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POVERTY STATUS OF ARABLE FARM HOUSEHOLDS IN AKINYELE LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA

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ABSTRACT
The study assessed the poverty status of arable farm households in Akinyele Local Government Area of Oyo State. Ninety (90) respondents were randomly selected using the multistage sampling technique while data was collected using structured questionnaire. The data generated from the survey were analysed using descriptive statistics, poverty measures and a logistic regression model. The descriptive analysis shows that majority of the rural households were headed by males (76.67%), most of them (82.22%) were married and had a mean age of 54.5 years with 84.45% of them having a formal education. The mean household size of about 7 persons was obtained with a mean farm size of 6.66 hectares in the study area. The mean farming experience was 13.63 years, and the majority (86.67%) of the respondents did not receive any credit for their farming activities at a time or the other. The poverty status indicated that 54.44% of the respondents are poor while 45.56% are non-poor. The result of the factors influencing the poverty status using logistic regression analysis reveals that being married ($p<0.05$) and household size ($p<0.1$) were positive and significant predictors of the probability of being poor while access to credit ($p<0.1$) and per capita income ($p<0.01$) were negative and significant predictors of the probability of being poor. The study, therefore, recommended that quality credit accessibility and participation in skills acquisition programmes through diversification should be encouraged due to their capability of improving the household income of the poor.

Keywords: Poverty, Income, Expenditure, Farmers, Oyo State

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INTRODUCTION
Poverty is a global phenomenon that affects the socio-economic well-being of its victims whether in a developed or underdeveloped country, however, available statistics shows that poverty in poor countries is widespread and more evident in the rural areas. The proportion of Nigerians living below the poverty line of one dollar per day has increased dramatically during the last decade (Africa Development Fund [ADF], 2004). Poverty in Nigeria is on the increase and its incidence and severity are more in the agricultural sector. It is a major problem that is more prevalent in the rural areas as 75% of the poor people in the developing countries are in the rural areas characterized by low productivity, small scale enterprise and crude

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system of farming (International Fund for African Development [IFAD], 2001).

According to Narayan (2000), poverty is hunger, lack of shelter, being sick and not being able to go to school, not knowing how to read, not being able to speak properly, not having a job, to fear for the future, to lose a child to illness brought about by unclean water, powerlessness, lack of representation, and freedom. Also, poverty has been described as the dearth of certain capabilities, such as being unable to participate with dignity in society; hence, it is a state of deprivation in terms of food, social status, self-esteem, and self-actualization (Aromolaran *et al.*, 2002).

Agriculture is the major source of livelihood in Nigeria, particularly in the rural areas and it is faced with many challenges. According to the International Fund for African Development, (2001) farm sector employs about 75% of the country's total labour force and provides a livelihood for about 90% of its rural population. Despite agriculture being the major occupation, most of the rural households are poor (Adepoju and Obayelu, 2013).

Poverty is a global problem that affects every nation (Chen and Ravallion, 2010). The reduction of poverty is the most difficult challenge facing any country in the developing world where on average, the majority of the population is considered poor. A recent study by Jatto *et al.*, (2021) revealed that an increasing number of rural communities are experiencing persistently high poverty rates. The study indicated that 56% of the rural households in Kwara State are poor while 44% are not poor.

However, there appears to be little or no study that had assessed the poverty status of arable farm households, at this present time when the economy is trying to pick up as a result of the Corona virus pandemic, particularly in Akinyele Local Government Area (LGA) of Oyo State. This knowledge gap is what this research hopes to fill. This research has two key objectives. First, it assessed the poverty status of arable farm households in Akinyele LGA of Oyo State. Second, it analyzed the factors influencing the poverty status of the sampled respondents.

MATERIALS AND METHOD

Area of study

The study was carried out in Akinyele Local Government Area of Oyo State, Nigeria. It is one of the eleven LGAs that make up the Ibadan metropolis. Its headquarter is in Moniya. It shares boundaries with Afijio LGA to the north, Lagelu LGA to the east, Ido LGA to the west and Ibadan North LGA to the south. It occupies a land area of 464.892 square kilometres with a population density of about 516 persons per square kilometre. The area measures 986km² and an estimated population of 146, 200 (NPC, 2006). The LGA is endowed with fertile agricultural land suitable for arable crop farming and notable for maize, yam, cowpea, vegetable, and cassava production.

Sampling procedures

Arable farm households were the main target respondents for the study. A multi-stage sampling procedure was used to select a total of 90 arable farm households from the study area. The first stage involved the purposive selection of Akinyele LGA based on the high concentration of arable farmers in the study area. The second stage involved a random selection of three wards among the 12 wards in Akinyele LGA. The third stage involved a random selection of one village from each of the three wards, and they are; Obada, Saanu, and Lanibe villages. At the last stage, proportionate sampling was used to select thirty-four (34) arable farm households in Obada village, 30 in Saanu village and 26 in Lanibe village of Akinyele LGA. This gives a total of 90 respondents for the study.

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Data collection

The data used for this research were collected between September-October, 2020using a structured questionnaire. Information used for the study includes those on socio-economic and demographic characteristics, as well as, those on expenditure made on food and non-food items by the marketing households. The expenditures on food include those on staples such as beans, garri, rice, yam, palm oil and so on and expenditure on non-staple food items such as eggs, fish, meat, fruits, vegetables, and beverages amongst others. The non-food items of expenditure include those on accommodation, clothing, education, health, transportation and savings. The items of wealth owned by the households were also examined. The considered wealth items include television sets, mobile phones, motorcycles, fans, generators, and refrigerators amongst others.

Analytical techniques

The data generated from the survey were analysed using descriptive statistics, poverty measures, and a logistic regression model.

Descriptive statistics such as mean, frequency distribution, and percentages were used to describe the socio-economic characteristics of the respondents

The Foster, Greer and Thorbecke – FGT (1984) class of poverty measure was employed as a measure of poverty status. The total monthly expenditure of the Households' was used to determine the households' poverty status. The poverty line was constructed as two-thirds of the mean monthly per-capita expenditure of all households. Households were then classified into their poverty status based on the poverty line (Adepoju and Obayelu, 2013). According to Adekoya, (2014) the model was given as:

$$P = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{z - yi}{z}\right)^{\propto}$$

Where: P = Foster, Greer and Thorbecke index ($0 \leq P \leq 1$); N = Total number of households; z = Poverty line; q = Number of poor who are below Z; yi = Expenditure of the ith household; $\propto$ = 0. This gives the head count ratio or the incidence of poverty which is the percentage of respondents in poverty.

Therefore, non-poor households were those whose monthly expenditure was above or are equal to two-thirds of the mean per capita expenditure of all households while those whose per capita expenditure was below two-thirds of the mean monthly per capita expenditure was classified as poor (Adepoju and Obayelu, 2013).

The logistic regression model was used to analyze the determinants of the poverty status of the farmers. It was most appropriate for this study owing to its unique ability to account for both categorical and dichotomous dependent variables. According to Adepoju and Obayelu, (2013) the model was specified as:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9 + U$$

Where:

Y = Poverty status of households (Poor = 1, 0 = if otherwise)

The independent variables are: X_1 = Gender of household head (1 = Male, 0 = Female); X_2 = Marital status (1= married, 0= if otherwise); X_3 = Educational level of the household head (years); X_4 = Farming experience (years); X_5 = Access to credit (1=Yes, 0=No); X_6 = Age of the respondents (Years); X_7 = Household size (Headcount); X_8 = Farm size (Ha); X_9 = Per capita income (Naira); U = Error term

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RESULTS AND DISCUSSION

Socio-economic characteristics of respondents

The results on the socio-economic characteristics of respondents are summarized in Table 1. The majority (76.67%) of the arable farm households were headed by males while 23.33% were females. This indicates that there is more male household head than female in the study area. The Table also shows that the majority (82.22%) of the respondents were married. This implies that a greater percentage of the respondents had family.

The respondents had a mean age of 54.51 years with the majority of the respondents (51.11%) being within the age range of 41-60 years. This implies that most of the respondents are middle-aged. They fall within the active age bracket and they belong to the economically active population category which is between 25-59 years according to Babatunde *et al*., (2015).

The majority (84.45%) of the respondents had formal education and 15.56% of the sampled respondents had no formal education. This implies that the respondents were literate and were positioned to take advantage of new farming techniques and innovation that could boost their productivity. The majority (53.33%) of the respondents had a household size of 7-12 persons. A mean household size of about 7 persons was obtained. This is a relatively large household size which is desirable in terms of supplying family labour instead of hired labour. However, it could become a burden in terms of the upkeep of the household.

In addition, most of the landholdings in the study area are small as the majority (44.44%) of the respondents has land holding between 6-10 hectares. The mean farm size is 6.66 hectares in the study area. This implies the respondents are medium-scale framers in the study area. Furthermore, the Table shows that the majority (50%) of the respondents had a farming experience of between 11-20 years. The mean farming experience of 13.63 years was obtained. This implies that the farmers were well experienced in their business. Hence, they can identify possible problems and are likely to proffer solution. The level of experience would contribute to their ability for efficient resource management in their business. The farming experience could also relate to the acquisition of good skills in the use of any technological innovation according to Babatunde *et al.,* (2015).

The result reveals that the majority (86.67%) of the respondent did not receive any credit for their farming activities. This implies that they have no other means to access credit, or purchase inputs in bulk which can reduce the total cost of operation (Babatunde *et al.*, 2015). For the monthly income distribution of the respondents, the majority (45.56%) of the respondents earn between ₦30001-₦50000 monthly while few of them (6.67%) earn above ₦70,000 per month. The average monthly income of the respondents in the study area stood at ₦38, 300.

Determination of poverty line

The expenditure approach was used to determine the household poverty line. Based on this, the poverty line constructed as two-thirds of the mean per-capita expenditure of all the households stood at ₦6778.49 as presented in Table 2. This implies that households whose per capita expenditure fall below ₦6778.49 was classified as poor while households whose per capita expenditure equalled or was above the poverty line were classified as non-poor. Based on the poverty line, households were classified into their poverty status as either non-poor or poor as presented in Table 3. The Table reveals that 54.44% of arable farm households in Akinyele Local Government Area of Oyo State are poor while 45.56 are non-poor.

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Factors influencing the poverty status of the rural households

The result of the logistic regression analysis of the factors influencing the poverty status of arable farm households in Akinyele Local Government Area of Oyo State is presented in Table 4. The chi-square value of 29.58 which was significant at 1% level shows that the model has a good fit for the data. The result indicated that being married ($p<0.05$) and household size ($p<0.1$) are positive and significant predictors of the probability of being poor while access to credit ($p<0.1$) and per capita income ($p<0.01$) are negative and significant predictors of the probability of being poor. Gender, education of household head, farming experience, age of the farmer and farm size are non-significant predictors of the probability of being poor. The odds ratio for being married was 2.599, meaning that the odds of a farmer being poor (Y=1) increased by a factor of 2.599 if the household was identified as married relative to a non-married household. In other words, household identifying as married were more likely to be poor than non-married household.

Similarly, the odds ratio for household size was 1.449, meaning that the odds of a farmer being poor (Y=1) increased by a factor of 1.449 with every unit increase on household size. This implies that poverty is increased by higher household size and this could be attributed to increase in the needs of the household as their household size increases. The result conforms to the study of Oyakhilomen and Kehinde (2016) on Farm Households Livelihood Diversification and Poverty Alleviation in Giwa Local Government Area of Kaduna State, Nigeria. They reported that an increase in size of the farming household increases the probability of a household being poor.

The odds ratio if the household was identified as those that received credit was 0.190, meaning that the odds of a farmer being poor (Y=1) increased by a factor of 0.190 with every unit increase on those that received credit relative to those that did not receive credit. Therefore, households identified as receiving credit were less likely to be poor than those that did not credit. This is expected, and it is in line with the findings of Oyakhilomen and Kehinde (2016) who reported that access to credit was negatively related to the poverty status of the farm households. That, access to credit enhances the farmers' production capacity through purchase of inputs such as improved seeds and fertilizer, reduce liquidity constraints, and increase the capacity of households to start off-farm businesses. The odds ratio for per capita income of households was 1.000, meaning that the odds of a farmer being poor (Y=1) change by a factor of 1.000 with every unit increase on per capita income. It implies that there is no change in odds per unit increase on the per capita income.

CONCLUSION AND RECOMMENDATION

The study focused on the factors influencing the poverty status of arable farm households in Akinyele Local Government Area of Oyo State. Based on the empirical evidence from the study, it is concluded that poverty exists among the arable farm households in the study area. The poverty status indicated that the majority (54.44%) of the respondents are poor. Being married, household size, access to credit, and per capita income were significant predictors of the probability of being poor. The study, therefore, recommended that quality credit accessibility and participation in skills acquisition programmes through diversification should be encouraged due to their capability of improving the household income of the poor.

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APPENDIX

Table 1: Socio-economic characteristics of respondents

Variables	Label	Frequency (n=90)	Percent	Mean
Gender	Female	21	23.33	
	Male	69	76.67	
Marital status	Single	4	4.44	
	Married	74	82.22	
	Separated/Divorced	3	3.33	
	Widowed	9	10.00	
Age of household head	21-40	17	18.89	54.51
	41-60	46	51.11	
	61-80	21	23.33	
	81+	6	6.67	
Education of household head	No Formal	14	15.56	
	Primary	24	26.67	
	Secondary	34	37.78	
	Tertiary	18	20.00	
Household size	1-6	39	43.33	6.88
	7-12	48	53.33	
	13+	3	3.33	
Farm size	1-5	41	45.56	6.66
	6-10	40	44.44	
	11+	9	10.00	
Farming experience	1-10	34	37.78	13.63
	11-20	45	50.00	
	21+	11	12.22	
Access to credit	Did not receive	78	86.67	
	Received credit	12	13.33	
Total household income	11000-30000	35	38.89	38300
	30001-50000	41	45.56	
	50001-70000	8	8.89	
	70000+	6	6.67	

Source: Field survey, 2020

Table 2: Determination of poverty line

Items	Amount (₦/month)
Household food expenditure	2,041,500
Household non-food expenditure	4,025,000
Total household expenditure	6,066,500
Per capita household expenditure (PCHE)	915,095.6
Mean per capita household expenditure (MPCHE)	10,167.73
2/3 MPCHE (Poverty line)	6,778.49

Source: Field survey, 2020

Table 3: Poverty status of households

Poverty status	Frequency (n=90)	Percent (%=100)
Non-poor	41	45.56
Poor	49	54.44

Source: Field survey, 2020

Table 4: Logistic regression estimates of the factors influencing the poverty status of arable farm households in Akinyele Local Government Area LGA of Oyo State

Variables	Logit Estimates				
	Coef.	*Std. Err.*	*Odds ratio*	*Std. Err*	*Z*
Gender	0.956	0.650	2.600	1.690	1.47
Married	0.955**	0.472	2.599**	1.227	2.02
Education of HH	0.426	0.283	1.532	0.434	1.50
Farming experience	0.00791	0.0411	1.008	0.0414	0.19
Credit	-1.662*	0.877	0.190*	0.166	-1.89
Age	0.00683	0.0193	1.007	0.0195	0.35
Household size	0.371*	0.199	1.449*	0.288	1.87
Farm size	-0.0114	0.0631	0.989	0.0624	-0.18
Per capita income	-0.000363***	0.000131	1.000***	0.000131	-2.78
Constant	-4.348*	2.516	0.0129*	0.0325	-1.73
LR chi2(9)	29.58				
Prob > chi2	0.0000				
Log-likelihood	-47.238519				
Pseudo R2	0.2384				
Observations	90				

Note: The base category for education is at most primary, female for gender, not married for marital status, and did not receive credit. *** p<0.01, ** p<0.05, * p<0.1