Effect of IFAD Value Chain Development Programme on Economic Welfare of Smallholder Rice and Cassava Producers in Anambra State, Nigeria

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Abstract
Anambra State is one of the six (6) States in Nigeria participating in the Value Chain Development Programme (VCDP) implemented by International Fund for Agricultural Development (IFAD) and Federal Government of Nigeria (FGN). The main objective of this study was to determine the effect of VCDP on smallholder producers’ economic welfare (income and other services). The VCDP which is in line with the government’s vision for agricultural development, is focusing on supporting cassava and rice smallholder farmers in Anambra State by strengthening farmer organizations through building their capacity to take advantage of existing market opportunities and overcome constraints along the value chain. It was hypothesized that availability of resources and boosting local production of rice and cassava through the VCDP would be very important to improving economic welfare of smallholder farmers.

Primary data were collected through well-structured questionnaires. A total of 358 respondents were randomly sampled and interviewed. Data analysis involved the use of descriptive statistics (means and frequencies) and inferential statistics (analysis of variance).

The results showed that VCDP has significantly led to the improvement of economic welfare of smallholder rice and cassava farmers in Anambra State. The State contributed to the level self-sufficiency in rice production and economic diversification policy of the Federal Government of Nigeria.

The study also found improvements in various aspects of farmers’ economic welfare such as productivity growth, income, physical and financial assets, and access to market and social services since their involvement in VCDP. Recommendations focused on the strategies for improvements of the VCDP in Anambra State, Nigeria.

Key Words: Value Chain, Productivity, Self-sufficiency, Economic welfare.
Introduction

International Fund for Agricultural Development

The International Fund for Agricultural Development (IFAD) is a specialized agency of the United Nations (UNs), which was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference. It resolved that "an International Fund for Agricultural Development should be established immediately to finance agricultural development projects primarily for food production in the developing countries." One of the most important insights emerging from the conference was that the causes of food insecurity and famine were not so much failures in food production but structural problems relating to poverty, and to the fact that the majority of the developing world’s poor populations were concentrated in rural areas.

IFAD is dedicated to eradicating rural poverty in developing countries. Seventy-five per cent of the world’s poorest people - 1.4 billion women, children and men - live in rural areas and depend on agriculture and related activities for their livelihoods. Working with poor rural people, governments, donors, non-governmental organizations and many other partners, IFAD focuses on country-specific solutions, which can involve increasing poor rural people's access to financial services, markets, technology, land and other natural resources.

IFAD Strategic Framework for 2016-2025

IFAD activities are guided by its Strategic Framework on enabling poor rural people to improve their food security and nutrition, raise their incomes and strengthen their resilience. Agenda 2030 offers clear evidence that IFAD mandate of investing in rural people and enabling inclusive and sustainable transformation of rural areas, notably through smallholder agriculture-led growth, is of absolute global relevance today and over the coming decade.

After several years of growth and reform, IFAD is recognized for its experience, knowledge and performance in this domain; it stands ready to achieve greater impact and it is well positioned to play a larger role in helping countries fulfil their priorities relative to Agenda 2030.

For it to do so, it needs to work in a way that is bigger, better and smarter:

Bigger: by mobilizing substantially more funds and resources for investment in rural areas;

Better: by strengthening the quality of IFAD’s country programmes through innovation, knowledge-sharing, partnerships and policy engagement; and

Smarter: by delivering development results in a cost-effective way that best responds to partner countries’ evolving needs.

Goal

IFAD goal is to empower poor rural women and men in developing countries to achieve higher incomes and improved food security.

Objectives

IFAD will ensure that poor rural people have better access to, and the skills and organization they need to take advantage of:
i. Natural resources, especially secure access to land and water, and improved natural resource management and conservation practices

ii. Improved agricultural technologies and effective production services

iii. A broad range of financial services

iv. Transparent and competitive markets for agricultural inputs and produce

v. Opportunities for rural off-farm employment and enterprise development

vi. Local and national policy and programming processes

All of IFAD decisions - on regional, country and thematic strategies, poverty reduction strategies, policy dialogue and development partners - are made with these principles and objectives in mind. As reflected in the Strategic Framework, IFAD is committed to achieving the Sustainable Development Goals.

**Partnership**

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. Since starting operations in 1978, IFAD has invested US$14.8 billion in over 900 projects and programmes that have reached some 400 million poor rural people. Governments and other financing sources in recipient countries, including project participants, contributed US$12.2 billion, and multilateral, bilateral and other donors provided approximately another US$9.6 billion in co-financing. This represents a total investment of about US$21.8 billion.

IFAD tackles poverty not only as a lender but also as an advocate for rural poor people. Its multilateral base provides a natural global platform to discuss important policy issues that influence the lives of rural poor people, and to draw attention to the central role of rural development in meeting the Sustainable Development Goals (SDGs).

**IFAD in Nigeria**

The Value Chain Development Programme of IFAD in Nigeria takes a holistic and demand-driven approach to addressing constraints along the cassava and rice value chains. It does so through an inclusive strategy, strengthening the capacity of actors along the chain including producers and processors as well as public and private institutions, service providers, policy-makers and regulators.

At the same time, the programme strongly emphasizes the development of commodity-specific Value Chain Action Plans at the local government level, which serve as the basis for rolling out sustainable activities to reduce poverty and accelerate economic growth. The objective is to sustainably enhance rural incomes and food security. The target groups include 15,000 smallholder farming households, 1,680 processors and 800 traders.

Specifically, the programme focuses on:

- Developing agricultural markets and increasing market access for smallholder farmers and small to medium-scale agro-processors
Enhancing smallholder productivity and thus increasing the volume and quality of marketable produce by strengthening farmers' organizations as well as supporting smallholder production.

IFAD's support to the Nigerian Government's poverty reduction programme in rural areas targets large numbers of smallholder farmers and is essentially people-centered. IFAD supports programmes and projects that work with communities, with smallholder farmers as the key players.

The Value Chain Development Programme (VCDP) emerged from the IFAD Country Strategic Opportunities Programme (COSOP) covering the 2010-2015 period. This COSOP built on the recommendations of the Country Programme Evaluation (CPE) carried out in 2008/2009 April 2009 by the Federal Government of Nigeria (FGN) and IFAD. The CPE recommended focusing on future IFAD interventions on agriculture, with emphasis on enhancing productivity and access to market.

The VCDP design is consistent with the CPE recommendations and builds on ongoing value chain (VC) interventions supported by Government, development partners (DPs) and the private sector in Nigeria. The VCDP is fully aligned with the National Agricultural and Food Security Strategy, the National Policy on Integrated Rural Development/Rural Development Sector Strategy and the National Agricultural Investment Plan (NAIP) of the Government of Nigeria.

The programme is consistent with the Agricultural Transformation Agenda (ATA), the vision for agricultural development set by the new Government, to develop the agricultural sector through a commodity value chain approach. In line with the ongoing COSOP, the programme will target two of the priority commodities identified in the ATA, cassava and rice, to take advantage of existing market opportunities and address the constraints along the value chain. Based on the CPE recommendation, the programme will focus its intervention on six out of the country’s 36 states for enhanced impact and learning towards possible up scaling.

The objectives are to empower poor rural people, especially women, by increasing their access to resources, infrastructure and services; and to promote the management of land, water and common property by local communities, helping to overcome environmental degradation. IFAD-supported programmes and projects address issues such as erosion and the loss of soil fertility, as well as coastal zone natural resource management.

Since 1985, IFAD has financed nine programmes and projects in Nigeria, with a total loan commitment of over US$232.2 million. The country currently attracts over 40 per cent of the financial resources that IFAD allocates to Western and Central Africa. All programmes and projects have addressed the livelihood needs of poor rural people, including; smallholders, women, small business owners, poor fishing communities, young people and landless people.

The organization also promotes commodity-based interventions that provide technical and financial support along several value chains – such as livestock products, rice and other cereals, roots and tubers, vegetables and agroforestry products.

Value Chain Development Programme, Anambra State, Nigeria

The IFAD VCDP in Anambra state is co-financed by the Federal Government of Nigeria, the Anambra State Government (ANSG), the five participating Local Government Councils and the Communities/Commodity Interest Groups (CIGs).

The target groups selected for value addition program are categorized into two;
**Primary target group**

i. Poor rural households engaged in cassava and rice value chain (not more than 5ha).

ii. Small scale processors (processing capacity of 2mt/day for cassava and 4mt/day for rice.

iii. Marketers (with reasonable volume of produce) with emphasis on women and youths.

**Secondary target group**

i. Downstream operators linked to large number of primary target group.

ii. Local government councils

iii. Communities strengthened to sustainably manage marketing infrastructure supported by the program

iv. Private sector operators strengthened to provide quality services.

Anambra state VCDP focuses on three dimensions:

1. Agricultural market development

2. Smallholders enhancement and Productivity: Sensitizations are organized for stakeholders and farmer organizations across Local government areas

3. Programme Management and coordination

Anambra State VCDP promotes two commodities; rice and cassava through farmer organizations (Producers, processors and marketers). The participating LGAs in Anambra state include: Anambra East, Anambra West & Ayamelum (first tier began 2014-2015); and in 2016 Orumba North and Awka North were included.

According to International Fund for Agricultural Development, 2013, Global agriculture needs to meet estimated 60 per cent increase in demand for food by 2050 while addressing the challenges presented by climate change and natural resource degradation. Africa’s capacity in rice and cassava research is very limited and mainly conducted by national research institutes, universities and international research institutes. The general disinterest in agriculture in the 1990s has led to a desperate lack of capacity at all levels in the rice and cassava value chain and gross neglect of Africa’s agricultural research and extension capacity, which jeopardizes progress toward developing Africa’s agricultural sector. Given these realities, it is clear that it is imperative to invest in the next generation of farmers.

The major objective of the study is to determine the effect of the IFAD-VCDP on the general standards of living of smallholder farmers in Anambra State. The present paper summarises the main methods results and implications of that larger study.¹

¹ For a longer and complete version of the original study, including questionnaire and full references, please contact the corresponding author.
Study Area

Figure 1 Map of Nigeria showing Anambra State

Figure 2 Map of Anambra State showing study sites
Nature and Sources of Data Collection

The study adopted the use of both primary and secondary data. Primary data was collected through the use of questionnaire administration, key informant (KI) interviews, focus group discussion (FGDs), as well as Observations via field visits to some local government areas participating in Value Chain Development Programme in Anambra State, Nigeria. Secondary data were obtained through the review of baseline study, journals, reports, publications on research works, newsletters, internet and books.

Prior to the commencement of data collection, the researcher met with the enumerators to train them on the importance of the research objectives and explanation of research questions. A pretest was carried out in Orumba North LGA, after which the questionnaire was reviewed and corrected. Meetings were held with the farmer groups to elicit information. Focus group discussion and key informant interview were also conducted by the researcher with the assistance of experienced interpreters.

Method Data Collection

Multi staged sampling technique was adopted. 3 LGAs were randomly selected from the 5 LGAs participating in the Value Chain Development Program (2 from the first tier LGAs and 1 from the second tier). The sample size was calculated in proportion to the number of beneficiaries in each location using sample size calculator with 95 percent confidence level. A total of 358 respondents were used for the study (264 rice farmers and 94 cassava farmers).

Table 1: Sample Frame for the Local Government Areas

<table>
<thead>
<tr>
<th>LGA</th>
<th>Rice</th>
<th>Cassava</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayamelum</td>
<td>175</td>
<td>07</td>
<td>182</td>
</tr>
<tr>
<td>Anambra East</td>
<td>28</td>
<td>57</td>
<td>85</td>
</tr>
<tr>
<td>Awka North</td>
<td>61</td>
<td>30</td>
<td>91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>264</strong></td>
<td><strong>94</strong></td>
<td><strong>358</strong></td>
</tr>
</tbody>
</table>

Analytical Methods

Data collected was coded and analyzed using Statistical Package for Social Sciences (SPSS) using descriptive statistics in form of percentages, frequencies, mean scores, standard deviation and cross tabulation. Percentages were specifically used to (present information in tables and figures) analyze the demographic characteristics of the respondents, improvements in income, physical and financial assets, access to market and social services while mean scores were used to analyze the productivity of the respondents.
RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

Mean Age

Figure 3 shows the mean ages of the respondents. Male respondents range between ages 25 years to 70 years and the mean age is 45.5 years while female respondents ranges between 25 years to 69 years and the mean age is 41.8 years. The mean age of all respondents is 43.8 years which implies that the respondents were in the active and productive age range. Age has been found to determine how active and productive the individual would be, which implies that majority of the beneficiaries in the studied area are energetic and still able to do manual work and it can be concluded that the beneficiaries are in their “working age” and as such the likelihood of moving out of poverty and food insecurity is high.

Figure 3: Mean age of respondents

![Mean age chart]

Fig 3: Source: Field survey 2018

Gender of respondents

Table 2 shows that 53.9% of the beneficiaries are Male while 56.1% of the beneficiaries are Female. This shows that the VCDP is female gender inclusive. More female participation in Agriculture have been encouraged. One of the main focus of VCDP is to empower poor rural people, especially women in all steps of the value chain.
Table 2: Gender of respondents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>193</td>
<td>53.9</td>
</tr>
<tr>
<td>Female</td>
<td>165</td>
<td>46.1</td>
</tr>
<tr>
<td>Total</td>
<td>358</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 Source: Field Survey 2018

Marital Status of the respondents

Figure 4 reveals that 5% of beneficiaries were single/never married as at the time of survey. 88.5% of beneficiaries are married, 1.1% of beneficiaries had separated from their spouses, 0.3% of beneficiaries are divorced, and 5% of beneficiaries are widowed. There is very low record of divorced and separated beneficiaries which buttresses the point that marriage, in the African culture is a hallmark of responsibility and also that the various religious faiths adduced to the fact that Marriage is the foundation for household development.

Figure 4: Marital Status of the respondents

![Marital Status Graph](image)

Fig 4 Source: Field survey 2018

Level of education of respondents

Table 3 reveals that most of the respondents have completed primary (30.7%) and secondary (49.4%) school education while 13.4% of the respondents had completed tertiary education. Only 6.4% of respondents have no formal education.

The level of education plays significant role in agricultural growth and the studied area indicates a high literacy level among respondents. The level of education could determine the level of opportunities available to enhance food security and reduce the level of poverty.
Education opens the mind of the farmer to knowledge. High education status of farmers will enable them acquire knowledge and skills, adopt new inputs such as high-yielding varieties, chemical fertilizers, pesticides and also embrace extension services. VCDP therefore, is a programme that is relevant to the targeted rural farmers.

Table 3: Level of education of respondents

<table>
<thead>
<tr>
<th>Highest education level attained</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal education</td>
<td>23</td>
<td>6.4</td>
</tr>
<tr>
<td>Primary education</td>
<td>110</td>
<td>30.7</td>
</tr>
<tr>
<td>Secondary education</td>
<td>177</td>
<td>49.4</td>
</tr>
<tr>
<td>Tertiary education</td>
<td>48</td>
<td>13.4</td>
</tr>
<tr>
<td>Total</td>
<td>358</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3 Source: Field Survey 2018

Farming experience of respondents

Figure 6 shows that 30.4% of the respondents have between 1-10 years of farming experience, majority (47.2%) of the respondents have between 11-20 years of farming experience, 17.6% of the respondents have between 21-30 years of farming experience, 4.5% of the respondents have between 31-40 years of farming experience and 0.3% of the respondents have more than 40 years of farming experience.

Farming experience is important to farmers’ efficiency, successful succession planning and even for the competitiveness of the nation’s farmers.

Figure 5: Farming experience of respondents

Fig 5 Source: Field Survey 2018
Productivity level of beneficiaries

Access to Inputs

Figure 6 shows that 100% of rice producers have access to improved seed variety and 100% of cassava producers have access to improved stem variety. All the respondents (rice and cassava) also have access to fertilizers. 80.6% of rice producers have access to pesticides while 47.8% of cassava producers have access to pesticides. 99.2% of rice producers have access to herbicides while 100% of cassava producers have access to herbicides. 76.5% of rice producers have access to farm machinery while only 27.6% of cassava producers have access to machinery.

Biological inputs such as seeds/stems, fertilizers, pesticides and herbicides and mechanical inputs of farm machinery and implements are very important to productivity. Low record in farm machinery for cassava producers is due to the fact that most of them still use labour for most of their farming activities.

Figure 6: Access to Inputs

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Fig 6 Source: Field Survey 2018
Source of improved seeds/stems and fertilizers

Figure 7 shows that 0.8% of rice producers get their improved seeds from commercial input suppliers, 6% get theirs from fellow farmers and 93.2% get their improved seeds from service providers (VCDP).

19.3% of rice producers get their fertilizers from commercial input suppliers, 1.5% get theirs from fellow farmers and 79.2% get their fertilizers from service providers (VCDP).

43.6% of rice producers that used pesticides got it from commercial input suppliers, 1.4% get theirs from fellow farmers and 54.9% get their pesticides from service providers (VCDP).

6.1% of rice producers that accessed herbicides got their herbicides from commercial input suppliers, 1.5% get theirs from fellow farmers and 92.4% get their herbicides from service providers (VCDP).

2.5% of rice producers that used farm machinery got them from commercial input suppliers, 80.2% get theirs from fellow farmers and 17.3% get their machinery from service providers (VCDP).

Farmers pay only 50% of retail price for inputs sourced from VCDP and this helps lower their production cost. Most of the rice farmers got their inputs from the VCDP except machinery where 80.2% got from fellow farmers.

Figure 7: Source of inputs (rice)

**Fig 7 Source: Field Survey 2018**

Figure 8 shows that 4.3% of cassava producers got their improved stems from commercial input suppliers, 10.6% got theirs from fellow farmers and 85.1% got their improved stems from service providers (VCDP).
9.6% of cassava producers got their fertilizers from commercial input suppliers, 2.1% got theirs from fellow farmers and 88.3% got their fertilizers from service providers (VCDP).

17.7% of cassava producers that used pesticides got it from commercial input suppliers, 13.3% get theirs from fellow farmers and 68.9% get their pesticides from service providers (VCDP).

13.8% of cassava producers got their herbicides from commercial input suppliers, 6.4% got theirs from fellow farmers and 79.8% got their herbicides from service providers (VCDP).

26.9% of cassava producers that used farm machinery got them from commercial input suppliers, 15.4% get theirs from fellow farmers and 57.7% get their machinery from service providers (VCDP).

Farmers pay only 50% of retail price for inputs sourced from VCDP and this helps lower their production cost. Majority of the cassava farmers got their inputs from the VCDP. VCDP therefore, is a programme that is relevant to the targeted rural farmers.

*Figure 8: Source of inputs (cassava)*

**Average Input Quantity**

Table 4 shows that the average land for rice cultivated by the respondents before VCDP was 1.4 hectares while an average of 2.7 hectares was cultivated last year. The average land for cassava cultivated by farmers before VCDP was 0.7 hectares while 1.7 hectares was cultivated last year.

Fertilizer use had increased from 4bags (200kg) to 10.7bags (534kg). Pesticides and herbicides use had increase from 0.9litres to 2.3litres and 4.1litres to 9.7litres respectively. Labour (in man days) had increased from 20.4 to 25.9.

These improvements are due to the subsidized rates for inputs provided by VCDP.
Table 4: Average Input Quantity

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Average Quantity (before VCDP)</th>
<th>Average Quantity (Last year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Cultivated Rice (ha)</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Land Cultivated Cassava (ha)</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Fertilizers used (bags)</td>
<td>4</td>
<td>10.7</td>
</tr>
<tr>
<td>Pesticides used (lttrs)</td>
<td>0.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Herbicides used (lttrs)</td>
<td>4.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Labour (in man days)</td>
<td>20.4</td>
<td>25.9</td>
</tr>
</tbody>
</table>

Table 4 Source: Field Survey 2018

Yield

Figure 9 shows the increase in rice and cassava yield after VCDP intervention. Before VCDP, the average rice yield was 2.9 tonnes per hectare and last year, the average rice yield was 5.1 tonnes per hectare while the average cassava yield before VCDP was 9.3 tonnes per hectare and 17.3 tonnes per hectare last year.

These improvements are due to the farmers’ access to subsidized inputs from VCDP such as improved seeds/stems, fertilizers, herbicides, pesticides and also extension services.

Figure 9: Yield

![Average yield (ton/ha)](image)

Fig 9 Source: Field Survey 2018
Level of income and physical and financial assets of beneficiaries

Level of income

Figure 10 reveals that the average annual income of rice producers before VCDP was ₦298,530.00 and ₦758,583.00 last year while the average of cassava producers before VCDP was ₦243,510.00 and ₦563,723.00 last year.

The average annual income for all respondents before VCDP was ₦284,083.00 and ₦704,469.00 last year.

Figure 10: Average Annual Income

![Average yearly income in Naira](image)

**Fig 10 Source:** Field survey 2018

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**Table 5: Percentage of Increase in Income**

<table>
<thead>
<tr>
<th></th>
<th>Percentage of increase in income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice producers</td>
<td>170.3</td>
</tr>
<tr>
<td>Cassava Producers</td>
<td>206.6</td>
</tr>
<tr>
<td>All respondents</td>
<td>179.8</td>
</tr>
</tbody>
</table>

**Table 5 Source:** Field survey 2018
Physical and financial assets of beneficiaries

From Table 6 and Figure 11, it is evident that the VCDP has a very strong positive impact on the physical and financial assets of the beneficiaries. This was established as a result of more than 90 percent of improvements recorded in income, household savings, profit making, and crops cultivated. More than 70 percent improvements in quality of dwelling unit, farm machinery, and means of transport and more than 50 percent improvements in size of dwelling unit, business assets, means of transport, size/number of landed property owned, and electrical appliances of the programme beneficiaries. It was only in a case that there was no record of up to 50 percent improvement, and this was access to credit, which has 43.2 percent improvement.

Table 6: The manifestation of the Project on the Physical and Financial Assets of the beneficiaries

<table>
<thead>
<tr>
<th>Variables (%)</th>
<th>Improving (%)</th>
<th>No change (%)</th>
<th>Worsened (%)</th>
<th>Not applicable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>size of dwelling unit</td>
<td>52</td>
<td>47.8</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>quality of dwelling unit</td>
<td>77.4</td>
<td>22.6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>farm machinery</td>
<td>77.9</td>
<td>17.9</td>
<td>0.3</td>
<td>3.9</td>
</tr>
<tr>
<td>income</td>
<td>99.4</td>
<td>0.6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>household savings</td>
<td>99.7</td>
<td>0.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>access to credit</td>
<td>45.5</td>
<td>38</td>
<td>2.2</td>
<td>14.2</td>
</tr>
<tr>
<td>business assets</td>
<td>62.6</td>
<td>28.2</td>
<td>0.3</td>
<td>8.9</td>
</tr>
<tr>
<td>profit making</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>means of transport</td>
<td>70.9</td>
<td>21.5</td>
<td>7.5</td>
<td>0</td>
</tr>
<tr>
<td>size/number of landed property owned</td>
<td>59.8</td>
<td>40.2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>electrical appliances</td>
<td>67</td>
<td>24.9</td>
<td>0.3</td>
<td>7.8</td>
</tr>
<tr>
<td>crops cultivated</td>
<td>98.9</td>
<td>0.8</td>
<td>0</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Table 6 Source: Field survey 2018
Figure 11: Improvements to physical and financial assets

Fig 11 Source: Field survey 2018
Access to Market and Social Services

Access to Market

Table 7 and Figure 12 show the effect of the VCDP on the beneficiaries’ access to market. There was over 95 percent of improvements recorded in access to market information, training services, and receipt of extension services. More than 60 percent improvements in cost of transportation and access to market infrastructure. These are commendable improvements. It was only in access to modern storage facilities that there was no record of up to 38.3 percent improvement.

Table 7: The manifestation of the programme on access to market of the beneficiaries

<table>
<thead>
<tr>
<th>Variables (%)</th>
<th>Improving (%)</th>
<th>No change (%)</th>
<th>Worsened (%)</th>
<th>Not applicable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to market information</td>
<td>95.5</td>
<td>4.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Access modern storage facilities</td>
<td>38.3</td>
<td>58.9</td>
<td>0</td>
<td>2.8</td>
</tr>
<tr>
<td>Cost of transportation</td>
<td>64.8</td>
<td>22.9</td>
<td>11.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Training services</td>
<td>95.3</td>
<td>4.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Receipt of extension services</td>
<td>95</td>
<td>2</td>
<td>3.1</td>
<td>0</td>
</tr>
<tr>
<td>Access to market infrastructure</td>
<td>64.5</td>
<td>33.8</td>
<td>0.3</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Table 7 Source: Field survey 2018
Figure 12: Improvements in Access to Market

Access to Social Services

Table 8 and Figure 13 show the effect of the VCDP on the beneficiaries’ access to social services. There was 99 percent of improvement in means of information and communication, more than 80 percent improvements in access to health services, food market and Primary/Secondary school for their children. There was also over 70 percent improvement in their access to clean drinking water. Improvements in their income has afforded them better health service, provision of quality education for their children and general improvements in welfare.
Table 8: The manifestation of the programme on access to social services of the beneficiaries

<table>
<thead>
<tr>
<th>Variables</th>
<th>Improving (%)</th>
<th>No change (%)</th>
<th>Worsened (%)</th>
<th>Not applicable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to clean drinking water</td>
<td>72.9</td>
<td>26.3</td>
<td>0</td>
<td>0.8</td>
</tr>
<tr>
<td>Access to Primary/Secondary school for your children</td>
<td>83.8</td>
<td>14.2</td>
<td>0</td>
<td>2.0</td>
</tr>
<tr>
<td>Means of Information and communication</td>
<td>99.2</td>
<td>0.6</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>Access to health services</td>
<td>82.7</td>
<td>15.6</td>
<td>0.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Access to food market</td>
<td>88</td>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 8 Source: Field survey 2018

Figure 13: Improvements in Access to Social Services

Fig 13 Source: Field survey 2018
Summary of Findings

The focus of this study is to proof with empirical evidence the effect VCDP has had so far on the beneficiaries and their household.

From the results, it can said that the Value Chain Development Programme a major stride towards improving productivity among farmers. This will also alleviate poverty and achieve the government’s vision for agricultural development. Living standards of beneficiaries have improved through the acquisition of assets such as motorbikes, cars, farm machinery and investments.

Increase in household cash flows has enabled smoother payment of children’s school fees, better access to medical treatment and better participation in community decision making process.

The programme in itself was faced with some short comings as attested to by the respondents. Some of the beneficiaries lamented on the untimely delivery of inputs, inputs redemption centre located too far away from beneficiaries and untimely information dissemination.

The beneficiaries also complained about short redemption period and with no access to credit, the redemption window closes too fast for some farmers. Another issue is the limited number of hectares the farmers can cultivate with the support of VCDP.

It is to be noted also that the VCDP is only in its third year of implementation and this intervention have produced promising results.

Conclusion

This research work afforded me the opportunity to apply classroom knowledge on the field. Though language was a barrier, I was able to adapt easily with the respondents and communicate with the assistance of an interpreter. The previous sections presented the effect of Value Chain Development Programme on the welfare of smallholder producers. The study was carried out in Ayamelum, Anambra East, and Awka North Local Government areas of Anambra State, Nigeria and it focuses on productivity level of beneficiaries, level of income and the physical and financial assets, access to market and social service as wells as the level of empowerment of beneficiaries. Recommendations proffered should be given due considerations and implemented in order to improve the welfare of farmers. Sustainability strategies should also be implemented in order to ensure continuity of the programme after the completion of VCDP duration.

Recommendations

Access to Credit

The importance of access to credit in agricultural production cannot be overemphasised. According to Carter and Weibe (1990), Farmers need both ex-ante and ex-post access to capital. Ex-ante capital access is required in order to finance vital production costs such as labour and purchase inputs which needed to be paid ex-ante, that is, prior to the actual realization of production. On the other hands, access to capital after the realization of the production process, that is ex-post capital access, is of particular importance when there is no insurance as it’s often the case in low income agrarian economies.
In addition, Feder et al. (1990) posit that credit allows farmers to satisfy the cash needs induced by the production cycle which characterize agriculture; land preparation, planting, cultivation, and harvesting are typically done over a period of several months in which very little cash revenue is earned, while expenditure on materials, purchased inputs, and consumption need to be made in cash. Thus, access to credit may affect farm productivity because farmers facing binding capital constraints would tend to use lower levels of inputs in their production activities compared to those not constrained (Feder et al., 1989; Petrick, 2004).

Although the VCDP delivers inputs to the farmers at a subsidized rate, access to credit will further help the farmers in the various productive processes.

**Timely delivery of inputs**

Timely delivery of inputs will help increase productivity. As at the time of this research which was May 2018, inputs for the farming season had not delivered to the beneficiaries. They suggested January of February for delivery of inputs to enable them plan better for the farming season.

**Redemption centres and Access roads**

Establishing more redemption centres will aid in the distribution of inputs. Farmers in Awka North LGA especially lamented about the redemption centre being too far from them. They suggested the creation of at least one more redemption centre in the LGA. Construction of more access roads will also reduce transportation costs.

**Youth Participation**

Youth participation should be further encouraged through creating awareness, and organizing trainings, seminars, workshop, and symposiums. According to the national bureau of statistics (NBS), Nigeria’s unemployed rate keeps rising to an unprecedented high. Encouraging youth participation in agriculture will help in the pursuit of a self-sufficient economy and also reduce unemployment rate in Anambra state and Nigeria as a whole.
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Value Chain Development Programme www.operations.ifad.org/web/ifad/operations/country/project/tags/nigeria/1594/project_overview