International Journal of Humanities and Social Science Invention
ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714
www.ijhssi.org Volume 2 Issue 5 ǁ May. 2013ǁ PP.11-16

Analysis of the Effects of Farmers Characteristics on Poverty Status in Delta State

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ABSTRACT: *The focus of the study was on farmers' characteristics and poverty status in Delta South senatorial district, Nigeria. Data were collected from 244 respondents using a two stage sampling technique. Data collected through a structured closed questionnaire were analysed using frequency counts, percentages, means, Foster, Greer and Thorbecke model and logit regression analysis. Findings revealed that 48.8% of respondents were males and 51.2% were females. The modal age was 41-50 years and a mean of approximately 45 years. About 79.9% of respondents were married.35.7% did not go to school and 64.3% had formal education at various levels. The mean household size was approximately 6 persons. Respondents mean farm size was 0.8 hectares. The result of the logit regression analysis showed that sex (0.574), educational status (0.249) and farm size (-0.339) had significant influence on poverty status of respondents. It was concluded that poverty status among farmers in Delta South Senatorial District is high with gender issues, poor educational levels and small farm sizes accounting for the more for the high poverty status. It is recommended that in developing poverty reduction programmes in the area, the sex, educational attainment and farm size of the people should be critically considered.*

I. INTRODUCTION

Poverty exists when one or more persons fall short of the level of economic welfare deemed to constitute a reasonable minimum, either in some absolute sense or by the standard of a specific society (Lipton & Ravallion, 1995).

The rate of poverty with its attendant effects on the nation and the rural populace specifically is on the increase. It is reported that one out of five in the world's population lives in extreme poverty (DFID, 2005). The incidence of poverty in Nigeria stands at 69.2% of the population (CBN, 2000). Despite its plentiful resources, poverty is widespread in Nigeria especially in the rural areas (IFAD, 2006) who are responsible for producing 90% of the nation's food. If the poverty situation is to be addressed, then emphasis should be placed on the rural populace who are the backbone of food production in the nation. It is perhaps this understanding that prompted previous government to make poverty alleviation a policy thrust with the establishment of agencies and programmes such as Agricultural Development Project, The National Economic Empowerment Development Strategy (NEEDS) among others. Regardless of these efforts, the standard of living is still on the decline especially in rural areas. This questions now relates to how effective have these poverty alleviation programmes been? what is the perception of general poverty status in the area? And what are the effects of farmers' characteristics on their poverty status. Consequently, this study was designed to determine the effects of farmers' socio-economic characteristics on their poverty status. Specifically, the paper attempted to examined the socioeconomic characteristics of farmers, evaluate their poverty status, and determined the effects of these characteristics on poverty status. The following hypothesis was also tested to achieve the major objective of this study: Farmers' Socio-economic Characteristics have no significant effects on their Poverty Status. Delta South Senatorial District is highly agrarian, producing bulk of the food supply to the state and the nation at large. Considering its prime position in food production and in the light of the failed programmes and policies, it was necessary to study the effects farmers' characteristics and their relationship to poverty status with a view to dealing with the challenge of poverty among rural farmers. this is especially so that other studies like Onemolease (2005) found that farmer's characteristic influences their poverty status.

Methodology

The study was carried out in Delta south Senatorial District. It is made up of eight local government area (Bomadi, Burutu, Isoko north, Isoko south, Patani, Warri North, Warri South, Warri South west).The estimated population of the zone is 1,293,282(Onemolease, 2005). It is blessed with fertile land and the main occupation of the people is farming, fishing, poultry and trading and the popular crops grown are cassava, maize, vegetable, yam, oil palm and rubber. Data on the socioeconomic and demographic characteristics such as

age, sex, household size, educational status, marital status, farm size, contact with extension and membership of social groups were collected from respondents using structured questionnaire and information was elicited he study employed a two stage sampling procedure for the selection of representative sample. A total of 244 farmers were selected from the zone. The study employed both descriptive and inferential analytical tools. Descriptive statistics such as frequency counts, percentages and means were used to present the socioeconomic and demographic characteristics. Foster, Greer and Thorbecke model was used to determine poverty status and the logit regression analysis was used to identify the determinants of poverty. The empirical model is given below;

Empirical studies on Poverty Alleviation have widely utilized the discriminant/logistic analysis (Oyekale, 2008) and Onemolease, 2005) to identify the determinants of poverty.
Gujarati (2004) specified the logistic model as

Ln = bo + bi Xi …… bn Xn + μ

Yi = Probability that a respondent is non-poor.
1 – Yi = Probability that a respondent is poor.

The odd ratio therefore is

Where bo = Coefficient of constant term.
bi = Coefficient of independent variables.
Xi = The independent variables.
μ = Error term.
Ln = Natural log.
Yi = Dichotomous dependent variable.

The empirical form of the model is specified as
Yi = bo + b1 X1 + b2 X2 + b3 X3 + b4 X4 + b5 X5 + b6 X6 b7 X7 +μ
where
Yi = Poverty status (Poor = 0, Non-poor = 1).
X1 = Sex (Dummy variable: Male = 1, Female = 2).
X2 = Age (Measured in years).
X3 = Educational level (Measured by highest qualification obtained).
X4 = Membership of social group. (Dummy: Yes = 1, No = 0).
X5 = Household size (Number of people feeding from the same pot).
X60 = Farm size (Measured in hectares).
X71 = Contact with extension (Dummy: Contact = 1, Non-contact = 2).

Foster, Greer and Thorbecke Model

P□ = □

Where
P□ = Poverty index
N = the size of the population under study (244)
Z = Poverty line
Z–Y = the gap between the poverty line and the income for each poor individual
q = The number of individual below the poverty line
Yi = Capita income of the ith poor household
□ = Non-negative poverty aversion parameter that takes the value 0, 1, 2.

P0 = Incidence of poverty

P1 = □ (Depth of poverty)

P2 = □ (Severity of poverty)

The dependent variable, poverty was measured or determined using the income approach. Respondent income was measured as the amount of money realized from the sales of all farm produce

Poverty line was placed at two-third mean income of respondents as adopted by FOS (1999) and the World Bank/FOS/NPC (1998). Based on this, the respondents were classified into three groups:

(a) Non-Poor: Those with income above Two-third mean income of respondents.i.e.NP >2/3(Mean income)

(b) Poor: Those with income between One-third and Two-third mean income of respondents. i.e. between 1/3&2/3(Mean income)

(c) Very Poor: Those with income below One-third mean income of respondents. i.e. VP <1/3(Mean income)

IV. RESULT AND DISCUSSION

a; Socioeconomic characteristics of respondents;

The selected socioeconomic characteristics of respondents were sex, educational level, marital status, membership of social group; household size, number of farms, are presented in Table 1. The result indicated that 51.2% of respondents were female and 48.8% were male. More females tend to be more involved in farming in the area corroborating the report of World Bank (1989) that women constitute between sixty to eighty percent of the labour force and majority of them are involved in agricultural production, domestic and craft activities. Efforts targeted at improving and empowering the women in the area may bring increased productivity and poverty reduction. The modal age for respondents was 41-50 years, this shows an economically strong and active farming population and by implication, the farming population in the area is quite active and has the potential for increased productivity and earning. About 35.7% had no formal education as against 64.3% of respondents that had formal education at different levels. Thus, the level of education among respondents is high. This may positively influence their farming practices as they may have quick access to information on improved method of production that can help them improve productivity. Islam (1997) asserted that primary education enhances the productivity of the workforce while secondary education stimulates entrepreneurial activity. Majority of the respondents have household size of 5-8 members (50.4%).This corroborated some findings that rural dwellers tend to have large families. The large household size may provide the needed labour requirement for farming but their impact can be limited by the small farm hectare cultivated. On the other hand, large family size may reduce the economic welfare of the household especially when the proportion of dependent is high. About 64.3% had 1 hectare and below and the rest had between 1.1-2 hectares (35.7%).The small size of their farm may limit productivity. About 75.8% of respondents had contact with extension agents with 24.2% having no access. Contact with extension agents was high. This implies that extension services in the area were functional and active. All things being equal, the farmers should have good access to information on latest and improved practices in farming that can help their farming operation.

Table 1.0: Respondents Socioeconomic Characteristics

Variable		Frequency (n)	(%)
SEX	**Male**	**119**	**48.8**
	Female	**125**	**51.2**
AGE (Years)	**≤ 21**	**6**	**2.5**
	21 – 30	**23**	**9.4**
	31 – 40	**57**	**23.4**
	41 – 50	**79**	**32.4**
	51 – 60	**56**	**23.0**
	61 & above	**23**	**9.4**
	Mean	**45**	
MARITAL STATUS	**Single**	**24**	**9.8**
	Married	**195**	**79.9**
	Divorced	**8**	**3.3**
	Widow	**12**	**4.9**
	Widower	**5**	**2.0**
EDUCATIONAL LEVEL	**Not go to School**	**87**	**35.7**
	FSLC	**102**	**41.8**
	JSSCE	**20**	**8.2**
	SSCE	**18**	**7.4**
	OND/NCE	**9**	**3.7**
	HND/B.Sc.	**9**	**3.7**
PRIMARY OCCUPATION	**Crop Farming**	**150**	**61.5**
	Livestock Farming	**41**	**16.8**
	Fish Farming	**53**	**21.7**
	Others	**-**	**-**
MEMBERSHIP OF SOCIAL GROUP	**Cooperative**	**122**	**50.0**
	Age Grade	**32**	**13.1**

	Civil Social Group	**41**	**16.8**
	Town's Union	**129**	**52.9**
	Others	**-**	**-**
	None	**42**	**17.2**
YEARS IN GROUP	**0 – 4**	**80**	**37.0**
	5 – 9	**73**	**33.8**
	10 – 14	**38**	**17.6**
	15 & >	**25**	**11.6**
	Mean	**6.4**	
NUMBERS OF FARM(S)	**1 – 3**	**144**	**59.0**
	4 – 6	**93**	**38.1**
	7 – 9	**7**	**2.9**
	10 & >		
	Mean	**4.5**	
HOUSEHOLD SIZE	**≤ 4**	**84**	**34.4**
	5 – 8	**123**	**50.4**
	9 – 12	**32**	**13.1**
	> 12	**5**	**2.1**
	Mean	**5.6**	
FARM SIZE	**0.1 – 0.5**	**108**	**44.3**
	0.6 – 1.0	**49**	**20.1**
	1.1 – 1.5	**59**	**24.2**
	1.6 – 2.0	**19**	**7.8**
	> 2.0	**9**	**3.7**
	Mean	**0.8**	
CONTACT WITH EXTENSION AGENT	**Yes**	**185**	**75.8**
	No	**59**	**24.2**
FREQUENCY OF CONTACT	**Weekly**	**25**	**10.2**
	Fortnightly	**87**	**35.7**
	Monthly	**64**	**26.2**
	Annually	**9**	**3.7**

Respondents Income level

Table 2 shows that 44.3% of farmers had income of between N51,000.00- N100,000.00, about 9.4% and 25.0% had income of less than N50,000.00 and N101,000 – N150,000.00 respectively. Those with income of N251, 000.00 and above were 3.7% and others with income of N151,000 – N200,000.00 and N201,000.00 - N250,000 were 11.9% and 5.7% respectively. The mean income was N113, 426.00

Table 2.0: Farm Income of Respondents

Farm income ₦				
	Freq	**%**	**Mean**	**S.D.**
0–50,000	23	9.4		
51,000–100,000	108	44.3		
101,000–150,000	61	25.0		
151,000–200,000	29	11.9	**113,426**	0.6
201,000–250,000	14	5.7		
251,000–300,000	6	2.5		
301,000–350,000	3	1.2		

Table 3: Distribution of Respondents by Poverty Status Poverty Categories

Poverty Categories	Frequency (n)	(%)
Non poor	**162**	**66.4**
Poor	**72**	**29.5**
Very poor	**10**	**4.1**
Total	**244**	**100**

Source: Field Survey data, 2010 , Poverty Line: N75, 617.70k

Logit estimate of socioeconomic characteristics of respondents

Socio-economic Factors Influencing Poverty Status

The results as shown in Table 4.0 indicated that poverty status of respondents was significantly related ($P < 0.05$) to Sex ($b= 0.574$), Educational level ($b = 0.249$) and Farm size ($b = –0.339$) with odd ratio of 1.78, 1.28 and 0.71 respectively.

The result indicates that sex influences the probability of a respondent of being not poor. The positive sign or relationship implies that males were more likely to be non poor than females. The odd ratio (1.8) implies that males are 1.8 times or 80% more likely to be non poor than females. One reason why more women are likely to be poorer is because of their limited access to production resources of land, credit, technology and decision making (World Bank, 1992). The educational level ($b=0.249$) was positively related and therefore positively influenced respondents poverty status. This means the more educated farmers have the likelihood of not being poor than the less educated farmers. With an odd ratio of 1.3, educated farmers are 1.3 times or 30% more likely to be non poor. Being more educated gives them an advantage in understanding improved farming practices with ease. Besides, is the accesses to valuable information for effective farm management that will help them increase output and income.

Farm size on the other hand showed a negative coefficient and ($b= 0.712$) which implies that respondents with smaller farms are more likely to be non-poor than those with larger farms in the study area. This result contrast apriori expectation. In such a situation, the inverse of the log likelihood function Exp (b) in absolute term is used to explain the real influence of the variable.

The result now implies that farmers with smaller farm are 1.4 times or 40% more likely to be non-poor than those with larger farms. The negative coefficient for farm size suggest a more efficient allocation of resources by small farm holders, implying that what is important is not necessarily the size of farm but how well the farm enterprise is managed. Other variables such as Age, Social group membership, Household size and extension contact were not significant at 5% level

Table 4.0: Logit Estimates of Socio Economic Characteristics of Respondents

Variable	Coefficient B	t.Stat	Prob level	Odd ratio
Constant	**0.622**	**0.905**	**0.365**	**1.863**
Sex	**0.574**	***1.97**	**0.985**	**1.775**
Age	**0.088**	**0.620**	**0.538**	**1.092**
Education	**0.249**	***1.98**	**0.3**	**1.283**
Social grp membership	**0.311**	**0.966**	**0.334**	**1.365**
Household size	**0.194**	**0.840**	**0.401**	**1.215**
Farm size	**–0.339**	***–2.628**	**0.009**	**0.712**
Extension contact	**–0.424**	**–1.285**	**0.199**	**0.655**

V. CONCLUSION

Based on the analysis of the data findings of the study, it can be concluded that there was a measure of poverty in Delta South Senatorial District and among the socioeconomic variables analysed; Sex, Education level and Farm size were found to have significant influence on the poverty status of respondents

Efforts should be geared towards improving the educational standard and knowledge of respondents in the study area since educational status had a significant influence on respondent's poverty status.

Farmer's education on the appropriate and efficient method of resource allocation should be carried out since one of the findings of the report indicated that farmers with small farmers are likely to be non poor against apriori expectation.

Since the result showed that farm size was significant but negatively related to poverty status against apriori expectation, further research on this is recommended as to what size would produce the optimum returns to the farmer

Extension services contact was high among respondents but without positive impact on farmers' poverty status, it is therefore recommended that the extension service be improved in terms of passing practical information and advice to farmers.

REFERENCES

Central Bank of Nigeria (2000): Annual Report and Statement of Account for the Year Ended December 31st 2000. Abuja: CBN

Delta State Government (2007): Delta State Agricultural Policy. Asaba: Delta State

Ministry of Agriculture & Water Resources.

Department for International Development DFID (2005): "Eliminating World Poverty: Making Governance Work for the Poor". www.dfid.gov.uk. Retrieved September 2, 2008.

Food & Agriculture Organisation (FAO 2002), Farming Systems and Poverty:

FAO Information Management Series 2: FAO United Nations.

Gujarati, D.N. (2004): Basic Econometrics (4th Ed). India, New Delhi: Tata McGraw-Hill Publishing Company. Pp 595-615.

Ike D.N. (1996): "Poverty in Nigeria" In: Ike D.N., Odozi, C. and Da' Silva Y.A. (Eds) Monthly Business & Economic Digest, United Bank for Africa (UBA) Vol. 19, No. 2 March/April, 1996 Lagos-Nigeria. pp 1-4.

International Fund for Agricultural Development IFAD (2006): "Rural Poverty in Nigeria" www.ifad.org/operation/projects/regions. Retrieved September 2, 2008.

International Fund for Agricultural Development (IFAD) (2008), "Programme

For Enhancing Smallholder Access to New Rice for Africa (NERICA) Seeds For Alleviating Rural Poverty in Western and Central Africa. New York: IFAD.

Islam N. (1997): The Non farm sector and Fund Development: Review of Issues and

Evidences. Food, Agric and Environ Discussion Paper No 22.Washington DC IFPRI

Lipton, M. & Ravallion M. (1995), "Poverty and Policy" 'In' Behrman, Jere &

Srinivasan, T.N. (Eds) Handbook of Development Economics Vol. IIIB

Elsevier Science B.V.

Ogwumike P.O. (2002): "An Appraisal of Poverty Reduction Strategies in Nigeria". Central bank of Nigeria Economic and Financial Review (39) 4 www.cenbank.org/out/publications/efr/rd/2002/efr Vol. 39.4.4 pdf

Okojie, C.E.E. (2002):'Gender and Education as Determinants of Household

Poverty in Nigeria' Discussion paper No 2002/37 United Nation University/World Institute for Development & Economic Research (UNU/WIDER), Helsinki, Finland 44pp www.cianet.org/okc01/wps/okc01.pdf

Onemolease, E.A. (2005): "Impact of the Agricultural Development Programme (ADP) Activities in Arable Crop Production in Rural Poverty Alleviation in Edo State of Nigeria". Unpublished PhD Thesis Submitted to Faculty of Agriculture, Department of Agricultural Economics and Extension Services, University of Benin, Nigeria. pp 89-94.

Osinubi, T.S. (2003): "Urban Poverty in Nigeria: A Case Study of Agege Area of Lagos State, Nigeria. Faculty of Social Science, University of Ibadan, Nigeria.

Oyekale, A.S. (2008): "Land Degradation, Soil Conservation Practices and Poverty Incidence in South Western Nigeria". Medwell Agricultural Journal 3(6): 482-487.

Terry, A. Olowu (Ed) (2004), Research Methods in Agricultural Extension. Ilorin:

Agricultural Extension Society of Nigeria

World Bank/FOS/NPC. (1998) "Poverty and Welfare in Nigeria" World Bank/Federal Office of Statistics/National Planning Commission, Abuja, Nigeria. pp1-22