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POVERTY STATUS AMONG FARMING HOUSEHOLDS IN OGBOMOSO SOUTH LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA

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ABSTRACT

The study assessed poverty status among farming households in Ogbomosho South Local Government Area (LGA) of Oyo State. It identified the causes, determined the depth and severity of poverty. Multistage sampling procedure was used to select a total of 110 respondents from 22 households in 5 out of the 10 wards in the LGA. Primary data were collected using validated interview schedule. Multiple regression analysis was used to examine the effects of selected variables on household poverty. Results showed that the respondents' mean age, years of education and annual income were 47 years, 8 years and N202,547.27, respectively. While the poverty line and poverty incidence were N135,030.7 and 50.9 percent, respectively. Lack of access to farm machinery (79.1%), poor road network (70.9%), non-accessibility to storage facilities (60.9%) were the identified causes of poverty among respondents. Respondents' age ($t = -0.759$), household size ($t = 0.576$) and farm size ($t = -1.344$) were the determinants of poverty among the farming household. Nearly half of the farming households were below poverty line. The study recommended that government should make farm machinery available to the farmers at affordable price, improve on infrastructure and road constructions.

Keywords: Poverty, Poverty depth, Poverty severity, Farming households

INTRODUCTION

Poverty has been defined in various ways and there seems to be no universal way of defining poverty (Agarwal, 2019; Marin *et al.*, 2019; Hageaars, 2017; Nsikak-Abasi and Solomon, 2010). Poverty is more easily recognized than defined (Foster *et al.*, 2010). According to United Nations (1998) as quoted in Gordon (2005):

“Fundamentally, poverty is a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and cloth[e] a family, not having a school or clinic to go to, not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implies living on marginal or fragile environments, without access to clean water or sanitation”.

Poverty is a situation where people have unreasonably low living standards compared with others; cannot afford to buy necessities, and experience real deprivation and hardship in everyday life (McClelland, 2000). The World Bank describes poverty as deprivation in well-being that comprises many dimensions which includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also encompasses low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice and insufficient capacity and opportunity to better one's life” (Narayan *et al.*, 2000).

According to the Ghana Poverty Reduction Strategy (GPRS) (2004), poverty is

recognized as multi-dimensional with complex interactive and causal relationship between the dimensions. The poor often lacks access to finance and income-earning opportunities (SIDA, 2005). Poverty according to Yunus (2006) is characterized by being in a state of joblessness, homelessness, lack of adequate capital, facilities and food to eat for a decent living. The conventional concept of poverty depicts it as a condition in which people live below a specified minimum income level and are unable to provide the basic necessities of life needed for an acceptable standard of living.

Poverty is multi-dimensional and no single indicator can capture all the aspects of poverty (Peng, 2018; Wossen *et al.*, 2019; Adepoju, 2019; Oladeebo *et al.*, 2017). Statistically however, poverty is determined based on income and/or consumption, which assigns numbers to living standards and makes it easier to calculate poverty. In calculating poverty line for 2009-10 using the income approach, the threshold which was considered poor by National Bureau of Statistics was defined at ₦55,235.20 per person per year. The absolute poverty incidence using per capita approach was calculated as 62.6% in 2009-10. Rural poverty reduced from 73.4 to 69.0 per cent from 2003-04 to 2009-10. According to National Bureau of Statistics, the poverty headcount differs considerably in different states of the Nigerian Federation. In 2003-2004, Oyo was estimated to have the lowest poverty rate of 38 percent which increased to 50% in 2009-2010 (NBS, 2012).

Extreme poverty as defined by the World Bank is a situation whereby a person is living below poverty line of \$1.90 per day. As at June, 2018, Nigeria has the highest number of poor people with an estimated 86.9 million people living in extreme poverty followed by India with 71.5

million. Data from the World Poverty Clock showed that by the end of 2018, close to four million were added to the population of people living below \$1.90 per day thereby increasing the number of extreme poverty to an estimated 90.8 million Nigerians. This represents nearly 50% of its estimated population of 180 million (World Poverty Clock, 2018).

Nigeria has vast and abundant agricultural resources, yet the incidence of poverty is more pronounced and basic infrastructure is lacking especially in the rural areas where the bulk of agricultural production takes place (World Bank, 2005). This has worsened the production capacity of the existing farming households' thereby increasing poverty level significantly among them (Okunmadewa, 2001)

For a long time, research efforts have focused on poverty and determinants of poverty in the general populations until last decade when attention started shifting to specific populations especially the farming households (Ogwumike and Akinnibosun, 2013; Etim and Udoh, 2013; Olorunsanya *et al.*, 2012; Akpan, *et al.*, 2016; Abu and Soom, 2016; Oyinbo, 2016; Omotesho *et al.*, 2016; Adepoju, 2019; Nwibo *et al.*, 2019). Few of the studies on farming households concentrated on determinants without assessing the poverty situations of the farming households except for the work of Ogwumike and Akinnibosun (2013) that reported high incidence of poverty among farming households in Nigeria and found socioeconomic variables such as age, household size, income, number of farms as major determinants of poverty.

Despite the efforts of government and non-government agencies in alleviating poverty, Nigeria has the highest number of people living in extreme poverty with 90.8million people and this represents nearly 50 percent of its estimated 180 million population (World Poverty Clock, 2018). The poverty situation in the rural areas is more severe (Ogwumike and Akinnibosun, 2013). For any policies or programmes aimed at reducing poverty to be effective, it is important to first assess the poverty conditions and levels of specific segments of the population for a proper understanding of the challenges posed by the incidence of poverty. Studies have shown that poverty is disproportionately concentrated among households whose primary livelihood lie in agricultural activities (FAO, 2006). In the light of the above, the study carried out an assessment of poverty situations among farming households in Ogbomosho South Local Government Area of Oyo State using poverty measures derived by Foster-Greer-Thorbecke. It also described the influence of socioeconomic characteristics of the respondents on poverty. It identified the causes and determined the depth and severity of poverty of the respondents.

METHODOLOGY

The study was carried out in Ogbomosho town - a predominantly Yoruba-speaking city in the Southwestern Nigeria. Ogbomosho has a land area of 373square kilometers and an average rainfall of 1330mm. The population was approximately 645,000 in 2006 census (Federal Republic of Nigeria, 2007). Ogbomosho has five (5) Local Government Areas (LGAs) which are; Ogbomosho North, Ogbomosho South, Surulere, Ogo-oluwa and Orire. The town is located in the savannah zone which makes farming the traditional source of economy. Common food crops cultivated include tuber (yam, cassava, cocoyam, and potato), grains (maize, guinea corn) and cowpea. Major tree crops being cultivated in the town are cocoa, Oil palm, kola nut, coconut and varieties of fruits.

The study design was cross-sectional in nature and utilised multistage sampling procedure in selecting the respondents. The study was conducted in Ogbomosho South Local Government Area (LGA) one of the 5 LGAs in Ogbomosho zone. In the first stage, 5 wards were randomly selected from the ten wards in the selected LGA. In the second stage, in each of the 5 wards, 22 household heads were randomly selected to give a total of 110 household heads interviewed in the study.

Primary data were collected through the use of a well-structured questionnaire using interview schedule. The data collection instrument was administered on each head of households (male or female). Data on socioeconomic characteristics included age, education status, sex, marital status, family size, farm size measured in acres, years of experience in farming, primary occupation and membership of agricultural-based cooperative society. Poverty variables included in the analysis were poverty gap index, poverty depth and poverty severity index. The incidence of poverty among the respondents was determined in a similar study using the headcount index which is the proportion of the population whose income is below the poverty line-who cannot afford to buy a basket of basic goods (Eze *et al.*, 2019). FGT poverty index was used to depict the extent of poverty among the farming households. The poverty aversion parameters employed were P0, P1, and P2 which means poverty incidence (head count), gap (depth) and severity, respectively. This study employed income approach method as a yard stick to set the poverty line i.e. the poverty line was drawn based on total income of the household head which is the two-thirds (2/3) of annual mean income of the farming household heads.

Data on socioeconomic characteristics were analysed using descriptive statistics such as frequency and percentage, means and standard deviation. The Foster-Greer-Thorbecke (FGT) model was used in analysing poverty indices.



The FGT poverty index is computed with the mathematical formula stated below:

$$P_1 = \frac{1}{2} \sum_{i=1}^q \left(\frac{Z - y_i}{Z} \right)$$

Where: n = total number of households in population

q = the number of poor households

Z = the poverty line for the household

y_i = household income

α = poverty aversion parameter and takes on value 0, 1, 2

$\left(\frac{Z - y_i}{Z} \right)$ = proportion of shortfall in income below the poverty line.

Three poverty measures were computed namely poverty index, poverty depth also known as poverty gap index and poverty severity index as follows:

1. The incidence of poverty or headcount index was calculated using the equation above where $\alpha = 0$ in FGT. This measures the proportion of the population that is poor or fall below the poverty line. It is used to determine the number of households having *per capita* income below the poverty line. When $\alpha = 0$ in FGT, the expression becomes:

$$P_0 \left(\frac{1}{n} \right) q = \left(\frac{1}{n} \right)$$

2. Poverty depth or poverty gap index is the measure of the extent to which individuals fall below the poverty line as a proportion of the poverty line the aggregate shortfall in income of the household from the poverty line. It measures the difference between actual income and minimum non-poverty income. This was calculated using the formula where $\alpha = 1$, hence the expression becomes;

$$P_1 = \frac{1}{2} \sum_{i=1}^q \left(\frac{Z - y_i}{Z} \right)$$

3. Poverty severity index is the measure of the squares of the poverty gap relative to the poverty line. This was calculated using the formula where $\alpha = 2$, hence the expression becomes;

$$P_2 = \frac{1}{n} \sum_{i=1}^q \left(\frac{Z - y_i}{Z} \right)^2$$

Lastly Multiple Regression analysis was used to examine the effects of selected variables on household poverty. The Beta coefficients were used to determine the relative importance of each of the selected independent variables on household poverty.

RESULTS AND DISCUSSION

Socioeconomic characteristics

Table 1 revealed that respondents' mean age, family size and farming experience were 47.1 ± 10.7 years, 6 ± 2 persons, 19.5 ± 11.8 years, respectively. This implies that majority of the respondents are middle aged, of an average family size and had spent a good number of years on farming practices. This shows that the respondents had long years of farming experience and are more likely to perform better using the wealth of experiences they have gathered over the years. The average family size is in agreement with similar findings of Oladejo (2011) which revealed a relatively similar mean household size.

Majority (77.3%) of the respondents were male which implies that male farming household heads were more than female in the study area. This result corroborates the work of Aigbhokhan (2000) that male headed household (86%) is more than the female headed. A greater proportion (74.5%) of the farming household was married. The predominance of married people in the study area may be attributed to the prevalence of early marriages or the ideals of the customs and traditions that are held in high esteem. Data on level of education of the respondents reveal that 31.8 percent had no formal education and complete secondary education, 19.1 percent had primary education. According to Owuor *et al.* (2007), education tends to reduce poverty, implying that the more educated the households are, the better skilled and productive they will be and the less poor. This may be responsible for the poverty of most households in the study area.

Majority (71.8%) of the respondents were farmers, 11.8 percent were artisans, while 9.1 percent were into trading. Those in the civil service constituted 7.3 percent of the respondents. This insinuate that most household heads were full-time farmers and consequently should be able to cater for the basic needs of their families.

The farm size still confirms the peasant nature of the study area where majority (68.2%) of the respondents farmed on less than 1 acre of land with the mean farm size of 0.8 ± 0.6 acre. This implies that most of the farmers in the study area are small scale farmers and consequently output may be generally low. The small farm size can limit the ability of the farmers to generate tangible income and other benefits. More than three quarters (77.3%) of the respondents were native of the sampled area. Nativity could determine the type of livelihood activity the respondents were involved in. Nativity guarantees access to communal agricultural resources as well as security. Majority (60.9%) of the respondents are not in any agricultural-based group. This implies limited or no opportunity of interacting with other farmers to enhance diffusion of innovation among the farmers.

Table 1: Distribution of respondents according to their socioeconomic characteristics (n=110)

Characteristics	Frequency	Percentage (%)
Age		
≤30	7	6.4
31-40	25	22.7
41-50	43	39.1
51-60	21	19.1
Above 60	14	12.7
Mean/std	47.1/10.7	
Sex of household head		
Male	85	77.3
Female	25	22.7
Marital status		
Single	8	7.3
Married	82	74.5
Divorced/widowed	20	18.2
Education status		
No formal education	35	31.8
Primary	21	19.1
Secondary	35	31.8
Tertiary	19	17.3
Family Size		
≤3	12	10.9
4-7	84	76.4
8-10	14	12.7
Mean/sd	5.6/1.9	
Primary Occupation		
Farming	79	71.8
Trading	10	9.1
Civil servants	8	7.3
Artisans	13	11.8
Farm size (acres)		
Below 1	75	68.2
1-5	35	31.8
Mean/std	0.8/0.6	
Years of farming experience		
10-20	75	68.2
21-40	31	28.2
41 or more	4	3.6
Mean/std	19.5/11.8	
Nativity		
Yes	85	77.3
No	25	22.7
Member of Agricultural-based group		
Yes	43	39.1
No	67	60.9

Source: Field Survey, 2018

Causes of poverty among farming households

Table 2 shows that lack of access to farm machinery (79.1%), no strong political voice (71.8%), lack of access to good roads (70.9%), Non-accessibility to water supply (68.2%) and no access to storage facilities (60.9%) were the causes of poverty identified by the respondents. It can be deduced that infrastructure is one of the major causes of poverty in the study area. Indicators of infrastructure development lacking in the study

area include proximity to access roads, water supply, farm machinery, electricity, proximity to large markets, availability of schools and medical clinics in the area, provision of agricultural tools and material such as storage facilities, fertiliser, herbicides, and pesticides. Similar findings were reported by Bamiwuye and Adisa (2015) in a study of the roles of community based-organisation in rural development activities in Osun State, Nigeria.

**Table 2: Distribution of the respondents according to causes of poverty in the study area (n=110)**

Variables*	Frequency	Percentage (%)
Non-accessibility to Farm machinery	87	79.1
Non-accessibility to Political voice	79	71.8
Poor/ Lack of Good road	78	70.9
Non-accessibility to Water supply	75	68.2
Lack of storage facilities	67	60.9
Lack of credit facilities	65	59.1
Inadequate Security	51	46.4
Non-Accessibility to Extension worker/agent	51	46.4
Non-accessibility to Fertiliser	48	43.6
Non-accessibility to Pesticide	47	42.7
Non-accessibility to Herbicides	47	42.7
Non-availability of Seed	47	42.7
Non-accessibility to Skill acquisition programme	43	39.1
Non accessibility to Electricity	38	34.5
Inadequate health care service	33	30.0
Lack of formal education	25	22.7
Non-availability of Farm tools	18	16.4
Non-availability of Labour	11	10.0
Non-availability of Markets for goods and services	5	4.5

*Multiple responses

Source: Field Survey, 2018

Poverty status of farming households

The mean income of the farming household head was ₦202,547.27. The value of poverty line computed was ₦135,030.75 per annum (i.e. 2/3 of ₦202,547.27). Thus, the farming household heads that earn less than the value of poverty line were considered being poor, which is about 50.9 percent of the sampled household heads, while those that earn greater than equal to the value of poverty line were considered to be non-poor which is 49.1 percent of the sampled household heads. The incidence of poverty (P0) in this study was 0.509 indicating that 50.9 percent of the

sampled farming household heads were actually poor based on the poverty line. This finding agreed with that of Anyanwu (2013) which stated that poverty in Nigeria is largely a rural phenomenon. P1 (poverty depth) among the farming households was 0.147, implying that an average poor farming household would require 14.7 percent of the poverty line to get out of poverty. The value P2 (poverty severity) was 0.022, indicating that the poverty severity of poor farming households was 2.15 percent. This result means that farmers need about 2.15 percent increase in per capita income to push them away from severe poverty.

Table 3: Distribution of respondents according to poverty level and measures (n =110)

Poverty indices	Measures	Percentage %
Poor	56	50.9
Non- poor	54	49.1
Poverty incidence (P0)	0.509	50.9
Poverty gap (P1)	0.147	14.7
Poverty severity (P2)	0.022	2.15
Poverty line	₦135030.75	
Average income	₦202547.27	

Source: Field Survey, 2018

Factors influencing poverty status of farming households

The result of multiple regression analysis showed that the coefficient of age (X_1) is negative and significant at 5% level. This implies the higher the age, the lower their poverty level. This result can be attributed to the ability of older farming household heads to diversify and manage their household income and expenditure. The coefficient

of household size (X_3) is positive and significant at 1% level. This implies that the larger the household size, the higher the level of poverty among the farming household. This is affirmed by the fact that the larger the household size the larger household generated income consumed and this will aggravate their poverty level significantly. The negative coefficient of farm size (X_6) implies that the larger the farm sizes the lower the poverty status among

the farming households. In a similar study, Ezeh *et al.* (2019) identified farm income and dependency ratio as determinants of poverty status among ginger farmers in Southern Kaduna, Nigeria. In an

earlier study, Ogwumike and Akinnibosun (2013) also reported age, household size, income, number of farms as determinants of poverty among farming households in Nigeria.

Table 4: Regression analysis showing factors influencing poverty among farming households

Variables	β	t-value	p-value
(Constant)	-0.241	-1.859	0.000
Age	-0.002	-0.759	0.037**
Sex	-0.082	-1.497	0.714
Household size	-0.007	0.576	0.008***
Education In Years	0.002	0.023	0.441
Farming Experience	0.001	0.269	0.763
Farm Size	-0.054	-1.344	0.043**
Education Status	-0.007	-0.355	0.355
Income	4.791E-06	17.908	0.069*
R ² = 0.841;			

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

Source: Field survey, 2018

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, farming household is poor as half of the farming households were below poverty line. The households' age, household size, farm size and income from farming activities are some of the factors influencing poverty among the farming household in the study area. Respondents identified lack of access to farm machinery, lack of access roads and potable water as well as poor storage facilities as the causes of their poverty. Based on the findings, government should make farm machinery available to the farmers at affordable price, improve infrastructure and construction of access roads would go a long way to improve the living condition of the people in the study area.

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