Determinants of Poverty among Crop Farmers: A Case of Ogo-Oluwa Local Government, Oyo State

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Authors' contributions

This work was carried out in collaboration between all authors. Author SOO designed the study, managed the literature searches, performed the statistical analysis and wrote the first draft of the manuscript. Author MOR also managed and reviewed the literature searches, proof read the manuscript and the analyses of the study; then, made the necessary and appropriate suggestions and corrections; hence, all authors read and approved the final manuscript.

Case Study

ABSTRACT

This study analyzed the determinants of poverty among crop farmers in Ogo-Oluwa Local Government, Oyo State, Nigeria. Primary data were collected with the aid of well-structured questionnaires and a total of 80 respondents were chosen through a multistage random sampling technique. The data collected were analysed using descriptive statistic, poverty indices, Logit regression analysis and Correlation matrix. The result revealed that, respondents have mean pooled income of ₦39, 521.00 while the estimated mean total expenditure was ₦ 21,673.46; this is incomparable with that of the national average. Also, the head count ratio P_0 was 7.2%, the poverty gap P_1 was 4.6% while that of the severity indices P_2 was 2.8%; total spending deficit was ₦12041.04 and the spending deficit ratio was 39.2%. It can be inferred from that poverty is a serious problem among crop farmers which has to be given utmost attention. The Logit regression analysis revealed that age, years spent in school, household size and farm size of the respondents have significant influence on the log likelihood of being poor; secondary occupation, years of experience in primary occupation and personal savings of the household heads have no influence on the log likelihood of being poor. Also, the correlation matrix revealed that years spent in

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school, farm size of the households' head, household size and gender were positively related to per capita expenditure while marital status and age of household head were negatively related to per capita expenditure as expected. The study concluded that the years spent in school is a significant factor that can reduce the likelihood of being poor. Increase in household size is significant which also can raise per capita expenditure and increase the likelihood of being poor. Hence, there is need to have sound educational level and curb excessive household size through birth control; these can reduce the likelihood of being poor.

1. INTRODUCTION

Rural poverty appears to be endemic in Sub-Sahara Africa (SSA), and this situation has attracted much attention; particularly disheartening is the fact that this problem, rather than abate, is proving intractable, at least in certain regions. One of the serious effects of rural poverty, of course, is food and nutrition insecurity, and its attendant socio-economic and political costs. Poverty contributes to poor agricultural productivity as many farmers in Nigeria cannot afford to purchase necessary farm inputs such as fertilizers, pesticides and improved seeds, which would bring about increased productivity (Ogunlela and Ogungbile, 2007). Nigeria is a nation that is endowed with multifarious and multitudinous resources-both human and material. Nigeria has been bedevilled with unemployment and poverty because of mismanagement, profligate spending and adverse policies of various governments (Osinubi, 2006). Poverty holds sway, in the midst of plenty, a situation described in Nigeria's political lexicon as a 'bewildering paradox'. Among the committee of nations, Nigeria has been described as poor. Even in the continent of Africa, using selected world development indicators, Nigeria is poorly ranked (Oshewolo, 2010). One of the most pathetic features of the Nigerian economy today is that a majority of its populace is living in a state of destitution while the remaining relatively insignificant minority is living in affluence (Osinubi, 2003b). Poverty is defined today as a state of long-term deprivation of well-being, a situation considered inadequate for decent living (Aigbokhan, 2008).

In 2000, the human development index (HDI) score for Nigeria was 0.433 and the country ranked was 151; Nigeria increased it human develop index score to 0.453 in 2003 but ranked 158 among 175 countries survey (United Nation, 2005b). The human development index however, fell again marginally to 0.448 in 2004 and the country ranked 159 out of 177 countries (United Nation, 2006). Recent poverty assessment survey has shown that over 70% of the population are living on less than a dollar per day over, 50% living below the national poverty line (FAO, 2006); survey also revealed that poverty is especially higher in rural areas where majority of the people are resident and deriving livelihood from agriculture (NBS, 2006). Poverty and income inequality are closely related and it has been argued that income inequality is a manifestation as well as a strong cause of poverty (UNU/WIDER, 2000).

A standard concept on poverty remains elusive because of its multidimensional and nature and also its dynamic nature or property (Ajakaye, 1998). But whatever perspective poverty is viewed, it is obvious that it is a condition of life not desirable and a state of deprivation experienced by human being (Omonona, 2000). The poverty situation in rural areas where food crop production activities are carried out as a livelihood means of obtaining food and

making income is quite disturbing and this makes it necessary to further investigate rural poverty among food crop farmers. The Human Development Report (UNDP, 1999) reveals that Nigeria is one of the poorest among the poor countries of the world. The World Bank in one of its findings of 1997 study found out that poverty especially among rural people is worse with Gini coefficient of 45.6 compared with 39.9 for urban. According to Okunmadewa (1999), various effort and deliberate policy measures taken by the international organizations in general and the Nigerian government shows that the number of rural poor is roughly twice that of urban poverty (World Bank, 1996); hence, the need for this study.

The overall objective of this study is to analyse the determinants of poverty in Ogo-oluwa Local Government Area of Oyo State, Nigeria. And, the specific objectives are to:

- Identify the socio-economic characteristics of crop farmers in the study area.
- Categorize the farmers into poverty status based on the poverty line estimate.
- Determine the factors that influence poverty status (correlates) among the respondents.

Poverty is increasingly being recognized as both a policy and economic problem in Nigeria (Fields, 2000); this is stressed by the Interim Poverty Reduction Strategy Paper in Nigeria as well as the Poverty and Vulnerability Assessment of the country, although the documents provide trends and profile of poverty is critical for policy analysis and these design of effective poverty reduction strategies. One important consensus in the literature on poverty is that, poverty is a rural phenomenon (World Bank, 1990; Fields, 2000). By this it is acknowledged that rural communities are worst hit by poverty. The poverty situation in Nigeria is disturbing, both the quantitative and qualitative measurement attests to the growing incidence and depth of poverty in the country.

According to Aktan (2002), World Bank's definition of poverty encompasses not only material deprivation (lack of an appropriate level of income or consumption) but also deprivation of social services such as education and health. This notion of poverty also includes vulnerability and exposure to risk and lack of a voice in decision-making, hence powerlessness. According to this broadened approach of the World Bank, income and health vulnerability is the risk that a person or a household will be subjected to in income or health poverty over time. But vulnerability also includes probability of being exposed to some additional risks such as violence, crime, and natural disasters. Moreover, recently, in measurement of poverty it is stressed that achievement in resources and in public and semi-public goods and services and notions of autonomy, self-respect, and honour should be taken into account (Aktan, 2002). Consequently, the notion of poverty in terms of human development came into prominence. According to the definition of UNDP poverty in terms of human development is the deprivation of the right to "lead a long, healthy, creative life and to enjoy a decent standard of living, freedom, dignity, self respect and the respect of others." (UNDP, 1997). Additionally, there are also some other types of poverties such as rural poverty and urban poverty.

The most severe poverty is in the developing country. There is an evidence of poverty in every region in the developing countries, this condition results in wandering homeless people and poor suburbs ghettos. To avoid stigma, this notions are usually called developing nations (World Bank, 2010). When measured, poverty may be absolute or relative. Absolute poverty is a set standard which is consistent over time and between countries. An example of absolute measurement will be percentage of the population eating less food than required to sustain the Human body (An approximate of 200-2500 calories per day), while relative

poverty in contrast view poverty as socially defined and dependent on social context or a situation in which some households are not absolutely poor but they are less rich compare to others in terms of income, properties and resources. One relative measurement will be to compare the total wealth of the poorest one third of the population with the total wealth of richest of the population, in this case, the number of people counted as a poor could increase while their income rises (World Bank, 2010). Those living in poverty and lacking access to essential health services, suffering from hunger or even starvation; experience mental and physical health problems which make it harder for them to improve their situation.

The eradication of hunger and poverty is probably the most basic target out of the eight UN millennium Development Goals (MDGs). Nigeria has lost this and also failed the midterm MDGs assessment. Nigeria however moved her goal post from 2015 to 2020. According to World Bank (2000), about 40million were unemployed, this problem have been ever analysed to the point of paralysis and there is certainly no dearth of knowledge on what needs to be done. Attempt to eradicate poverty are not to view legislation and community effort, but to assist the poor are reported to at least as far back as biblical times. Poverty reduction lies at the heart of the development discourse and practice (Jackson, 1997).

2. MATERIALS AND METHODS

The study was carried out in Ogo-Oluwa Local Government Area of Oyo state with the local government headquarters at Ajaawa. Ogo-Oluwa local government area is located between the longitude of 3'51.18' and 3'58.9' East of Greenwich meridian and the Latitude 7'30.3' and 7'40.2' North of the equator with rainfall between 1500 and 2000mm and temperature between 23'C and 27'C Isotherms in January. It is situated at 233.2meters above sea level and the general elevation is between 178m and 220m above sea level (OYSADEP, 2001). The vegetation of the zone is derived savannah. The climatic and soil conditions of the study area favour the extensive production of food crops like cassava, yam, maize, pepper and tomatoes, to mention few. Ogo-Oluwa local government area is an extension block of the Oyo State Agricultural Development Programme (OYSADEP). The block is made up of eight cells from which the sample for this study was taken. A multistage random sampling technique was used in selecting the respondents for this study. Four cells were purposively selected from the block based on the concentration of crop farmers in the areas; from each of the selected cells, two villages were randomly chosen. Thereafter, ten registered crop farmers were selected randomly from the chosen villages to arrive at a total sample of 80 respondents; this selection was made based on time and fund available. A structured questionnaire was developed based on the objectives of the study to collect information from the selected respondents through one on one interview approach. Analytical techniques used include: descriptive statistics such as frequency count, percentages and mean values. Poverty indices approach, Logit regression and Correlation matrix were also used.

2.1 Poverty Indices

According to Okunmadewa et al. (2007), poverty indices are the measurement of poverty incidence or head count ratio (P_0), depth of poverty or poverty gap (P_1) and severity of poverty (P_2). The measures related to the different dimension of the incidence of poverty. The three (3) measures are based on a single formula but each index put different weight on the degree to which household or individuals falls below poverty line. This approach is based

on the mathematical formula which explains poverty indices anchored upon the existence of household's classification according to income or consumption expenditure.

To determine poverty profile indices, it becomes necessary to use the so called P-alpha measured analyzing poverty; its mathematical formulation is derived thus:

$$P_x = \frac{1}{N} \sum_{i=1}^{a} \frac{(z - y_1)^a}{z} \quad -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ (1)$$

Where

N   = the total population in the group of interest
Z   = Poverty line
N   = Number of individual below the poverty line
Y_1 = Expenditure of income of the household in which the individual lives.
x   = the degree of concern for the depth of poverty, it takes on the value of 0, 1 and 2 for poverty incidence, poverty gap and poverty severity respectively.

The indices are then derived as follows:

$$P_0 = \frac{1}{N} \sum_{i=1}^{a} \frac{(z - y_1)^0}{z} \quad -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ (2)$$

$$P_1 = \frac{1}{N} \sum_{i=1}^{a} \frac{(z - y_1)^1}{z} \quad -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ (3)$$

$$P_2 = \frac{1}{N} \sum_{i=1}^{a} \frac{(z - y_1)^2}{z} \quad -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ -\ (4)$$

2.2 Logit Regression Model

Logit regression has been defined as the amount of change in the value of one variable associated with a unit change in the value of another variable; Logit regression analysis therefore helps to determine the effect of changes in the explanatory variables on the dependent variable. Logit model is used whenever the dependent variable is binary (also called dummy) which takes values 0 or 1. Logit regression is a nonlinear regression model that forces the output (predicted values) to be either 0 or 1. Logit model estimates the probability of your dependent variable to be 1 ($Y = 1$). This is the probability that some event happens. According to Hazoor et al. (2006), it is expressed as:

$Y_i = X_i \beta + u_i$

In this model, the response variable was binary, taking values as one if the household was poor, zero otherwise. Following Greene (1993) as cited by Hazoor et al. (2006), and assuming that the cumulative distribution of u_i was logistic; a logistic model was employed. In this case, the probability of being poor was estimated by using the logistic probability model given as:

$$\Pr ob \ (Y_i = 1) = \frac{\exp (X'_i \beta)}{1 + \exp (X'_i \beta)}$$

Where:

Y_i = dependent variable that indexes the status of poverty

X_i = explanatory variables (i =1, 2, 3…………..7); these are defined as follow:

X_1 = Age (years), X_2 = Years spent in school (years), X_3 = Household Size (Actual number), X_4=Farm size (ha), X_5 = Secondary occupation (dummy), X_6 = Years of experience in primary occupation (years), X_7 = Personal savings (₦), u_i = the stochastic error term which is independently distributed, βis are the parameters to be estimated.

3. RESULTS AND DISCUSSION

The summary of the descriptive statistics on socio-economic characteristics of the respondents is given in Table 1. Majority (58.75%) of the respondents fall between age ranges of 41-50 years with a mean age of 41.7 years, meaning that the respondents are still in their active and productive age. 60.0% are male while 66.25% of the respondents are married. About 67.5% have household size ranging between 6 and10 members; with an average household size of 7.29 members, approximately 8 members which is higher than the national average; this could be associated with the believe on the need for family labour to work on the farm. More than half of the respondents have years of experience in primary occupation ranging between 11-15 and above 15 years respectively with mean years of experience of 16.8 years (approximately 17 years). Many (66.25%) take to farming as their primary occupation and embrace livelihood diversification through involvement in non-farm livelihood activities. 53.75% and 46.25% of the respondents practiced mono and mixed cropping system respectively; connoting that majority take to mono-cropping due to capital constraint. The estimated average farm size of approximately 2ha is in line with the national average. Mean incomes from primary and secondary occupation were ₦ 34,536.28 and ₦ 14,281.72 respectively while the mean pooled income was ₦39, 521.00. The estimated mean total expenditure was ₦ 21,673.46; this is incomparable with that of the national average and these findings agree with the work of Babatunde et al. (2008).

3.1 Estimation of the Poverty Line

Mean per capita household income was obtained by dividing the total per capita income by the total number of respondents sampled; this calculation eventually gave a mean per capita household income of ₦5305.76 which can also be referred to as the poverty line per month. The classification of the sampled respondents was based on the moderate poverty line which is two third ($^2/_3$) of the poverty line per month while the core poverty line is one-third ($^1/_3$) of the poverty line per month. The moderate poverty line was estimated to be ₦3537.17 while the core poverty line was ₦1768.58. The implication of this is that any farmer spending less than ₦3537.17 per month is moderately poor while farmers spending less than ₦1768.58 are regarded as being poor and spending exactly the estimated amount or higher than the moderate poverty line per month connotes that the farmer is non-poor. Hence, the result as shown in Table 2 revealed that 28.75% of households sampled were core poor, 61.25% of the households were moderately poor while 10.0% of the households were non-poor; which implies that, majority of the households sampled were moderately poor.

Table 1. Selected socio-economic variables of the respondents

Variable	Frequency	Variable	Frequency
Age		Type of house occupied	
21 – 30	6 (7.5)	Face to face	75 (93.75)
31 – 40	12 (15.0)	Bungalow	3 (3.75)
41 – 50	47 (58.75)	Flat	2 (2.5)
51 – 60	11 (13.75)	Types of toilet used	
> 60	4 (5.0)	Water closet	2 (2.5)
Mean age (41.7 years)		Pit latrine	24 (30.0)
Gender		Bush	54 (67.5)
Male	48 (60.0)	Means of transportation	
Female	32 (40.0)	Personal car	2 (2.5)
Marital status		Public car/buses	20 (25.0)
Single	7 (8.75)	Motorcycle	46 (57.5)
Married	53 (66.25)	Bicycle	10 (12.5)
Widowed/Divorced	20 (25.0)	Trecking	2 (2.5)
Household size		Health care	
1 – 5	17 (21.25)	Modern hospital	5 (6.25)
6 – 10	54 (67.5)	Community dispensary	22 (27.5)
Above 10	9 (11.25)	Spiritualist	36 (45.0)
Mean household size (7.29)		Self medication	17 (21.25)
Years spent in school		Source of finance	
None	20 (25.0)	Personal savings	53 (66.25)
1 - 6	32 (40.0)	Social group	25 (31.25)
7 - 12	19 (23.75)	Banks	2 (2.5)
Above 12	9 (11.25)	Income from primary occupation (₦)	
Primary occupation		< 20,000	8 (10.0)
Farming	53 (66.25)	20,001 – 30,000	13 (16.25)
Others	27 (33.75)	30,001 – 40,000	45 (56.25)
Secondary occupation		40,001 – 50,000	9 (11.25)
Farming	27 (33.75)	Above 50,000	4 (5.0)
Civil service	18 (22.5)	Mean (₦ 34,536.28)	
Trading	11 (13.75)	Income from secondary occupation(₦)	
Artisanship	24 (30.0)	< 20,000	27 (33.75)

Years of experience in primary occupation		20,001 – 30,000	38 (47.5)
(years)		30,001 – 40,000	10 (12.5)
1-5	14 (17.5)	40,001 – 50,000	3 (3.75)
6-10	8 (10.0)	Above 50,000	2 (2.5)
11-15	25 (31.2)	Mean (₦ 14,281.72)	
15 and above	33 (41.3)	Pooled (Total) Income (₦)	
Mean (16.8)		≤ 40,000	14 (17.5)
Cropping system		40,001 – 60,000	19 (23.75)
Mono-cropping	43 (53.75)	60,001 – 80,000	37 (46.25)
Mixed cropping	37 (46.25)	80,001 – 100,000	6 (7.5)
Farm size (ha)		Above 100,000	4 (5.0)
Less than 2	47 (58.75)	Mean pooled income (₦ 39,521.00)	
2 – 4	26 (32.5)	Total expenditure(₦)	
Above 4	7 (8.75)	≤ 10,000	4 (5.0)
Mean (2.36)		10,001 – 20,000	19 (23.75)
House occupied ownership		20,001 – 30,000	44 (55.0)
Personal	45 (56.25)	30,001 – 40,000	12 (15.0)
Family	26 (32.5)	Above 40,000	1 (1.25)
Rented	9 (11.25)	Mean total expenditure (₦ 21,673.46)	
Total	**80 (100.0)**	**Total**	**80 (100.0)**

Source: Field survey, 2011;
Figures in parentheses are percentage values.

Table 2. Distribution of respondents based on Poverty line estimate

Poverty class	Frequency
Core poor	23 (28.75)
Moderately poor	49 (61.25)
Non-poor	8 (10.0)
Total	**80 (100.0)**

Source: Field survey, 2011;
Figures in parentheses are percentage values.

3.2 Analysis of Household Poverty

As shown in Table 3, poverty head count ratio P_0 shows that the number of people (Food crop farmers) living below the poverty line was 7.2%, which is low in the study area at a moderate poverty line of ₦3537.17; the SDR (spending deficit ratio) measures the ratio of the difference between the average spending of the poor and the poverty line; according to the poverty line, it was 39.2% while the total spending deficit which is the total amount of increase in spending by all the poor people necessary to lift them up to the poverty line was ₦12041.04. The poverty gap P_1 which measures the depth of poverty was 4.6% while that of the severity indices P_2 was 2.8%. It can be inferred from these indices that poverty is a serious problem among crop farmers which has to be urgently addressed.

Table 3. Prevalence, depth and severity of poverty of the respondents

Respondents	Poverty line	P_0(%)	P_1(%)	P_2(%)	TSD	SDR%
Crop Farmers	2/3 of poverty line = ₦3537.17	7.2	4.6	2.8	12041.04	39.2

Source: Field survey, 2011

3.3 Determination of Factors Influencing Poverty Level (Correlates) Among the Respondents

The result of the analysis on factors influencing poverty; that is the correlates of poverty is shown in Table 4. In all, the likelihood ratio value of 19.26 indicates that some of the coefficients of the explanatory variables are statistically different from zero. The chi-square value also shows that the model performs well. However, age, years spent in school, household size and farm size of the respondents have significant influence on the log likelihood of being poor; other explanatory variables have no influence on the log likelihood of being poor as indicated by the Z-values. While age and household size increased the log likelihood of being poor; years spent in school and farm size reduced the log likelihood of being poor. Following from this, the implication is that increase in age will lead to an increase in the likelihood of being poor because older people tend to be less active in carrying out livelihood activities; in the same vein, increase in household size will lead to an increase in the likelihood of being poor because of perceived responsibilities and many dependants on household head; this agrees with the findings of Babatunde et al., (2008) and Yusuf et al. (2008). Moreover, increase in years spent in school will lead to a reduction in likelihood of being poor by the value of the coefficient because the higher the level or number of years of schooling, the better-exposed one is and also more enlightened; hence, with improvement in the level of education, one is better placed in terms of income generation and therefore enhanced the purchasing power of the person and thereby improving his standard of living

and poverty level; this is in line with Babatunde et al. (2008). Also, increase in farm size will lead to a reduction in likelihood of being poor. All things being equal, increase in farm size could mean increased output and income leading to improve household welfare and reduces the likelihood of being poor; this is in line with of Babatunde et al. (2008).

Table 4. Result of Logit regression analysis

Variable	Coefficient	S.E	Z	P > |Z|
Constant	6.413	2.846	2.253	0.039
Age	0.526 E-01	0.284 E-01	1.852	0.072*
Years spent in school	-0.819	0.396	- 2.068	0.043**
Household size	0.481	0.205	2.346	0.035**
Farm size	- 1.324	0.726	- 1.824	0.084*
Secondary occupation	- 0.650	0.741	- 0.877	0.421
Years of experience	0.847	0.672	1.260	0.236
Personal savings	- 2.136	1.963	- 1.088	0.295

Source: computer print-out, 2012
S.E = Standard Error; R^2 = 43.7%; Prob > Chi^2 = 0.0000; Likelihood ratio = 19.26
*, ** - Significant at 10% and 5% probability level respectively

A functional relationship was also formulated to ascertain the factors influencing poverty status among the respondents using the correlation matrix.

A linear equation was chosen as the lead equation; this is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + e_i \qquad \text{where:}$$

Dependent variable Y is the per capita expenditure on basic needs, X_1 is the gender of the head of household, X_2 is the marital status of the household head, X_3 is the size of the household, X_4 is the years spent in school in years (which measure the educational status of the household head), X_5 is the age of the household head in years and X_6 is the farm size in hectare; e_i is error term, α is the constant while β_i are the regression coefficients.

From the correlation matrix result presented in Table 5, it was revealed that years spent in school, farm size of the households' head, household size and gender were positively related to per capita expenditure while the other two variables (marital status and age of household head) were negatively related to per capita expenditure. This suggests that the more the number of years of formal education of household head, the more the per capita expenditure, which can determine the level of poverty any household belongs. More so, the more farm size the household head has, the more the per capita expenditure on basic needs. Also, the more the household size, the more the per capita expenditure because of the perceived responsibilities bestowed on the household heads. More so, there is positive relationship between per capita expenditure and gender which suggests that male has high tendency towards having more per capita expenditure than the female counterpart; this is further established by the dominance of male gender in the study area. The negative relationship between per capita expenditure and marital status suggests that the more the number of members of a household who are married, the less the per capita expenditure; in the same vein, age being negatively related to per capita expenditure suggests that older household heads tend to have less per capita expenditure because most of their wards are likely to be working members who also contribute towards household expenditure. This result agrees with the findings of Osinubi (2003b).

Table 5. Correlation matrix

	Y	X_1	X_2	X_3	X_4	X_5	X_6
Y	1						
X_1	0.1358	1					
X_2	-0.2173	0.1302	1				
X_3	0.0512	0.6531	0.3741	1			
X_4	0.1029	0.4147	0.1469	0.0331	1		
X_5	-0.0436	0.1632	-0.1137	-4.371	0.3416	1	
X_6	0.3124	0.2183	0.5321	0.1924	-0.0563	-0.2163	1

Source: Correlation matrix result, 2012

4. CONCLUSION

The result revealed that respondents have mean pooled income of ₦39, 521.00 while the estimated mean total expenditure was ₦ 21,673.46; this is incomparable with that of the national average. Also, the head count ratio P_0 which shows the number of crop farmers living below the poverty line was 7.2%, the poverty gap P_1 which measures the depth of poverty was 4.6% while that of the severity indices P_2 was 2.8%; total spending deficit was ₦12041.04 and the spending deficit ratio was 39.2%. It can be inferred from these indices that poverty is a serious problem among crop farmers which has to be given utmost attention. However, the result of the Logit regression analysis revealed that age, years spent in school, household size and farm size of the respondents have significant influence on the log likelihood of being poor; secondary occupation, years of experience in primary occupation and personal savings of the household heads have no influence on the log likelihood of being poor as indicated by the Z-values. While age and household size increased the log likelihood of being poor; years spent in school and farm size reduced the log likelihood of being poor. In the same vein, the correlation matrix analysis revealed that years spent in school, farm size of the households' head, household size and gender were positively related to per capita expenditure while marital status and age of household head were negatively related to per capita expenditure as expected. Hence, the study concluded that the educational level has a significant impact on increased income among the crop farmers, which may translate to poverty reduction. Also, increase in household size brings about an increase in poverty level considering the meagre income in the study area.

Based on the findings of this study, it is recommended that crop farmers in the study area need to have sound educational level and curb excessive household size through birth control; these can reduce the likelihood of being poor. Then, younger people should be encouraged to go into farming and stop migrating to urban areas in search for white collar jobs as people tend to be less active in livelihood activities with increase in age as shown from the findings.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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