ANALYSIS OF POVERTY STATUS OF RURAL FARM FAMILIES IN AKWA IBOM STATE, NIGERIA

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ABSTRACT

This study was conducted to provide empirical evidence of the effect of farming on the poverty status of rural farm families in Uyo, Akwa Ibom State, Nigeria. Data were collected from 80 randomly selected farm families in the study area. Both descriptive and econometric tools were employed to analyze the data.The results show that the study area consists of a mixture of extremely poor, moderately poor and non-poor households.While family sizes and farming activity type, enhanced poverty while age, educational status and off farm income by family heads reduced the incidence of poverty. Based on these findings, the study suggests promoting and improving the educational status of the farmers. Farmers are also encouraged to practice mixed farming and engaging in other economic activities such as petty trading and off-farm activities as these will tend to stabilize income thus reducing income volatility. Some of specific programmes advocated to reduce poverty incidence are provision of educational facilities and equipping households with basic skills.

KEYWORDS: Poverty status, rural, farming, family, Akwa Ibom State.

INTRODUCTION

Reducing poverty in developing economies is a major challenge faced by the development stakeholders today (UNDP, 2007). Although poverty is a worldwide phenomenon, it has been observed that Nigeria is one of the countries that is worst hit by the poverty. In fact it is one of the poorest among the poor countries of the world (UNDP, 2007). The situation is alarming as more than 43% (about 67 million) of the population live below the poverty line (FOS, 1996; World Bank, 1999, 2013).

The scourge of poverty is a threat to the Nigerian population as its incidence is on the increase with biting effects more on the rural dwellers where the bulk of the population lives. As stated by NPC (2006), Nigeria is predominantly rural with 63.7% of the population living in the rural areas. In 1995 for example, 49% of the rural population were poor against 31 percent in urban areas. The share of the rural areas in the population of the poor also rose marginally from 66% in 1992 to 68.9% in 1996, implying that about 48 million Nigerians in rural areas were poor in 1996 (FOS, 1999; Anyanwu, 1997; Awoseyila, 1999).

There has been remarkable progress in some parts of the World to reduce poverty. The greatest progress has been made in East Asia and the Pacific, where the share of the poor fell from 30% in the 1990 to 9% in 2004. In contrast, the share of the poor in sub-Saharan Africa (Nigeria inclusive) has decreased by a little more than 5% and remains above 40% (Ravallion *et al*., 2007). This scenario of rural poverty is against the backdrop that rural people are not only isolated from economic opportunities, but they also tend to have less access to social services such as health, sanitation, education and economic services like electricity and good water supplies. The CBN/World Bank study on Poverty Assessment and Alleviation in Nigeria (1999) showed deteriorating environmental conditions for the poor rural households. It is therefore imperative to assess the poverty condition and levels for a proper understanding of the challenges posed by the incidence of poverty. It is obvious that attempts to solve overall or specific poverty problems would require a clear articulation of the poverty situation. What amount of resources should be allocated, to which group of poor, area and region (urban/rural), sector (sub-sector) and/or targeted activities is often premised on the poverty measure. What changes has occurred to the welfare of the people as a result of complementation of a particular policy or programme is also discernible from poverty measure (Baulch and Hoddinott, 2000; Okumadewa, 2001).

Also, as posited by Ajakaiye and Adeyeye (2001), a deep insight into the nature of poverty remains imperative in order to approximately design successful poverty alleviation programmes. An understanding of rural household poverty situation is therefore a precondition for effective pro-poor development strategies. A clear understanding of who are the poor? How poor are they? How many are poor or what groups are vulnerable to poverty. Is poverty increasing or decreasing and at what rate are imperative for meaningful articulation of remedial intervention and its cost implication.

This study is, therefore, conducted to identify the factors which affect the poverty status of farm families and ascertain poverty-enhancing factors with a view to formulating policies for its alleviation.

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MATERIALS AND METHODS

The study was conducted in Uyo Local Government Area (LGA), the capital city of Akwa Ibom State. Primary data were sourced from a survey carried out in the study area in 2006 using a structured questionnaire. Eighty (80) farm families were randomly sampled from Anua and Afaha Oku villages representing Offot and Oku clans respectively in the Local Government Area.

Uyo L.G.A. has a total land mass of about 304,769 sq. km with estimated population of 291,835 people (NPC, 2006). The major occupations of the people are farming and petty trading. They grow a wide range of food crops such as cassava, waterleaf, Telfaria and cash crops like oil palm and rubber.

The analytical techniques used in the study were descriptive (use of percentages) and econometric (logit model).The poverty line was used to determine the scope of the poverty problem. This was constructed using the mean per capita household expenditure (MPCHHE). To ascertain the effect of certain factors on poverty status of households, logit analysis was used. The logit model based on the assumptions of Pindict and Rubenfeld (1982) and Bidani and Ravallion (1994) was used and is stated in general form as shown in equation (1).

$$P_i = E(Y - 1/X_i)$$

$$P_i = \frac{1}{1 + e^{-Z_i}} \quad \text{...............................} \quad (1)$$

where Y = poverty status of household (probability of being poor).

X_i = vector of independent variables.

E = familiar base of the natural logarithm

z_i = $b_1 + b_2 x_i$

Stated explicitly as: $Y = f(x_1, x_2 \ldots x_9)$.................. (2)

Y = Probability of being poor (poverty level of household)

X_1 = Age of household head(years)

X_2 = Sex of household head (D = 1 if male, 0 = otherwise)

X_3 = Household size (number of persons in the household)

X_4 = educational status of household head (no. of years of formal schooling)

X_5 = farm income in Naira/household

X_6 = years in farming(number)

X_7 = off-farm income of household in Naira

X_8 = Type of farming activity (D = 1 if crop, 0 – otherwise)

RESULTS AND DISCUSSION

Socio-Economic Characteristics

Age: Majority of the household heads sampled were between the ages of 38 and 50 years. Considering the average ages of household heads according to the farming system engaged in, those in crop farming have an average age of 44 years; mixed farming 42 years and livestock 40 years. This shows that farmers are in their economic active age (Table 1).

Table 1: Some Socio-Economic Characteristics of Households

No.	Socio-Economic Variables	Mixed Farmers		Livestock Farmers		Crop Farmers		Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
1	Age								
	< 20	8	10.0	4	5.0	3	3.75	15	18.75
	20-40	18	22.5	10	12.5	14	17.5	42	52.50
	41-60	10	12.5	2	2.5	4	5.0	16	20.0
	>60	4	5.0	2	2.5	1	1.25	7	8.75
	Total	**40**	**50.0**	**18**	**22.5**	**22**	**27.50**	**80**	**100.0**
2	Gender of Household Heads:								
	Male	31	38.75	8	10.00	18	22.50	57	71.25
	Female	9	11.25	10	12.50	4	5.00	23	28.75
	Total	**40**	**50.00**	**18**	**22.50**	**22**	**27.50**	**80**	**100.0**
3	Educational Level of Household Heads:								
	No Formal Education	21	26.25	10	12.50	11	13.75	42	52.5
	Primary	5	6.25	2	2.50	3	3.75	10	12.5
	Secondary	4	5.00	2	2.50	2	2.50	8	10.0
	Higher Institution	10	12.50	4	5.00	6	7.50	20	25.0
	Total	**40**	**50.00**	**18**	**22.50**	**22**	**27.50**	**80**	**100.0**
4	Household Size (Persons)								
	1 – 3	10	12.20	5	6.25	7	8.75	22	27.5
	4 – 6	19	23.75	9	11.25	10	12.50	38	47.5
	7 – 10	7	8.75	3	3.75	5	6.50	15	18.25
	11 and above	4	5.00	1	1.25	-	-	5	6.25
	Total	**40**	**50.00**	**18**	**22.50**	**22**	**27.50**	**80**	**100.0**
5	Monthly income from Farming								
	(₦) < 1,000	8	10.00	2	2.50	10	12.50	20	25.0
	1,000 – 4,000	10	12.50	6	7.50	8	10.00	24	30.0
	4,001 – 10,000	15	18.75	8	10.00	4	5.00	27	33.75
	10,001 – 15,000	5	6.25	1	1.25	-	-	6	7.5
	15,001 and above	2	2.50	1	1.25	-	-	3	3.75
	Total	**40**	**50.00**	**18**	**22.50**	**22**	**27.50**	**80**	**100.0**
	Mean Income	*₦9,045.22*		*₦16,309.40*		*₦5,532.14*			
6	Monthly income from Non-farming (₦)								
	< 1,000	2	2.50	-	-	2	2.50	4	5.0
	1,000 – 4,000	8	10.00	1	1.25	-	-	9	11.25
	4,001 – 10,000	12	15.00	1	1.25	1	1.25	14	17.5
	10,001 – 15,000	6	7.50	6	7.50	10	12.50	22	27.5
	15,001 and above	2	2.50	10	12.50	9	11.25	31	38.75
	Total	**40**	**50.00**	**18**	**22.50**	**22**	**27.50**	**80**	**100.0**
	Mean Income	*₦17,840.00*		*₦18,846.00*		*₦13,462.00*			
7	Land Tenureship								
	Owned land	12	15.0	10	12.5	4	5.0	26	32.5
	Family land	20	25.00	2	2.5	7	8.75	29	36.25
	Lease	8	10.0	6	7.5	11	13.7	25	31.25

		40	50.0	18	22.5	22	5 27.5	80	100.0
	Total	40	50.0	18	22.5	22	27.5	80	100.0
8	Household expenditure Food Housing Health Education Transport	N 91,200.00 30,600.00 45,800.00 20,500.00 13,980.00		45,400.00 25,300.00 21,200.00 15,400.00 7,600.00		33,150.0 21,300.0 13,800.0 16,200.0 8,000.00				
	Mean Expenditure	5,052.66		6,382.00		4,156.70			

Source: Field Survey, 2012

Table 2: Poverty status of respondents

No.	Socio-Economic Variables	Mixed Farmers		Livestock Farmers		Crop Farmers	
		Freq.	%	Freq.	%	Freq.	%
i	Non-Poor	15	18.75	14	17.50	11	13.75
ii	Moderately Poor	25	31.25	4	5.00	3	3.75
iii	Core Pore	-	-	-	-	8	10.00
		40	50.00	18	22.50	22	27.50

Source: Field Survey, 2012

Table 3: Poverty gap index for households

	Mixed Farmers	Livestock Farmers	Crop Farmers
Moderately Poor	0.53	0.02	0.187
Core Poor	-	-	0.036

Source: Field Survey, 2012

Table 4: Logit model result for households

	Variables	Estimated Parameters	Standard Error	Parameter Standard Error
X_1	Age of Household Heads	-5.7363	2.526	-2.2298*
X_2	Gender of Household Head	0.2788	0.5796	0.4810
X_3	Household Size	-1.8016	0.9951	1.8104***
X_4	Educational Status of Household Head	4.7756	2.2740	2.1001*
X_5	Farm Income	-6.9433	1.6969	-4.0917
X_6	Years in Farming	0.9428	1.0778	0.8747
X_7	Off-Farm Income	-1.6354	5.5324	-0.2956*
X_8	Type of Farming Activity	2.1747	0.8777	-2.4778**

Person X^2 = 136.26   Estimated Poverty Probability = 0.97
Log likelihood Ratio = 136.26   * Significant at 1% = 2.575
P = 0.63   ** Significant at 5% = 1.960
N = 80   *** Significant at 10% = 1.645
R^2 = 0.5475

Source: Computer Print Out.

Sex: There are more male headed households than female headed ones in the study area. Female respondents were more involved in livestock production. In general, just about a quarter of respondents are female(Table 1). Involvement of more women in the livestock farming can be attributed to small land requirement for livestock production as those are usually located within households.

Level of Education

The level of education in the study area reveals that a little more than 50% have no formal education while the remaining 22% are educated up to primary and post-primary levels (Table 1). This shows that literacy in the area is still low, which might be responsible for the increase in the poverty level of the farmers.

Household size

The average household size in the area is 5. The impact of large household size is such that it reduces per capita expenditure of the household, thereby aggravating poverty in the household. A large proportion of the respondents' households fall between size 1 and 3, and 4 and 6 persons constituting 72.7%, while above 11 persons were the least with 5% and 1.25% in mixed farmers and livestock farmers respectively. Although household size tend to reduce per capital expenditure, it can also enhance it depending on the distribution of household members between adult and children and whether such adults are working, thus supplementing household needs (income) and reducing poverty.

Income from Farming Activities

In comparative terms, among the three economic activities in the study area the respondents involved in crop farming earn less than ₦1,000 monthly from farming activities. Those that earn ₦1,001 – ₦4,000 monthly constitute the largest portion in mixed farming while a sizeable proportion of those engaged in livestock production earn over ₦10,000 monthly (Table 1). Using the average monthly income from farming activities, the result shows that crop farming households have the least value of ₦5,532.14. This is followed by ₦9,045 for mixed farming practitioners, and ₦16,309 for livestock farmers.

Income from Non-Farming Activities

The average monthly income from non-farming activities is ₦13,462 for crop farmers, ₦17,840 and ₦18,846 for mixed farming and livestock farming households respectively. This implies that those engaged in mixed farming and livestock earn more income from non-farm activities therefore have more to spend on basic necessities. Hence, the likelihood of being poor is lower. Fifty (50)% of respondents earn an income of between ₦15,000 and ₦30,000 per month. However, the average monthly income of respondents is ₦19,836 and only about 37% of respondents earn above this average income (Table 1).

Land Tenureship

The security of tenureship is shown as a key consideration in the type of crops grown, as it can be seen that those operating on leased land to be involved in cropping with 13.75%, those on family lands in mixed farming with 25%, while those that own land tend to be involved in livestock farming. Exactly half of the respondents in crop farming operate on leased land while about 12.5% of those in livestock farming own their farmlands.

Household Expenditure

The main household expenditure is on food, transport, electricity, health and education. Expenditure on food constitute more than 50% of total expenditure per month for mixed farmers while it constitute 45% and 39% for livestock and crop farmers respectively. The food items vary from garri, beans, palm oil to vegetables and fruits. On the average, crop farmers spend ₦4,156.70 per month, while those in mixed and livestock farming spend an average of ₦5,052.66 and ₦6,382 respectively on food. On basic needs of households, the average expenditure per month of those engaged in crop farming stood at ₦1,091.03; ₦1,129.10 for mixed farming and ₦1,522.90 for livestock farming household. This implies that those in livestock farming spend more on basic necessities than those engaged in crop farming and mixed farming activities. Thus, the likelihood of being poor is lower than that of their counterparts in other categories.

Poverty Status of Respondents

The total expenditure of households on food and non-food items was used in classifying them into poor and non-poor. The mean per capita household expenditure per month (MPCHHE) is ₦1,949.12. On this basis, ₦1,299.41 is the poverty line for moderately poor households while those with per capita expenditure above ₦1,949.12 are considered to be non-poor.

Of those involved in crop farming, 50% are non-poor while about 40% are poor and about 10% extremely poor. For those engaged in mixed farming, none of the household falls under the core poverty line, 31.25% are moderately poor while 18.15% are non-poor. For livestock farmers 17.5% are non-poor, 5% are moderately poor and none of the households involved in livestock farming is extremely poor. This indicates a lower poverty level for those engaged in livestock farming (Table 2).

The poverty gap index, which indicates or measures what would bring the expenditure of every poor person in the area exactly up to the level of poverty line, thereby eliminating poverty, and the severity of poverty of the 3 types of farming systems are shown in Table 3. The table shows that households that engaged in livestock farming have lower poverty gap index (0.02) as compared to those in mixed farming and crop. Those involved in crop farming have a poverty depth of 0.036 for extremely poor household and 0.187 for moderately poor.

Hence, the amount of expenditure that is required by the moderately poor to cross the poverty cut-off point, supposing payment are to be made to poor households to lift them out of poverty is ₦243.05 for cropping households, ₦68.80 for mixed and ₦26.00 for livestock farming households. Therefore, to successfully alleviate poverty in the area, appropriate policy instruments and approaches should be fashioned to lift farming household out of poverty.

Logit Analysis

The result of the logit analysis is presented in Table 4. The value of R^2 of 54.75 shows that the data fited the model, and is significant at 1%. Nearly all determinants of poverty examined have the expected signs and are statistically significant at the stated probability levels. Hence, the logit result provide a strong support for the result of the descriptive analysis earlier obtained.

Age of household head (X_1), household size (X_3), educational status of household head (X_4), off farm income (X_7) and type of farming activity (X_8), have coefficients that are statistically significant. It therefore follows that those variables are the major determinants of poverty in the study area. Educational status of household head (X_4) and X_7 (off farm income) are significant at 1 percent; age of household head (X_1), type of farming activity (X_8) at 5% household size (X_3) at 10%. The age of the household head is negatively correlated with poverty. In this instance, the older the respondents, the lesser the probability of being poor. This is nonetheless contrary to a-priori expectation. However, the average age of the respondents show that they are in their economic active age. Hence, the ability of the respondents to work in order to earn income which can be used to meet their basic needs.

In terms of household size, the larger the size of the household the more the likelihood of being poor. This shows that large size households tend to reduce per capita income available and hence the average per capita expenditure reduces as household size increases. Larger household sizes can therefore be said to be poverty enhancing most especially when they are not of working age. Type of farming activity increases the likelihood of poverty as revealed by the analysis. The possible reason for this being that mixed farming activities could help a farmer to increase production and stabilize/ reduce the volatility of income. The result also shows that the higher the off farm income, the lower the likelihood of being poor. Off farm income can be used to augment the gains from farming activity.

POLICY IMPLICATION

Policies designed to reduce the incidence of poverty must be hinged on the following: provision of adequate educational facilities, equipping the rural households with basic skills, thereby increasing their non-farm income generation potential. Also, family planning programmes should be adopted and people need to be educated on the importance of small family size and that large family size enhances poverty – indicating a severity of dependency effect, as households get larger.

CONCLUSION

It was also found out that age, household size, education, off farm income and type of farming activity practiced are significant determinants of poverty. Hence, promoting and improving the educational enlightenment and encouraging livestock mixed farming will be positive steps in the reduction/eradication of poverty in Uyo Local Government Area of Akwa Ibom State. Farmers are also advised to be engaged in other off-farm economic activities to diversify their income base.

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