Afropolitan Journals

ISSN: 3027-2637 www.afropolitanjournals.com

Determinants of Poverty among Farming Household in South-East Nigeria

Afolabi Oluwatobi Christopher [1]; Babarinde Taofeek Olajide [1]; Offor Miriam Ngozi [2]; Toha Adewale Omonigba [1]; Olachi Deborah Azino [3]; and Aremu Waliyat Titilayo [1]

[1]Department of Agricultural Economics, Ladoke Akintola University of Technology, P.M.B. 4000, Ogbomoso, Nigeria. [2]Department of Agricultural Economics, Federal University of Technology, 1526, PMB, Owerri, Nigeria. [3]Department of Energy Economics, University of Ibadan, Box 4078, Ibadan, Nigeria.

Corresponding author: christopherafolabi@gmail.com

DOI: *https://doi.org/10.62154/ajasfr.2024.017.010472*

Abstract

The study specifically profiled the socioeconomic characteristics, determined the level of poverty among farming households, and identified the determinant of poverty among farming households with descriptive statistics and a logistics regression model. General household survey secondary data was used. The data obtained was analyzed with descriptive statistics, such as mean, which was used to describe socio-economic characteristics of farming households, and the dimension of poverty among the farmers of 5 states was related by classifying the respondents into poor, moderately poor, and non-poor using the poverty line, and a logit model was used to examine the determinant of poverty among farming households in the southeast of Nigeria. Findings from the study revealed the average age of the respondent to be approximately 48 years. The mean household size is about 2, and the average income earned is about N24125. Age is negative and significantly influences household poverty status. Household size was found to be positive, and it significantly affected the poverty status of the farming household by 1%. Income from non-farm activities is positive, and it's significant at 1%. Access to extension is positive and significant at 5%. Also, the source of electricity is positive, and it's significant at 5%. Finally, the water source is positive, and it's significant at 10%. The study recommends that governments and other stakeholders should provide incentives and support to encourage more youth to participate in farming activities. Farmers should prioritize their farming activities as their main source of income and livelihood. Farmers should ensure that their farming activities are not neglected or compromised in any way. The government should also reduce the cost of tariffs; transformers, solar, and other sources of electricity should be provided; and drill boreholes for farmers.

Keywords: Determinants, Poverty, Farming Households, South-East Nigeria.

Introduction

Nigeria's agriculture was the most important economic sector in the nation's history before crude oil was discovered, producing food, creating jobs in rural areas, and generating a sizable amount of export income (Adamu et al., 2021). The fact that little was known about

petroleum as a substantial source of income for Nigeria before independence provided credence to this theory. Nigeria was a net exporter of agricultural products such as cocoa, palm oil, rubber, and cotton (IFPRI, 2018), in addition to these food crops, because agriculture was continuously appreciated. Until petroleum appeared in the early 1970s and became the country's primary source of foreign income, agriculture was completely ignored in the meantime (Adamu et al., 2021).

More than two-thirds of Africa's population lives in rural areas, where more than 85% of people depend on agriculture for their livelihoods, even while the sector generates about one-fifth of the continent's GDP and half of its total export value (World Bank Development Indicators, 2014). Therefore, increasing smallholder farming's productivity, profitability, and sustainability is thought to be the main strategy for escaping poverty. Different institutions have different definitions of poverty One definition of poverty is the absence of household income or consumption brought on by a number of interconnected circumstances that affect the lives of the impoverished. It includes poor levels of human development, including education, health, and nutrition, in addition to low levels of financial income and consumption. In a broader sense, poverty refers to the inability to pay for necessities such as clothing, food, housing, water and sanitation, healthcare, and education.

Poverty's importance is demonstrated by the fact that it is the first Sustainable Development Goal (SDG) to seek to end all forms of poverty by 2030. Poverty, a complicated and multidimensional phenomenon, is one of the primary barriers to growth (Ogunniyi et al., 2017; Oluwatayo, 2014). According to Omobowale (2014), poverty is a state in which individuals are deprived of the good things in life as well as the resources necessary to achieve the desired degree of wellbeing and a standard of living that is acceptable in society. Notably, over 80% of individuals in rural areas live below the poverty line and have little access to social and infrastructure resources, making poverty more prevalent there (Ogundipe et al., 2019; Aderounmu, 2018).

Around the world, 767 million people lived in extreme poverty in 2015 (UNDP, 2016); by 2019, that figure had fallen to less than 600 million (Khara et al., 2018). Desperation, illness, starvation, and degradation all contribute to the filthy, degrading conditions that billions of people live in worldwide. Notwithstanding the remarkable strides made in the last 25 years to eradicate poverty, 766 million people—385 million of them are children—lived on less than $1.90 per day in 2013 (World Bank, 2017). There is no doubt that poverty is not limited to developing countries; it is also growing increasingly common in rich countries as well; estimates from 2012 indicated that more than 300 million people were below the poverty line (ILO, 2012; UNDP, 2016). However, Nigeria has a wealth of natural resources, such as agricultural, human, petroleum, gas, and large untapped solid material deposits; nonetheless, poverty is more prevalent in emerging countries than in developed ones.

Additionally, different measures of poverty are used for coherence and simplicity of reference in worldwide assessments. Development organizations employ quantitative indicators of poverty, like those that establish a daily threshold of $1 or $2. Nonetheless,

there are several definitions of poverty with various metrics. According to the United Nations High Commission for Refugees (2014), "poverty" is a human condition that is defined by the continuous or chronic denial of resources, choices, security, and power necessary for a decent standard of living in addition to other civil, cultural, economic, political, and social rights. Thus, the state of not having access to the necessities of daily living, which is commonly associated with need, hardship, and a lack of resources in a number of circumstances, can be characterized as poverty. Poverty could be caused by a variety of factors that reinforce one another. These elements include a lack of resources, including credit, land, equipment, and social networks; a lack of access to basic amenities, such as clean water, medical care, and education; and a lack of revenue from work, which is required to cover expenses for housing, food, clothes, and empowerment.

Poverty can be classified as either transient or chronic. A number of traits, such as gender, endemic socio-political and cultural components, a lack of skills for gainful employment, and insufficient productive resources, are linked to the former, which is defined by persistent or permanent socioeconomic deprivations. On the other hand, the latter is characterized as temporary or transient and is linked to both natural and man-made disasters. Temporary poverty is more reversible, but if it persists, it can turn into structural poverty. There is no single cause or factor that determines poverty. On the contrary, a number of complex factors come together to generate poverty. Unsuitable macroeconomic policies, low productivity and low pay in the unorganized sector, labor market imperfections that restrict the creation of new jobs, weak or negative economic growth, and a delay in the development of human resources are some of these. Other factors that have led to a reduction in living standards and are structural causes or drivers of poverty include a rise in crime and violence, environmental degradation, worker layoffs, a decline in the genuine value of safety nets, and changes in family arrangements.

Many development economics academics have argued that eradicating poverty is a necessary condition for advancement. Unemployed graduate adolescents should have access to better training programs for learning entrepreneurial skills and revolving soft-loan credit facilities, especially in developing countries with high unemployment rates (Ehinomen et al., 2016). Nigerians frequently live in poverty. Nigeria is both rich and poor; many people live in extreme or utter poverty, while a small minority hold the majority of the nation's wealth. The fact that Nigeria's macroeconomic indicators and economic measures do not correspond with reality is alarming. In reality, people die because they cannot afford to eat three square meals a day. Oddly enough, this happens at the same time that the wealthy few flaunt their wealth because many Nigerian Rural poverty contributes to low agricultural productivity because farmers cannot afford to purchase necessary farm inputs that would increase output, such as improved seeds, fertilizers, and insecticides. Low-income customers also find it more difficult to purchase the food they require to stay healthy and lead fulfilling lives. Since 1970, the continent's food security has drastically

declined, leading to a recent decline in per capita food intake in some African regions (Ogunlela and Ogungbile, 2014).

Nigeria leads the globe in the production of cowpeas, yams, cassava, and cereal crops, according to 2018 research by the International Food Policy Research Institute. Nigeria's agricultural output was primarily composed of food crops, including grain, roots, and tuber crops. Nigeria has a wealth of natural resources, but due to increased population pressure and a high demand for land for non-agricultural uses, productivity is below potential yields, with farmer yields of most crops being less than half of the yield potential. Due to this, there is now less agricultural land accessible, which has resulted in small farms, poor incomes, high levels of food insecurity, and a high prevalence of poverty (Igbenaese and Okojie-Okoedo, 2017).

Measurement of Poverty

Our understanding of poverty has improved thanks to the current theoretical approach, which sees the income factor as the primary cause of most poverty-related problems. It is now widely accepted that, although there is a strong positive correlation between PCI and well-being indicators, capacity is affected by the distribution of PCI rather than its absolute value. Alterations in the distribution of income or the average income can both result in poverty. Growth raises mean earnings and narrows the income distribution, which is why it is seen to be a prerequisite for reducing poverty. Once more, an important lesson is that the above definition of poverty suggests that, because poverty is diverse in extent and dimension, any attempt to develop a practical strategy to poverty alleviation must use a combination of tactics. However, how can we quantify poverty without losing sight of its many facets?

Relative Poverty Measures: Relative poverty measures are used to calculate the proportion of the population that lives below the average income of the entire population. This kind of poverty line is placed at half of the mean income, or the 40th percentile of the distribution. There are two main types of relative measures. The average income is defined as the average income of the poorest 40 percent of persons or the poorest 10 or 20 percent of individuals. The population or number of people whose incomes are less than or equal to a certain percentage of the mean income, like 50% or less, is the second.

Living Standards: This is often measured using income or current consumer spending. For two reasons, consumer spending is usually favored over income as a measure of present living standards. First, current consumption is often seen as a more accurate indicator than current income since immediate utility is directly connected with consumption rather than money. Second, current expenditure may also be a good predictor of long-term average well-being since it will reveal information about earnings at other points in time, both past and future. This is because incomes, including those of the poor, often fluctuate over time in very predictable ways, particularly in agrarian economies like Nigeria. Furthermore, because respondents often interpret income incorrectly, it is often questioned as a measure

of living standards. Overall, consumption spending is a better indicator of living standards than income.

Poverty Lines in Theory: The poverty line is the monetary cost of a reference level of welfare to a person at a given place and time. While people who attain that level of well-being are seen as destitute, those who do not are not. There is frequently a distinction made between the "absolute poverty line" and the "relative poverty line"; the former has a constant "real value" throughout time and space, while the latter rises in proportion to average spending. In order to guide anti-poverty initiatives, it could be argued that a poverty level in the welfare sector should always be absolute. Such a poverty limit guarantees consistent comparisons of poverty when two individuals with the same level of benefit are treated similarly.

Objective Poverty Lines: It is possible to interpret attempts to determine the reference utility level to attain fundamental capacities as objective approaches to the poverty line. Of these, the most commonly identified relate to the appropriateness of consumption for leading an active and healthy life, including fully participating in society. The objective poverty line is determined in two ways: by the cost of essentials and by dietary energy consumption. The food-energy intake method: One frequent practical method of defining poverty lines is to calculate the income or consumption level at which food energy intake is just sufficient to meet predefined food energy requirements. Meal energy requirements can be difficult to calculate.

There will be a poverty line z as long as the expected value of food-energy intake conditional on total consumption expenditure, E (k/y), is strictly increasing in y over an interval that includes k.

$$E(k/z)=k$$

The "food-energy-intake" (FEI) approach is one name for this. The technique has been applied in several nations.

Approaches to Measure Poverty (Unidimensional)

Basics Unidimensional Measures' fulfillment of axioms and policy implications:

Measures of Poverty

There are seven ways to quantify absolute poverty. These include composite poverty measures, the physical quality of life index (PQLI), the enhanced physical quality of life index (PAQLI), the headcount ratios/incidence of poverty, the poverty gap/income deficit, and the human development index (HDI).

Ratio of Heads: One index can be used to represent poverty: The Head Count ratio (H), which is the ratio of the number of poor people to the overall population, is the most straightforward and often used metric.

where N is the entire sample population and q is the number of impoverished people. This indicates the percentage of people whose income is below the poverty line. The head count

ratio has come under fire for concentrating solely on the number of impoverished people and being inconsiderate of changes below the poverty threshold and the degree of poverty. In other words, while not all the poor are equally impoverished, it treats them all similarly. The HDI, or human development index: The United Nations Development Programme created the HDI, the most recent composite index (UNDP, 1990). Human progress is the main focus of this measure. It takes into account both non-income and income factors.

The variables of the index are three: income, lifespan, and knowledge. Life expectancy at birth (e0) is used to evaluate longevity, while literacy is used to measure knowledge. Per capita income is the third variable. Accordingly, UNDP's human development HD is typically expressed as follows:

HD = f (e0, lit, Y)

Where;

lit is the literacy rate and e0 is the life expectancy at birth. Y is the per capita income. Life expectancy (X1), literacy (X2), and the logarithm of real GDP per capita (X3) are the three indicators that make up the index, and they are set at the national level.

Approaches to Measure Poverty (Dimensional)

Due to its complexity and multifaceted nature, poverty can be measured in a variety of ways. Some of the popular methods are shown in this section. The percentage of a population whose income or consumption is below the poverty level is known as the poverty rate, or poverty incidence Po. If an individual is the unit of analysis, this measure of poverty is also known as the Poverty Head Count Index, which is the number of impoverished people divided by the entire population.

The mathematical expression for poverty incidence Po is as follows:

Po=1NΣ(Yi), where N is the total population.

If the bracketed statement is true, I(.)= an indicator function returns 1 (poor); otherwise, Yi = welfare indicator, for instance, per capital consumption Z = poverty line Np is the population's number of impoverished individuals.

Poverty Incidence Po is simple to calculate and comprehend. It is also helpful in assessing the general level of poverty reduction progress. It does, however, have some significant drawbacks. First, by presuming that all of the poor are in the same situation, the index ignores variations in their welfare.

Second, as long as people remain below the poverty line, it doesn't care how their well-being changes. Thirdly, poverty severity is not taken into account (Makoka and Kaplan 2005).

How much the average income of the poor deviates from the poverty line is measured by the Poverty Gap Index P1. It determines the population's mean proportionate poverty gap. Poverty Depth is another name for this index. With the use of the previously established notations in equation 2.1, Poverty Gap P1 can be expressed formally as follows:

P1 = 1NΣ(Z–Y1Z)I(Z–Y1) = 1NNi = 1Σ(Z–YZ)qi = 1

The Poverty Gap Index has the following advantages: (A) By displaying the average shortfall of the poor, it makes it possible to comprehend the extent of poverty better. (B) It shows how much money must be transferred in order to raise the impoverished's income or expenses to the poverty line. This gives us the chance to figure out how much it would cost to eradicate poverty through transfers.

Index of the Squared Poverty Gap (Poverty Severity) P2: By quantifying disparity among the poor, this measure of poverty overcomes the shortcomings of the poverty gap index. The mean of the squared relative poverty gaps is the poverty severity index. The poverty gap index is squared to assign the largest poverty disparities the highest weight, hence providing the gaps proportionate weights.

According to Yizengaw et al. (2015), factors such as land size, livestock holding size, gender, income and income distance, and urban connection were significant drivers of livelihood activities at 10 percent probability levels. The present study will demonstrate the important factors that influence a household's choice of alternative livelihood activities. Furthermore, Ibekwe et al. (2010) observed that in Nigeria, factors like occupation, education level, household size, land size, and farm output all influenced the non-farm income diversification of families.

Nindi and Odhiambo (2015) used the ECM-based Granger causality method and the ARDL-bounds testing approach to co-integration to investigate the causal relationship between poverty reduction and economic growth in Swaziland between 1980 and 2011. The study's findings demonstrate that, both immediately and over time, economic progress does not directly lead to a decrease in poverty. This finding was in contrast to what we find out: that economic progress directly leads to a decrease in poverty.

Ogebe, O. F. et al. (2020) investigated factors affecting rural poverty and its vulnerability. The study assessed the determinants and vulnerability to rural poverty in Nigeria using 2018-2019 Nigerian Living Standards Survey data. A binary probit regression model was used to ascertain the determinants of poverty and the probability of the household being vulnerable to poverty. The research recommends the creation of an enabling environment that encourages small and medium-scale businesses to thrive in order to reduce the level of unemployment, which has a pervasive effect on poverty. The recommendation was in line with ours, that government should provide some social needs.

Nigeria's rich natural resources, poverty, and its related factors have continued to rise over the years, as noted by (Olarinde *et al.* 2020). Limited progress has been made in addressing this challenge by different parties. This study employed cross-sectional data collected in 2015 from 775 cassava farmers scattered across four geographic zones to assess the complex poverty of Nigerian cassava producers and identify the causes and contributions of poverty. It was shown that 74% of respondents were multidimensionally destitute. Health and education were the main factors helping to reduce poverty, whereas assets and public/housing utilities made significant contributions to the total multidimensional poverty index (MPI). Significant indicators that contributed to MPI included formal

employment, years of education, school enrollment, frequency of medical visits, and ownership of household assets. The Southeast has the largest adjusted poverty headcount among cassava-producing regions. Additionally, the investigation revealed that age, farming experience, household size, years of education, and availability of informal credit were important indicators of poverty. According to the study's findings, poverty reduction programs for cassava farmers should be tailored to the particular aspects of poverty in each of Nigeria's more than 30 states, even if these states mostly rely on national policies from the federal government. In order to promote modern cassava farming and increase the likelihood that rural cassava farmers would be able to escape poverty, agricultural reforms should concentrate on giving younger farmers access to loans, training, extension services, and cooperative structures.

Research Questions:

- What are the social-economic characteristics of the farming household in the study area?
- What are the factors that determine rural farming household's level of income?
- What are the factors that determine the percentage of farming households living in poverty?
- What are the factors that affect a rural farming household's livelihood situation?
- What are the factors that contribute to poverty among farming households in the study area?

Objectives of the Study

The objectives of the study are to:

- Describe the social-economic traits of agricultural households.
- Determine the rural farming household's level of income.
- Determine the percentage of farming households living in poverty.
- Analyze the factors that affect a rural farming household's livelihood situation.
- Analyze the factors that contribute to poverty in farming households.

Problem Statement

The declining level of living in Nigeria has spurred research on the country's poverty problem. Although poverty exists in both urban and rural areas, several studies have shown that its impacts are more pronounced in the former. Unfortunately, most of these studies were macro-level. However, poverty usually shows up at the family or individual level. Thus, in order to better understand the actual situation of household poverty, microstudies of this type are required. Despite numerous studies and household surveys aimed at bridging the gap, nothing has been said about poverty in Nigerian farming households. Poverty should be seen as a complicated problem that needs a multidimensional solution because it has many diverse causes, especially when it affects farming households, which suffer several

difficulties. According to the aforementioned, identifying the causes of poverty in rural areas is crucial to comprehending its causes and creating policies that try to lessen it.
Farmers will also benefit from the research's findings because the report, which is based on data from the study, can provide opportunities for employment for local residents who support the national economy as well as for investors and others who are interested in investing in farming for profitability and proper establishment. Comprehending the livelihood systems and the limitations linked to the various livelihood indicators will support effective planning, tracking, and assessment of programs for rural development. The evaluation of rural farming households based on livelihood indicators will give program planners and donor organizations important information about the unique needs of rural residents and where to direct funding and programs. Policymakers and agricultural administrators will be better able to address concerns about the stark disparity between rural and urban livelihood status if they know the livelihood status of rural farming households. It's also probable that some socioeconomic traits of rural households affect their livelihood status; therefore, the study will assist socio-economists and extension workers in identifying these factors and addressing them appropriately (Omotosho et al., 2019).

Materials and Methods

A few states in southeast Nigeria were chosen to participate in the study. Abia, Anambra, Ebonyi, Enugu, and Imo are the five states that make up south-eastern Nigeria. It is among Nigeria's six geopolitical zones. It lies between longitudes 6°35' and 8°27' east of the Greenwich meridian and latitudes 04°47' and 07°07' north of the equator. Benue and Kogi States border the study area to the north; Rivers State borders it to the south; Akwa Ibom and Cross River States border it to the east; and Delta State borders it to the west. In Nigeria, the two distinct seasons—the dry season (November–February) and the rainy season (March–November)—have different weather patterns. (November through February). The harmattan dust is also brought about by the dry season, when chilly, arid winds from the Northern deserts enter the Southern areas.

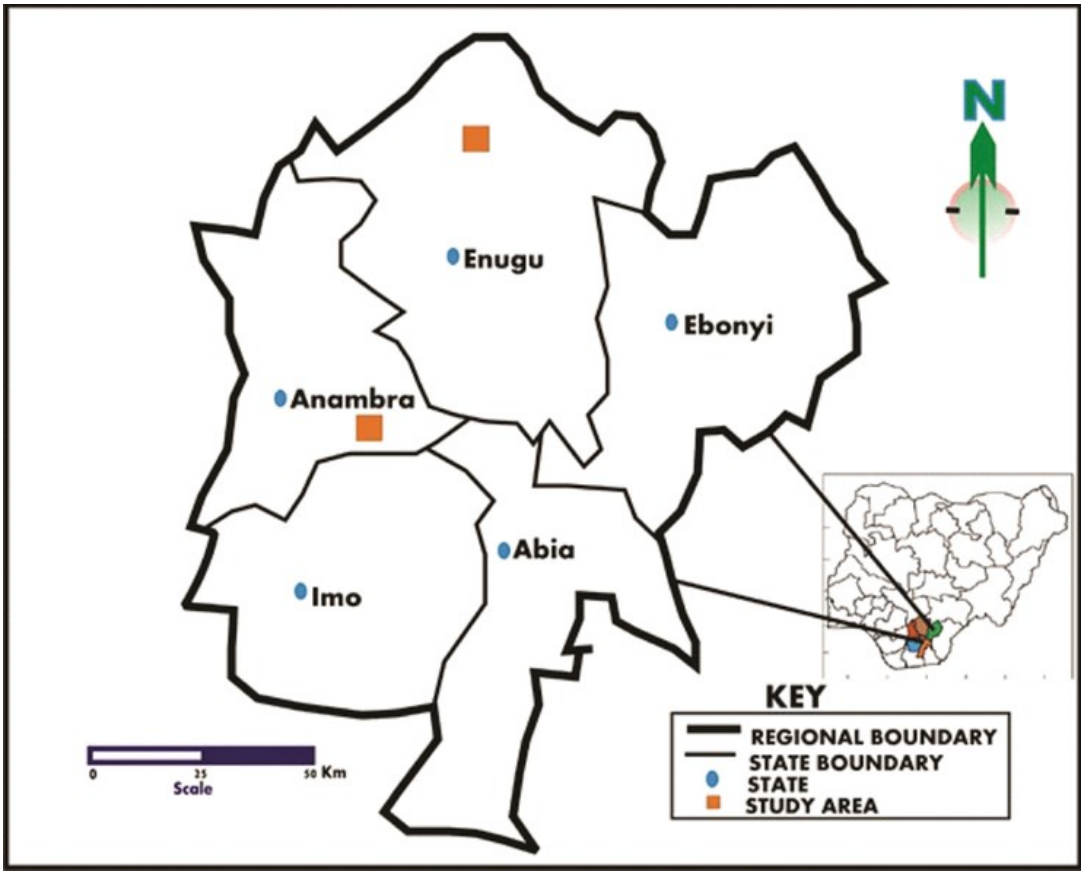

Figure 1: The South-East States of Nigeria
Source: A modified and adapted version of the Nigerian administrative map.

Data sources: The study made use of secondary data. Study Population: The study's population consisted of all farming households in the southeast of Nigeria.

Size and method of sampling: Secondary data from the general household survey was used.

Method of Data Analysis: The socioeconomic features of farming households in the study area and the aspect of poverty among farming households were described using descriptive statistics like mean, frequency, and percentage. Using the poverty line, the respondents will be categorized as poor, moderately poor, or non-poor in order to relate the dimension of poverty among farmers in five states for objective 2. Two-thirds of the mean per capita income was the relative poverty line used. Farmers were categorized as poor or non-poor based on their per capita income falling below the poverty line. To determine the degree of poverty in the area under study, the following factors will be examined: their access to health care, housing type, electricity source, cooking stove type and kitchen location, toilet type and location, waste collection type, water source, and water fetching time.

Logit Regression Model: Due to the dummy nature of the poverty status used in this study, which means that either the farming household is poor or not, the following variables were included in the model: age, sex, education, household size, working experience, farming income, non-farming income, electricity source, water source, and type of house. The logit model, a non-linear regression model that forces the output to be either 1 or 0, is what was used to examine the determinants of poverty among farming households in southeast Nigeria.

The logistic regression model is stated thus:

$P_I = f(X) =$

P_I = the probability that the farming household is below or above the poverty line

= are the coefficients

= are poverty determinants variables

The model can be expressed as follows in terms of the likelihood of being impoverished:

$p_I =$

Where,

p_i = the likelihood that a farming household is either above or below the poverty line.

β_o = constant

In order to demonstrate it in terms of the likelihood of not being impoverished, the following follows:

$1- p_I =$

Where,

1- p_I = is probability of being non-poor

The empirical logistic regression model is stated thus:

$Y_i =$

In the model:

Y_i = poverty status

= constant to = parameters estimated Z_1 = age(years)

Z_2 = gender Z_3 =education Z_4 = marital status Z_5 = household size(number)

Z_6= working experience Z_7 = farming income Z_8 = non-farming income

Z_9 = electricity source Z_{10} = water source Z_{11} = type of house.

Results and Discussion

Socioeconomic Characteristics of the Farmers

Table 1 displays the socioeconomic attributes of the rural households. According to the table's findings, 73.77 percent of the respondents were men, 81.39 percent were married, 0.95 percent were divorced, 2.39 percent were separated, 11.58 percent were widowed, and only 3.70 percent had never been married. Approximately 24.70 percent of those surveyed were in the age range of 31 to 40. Of them, only roughly 13.72 percent were under 30. With a mean household age of 48, the heads of households are progressively aging out of their prime. 41.77 percent of the respondents had four to six household members, according to

the results of the household size survey. Those with more than nine households made up the smallest percentage (5.01%), since having more household members has an impact on the income generated. The average household size is two people, which is moderate. Just roughly 23% of respondents do not have formal education, compared to 76.85% of respondents who do. The respondents' average length of time in school was roughly three years, which is significantly less than the Nigeria Education Policy's minimum recommendation of nine years of education. In this decade, two years of formal education is the same as no education, which is why living standards are low. The farm income of the respondent, as shown in the table below, revealed that 35.3% of the respondent earned an income of N10000 or less, while about 10% of them earned an income between N10001 and N50000. Also, 1.3% of them earned an income between N50001 and N100000. Also, 1.7% of them earned an income between N100001 and N200000, while 0.7% of them earned farm income between N200001 and N400000, and 51.6% of them earned farm income above N400000. The average farm income earned by the farmers in the region is about N24125; this implies that most farmers earn little from their activities, perhaps because they are small farmholdings. The result in the table reveals that 1.3% of the farming households are involved in farming only for sale/barter, while approximately 19% are involved in farming for sale and some for food, while 15.0% involved in farming for own family use but some for sale, 5.5% are involved in farming only for family use, and 59.4% do not have a reason for farming activities.

According to the findings, 70.3% of respondents do not have access to extension services, whereas 29.7% of respondents do. The result's implication is that most farming households won't have access to innovation, which would likely boost their agricultural output and lower their poverty levels. Approximately 81% of the participants reported having less than or 10 years of work experience, with those with 11–20 years of work experience coming in second (12.05%). Those with over 40 years of work experience made up the smallest percentage of this group, at 0.12%. Eight years is the average amount of work experience This is long enough to gain sufficient experience in activities that can help generate revenue. The majority of those surveyed (59.40%) said they were farmers, whereas 19.06 and 14.92 percent said they were in the civil service and trading, respectively. The amount of money made from farming activities showed that 28.45% of farmers made more than N100,000. Respondents who made between N25,000 and N50,000 (26.52%) and N50,000 and N75,000 (25.14%) came in close second and third, respectively. Those who make N25,000 or less, however, make up the smallest percentage of respondents—just 2.49 percent. Depending on the size of the household, the average rural household's income of N80,348.73 is somewhat reasonable. This suggests that the average household may spend up to N2,678.26 every day.

The source of capital for the respondents in the region. It showed 66.8% of the respondents sources of capital are from household savings, 3.6% of them sources of capital are from proceeds from family farms, and 4.5% of them sources of capital are from relatives and friends. Meanwhile, 2.7% of the respondents sources of capital are loans from banks, while

15.65% of the respondents sources of capital are from Esusu or Ajo; moreover, 1.4% of the respondents sources of capital are from corporations and trade associations, and 5.3% of the respondents sources of capital are from remittances abroad. This implies that most capital used for farming activities by the respondents is from household savings, and they do not have more access to other sources of capital. The distribution based on ownership of non-agricultural businesses in the last 12 months shows that 85.1% of the respondents did not own non-agricultural businesses in the last 12 months, while 15% of the respondents owned non-agricultural businesses in the last 12 months. This implies that the farmers majorly depend on earnings from farming as a source of livelihood for the welfare and well-being of their households.

The result also shows that 1.7% of the respondent earned nothing from non-farming income, while 13.8% of the respondent earned between 1-10000 or less, 79.4% of the respondent earned between 10001-50000, and 3.5% earned between 50001-100000, while approximately 1.2% of the respondent earned between 100001-200000 as non-farm income. Furthermore, 0.2% of the respondents earned 2000-01-400000 and above 400000 non-farm income. The average income from non-farm pursuits was N28713.24; this suggests that the additional money farmers make outside of farming could help them live better lives and lower their poverty levels. There is a lower chance of poverty because non-farm income can be used for more essential household expenses. Approximately 1.1% of respondents in the region made no money, 10% made N10000 or less, 76.1% made between N50001 and N100000, and 3.3% made between N100001 and N200000. Just 1% of respondents made between N200001-400000 and over N400000. Depending on how big the household is, the average total income of N42883.3 was found to be somewhat reasonable. This suggests that the average household may spend up to N1429.44 every day.

Dimension of Poverty among Farming Households and their Level

Dimensions of the rate of poverty considered include examining access to health, house type, roof type, floor type, kitchen location, source of electricity, use of electricity, toilet type, toilet location, refuse dumping type, source of water, and fetch water time.

Distribution of the Respondents based on Health

The table reveals that about 53.82% of the farming households had no access to health facilities, while about 46.18% of the farmers had. About 96.25% of the respondents indicated they had no access to the National Health Insurance Scheme, while only 3.75% have access. About 78.57% of the respondents also signifies that they have not been ill for this period, while about 22.43% are ill during this period.

From the result shown in the table, it was gathered that about 47.97% of the respondents live in a separated house (bungalow), 28.29% of the farmers live in compound house with separate rooms, only 1.56% of the respondents live in uncompleted buildings. Also, the table reveals that 84.57% of the respondents live in cement or concrete houses, 14.11% of

the respondents live in mud buildings, and only 0.36% of the respondents live in buildings whose walls were covered by aluminum roofing sheet. About 81.82% of the respondents have their house roofed with corrugated long pan; 6% of the farmers roofed their houses with long or short span sheets, while only 0.12% roofed their house with step tiles and clay tiles.

Those who had concrete floors in their houses were found to be 80.26% of them, while only 0.72% of the farmers had covered their terrazzo, 42.87% of the respondents had their kitchen in a separate room in the same building, 21.80% of the farmers had their kitchen in separate dwellings, and only 5.87% of the respondents had their kitchen located in the sleeping area of the building. The implication of the respondent based on the housing is that the highest percentage of the respondent lives in a suitable housing, which is a cement house, and it has a relationship with their poverty status.

NEPA/PHCN were their main source of energy, while only 1.58% of the farmers indicated use of generator and rechargeable battery as their main source of energy. The table further reveals that 46.36% of the farmers had between 1-6 hours of electricity daily, 16.51% of the respondents had more than 18 hours of electricity daily, and only 1.19% had between 13-18 hours of electricity daily. Furthermore, from the table, it was revealed that 29.43% of the respondents made use of an open stove for cooking, 23.44% of the respondents made use of self-built biomass (charcoal) for cooking, and only 0.36% of the farmers made use of an electric stove for cooking. Households likely depend on different sources of energy, irrespective of their poverty status. The table revealed that 29.07% of the respondents made use of a pit toilet with slab, 24.64% made use of no facilities, bush or field, and 0.12% of them made use of a flush to open drain and composting. 43.06% of the respondents had their toilets in the yard, 39.59% had theirs elsewhere, while only 22.97% of the farmers had their toilets in their dwellings. About 61.36% of the respondents indicate that they dispose of their refuse outside the compound, 27.27% of the farmers answer to disposing of it within the compound, while only 2.87% of the respondents paid for their refuse to be collected by a private firm. The respondent sanitation level on poverty is high. For source of water, 52.72% of the respondents made use of borehole/tube as their main source of water, 24.64% collected water from rain, and only 0.12% made use of unprotected dug wells and surface water. Meanwhile, about 26.78% of the respondents had 1 hour or less for fetching water, while about 52.39% had above 24 hours of fetching water, and only about 0.91% had between 1 and 24 hours for fetching water. From this implication, the respondents had access to water from different sources, either collected through rain, unprotected dug wells, or surface water.

Table 1: Socio-economic Characteristics of the Farming Households in the Study Area.

Socio-economic Characteristics	Frequency	Percentage	Mean (Std.dev)
Age			
<=30	11	13.72	48.00±16.05
31-40	207	24.70	
41-50	163	19.45	
51-60	165	19.69	
> 60	188	22.43	
Sex			
Male	618	73.75	
Female	220	26.25	
Marital Status			
Married	682	81.39	
Divorced	8	0.95	
Separated	20	2.39	
Widowed	97	11.58	
Never married	31	3.70	
Household Size			
<=3	270	32.22	1.99±0.86
4-6	350	41.77	
7-9	176	21.00	
>9	42	5.01	
Educational group (years)			
0	194	23.15	2.80±1.22
1-6	120	14.32	
7-12	208	24.82	
13-17	293	34.96	
>17	23	2.74	
Farm income			
1-10000	296	35.32	24124.82±110472.70
10001-50000	83	9.90	
50001-100000	11	1.31	
100001-200000	10	1.19	
2000001-400000	6	0.72	
>400000	**432**	**51.55**	
Purpose of farming			
Only for sale/barter	11	1.31	
Sale/barter but some for food	157	18.74	
Mainly for own/family some for food	126	15.04	
Only for family use	46	5.49	
None	498	59.43	
Extension service			

Yes	249	29.71	
No	589	70.29	
Capital source			
Household savings	516	66.75	
Proceeds from family farm	28	3.62	
Relatives/friends	35	4.53	
Loan from Bank	21	2.72	
Essus/Adashi/Ajo	121	15.65	
Cooperatives/Trade	11	1.44	
Remittance from abroad	41	5.30	
Owned non-agribusiness			
No	644	85.07	
Yes	113	14.97	
Non-farm income			
<=0	14	1.67	28713.24±56484.7
1-10000	116	13.84	
10001-50000	665	79.36	
50001-100000	29	3.46	
100001-200000	10	1.19	
200001-400000	2	0.95	
>400000	2	0.95	
Total income			
<0	9	1.07	42883.29±99645.11
1-10000	83	9.90	
10001-50000	638	76.13	
50001-100000	64	7.64	
100001-200000	28	3.34	
200001-400000	8	0.95	
>400000	8	0.95	
Work experience (years)			
<=10	674	80.43	7.90±6.98
11-20	101	12.05	
21-30	55	6.56	
31-40	7	0.84	
>40	1	0.12	
Access to health			
Yes	387	46.18	
No	451	53.82	
Access to NHIS in the last 12 months			
Yes	29	3.75	
No	744	96.25	
Illness			
Yes	188	22.43	
No	650	77.57	

House type		
Separate house (Bunga)	401	47.97
Semidetached house	23	2.75
Flat/ apartment	94	11.24
Compound (Sep. rooms)	239	28.59
Huts (Shared compd)	35	4.19
Huts/building (Private)	20	2.39
Living Qrtrs Attached	6	0.72
Office		
Uncompleted Building	13	1.56
Other, Specify	5	0.60
House wall type		
Mud	118	14.11
Unburnt bricks	2	0.24
Burnt bricks	1	0.24
Cement/ concrete	707	84.57
Wood/bamboo	6	0.72
Iron sheet	3	0.36
Roof Type		
Thatch (Grass/ straw)	26	3.11
Corrugated iron sheet	684	81.82
Clay Tiles	1	0.12
Concrete/ cement	37	4.43
Asbestos sheet	24	2.87
Mud	2	0.24
Step Tiles	1	0.1
Long/Short Span Shts	57	6.82
Other (Specify) |	4	0.48
House floor		
Sand/Dirt/Straw	24	2.87
Smoothed Mud	77	9.21
Smth Cement/Concrte	671	80.26
Tile	56	6.70
Other (Specify) |	2	0.24
Terrazzo	6	0.72
Kitchen Location		
In Dwelling Not, A Sleeping	182	21.80
In Dwelling, In A Sleeping	49	5.87
. In A Separate Dwelling	358	42.87
In A Veranda (Roofed Plat	19	2.28
Outdoors	225	26.95
Other, Specify	2	0.24
Source of Electricity		
Phcn/Nepa	410	72.18

Generator	121	21.30
Rechargeable Battery	28	4.93
Other (Specify)	9	1.58
Hours of Electricity Availability		
<=0	80	9.56
1-6	388	46.36
7-12	75	8.96
13-18	10	1.19
>18	284	33.93
Type of cooking stove		
Does Not Cook	1	0.12
Stone/Open Fire Stove	246	29.43
Self-made Built Biomass Stove	196	23.44
Manufactured Biomass Stove	114	13.64
Lpg/Natural Gas Stove	46	5.50
Kerosene Stove	230	27.51
Electric Stove	3	0.36
Toilet Type		
Flush to Piped Sewage System	65	7.78
Flush to Septic Tank	199	23.80
Flush to Pit Latrine	39	4.67
Flush to Open Drain	1	0.12
Ventilated Improved Latrine	5	0.60
Pit Latrine with Slab	243	29.07
Pit Latrine W/O Slab	67	8.01
Composting Toilet	1	0.12
Hanging Toilet/ Hanging	8	0.96
No Facilities, Bush, Or Field	206	24.64
Other(Specify) |	2	0.24
Toilet location		
In dwelling	145	17.34
In yard	360	43.06
Elsewhere	331	39.59
Refuse collection type		
Collected by government	43	5.14
Collected by private firm	24	2.87
Government bin	28	3.35
Disposal within compound	228	27.27
Disposal outside compound	513	61.36
Main Source of water		
Piped into dwelling	8	0.96
Piped into neighbor	11	1.32

Public tap/standpipe	10	1.20
Tube well/borehole	436	52.15
Protected dug well	16	1.91
Unprotected dug well	1	0.12
Protected spring	12	1.44
Unprotected spring	21	2.51
Rain water collection	206	24.64
Tanker truck/water vendor	10	1.20
Small Tank/drum	1	0.12
Surface water	54	6.46
Sachet water	49	5.86
Other (Specify)	1	0.12
Time of fetching water		
<=1	207	26.78
1.1-2	65	8.41
2.1-4	66	8.54
4.1-8	23	2.98
8.1-24	7	0.91
>24	405	52.39

Distribution of the Farming Households based on Poverty Status

From the result of each state, it was revealed that Ebonyi State as the highest percentage of farmers who are coop poor, and Abia state has the lowest percentage of farmers who are core poor. Furthermore, it was also gathered that Anambra has the highest percentage of farmers who are moderately poor, while Enugu has the lowest percentage of farmers who are moderately poor. The results also shows that Imo state has the highest percentage of farmers who are non-poor, and Ebonyi State as the lowest percentage of farmers who are Non poor.

Table 2 shows the poverty status of each state in south east region. In Abia state, about 27% of the respondent with an average income of about N1708.8 are core poor, while about 33.1% with an average income of about N6118.8 are moderately poor, and about 39.2% with an average income of about N19841.6 are non-poor. This implies that most farmers in Abia state are non-poor and are able to provide for their basic necessity of life.

In Anambra, it was revealed that about 30.6% with average income of N1816.6 of core poor, by about 33.9% with an average income of about N587 1.9 of core are moderately poor while about 35.54% with average income of N31878 .7 are non-poor. This implies that most farmers in Anambra state and therefore are able to provide their basic necessity of life are non-poor.

In Ebonyi state, about 19 37.8% on the farmers with average income of N 2638 .4 of core are poor, nevertheless 29.7% of the farmers with average income of approximately N 5703.6 are moderately for poor and 32.4% of the farmers with an average income of 21890.8 and

non-poor. This implies that majority of farmers in ebonyi state, high level of poverty has low standard of living.

In Enugu state, the table indicate that about 27.9% of the farmers with an average income of N7405.3 of a core poor, while about 27.3% of the of the farmers with an average income of about N5909.7 are moderately poor, also about 44.8% all the farmers are non-poor with an average income of about N30055.0. This indicates that most farmers in enugu state are living above average and they can provide their basic necessity of life.

In Imo State, the table shows that about 29.2% of the Farmers with an average income of N164 3.73 are core poor, where about 28.1% return average income of N5871.5 are moderately poor and hence about 42.7% off the respondent with an average income of about N21696.6. this implies that most farmers in Imo State are non-poor and have a high standard of living.

Table 2: Frequency Distribution of the Farming Households based on Poverty Status

States	**Core poor**	**Moderate poor**	**Non-Poor**	**Total**
(Mean)	**Freq(%)**	**Freq(%)**	**Freq(%)**	**Freq(%)**
Abia	71(27.00)	87(33.08)	105(39.92)	263(100.00)
(Mean±SD)	1708.78±6371.43	6118.79±1243.78	19841.60±21032.83	
Anambra	37(30.58)	41(33.88)	43(35.54)	121(100.00)
(Mean±SD)	1816.59±2357.56	5871.93±1099.85	31878.27±60084.94	
Ebonyi	42(37.84)	33(29.73)	36(32.43)	111(100.00)
(Mean±SD)	2638.36±923.55	5703.57±1075.30	21890±19022.07	
Enugu	48(27.91)	47(27.33)	77(44.77)	172(100.00)
(Mean±SD)	740.53±10050.21	5909.67±1234.80	30055.04±44156.90	
Imo	50(29.24)	48(28.07)	73(42.69)	171(100)
(Mean±SD)	1643.73(1767.39)	5871.46(1137.12)	21696.59(16233.67)	
Pooled	248(0.30%)	256(0.31%)	334(0.41%)	838
(Mean±SD)	8547.99±29.59	29474.96±30.55	125361.5±39.86	

Source: Data analysis, 2023.

The Determinant of Poverty among Farming Households

The factors that determine poverty among household farmers are shown in Table 3. The adjusted R-squared value of 0.5773 showed that the estimated independent variables specified in the logistic regression model account for 57.73% of the explained variation in the factors that determine respondents' poverty level, while the remaining 42.27% of the unexplained variation may be due to an unspecified variable of interest in the model that is located in the error term.

Age (years), household size, non-farm income, access to extension services, electricity source, and water source are the factors that significantly correlate with the respondents' level of poverty in farming households. The table showed that among farming households, age had a negative impact on poverty status. At the 10% level, the Age coefficient is significant. This suggests that the probability of a household being impoverished will decrease as farmers' ages increase. This could be as a result of the older respondents. and

concurs with the findings of Azeez et al. (2015), which indicate that the likelihood of poverty decreases with age.

It was discovered that household size had a positive effect and had a 1% impact on the farming household's poverty status. This indicates that the likelihood of a household being impoverished will rise by 1.1% for every unit increase in the number of household members. This is consistent with the findings of Okpachu et al. (2017), who suggested that the reason for this could be that larger household lower income per capita (per capita income) and lower the standard of living for those households.

Additionally, nonfarm income is positively significant at 1%, meaning that for every unit increase in nonfarm income, the likelihood of a household being impoverished will rise by 0.0002%. Farmers who engage in low-paying activities may find that their attention is diverted from more lucrative endeavors. This is because, even in situations where farming may not produce the anticipated returns, non-farm pursuits have the ability to add to a more varied income portfolio, which can offer a steady source of income. Nevertheless, the data also implies that farmers engaged in low-income pursuits might be sidetracked from more lucrative endeavors. This may result in less focus on farming, which may eventually impact their earnings and raise the possibility that they will be categorized as impoverished. This could be because non-farm income may not be sufficient to support and raise the household's standard of living, which runs counter to the findings of Ademola et al. (2015), who found that the higher the non-farm income, the lower the probability of poverty.

Another benefit is having access to extension services, which is noteworthy at 5%. This suggests that the likelihood of a household being more improvised will rise by 0.58% for every unit increase in farmers' access to extension services. This may be because farmers are receiving extension services in an inappropriate manner or because poorly trained extension agents may misinform farmers during extension visits. This finding is consistent with that of Duniya et al. (2015), who demonstrated that higher extension contact leads to MPHCE (mean per household capital expenditure). It has to do with providing extension services to make sure farmers have access to reliable and practical information that can support their financial security and lessen poverty.

Additionally, 5% of households have positive and significant access to electricity. This indicates that there is a 0.61% increase in household access to energy sources. The purchase of electricity tariffs, generator fuel, and batteries to produce energy may likely make households more likely to fall into poverty.

Lastly, at 10%, the water source is significant and positive. This suggests that there is a 0.31% chance that household poverty will rise for every unit increase in access to portable water. This could be as a result of the household spending more money on water sources or the lack of water to perform agricultural tasks on the farm. Although having access to water is a basic need, it can also come with costs, like buying water or keeping up a water supply system. Furthermore, a household's capacity to make money may be restricted and their level of poverty may rise if there is insufficient water for farming. Therefore, even though

having access to portable water might be a good thing, its implementation must take into account how it might affect household expenses and revenue generation.

Table 3: The Determinant of Poverty among Farming Households

Poverty dummy	Coefficient	Std. Err	Zvalue
Age(years)	-0.0154183*	0 .0081237	-1.90
Gender	-0.5002306	0.4385564	-1.14
Education(years)	0.0139966	0.0195182	0.72
Marital status	0.031051	0.448499	0.07
Household size	1.10548***	0 .0881729	12.54
Working experience	-0.0282162	0 .0190067	-1.48
Actual farm income	-1.97e-06	1.30e-06	-1.52
Non-farm income	0 .0001554***	0 .0000147	-10.56
Sec Occupation	0-.7253997	1.387904	-0.52
Ac extn servc	0 .5807815**	0.2844135	2.04
Electricity source	0 .6130775**	0 .2552071	2.40
Water source	0 .3134934*	0.1645587	1.91
Type of house	0-.3249764	0.4450158	-0.73
Constant	2.214195	2.915146	0.76

Source: Data analysis, 2023.

Summary

The study sought to ascertain the poverty and livelihood status of farming households in Nigeria's northeastern states. Using descriptive statistics and a logistics regression model, the study specifically profiled the social and economic characteristics, assessed the degree of poverty among farming households, and identified the factors that contribute to poverty among farming households.

According to the study's findings, the average respondent age was roughly 48 years old, indicating that they are in their prime. The results suggest that because the respondent is still in their prime, they are processing the energy needed to lessen the strain of farming. It reveals that a significant majority of farmers—roughly 73.75%—are men, suggesting that farming in the areas is dominated by men. According to the results, 80.6% of the farmers in the sample are married. According to the data, 41.8% of the respondents live with four or six people. About two people live in the average household. According to the results, 34.6% of respondents had between 13 and 17 years of education, compared to the average of three years. This suggests that the majority of respondents are illiterate and lack formal education. The outcome also shows that the respondent's average income is roughly N24125. A better outcome for those who farm for a reason is shown in Table 7. Additionally, it was revealed that 70.3% of farm households lack access to extension services, suggesting that most lack access to innovation that could potentially boost agricultural productivity and lower poverty levels. Approximately 80.4% of respondents have less than or equal to ten years of work experience.

Access to healthcare, house type, roof type, floor type, kitchen location, electricity source, electricity use, toilet type, toilet location, type of refuse dumping, water source, and fetch water time are all factors that are taken into account when determining the degree of poverty in the study areas. According to the results, the majority of respondents (53.8%) did not have access to a health facility, and approximately 96.3% did not have access to the National Health Insurance Scheme during the previous year. However, 77.57% of respondents also indicated that they had not been ill during this time. Additionally, the results showed that the majority of respondents—84.57%—live in homes made of concrete or cement. Approximately 81.82% of those surveyed have corrugated long pane roofing. The majority of respondents (80.26%) had concrete floors in their homes, and 42.87% had their kitchens in different rooms within the same building. Additionally, the table reveals that 29.43 percent of the respondents cooked on an open stove. Most respondents (72.18%) said that their primary source of lightning was NEPA/PHCN. Additionally, 43.06% of the respondents reported using their yard homes for toilets. Approximately 61.36% of the respondents said they prefer to dispose of their waste elsewhere rather than properly managing it within their compound. According to the results, 52.72% of the respondents primarily drew their water from a borehole or tube. Lastly, 52.3% had water fetching for more than 24 hours.

According to Abia State's results, 39.92% of respondents are classified as non-poor, 33.08% of farmers are classified as moderately poor, and only 27% of respondents are classified as core poor. According to the results, the majority of respondents from Anambra state—35.54%—fall into the core poor category, followed by moderately poor (33.88%) and non-poor (30.58%). Only 38.84% of farmers in Ebonyi State are extremely poor, compared to 32.43% who are not and 29.73% who are moderately poor. According to the results, only 27.91% of farmers in Enugu are classified as core poor, while 44.77% of respondents are not poor and 27.33% are moderately poor. Lastly, Imo State's results show that 29.24% of people are core poor, 28.07% are moderately poor, and 42.69% are not poor.

Age, household size, non-farm income, access to extension services, electricity source, and water source are the factors that significantly correlate with poverty in the respondents' farming households. Age has a detrimental effect and a big impact on household poverty. This suggests that a unit increase in age will most likely result in a lower level of household poverty. This could be because respondents' level of household responsibilities decreases with age. It was discovered that household size had a positive effect and had a 1% impact on the farming household's poverty status. This indicates that a household's poverty level is likely to rise with each additional person living there. This could lower the household's standard of living and result in a decrease in income per capital. At 1%, revenue from non-farm sources is likewise positive and noteworthy. Accordingly, a unit increase in income from non-farm sources may have the potential to raise the poverty level of households. This could be because the household may not be able to be supported by the non-farm income generated. Additionally, access to extension is positive and significant at 5%, meaning that

a unit increase in access to extension services is associated with a higher probability of household poverty. Access to extension is also positive and significant at 5%, meaning that a unit increase in access to extension services is associated with a higher probability of household poverty. One possible explanation for this is that farmers may not receive extension services in an appropriate manner or that improperly trained extension agents may misinform them during extension visits. Additionally, at 5%, the Source of Electricity is significant and positive. This indicates that there is a chance that the level of household poverty will rise with each unit increase in the electricity source. This indicates that there is a chance that the level of household poverty will rise with each unit increase in the electricity source. This might most likely be the result of the household spending more money on electricity due to paying for the electricity tariff, batteries, and generator fuel. At 10%, the water source is finally positive and significant. This suggests that the likelihood of a household becoming poorer increases with each unit increase in the water source. This could be as a result of the household spending more money on water sources or the lack of water to perform agricultural tasks on the farm.

Conclusion

The results of this study indicate that while income from non-farm sources was positively correlated with poverty status, the age of the household head was found to have a negative correlation. Another important factor was the size of the household, with larger households having a higher likelihood of living in poverty. Another significant factor was access to extension services; households with these services were less likely to be impoverished. All things considered these results imply that poverty among farming households is caused by a variety of factors.

Recommendations

The following recommendations are offered in light of the results.

- Age is found to negatively affect poverty status, this is because affect poverty status among farmers, as older farmers may have less energy and resources to invest in their farming activities. It is important to encourage more youth to engage in farming, as they are in their productive and active age, and can bring new ideas and innovations to the agricultural sector. Furthermore, by involving more youth in farming, we can ensure the sustainability of the sector and prevent the decline of agricultural production. Therefore, it is recommended that governments and other stakeholders provide incentives and support to encourage more youth to participate in farming activities.
- Household size is also found to be positively significant, this is due to the increase in the expenditure of the household on food, shelter and basic needs of life, farmers should not marry many wives and should give birth to lesser number of children by practicing family planning.

- Non-Farming activities is found to be positively significant. These activities can be beneficial to their overall financial stability. However, it is important for farmers to prioritize their farming activities as their main source of income and livelihood. Non-farming activities can be seen as complementary to farming activities, but farmers should ensure that their farming activities are not neglected or compromised in any way
- Electricity source is found to be positively significant, this may be as result of increase in tariff from PHCN, high cost of fuel for generators and batteries or increase in amount spend for sourcing for power by the farmers. government should reduce cost of tariff, fuel also transformer, solar and other source of electricity should be provided to farmers.
- Water source is found to be positively significant; this might be due to the fact that household incurred more expenses in sourcing for water or water is not available to carry out farming activities on the farm. government should drill borehole for farmers and make available closer to the farmers.

References

Adamu, B. D., Tanko, F., Barnabas, T. M., & Adejoh, E. U. (2021). DETERMINANTS OF HOUSEHOLD'S POVERTY AMONG CROP FARMERS IN KADUNA STATE, NIGERIA. *FUDMA Journal of Sciences*, *5*(1), 529–538. https://doi.org/10.33003/fjs-2021-0501-600

Adepoju A.A. (2019) Comparative Analysis of Determinants of Household Poverty among Rural Farming Households in Southwest Nigeria Asian Journal of Agricultural Extension, Economics & Sociology29(4): 1-12, 2019; Article no. AJAEES.47192ISSN: 2320-7027

Aderounmu, B. O. (2018). Gender analysis of poverty in Sub-Saharan African Countries. Presented at the 1st covenant university international women's multidisciplinary conference, Covenant University, Ota, Nigeria,

Azeez A. Ademola And S. O. ANALYSIS OF POVERTY STATUS OF RURAL FARM FAMILIES IN AKWA IBOM STATE, NIGERIA GLOBAL JOURNAL OF AGRICULTURAL SCIENCES VOL. 14, 2015: 45-50 COPYRIGHT© BACHUDO SCIENCE CO. LTD PRINTED IN NIGERIA ISSN 1596-2903 www.globaljournalseries.com, Email: info@globaljournalseries.com

Bank, W.(2017). Povcal Net [onlinedatabase]. https://iresearch.worldbank.org/povcalNet/povDuplication.W.aspx. Accessed 5 December 2016. World Bank.

Duniya K.P. and Rekwot G.Z. Determinants of Poverty among Groundnut Farming Households in Jigawa State, Nigeria Asian Journal of Agricultural Extension, Economics & Sociology4(3): 224-230, 2015; Article no. AJAEES.2015.023ISSN: 2320-7027

Ehinomen, C. and Afolabi, B. (2016), "Rising Youth Unemployment and its Social Economic Implications for the Growth and Development of the Nigerian Economy". The Nigerian Journal of Economics and Management Studies. Vol. 6. No. 2. PP 1 – 27. ISSN: 1118 – 7557. Published by: Department of Economics, Ambrose Alli University, Ekpoma, Nigeria.

Girei, A., Abdullahi, A., & Ismaila, G. (2016). Determinants of Poverty Coping Strategies among Women Farmers in Yola South Local Government Area of Adamawa State, Nigeria. *Asian Research Journal of Agriculture*, *2*(4), 1–9. https://doi.org/10.9734/arja/2016/30353

Grote, U. (2018). IFPRI: Global Food Policy Report 2018. *Food Security*, *10*(6), 1665–1667. https://doi.org/10.1007/s12571-018-0844-x

Nindi, A.G. and Odhiambo, N.M. (2015): Poverty and Economic Growth in Swaziland: An Empirical Investigation. Managing Global Transitions 13 (1): 59–7.

Ogundipe, A. A., Ogunniyi, A., Olagunju, K., & Asaleye, A. J. (2019). Poverty and income inequality in rural agrarian household of southwestern Nigeria: The gender perspective. The Open Agriculture Journal, 13(1), 51–57. https://doi.org/10.2174/.

Ogunniyi, A., Oluseyi, O. K., Adeyemi, O., Kabir, S. K., & Philips, F. (2017). Scaling up agricultural innovation for inclusive livelihood and productivity outcomes in sub-Saharan Africa: The case of Nigeria. Afr Dev Rev, 29(S2), 121–134. https://doi.org/10.1111/1467-8268.12267.

Okere, C. P., & Shittu, A. M. (2012). Patterns and Determinants of Livelihood Diversification among Farm Households in Odeda Local Government Area, Ogun State, Nigeria. Paper Presented at the Nigerian Association of Agricultural Economist Conference held at Obafemi Awolowo University, Ile-Ife between 25-27 September, 2012. Theme: Agriculture in the National Transformation Agenda: The Policy Mix.

Okpachu, S. A.1, Madu, U. V. and Okpachu, G.A(2017), 'Assessment of rural farm household poverty: Evidence from Potiskum Local Government Area of Yobe State, Nigeria'Sky Journal of Agricultural Research Vol. 6(2) 022 – 02

Olarinde, L. O., Abass, A. B., Abdoulaye, T., Adepoju, A. A., Fanifosi, E. G., Adio, M. O., Adeniyi, O. A., & Wasiu, A. (2020). Estimating Multidimensional Poverty among Cassava Producers in Nigeria: Patterns and Socioeconomic Determinants. *Sustainability*, *12*(13), 5366. https://doi.org/10.3390/su12135366

Oluwatayo, I. B. (2014). Gender dimension of poverty and coping options among smallholder farmers in eastern Nigeria. Medterr J. Soc. Sci, 5(27), 49–61. https://dx.doi.org/10.5901/mjss.2014.v5n27p49.

Omobowale, A. O. (2014). Livelihood, agro ecological zones and poverty in rural Nigeria. Journal of Agricultural Science, 6(2), 103–113. https://doi.org/10. 5539/jas. V6n2p103.

Oyinbo, O. and Rekwot, G.Z. (2014): Agricultural Production and Economic Growth in Nigeria: Implication for Rural Poverty Alleviation, Quarterly Journal of International Agriculture 53 (2014), No. 3 Pp 207-223.

Ugwuja, V.C., Adesope, O. M., Odeyemi, T. J., Ifeannyi-Obi, C. Cand Nkwakasi. R. (2011). Socioeconomic Characteristics of Farmers as Correlates of Fertilizer Demand in Ekiti State, South West Nigeria: Implications for Agricultural Extension. Greener Journal of Agricultural Science 1 (1), 48-54

UNDP. (2016). Human Development Report: Human Development for Everyone. New York: UNDP. http://hdr.undp.org/sites/default/files/2016_human_devel_opment_report.pdf.

United States Agency for International Development [USAID]. (2015) Nigeria Development. Abuja, Nigeria: Author.