

Incidence of Poverty Among Rural Households: Evidence from Oyo State, Nigeria

Jerumeh, T. R.* Salman, K. K. and Jerumeh, E.G.

Department of Agricultural Economics

University of Ibadan, Ibadan, Nigeria.

*Corresponding author e-mail: tolujerumeh@gmail.com

Abstract

Although poverty is widespread in the urban areas, it is more endemic in the rural areas where a high percentage of Nigeria's total food production comes from. There is therefore a need to complement macro studies with micro-studies on poverty. Hence, this study evaluated the poverty situation of farming households in selected areas in Ibadan, Oyo state. Primary data were collected from farming households in selected areas in Ibadan Zone of Oyo state with the aid of well-structured questionnaire using multistage sampling procedure. Analysis was done using descriptive statistics, Multidimensional Poverty Index (MPI) and Tobit regression model. The incidence of poverty or the percentage of people who were MPI poor was 50.58% and the average intensity of MPI poverty across the poor among the sampled households was 48.7%. The Multidimensional Poverty Index (MPI) for the sampled households was 0.246. The Tobit regression revealed that a unit increase in age, years of education and access to infrastructures by the farming household heads will lead to 0.0093, 0.0969 and 0.2287 decrease in poverty respectively. The study concludes that the level of impoverishment is high with more than half of the farming households being poor.

Keywords: Farming households, Multidimensional Poverty Index, Poverty

Introduction

Statistics from the National Bureau of Statistics (NBS, 2007) indicated that poverty incidence in Nigeria rose from 28.1% in 1980 to 54.4% in 2004. In 2010, the proportion of Nigerians living in absolute poverty – that is, those who can afford only food, shelter and clothing – jumped to 60.9% in 2010 from 54.4% in 2004 (NBS, 2010). Out of a population of 167 million, 100 million live on less than a dollar a day (BBC, 2012), while 53% of Nigeria's total population in 2014 reside in rural areas (World Bank, 2016). The study carried out by Ilavbarhe and Enabulele (1999) revealed that the high incidence of poverty in Nigeria is as a

result of the shortage and scarcity of petroleum products such as petrol (gasoline), kerosene, cooking and automobile gas, diesel, electricity, water and even food both in quality and quantity. In addition, certain percentage (up to 22%) are excluded from adequate and comfortable shelter and clothing materials while the scarcity and consequent increase in the prices of petroleum products in the black market has sky-rocketed the prices of basic food commodities and the cost of production and distribution of agricultural commodities.

Consequent on the deteriorating standard of living, several studies have

been carried out on the poverty situation in Nigeria and these were done both at the micro and macro levels (Balogun *et al.*, 2011; Okunmadewa *et al.*, 2005; Nwaobi 2003; Aliyu, 2001 (as cited in Abubakar and Hussaini, 2014); Omonona 2001(as cited in Adekoya, 2014); Olayemi *et al.*, 1999; Anyanwu, 1997; World Bank, 1996). Although, it is reported that poverty is prevalent in urban areas, poverty is especially severe in rural areas, where up to 80% of the population live below the poverty line and social services and infrastructure are limited (IFAD,2007).

The finding by IFAD (2007) further strengthens that of World Bank (1996). Going by the above situation, Nigeria is in a very critical state as about two-third of Nigerians live in rural areas. Consequent on this, poverty in rural areas has ripple effect. Therefore, increased poverty in rural areas poses a threat on the riches in urban areas. The validity of the statement becomes apparent given that over 90% of Nigerians total food production comes from the rural areas (IFAD, 2007 and Olayemi, 1980). The challenge for Nigeria is not one of improving one sector or region at the expense of another or of introducing policy distortions and inefficiencies in resource allocation to benefit one group which in the past has led to increased poverty for others, but to adopt growth and social service oriented policies that will enable all its inhabitants to improve their welfare (Nwaobi, 2003).

The thrust for this study therefore stems from the need to complement macro-studies with micro-studies on poverty. This is because a generalized study could be palliative as it is not truly representative of the actual situation

experienced in different sub-groups. World Bank (undated) reveals that the number of the rural poor is roughly twice that of the urban and the depth of poverty is more than double in the rural areas. Moreover, Eighty five percent and two-thirds of the extreme poor live in rural areas and farms respectively and income inequality is worse in rural areas than for urban areas. Therefore, studies on rural poverty could be a miniature depiction of how solutions can be proffered to the worsening poverty situation in Nigeria as a whole. Another motivation for the study is that it uses Multidimensional Poverty Index, developed by Oxford Poverty and Human Development Index and United Nations Development Programme (2010), to measure poverty. Different approaches to poverty exist; these include Sen Index (Sen, 1976), Integrated poverty Index (HDI), Foster, Greer and Thorbecke's (FGT) P_{α} weighed poverty measure (Foster et. al 1984). Apart from the fact that these models were developed a long time ago, they all have one shortfall or the other. FGT's P_{α} weighted poverty measure, which is the most prominently used, uses poverty depth as a measure and this does not indicate the severity of the poverty problem in terms of the number of people who suffer. This study, therefore, uses a more recent model, Multidimensional Poverty Index (MPI) to measure the incidence and the intensity of poverty across the poor households. This reflects deprivations in very rudimentary services and core human functioning for people in the sampled areas. The use of MPI unlike other models reveals a different pattern of poverty than income poverty, as it illuminates different set of deprivations. It has been shown severally

that income and expenditure data distilled from respondents are more or less not too reliable as they are based on their head knowledge which varies from time to time. People are sometimes biased in their responses, especially when it comes to giving information on their incomes as they think that if actual financial positions are given, government might decline in their effort to assist them; in some instances, some inflate their incomes to make them appear affluent and respectable before their interviewers. On the contrary, indicators for deriving the MPI (Education, health and standard of living) can be easily observed by the interviewer and he or she can discern when falsified information are being given. The paper presents the poverty situation of farming households in selected areas in Ibadan, Oyo State. Other specific objectives were:

1. To characterize the socioeconomic characteristics of farming households based on their poverty profile.
2. To estimate the determinants of poverty among the farming households.

Materials and Methods

Theoretical Considerations: An Overview of Poverty Measurement Methods

Poverty is a complex phenomenon influenced by a large number of factors which can be studied from different perspectives. Measuring poverty can importantly influence both its understanding and analysis and how to create policies influencing it. For this reason, reviewing different methodologies can be of tremendous practical relevance. As depicted in figure 1, there are five main approaches for defining and measuring poverty; the monetary

approach, the capability approach, social exclusion, the participatory approach, and multidimensional deprivation approach.

Monetary or one-variable approach is the most commonly used measurement of poverty which identifies poverty with a shortfall in consumption (or income) from some poverty line (Stewart *et al.*, 2007). Depending on the type of base information used, one variable approach can be conceived in terms of objective and subjective poverty. Objective poverty studies use information collected via variables whose measurement comes from a researcher's direct observation, which gives them a high degree of objectivity. From an objective point of view, an analysis of both absolute poverty (a situation in which an individual lacks basic needs) and relative poverty (which compares the status of an individual to others in his or her environment) can be achieved. Subjective poverty studies are based on the perception that the individuals or households have of their situation in relation to the society as a whole (INE, undated). The best known subjective poverty lines are the Kapteyn and Leyden lines.

It should be pointed out that the monetary approaches are in one way or another associated with "income indicators". Sen (1985) forcefully argues for the inclusion of "non-income" indicators (social indicators) like life expectancy, literacy and infant mortality. This is the basis of the so-called *human development paradigm* (HDI). Poverty is a function of the absence of capability. Capability is a set of vectors functioning and reflecting the person's freedom to lead one type of life or the other ... to choose from possible livings (Nune, 2008). Sen

(1979) established equilibrium between the absolute and relative approaches, developed non-income indicators to identify the poor (which includes the direct or the income method), and aggregated the poverty characteristics into one overall measure. Translating the capability approach into an operational framework for poverty evaluation raises a number of issues. Most fundamental are the definition of basic capabilities and the level of achievements that are to be considered essential.

The third approach to poverty measurement, social exclusion, was developed in industrialized countries to describe the process of marginalization and deprivation that can arise within rich countries. It is the process through which individuals or groups are wholly or partially excluded from full participation in the society in which they live (Stewart *et al.*, 2007). For example, exclusion exists if an individual does not participate in key activities of the society in which he or she lives. This could be due to racial differences or whether the individual is aged or handicapped. Social exclusion is perhaps the least well defined and most difficult to interpret of the concepts of deprivation. Nonetheless, the approach is the only one that focuses intrinsically, rather than as an add-on, on the processes and dynamics which allow deprivation to arise and persist.

A principal complaint by those involved with development work at the grassroots level is that local realities are not adequately reflected in international policies and programmes. Most conventional estimates, including both monetary and capability approaches have been criticized for being externally

imposed – emphasizing income-generating opportunities as a major concern to the poor. It has been opined that the income generating opportunities may not necessarily be the primary or sole grievance the poor have with regards to their situation (Mowafi, 2004). The participatory approach aims to change this, and get people themselves to participate in decisions about what it means to be poor (Chambers 1994a, 1994b, 1997). The method is apparently cost-effective, but the community spends much more time on the exercises. Also, due to small sample size imposed by the approach relative to other methods, it is difficult to carry out statistical significance tests on data collected this way.

Multidimensional deprivation, closely linked to social exclusion, refers to deprivation or the lack of access to certain goods and services considered necessary for society, whether a basic need or not. Here, poverty is measured with non-monetary variables and deprivation indicators, using breakdowns of these indicators to construct poverty measures. Bourguignon and Chakravarty (2003) propose the use of dimension – specific lines – which are called deprivation cut-offs in Alkire and Foster (2007) – as the basis for determining who is deprived and in which dimension. Examples of multidimensional approaches are: the Fuzzy set theory-based contributions; the Human Development Index (HDI); the Human Poverty Index (HPI); and Multi-dimensional Poverty Index (MPI). Since the multidimensional deprivation approach is based on the fact that no matter how much effort is put into ensuring that the weights

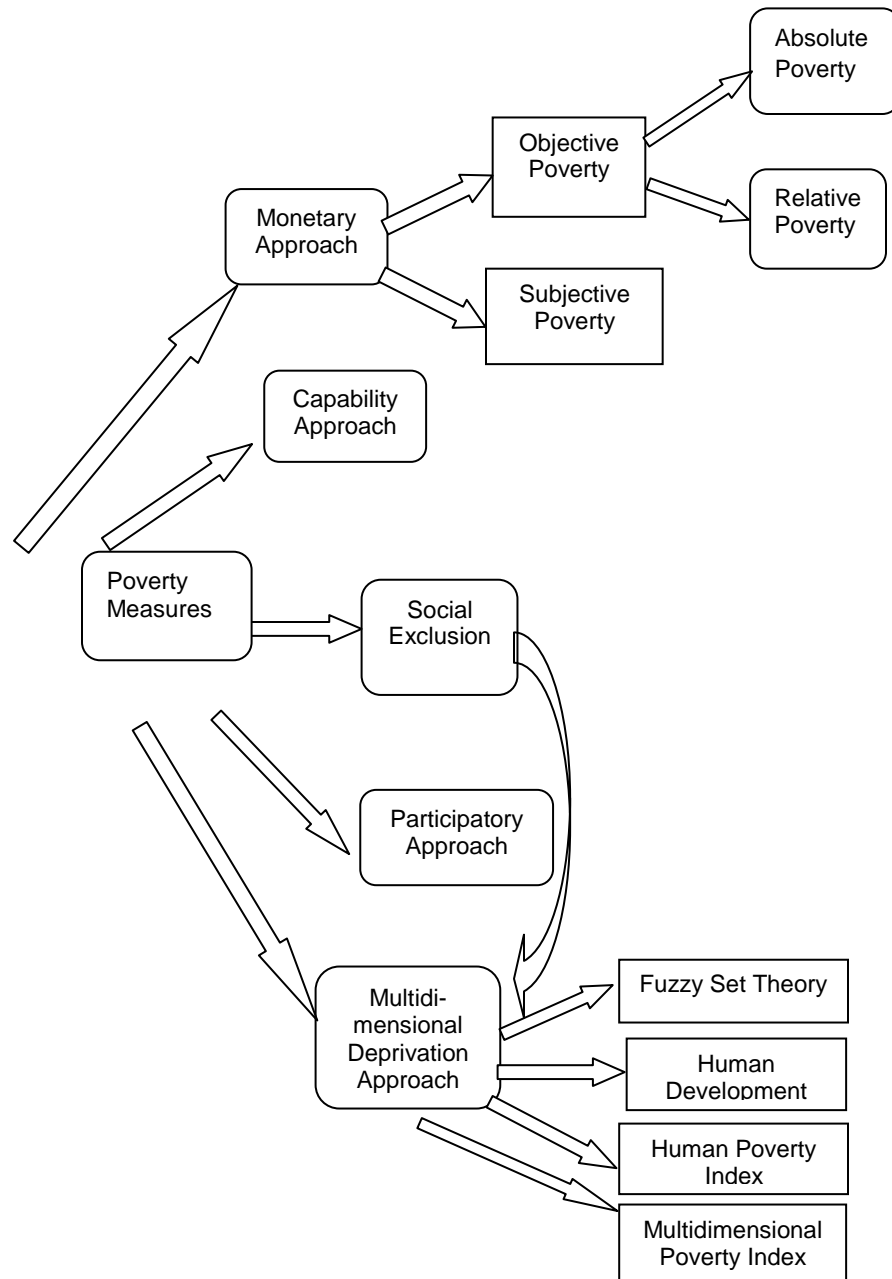


Figure 1: Conceptual framework showing different approaches to poverty measurement

appropriately represent the overall circumstances, the methods are inevitably imperfect and should be recognized as such. It is clear from the review of alternative approaches that the implementation of each method requires a number of methodological decisions which result in different outcomes. None of these methods gives a unique measure due to the general vagueness in the definition of poverty and the possibility of researchers' interference in poverty measurement.

Study Area

Oyo State is an inland state in south-western Nigeria, with its capital at Ibadan. It is bounded in the north by Kwara State, in the east by Osun State, in the south by Ogun State and in the west partly by Ogun State and partly by the Republic of Benin.

Oyo State covers approximately an area of 32,249.10 km² out of which 27,107.93 km² is cultivable (OYSADEP, 2001). The climate is equatorial and the two climatic seasons identified in the study area are dry season which is from November to March and the rainy season which starts from April and ends in October (Olaoye *et al.*, 2013). The rainfall pattern in the state follows tropical type with an average annual rainfall of 1000mm-1400mm and fairly high temperature (Oyeyinka and Bello, 2013).

Oyo State has 33 local government areas, all which have been grouped into four zones for administrative conveniences (Olaniyi, 2012). These zones are Ibadan/ Ibarapa, Ogbomoso, Oyo and Saki. The state is homogenous and the indigenes mainly comprise the Oyos, the Oke-Oguns, the Ibadans and the Ibarapas, The study was carried out in

selected local governments in Ibadan area of Oyo State. Ibadan is situated at 7.39⁰ North latitude, 3.9⁰ East longitude and 239 meters elevation above the sea level. Ibadan is the largest indigenous city in Africa with an estimated population of about 3,800,000 according to 2006 estimates (P.G. School U.I., 2012). The Local Governments covered in the study were Akinyele, Egbeda and Ido local government. The Local Governments were chosen because most of their inhabitants are known for their farming activities and due to their fairly large concentration of villages that are typical of rural areas.

Sources and Methods of Data Collection

The data used for this study were mainly primary. Personally administered structured questionnaires were designed, pretested and validated for use in this study. Information elicited from the sampled farm households covered the following: household income, occupational variables, demographic characteristics of household members and other farm related and living condition characteristics.

Sampling Procedure

A multi stage sampling procedure was used to select respondents for the study. The first stage involved the selection of three local government areas namely: Akinyele, Ido and Egbeda local government areas. These local governments were purposively selected because of their fairly large concentration of villages which are typically rural in nature. The second stage involves a random selection of two villages in each local government. A total of 180 farming households (30

households from each village) were therefore randomly sampled. In most cases, the household heads were interviewed and in situations where the household head could not be reached, a knowledgeable adult member of the household was interviewed in proxy. The data collection took place between April and May, 2012. Consequent on unsuitable responses from completed instrument and non-return of 8 questionnaires (approximately 4 percent of the sampled respondent), a total of 172 households were covered and used as the unit of analysis for the study.

Analytical techniques

This study employed a number of analytical techniques. These techniques include descriptive and inferential statistics, multi-dimensional poverty measure and the Tobit regression model. The descriptive statistics used include tables, cross tabs, percentages and all forms of indices to describe the socio economic characteristics of farming households and to characterize poverty profile.

Multidimensional Poverty Index

The multidimensional poverty measure (MPI) is an index of acute multidimensional poverty (OPHDI and UNDP, 2010). It uses a range of deprivations that afflict an individual's life. The measure assesses the nature and intensity of poverty at the individual level in education, health outcomes, and standard of living (OXHDI). MPI is calculated as follows:

$$MPI = H \times A$$

Where,

MP = Multidimensional Poverty Index

H = Percentage of people who are MPI poor (incidence of poverty)

A = Average intensity of MPI poverty across the poor (%) (OPHDI and UNDP, 2010).

The MPI has three dimensions: health, education, and standard of living. These are measured using ten indicators. Poor households are identified through an aggregate measure constructed using the methodology popularised by Alkire and Foster (2007). Each dimension and each indicator within a dimension is equally weighted.

Indicators used

The following ten indicators were used to calculate the MPI:

Education (each indicator is weighted equally at 1/6)

1. Years of Schooling: deprived if no household member has completed five years of schooling.
2. Child Enrolment: deprived if any school-aged child is not attending school in years 1 to 8.

Health (each indicator is weighted equally at 1/6)

3. Child mortality: deprived if any child has died in the family
4. Nutrition: deprived if any adult or child for whom there is nutritional information is malnourished

Standard of Living (each indicator is weighted equally at 1/18)

5. Electricity: deprived if the household has no electricity.
6. Sanitation: deprived if they do not have an improved toilet or if their toilet is shared (MDG Definition).

7. Drinking water: deprived if the household does not have access to clean drinking water or clean water is more than 30 minutes walk from home (MDG Definition).
8. Floor: deprived if the household has dirt, sand or dung floor.
9. Cooking fuel: deprived if they cook with wood, charcoal or dung.
10. Assets: deprived if the household does not own more than one of: radio, TV, telephone, bike, or motorbike.

A person is considered poor if they are deprived in at least 30% of the weighted indicators (OPHDI and UNDP, 2010). The intensity of poverty denotes the proportion of indicators in which they are deprived.

Tobit Regression Model

The Tobit regression, a hybrid of the discrete and continuous dependent variable, was used to determine the influence of the group variables on the farming household poverty. The model that was developed by Tobin (1958) and as adopted by Omonona (2001) is expressed below

$$q_i = P_i = \beta^T \begin{cases} X_i + e_i & \text{if } P_i > P_i^* \\ 0 & \text{if } P_i \leq P_i^* \end{cases}$$

$i = 1, 2, 3, \dots, n$

Where

q_i = Dependent variable.

P_i is the poverty depth/intensity which is derived from the multidimensional poverty index (MPI).

P_i^* is zero.

X_i is a vector of explanatory variables

B is a vector of parameters and

e_i is error term

The independent variables to be used in determining the factors influencing poverty are specified below.

X_1 = Age of household head (Years)

X_2 = Farming experience of the household head (Years)

X_3 = Access to infrastructure; this include roads, schools and factories (D=1 if Accessible, otherwise = 0)

X_4 = Gender of household head (D=1 for male, otherwise= 0)

X_5 = Household size

X_6 = Marital Status (D=1 if Married, 0= otherwise)

X_7 = Educational level of the household head measured in years.

X_8 = Farm size (ha)

X_9 = Level of income (₦)

X_{10} = Dependency ratio (This is defined as the ratio of non-workers to workers in each household)

Also, based on literature review, apriori expectation showing the expected relationships between the independent variables and the dependent variables are presented in Table 1.

Table 1: Apriori expectations for the independent variables in poverty status model

Variables	Expected signs	Literatures
Age X ₁	+/-	(Omonona, 2001, Omonona <i>et al.</i> , 2008)
Farming experience X ₂	+/-	
Access to infrastructure X ₃	+/-	
Gender of household head X ₄	+/-	(World bank, 1996; Omonona, 2001, Omonona <i>et al.</i> , 2008)
Household size X ₅	+	(World bank, 1996; Omonona, 2001, Omonona <i>et al.</i> , 2008)
Marital status X ₆	+/-	(World bank, 1996; Omonona, 2001, Omonona <i>et al.</i> , 2008)
Educational level of the household head X ₇	+/-	(World bank, 1996; Omonona, 2001, Omonona <i>et al.</i> , 2008)
Farm size X ₈	+/-	Omonona 2001
Dependency ratio X ₉	+/-	(World bank, 1996; Omonona, 2001, Omonona <i>et al.</i> , 2008)
Level of income X ₁₀	-	Omonona 2001

Results

Descriptive Analysis of Socio-economic Demographics of Respondents

Socio-economic characteristics of the respondents are presented in Table 2. Majority of the household were male headed, married, 50 years and above, had 1-6 years of formal education and have families with a dependency ratio greater than one. On the other hand, households headed by females, single individuals, persons aged below 30 years, persons having 7 and 12 years of formal education and families with a dependency ratio equal to zero were in the minority. The average values of the age and years of formal education of household heads were 52.9 years and 8.0 years respectively. Those households with 5 to 10 persons constituted more than half of the sample while those with less than 5 persons constituted about one tenth of the sample. However those households with more than 10 members represented one-fifth of the

sample. The average household size in the study area was 8 persons.

Derivation of the Multidimensional Poverty Index of the Sampled Households

Table 3 gives the summary of how the MPI indicators were measured for the sampled households. Each decile, as shown above, consists of a minimum of 17 households and the scores displayed in each decile are averages taken over 17 households. It can be seen that households in the first decile to the fifth decile had a mean weighted scores of 0%, 7.7%, 17.3%, 24.4% and 28% respectively. Since households in these deciles are not deprived in at least 30% of the weighted indicators, they are therefore not MPI poor. Farming households in the sixth decile to tenth decile had mean weighted scores of 38.9%, 44.0%, 54.2% and 69.8% respectively. Given that the mean weighted scores of households in these

deciles exceeded 30 %, it can be said that they are MPI poor.

Table 2. Distribution of Households based on selected socio-economic characteristics

Characteristics	Freq	%
1. Sex of household head		
Male	150	87.2
Female	22	12.8
Average	0.87	
Standard deviation	0.335	
2. Age of household head (years)		
< 30	2	1.16
30-40	42	24.42
41-50	40	23.26
>50	88	51.16
Average	52.9	
Standard deviation	14.79	
3. Years of formal education		
0		
1-6	47	27.33
7-12	48	27.91
Above 12	34	19.77
Average	43	25.00
Standard deviation	8.2yrs 6.47	
4. Dependency ratio		
0	8	4.65
0.01-0.9	54	31.40
1.0	25	14.54
>1.0	85	49.42
Average	1.44	
Standard deviation	1.51	
5. Marital Status		
Married	167	97.09
Single	5	2.91
Average	0.971	
Standard deviation	0.15	

Source: Computed from Field Survey, April-May, 2012

Table 4 shows that 49 % of the sampled households were not MPI poor as they were not deprived in at least 30 % of the weighted indicators while 51 % were considered to be MPI poor because they were deprived in at least 30 % of the weighted indicators.

Factor H for the sampled households was calculated as 0.5058 and Factor A for the sampled households as 0.4753. Therefore, MPI for the sampled households was given as 0.2404 (from multiplying H[0.5058] by A[0.4753])

From the above, 50.58 % of the sampled households were MPI poor and those who were poor suffer from deprivation in 47.53 % of indicators, on average. The MPI for the sampled households was 0.24 while that of Nigeria as revealed by OPHDI and UNDP (2010) was 0.368.

Determinants of Poverty Status among the Farming Households

There was a marginal effect of the changes in the explanatory variables on the probability of being poor (Table 5). The chi-square (χ^2) value is 108.33 with pseudo r^2 0.2254. This means that the chi-square (χ^2) is statistically significant ($p < 0.01$) and therefore the model has a good fit to the data. Out of the ten explanatory variables, only three postulated variables determine the level of poverty.

Table 3: Summary of Farmers' Deprivation on the Weighted Indicators

Decile	Mean weighted score	Status
1	0.000	Not MPI poor
2	0.077	Not MPI poor
3	0.173	Not MPI poor

4	0.244	Not MPI poor
5	0.280	Not MPI poor
6	0.324	MPI poor
7	0.389	MPI poor
8	0.440	MPI poor
9	0.542	MPI poor
10	0.698	MPI poor
Means	0.317	

Source: Computed from Field Survey, April-May, 2012.

Table 4: Distribution of Farming Households by Multidimensional Poverty Index (MPI)

Status	Freq	%
MPI poor (<0.3)	87	50.58
Not MPI poor (≥ 0.3)	85	49.42
All	172	100

Source: Computed from Field Survey, April-May, 2012.

These are age, years of schooling and access to infrastructure. Result from Table 5 reveals that age, years of schooling and access to infrastructure had negative relationship with the poverty level of the households. In other words, as the age, years of schooling and access to infrastructure of the household increase, the poverty level of the households is decreased by 0.93%, 9.7% and 22.9 % respectively.

Discussion

Findings from the socioeconomic characteristics of the sampled respondents revealed that majority of the household heads were married and 50 years and above. This result suggests that a large proportion of the farmers had some responsibilities towards their families

which may be physical, financial or moral. Also, being aged 50 years and above shows that most of the sampled farmers are not in their active and productive years and if this situation goes unchecked, it poses a serious threat to agricultural development which further intensifies poverty among the rural households and Nigeria at large.

The study also showed that approximately half of the sampled population were MPI poor indicating deprivation in at least 30 % of the weighted

indicators. By implication, approximately 50 % of the respondents lacked basic education evident in low levels of formal education acquisition and child enrolment in schools. There is a strong indication that this set of people may be malnourished and may have experienced high incidence of child mortality. Accordingly, their standard of living can be said to be low from the standpoint of access to basic amenities, number of assets owned among other factors.

Table 5: Tobit parameters of probability and effects of marginal changes in the explanatory variables on poverty status

Variable	Coefficient	Standard Error	T-value	Elasticity at mean
Age X ₁	-0.009	0.006	-1.66*	-0.009
Gender X ₂	0.145	0.181	0.8	0.145
	-0.097	0.011	-8.56***	-0.097
Education X ₃	-0.136	0.120	-1.13	-0.136
Marital status X ₄	0.002	0.005	0.3	0.0017
	0.014	0.019	0.75	0.014
Farming experience X ₅	-6.20E-08	4.44E-08	-1.4	-6.20E-08
Household size X ₆	-0.001	0.003	-0.45	-0.001
	-0.229	0.137	-1.67*	-0.229
Annual income X ₇	-0.064	0.040	-1.62	-0.064
Farm size X ₈	2.663	0.460	5.79	
	0.749	0.043		
Infrastructure X ₉	0.225			
Dependency ratio	108.33			
	-186.141			
Constant	0.000			
Sigma				
Pseudo R ²				

LR chi-squared

Log likelihood

Probability > Chi-square

***, * = Significant at 1 and 10% probability level, respectively.
Dependent variable-Multidimensional Poverty Index

Source: Computed from Field Survey, April-May, 2012.

The negative coefficient of age shown in the Tobit regression indicates that as the household head advances in age, poverty level decreases. This result is in agreement with Okunmadewa *et al.* (2008) but differs from Balogun *et al.* (2011). The result obtained could be due to the fact that households with older heads, in addition to income obtained from their farming activities and reduced dependants, receive remittances from their children unlike the younger farmers who in addition to taking care of their immediate families still shoulder the responsibility of fending for their aged parents. The more educated a household head is, the lower the poverty level. This result is not surprising because educated household heads are better able to adopt new improved technologies to raise their productivity and income than their uneducated counterparts. Educational attainment enhances farmers' ability to appreciate the essence of credit, new techniques and information disseminated from extension agents which impacts positively on commercialization (Tolno *et al.* 2015). Also, because of their level of education, farmers are better able to get off-farm incomes

Farmers' access to infrastructure also had a negative relationship with the poverty level of the households. This result is consistent with Ogun (2010) who found out that infrastructural development leads to poverty reduction. Poor infrastructural facilities, particularly transportation systems, put a severe strain on the profit realizable by farmers as most of the roads leading to the farm gates are in deplorable conditions. A good road network from the farm gate to the main market, for example, reduces the cost of transportation which helps to eliminate rent-seeking which arises from the huge profits made by middlemen who take advantage of farmers who are fraught with the possibility of running at a loss resulting from high perishability of most of their crops, low patronage, and fluctuating market prices.

Conclusion

The study focused on the poverty situation of farming households in selected areas in Ibadan, Oyo state. The study showed that the level of impoverishment is high with more than half of the farming households being poor and deprived in one or more poverty indicators as stipulated by

Multidimensional Poverty Index (MPI). The incidence of poverty or the %age of people who are MPI poor was 50.58 % and the average intensity of MPI poverty across the poor farming households was 48.7 %. The Multidimensional Poverty Index for the sampled households is 0.246 and this reflects deprivations in very rudimentary services and core human functioning for people in the sampled areas. The major determinants of poverty in the sampled areas were found to be age, years of schooling and access to infrastructure. This implies that poverty is not connected to a single cause and therefore poverty alleviation strategies should be multi-pronged in order to achieve more than marginal improvement in the standard of living of poor farming households in Oyo state.

Recommendations

Based on the findings of the study, the following recommendations are suggested. The poorest households are those with no formal education and those with 1 to 6 years of education. This may not be unconnected to the fact that farming households with higher levels of education are better able to earn additional incomes from other paid jobs besides farming. Therefore government should make effort to provide a learning environment for farmers regardless of their age, religion or political affiliation.

The Multidimensional Index (MPI) used in this study was measured using three indicators namely: Education, health and standard of living. On the basis of the standard of living indicator, the study has shown that poverty is higher among farming households using pit toilet or who defecate on bare grounds in nearby bushes

and those without clean drinking water or whose source of clean drinking water is more than 30 minutes. This set of people are prone to contacting infectious diseases such as cholera, ring worm, guinea worm etc. It is a known fact that poor health slows down productivity and this has its ultimate effect on farmers' income. Therefore, government should provide public toilets and construct boreholes which will be easily accessible to farming households.

In sum, since poverty is not connected to a single source, strategies targeted at poverty reduction should be combined into a single strategy and given the chance to succeed so as to bring about the desired result.

References

- Abubakar and Hussaini (2014). An Appraisal of the Performance of National Poverty Eradication Programme (NAPEP) on Poverty Reduction in Bauchi State. *Journal of Humanities and Social Science*. 19 (1): 49-55
- Adekoya, O.A. (2014): Analysis of Farm Households Poverty Status in Ogun State, Nigeria. *Asian Economic and Financial Review*. 4 (3):325-340.
- Alkire, S. and Foster, J.E. (2007). Counting and Multidimensional Poverty Measurement, *Working Paper 7*, Oxford Poverty and Human Development Initiative, University of Oxford, 2007 <www.ophi.org.uk>
- Anyanwu, J.C. (1997). Poverty in Nigeria: Concepts, Measurements and Determinants. Selected Papers from the Nigerian Economic Society's Annual Conference.
- Balogun, O.L., Yusuf, S.A, Omonona, B.T. and Okoruwa, V.O. (2011). Social Capital and Microcredit Effects on Poverty among the Rural Households in South West States, Nigeria. *ARP*

- Journal of Agricultural and Biological Science* 6(3):48-59
- British Broadcasting Corporation [BBC] (2012). "Nigeria living in Poverty Rise to Nearly 60%". Accessed 26th June, 2016, <http://bbc.co.uk/news/world-africa-17015873>
- Bourguignon, F. and Chakravarty, S. (2003). 'The Measurement of Multidimensional Poverty', *Journal of Economic Inequality*, 1(1): 25-49.
- Chambers, R. (1994a). All Power Deceives. *IDS Bulletin*, 25(2):14-26.
- Chambers, R. (1994b). Participatory Rural Appraisal (PRA): Analysis of Experience. *World Development*, 22(9):1253-1268.
- Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*, Intermediate Technology Publications, London. Pp 1-18
- Foster, J., Greer, J. and Thorbecke, E. (1984). A Class of Decomposable Poverty Measures. *Econometrica* 52:761-766.
- Ilavbarhe, K.O. and Enabulele H.N. (1999). Role of Financial Institutions in Poverty Alleviation in Nigeria: A Case Study of Nigerian Agricultural and Cooperative Bank Ltd (NACB). In Y.L. Fabiyi and E.O. Idowu (eds.), *Poverty Alleviation and Food Security in Nigeria*, Nigerian Association of Agricultural Economists (NAAE).p. 313-317
- Instituto Nacional De Estadística (INE). Undated. Poverty and its Measurement: The Presentation of a range of methods to obtain measures of poverty. Available at: http://www.ine.es/en/daco/daco42/social/es/pobreza_en.pdf.
- International Fund for Agricultural Development (IFAD) (2007). *Rural Poverty in Nigeria*. <http://www.ruralpovertyportal.org>
- Mowafi, Mona (2004). The Meaning and Measurement of Poverty: A Look into the Global Debate. Development Gateway Foundation, pp. 1-53.
- National Bureau of Statistics (NBS). (2010). NBS Harmonized Nigeria Living Standard Survey. Press Briefing on Nigeria Poverty Profile 2010 Report.
- National Bureau of Statistics (NBS) (2007). Poverty Profile for Nigeria 2004. NBS Abuja
- Nwaobi, G.C. (2003). Solving the Poverty Crisis In Nigeria: An Applied General Equilibrium Approach. Computational Economics, Econ WPA: 0312003, pp 3-34
- Nunes, C. (2008). Poverty measurement: The Development of different Approaches and its Techniques. *Society for the Study of Economic Inequality (ECINEQ)*. Working Paper Series (ECINEQ) 2008-93. Portugal: Society for the Study of Economic Inequality
- Ogun, T.P. (2010). Infrastructure and Poverty Reduction: Implications for Urban Development in Nigeria. *Urban Forum*, 21(3): 249-266.
- Okunmadewa, F.Y., Yusuf S.A. and Omonona B.T. (2005). Social Capital and Poverty Reduction in Nigeria. Draft Final Report submitted to African Economic Research Consortium (AERC) Kenya, pp 1-47.
- Olaniyi, O.A. (2012). Attitudinal Disposition of Urban Dwellers towards Participation in Urban Agriculture in Oyo State, Nigeria: Implication for Sustainable Food Production. *Asian Journal of Agricultural Research*, 6 (1): 1-11.
- Olaoye, O.J., Ashley-Dejo S.S., Fakoya E.O., Ikeweinwe, N.B., Alegbeleye, W.O., Ashaolu, F.O. and Adelaja, O.A. (2013). Assessment of Socio-Economic Analysis of Fish Farming in Oyo State, Nigeria. *Global Journal of Science Frontier Research*, 13 (9): 45-55.
- Olayemi, J.K. (1980). Food production by Small Scale Farmers in Nigeria: Problems and prospects In: IRD, pp 18-32.
- Olayemi, J.K., Yusuf, S.A., Oni, O.A. and Omonona, B.T. (1999). A Review of Poverty Reduction Programme and

- Projects in South-Western Nigeria. A Technical Report Prepared for the World Bank, pp. 1-76.
- Omonona, B.T., Udoh, E.J. and Adeniran, A.A. (2008). Poverty and its Determinants among Nigerian Farming Households: Evidence from Akinyele LGA of Oyo State, Nigeria. *European Journal of Social Sciences*, 6(3): 402-413.
- Oxford Poverty and Human Development Initiative and United Nation Development Programme (2010). *Multidimensional Poverty Index*. Retrieved 2010-08-04, <http://www.ophi.org.uk/policy/alkire-foster-methodology/>
- Oyeyinka, R.A. and Bello, R.O. (2013). Farmers Use of ICTs for Marketing Information Outlets in Oyo State, Nigeria. *Journal of Agricultural Science*, 5 (11): 150-158.
- OYSADEP (2001). A Report of Village:Listing Survey in Oyo State. Department of Planning, Monitoring and Evaluation, Oyo State Agricultural Development Programme, pp. 1-5.
- Postgraduate School, University of Ibadan (P.G. School, U.I.) (2012). *History of Ibadan*. Accessed 17th August, 2016-http://infocontent.pgschool.ui.edu.ng/ibadan_history.aspx
- Sen, A. K. (1976). Poverty: "An Ordinal Approach to Measurement." *Econometrica* 44 (2): 219-231.
- Sen, A.K. (1985). *Commodities and Capabilities*. New York: Oxford University Press, pp. 60-67.
- Sen, Amartya K. (1979). "Issues in the Measurement of Poverty." *Scandinavian Journal of Economics*, 81(2): 285-307.
- Stewart, F., R. Laderchi, and Saith, R. (2007). Introduction: Four Approaches to Defining and Measuring Poverty. F. Stewart, R. Saith and B. Hariss-White. Basingstoke, Hampshire, Palgrave Macmillan., pp. 1-35.
- Tobin, J. (1958). Estimation and Relation for Limited Dependent Variables. *Econometrica* 26(1): 26-36.
- Tolno, E., Kobayashi, H., Ichizen, M., Esham, M., Balde B.S. (2015). Economic analysis of the role of farmer organizations in enhancing smallholder potato farmers' income in Middle Guinea. *Journal of Agricultural Science*, 7(3): 123-127.
- World Bank (undated). Poverty and Welfare in Nigeria. FOS, NPC and the World Bank. World Bank (2016). "World Development Indicators. URL:<http://data.worldbank.org/data-catalog/world-development-indicators>
- World Bank (1996). Nigeria: Poverty in the Midst of Plenty. The Challenge of Growth with Inclusion. *A World Bank Poverty Assessment*. Report No. 14733 UNI, pp. 1-176.

