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Assessment of Poverty among Arable Crop Farmers: A Case Study of Farmers Empowerment Programme (FEP) in Osun State, Nigeria

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Abstract

Farmers' Empowerment has become an important part of the development agenda in the recent years. This study identified and analyzed the poverty status in terms of incidence, depth and severity among arable crop farmers in Osun State and compared the socio-economic characteristics of beneficiaries and non-beneficiaries of Farmers Empowerment Programme (FEP) in Osun State, Nigeria. The study made use of pre-tested and validated structured questionnaire. A multi-stage sampling procedure was used to select 240 respondents. Data collected were analyzed using a combination of descriptive statistics, t-test of difference of two means and p-alpha measures of poverty. The result of poverty incidence, depth, and severity among respondents indicated that poverty incidence was lower among the FEP beneficiaries (0.42) than the non beneficiaries (0.58). Poverty gap index was also lower among the beneficiaries of FEP (0.19) than with the non-beneficiaries (0.46). The severity of poverty was mild (0.13) among the FEP beneficiaries while it was severe among non-beneficiaries (0.43). The Lorenz curve revealed that 22.5 percent of the respondents control 50 per cent of the resources available indicating an apparent inequality in income distribution. A significant difference exists between the age ($p < 0.05$), household size ($p < 0.05$), membership of cooperative societies ($p < 0.05$), land ownership ($p < 0.05$) and income ($p < 0.05$) of beneficiaries and non-beneficiaries of FEP, respectively. In conclusion, the FEP has alleviated poverty among the participants in the study area. The level of education, household size and farmers' experience are the key determinants in alleviating poverty among the participating arable crop farmers in the FEP in Osun State.

Keywords: assessment, poverty, farmers' empowerment

Introduction

In Nigeria, about 70 per cent of the poor live in rural areas and depend largely on agriculture. As in other African economies, most especially in the Sub-Saharan African, agriculture is the mainstay of the economy. Past attempts to alleviate poverty in Nigeria include National Accelerated Food Production Programme (NAFPP) in 1972, Operation Feed the Nation (OFN) in 1976, the 1979 Green Revolution Programme, Go back to Land Programme in

1983, the 1986 Directorate of Food, Roads and Infrastructure (DFRRI) and Better Life Programme (BLP), the 1993 Family Support Programme (FSP) and Family Economic Advancement Programme (FEAP) (Anthony, 2000). A recent effort to alleviate poverty is the National Poverty Eradication Programme (NAPEP), which has four schemes. One of the schemes is the Farmers Empowerment Programme (FEP) aimed at giving agricultural credit to poor farmers to enhance their productivity and potentials for increased output.

NAPEP undertakes this scheme in collaboration with state governments, local governments and specialized agricultural agencies.

Using poverty indicators such as illiteracy, access to safe water and good health among others, the World Bank assessment of poverty in Nigeria (a report by the Federal Office of Statistics and National Planning Commission 1996) revealed that poverty in Nigeria is widespread and severe.

The World Bank and UNDP (1996, 1998) drew a poverty line in Nigeria as at 1992 to be US \$1 per day (equivalent of ₦128 per day). This was determined by the mean per capital household expenditure. Those who lived on less than ₦128 per day then were considered to be poor. They had inadequate access to education, health, water and housing facilities. In 2004, the United Nations Development Programme (UNDP) publications reported that over 70 per cent of Nigerians lived below the international income poverty line of US\$1 dollar per day. The United Nations Children's Fund/ Federal Office of Statistics (UNICEF/ FOS, 1997) classified Nigeria as a country with severe malnutrition and very high mortality rate amongst children under the age of 5 years. This is an indication of the poverty level of the Nigerian population.

Jemide (2008) reports a recent survey of 126 countries, which indicates that Nigeria was the 17th highest poor country with 60 per cent of the population living below poverty line. Thus, Nigeria is ranked close to countries like Niger (63%), Mali (64%), Bolivia (64%) and Burundi (68%).

According to the CBN (2003), alleviation of poverty through government intervention, United Nations (UN) agencies and Non-Governmental Organisation (NGOs) is not a recent phenomenon in the country. The Nigerian Government has shifted its focus from Poverty Alleviation Programme (PAP), which was established in 2000 to the National Poverty Eradication Programme (NAPEP) in 2001. Farmers Empowerment Programme (FEP) (a scheme of NAPEP), is put in place to achieve the Millennium Development Goals (MDG's) of halving poverty in 2015. It gives agricultural

credit assistance to poor rural farmers to enhance farmers' productivity. The beneficiaries often form themselves into self-help groups or Cooperative societies to facilitate access to credit.

Despite the various efforts made by the Nigerian Government in alleviating poverty and ensuring food security among the citizenry, the situation still remains pathetic, most especially among the rural dwellers. Many agricultural and rural development programmes/ schemes including Farmers Empowerment Programme (FEP) are being implemented while some had been implemented over the last three decades without visible improvement on the incidence and severity of poverty especially in the agrarian communities (Oyesanmi *et al.*, 2006).

It was against this background that this study was designed to investigate the extent to which FEP has effectively addressed the incidence, depth and severity of poverty among the beneficiaries in Nigeria and in particular the study area. This study therefore assesses the impact of farmers empowerment programme (FEP) on poverty among arable crop farmers in Osun State. Specifically the study

- i. identify and analyze the poverty status (incidence, severity and depth) among arable crop farmers;
- ii. compare the socio-economic characteristics of beneficiaries and non-beneficiaries of FEP.

Hypotheses: The hypotheses are stated in null form

- H_{01} There was no significant difference between the socio-economic characteristics of beneficiaries and non-beneficiaries of FEP.

Methodology

The study was carried out in Osun State, Nigeria. A multi-stage sampling procedure was used to select respondents for the study. At the first stage, all arable crop farmers in the state constitute the population for the study. They were stratified into two: - arable crop farmers who are beneficiaries (Experimental group) and

arable crop farmers who are non-beneficiaries of FEP (Control group). At the second stage, from the five (5) administrative zones in Osun State (i.e. Osogbo, Ede, Iwo, Ilesha and Ikirun zones), there were twelve (12) registered FEP groups out of which eight (8) were randomly selected. At the third stage, 50 percent of the beneficiaries were selected from the groups using systematic sampling with a random start at an interval of two (2) using the FEP's groups register as the sampling frame. In all, one hundred and twelve (112) beneficiaries were interviewed. At the last stage, an equal number of non-beneficiaries were selected from the communities contiguous to the beneficiaries' farms using the snowball method. The study was conducted in 2009. Data collected were analyzed using a combination of descriptive statistics, t-test of difference of two means and p-alpha measures of poverty.

Results and Discussions

Socio – economic characteristic of sampled respondents

Table 1 revealed that there were more males among beneficiaries than the non-beneficiaries. The distribution by gender follows the same pattern trend for both beneficiaries and non-beneficiaries. The mean age of non-beneficiaries (51 years) was higher than the beneficiaries (47 years). This means that they are still in their productive years. This implied that majority of the respondents were in their productive age. Majority of respondents 88 per cent of the beneficiaries and 78 per cent of the

non-beneficiaries were married. This showed that majority of the adult respondents in the study area comprised of married people. Majority (64.3 %) of the beneficiaries and 50 per cent of the non-beneficiaries had less than five members in their household. It could be deduced that a greater percentage of the beneficiaries in the study area have relatively small household size (less than 5). This means that few mouths would be fed which could in turn reduce the incidence of poverty. The mean number of years spent in schools by of the non-beneficiaries (11 years) was merely higher than that of beneficiaries (10 years). This is perhaps indicative of the two groups having the same level of education. Majority of the beneficiaries (85.8%) had formal education while 53.5 per cent the non-beneficiaries attended formal schools. Majority of the non-beneficiaries (43.8 %) and 40 per cent of the beneficiaries had between 24 years of farming experience. This suggests that most of the beneficiaries had been in farming long before the advent of FEP. Fifty-six percent of the beneficiaries and sixty-seven per cent of the non beneficiaries earned less than ₦ 100,000 per annum; 56 per cent of the beneficiaries and 41.5 per cent of the beneficiaries earned more between ₦100,000 and ₦300,000. This distribution generally reveals that non-beneficiaries in the study area are low income earners when compared with their beneficiaries' counterparts (Table 1b). The higher income of the beneficiaries is indicative of the potential of the FEP to improve the livelihood of the respondents and probably lift them out of the poverty trap.

Table 1a: Distribution of respondents by socio-economic characteristics

Distribution of respondents	Category of respondents			
	Beneficiaries		Non-beneficiaries	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	76	67.9	76	67.9
Female	36	32.1	36	32.1
Total	112	100.0	112	100.0
Age (Years)				
20 – 40	26	23.20	22	19.64
41 – 60	80	71.43	69	61.61

61 and above	06	5.37	21	18.75
Total	112	100.0	112	100.0
Mean	47.41		50.48	
Standard deviation	9.01		11.70	

Marital status

Single	1	0.9	5	4.5
Married	99	88.4	87	77.7
Widowed	9	8.0	4	3.6
Widower	3	2.7	3	2.7
Divorced	-	-	7	6.3
Separated	-	-	6	5.4
Total	112	100.0	112	100.0

**Household size
(Number)**

Less than 5	72	64.3	56	50.0
5 – 10	36	32.1	35	31.2
10 and above	4	3.6	21	18.8
Total	112	100.0	112	100.0
Minimum	1		1	
Maximum	6		6	
Mean	2.21		1.54	
Standard deviation	1.83		1.07	

Source: Field survey, 2009

Table 1b: Distribution of respondents by socio-economic characteristics

Distribution of respondents	Category of respondents			
	Beneficiaries		Non-beneficiaries	
	Frequency	Percentage	Frequency	Percentage
Educational Level (Years)				
No formal education	16	14.3	30	26.8
Adult Literacy/Arabic	4	3.6	5	4.5
Vocational School	5	4.5	3	2.7
Primary School	22	19.6	33	29.5
Secondary School	4.9	43.8	32	28.6
Tertiary education	16	14.3	9	8.0
Total	112	100.0	112	100.0
Minimum	0		0	
Maximum	20		30	
Mean	7.52		6.64	
Standard deviation	5.78		6.51	

Years of farming experience				
(Years)				
Less than 10	18	16.10	32	28.60
11 – 20	25	22.30	15	13.40
21 – 30	22	19.60	22	19.60
31 – 40	19	17.00	18	16.10
41 and above	9	8.00	5	4.50
No response	19	17.00	20	17.90
Total	112	100.0	112	100.0
Mean	3.99		3.79	
Standard deviation	2.98		3.13	

Income (₦)				
< 100000	50	56.0	60	67.2
100001 - 200000	30	33.6	28	31.3
200001 - 300000	20	22.4	10	11.2
300001 - 400000	2	2.24	14	15.6
Total	112	100.0	112	100.0
Minimum	0		0	
Maximum	1,474,200		717,600	
Mean	165169.93		70171.61	
Standard deviation	170560.28		102342.04	

Analysis of arable crop farmers' poverty incidence, depth and severity

The result of poverty incidence (P_0), depth (P_1), and severity (P_2) among arable crop farmers in Osun State indicated that there was lower poverty incidence (0.42) among the beneficiaries than the non beneficiaries (0.58),

the poverty gap index was considerably lower among the beneficiaries of FEP (0.19) than with the non-beneficiaries (0.46) while the severity of poverty was lower among the beneficiaries (0.13) than the non-beneficiaries (0.43), respectively (Table 2).

Table 2: Poverty incidence, depth and severity among arable crops farmers

Arable crop farmers	Incidence	Depth	Severity
	(P_0)	(P_1)	(P_2)
Beneficiaries	0.419	0.189	0.131
Non beneficiaries	0.580	0.457	0.428
Pooled	0.500	0.323	0.280

Source: Field survey, 2009

Distribution of income among the respondents

The pattern of income distribution was explored with the use of the Lorenz curve. The curve does not follow a normal distribution pattern. Table 3, revealed that 22.5 per cent of the

respondents control the resources in the study area. Although, only 23.2 per cent of the beneficiaries and 22.2 per cent of the non-beneficiaries control the resources. This suggests that income is relatively not equally spread among the farmers' that were surveyed.

Table 3: Gini coefficients for beneficiaries and non-beneficiaries

Arable crop farmers	Estimate (%)
Beneficiaries	23.2 (0.018)
Non beneficiaries	22.2 (0.022)
Pooled	22.5 (0.021)

Source: Field survey, 2009

Hypothesis 1:

There was no significant difference between the socio-economic characteristics of beneficiaries and non-beneficiaries of FEP. Data in Table 4 indicated that a significant difference exists between the age (p<0.05),

household size (p < 0.05), membership of cooperative societies (p < 0.05), land ownership (p < 0.05) and income (p < 0.05) of beneficiaries and non-beneficiaries of FEP, respectively.

Table 4: T-test summary on difference between the socioeconomic characteristics of beneficiaries and non-beneficiaries of FEP

Variables	Category of respondents		t-value	p<0.05
	beneficiaries	Non-beneficiaries		
	mean	mean		
Age (years)	47.4	50.5	-2.06**	0.042
Household size (number)	5.7	4.6	2.99***	0.004
Educational level (years)	9.5	10.7	-1.59	0.117
Belong to cooperative Society (dummy)	1.0	1.0	3.46***	0.001
No of years spent in Cooperative society (years)	5.6	7.6	-3.74***	0.000
Farmers experience (years)	17.7	20.5	-1.47	0.145
Land ownership (dummy)	2.1	2.5	-2.39**	0.019
Farmers income (Naira)	24,869	26,039	-0.23	0.820

***Significant at 0.01%

** Significant at 0.05%

Sources: Field survey, 2009

Conclusion

The FEP has alleviated poverty among the participants in the study area. The level of education, household size and farmers' experience are the key determinants in alleviating poverty among the participating arable crop farmers in the FEP in Osun State.

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