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Value Chain Agricultural Development Programme and Food Security in Anambra State: A Critical Assessment

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Abstract

Food security in Africa and particularly in Nigeria has become a challenge that has worried both the government and the Nigerian masses. Nigeria as the 6th most populous nation in the World is faced with myriads of economic crisis. Beyond insecurity, top of that challenge is the issue of food security. The Global Food Security Index revealed that across Nigeria, 1 out of every 8 persons goes home to sleep every day without food. However, Nigeria has about 94.3% volatility for Agricultural production and yet does not contribute up to 20% in the Global Agro-Production Index. To rescue this situation, the International Fund for Agricultural Development (IFAD) as part of providing an African solution to the issue of Food Security in Africa and particularly Nigeria, introduced the Value Chain Agricultural Development Programme in 2014. This paper therefore, assessed the programme through the use of qualitative research method and thematic analyses, which were critically discussed from the available extant literature. It was found that indeed the Value Chain Agricultural Development Programme (VCDP) was domesticated to become an African solution to the African problem in Food Security. That the programme has really faired in Anambra State in the past 3 years of its existence. We therefore recommended that the Government should encourage the programme by providing it with the needed support especially in the area of skilled manpower to further help drive the objectives of the programme of achieving a food for all society by the year 2025. That other Nigerian States and Africa at large, should partner with IFAD to produce more African driven policies such as VCDP.

Keywords:
Value Chain, Food Security

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Background to the Study

Food security in Africa and particularly in Nigeria has become a challenge that has worried both the government and the Nigerian masses. Nigeria as the 6th most populous nation in the World is faced with myriads of economic crisis. Beyond insecurity, top of that challenge is the issue of food security. The Global Food Security Index revealed that across Nigeria, 1 out of every 8 persons goes home to sleep every day without food. However, Nigeria has about 94.3% volatility for Agricultural production and yet does not contribute up to 20% in the Global Agro-Production Index.

Nwajiuba (2017) noted that the aims of Nigeria's national agricultural policy are to "(i) attain food security, (ii) increase production and productivity, (iii) generate employment and income, and (iv) expand exports and reduce food imports thereby freeing resources for critical infrastructure development and delivery of social services." The current government seems to attribute the unsatisfactory state of Nigeria's agriculture to its subsistence-orientation. The efforts of previous governments are characterized as having treated agriculture purely as a development issue. Hence the focus shifts to the role of agri-business. Specifically, the Agriculture Transformation Action Plan (ATAP, launched in August 2011) seeks to develop the value chain of five key commodities, i.e. rice, cassava, sorghum, cacao and cotton. This entails reforming the input supply regime, a targeted region-specific increase in the output of the five priority commodities, post-harvest systems development, a strong orientation towards agri-business and promoting value-addition in the product chain. The success of the programme depends largely on reforming the fertilizer supply mechanism which has a history of large-scale corruption. The programme is promoted by the then Minister of Agriculture who, however, has to contend with his own officials and the states who have not bought into this vision. State-level involvement in the agricultural reforms was key because agriculture is on the concurrent legislative list and, in practice, is largely dealt with at the local and state level.

Similarly, Odoh (2014) observed that, agriculture, apart from the contribution to employment creation, poverty and hunger reduction as well as reduction in rural-urban drift was also a source of major foreign exchange earnings of Nigeria and a major contributor to economic development in the early colonial days up to the time of attainment of political independence through to 1970. It was as a result of enormous contribution of agriculture to the economy according to Olufolabi (2009) cited in Odoh (2014), agricultural research in Nigeria started more than 100 years ago with the establishment of a botanical garden in Lagos during the late 19th Century. By1903, the forestry and botanical Department (renamed Agricultural Department) for Southern Nigeria was created. By 1912, the latter was divided into Northern and Southern regions. By 1914, the Forestry and Veterinary Departments were created. The Fishery Department evolved in 1951. In a nutshell, by the 70s and 80s, different research institutes and departments of agriculture had emerged. Presently Nigeria has the largest and most elaborate National Agricultural research systems in sub-Saharan Africa. By 2006, the Government set up an umbrella body known as Agricultural Research Council of Nigeria (ARCN) which was established to address the challenges faced by agriculture. The major functions of agricultural research are to provide necessary information for policy makers and

also to funding agencies. It is also to as well provide transfer of research-induced technology to farmers which essentially measure research benefits to society. Lastly, agricultural research impact study also provides feedback to scientists on which technologies or technology components are successful at farm levels.

To rescue this situation, the Anambra State Ministry of Agriculture keyed into the International Food and Agricultural Development Programme as part of providing an African solution to the issue of Food Security in Africa and particularly in Nigeria. The Value Chain Agricultural Development Programme in 2014 thus, was introduced. The aim of the Value Chain Development Programme is to enhance the incomes and food security of poor rural households engaged in production, processing and marketing of cassava and rice in Anambra, Benue, Ebonyi, Niger, Ogun and Taraba States on a sustainable basis. Poor rural households engaged in the cassava and rice value chains serve as the primary target group, including smallholder farmers cultivating up to five hectares of land, small-scale processors and traders. The International Fund for Agricultural Development (IFAD) assisted Value Chain Development Programme (VCDP) in Anambra State from 2014 to date, has been actively involved to teaching rice farmers on numerous improved agricultural practices, to double their yields and enable them improve their income and livelihood. The VCDP works to improve the income and food security of poor rural households with particular attention to women and youth engaged in production, processing and marketing of rice and cassava.

Regrettably, despite aforementioned noble ideas of the governments in Nigeria, extant literatures revealed that, Nigeria still faces huge food security challenges. About 70 percent of the population live on less than N 100 (US$ 0.70) per day, suffering hunger and poverty. Despite its reputation as petroleum resource-dependent, Nigeria remains an agrarian economy. The sector provides over 40% of gross domestic product (GDP) with between 60 and 70% of the population productively engaged in farming. But large regional differences exist. For instance, in the southeast, 22% of the people live in rural areas with most of them engaged in non-farming activities (Global Food Index Report 2017).

It is in the light of the above that this study intends to examine the successes of the IFAD-VCDP programme in Anambra State. To achieve that, the paper is bifurcated into conceptual analyses and data presentation which were culled from the programme quarterly report.

Literature Review

Conceptualizing Value Chain

European Union Commission (2011) described value chain as a full range of activities which are required to bring a productor service from its conception, through the different phases of production (involving a combination of physical transformation and the input of various services), delivery to final consumers, and final disposal after use. At each stage considered, there is value added.

Chains composed of companies (or individuals) that interact to supply goods and services that are variously referred to as productive chains, value chains, marketing chains, supply

chains, or distribution chains. These concepts vary mainly in their focus on specific products or target markets, in the activity that is emphasized, and in the way in which they have been applied. What they have in common, however, they all seek to capture and describe the complex interactions of firms and processes that are needed to create and deliver products to end users. Moreover, they all strive to identify opportunities for and constraints against increasing productivity.

Although it is impossible to draw clear distinctions among these often overlapping concepts, it is still worthwhile to provide some basic definitions and highlight some of the differences (Agbaka, 2005). Typically, "value chain" describes the full range of value-adding activities required to bring a product or service through the different phases of production, including procurement of raw materials and other inputs, assembly, physical transformation, acquisition of required services such as transport or cooling, and ultimately response to consumer demand (Kaplinsky and Morris 2002). As such, value chains include all of the vertically linked, interdependent processes that generate value for the consumer, as well as horizontal linkages to other value chains that provide intermediate goods and services. Value chains focus on value creation - typically via innovation in products or processes as well as marketing - and also on the allocation of the incremental value.

By contrast, the term "supply chain" is used internationally to encompass every logistical and procedural activity involved in producing and delivering a final product or service, "from the supplier's supplier to the customer's customer" (Feller, Shunk, and Callarman 2006). Since the primary focus of supply chains is efficiency, the main objectives are usually to reduce "friction" (for example, delays, blockages, or imbalances), reduce outages or overstocks, lower transaction costs, and improve fulfillment and customer satisfaction.

The issue is not so much about which concept is superior or preferable, since they are complementary and their effective implementation can deliver improved business results. It must be noted, though, that practitioners of the supply chain approach often fail to consider to what extent cost reduction and inefficiencies in supply chain logistics actually add value, and if so, who benefits. On the other hand, value chain proponents sometimes forget that effective value chains must rest in efficient supply chains.

"Clusters" represent collections of firms and institutions that perform many of the functions segmented and described in both the value chain and supply chain literature. Clusters themselves display horizontal and vertical links among enterprises that produce a single or closely related product or service, which in turn may combine to satisfy the demand of a particular value/supply chain. The literature on clusters stresses the benefits of enterprise agglomeration and geographic proximity, which can generate economies of scale and positive externalities such as lower costs of intermediate inputs or services, better access to skilled personnel, or greater attractiveness to external procurement agents. Improving clusters typically requires more emphasis on the local environment (both policies and institutions, public and private) and context in which it operates. Generally the "chain" concept, whether value or supply, places less emphasis on the enabling environment, while "cluster" analysis often neglects the necessary linkages to specific target markets that exist outside the cluster.

Another related concept is the Francophone *filière* (literally "thread" in English). "Filière" is used to describe the flow of physical inputs and services in the production of a final product, and is essentially similar to the modern value chain concept in its emphasis on vertical and horizontal coordination (Kaplinsky and Morris 2002). Filière studies do not have a single unifying theoretical framework, and its practitioners have borrowed from different theories and methodologies for their analyses. The concept is often used as synonymous to commodity chain or subsector. The filière was initially used to study contract farming and vertical integration in French agriculture in the 1960s. It was, soon thereafter, applied to agriculture in developing countries, such as the model implemented to develop the cotton sectors in West and Central Africa. Over time, filière analysis focused more on how public institutions affect local production systems, and how "interprofessional associations" can help glue together direct and indirect economic actors, that is, those who handle the product of interest versus those who contribute ancillary goods or services.

All of the commodity system concepts discussed, whether chain, cluster, or filière, underscores the importance of linkages to gain value and advantages to compete in global markets. The term value chain is primarily used in this Guide, as it is inclusive and incorporates supply logistics, value addition, transactions, and market linkages.

How Value Chain Analysis is Applied

Interest in value chains is not new. Businesses have been using value chain analysis and implementation principles for years to formulate and implement competitive strategies. Corporations use value chain analysis to answer questions such as, "Where in the value chain should my business be positioned to improve its performance?" The value chain's popularity has been reinforced by many important business strategy themes, including core competencies, comparative and competitive advantage, outsourcing, vertical and horizontal integration, and best practices.

Businesses (individually and in groups, such as clusters) have focused on value chains while searching for alternative ways to remain competitive. Value chain approaches have been used to guide product and process innovations, such as specialty or organic coffee, that final customers or receiver's value. Further, there is increased awareness that procedures within a firm might not affect its own competitiveness unless other firms adopt similar or linked practices. Recognizing that partnerships and joint programs aimed at better category management and sustainability need not be a zero sum game has paved the way for businesses to use collaborative value chain concepts to identify efficiencies and competitiveness both within and among firms, acting on opportunities to build win-win relationships. Recent technological developments that permit high levels of information sharing have reinforced businesses' capacity to upgrade value chain productivity and supply chain efficiencies.

More recently, governments and donors, realizing that upgrading the performance of individual firms can best be achieved in the context of market-based rewards for improved performance; have shown significant interest in value chain analysis and implementation. In their effort to devise interventions that can help reposition entire industries, build business

competitiveness, and spur economic growth, governments and donors can use value chain–based approaches as robust tools to protect threatened links, facilitate upgrading of others to generate greater returns, and to promote foreign direct investment (FDI) programs. Additionally, value chain analysis has been used to examine constraints in the enabling environment in which the chains operate. Value chains have also been used as a tool for SME development, with new methods of linking SME suppliers and service providers to the value chains of lead processors or marketers.

More importantly, value chain analysis sheds light on the size of the firms participating in each link, how they are participating or could be participating in the chain, and opportunities to facilitate or improve those linkages. This is particularly crucial in agriculture, where governments and aid agencies are confronted with the challenge of including small farmers in modern value chains so that they can benefit from the globalization of markets. The value chain concept is therefore not only relevant to deal with growth, but also with the equity dimension of the modernization of the agrifood systems.

Food Security

Napoli, De Muro & Mazziotta (2011) aptly noted that, Food security is a difficult concept to measure since it deals in very broad terms with the production, distribution and consumption of food. To them, any analysis of food security will examine whether a change from security to insecurity or insecurity to security actually takes place and also the probability of such a change happening.

Historically, concerns about food security can be traced back to the Hot Springs Conference of Food and Agriculture in 1943, since which time the issue has undergone several redefinitions (Napoli, De Muro & Mazziotta, 2011). The 1943 conference evolved the concept of a "secure, adequate and suitable supply of food for everyone" a concept that was subsequently taken up at an international level. The next step was the setting up of bilateral agencies by donor countries such as the USA and Canada in the 1950s whereby their agricultural surpluses would be shipped overseas to countries in need. By the 1960s there was a growing realization that food aid could actually hamper a country's progress to self-sufficiency and thus was born the concept of Food for Development and in 1963 its institutional expression, the World Food Programme (WFP). However, the era of an abundance of food came to an end and the 1972-4 food crisis marked the beginning of fluctuating food supplies and prices. To counter this, insurance schemes were set up to guarantee access to food supplies and this led to enhanced coordination among donor organizations and improved monitoring of the situation on the ground in receiving countries.

Maxwell (1996), observed that, the issue of food security really came to the fore in the 1970s and at the 1974 World Food Conference in Rome the first explicit acknowledgement was made that this issue concerned the whole of mankind: since the 1974 Rome conference the whole concept has "evolved, developed, multiplied and diversified" There are now thought to be almost two hundred definitions of food security (Smith et al., 1993) which is a clear indication of differing views and approaches to the problem.

However, the definition that has acquired the broadest acceptance is that of the World Food Summit (WFS, 1996): who opined that, "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life."

Again, back in the 1970s the whole problem of food security was basically seen as one of supply, stemming from a series of food crises and major outbreaks of famine that the hoped-for promises of the Green revolution had done little to avert. The main focus was on guaranteeing the availability of food as well as attempting to ensure price stability both nationally and internationally through increased food production and the use of food surpluses. This approach led to the 1974 definition of food security: "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices" (United Nations.1975. Report of the World Food Conference, Rome 5-16 November 1974, New York).

Methodology

The paper made use of qualitative and quantitative research design. Beyond its heavy reliance on secondary sources of data, interviews, questionnaire were administered to the farmers who proffered answers to the necessary questions, there were also personal visitations and observations that were also made. The available empirical evidences were reliable enough to base emphases on.

Data Presentation on VCDP in Anambra State: 2014 – 2017

Table 1: Farmers' organizations' membership segregated by gender and youth

	LGA	Cassava groups with savings	Total savings of cassava groups (N)	Rice groups with savings	Total savings of rice groups (N)	Total savings	No of FO members linked to financial institutions		No of FO members accessed credit	
							Cassava	Rice	Cassava	Rice
1	AYAMELUM	8	2,598,900	142	17,439,000	20,037,900	26	430	0	0
2	AWKA NORTH	20	2,833,400	47	6,676,324	9,509,724	124	157	0	0
3	ANAMBRA EAST	20	923,497	14	444,600	1,368,097	96	112	0	0
4	ANAMBRA WEST	10	9,234,010	22	9,892,500	19,892,500	175	319	0	0
5	ORUMBA NORTH	15	331,812	11	538,070	869,882	59	72	0	0
	TOTAL	73	15,921,619	236	34,990,494	50,912,113	480	1,090	0	0

Sources: Anambra State Value Chain Development Programme Mid-Term Review Report, 2017

From the table above, a total of 600 Farmers Organizations with the total membership of 7652 (3992 males and 3562 female) were profiled as beneficiaries of the programme in Anambra between 2014 – 2017.

Table 2: Farmers' organizations' profile as at December, 2017

SN	LGA	COMMODITY	ENTERPRISE			FO TYPE				GENDER		TOTAL MEMBERSHIP
			Production	Processing	Marketing	MX	MO	WO	YO	M	F	
1	AYAMELUM	CASSAVA	9	0	0	9	0	0	0	66	35	101
		RICE	217	3	0	164	16	22	18	1439	1096	2535
2	AWKA NORTH	CASSAVA	33	1	0	33	0	1	0	197	244	441
		RICE	73	1	0	68	0	3	3	468	423	891
3	ANAMBRA EAST	CASSAVA	55	5	0	59	0	0	1	449	374	823
		RICE	39	1	1	41	0	0	0	231	187	418
4	ANAMBA WEST	CASSAVA	30	2	1	30	1	2	0	205	319	524
		RICE	50	4	1	51	1	2	1	556	471	1027
5	ORUMBA NORTH	CASSAVA	43	3	0	38	0	5	3	295	299	594
		RICE	27	1	0	23	0	2	2	184	114	298
	TOTAL CASSSAVA		170	11	1	169	1	8	4	1114	1271	2483
	TOTAL RICE		406	10	2	347	17	29	24	2878	2291	5169
	TOTAL CASSAVA AND RICE		376	21	3	516	18	37	28	3992	3562	7652

Sources: Anambra State Value Chain Development Programme Mid-Term Review Report, 2017

From the above table, the production enterprise tops the other enterprises in terms of beneficiaries' involvement with 600 farmer organizations representing about 96% of total beneficiaries. While the programme emphasizes women participation, the enrolment of women in the programme meets the gender specification (46.55%).

Table 3: Status of Savings and Linkage to Financial Institution as At 31st December, 2017

SN	LGA	No of FOs		Membership		No received support in production		No received support in processing		No received support in marketing		No not yet supported	
		C	R	M	F	M	F	M	F	M	F	M	F
1	AYAMELUM	9	220	1505	1131	281	195	0	4	100	75	1124	857
2	AWKA NORTH	34	74	665	667	393	325	13	12	115	63	144	267
3	ANAMBRA EAST	60	41	680	561	182	129	15	09	120	65	363	358
4	ANAMBRA WEST	33	55	761	790	516	451	13	12	120	60	112	267
5	ORUMBA NORTH	46	28	479	413	350	282	0	10	100	60	29	61
	TOTAL	182	418	4090	3562	1722	1382	39	47	435	323	1772	1810

Sources: Anambra State Value Chain Development Programme Mid-Term Review Report, 2017

From the above table, a total of 73 Farmers' Organizations had been able to save N50,912,113.00. This translates to about N697,426.00 per FO. At an average of 15 members per FO translates to N46,495.06 per individual member. We hope it had significantly improved by now that most farmers had harvested their prduce, particularly rice farmers and do kind (produce) saving which we have encouraged them to do. Each farmer has been enjoined to save at least the quantity of produce that can sell and be able to pay for the matching grant for inputs next cropping season.

Table 4: Activities of VCDP that have engaged youths in the State

SN	ACTIVITY	Anambra		
		Total	M	F
1	Trained spray gangs	830	65	225
2	Operators at processing plants	60	50	10
3	youths that received production and processing equipment	112	81	31
4	Youths trained on rice seeds production by Africa Rice at IITA, Ibadan 2016 – 2018	10	7	3
5	Youths trained at NCAM on use of simple farm machines and Business plan development by CORY at NCAM, Ilorin in May, 2016	10	8	2
6	Youths trained on business plan development by CORY	10	8	2
7	Youths trained on dry season techniques using tube wells and water management in rain fed rice	30	30	
8	Youths trained by NCAM engineers on use of power tiller and cassava planters at Awka, Anambra state/makurdi, Benue state	60	43	17
9	Youths trained by Africa Community Bridge Foundation on Entrepreneurship at Makurdi, Benue state April, 2017	9	6	3
10	Youths trained on rural road maintenance at O ta, June 2017	35	31	4
11	Youths trained by National Root Crops Research Institue, Umudike for cassava stem multiplication, Abia state May 2017	15	8	7
12	No of ha established by 5-rice seed agri-preneurs already trained and supported	5	3	2
13	No ha of cassava stem multiplication plots established by 15 trained youths	15	8	7
	TOTAL	451	363	88

Profiling of Udoka Rice Mill OMOR, UNDER VCDP Anambra State

The Udoka Rice Mill Company was established in 2002 and registered with the Corporate Affairs Commission in 2005. At establishment, the company had one (1) mill producing 2tons/day in 2002. This has grown to its current capacity of four (4) mills and 20ton/day production.

The company produces 20 metric tons per day of high quality, stone-free rice, its clients include big rice dealers across the country and the Anambra state government. The processor runs to their business based on their group plan. Its also subscribe to an insurance.

Table 5.

	Pre-VCDP Era				VCDP Intervention Period		
	2002	2005	2009-2013		2014	2015	2016-2017
Establishment	establishment	CAC Registration					
Management	Sole proprietor			Manager	Chairman and Manager		
Finance	Chairman				3	3	3

Management Structure
The company started as a proprietorship business founded in 2002. It later appropriated the cooperative nature working with farmers in the community. It currently has a 3-man Board of management, with a plan to hire a Managing Director.
IFAD/FGN VCDP Participation

The company was selected in 2014 to be one of the organizations and groups to receive the IFAD/VCDP intervention in rice processing. The intervention covered infrastructure upgrade, capacity enhancement for quality and standards practice as well as market development. The programme is expanding the mill house with standard specifications of an industrial facility.

IFAD/VCDP Need Assessment/Upgrade Visit to Udoka Rice Mill Co. The IFAD/VCDP multi-disciplinary consultants visited the company in February 2016 to appraise its capacity and needs for capacity upgrade. IFAD/VCDP Appraisal Team visiting Udoka in 2016 interacts with Mr. Udoka Egwuatu, Chairman of the business group. The visit was used to gather data and information on the capacity needs of the group and conduct a feasibility analysis for designing and implementing a capacity upgrade for it. This led to the infrastructural upgrading & scaling up of the processing.

Warehouse Facility
The company's warehouse was found to be cramped and requiring an organized means of stacking produce. This necessitated provision of modern warehouse facility. The company which at its establishment has two full time employees and two parboilers grew to five time and 10 casual workers in 2009 through 2014. Upon participating in the IFAD/FGN VCDP, it grew its fulltime workforce to 18, with 105 casual workers from 2015 through 2017. The eighteen (18) permanent staff are mill workers (staff) while the 105 non-permanent workers are involved in parboiling and drying, mill cleaning and "husk sifting activities. This comprises of 10 males (55.55%) and 8 females (44.45%) while ten (10) in the youth demographic group. The 105 direct casual workers also include 35 males and 70 females.

Table 6: Employment Generated

Workers	Pre-VCDP Era			VCDP Intervention Period		
	2002	2005	2009-2013	2014	2015	2016-2017
Full time	2	2	5	5	18	18
Casual (Parboiers)	2	3	10	10	105	105

Processing Operations
Parboiling
The company has one mill at establishment, which grew to two (2) in 2009 amd three (3) in 2013 and four in 2014 through 2017. Its operations have also grown from 3 drums of paddy parboiled per week or 6 tons of processed rice per week in 2002 through 9 drums per week in 2009 through 2013 an currently 105 drums parboiled paddy per week or 5 tons processed rice

per day (15 tons per week) in 2007-2017 operational period. It currently processes 20 ton per day.

Udoka Rice Mill started its participation in the FGN/IFAD VCDP in 2014 and was encouraged to add destoners to its operations. It currently has 2 destoners of 5 tons per day capacity since 2015. It introduced the False Bottom parboiling technology in 2009.

Table 7.

	Pre-VCDP Era				VCDP Intervention Period		
	2002	2005	2009/2010-2013		2014	2015	2016-2017
Capacity: paddy parboiling	3 drums/week		9 drums per week		105 drums per week		
Capacity: Mills	1 mill	1 mill	2 mill	3 mill	4 mill	4 mill	4 mill
Millhouse (Size)	1 ton per day						
Capacity: Processing	2tons per day	2tons per day	2tons per day	20tons per day	20tons per day	20tons per day	20tons per day
Destoner	none		None		2	Trainin g	Training
Parboiling Equipment	Drum	Parboiling drum + False bottom parboilers					

Milling: Udoka still uses legacy milling stones. The VCDP is working with the group to upgrade to an integrated rice mil technology.

Rice Drying: Rice is currently dried on the ground by the numerous parboiling and drying workers at the company.

Market Development: The Company has expanded its market niche that includes sale and delivery of 20 tons per week to clients across the country. More significantly, it supplies 100 tons of rice to the Anambra State Government for the season from November – December period annually since 2014. They grew to 350 tons in 2016.

Market: The millhouse is the first line of rice market. Other market sources include rice dealers, restaurant and hotel operators across the state and neighboring states.

The company uses bushels as its measure but it has also introduced standard weight scales including the analog and digital measures.

Table 8.

Market/ Product Development	Pre-VCDP Era			VCDP Intervention Period		
	2002	2005	2009-2013	2014	2015	2016-2017
Measures	Bushels (22kg, 11kg)			Bushels Standard weigh scales (digital and analog)		
Branding/Labeling	none	none	none	none	Branded and labeled packs	
Market Supplies	2 t/Month	2 t/Month	0.5-1t/day	10 t/day	20 t/day	20 t/day
Government Patronage/Year				100t	100t	350t
Quality	Stone			Stone-free		

Packaging: The Company operated the open measurement and sale from 2002 – 2010 largely in new branding operations. It started branding its produce in 2018. Its packaged products come in 50kg, 25kg and 10kg branded presentations.

Bag Sealing: Bag sealing is one of the highest labour intensive activity that engage the youth as employees.
Scaling: Rice scaling uses simple automated machine operated by young employee.

Quality and Standard: Udoka has two destoners that enables it package stone-free and high quality rice packed in standard bags and standard sealing procedures.

Energy Use: the business operation created additional business in supply of 1 truck of wood per week (pick up size trucks of wood fuel). The operations of the group currently utilize 1 truck of wood fuel per week at the rate of eighteen thousand naira.
The company also runs on generators, it uses three(3) 7KVA generators and one(1) 12KVA generator. It consumes 12litres of diesel per day at a cost of N220 per litre.
Environment: The Company currently burns the waste of processing operations (rice husk) and waste water is not properly channeled. The need for briquetting facility and waste conversion is necessary.

Cost Recovery
The company has moved from financial loss (2002-2009) to full cost recovery and 50% profit (2010) and 75% in 2015-2016 business year.

Employment Generation and Poverty Reduction
The company has provided direct employment to 18 factory workers and indirectly about 105 paddy rice parboilers and driers. Parboiling and drying generates an aggregate income of MI, 050, 000 per week and average income of N19.800 per parboiler. Mill leaners or rice sifters also earn an average of N8,000 per week. It also created other business/es including wood supplies

which sell at N18,000 per week. It has become a reference model for value chain development in the rice processing enterprise.

Remaining Opportunities

1. Huge rice market in the south east and south-south region of Nigeria
2. Expected large consumer market created by the planned Anambra state urban metropolis
3. Continued and growing patronage of the state government.

Summary of Findings and Recommendations

Findings

This study carefully studied the Value Chain Development Programme from its start up in 2014, to 2017. The available information and oral and documented interviews gathered, indicated that indeed never in history of a Government Agricultural programme, has this sort of success recorded. From the oral interviews conducted in the Local Government Areas across the State, it was a dream come story for the accredited farmers' organizations that are participating into the programme. The available statistics heavily supports this finding. For instance, the unit has what it called Knowledge Management Office (KM) where the programmes of the VCDP are communicated to the farmers. Among their core objectives is maintain the various visibility mediums of knowledge and information dissemination through the use of TV and Radio airing of the project's policies, activities knowledge products etc, newspapers, social media platform like the Facebook, WhatsApp and community sensitization.

The Knowledge Management Office has also documented success stories on the improved livelihood of VCDP Farmers who now bears testimonies of additional farm lands; asset acquisition and increased incomes/yields. - Started with one/two hectares, now farm from two to three hectares and some five while some 8 hectares. Like in the case of Peter Okonkwo who started with two hectares, now farms 8 hectares with average yield of 7.4 tons of rice. - Some built new houses, while some are still building theirs. One Michael Afune, from Green Land MPCB now has his own milling machine, cultivates 6 hectares of rice farm, has built a new house and has bought a piece of land for proposed pure water factory. Also Mr. NnaemekaIjeoma now has a new house with a motocycle. Others include Mrs. Bridget Okonkwo, Peter Emeka. - Nweke David, from Divine Destiny MPCS who joined VCDP in 2015, cultivates 4 hectares as a rice farmer, also a seed producer, has bought a pumping machine and big grinder and generates additional livelihood from them. - Also Obinna Udogalanya, joined in 2016, Chukwunonso MPCS, with inputs supports and through capacity building on best agronomic practices by VCDP, which he applied in his farm(4 hectares), has also acquired additional skill and now produces rice seed as Rice Entrepreneur. He has harvested twice from his rice farm and once from his rice seed multiplication farm.

Recommendations

Anambra State as at today in Nigeria prides herself as the best in agriculture in Nigeria. The Federal Government of Nigeria has sent various teams to go and visit the State Government

with a view to knowing what exactly they do right. However, this study has justified that to be true. The VCDP of IFAD ever since its adoption in 2014, has been tremendously been domesticated to the extent that every farmer within the State now hopes and awaits for new farming season to commence. Thus, recommend as follows;

1. The government should uphold the programme. They should strive to ensure that the programmes present state of affairs be maintained and be improved upon to ensure that it doesn't fail.
2. Since all the farmers today enjoy quality life and their poverty reduced to over 45%, the programme though an International Programme and has been domesticated so much so that its now the people that owns it, should made to encourage and accommodate other interested farmers who may wish to join in future. It's now a practical case of African Solutions to African Problems.
3. The government should do more in the area of access roads to the various communities where these produce are been gotten. We argued that, if more rural roads could be constructed, many communities shall have the need to join the programme and better the lots of their people.

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