

ANALYSIS OF POVERTY STATUS AMONG FARM HOUSEHOLDS IN DEKINA LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA.

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ABSTRACT

This study analyses the poverty status among farm households in Dekina Local Government Area of Kogi State, Nigeria. Descriptive statistics was used to analyze the socio-economic characteristics and the coping strategies adopted in the event of poverty. FGT model was used to analyze the poverty status and Logit regression was used to analyze the factors influencing poverty status among the farming households. Most of the respondents (59.1%) were categorized non-poor, 32.6% were categorized moderately poor while 8.3% were grouped to the poor category. Education, farm size and annual income have positive relationship with poverty status (Non-poor), while age, gender, household size and credit facilities have an inverse relationship with the dependent variable (non-poor). Coping strategies adopted include; selling of assets (35%), reliance on help from relatives (32.5%), purchasing less preferred food (28.57%), and skipping meals (22.5%). However, majority (89.17%) of the respondents adopt taking loan as poverty coping strategy, while some engaged in other income generating activities (85.71%) and engagement in mixed farming (70.59%). The study concluded that, households' whose MPCHHE falls below ₦11,447.91 is considered poor hence, the number of respondents below the poverty is lesser than those that escaped the threshold and those below the threshold availed with a number of coping strategy option to thrive and sustain. The study recommended that there is a need for establishment of information centers in the study area by the government. Such information centers would be able to provide the rural farmers with adequate information on poverty reduction and coping strategies.

Keywords: Poverty, Farm Households, Logit , Coping strategies

INTRODUCTION

Poverty is a menace and attracts attention of all its organs and stakeholders. Some attributed this situation to growth in population, reduction in food production capacity, while others see it as imperfection in income distribution. The most disheartening aspect of poverty in Nigeria is that the country is rich but large percentage of the populations wallow in poverty (Idoko, 2014). Poverty is still wide spread across different parts of the country. Food insecurity and poverty situation in Nigeria is getting worse with passage of time due to a

number of factors among which are, wide gap between food supply food demand, deficiency in health and hygiene management, welfare of the people, attribute of low income and savings, inadequate resources to catch up with nutritional diet (FAO, 2021). There are many different approaches to defining poverty but the basic needs approach is commonly applied, particularly in developing countries where a bigger majority of the people struggle to attain a predetermined minimum level of income to satisfy their basic needs (Maloma, 2016).

Africa harbors most of the poorest countries in the world because of so many factors such as poor leadership, low technology, war and ethnic strife, natural disasters (Stephen and James, 2012). Presently, majority of citizens of sub-Saharan Africa are rural residents and depend on agriculture for a large share of their income. Hence, since poverty goes beyond income and consumption, targeting and ending it in all forms becomes appropriate (Ebenezer, 2014). Most of the previous studies on poverty did not recognize the effect of ignoring certain income source in poverty calculation. In view of this, the study intends to analyze the poverty status among farm households in Dekina Local Government Area, Kogi State, Nigeria bearing in mind the factors that affect the welfare status of individuals and groups in the society. The study specifically described *the* socio-economic characteristics of the respondents, determined the poverty status among households in the study area, examined the factors influencing poverty among farming households in the study area and identify the coping strategies adopted in the event of poverty in Dekina Local Government Area, Kogi State.

MATERIALS AND METHODS

The study was conducted in Dekina Local Government Area Kogi state, Nigeria located on latitude 7⁰41'41"N to the north and longitude 7⁰01'20" E to the east. It has a land area of 2461Km² (950 square ml) and a population of 260,312 at 2006 census. Dekina LGA is made up of over 50 villages and about 5 major towns namely; Dekina town, Anyigba town,

Agbeji, Itama, Egume, Iyale. Rainfall reaches an average of 2,000 per annum. This depicts high precipitation. The population for this study comprises of all farming households in Dekina Local Government Area of Kogi State.

A two stage random sampling procedure was employed in selecting the respondents for this study. Data was collected from three major districts in Dekina: Okura, Dekina and Biraidu. In stage one; two farming communities were randomly selected from each district to make six farming communities and at the second stage; twenty farm households were selected from each of the farming communities to make a total of 120 respondents for the study. Primary data was collected and used for this study through the use of a structured questionnaire and interview method to take care of respondents with no formal education. Data was analyzed using both descriptive and inferential statistics. The poverty status among farming households was analysed using FGT model and poverty line. Factors influencing poverty among farming households was analysed using Logit regression analysis.

Model Specification.

In line with recent work on poverty, the analysis in this study used the per capita household expenditure as a measure of poverty incidence and for determining the poverty line.

FGT Model

The Foster, Greer and Thorbecke (FGT) poverty index was used to determine poverty levels among the respondents. It is generally given as:

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^{\alpha} \quad (1)$$

where:

P = Foster, Greer and Thorbecke index ($0 \leq P \leq 1$), N = total number of respondents i.e farm households sampled, q = number of respondents below the poverty line i.e poor people, z = the poverty line, Y_i = per capita household expenditure of the i th respondent, α = non-negative poverty aversion parameter (0, 1 or 2).

The analysis of the poverty status of the households were decomposed into the three indicators i.e. prevalence of poverty (P0), poverty depth (P1) and severity of poverty (P2). **Note:** If $\alpha = 0$, the index become $Po = q/n$ this gives the head count ratio or the incidence of poverty which is the percentage of respondents in poverty i.e whose per capita expenditure is below the poverty line. If $\alpha = 1$, it reflect both incidence and depth of poverty or the proportion of the poverty line that the average poor will require to attain to the poverty line.

If $\alpha = 2$, the index measure the severity of poverty which is the mean of square proportion of the poverty gap. When multiplied by 100, it gives the percentage by which a poor household's per capita expenditure should increase to push them out of poverty (Foster and Thorbecke, 2020).

$$Po = \frac{1}{N} \sum_{i=1}^N I(y_i < z) \dots\dots\dots (2)$$

Where Po = the fraction of the population below the poverty line, $I(.)$ = the indicator function that takes the value of 1 if the bracketed expression is true and 0 otherwise, y_i = household income, z = poverty line, N = total number of poor

Poverty Incidence

Poverty incidence among the Respondents was estimated using the monthly per capital expenditure approach (MPCHHE), 2/3 MPCHHE for moderate poor and 1/3 MPCHHE for core poor households.

Logistic regression model.

The logistic (logit) probability function is given as

$$P_i = \frac{1}{1 + e^{-Z_i}} = f(Z_i) \dots\dots\dots (3)$$

Where P_i is the probability that a household i ($i = 1, 2 \dots n$) will be poor. Index Z_i is a random variable which predicts the probability of a household being poor or non-poor.

Implicitly, the model is empirically estimated as

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \dots \dots \dots \beta_{11} X_{11} \text{ ----- (6)}$$

where:

Y = Poverty status of farm households sampled (1= if poor, 0 otherwise), X₁ = Farm size (hectares), X₂ =Highest educational level (years of formal schooling), X₃ = Farming experience (years), X₄ = Age of household head (years), X₅ = Age squared (years²), X₆ = Sex (male = 1, female = 0), X₇ = No of adult in household, X₈ = Off farm income (₦), X₉ = Household size (number), X₁₀ = Membership of farmer association (member = 1 and 0, otherwise), X₁₁ = Amount of credit accessed (₦), ϵ = errors term.

RESULTS AND DISCUSSIONS

Results of respondents Socio-economic characteristics of respondents, Poverty incidence among the respondents, factors influencing poverty in the study area are presented in the tabular forms and further discussed as follows:

Socio-economic characteristics of respondents

Result on Table 1 showed the distribution of respondents based on their socio economic characteristics. Results revealed that majority of the respondents (53.33%) are of age 20-30years which clearly shows that the respondents are still in their active working ages and most of the respondents are male (71.67%) which is in line with the work of Adewunmi (2013) who reported that most (83.7 %) of the households were headed by male. Result revealed that 61.89% of the respondents were divorced. Also, 30% of the respondents completed either primary or secondary education each or only 14% having tertiary education. Majority of the respondents (70%) were involve in secondary occupation to meet up and sustain livelihood as farming alone may not provide for their needs. Most of the household sizes (55%) have between 6-10 members which is fairly large. This is in consonance with Ibrahim and Umar (2008) further shows that majority (71.43%) of the non-poor farming households have about 4-6 household members.

Table 1: Distribution of respondents according to socio-economic characteristics.

Socio-economic Variables	Frequency	Percentage
Age		
20-30	64	53.33
31-40	49	40.83
41-50	3	2.50
51-60	3	2.50
61 and above	1	0.83
Gender		
Male	86	71.67
Female	34	28.33
Marital status		
Single	8	6.67
Married	98	81.67
Divorced	11	9.17
Widow	3	2.50
Level of Education		
No formal education	31	25.83
Primary education	36	30.00
Secondary education	36	30.00
Tertiary education	17	14.17
Secondary occupation		
Yes	85	70.83
No	35	29.17
Household size (Numbers)		
1-5	45	37.50
6-10	66	55.00
11-15	9	7.50
Farming experience (years)		
1-10	74	61.67
11-20	35	29.16
21-30	9	7.5
30 and above	2	1.66
Farm size (ha)		
0.5-3	105	87.50
3.5-6	14	11.67
6.5-9	1	0.83
Access to credit		
Yes	62	51.67
No	58	48.33
Member of cooperative society		
Yes	76	63.33
No	44	36.67
Monthly income		
10,000-50,000	115	95.83
60,000-100,000	4	3.34
110,000-150,000	1	0.83
Contact with extension agent		
Yes	47	39.17
No	73	60.83

Source: Field survey, 2019.

The poor households on the other hand have larger household size. Also, 51.67% of the respondents have access to credit facilities while 63.33% are also member of cooperatives and majority of the respondents make monthly income of just between ₦10,000 – ₦ 50,000 naira only.

Poverty incidence among the respondents.

Results in Table 2 show the poverty incidence of respondents and poverty line was constructed to determine poverty status of the respondents.

Table 2: Distribution of respondents according to poverty incidence.

Poverty Status	Frequency	Percentage
Core Poor	10	8.3
Moderate poor	39	32.6
Non-poor	71	59.1
Poverty Indices		
Po	0.408	
P1	0.301	
P2	0.091	
MPCHHE	= ₦ 34, 343.75	
2/3 MPCHHE	= ₦ 22, 895.83	
1/3 MPCHHE	= ₦ 11, 447.91	

Source: Field Survey, 2019. Monthly Per Capita Household Expenditure (MPCHHE)

Results show that any household whose MPCHHE falls below ₦ 11,447.91 is considered poor, while those with higher values are considered non-poor. Given this poverty line, results shows that a large portion of the respondent (59.1%) were categorized core poor, 32.6% were categorized as moderate poor while 8.3% were grouped to be Non-poor. This revealed that the incidence of poverty in the study area is not severe as majority of the respondents is above the poverty line. The result shows that the poverty prevalence, P₀ is 40.8% and the poverty depth, P₁ is 30.1% which means that, the poor households require 30.1% of the poverty line to escape from poverty group.

Poverty severity, P_2 value was 2.47%. This implies that 2.47% of the fall into the category of the poor of the poorest. Results show that any households who's Mean Per Capita Household Expenditure (MnPCHHE) falls below ₦1, 336.70 is considered poor, while those with higher values are considered non-poor. Given this poverty line, the incidence of poverty was 28.80 percent, while 0.8 percent was core poor. Poverty depth is 0.0527. This shows that the poor rural households require 5.27 percent to escape from the poverty group. This is supported by the work of Oyekale *et al.* (2006) who reported that the households' per capita expenditure on food and non-food items was used in the classification of households into poor and non-poor through the poverty line.

Factors influencing poverty

Results in Table 3 show factors influencing poverty among farming households of the respondents.

Table 3: Logistic regression according to the factors influencing poverty of respondents

Non-poor	Coefficient	Std. Error	Z	P>/z/
Age	-.2459	.0513	-4.78	0.000***
Gender	-1.2672	.5702	-2.22	0.026**
Education attainment	0.9932	.3993	2.49	0.013**
Farm Experience	0.0600	.0445	1.35	0.178***
Farm size	0.1246	.2788	0.45	0.655***
Annual income	1.42×10^{-4}	2.84×10^{-4}	0.70	0.487***
Annual Income	1.42×10^4	2.84×10^4	0.70	0.487***
const.	10.9655	2.7078	4.05	0.000*
Number of obs.	120			
LR Chi2(6)	101.85			
Prob.>Chi2	0.0000			
Psuedo R ²	0.6275			

Source: Field survey, 2019.

Regression results in Table 3 reveal the factors that influence poverty status of the farm households with R-square value (0.6275) which implies that 62.75% of the changes that occur in poverty status of the respondents are caused by the variables included in the model. The results also revealed that, coefficients education status (0.9932), farm experience (0.0600), farm size (0.1246) and annual income (1.42×10^4) have positive relationship with the non-poor household variable hence, unit increase in the application of this variable would rather increase food security and reduce poverty status in the study area. In addition, the result of education attainment was statistically significant at 5%, while farm size, farm experience and annual income were significant at 1% level respectively. This shows that non-poor households has a better welfare in terms of food security with unit increase in this variables. This is in consonance with the study carried out by Oyekale *et al.* (2006) who revealed that the factors that determine the poverty status of the respondent households in Ogun Waterside Local Government Area of Ogun State show that all the estimated parameters have the expected signs. This implies that as these variables increase, the probability of a non-poor household while that of the poor household declines.

Conclusions and Recommendations

This study conclude that poor economic planning and social policies had rendered significant population of people dejected and neglected due to the effect of poverty. This is an indication that poverty is not only institutionalized but highly endemic. Following this assertion, one may consider the poor as those who are unable to obtain adequate income, find a stable job, own property or maintain healthy living condition, lack adequate level of education and are often regarded as illiterates. The study concluded that households' whose MPCHHE falls below ₦11, 447.91 is considered poor. It is recommended that government at all levels should enhance the farm households' accessibility to credit facilities through the financial institution in order to expand production and improve their standard of living.

The government and private stakeholders need to make available an accessible seasoned and qualified extension agents or other adequate media information that could enhance poverty reduction and feasible coping strategies. Policies that will ensure equitable accessibility farm lands by both male and female farmers to encourage equality and farm mechanization instead of the subsistence farming hence, abolishing the land tenure menace.

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