VALUE CHAIN DEVELOPMENT PROGRAMME AND AGRICULTURAL ENTERPRISE GROWTH IN ANAMBRA STATE, NIGERIA

[1]Okonkwo Leonard Anayochukwu, [2]Zwingina, Christy T. Ph. D, [3]Wuyep Tony Ph.D

[1,2,3]Department of Business Administration
Bingham University
Karu, Nasarawa State

Correspondence: leeaglobalresources@gmail.com

Abstract

The Federal government of Nigeria (FGN) in partnership with the International Fund for Agricultural Development (IFAD) launched the value chain development programme (VCDP), with the goal to improve livelihoods, incomes and food security of its populace, but the consistent price increase of food products especially rice and cassava in Nigeria is an indication that the country is yet to meet this target. Therefore, this study is to examine rice and cassava value chain programmes to ascertain their contributions to agricultural enterprise growth in Nigeria. The main objective of this study is to investigates value chain development programme (VCDP) and agricultural enterprise growth in Anambra state, Nigeria. The specific objectives were to: assess the effect of operations programme (rice and cassava) on agricultural enterprise growth in Anambra State, Nigeria; ascertain the effect of marketing programme (rice and cassava) on Agricultural enterprise growth in Anambra State, Nigeria. Survey research design was adopted. The population of this study comprised of 12, 737 rice and cassava VCDP farmers in Anambra state, the sample size was 427 respondents using simple random sampling technique across the 8 local government area covered by the Anambra state VCDP. Data was collected through questionnaires. Multiple regression techniques were used for analysis. Findings from the study show that operation have positive relationship and significant effect on agricultural enterprise growth in Anambra state, Nigeria. While marketing programme has positive relationship and insignificant effect on agricultural enterprise growth in Anambra State, Nigeria. The study recommends that; Agric-enterprise should adopt bush fallowing method to aid its operations programme as farming on same piece of land for a long period of time may mar operational effort for optimum output. Effective development and implementation of marketing strategy that covers all area of marketing mix, establish functional aggregation centers.

Keywords: *Value Chain Development Programme, Operation Programme, Marketing Programme and Agric-Enterprise Growth.*

INTRODUCTION

Value Chain development Programme (VCDP) is the processes involved in bringing goods or services from conception, through production, processing, marketing, delivery to customers and proper disposal after use or waste recycling (Donor Committee for Enterprise Development, 2023).

Adopting the value chain approach for rice and cassava farming in Nigeria, the Federal government of Nigeria (FGN)

and the International Fund for Agricultural Development (IFAD) launched the value chain development programme (VCDP) with the goal to improve livelihoods, incomes and food security in Nigeria, especially poor rural households in existing nine programme states: Anambra, Benue, Ebonyi, Enugu, Kogi, Nasarawa, Niger, Ogun and Taraba.

The programme beneficiaries are farmers who are engaged in production, processing and marketing of rice and cassava products along its value chain activities. The programme is expected to make more foods available, reduce poverty, increase employment opportunities, reduce rural-urban migration, increase local raw material utilization, increase government revenue through food and raw material exports, improve local technology and innovations, diversify economy and increase foreign revers. This is in line with the commitment of the federal and state government of Nigeria towards the actualisation of Sustainable Development Goal 1 and 2: No poverty and zero hunger respectively.

International fund for agricultural development (IFAD) is a financial institution of United Nation established in 1977 as an outcome of 1074 world food conference. IFAD goal is to empower rural men and women in developing economies to achieve sustainable higher income and food security through provision of low interest loans and grants. They work in partnership of government structures within the country to develop and finance programmes and projects that enable rural dwellers to overcome poverty (Tenabe et al., 2018). Cassava and Rice are the two products covered by VCD programme in all the nine programme states in Nigeria.

Cassava (Manihot esculenta) is an excellent foreign exchange commodity and a multipurpose crop. It is a major source of traditional foods and industrial products such as carbohydrate, starch, flour, ethanol, sorbitol, animal feed and medications which are derived from its products and bye products. The findings from a 2019 survey conducted in Nigeria showed that about 46% of farming population in Nigeria are growing cassava crops for consumption and for industrial purposes, which has made it one of the most common crops in the country (Sasu, 2023).

Rice (Oryza sativa) is the second product that farmers produce in value chain development programme in Nigeria. Global index shows that rice is second most important cereal crop following only corn (Shahbandeh, 2023). It is the sixth major crop cultivated in Nigeria after sorghum, millet, cowpea, cassava and yam, the most important staple food for most household. Rice is used in the preparation of several local and intercontinental dishes that are eaten in most homes in Nigeria, especially during festivals and ceremonies. Though rice plays essential role in enhancing food security in Nigerian economy, there are still many challenges with its processing and marketing related activities especially as regards to quality and quantity which equally contributed to low pricing of the commodity across the country (Adam et al., 2018).

Although rice production output in Nigeria increased from 3.7 million metric tons in 2017 to 4.0 million metric tons in 2018, only 57% of the 6.7 million metric tons of rice consumed in the country annually is locally produced thereby leading to a deficit of approximately 3 million metric tons, which is either imported or smuggled into the country

illegally. In line with this, rice importation was banned by the Nigerian Government in 2019 in order to stimulate local production (FAO, 2023). Consequently, in August 2019, Nigeria closed its border with Benin Republic and other neighbouring countries to stop rice smuggling into the country as part of efforts to boost local production (Reuters, 2019). Though, Rice production in Nigeria amounted to around 8.2 million metric tons in 2020 thereby making the country the leading rice producer in Africa with Egypt and Tanzania following with an output of about 4.9 million and 4.5 million metric tons of rice respectively (Saleh, 2022), Nigeria's rice could hardly keep up with the increased demand.

FGN/IFAD Value chain development programme in all its programme states, including Anambra state, takes a holistic and demand driven approach to addressing constraints along the cassava and rice value chains in Nigeria, through an inclusive strategy, strengthening the capacity of actors along the chain values including producers and processors as well as public and private institutions, service providers, policymakers and regulators. Specifically, the programme focuses on the following; developing agricultural markets and increasing market access for smallholder farmers and small to medium scale agro-processors, enhancing smallholder productivity by increasing the volume and quality of marketable rice and cassava products while strengthening farmer organisations as well as supporting smallholder production (Tenabe et al., 2018).

Anambra State is one of the nine (9) States that are participating in the Federal Government of Nigeria and International Fund for Agricultural Development (FGN/IFAD)-Assisted Value Chain Development Programme (VCDP). The programme activities in the state is carried out in eight local government areas namely; Anambra East and West, Anyamelu, Orumba North and south, Awka North, Ihiala, Ogbaru. The activities of the programme incliudes strengthening of farmers' organizations, business development, 50% input support, 70% support for farm machinery, land development and construction (farm access road, market infrastructure and storage facilities), among others.

The growth and development of developing economy like Nigeria is highly dependent on the rate agricultural enterprise grow. Agricultural enterprise growth is therefore essential for economic growth and national development. They contribute to employment opportunities, gross domestic product rate (GDP), enhance productivity, food security, and increase in earnings / income and sustainable livelihood. According to Mustapha et, al (2018) Growth of agricultural enterprise can be measured by increase in product output, increase in sales turnover and increase in the number of workers or increment in profits.

Statement of the Problem

As the human population is on an increasing rate, so also is the demand for food consumption. Growth in agricultural production is of essence to meet up with the local and international demands for agricultural products. Hence, agricultural enterprise growth through increasing agricultural output has become a necessity in today's world, especially in developing economies like Nigeria.

The VCDP is one of the investment projects of the Nigerian Government geared towards reducing annual food

import rates in line with the country's national development agenda, and is also among the major agricultural programmes in Nigeria that enhance incomes and promote food security of poor rural households engaged in the production, processing and marketing of rice and cassava (Enechi et al., 2021),
The Value Chain Development Programme is primarily focused on rice and cassava value chains with the aim to improve agricultural enterprises through the provision of support services such as market access, financial literacy and enterprise development, trainings and other technical support services, including Government policies, information and communication technology, and infrastructural development. There are increasing rural – urban labour force migration, deficient transport infrastructure such as roads, low technological adoption, poor agricultural productivity and resource shortages over the past years thereby causing farmers to experience low yields and poor enterprise growth. Current statistics revealed that despite the efforts by the Government and other stakeholders to enhance productivity of agricultural enterprises in Nigeria, the country is still unable to meet the local and export demand for most agricultural value chains especially rice and cassava (Oyaniran, 2020).

The reality on ground shows that with all the programmes (National Poverty Eradication Programme (NAPEP), Family Support Programme (FSP), Green Revolution, Operation Feed the Nation (OFN), National Directorate for Employment (NDE), Youth Empowerment Scheme (YES), Family and Economic Advancement Programme (FEAP), Micro Credit Scheme, Better Life programme (BLF), Directorate for Food Road and Rural Infrastructure (DFRRI) and FADAMA etc.) aimed to eradicate poverty, It is highly sympathetic that we have not achieved the desired result, even despite the huge sum of money equally realized from the oil industry, the poverty level of Nigeria has kept on increasing on a daily basis, the expected outcome has not been achieved because of consistent low performance of agric enterprises, which is witnessed by high rate of business closures worsened by the impact of COVID-19 lockdown, rising insecurity plus inability to meet up with local and international demand of agricultural products. These have resulted in the steadily-rising cost of food products in Nigeria market. The research on value chain development programme and Agricultural enterprise growth is employed to find out the durable solutions to the gaps.

Most studies such as Abdullahi et al (2021), Nkem et al (2021), Dooember (2020) and Adi et al (2020) examined value chain programme as a unit of study; however, none of these studies considered the effect of each chain of activity involved at different stages of the value chain programme. Most research works approached value chain development programme as a whole unit proxy but in this research work, the researcher choose to examine the specific activities (operation programme and marketing programme) carried out along the value chain. This research study therefore seeks to close the gap and contribute to the existing body of knowledge by examining the effects of operations programme and marketing programme on agricultural enterprise growth in Anambra State, Nigeria.

Research Questions

In line with the statement of the problem, this study provided answers to the following research questions:

i. To what extent does operations programme (processing and packaging) affect agricultural enterprise growth in Anambra State, Nigeria?
ii. Does marketing programme have effect on agricultural enterprise growth in Anambra State, Nigeria?

Objectives of the Study

The main objective of this study is to examine the effect of the Value Chain Development Programme (VCDP) on Agric-Enterprise Growth in Anambra State, Nigeria. The specific objectives are to:

i. assess the effect of operations programme (rice and cassava processing/packaging) on agricultural enterprise growth in Anambra State, Nigeria.
ii. ascertain the effect of marketing programme (rice and cassava) on agricultural enterprise growth in Anambra State, Nigeria.

Statement of Hypotheses

$\mathbf{H_{01}}$: Operations programme (processing and packaging) has no significant effect on agricultural enterprise growth in Anambra State, Nigeria.

$\mathbf{H_{02}}$: Marketing programme has no significant effect on agricultural enterprise growth in Anambra State, Nigeria.

LITERATURE REVIEW

Conceptual Framework

The concepts that formed the basis of this study are value chain programme, operations programme, marketing programme and agricultural enterprise growth.

Value Chain Programme

Value Chain was first described as a concept in 1985 by Michael Porter (a Harvard Business School Professor) in his book - *Competitive Advantage: Creating and Sustaining Superior Performance*. The Value Chain Approach takes an all-inclusive view of the whole chain so as to ensure that identified gaps are resolved and do not limit growth; it involves a range of collaborations, policies and investments that need to be carefully prioritized and sequenced (CABRI, 2019). For Chai (2021), the primary activities in a value chain contribute to the physical creation, sale, maintenance and support for a product or service and thus include: Inbound Operations, Operations, Outbound Logistics, Marketing and Sales, and Service.

According to De Bruin (2018), the five primary activities are directly involved in the production and selling of the actual product. Inbound Logistics is where purchased inputs such as raw materials are often taken care of. The activities associated with inbound logistics include receiving, storing and disseminating inputs to the product (for instance, material handling, warehousing, inventory control, vehicle scheduling and returns to suppliers) while outbound logistics involve the collection, storage and physical distribution of the product to buyers; for instance, finished goods warehousing, material handling, delivery vehicle operations, order processing and scheduling. Operations involve the transformation of inputs into the final product form; for instance, machining, packaging, assembly, equipment maintenance, testing, printing and facility operations. marketing and sales provide the means by which buyers can purchase the product and induce them to do so through advertisement, promotion, sales force, quoting, channel

selection, channel relations and pricing. Marketing funnel is often used to structure the entire marketing process. Service enhances or maintains the value of the product after it has been sold and delivered through activities such as installation, repair, training, parts supply and product adjustment.

Support activities pass through the primary activities with the aim of coordinating and supporting their functions as best as possible with each other by providing purchased inputs, technology, human resources and various firm wide managing functions (De Bruin, 2018). These support activities (procurement, technology development and human resource management) can be associated with specific primary activities as well as support the entire value chain. Procurement refers to the function of purchasing inputs used in the firm's value chain, not the purchased inputs themselves (purchased inputs include raw materials, supplies and other consumable items as well as assets such as machinery, laboratory equipment, office equipment and buildings). Technological development is critical in the entire value chain, and therefore includes efforts to improve the product and the process such as telecommunication technology, accounting automation software, product design research and customer servicing procedures. Research & Development departments can also be classified as part of technological development. Human Resource Management (HRM) comprises activities involved in the recruitment, hiring and firing, training, development and compensation of all types of personnel. HRM affects the competitive advantage in any firm through its role in determining the skills and motivation of employees and the cost of hiring and training them. Firm infrastructure contains a number of activities including general (strategic) management, planning, finance, accounting, legal, government affairs and quality management. Infrastructure usually supports the entire value chain, and not individual activities.

Agricultural value chain includes the development and dissemination of plant and animal genetic material, input supply, farmer organization, farm production, post-harvest handling, processing, provision of technologies of production and handling, grading criteria and facilities, cooling and packing technologies, post-harvest local processing, industrial processing, storage, transport, finance, and feedback from markets. A value chain approach in agricultural development is therefore necessary as it helps to identify weak points in the chain and actions to add more value.

The Value Chain Development Programme (VCDP) adopts a comprehensive and demand-driven strategy to overcoming limitations in the rice and cassava value chains (Tenabe, 2018). It accomplishes these through an inclusive strategy that builds the capacity of all participants in the supply chain, including producers and processors, public and private institutions, service providers, policymakers and regulators.

Operations programme

Operations management which is same as operations programme is defined as a business function that controls, plans, organizes and coordinates the activities or resources needed for production (Gwa, et al, 2019). This means that the major role of operations management is to transform organization activities' inputs into outputs. Inputs include workers and managers (human resource management), buildings and equipment

such as process and facilities as well as effective use of materials, technology, and information. Output includes the delivery of finished goods and services to customers. Operations programme help to advance farm activities that help to increase crop yield by improving farming practices to achieve sufficient produce and with good planning and adequate control of farming activities.

A successful agricultural supply chain considers the production process, procurement of the required materials, management of the inventory, the transportation and warehousing and distribution systems in place to ensure timely and adequate supply of inputs to the farmers.

To enhance cassava and rice productivity in Anambra State, the Government through the VCDP provided inputs, training and capacity building, extension services, linkage to off-takers, upgrading of processing centers, false bottom parboiling technology, tube-wells and other irrigation facilities, and market information to rice farmers that are participating in the programme

IFAD/ANSVCDP (2017) highlighted the following steps for operation processes in rice production: Site selection, Land preparation, Selection of varieties, Selection of seed, Nursery establishment, Transplanting Fertilization application, weed control, Insect/pest control, Bird control, Harvesting, Drying, Threshing, Winnowing, Drying of cleaned paddy, Bagging, and storage.

Aiyede (2021) maintained that processing begins with parboiling the paddy rice, to ease the removal of the outer layers (husk) of the paddy or rough rice, and then bran covering the grain seed is also removed. The parboiling process involves washing, boiling, soaking, and steaming the paddy before drying. When only the husk is removed the result is brown rice, and when further milling occurs to remove the bran, this converts it into white rice. After milling, a cleaning stage involves separating small stones from the rice, either by hand or with the use of a mechanized de-stoner.

Prior to the introduction of the VCDP in Nigeria, cassava processing was done using traditional methods and rudimentary tools and was seen as tasking, ineffective, time- consuming and inefficient. Most cassava processors had to rely on the use of generators as an alternative to electric power which was expensive and subsequently led to very high processing costs as a result of lack of improved processing and storage technologies resulting in high rate of perishability in cassava tubers, non-availability of efficient processing equipment which raises unit of processing and marketing cost, and unreliable power supply to power the storage equipment. Through the VCDP, there has been notable improvement in cassava processing in the nine programme States. Participating Farmers were provided with modern equipment, sensitization, training, cassava processing centres to enhance cassava processing (Jirgi et al., 2019).

Marketing Programme

Marketing includes the act of identifying of needs and problem gaps, assembling human and material resources necessary to address the identified gaps, producing and providing the tangible product (goods) or intangible product (services) that can address the identified gaps and selling them at a profit. According to (De Bruin, 2018), marketing provides the means by which buyers can purchase the product and the process to induce them to do so through advertisement,

promotion, sales force, quoting, channel selection, channel relations and pricing. The process of marketing funnel is often used to structure the entire marketing process. Marketing is the process of exploring, creating and delivering value to meet the needs of a target audience; selection of certain organisation or product attributes to be emphasized on in advertisement; advertisement campaign operation; trade show and public even exhibitions; attractive product design and product packaging; pricing, sales and business terms (Cerf et al., 2017).

Marketing concept proposes that organisational objectives should anticipate customer needs to be satisfied efficiently especially in the area of its comparative advantages. In other to achieve this, marketing mix strategies should be applied as a tool to guide decision making in the organisation. The four traditional marketing mix pillars equally known as 4ps of marketing are: product, price, promotion and place.

The product aspect of marketing mix is referring to the actual goods and services of the organisation and how it relates to the end users needs and wants. The product aspect consists of product; design, innovation, branding, packaging, labelling. The price aspect is the cost that a customer pays to acquire a product, it can be financial or non-financial cost. Place/ placement/ distribution is the aspect of marketing mix that refers to the channels by which a product is sold to a customer (online and physical shops). Promotion aspect has to do with market communications, advertisements, sales promotions personal selling, trade shows and exhibitions among others.

As a response to environmental and technological changes in marketing, and to address criticisms towards the 4Ps approach, the 4Cs emerged as a new marketing mix model, and includes Consumer (person or group that will acquire the product; it focuses on fulfilling the wants or needs of the consumer), Cost (what is exchanged in return for the product), Convenience (where the product will be sold – Physical or virtual), and Communication (how consumers find out about a product, for instance, the two-way communication available social media) (Hester, 2019).

An effective and efficient agricultural value chain connects farmers to sustainable markets locally and internationally. However, the integration of small-scale producers into market is constrained by a host of factors: small size, limited access to resources, information, skills, technology and access to other business services. Integration of small-scale producers into high value market is a topic of current interest. Value chain approach is widely used as a tool to facilitate this process of market integration. Unlike the traditional approaches to enterprise development, the value chain development emphasizes on facilitating market linkages, developing business services market and improving the environment in which enterprises operate (Tenabe et al., 2018).

Marketing research is a scientific process which involves a number of stages including, recognition of the need for research, problem definition, statement of research objectives, research design, data collection, tabulation and analysis of data, interpretation of results, preparation and presentation of a report, and feedback. Marketing research as a component of marketing information system provides marketing executives with pertinent information for solving marketing problems and taking

advantage of market opportunities. It is the systematic and objective search for and analysis of information relevant to the identification and solution of marketing problems.

The whole essence of marketing is to facilitate processes of transaction and exchange of values between two parties. If exchange is at the centre of marketing, then personal selling occupies a pre-eminent position in marketing. It is the marketing function or activity that identifies prospective buyers and persuades them to physically exchange possibly their money with the output of the firm. The typical firm can be seen as an input-output system. Therefore, every organization must have one or more persons whose responsibility it is to ensure that customers and/or prospects are contacted and convinced to accept the values offered in exchange for a value desired by the organization. Such persons entrusted with task of effecting market transactions make up the sales-force of organizations. The sales-force which makes up the sales team is indispensable in organizations. There is no amount of advertising, sales promotion or publicity that can make up for personal selling. Someone somewhere must establish contact with buyers for market transaction to take place. Indeed, nothing happens in organizations until a sales-person sells something. The sales-force acts as the link between organizations and their customers. Sales team have dual responsibilities in many respects; they pass information in the form of messages from organizations to customers and bring back reports from the customers to the organizations (feedback). Sales personnel also have to ensure that organizations realize profit from sales and those customers derive adequate satisfaction from buying organization's outputs (Okeke et al., 2017).

Agricultural Enterprise Growth

According to Obi (2015), growth of an enterprise has many benefits which includes; increased output of goods and services for the generality of the people of Nigeria. It will as well curb the menace of unemployment situation in the country through creation of job opportunities and employment of large number of skilled, semi- skilled and unskilled work force. Enterprise growth also provide opportunity for developing and adapting appropriate technology that serves as breeding ground for breeding sustainable industrialisation of an economy. Growth of agricultural enterprises shall make it possible for increased utilization of local resources as inputs for processing and production value chain of goods and services thereby stimulating indigenous entrepreneurship. They supply large firms with intermediate materials and help to distribute the products of large firms. Small scale enterprises, especially the ones operating in the rural areas, help to reduce rural-urban migration by the employment of youths in the rural areas. They help to preserve competition and prevent monopolistic tendencies by the large firms.

Various literatures exist on how to measure enterprise growth; growth can be measured in a variety of ways including growth in sales, increase in the number of workers or increment in profits while enterprise growth can be measured by growth of sales, employees, assets, profits, equity, among others. For Mustapha & Sani (2018), enterprise growth can be measured in absolute or relative terms; the most common means of operationalizing firm growth are through relatively objective and measurable characteristics such as growth in sales turnover, total assets and employment growth. A value chain encompasses the flow of products,

knowledge and information, finance, payments, and the social capital needed to organize producers and communities (Tenabe et al, 2018).

Empirical Review

Nkem et al (2021) assessed youth participation in activities of value chain development programme (VCDP) in Anambra state, Nigeria. A multi-stage sampling procedure was used to select 100 respondents. Primary data was used, sourced through structured questionnaire. Data were analysed using percentage, mean score and multiple linear regression. Findings of the study revealed that VCDP beneficiaries had very high benefits in increased access to improved rice/cassava varieties, provision of agro-chemicals, increase in income, provision of all-weather feeder roads, adequate trainings on the improved technologies, increase in yield, and ease in marketing of produce. The major challenges identified were late/untimely distribution of inputs, difficulty in payment of counterpart fund, poor monitoring and evaluation, high cost of production, fluctuation in prices of products, corruption and materialism among staff and poor off-taker implementation. The need for timely and adequate supply of agro inputs and credits at subsidized rate by service providers was recommended.

Abdullahi et al (2021) undertook an analysis of rural women participation in rice processing under the VCDP in Bida and Wushishi local government areas of Niger State, Nigeria with the objectives to describe the socio-economic characteristics of rice processors under the programme, determine the profitability of rice processors, determine the extent of women participation in rice processing, examine the factors influencing the extent of women participation in rice processing, and examine the constraint associated with women participation in rice processing under the VCDP. 128 respondents were randomly selected from two (2) LGAs with IFAD-VCDP intervention which are Wushishi and Bida LGAs. Descriptive statistics was used for the study, farm budgeting tool and ordered probit regression model were used to analyze the data collected. Results from the study showed that most of the respondents faced challenges of inadequate power supply, high cost of start-up capital, lack of technical knowledge and processing facilities for producing good quality milled rice grains, poor transportation system, and non-availability of loans due to their inability to provide collaterals. The study concluded that rice processing under the VCDP was profitable while the rate of female participation was high; it therefore recommended that Government should provide improved technologies for the processors. The research was carried out in Niger sate, focused on rural women participation in rice processing under the VCDP.

Dooember (2020) in his research study examined the effect of the VCDP on Income and Food Security of Rice Farmers in Yewa North and Ijebu North-East, Ogun State, Nigeria with the objective to assess the level of income, physical and financial assets of the farming households; examine the level of productivity of the farming households; and to assess the level of food security of the farming households. The sample size of 300 rice smallholder farmers under IFAD VCDP were interviewed through well-structured questionnaire. Focused group discussion and key informant interviews were also conducted. The data gathered from respondents were analyzed through descriptive and inferential statistics.

The findings of the study revealed that the mean age of the respondent

beneficiaries is 44.3 years, that the farmers are in their active and working age, and that there is less participation of youth in the occupation. It was concluded that policies and strategies that involve regulation of the trend of increase in the supply of agro-chemicals in the intervention programme vis-à-vis chemical fertilizer and introducing necessary adjustments are essential to sustain this positive effect.

MS (2020). Resource Use Efficiency of Rice Farmers Participating in Value Chain Development Programme (VCDP) in Niger State of Nigeria**.** The main objective of the research was to determine the efficiency of the productive resources used in rice production among IFAD beneficiaries in Niger State of Nigeria using field survey data of 2018 production season elicited from 111 farmers through structured questionnaire complemented with interview schedule and the representative sample size was arrived at through multi-stage sampling design. The multiple regression model which adopted ordinary least square (OLS) estimation technique was used to analyze the data collected.
The empirical findings showed that the farmers were operating within the economic region of production but were not at the economic optimum point owing to inefficiency in the utilization of the available recommended technologies at their disposal coupled with market imperfections. Thus, sequel to this, the study recommends the need for capacity building for the farmers on the recommended technologies viz. efficient extension services delivery (e.g. farmers field school) and adoption of neoclassical extension approach (farmer to farmer extension approach). In addition, provisions of consumption credit apart from the advanced production credit for the productivity of the latter and agro-inputs subsidies due to the farmers' poor economic status and the prevailing market imperfections are suggested in the studied area

Metcho (2018) researched on the effect of adoption of innovative rice processing techniques on profitability and empowerment of smallholder rice processors. Case study of IFAD value chain development programme in Niger state, Nigeria. the main objective of this study is to assess the impact of the adoption of innovative rice processing techniques of international fund for agricultural development (IFAD) value chain development programme on profitability and empowerment. Specifically, the study analyzed the socio-economic characteristics of the adopters of the modern rice processing technique, determine their net returns, empowerment, and the identified the constraints faced by these rural poor households. A random sampling method was used to select 424 respondents from five participating local government areas in Niger State, Nigeria. Descriptive statistics, Poisson regression, ordinal ranking and women empowerment index were the tools of analysis. The study showed that education, access to credit and link to market access had the highest relative contribution to the disempowerment index. The study showed that the average age of the processors is 37 years and about 54% of the respondents have informal education hence affects market access. About 70% of the respondents do not take decisions on production activities. The study concluded that education, autonomy of production, access to credit, and market linkage enhanced women empowerment in Niger State. Therefore, efforts should be made to prioritize these indicators and link the processors to the market.
Kanu et al (2017) examined the youth farmer's utilization of agricultural farm

land in Benue and Abia states, Nigeria. The main objective of this study was to compare youth farmers 'utilization of agricultural farm land in Benue and Abia States, Nigeria. The specific objectives were to describe the socio-economic characteristics of the respondents and level of utilization of farm lands in the States. Multistage random sampling technique was used in selecting 240 respondents for the study. A structured questionnaire and Focus Group Discussion were used in eliciting data from the respondents. Descriptive and inferential (Regression) statistics were used in analysing the data. The result revealed that large proportion of youths were males and they are more productive in the farm, large proportion of the respondent in Benue State were married while their counterparts in Abia were single, farming was the primary occupation in both States. The respondents in Benue State had more of secondary education compared to that of Abia that had more of tertiary education, which means that they are literate and can better interpret agricultural packages. The researcher observed that, inheritance, availability, gender and cultural beliefs were the major inhibiting factors to the use of farm land. Again, high cost of land and poor orientation in the use of farm land contribute immensely to the utilization of farm land across the study areas. In conclusion results indicated that youth farmers in the study areas highly utilized their farmlands in order to improve their economic status. This entails that farming enterprise needs active, productive and relatively young farmers who are energetic to participate actively to raise the enterprise.

Theoretical Framework

Michael Porter's Theory

Porter's Theory of value chain identifies activities that are performed by an Enterprise to create value for its customers, and he split business activities into two categories: primary and support activities. Porter argued that the ability to perform particular activities and to manage the linkages between these activities is a source of competitive advantage.

According to Chai (2021), the primary activities in a value chain contribute to the physical creation, sale, and maintenance and support a product or service, which include: Inbound Operations, Operations, Outbound Logistics, Marketing and Sales, and Service. Inbound Operations involve the internal handling and management of resources coming from outside sources such as external vendors and other supply chain sources. These outside resources flowing in are called 'inputs' and may include raw materials. Operations are activities and processes that transform inputs into 'outputs', that is, the product or service being sold by the business that flows out to customers. These 'outputs' are the core products that can be sold for a higher price than the cost of materials and cost of production in other to make profit. Outbound logistics entails the delivery of outputs to customers and involves systems for storage, collection and distribution to customers; this includes managing a company's internal systems and external systems from customer organizations. Marketing and Sales are activities such as advertising and brand-building that seek to increase visibility, reach a marketing audience and communicate why a consumer should purchase a product or service. Service comprises activities such as customer service and product

support, which reinforce a long-term relationship with the customers who have purchased a product or service. Porter's Theory is most relevant for this study because the farmers that are engaged in the value chain development programme in Anambra state are carrying out all these activities; as such, there is a need to examine the contribution of each activity to the growth of their enterprises.

Methodology

The study focused on value chain development programme and its effect on agricultural enterprise (rice and cassava) growth**.** In order to examine the cause of this low productivity of agricultural enterprises in Anambra State, this research work adopted Micheal Porter's Value Chain Framework which comprises five primary activities: inbound operations, operations, outbound logistics, marketing and sales, service as well as four secondary/support activities: procurement and purchasing, human resource management, technological development and company infrastructure.

The variables for the study are limited to two primary activities: operations programme, and marketing programme. This is to align this research work with the activities of the IFAD/VCD Programme in Anambra State, Nigeria. The study equally adopted 'increase in output'/ increase in sales as the variable for measuring agricultural enterprise growth.

The study area is Anambra State, Nigeria which consists of twenty-one (21) Local Government Areas (LGAs) and 177 autonomous communities. Anambra State has an estimated population of 4,182,032 with the male population of 50.9% and female 49.1%. This study covers the eight LGAs in Anambra State (Ayamelum, Awka North, Anambra East, Anambra West, Orumba North, Ihiala, Orumba South and Ogbaru) where the Value Chain Development Programme is being implemented.

The population of the study comprised of 12,737 farmers of rice and cassava value chains in Anambra State. Primary data was collected through the use of questionnaire as a tool for obtaining information related in the course understudy. Data obtained were analyzed using multiple regression on SPSS statistical tool *version 28*, and Taro Yamane (1967) formula was used to determine the sample size of the study. According to Smith (1984) in sample size determination in agreement with Taro Yamane sample size determination technique (1967) which stated that if the population is above 400, there is a need to use Taro Yamane formula to reduce the population. According to Yamane (1967), the sample size of a study is derived thus:

$$n = \frac{N}{1 + N(e)^2} \quad \text{..... (i)}$$

Where:

n = sample size desired to be covered

N = population of the study

1 = constant

e = level of significance (at 0.05 or 5% level of significance) Sample size =

$$n = \frac{12\,737}{1+ 12737(0.05)} \quad \frac{12\,737}{1+ 12\,737\,(0.0025)} \quad \frac{12737}{32.8425} = 387.821$$

While the calculated sample size using the Taro Yamane formula is 387.821, Singh and Masuku (2014) states the need to add 10% to make up for some questioners that may not be returned and those that cannot be contacted.

387.821+ 38.7821 = 426.6031
Approximately = 427 farmers.

However, 405 questionnaires from the 427 questionnaires administered were returned and found valid for analysis.

Table 1 Reliability Test

Variables	Cronbach's α	No. of Items
Operational Programme	4	0.77
Marketing Programme	4	0.73
Enterprise Growth	4	0.82

Source: *Statistical Package for Social Sciences SPSS, version 27*

To ensure reliability of the instrument, Cronbach's alpha was used in validating and testing the reliability of the research instrument used in collecting data for the study. The Cronbach's coefficient alpha ranges from 0 to 1. A scale is considered to have good reliability if it has an alpha value greater than 0.70

Model Specification

The model specification is stated below:
Independent Variable = Value chain development programme
Dependent Variable = Agricultural enterprise growth
$Y = \alpha + bx + \mu$……(i)
Where:
Y = dependent variable
a = constant
x = independent variable
b = coefficient
μ = Error term

This model can also be expressed in a statistical form.
Model for the study: $EG = Bo + B_1OP + B_2MP + e$…….(i)
Whereby;
EG= Enterprise growth
Bo= constant
B_1, B_2, = coefficients of the parameter estimates
OP = Operation programme
e = error term representing all other variables not specified in the model.

Regression Analysis and Result

Table 2: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.808[a]	.653	.651	.618

a. Predictors: (Constant), MP, OP
Source: *SPSS Output Version 27*

Table 2 above shows the co-efficient of the regression R^2 with a value of (0.653) which means that (65%) of the variation in Enterprise growth can be explained by Operation Programme and Marketing Programme. While the remaining value of (0.347) representing (35%) can be explained by other related factors not stated in the regression model which is refer to as error term.

Table 3: Anova

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	289.692	2	144.846	379.302	.000[b]
	Residual	153.896	403	.382		
	Total	443.588	405			

a. Dependent Variable: EG
b. Predictors: (Constant), MP, OP

Decision Rule: 5% level of significance
Table 4 reveal the fitness of the model earlier formulated. The F-statistics value of (379.302) is significant at 5%, and since the tabulated p-value (0.000) is less than the 5% level of significance i.e., (0.000<0.05) the implication is that, the model is well fitted and the null hypotheses can be rejected and concluded that Value Chain Programmes has significant effect on Enterprise Growth in Anambra State, Nigeria.

Table 4 Co-efficient

Co-efficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.653	.136		4.806	.000
	OP	.843	.036	.778	23.383	.000
	MP	.061	.034	.060	1.803	.072

a. Dependent Variable: EG

Table 4 shows the co-efficient of operations programme (0.843) which is positive and significant in enhancing the growth of Agricultural enterprises in Anambra State, Nigeria. EG = 0.653 + 0.843og_OP shows that growth of Agricultural enterprises in Anambra State, Nigeria gets 84% better for every 1 unit increase in operations programme.
The co-efficient of marketing programme (0.061) is insignificant in improving the growth of Agricultural enterprises in Anambra State, Nigeria. EG = 0.653 - 0.061og_MP shows that growth of Agricultural enterprises in Anambra State, Nigeria decreases by 6% at every 1 unit increases marketing programme.

Test of Research Hypotheses
Decision Rule: to decide whether to reject or accept the null hypothesis at 0.05 (5%) level of Significance, the rejection point states that; the null hypothesis is rejected and the alternative hypothesis is accepted if the p value is equal to or less than 5%; while the null hypothesis is accepted and the alternative hypothesis is rejected if the p value is greater than 5%. Two hypotheses were tested and the results were stated below.

Test of Hypothesis One
$H0_1$: Operations programme (processing and packaging) does not have significant effect on agricultural enterprise growth in Anambra State, Nigeria.
The result from the co-efficient table 4 shows that operation programme with a co-efficient value of (0.843) implies that operation programme has a positive and significant effect on Agricultural enterprise growth in Anambra State, Nigeria since the probability value of (0.000) is less than significant value of (0.05). Therefore, this leads to the acceptance of the alternative hypothesis which states that operation programme has significant effect on Agricultural enterprise growth in Anambra State,

Nigeria while the null hypothesis is rejected This means that operations programme influences Agricultural enterprise growth in Anambra State, Nigeria.

Test of Hypothesis Two

H_{02}: Marketing programme has no significant effect on agricultural enterprise growth in Anambra State, Nigeria.

The co-efficient of marketing programme has a positive value of (0.061) with a probability value of (0.072). This indicates that marketing programme has positive effect on Agricultural enterprise growth in Anambra State, Nigeria but is statistically insignificant at (5%) as the probability value of (0.72) is greater than 0.05. The means that the Null hypothesis failed to be accepted while the null hypothesis is rejected This means that marketing programme has been contributing less to Agricultural enterprise growth in Anambra State, Nigeria.

DISCUSSION OF FINDINGS

This study discovered that value chain development programme has a positive effect on agric-enterprise growth in Anambra State, Nigeria as the main findings. Other findings are as follows: the first finding revealed that, operations programme has positive and significant effect on agricultural enterprise growth in Anambra State, Nigeria as result of their responses which indicate that, the farmers have a quality management practice, the land preparation techniques in use has been very sustainable over the years, Farm operations ranging from land cultivation, harvesting, storage and packaging are consistently reviewed over the years to deliver market expectations even though qualitative farm inputs are not been easily accessible to meet the farm's need and expectations for high quality yield. This study is in line with the finding of Adiaha (2017) stipulating that, sustainable agricultural management for economic development, and support for local food processing improves local knowledge on agricultural mechanization.

The second hypothesis found out that marketing programme has insignificant effect on agricultural enterprise growth in Anambra State, Nigeria. This is as a result of the outcome of the responses which showed that; Considering the cost of operating the farm for optimum yield the farm has not been able to consistently deliver stable price of its produced to its esteem market; The farmers do not often embark on promotional activities such as advertising the quality of yield, health benefit and different usage of farm produced like rice and cassava; as well as poor access to transportation facilities in moving farm produce to the nearest market or stores even though the quality of yield over the past years has significantly delivered value to the satisfaction of the customer. Therefore, the null hypothesis is accepted and alternative hypothesis rejected. The result of the finding is this study is supported by Sadiq et al., (2020) who posit that farmers were operating within the economic region of production but were not at the economic optimum point owing to market imperfections and inefficiency in the utilization of the available recommended technologies at their disposal.

CONCLUSION AND RECOMMENDATIONS

This study through the result of its findings, conclude that operation programme has strong positive and significant effect on agricultural enterprise growth in Anambra State, Nigeria, while marketing programme have weak positive and insignificant effect on agricultural enterprise growth

in Anambra State, Nigeria. However, the following recommendations were postulated;

i. Agric-Enterprises should adopt farming practices such as bush fallowing to aid its operations programme as farming on same farm land for a long period of time may mar operational effort for optimum output.

ii. There should be effective development and implementation of marketing strategy that covers all area of marketing mix, establish functional aggregation centers, enhance use of E-commerce platform such as agricultural market information system (AMIS) to ensure customers satisfaction and to meet market demands.

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