

The Incidence and Severity of Poverty among Small-scale Farmers in Ogbomoso Area of Oyo State

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Abstract: This study investigated the incidence and severity of poverty among small-scale farmers in five local government area of Ogbomoso ADP Zone, Oyo State. Systematic random sampling was used to select the small scale farming households and structured questionnaire was administered on selected sample of one hundred and fifty (150) respondents. Head count ratio, Poverty gap index, Sen Index, frequency counts was used to analyze the data.

The study revealed that most small-scale farmers in the area were male, mature and responsible but with large household size and no formal education, their income level is also quite low. About 28% of small – scale farmers were extremely poor, 20% were moderately poor and 52% are non- poor. It was revealed that severity of poverty was seriously felt in Ogbomoso North and South than in Oriire LGA and the poverty gap was considerably large at Oriire LGA. The probability of being poor is reduced by increase in educational level, farming experience, number of farm enterprise, farm size and income level of the farmers. But the probability of being poor is increased by increase in household size. Farmers should be encouraged to diversify into many enterprises and also increase their farm size in order to increase their income

Keywords: Poverty, severity, incidence, small-scale farmer, and household.

INTRODUCTION

Poverty as a concept does not lend itself to an easy and precise definition. The analytical exploration of the concept and definition is fraught with a number of difficulties. This is because it affects many aspects of the human conditions/situations including physical, moral and psychological that a concise and universally acceptable definition is elusive (Blackwood and Lynch, 1994).

Poverty is often defined in terms of inadequacy of income or disposable resources to support a minimum standard of decent living, its characteristics of poor nutritional status, lack of

physical assets and inability to work are sufficiently well correlated with income and consumption expenditure to allow us focus on these two variables (Ravallion, 1992) However, indicators such as illiteracy, access to education, safe water, health and housing if adequate are also used to measure poverty (Rasheed, 1996).

The general consensus is that most of the poverty in Nigeria is related to agriculture. The World Bank (1996) reported that the number of rural poor is about twice that of the urban and that the depth of poverty is more than double in rural area. Small – scale family land operators still dominate the agricultural sector in Nigeria. Most

farming households operate land owned through inheritance and acquisition through family ties. More than 50% of farmers own their land (invariably small pieces of land) and few are in rental or squatter tenureship (Okunmadewa, 1993).

Interestingly, the owner operators in view of the fragmented structure of such farmlands as well as other issues surrounding the operation of such land are less prosperous than renters and squatters. The poverty headcount or incidence among owner occupied farmlands is higher (Okunmadewa, 1993).

Poverty can be chronic or transitory depending on how long poverty is experienced by an individual or a community. Poverty can also be absolute or relative. Absolute poverty is the situation of lack of access to resources needed to obtain the minimum necessities required to maintain physical efficiency. Relative poverty, on the other hand, is the inability to maintain a given minimum contemporary standard of living (Okunmadewa, 2001)

The significance of micro or small scale enterprises as defined in terms of the general role in economic development which focuses on firms as the instruments for poverty alleviation is rooted in the fact that poverty is produced, sustained and substantiated within the household (Falusi, 1995). In Nigeria, the household based small/micro enterprises are the sure bet for poverty alleviation. This set of the populations according to Idachaba (2000) will constitute the backbone of Nigeria agriculture for the next 25 years, the contrary wishful thinking of some leaders and policy makers not withstanding.

The poor small –scale farmers are the central focus in poverty studies, people are termed

poor when their measured standard of living in terms of income or consumption is below the poverty line (Obadan, 1997). Constraints to growth and performance of small/micro enterprise in the agricultural sector include: Low – productive production technology, low technology adoption and low rate of use of adopted technologies, low- income, low capital formation in agriculture, decreasing man- land ratio, other constraints to growth and performance are low level of investment and low budgetary allocation to the sector, low level of rural savings mobilization, problems of unworkable agricultural credit administration, low level of agricultural growth of less than 3% per annum and finally problem of agricultural policy mistakes, policy failure and policy distortions (Rahji, 2000).

Poverty thresholds were the dollar amounts used to determine poverty status. Poverty line has been described as the “cut – off” or the minimum standard of expenditure on food or per capita income, below which an individual is described as poor (Ravallian, 1992).

The objectives of the study

Specific objectives of the study are to:

- i. identify and describe the socio-economic characteristics of the small-scale farmers sampled,
- ii. find out the main livelihood activities and income sources among the respondents, and
- iii. describe the poverty incidence and severity among the small scale farmers.

The hypothesis was stated in null form as follows; There is no significant relationship between the farmers’ socio economics characteristics and their poverty level.

METHODOLOGY

The study was conducted in Ogbomoso in Oyo State. Cross –sectional observation of one-hundred and fifty (150) small – scale farmers was made. Ogbomoso is the second largest town in Oyo State with an urban population of about 657,417 (FGP, 2006 Census) and lies between latitude 8° 29’ North of the equator and between 4°30’ North of the Greenwich Meridian. Ogbomoso has an area landmass covering about 37,984 square kilometres and located in the northern part of Oyo State.. The vegetation of Ogbomoso is dominated by derived savannah vegetation and agriculture is the main occupation of the people.

Both primary and secondary data were used in the study; copies of questionnaires were administered to the small- scale farmers. Some of the information gathered in this study includes the socio- economic characteristic of the respondents, information relating to respondent with crop and livestock production, income and expenditure of the small scale farmers.

About one hundred and fifty (150) small – scale farmers were sampled using multistage random sampling technique within Ogbomoso zone. There were five local government areas in Ogbomoso zone (Ogbomoso North, Ogbomoso South, Ogo-oluwa, Oriire, and Surulere) and two communities/villages were randomly selected from each local government area, systematic random sampling was used to choose fifteen (15) small-scale farming households in each community/village; all the samples made a total of one hundred and fifty (150) respondents.

Descriptive and inferential analyses were used, data were analyzed using such tools like

headcount index, poverty gap index, severity index, and frequency distribution

The first three measures are represented mathematically thus:

(i)..... $P_0 = q/n$ – headcount ratio

(ii)..... $P_1 = 1/n = \frac{q}{\Sigma} [Z - Y_i]$ – poverty gap index

(iii)

$S = P_0 \{PGR + (1 - PGR)GP\}$ – Severity index

The variable in the model are:

Y_i = Income of the poor

Z = Poverty line

q = Number of people below the poverty line

$P_0 = q/n$ = headcount ratio

$PGR = \sum \left\{ \frac{(z - y_i)}{qz} \right\}$ = Poverty gap ratio

GP = Gini co – efficient among the poor

$S = P_0 (PGR + (1 - PGR) GP)$

Gini coefficient GP is simply expressed as

$GP = 1 - \frac{\sum XY}{\sum k^2}$ where X = percentage of poor in the category (each LGA)

Y = cumulative proportion of the poor in the whole study area

Model Specification

Logistic distribution

$Pr ob(y=1) = 1 - L \left(\sum_{k=1}^k \beta k \times k \right) = L \left(\sum_{k=1}^k \beta k \times k \right) = L = ek = \frac{1\beta k \times k}{\sum_{1+ek=1}^k \beta k \times k}$

For the logit model the choice probabilities are given by:

$P_1 = F(x_i^1 \beta) = F(1_i)$ (2)

Where F(i) is the cumulative distribution of a logistic random variable and given by:

$P_1 = F(x_i^1 \beta) = \frac{1}{1 + e^{-\beta x}} \quad (\log it)$ (3)

RESULTS AND DISCUSSION

Concerning the socio economic characteristics of respondents, 83.3% were male farmers while 16.7% were female. Larger percentages of the farmers (38.7%) are in the age range of 41-50 years. Majority were married (80.0%) while 41.3% of the respondents had no formal education. About 34.0% had an average of 8 household members and 52.0% had an average of N12,500 as their monthly income. This implies that most small-scale farmers in the area are male, mature and responsible but with large household size and no formal education, their income level is quite low.

Table 1. Socio-economics characteristics of the respondents

Variables	Frequency	Percentage
Sex		
Male	125	83.3
Female	25	16.7
Age		
< 20	7	4.6
21- 30	15	10.0
31- 40	30	20.0
41 - 50	58	38.7
50 and above	40	26.7
Educational Level		
No formal education	62	41.3
Primary	26	17.3
Secondary	30	20.0
Tertiary Education	32	21.3
Marital Status		
Married	120	80.0
Separated	-	-
Divorced	-	-
Widowed	9	6.0
Single	21	14.0
Households Size		
1- 3	26	17.3
4- 6	42	28.0
7- 9	51	34.0
10 and above	31	20.7
Income level/month		
1,000 - 5,000	10	6.7
5,001 - 10,000	15	10.0
10,001 - 15,000	78	52.0
15,001- 20,000	21	14.0
20,001 - 25000	15	10.0
> 25,000	11	7.3
Total	150	100

Source: Field Survey, 2007

Table 2.0 revealed the poverty incidence, depth and severity among the small-scale farmers. The use of the poverty lines consistent with the typical consumption and expenditure behaviour among small-scale farmers in the study area suggested the poverty incidence in the study area. The results indicated (in Table 2) that 28% of the farmers' households were extremely poor, 20% were moderately poor and 52% were non-poor in the area. Incidence of poverty was far more intense in Ogbomoso North Local Government Area (8%) than in Orire Local Government Area (3.3%), and in all 42 households of the small-scale farmers out of a total of 150 were poor in Ogbomoso; this is well explained in Table 3.0.

Table 2: Poverty incidence of small-scale farmers

Location	Extreme Poor	Moderate Poor	Non-poor	Percentage
Ogbomoso North	8.0	2.6	11.6	22.2
Ogbomoso South	6.0	1.8	7.8	15.6
Ogo-Oluwa	4.7	4.5	9.2	18.4
Oriire	3.3	9.4	14.7	27.4
Surulere	6.0	1.7	8.7	16.4
Total	28	20	52	100

Source: Field Survey, 2007

Table 3: Distribution of Poor Farmers in each Locality Surveyed.

Location	Total household	Poor H/H	Percentage
Ogbomoso North	30	12	40
Ogbomoso South	30	9	30
Ogo-Oluwa	30	7	23.3
Oriire	30	5	16.7
Surulere	30	9	30
Total	150	42	

Source: Data Analysis, 2007 Field Survey

Table 4.0 showed that poverty gap index was considerably lower (small) in Ogbomoso North (5.4%), Ogbomoso South (7.1%) and Surulere LGA (7.1%), than in Orire which was 12.9%. The poverty measures P2 suggested higher severity of poverty in Ogbomoso North (8.4%)

than in Orire LGA (3.6%). In order to locate the poor, the percentage distribution of the poor was derived from the headcount index (Po) and it confirmed that 42.9% and 32.1% of the poor

households were located in Ogbomoso North and South LGA respectively. The normal distribution of poor farmers in each locality surveyed (Table 3) also supported the above conclusion.

Table 4: Poverty Incidence and Severity among the respondents

Location	Headcount (Po)	Poverty Gap (P1)	Sen Index (P2)	Percent share poor	percent share Population	Location Index
OGBOMOSO	28.0	1.5	19.7	100	150	100
Ogbomoso North	8.0	5.4	8.4	28.6	40.0	71.5
Ogbomoso South	6.0	7.1	6.4	21.4	30.0	71.3
Ogo-Oluwa	4.7	9.2	5.1	16.7	23.3	71.7
Oriire	3.3	12.9	3.6	11.8	16.7	66.5
Surulere	6.0	7.1	6.4	21.4	30	71.3

Source: Field Survey, 2007

A location index was derived to know the percentage share of the poor in each LGA. This is done by dividing the percentage share of the poor in each region by the corresponding percentage share of respondents in each LGA. The index revealed that the percentage share of poor in Orire LGA was the least amidst other LGA.

The hypothesis was tested using logit model, poverty level of the farmer was the dependent variable and the socio economics characteristics were the explanatory variables. From

Table 5.0, it was revealed that educational level, farming experience, number of farm enterprise, income level and farm size were negatively significant while household size was positively significant. This means that the probability of being poor is reduced by increase in educational level, farming experience, number of farm enterprise, farm size and income level of the farmers. But the probability of being poor is increased by increase in household size.

Table 5: Logit Analysis showing Relationship between the poverty level and socio –economic characteristic of small scale farmers in the study Area

Description of the Variable	Co- efficient	t - ratio
Farmer's Sex (1= female, 0 = male)	3.262	2.637
Farmer's Age(years)	- 0.202	-0.701
Marital status (1 single, 0 = married)	25.030	0.348
Household size	0.322	0.904*
Education level	- 0.596	-2.453**
Major occupation (farming)	2.869	3.063***
Farming Experience (years)	0.210	0.901*
Type of farming (Enterprise)	- 2.322	2.106**
Social Group	- 0.513	-1.049 *
Accessibility to farmland	0.208	2.929***
Farm size	-0.115	-1.009
Number of Right Predictions	125	
percentage of Right Predictions	83	
Sample Size (number)	150	
Log –Likelihood function	- 57.776	
Log – Likelihood(0)	- 88.943	
Likelihood Ratio test (13)	62.335	

*** = Significant at 0.01 level ** = Significant at 0.05 level * = Significant at 0.10 level
No of valid cases: 150. Source: Field Survey, 2007

CONCLUSION AND RECOMMENDATION

The study exposed the level of poverty among small scale farmers in all the local government areas of Ogbomoso zone. It was revealed that severity of poverty was seriously felt in Ogbomoso North and South than in Oriire LGA and the poverty gap was considerably large at Oriire LGA. Also there is high probability of being poor if the farmer continues to increase his household size. Whereas increase in educational level, farming experience, number of farm enterprise, farm size and income level of the farmers will reduce the probability of being poor.

Based on the results from this study, it is therefore recommended that;

- i. A stable environment should be provided to promote rapid economic growth; policies that make productive use of labour will definitely expand the employment and income earning opportunities for the majority of small – scale farmers in the study area.
- ii. Poverty remedies should include provision of the adequate basic social services for the small- scale farmers' especially adult education, primary health care and family planning. Provision of these social services will improve their lot and enhance their chance of moving out of poverty line.
- iii. Farmers should be encouraged to diversify into many enterprises and also increase their farm size in order to increase their income. Forming cooperative society and

group farming should be encouraged so that the expansion can be made possible.

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