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Analysis of Effect of Integrated Farmers' Scheme Project on Beneficiaries Farm Output in Akwa Ibom State, Nigeria

Onumadu, F. N., Inyang, N.U.,
Department of Rural Sociology and Extension
Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.

ABSTRACT

The study examined the effect of Integrated Farmers Scheme Project on beneficiaries' farm output in Akwa Ibom State, Nigeria. The objectives of the study were to: examine the socio-economic characteristics of the respondents in the study area; and to determine the difference in output between the IFS beneficiaries and non-beneficiaries in the study area. The study relied mainly on primary data collected via questionnaire which were administered to 184 respondents consisting of 92 IFS beneficiaries and 92 non-beneficiaries. The data were analyzed using the descriptive and inferential statistics. The findings indicated that majority of the respondents 64.1% of the beneficiaries and 55.4% of the non-beneficiaries were in their active ages. About 60.9% of the beneficiaries and 50% of the non-beneficiaries are single. Majority of the respondents had a mean household size of 3 with average farming experience of 4.35 and 4.65 years for beneficiaries and non-beneficiaries respectively with 100% of beneficiaries and 98.9% of the non-beneficiaries members being literate. The study further revealed that the output of the beneficiaries in the study area was 104.499 (Grain Equivalent) while that of the non-beneficiaries was 77.549 (Grain Equivalent) with a margin of 26.949 (Grain Equivalent) and was statistically significant at 1% probability level. The study recommends that the programme has positive effect on the beneficiaries, therefore, there is need to increase the number of its beneficiaries. Furthermore, the scope of the programme is skewed in favour of agriculture, it should be integrated.

Keywords: *Effect, IFSP, Beneficiaries, Income*

1. INTRODUCTION

The agricultural sector is the main stay of many economies in sub-Saharan Africa, contributing about 18% of Gross Domestic Product (GDP), 23% of total value of export and employing 69% of the active labour force. Agricultural output provided the prime source of foreign exchange, food and raw materials for industries as well as feed for livestock. But sadly, the increase in earnings from the petroleum sector in the mid 1970s resulted in the neglect of the agricultural sector resulting in a decrease in the agricultural production (Abdullahi 1990). In an attempt to resuscitate the agricultural sector, government at different levels had initiated many poverty alleviation programme/strategies. One of such initiative was the establishment of the Integrated Farmers' Scheme (IFS) by the Akwa Ibom State government in 2003 to ameliorate the suffering of the youth as a result of unemployment.

The Integrated Farmers' Scheme is an initiative by the government of Akwa Ibom State to work out modalities for cushioning the effect of unemployment among school graduate at different levels in the state. The philosophy guiding its establishment is the eradication of poverty and unemployment at the grass root level. However, the main objective of the Integrated Farmers' Scheme is to sustainably increase the output of the IFS beneficiaries. By increasing their output, the programme will help reduce rural poverty, create jobs for the unemployed as well as increase food security.

The objectives of the scheme according to the Akwa Ibom State Integrated Farmers' Scheme Law (AKSIFS Law 2003) are as follows, identification and recruitment of dynamic youths that are trainable and have a desire to make a career in farming; get the better educated and youth segment of our society to farm and do it as means of livelihood; identify profitable farm business ventures in crops, livestock, fisheries, processing and attract investments in these enterprises; promote and dignify farming as a business; provides self-employment to graduates of various levels of education; stimulate the use of improved agricultural technologies and inputs viz, fertilizers, agro-chemicals, planting materials and animals with genetic potentials; and offer technical assistance and loan to the participants to achieve the said agricultural goals. From the fore-going, the study was conducted to identify the socio-economic characteristics of the IFS beneficiaries and non-beneficiaries in the study area; and to determine the difference in output between the IFS beneficiaries and the non-beneficiaries in the study area.

Hypothesis

The null hypothesis below was tested,

HO_1: there is no significant difference between output of the beneficiaries and the non- beneficiaries in the study area.

2. METHODOLOGY

The study area is Akwa Ibom State. Akwa Ibom State is situated at the rainforest agro-ecological zone of Nigeria located between latitude $4^0$33' and $5^0$35' North and longitude $7^0$35' and $8^0$35' East. The state is boarded to the North with Abia, to the south with Atlantic Ocean, to the East with Cross River and to the West with Rivers. The 2006 census estimated Akwa Ibom State population at 7,245,935,746. The state has a tropical climate with two distinct seasons, the wet and the dry season with an average annual rainfall of 220mm-250mm evenly distributed through its long wet season, which covers the period of eight months (March to November). The period is followed by the dry season spanning the month of November to March. For ease of administration of agricultural programmes, the state was divided into six agricultural zones namely, Uyo, Eket, Abak, Ikot Ekpene, Etinan and Oron.

A multi-stage random sampling technique was used in selecting 184 respondents used for the study. The first stage involved selection of the six agricultural zones, then the second stage involved the random selection of two local government areas from each agricultural zone and the third stage involved the random selection of eight respondents each of the beneficiaries and non beneficiaries from each of the twelve local government area giving a total of 192 respondents. A total of 192 questionnaires were distributed, but out of these, only 184 were retrieved that is 92 from the beneficiaries and 92 from the non-beneficiaries. A well structured questionnaire was used to collect information from the respondents. Other sources of information were publications in journals, text books, and seminar materials etc.

To achieve the objectives of the study, descriptive statistics such as frequencies, means and percentages were used to achieve objectives one (1), while inferential statistics such as the Z-test was used to achieve objective two (2) and also used in testing the hypothesis.

The Z-test model for objective two and the hypothesis is stated thus,

$$Z_{cal} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S^2\bar{X}_1}{n_1} + \frac{S^2\bar{X}_2}{n_2}}}$$

Where,

$\bar{X}_1$ = mean output of the beneficiaries

$\bar{X}_2$ = mean output of the non-beneficiaries

$S^2\bar{X}_1$ = squared standard deviation for output of the beneficiaries.

$S^2\bar{X}_2$ = squared standard deviation for output of the non- beneficiaries

n_1 = number of sampled beneficiaries

n_2 = number of sampled non- beneficiaries.

3. RESULTS AND DISCUSSION

Table 1 described the socio-economic characteristics of the sampled beneficiaries and non-beneficiaries farmers in the study area. The study revealed that majority (64.1%) of the beneficiaries and (55.4%) of the non-beneficiaries age ranges from 31-40 years with an average of 36.59 and 36.64 years for beneficiaries and non beneficiaries respectively. It implies that the farmers were within their active age of economic life. This is important because as youth, they may be willing to assume greater risk in anticipation of profit than the older or much younger ones that are often more risk aversed. The findings also revealed that 60.9% of the beneficiary youth and 50% of the non-beneficiary youth were single, whereas, 39.1% of the beneficiary and 50% of non-beneficiary youth were married as shown in

Table 1. Since most of the respondents were single, they could have more time to learn new skills as well as save enough money to improve on their agricultural business. Moreover, table 1 depicts that 54.3% and 62.0% of the beneficiary and non-beneficiary youth respectively, had a household size range of between 1-3 persons, with a mean household size for both households of 3 persons per household. The implication of this result is that the farmers may have to supplement most of their farm labour with hired labour rather than complement it.

The study further indicated that 84.4% of the beneficiary youth and 75% of the non-beneficiary youth were males while 15.2% of the beneficiary youths and 25% of the non-beneficiary youths were females. This is consistent with Simonyan (2009) who reported 85% beneficiary farmers and 87% non-beneficiary farmers of Fadama II projects as males. However, Oladeji *et al* (2005), observed that it is generally believed that males are often more energetic and could readily be available for energy demanding jobs which is usually associated with farming. More so, the average farm sizes cultivated by the two groups of youth were 0.91 and 0.44 respectively, implying that all the respondents were small scale farmers. The distribution of the respondents based on farming experience as reported also in Table 1 shows on the average that the beneficiary youth spent 4.35 years in farming, while the non-beneficiary youths spent 4.65 years in the same enterprise. With the above farming experience of the respondents, it can be concluded that the youth are still very new in the system and should be trained well in the different areas of agriculture to enable them stabilize and master the field in order to make them take sound decision as regards resource allocation and management of their farms.

Furthermore, the distribution of respondents by educational status as shown in Table 1 revealed that there was high literacy rate among both groups of respondents that is the beneficiary and non-beneficiary youth as over 95% of them had one form of education or the other. This is a healthy situation because through education, people could acquire skills and knowledge which are important in obtaining and analyzing information about agricultural production, thereby increasing their agricultural output. With regards to the membership of a cooperative organization, the table showed that 83.7% and 37% of the beneficiary and non-beneficiary youth belonged to a cooperative organization. This is advantageous to farming, since according to Agwu (2000) social organizations offer an effective channel for extension contact with large number of farmers as well as opportunities for participatory interaction with extension organizations. This enhances farmers' uptake of new practices.

Table 1: Distribution of Respondents according to their Socio Economic Characteristics

Socioeconomic variables		Beneficiaries		Non-Beneficiaries	
		Frequency	Percentage	Frequency	Percentage
Age					
	21 – 30	15	16.3	15	16.3
	31- 40	59	64.1	51	55.4
	41- 50	18	19.6	26	28.3
	Total	92	100.0	92	100.0
	Mean	36.59		36.64	
Marital status					
	Single	56	60.9	46	50.0
	Married	36	39.1	46	50.0
	Total	92	100.0	92	100.0
Household size					
	1 – 3	50	54.3	57	62.0
	4 – 6	40	43.5	30	32.6
	7 – 9	2	2.2	1	1.1
	10 – 12	-	-	4	4.3
	Total	92	100.0	92	100.0
	Mean	3.57		3.24	
Gender					
	Male	78	84.8	23	25.0
	Female	14	15.2	69	75.0
	Total	92	100	92	100.0
Farm size					

	0.1 – 1.0	71	77.2	85	92.4
	1.1 – 2.0	20	21.7	4	4.3
	2.1 – 3.0	1	1.1	3	3.3
	Total	92	100.0	92	100.0
	Mean	0.91		0.44	
Farming experience					
	1 -5	62	67.4	72	78.3
	6 – 10	30	32.6	15	16.3
	11 – 15	-	-	1	1.1
	16 -20	-	-	1	1.1
	21 – 25	-	-	1	1.1
	26-30	-	-	1	1.1
	31 – 35	-	-	1	1.1
	Total	92	100.0	92	100.0
	Mean	4.35		4.65	
Educational level		-	-		
	No formal education			1	1.1
	Primary education	-	-	3	3.3
	Secondary education	3	3.3	3	3.3
	NCE/OND	38	41.3	33	35.9
	B.Sc, B.Agric, HND	43	46.7	49	53.3
	M.Sc/Ph.D	8	8.7	3	3.3
	Total	92	100.0	92	100.0
Cooperative membership					
	Yes	77	83.7	34	37.0
	No	15	16.3	58	63.0
	Total	92	100	92	100.0

Source:Field Survey,2014

Table 2 showed the output level of the respondents. The output (Grain Equivalent) of the respondents were basically from their farming activities made up of crops and livestock components, and this was valued in grain equivalent. The table estimated the annual mean output (Grain Equivalent) by beneficiaries as 104.499, while the annual mean output (Grain Equivalent) for the non-beneficiaries was 77.549. From here, it can be seen that the beneficiaries of IFS had significant improvement in their farm output when compared with that of the non-beneficiaries as shown in table 2 with a difference of 26.949. This result depicts that the difference between the output of the beneficiary famers and non-beneficiaries as indicated by the Z- test value (4.901) was statistically significant at 1% level of probability. This difference could be attributed to the benefits derived by the beneficiary farmers' involvement in IFS intervention.

This findings is not surprising because according to Simonyan (2009), the impact of fadama II project was suppose to reflect positively on all aspect of the beneficiary farmers including income and productivity output, due to their acquiring and using some productive inputs and training provided by the intervention programme.

Table 2: Comparison of the Output level (Grain Equivalent) of the Beneficiaries and Non-Beneficiaries of IFS Programme

Variables	Mean	Std Deviation	Std Error mean	Degree of Freedom	Z-Cal.
Aggregate agric. output (Grain Equivalent) for beneficiaries (c)	104.499	47.537	4.956		

Aggregate agric output (Grain equivalent) for non-beneficiaries (d)	77.549	25.018	2.608		
Difference (c-d)	26.949	52.740	5.498	91	4.901***

Source: Field survey, 2014 *** significant at 1% level.

Hypothesis 1 states that there is no significant difference between output of IFS beneficiaries and non- beneficiaries in the study area.

Furthermore, the research findings presented on table 2 also shows that the value of z-statistics computed (4.901), was greater than the value of the Z-statistics tabulated (2.358) at 1% significant level. This implied that the null hypothesis which states that there is no significant difference between output of IFS beneficiaries and non-beneficiaries in the study areas is hereby rejected. Thus the study concludes that there is significant difference between output of the IFS beneficiaries and non-beneficiaries in the study area.

4. CONCLUSION AND RECOMMENDATION

The study examined the effect of Integrated Farmers Scheme project on beneficiaries' farm output in Akwa Ibom State, Nigeria using descriptive statistics and other statistical tools. The study revealed that the programme was dominated by young men who farmed on small scale basis. Most of the farmers were relatively inexperienced with a mean farming experience of 4.35 and 4.65 years for beneficiaries and non-beneficiaries respectively. The empirical evidence from the study indicated that the annual mean output of the beneficiaries in grain equivalent (104.499) was greater than that of the non-beneficiaries (77.549) with a difference of (26.949) and was statistically significant at 1% level of probability. Also, the result showed that the value of the z-statistics computed (4.901) was greater than the value of the z-statistics tabulated (2.358) at 1% significant level. This implies that the null hypothesis which states that there is no significant difference between output of IFS beneficiaries and non beneficiaries in the study area is hereby rejected and the study concludes that there is a significant difference between output of IFS beneficiaries and non-beneficiaries in the study area.

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