



Effect of IFAD-Value Chain Development Programme (VCDP) on livelihood of small-scale rice beneficiaries in Taraba state, Nigeria

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Abstract

The study assessed effect of IFAD-Value Chain Development Programme (VCDP) on the livelihood of small scale rice beneficiaries in Taraba State. The specific objectives were to; describe the socio-economic characteristics of the beneficiaries, compare yield and income of the beneficiaries before and after joining the programme and identify constraints faced by beneficiaries in the study area. Multi-stage sampling procedure was used in selection of 184 respondents. Data were obtained through structured questionnaire and analyzed using frequency, mean, percentage, likert scale and t-test. The results revealed that average age of the respondents were 36 years. Majority (65.2%) of the respondents were male while most (77.2%) of them were married. The mean household size was 8 persons while the mean farm size was 3 hectares. Most (86.4%) of the respondents attended formal education. The mean years of farming experience was 13years. Majority (91.3%) of them have contact with extension workers. The t-test result implies that before the farmers joined IFAD-VCDP their yield was 1.92 tons and after they joined IFAD-VCDP their average yield was 6.02 tons per hectare. This indicated that the yield and income of beneficiaries improved when they joined programme than before the programme. This implies that IFAD-VCDP have impacted positively on the livelihood of beneficiaries in the study area. Major constraints were; insecurity and lack of payment of matching grant. Recommendations: the government should cooperate with the community to devise means of improve the security of life and properties of farmers and farmers should be encourage to cultivate the habit of savings in order to enable them pay their 30% matching grant.

Keywords: effect, IFAD-VCDP, livelihood, small-scale, rice, beneficiaries

1. Introduction

The International Fund for Agricultural Development (IFAD) is a specialized agency of the United Nations (UN) established in 1977 as one of the major outcomes of the 1974 World Food Conference. It was resolved at the conference that an international institution be established immediately to finance agricultural development projects, primarily for food production in developing countries. (IFAD, 2019) ^[5]. The institution would focus on alleviating poverty of rural dwellers, increased and accelerated economic growth to achieve a sustainable basis through investment in agricultural activities, as agriculture is seen in developing countries as a sector with viable potential to move the rural poor out of poverty and with the capacity to feed the world (Dooember *et al.*, 2020) ^[4].

Africa has a large expanse of land and with enough resources; agriculture would set a new pace for Africa's growth and development. The IFAD intervention maximizes the potential of smallholder farmers by exposing them to opportunities through inputs support, market access and services that would increase their farm yield build their human capacity and consequently increase their income (Dooember *et al.*, 2020) ^[4]. Through low interest loans and grants, IFAD works with governments to develop and finance programmes and projects that enable rural poor people to overcome poverty (Shehu *et al.*, 2019) ^[9].

The Value Chain Development Programme is a development

initiative that was contrived for Nigeria and aimed to tackle the challenges faced by small-scale farmers. The first phase of the programme is aimed at improving cassava and rice value chains in six states namely; Anambra, Benue, Ebonyi, Niger, Ogun and Taraba by proffering solutions to low productivity, limited access to productive assets and inputs, paucity of opportunities for value addition, inadequate support services such as extension services and research, inability to access rural financial services, inadequate markets and rural infrastructure (Bamidele *et al.*, 2019) ^[2]. Rural settlement in Nigeria is characterized by agrarian livelihood as well as other primary production activities. Studies have shown that agricultural-based livelihood in rural Nigeria has a higher level of poverty than other occupational groups. Rural agriculture is subjected to local variations in weather condition and thus expected variations in income levels and thus access to food (IFAD, 2019) ^[5]. Therefore, there is need to diversify sources of income into multiple agricultural and/or non-agricultural income-based livelihood systems. Livelihoods comprise "the capabilities, assets (including both natural and social) and activities required for means of living: a livelihood is sustainable which can cope with and recover from stresses and shocks, maintains or enhances its capabilities and assets, both now and in the future, while not undermining the natural resource base" (Chanchani, 2019) ^[3]. Empirical evidence shows that the VCDP's value chain and public-private

partnership models have significantly contributed to the profitable engagement of smallholders in the cassava and rice value chains (IFAD, 2019) [5].

Its primary goal is to reduce poverty and sustainably enhance accelerated economic growth; whilst the specific Programme Development Objective (PDO) is to increase the incomes and enhance food security for rural household engaged in production; processing and marketing of Rice and Cassava in the targeted LGAs of the six (6) targeted states are enhanced on a sustainable basis. Programme implementation in the six states of Anambra, Benue, Ebonyi, Niger, Ogun, Taraba and five LGAs each in all the six states has continued since 2014. In Taraba State, the programme is being implemented in Ardo-kola, Bali, Donga, Gassol, Jalingo, Karim-Lamido, Takum and Wukari LGAs. Low productivity undermines potential food production, and stifles income quality and keeps many farming families impoverished, hungry and undernourished. Inability to access capital to buy modern agricultural inputs reduces productive yield of small-scale farmers (Adi *et al.*, 2020) [1].

Through IFAD-VCDP, it is expected that rice farmers will have improved yield and income from their livelihood activities. Therefore, this study was under taken to examine the effect of IFAD-Value Chain Development Programme (VCDP) on the livelihood income of small-scale rice beneficiaries in Taraba state Nigeria. The specify objectives were;

- Describe the socioeconomic characteristics of the respondents;
- Compare the yield and income of the farmers before and after joined the programme and,
- Identify the constraints faced by IFAD-VCDP farmers in the study.

Hypothesis of the study

H₀ (1): there is no significant difference between the yield and income of the farmers before and after joining the programme.

2. Methodology

The study area

The study was conducted in Taraba State, Nigeria. Taraba State is located at the north eastern part of Nigeria. It lies between latitude 8° 00' and 0° 00' north of the equator and longitude 10° 30' and 10° 500' east of the Greenwich meridian The state shares boundaries with Bauchi and Gombe states in the north, Adamawa state in the east, and the Cameroon Republic in the south. The state is bounded along its western side by Plateau, Nassarawa and Benue states. The state has a land area of 58,795 km² with a population of about 3,609,800 million people (projected at 2.9% from the 2006-2022 National Population Census). It is divided into sixteen Local Government Areas (LGAs) and three senatorial districts (Taraba north, central and south). The state has an average annual rainfall of 100.64mm with a temperature of about 30°C-40°C. It is characterized by dry and rainy season common to tropical region. Taraba State is regarded as Nature's Gift to the Nation because of its abundant natural resource endowment. The state is well endowed with abundant solid mineral resources, surface water resources, arable and grazing land. The major occupation of the

people of Taraba State is agriculture. The state is blessed with good climate and vegetation types that cut across the State, ranging from a more humid climate to a forest vegetation in the south to a more seasonal wet and dry climate and savanna vegetation in the north. These favours the growth of cereals crops like rice, maize, millet, sorghum and guinea corn while tree crops such as palm oil, banana/plantain and orange. Root crops grown in the state include cassava, potato and yam, while Cash crops produced in the state include coffee, tea and groundnuts. In addition, cattle, sheep and goats are reared in large numbers, especially on the Mambilla Plateau, and along the Benue and Taraba river valleys (Oruonye and Abbas, 2011) [8].

Method of data collection

Data for this study was collected from primary source. The Primary data were obtained through structured questionnaire administered.

Sampling procedure and sample size

IFAD-VCDP rice farmers constituted the population for the study. A multi-stage sampling procedure was employed to select the sample for the study. In the first stage, 3 Local Government Area out of the eight (8) LGAs participating in IFAD-VCDP in Taraba State were randomly selected. In the second stage, 7 farmers organization society were randomly selected from each of the selected LGAs to give a total of 21 farmers' organization society. In the third stage, from the sample frame of 323 rice farmers, 194 respondents were randomly selected at 60% proportionate to each of the farmers organization society selected which formed the sample size for the study.

Analytical techniques

The study adopted both descriptive and inferential statistic to analyze the data. The descriptive statistic such as frequency, mean standard deviation and likert scale were used to analyzed objective (i) and (iii) while inferential statistic such as T-test was used to achieved objective (ii).

3. Results and discussion

Socio-economic characteristics of the beneficiaries

The result of the study (Table 1) shows that the average age of the beneficiaries were 36 years. This indicated that the beneficiaries were young, who were at their youthful age which is in line with the aims and objectives of IFAD- VCDP targeted youths (IFAD, 2018) [6]. Majority 65.2% of the beneficiaries were male while 34.8% were female. This implies that male were the dominant participants than female in the programme. The result of the (Table 1) revealed that 77.2% of the beneficiaries were married while 22.8% were single. This indicated that most of the beneficiaries were married than single. The mean household size of the beneficiaries was 8 persons. This is an indication the households may not need to involve paid labour for rice production activities since the family labour if not engaged elsewhere, could be effectively utilized to boost level production and increase income. The

mean farm size of the beneficiaries was 3 hectare. This implies that beneficiaries were mostly small- scale farmers in the study area. This was not surprising given that of IFAD (2018) [6] stated that the programme was targeted at only small- scale farmers who cultivated less than 5 hectares. The beneficiaries in the programme were reasonable educated with 42.4%, 27.2% and 16.9% attained secondary, tertiary and primary education while 13.6 % didn't attained any formal education. This implies that most 86.4% of the respondents had greater potentials for understanding and adopting any new technologies introduced by the programme. The mean year of rice farming experience of the respondents was 13years. This indicated that the beneficiaries were well experienced rice farmers in the study area. With their high level of experience, they could adopt innovations skills and make decision that would increase their production. The participants of the programme (Table 1) revealed that 91.3% of the respondents had contact with the extension workers while 8.7% of the respondents didn't have contact with extension workers. This implies that most 91.3% of the respondents have contact with the extension workers which enable them to have more knowledge and techniques that would increase their production.

T- test statistics to determine yield and income before and after IFAD-VCDP

The result of the study (Table 2) shows the mean of 1918.26 with standard deviation of 441.23 before the IFAD-VCDP and a mean of 6021.94 with standard deviation of 452.81 after joined the IFAD-VCDP at 95% confidence interval of the difference. The t-value was 62.70, p-value was 0.05 significant

and degree of freedom was 183 while the mean difference was 4103.68. Therefore, the t value = 62.70, p value= 0.05 while the critical t value=1.98. Based on decision rule of t-test since the t value (62.70) is greater than the critical value (1.98), so we reject the null (Ho) hypothesis which stated that there is not significance difference between the yields and income of the beneficiaries before and after joined the IFAD-VCDP and accept the alternative hypothesis. This implies that before the farmers joined IFAD-VCDP their yield was 1.92 tons per hectare and after they joined IFAD-VCDP their average yield was 6.02 tons per hectare with yield difference of 4.10 tons while the income changes from ₦259, 891.30 to ₦597, 989.14 before and after the programme. It shows that the beneficiaries yield and income improved as they joined the programme. This also indicated that IFAD-VCDP have impacted positively on the livelihood of farmers in the study area.

Constraints faced by IFAD-VCDP rice farmers

The major constraints that affected IFAD-VCDP rice farmers in the study area were presented in Table 3. Constraints encountered by the respondents were ranked according to their relative severity. The result (Table 3) revealed that insecurity M=3.94, SD=0.24, lack of payment of requisite matching grant to acquire farm implement M=3.35, SD=0.84, untimely distribution of farm inputs M=3.23, SD=0.71, natural disasters M=2.97, SD=0.65, shortage of farm inputs M=2.71, SD=0.47 while low technical know-how M=1.67, SD=0.48. This implies that insecurity, lack of payment of requisite matching grant to acquire farm implement and untimely distribution of farm inputs were the major constraints faced in the study area.

Table 1: Socio-economic characteristics of the beneficiaries (n=184)

Variables	Respondents	Percentage (%)	Mean	Minimum	Maximum	Std. Dev.
Age	-	-	36	30	50	5.1
Sex						
Male	120	65.2	-	-	-	-
Female	64	34.8	-	-	-	-
Married Status						
Married	142	77.2	-	-	-	-
Single	42	22.8	-	-	-	-
Household size (persons)	-	-	8	1	15	2.2
Educational Status						
Non formal education	25	13.6	-	-	-	-
Primary Education	31	16.8	-	-	-	-
Secondary Education	78	42.4	-	-	-	-
Tertiary Education	50	27.2	-	-	-	-
Farming Experience	-	-	12.9	9	23	2.8
Extension Contact						
Yes	168	91.3	-	-	-	-
No	16	8.7	-	-	-	-
Farm Size (Ha)	-	-	2.7	1	5	0.98

Source: Field survey, 2024.

Table 2: Yield and Income of Farmers before and after joined IFAD-VCDP activities

Variable	Mean Before	Mean After	Percentage change
Yield	1918.2603	6021.9397	4103.6794
Income	259891.30	597989.14	338097.83

Source: Field Survey, 2024

Table 3: Constraints faced by IFAD-VCDP rice farmers

S/N	Constraints	Mean	SD	Rank
1.	Insecurity	3.94	0.24	1
2.	Lack of payment of requisite matching grant to acquire farm implement	3.35	0.84	2
3.	Untimely distribution of farm inputs	3.23	0.71	3
4.	Natural disasters	2.97	0.65	4
5	Shortage of farm inputs	2.71	0.47	5
6.	Low technical know-how	1.67	0.48	6

Source: Field survey, 2022.

4. Conclusion and recommendations

IFAD-Value Chain Development Programme has impacted positively on the livelihood of beneficiaries in the study area. This was based on the finding of the study revealed that before the farmers joined IFAD-VCDP their yield was 1.92 tons per hectare and after they joined IFAD-VCDP their average yield was 6.02 tons per hectare, the yield difference was 4.10 tons, while the income changes from ₦259, 891.30 to ₦597, 989.14 before and after the programme. It shows that the beneficiaries yield and income improved as they joined the programme.

The result of the study also reveals that some socio-economic factors such as contact with extension workers, farming experience and access to credit facilities were important and significant factors influencing yield and income of the farmers. The major constraints encountered by IFAD-VCDP rice farmers were; insecurity, lack of payment of requisite matching grant to acquire farm implement, untimely distribution of farm inputs, among others must be effectively tackled to improve the livelihood of the benefiting farmers in the study area. Recommendations include;

- The government should cooperate with the community to devise means of improve the security of life and properties of farmers through establishment of peace and conflict resolution committee, hunters and vigilante groups and create more awareness among farmers to avoid taken laws into their hands. They should always report any suspicious act to the appropriate authority. The affected farmers should also dialogue and forgive one another for peace to reign among them.
- The farmer should cultivate the habit of savings either as individual or cooperative so that they can be able to pay their 30% matching grant for acquiring farm implements as stated by IFAD.

The Government and Non-Governmental Organization (NGOs) should distribute farm inputs at timeliness more especially in the beginning of farming season to enable them applied it at due time.

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