Average Annual income of Household from rice milling}}{\text{Total number of days in a year (365 days)}}$$

If the result is less than 1.5 dollars naira equivalent, it means the household is poor in which case we assign (1). If the result is 1.5 dollars and above naira equivalent. Its means the households is non-poor, in which case we assign (0).

Note: 1.5 dollars naira equivalent was assumed as (N225) that is, \$1: N150

- X₁ = Business size in bags of rice
- X₂ = Number of meals taken per day (1 if three times meals a day, 0 if otherwise).
- X₃ = Housetype (1 if Zinc roof and cemented walls/floor, 0 if otherwise)
- X₄ = Access to improved medical services (1 if a respondent visits maternity, specialist and general Hospital, 0 if otherwise).
- X₅ = Access to clothing (1 if at least one new cloth is purchased in a year, 0 if otherwise)
- X₆ = Family members Access to formal education (1 if family members have access to formal education, 0 if otherwise).
- X₇ = Level of education of the respondent (1 if the respondent attains at least secondary school, 0 if otherwise).
- X₈ = House size
- X₉ = Dependency ratio (Number of persons a respondent sponsors in school). Thus, the specific form of model was stated as follows:

$$POV = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + U \quad \text{-----}$$

-----(6)

B₀ = Intercept of the model.

B₁ - B₉ = Parameters

X_i = Explanatory variables

U = the error term

4.1 Results and Discussion

The average annual income of the rice millers before and during rice milling in the study area is shown in table 2.

Table 2: Distribution of annual incomes of the sampled respondents before and during rice Milling

Average annual Income (N)	Annual income before rice milling activities		Annual income during rice milling activities	
	Frequency	Percentage	Frequency	Percentage
≤ 50,000	84	24	26	7.4
50,001-100,000	110	31.4	10	2.9
100,001-150,000	68	19.4	16	4.6
150,001-200,000	54	15.4	70	20
200,001-250,000	18	9.1	33	9.4
250,001-300,000	10	2.9	111	31.7
Above 300,000	6	1.7	84	24
Total	350	100	350	100

Source: Field survey,2010.

The result from table 2 revealed that 24% of the respondents were earning less than or equal to N50,000 annually before they started rice milling, while 7.4% of the millers generate an average annual income of less than or equal to N50,000 when they joined rice milling. The table also revealed that 31.4% of the millers realized an average annual income of N50,001 – N100,000 before they joined rice milling, while 2.9% of the respondents earned N50,001-N100,000 when they joined rice milling. The average annual income of all these categories of millers was less than 1.5 Dollars naira equivalent (N225) per day. On the other hand, 19.4% of the millers earned an average annual income of N110,001 – N150,000 before they joined rice milling while 4.6% of the millers earned the same amount when they joined rice milling. 15.4% of the millers generate an average annual income of N150,001 – N200,000 before they joined rice milling while 20% of the respondents earned the same amount when they joined rice milling. Also, 9.1% of the millers realized an average annual income of N210, 001- N250,000 before they joined rice milling, while 9.4% of the respondents earned the same amount when they joined rice milling. Also, 2.9% of the millers generate an average annual income of N250,001 – N300,000 before they joined rice milling while 31.7% of the millers earned the same amount when they joined rice milling. And 1.7% of the millers realized an average annual income of above N300,000 before they joined rice milling while 24% of the respondents also earned above N300,000 when they joined rice milling. All these categories of millers earn more than 1.5 dollars naira equivalent (N225) per day. From the foregoing, it can be seen that the more respondents earn higher incomes when they started rice milling activities.

4.1.1 Determination of the Poverty Status of Rice Millers in the Study Area.

Poverty lines were estimated using the total annual income of the studied millers. Details on the implementation of the method can be found in Wodon (1997), Jibril, Haruna and Okonu (2009), and Yusufu, Adesanye and Awotide (2008). The total annual incomes of the respondents before and during rice milling were used in the classification of the households into poor and non-poor. This was done in two ways:

- (a) A moderate poverty line equivalent of 2/3 of the mean per income.
- (b) A core poverty line equivalent of 1/3 of the mean per income. Then households were classified into one of the mutually exclusive groups separated by line either as core poor, moderately poor or non-poor.

Using this criterion, the results were obtained and presented in table 3.

Table 3: Poverty Indices of the rice millers before and during rice milling in the study Area.

Index	Before rice milling	During rice milling
(i) Total average annual income	N65,321,000	N133,000,000.00
* Mean average annual income		
* 2/3 rd of mean income	N186,631.43	N380,000.00
* 1/3 rd of mean income	N124,420.93	N253,333.33
(ii) Headcount Index	N62,210.48	N126,666.67
* Core poor		
* Moderate poor	0.24(24%)	0.103 (10.3%)
* Non-poor	0.314(31.4%)	0.4943(49.43%)
(iii) Poverty gap index	0.446(44.5%)	0.557(55.7%)
* Moderate poor		
* Core poor	0.32	0.177
	0.23	0.11

Source: Authors' Computations

The analysis of the rice millers' poverty status in table 3 showed poverty line of N124,420.93 and N253,333.33, for before rice milling and during rice milling respectively. This implies that a miller in the area with an average annual income of greater or equal to N124,420.93 and N253,333.33 for before and during rice milling was considered to be non-poor or rich and any miller with an average annual income below N124,420.93 before rice milling and below N253,333.33 during rice milling was considered moderately poor. The core poverty lines of N62,210.48 and N126,666.67 for before and during rice milling respectively means that a miller with an average annual income greater than N62,210.48 but less than 124,420.93 before rice milling was considered extremely poor and a miller with the income of N126,666.67 but less than N253,333.33 during rice milling was considered to be extremely or core poor. The headcount indices of 0.24,0.314,0.446 before rice milling and 0.103, 0.4943 and 0.577 for during rice milling were obtained implying that 24% of the respondents were core poor before they joined rice milling while 10.3% of the studied millers were core poor when they joined rice milling 31.4% of the respondents were moderately poor before they joined rice milling, while 49.43% of the millers were moderately poor when they joined rice milling and 44.6% of the respondents were non-poor before they joined rice milling; while 57.7% of the millers were non-poor when they joined rice milling.

The poverty gap of average poor persons below the poverty line was 0.32, this implies that before rice milling the income of the moderately was 32% below the poverty line while that of the core poor was 23% below the poverty line. Conversely, the table reveals that during rice milling 17.7% of the income of the moderately poor falls below the poverty line while that of the core poor falls below the poverty line by 11%. Thus, it can be said from the foregoing that lower income levels were required during rice milling to bring the miller up to the poverty line during rice milling activities. This implies that by joining rice milling their poverty status has improved.

4.1.3 Results of Logit Regression Analysis

As indicated in the methodology, the correlates of poverty among the rice millers were estimated using the maximum likelihood technique and the results were presented in table 4.

Table 4: Results of Logit Regression analysis

Variables	Coefficients	S.E	Sig	Exp(B)
Constant	-3.389	1.616	0.036**	0.34
X ₁	-0.002	0.001	0.015**	1.000
X ₂	-1.445	0.535	0.007**	0.242
X ₃	0.086	0.383	0.822	1.090
X ₄	-0.569	0.709	0.036**	0.34
X ₅	0.467	0.361	0.196	0.596
X ₆	0.365	0.193	0.059*	1.440
X ₇	-0.660	0.372	0.076*	0.517
X ₈	1.541	0.859	0.0712*	0.128
X ₉	0.188	0.244	0.440	1.207

Nagelkerke $R^2 = 0.335$, log likelihood = 119.947 chi-square 45.617

*** Significant at 1%, ** significant at 5% * Significant at 10%.

From table 4, the log likelihood is 119.947, the Nagelkerke $R^2 = 0.835$ which indicates that some of the coefficients of the independent variables are statistically different from zero. The chi-square value also shows that the model performs well. Variables like x_1 , x_2 , x_4 , x_6 , x_7 and x_8 , have significant influence on the log likelihood of being poor. Other variables x_3 , x_5 and x_9 have no influence on the log likelihood of being poor.

From the table above, it is evident that a unit increase in (x_1) the number of bags of rice milled will lead to about 100% reduction in their log likelihood of being poor. The same change in the number of meals taken per day from rice income, access to improved medical services, level of education of the rice millers will lead to about 24.4%, 42.4%, 34%, 51.7% and 12% reduction in their log likelihood of being poor. On the other hand, increase in family members access to formal education will increase about 144% of their log likelihood of being poor. This might be because of high cost of financing formal education. The results are in line with generally accepted theory. Having more children in schools can lead to short run poverty status (Lipton, 1983). Thus, it can be said that rice milling significantly affects the poverty status of the respondents.

5.1 Conclusion and Recommendations

The findings of the study showed that participation in rice milling has the potential of poverty reduction. However, to reduce their poverty level to a minimum level, the business size (bags of rice processed and marketed) of rice millers should be augmented either by encouraging farmers of paddy rice via subsidies or by increasing their access to credit facilities by the government. This is because, the study has revealed that a unit change in the business size will lead to 100% reduction in their log likelihood of being poor. Augmentation of their business size is necessary as an income transfer policy that will bring the moderately poor millers to the poverty line. Also, enabling environment should be created by the government for rice millers so that more people will participate since findings of the study have indicated that by participating in rice milling alone generates income that can lead to about 34% reduction in the poverty level of those engaged in.

References

- Akaande T. (2005). An Overview of the Nigerian Rice Economy, *Journal of the Nigerian Institute of social and Economic Research Institute of Social and Economic Research (NISER)*. Vol. No. 2.
- Akbar and Mikuni (1998). Paddy Processing System for Food Security and Poverty Alleviation in Bangladesh, at Mikuni@Ipc.hiroshimo.u.ac.jp
- Ajekaiya, D. O. and V. A. Adyeye, (2001). Concepts, Measurement and Causes of Poverty. *Central Bank of Nigeria (CBN) Financial Reviews*. Vol. 39, No 4. Abuja.
- Allen, A. and A. Thompson (1990). Rural Poverty among Racial and ethnic minorities. *American Journal of Agricultural Economics* 75 (2).
- Appleton, S. (1996) Women-headed households and household welfare: *An empirical deconstruction for Uganda*. World Development 24 (2)
- Anyanwu, J. (1997). Poverty in Nigeria: Concept, Measurement and determinants in: Obaseki P. J. (ed) Poverty Alleviation in Nigeria. *Proceedings of the Nigerian Economic*. Pp 93-120.
- Benue Advanced Plan 2003 Document.

- Biyi, D. (2005). Government Policies Competitiveness of Nigerian Rice Economy; *a paper presented at the workshop on rice policy and food security in sub-Saharan Africa* by WARDA, Cotonou, Republic of Benin, November 07 – 09.
- Central Bank of Nigeria (2003). *Statistical Bulletin* (CBN) Abuja, Nigeria.
- Clarence, T. and W. Quentin, (2008). Rice prices and poverty in Liberia. Policy Research Working paper Presented at the *World Bank Human Development Network Development Dialogue on values and ethics*, October, 2008.
- Coulombe. H and A. Mikay, (1996). Modelling Determinants of Poverty in Mauritania. *World Development* 24 (6).
- Department for International Development (2002). Desk Study and Scoping Mission on Poverty and well-being in Benue State.
- Evbuomwam, G. O. (1997). Poverty as a social issue: A Theoretical Note in Nigerian Poverty, Teriba (ed), *The Nigerian Economic Society*, Ibadan.
- Federal Office of Statistics (2007), Poverty Profile for Nigeria: Lagos, FOS.
- Foster, E. J. Green and E. Thorbecke, (1984). A Class of Decomposable Poverty Measures. *Econometrica* 52(1).
- Hazell. P. and L. Hadda (2001). Agricultural Research and Poverty Reduction. *International Food Policy Research Institution. Food, Agriculture and the Environment Discussion Paper* No. 34.
- Imran, S. C. M. Shahnawazi, and U. H. Abo (2009). The Impact of Socio-Economic and Demographic Variables on Poverty. A Village Study. *The Labour Journal of Economics* 14.1 (Summer 2009).
- Jibril, S. A. Haruna, U and K. S. Okonu, (2009), Assessment of Poverty level among Farmers in Bauchi Local Government Area, Banchistade Nigeria. *Proceedings of the 43th Annual Conference of the Agricultural Society of Nigeria*, Abuja 2009.
- Lipton, M. (1983) Demography and Poverty: *World Bank Staff Working Paper*. 616. World Bank Washington D.C.
- Noah, Y., T. F. Gafar and T. A. Muftan (2009), Informal Financial Institutions and Poverty Reduction in the Informal Sector of Off a Town, Kwara State: A Case Study of Rotating Savings and Credit Association (ROSCAs), *Journal of Social Science* 20 (1) 71-81 .
- Omotola, K. M. and A. Ikechukwu, (2006). Rice Milling in Nigeria. Student researchers working on Development of Agriculture Production in Sub-Saharan Africa.
- Schubert, R. (1994). Poverty in Developing Countries: Its definition, Extent and Implication. *Economics* 49/50: 17-40.
- Titilola, G. (2003). The Nigerian Rice Economy in a competitive World. Constraints, opportunities and Strategies Choices.
- UNDP (2009) Nigeria: Human Development Report on Poverty, 2009, UNDP Lagos.
- Woodon, Q. (1997). Food Energy Intake and Cost of Basic Needs: Measuring Poverty in Bangladesh. *Journal of Development Studies* 34.
- Yusuf, S. A., A. O. Adesanoya and D. O. Awotide, (2008), Assessment of poverty among urban farmers in Ibadan metropolis. Nigeria. *Journal of Humanities (J. Hum. ECOT)* 24 (3).