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AGRICULTURAL MARKETING AND POVERTY ALLEVIATION IN BENUE STATE: A CASE STUDY OF VANDEIKYA LOCAL GOVERNMENT AREA

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Abstract

The study examined the impact cassava product marketing and poverty reduction in Benue State: A case study of Vandeikya LGA. The research questions addressed the socio-economic characteristics of the respondents in the study area; the extent has cassava product marketing created employment and generated income in Benue state; and the major problems encountered by cassava product marketers. A sample of 120 respondents was selected for the study using questionnaire, semi structured interview and observations. A logistic Regression model was estimated using SPSS. The results indicate that cassava products marketing have significant effect on poverty reduction in Vandeikya local government areas of Benue. The study omment that (both for the domestic and export markets) investments in cassava processing machines among others must be a prerequisite.

Keywords: Agriculture, Marketing, Poverty, Alleviation, Cassava

1. Introduction

Market does not subsist where there is no desire or demand for something. Market came into existence since some centuries back when there existed the system of trade by barter. Jay Morris (2012), 'Nothing happens until someone sells something'. On this basis, we can infer that agricultural marketing began a long time ago because the trade by barter system encouraged the use of animals and crops as an exchange for another commodity or service.

The study area, Vandeikya have since the discovery of cassava been able to market cassava in the form of cassava flour, 'akpu' and garri and been one of the largest producers in Africa (Information Department, Vandeikya Local Government Area Council, 2007).

Furthermore, Benue State with 23 local government areas is among the thirty-six states (36) in Nigeria. Poverty in Benue State is absolute, severe, widespread, and multi-dimensional and has increased overtime. Poverty here is predominantly rural with an alarming 79 percent of the working population engaged in agriculture which is not rewarding. Characteristics like

poor health facilities, nutrition, environmental problems and neglect of agriculture has caused high poverty in Benue State (Information Department, Vandeikya Local Government Area Council, 2007).

Therefore, with the study area of Vandeikya Local Government having similar characteristics of poverty with other areas in an agrarian society, the researcher of this work is therefore out to assess, investigate and examine the relationship between agricultural marketing and poverty alleviation in Benue State taking cognizance of the marketing channels and systems in the study area.

Although a lot of researchers have worked on agricultural marketing and poverty alleviation in Nigeria, there are still gaps that this study work wants to fill. Most of these researches focused solely on either agricultural marketing or on poverty alleviation as a single variable and never worked on the two in correlation. Some of the works did on a particular crop, a local government other than Vandeikya or handled a particular variable but none researched on agricultural

marketing and poverty alleviation in Vandeikya with a focus on cassava.

Objectives

- i. To find the socio-economic characteristics of the respondents in the study area
- ii. To examine the level of employment and income generated from cassava product marketing overtime
- iii. To identify the major problems faced by the marketers of cassava products and proffer solutions

Statement of Research Hypothesis

For the purpose of the current study hypotheses were formulated in a null form for the basis of drawing conclusion in this study as follows:

H_0 : Cassava products marketing has not helped in the reduction of poverty in Benue state.

2. Literature Review

Chen and Ravallion (2007) estimated that agricultural growth had four times greater impact on poverty reduction than growth in the secondary and tertiary sectors. Byerlee, de Janvry and Sadoulet (2009) report findings from the World Bank in 2008 (World Bank, 2008b) regression analysis showing that migration from rural to urban areas in Ghana accounted for less than 20 percent of the reduction in rural poverty during 1993-2002. The other 80 percent came from improvements in economic conditions in rural areas, including in agriculture.

Gardner (2000) using regression analysis in the United States of America found out that gains in income from off-farm sources was the main reason why rural poverty declined in the US from the 1960's.

Meanwhile, Barker (1989), identified marketing at the farm level, as a deliberate activity undertaken by farmers with the purpose of aiming his output towards pre-selected market areas so as to maximize or at least optimize profits.

These definitions comprise three key features. They are:
i. Marketing is deliberate activity and so it must be planned.

ii. Output is aimed towards pre-selected areas. The final market for agricultural product is determined at every final stage; and

iii. The aim of marketing is to maximize or at least optimize profit. This qualifies profits motive of marketing as a driving force behind marketing agricultural products.

Baker (1989), concluded that, consumers are interested in purchasing what they want at lowest possible cost and farmers are interested in obtaining the possible returns from the sales of agricultural produce.

2.1 Empirical Review

Farmers cannot sell their products, search market information, or look for food due to limitations and lockdown policies (Adhikari et al. 2021). All of these lead to difficulties in creating efficient marketing systems in many developing countries.

Law insider (2022) explained agricultural development as “a marketing, agribusiness development, seed capital, or research and development project designed to discover, develop, transfer, market, use, or commercialize existing or new agricultural products or processes in order to strengthen and enhance agricultural economic development in the state”

It has been established that by World Bank Group that agricultural development is one of the most powerful tools to end extreme poverty, boost shared prosperity, and feed a projected 9.7 billion people by 2050” (World Bank Group, 2022). Agricultural development plays a significant part in rural development.

Agricultural development promotes the proper conditions for farming so that planting, harvesting and processing of crops can be done effectively, which ultimately can reduce poverty and save lives” (Geri, 2022).

The issue related to prevailing agricultural market systems in developing countries is oligopsony (Kumse et al. 2020). In an oligopsonic market, traders vertically control farmers with their strong market power.

Shepherd, Parida, and Wincent's (2020) study on the link between entrepreneurship and reducing poverty focused on the health and education of the children of slum entrepreneurs. The authors of the research set out to examine how business ownership may help reduce poverty. But the long-term systemic and structural effects of entrepreneurship did not match the short-term effects that entrepreneurs saw when they used their own money to fill urgent resource gaps. So, for this report, they asked entrepreneurs what they thought about how entrepreneurial action can end poverty. To do this, they did a qualitative analysis of entrepreneurs in Indian slums to find out how important aspirations, role models, and their children's schooling were to them in their efforts to reduce poverty. High-density, low-quality housing can bring people together and help them work together, and slum entrepreneurs take advantage of this.

In poor countries, women will only be asked to help with on- farm activities ranging from field cleaning to harvesting, whilst men will be in charge of marketing. Within such a system, when men own agricultural assets, they are more likely to reap the majority of the benefits, whilst women are more likely to follow the rules set by men (Quisumbing et al. 2015; Singh and Goyal 2019).

3. Methodology

3.1 Research Design

Data collected was analysed using both descriptive and regression analysis. Descriptive statistics include frequency distribution and percentages. Logit regression was used to test the hypothesis.

3.2 Population of the study

The population of this study consists of all the cassava products marketers and citrus marketers in Ihugh market in Vandeikya Local Government Area of Benue State estimated to be over 392 household (that is 271 cassava products marketers and 121 citrus crop marketers). Citrus crops marketers were considered to make a comparison with cassava marketers. Random

sampling procedure was used in the selection of the cassava marketers for the study. The selection of the non-cassava marketer was purposively done.

3.3 Sample and Sampling Technique

The study will make use of the random and purposive sampling procedures to select a size of 120 respondents.

3.4 Instrument for Data Collection

There are two sources of data collection available for researchers. They are primary and secondary sources. This research work is concerned with primary and secondary sources of data collection.

3.5 Method of Data Collection

The data for this study were collected from primary and secondary sources. The primary data were collected using structured questionnaire, oral interview, and personal observation. The secondary sources of data include library textbooks, Cassava Marketers' Association Record Book, journals, conference papers, data from Benue State Ministry of Agriculture, Divisional Agricultural Office, Vandeikya and internet sources respectively.

3.6 Method of Data Analysis

Data collected will be analysed using both descriptive and regression analysis. Descriptive statistics include frequency distribution and percentages. Logit regression will be used to test the hypothesis.

4. Results and Discussion

4.1 Descriptive Statistics Result

This research, therefore, adopted methods used by the above mentioned researchers or authors to analyse the relationship that exists between cassava products marketing and poverty reduction in Benue state. The Logit model as a probability function is a model in which dichotomous variable representing whether or not a household is poor is regressed on a set of supposedly exogenous explanatory variables. In a logit model the endogenous variable is a dichotomous or dummy variable with (1) representing the household is

poor and (0) the household is not poor. Thus, a dichotomous variable representing whether or not a set of supposedly exogenous explanatory variables will be used.

The implicit form of the model is written as;

$$\ln(P/1-P) = Z = \alpha + \beta X + v \quad (1)$$

Where:

Z = the probability which measures the total contributions of the independent variables in the model and is known as the logit.

α = the intercept which is also the value of Z when the value of all the other independent variables is zero.

β = coefficient which describes the size of and nature of the contributions of X to Z . a positive β means that X increases the probability of the outcome, a negative β means that X decreases the probability of the outcomes, a large β means that the factor strongly influenced the probability; while a near zero means that X has little influence on Z .

X = Independent variables

v = the random disturbance term.

From the implicit model (1), the modified form of the logit regression model is written as

$$PTY = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, x_{10}) \dots \quad (3.2)$$

Where:

PTY = dependent variable (poverty status)

PTY = Average annual income of a household from cassava products marketing /Total number of days in a year (365)

If it is less than US\$1½, it means that the household is poor in which case, (1) will be assigned. If it equals or greater than US\$1½, it means that the household is non-poor in which case, (0) will be assigned.

x_1 = Annual income from cassava products marketing

x_2 = Quantity of cassava processed and marketed in bags (100kg)

x_3 = Number of square meals taken per day (1 if three square meals a day, 0 if otherwise)

x_4 = house type (1 if zinc roof and cemented completely, 0 if otherwise)

x_5 = Access to “improved” medical services (1 if respondents visited dispensary, specialist and general hospitals, 0 if otherwise).

x_6 = Access to clothing (1 if at least 1 new cloth is purchased in a year as a result of cassava processing and marketing, 0 if otherwise).

x_7 = Education Level of the respondent (1 if the respondent attains secondary education and above, 0 if otherwise)

x_8 = House size

x_9 = Age of respondent

x_{10} = Distance to markets (local) (Kilometres)

Thus, the specified form of the model became:

$$PTY = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \beta_{10} x_{10} + v_i \quad (2)$$

Where:

β_0 = intercept

$\beta_1 - \beta_{10}$ = parameters

v_i = A random disturbance term.

4.2 A Priori Expectations

In this study, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_9, \beta_{10}$ are expected to have negative sign, implying an inverse relationship with the poverty status of the respondent. This is because increase participation with considerable capital, will increase profit leading to increasing access to food, shelter, improved medical services, education and means of transportation. This entails a reduction in the absolute poverty status of those involved in cassava product marketing activities. While β_8 is expected to be positive.

4.3 Discussion of Major Findings

A sample of 120 respondents was taken as sample size. Out of the total of one hundred and twenty respondents (that is cassava products marketing household and non-cassava marketing household in Ihugh market)

contacted, one hundred and sixteen (116) of cassava marketing household responded within the time required while four (4) did not return. While all the non-cassava marketing household contacted responded within the timeframe. The findings of this study revealed that cassava products marketing have significant effect on poverty reduction in Vandeikya local government areas of Benue.

Specifically, it was found that majority of the operators of cassava products marketing are married. This implies that married people mainly carry out the occupation. It could also be assumed that married people were much more involved since their children, wives and husband could form or supply part of the labour.

The studies also revealed that majority of the respondents were between the age of 31-40 years. This implies that, the cassava marketers in the area are still within their active age of production. The level of education of the respondent was also considered to check whether the respondent's level of education affects the level of their marketing efficiency. The data to this effect showed that cassava product marketing was dominated by 50% of non-educated people in the Vandeikya LGA of Benue state. It was also observed that only 3.8% of the respondent had acquired higher degrees, such as M.Sc. PGD, etc. The low percentage of those with postgraduate level of education may be traceable to their preferences for white collar jobs. However, the involvement of this few may be due to their location and the need to augment their income and also provide food for their families.

It was also found that majority of the sampled respondents do not have any means of transport since 96.6% of the studied respondents have indicated so. This may be due to the fact that the income they earn from cassava products marketing activity is not enough for them to afford any means of transportation. The table also shows that 37.07% of them transported their products through motorcycles.

Furthermore, the study showed that the majority of the respondents patronised Dispensaries and General

Hospitals as their health facilities with cassava products marketing income. These health facilities are at least considered to be improved health facilities.

The study discovered an increasing trend in the quantity of cassava processed and marketed in the study areas over time. This increase was found to be as a result of the profitable nature of the business and the comparative advantage the operators in the area enjoyed from closeness and steady supply of cassava tubers in the areas.

It was also discovered that in as much as cassava products marketing has reduced the poverty of the respondents and has the potential of poverty reduction, it is beset with a lot of inescapable problems such as lack of efficient dryers and peeling machines, Agronomic challenges, lack of Processing and storage, Market and market constraints, poor Access to markets.

With respect to the problem of processing and storage, cassava roots are bulky and perishable. Processing reduces the bulkiness and extends the shelf life and therefore reduces the transportation cost, as well as adding value to the product. The present cassava processing methods are highly labour intensive and expensive. For example, manual processing require a minimum of 4 person-days to peel and wash, 23 person-days to chip one ton of fresh cassava roots which translates to approximately \$65/t of flour because appropriate processing technologies, machines and tools are not easily affordable and sometimes unavailable at the farm level. In contrast the cost of processing cassava into flour is approximately US\$16/t in other cassava producing countries, such as Colombia (World Bank (2008b)).

The cassava processing methods available include grating, milling, fermenting, drying, dewatering, pressing, extracting, roasting and sieving. The forms of processed cassava available include fufu, garri, lafun, chips, starch, livestock feed, and flour. Majority of the farmers agreed that processed cassava improves income, add value to the cassava produced and inspired their production activities. The processing of cassava

impacted on the farmers by increasing their income, increased marketing outlets, household food security, added variety to family menu, improved access to medical services and general welfare.

5. Conclusion and Recommendations

The study reveals that cassava products marketing is a profitable enterprise. The study also showed the various channels of cassava marketing, the poverty status and the factors influencing poverty among the cassava products marketing households. Farm gate and rural markets serve as the major marketing channels for cassava farmers. It is clear that crucial factors like access to market, educational level, and market information are germane to poverty reduction. Farmers need to take full advantage of market information in order to improve their standard of living. The details from the work reveal a deeper poverty depth in non-cassava marketers with 0.5351% as against 0.4530% of cassava marketers.

In line with the above findings, the following recommendations are made to improve beyond the present level of cassava processing and marketing.

- i. government should create the right policy environment and target incentives for private investment in the cassava marketing sub-sector.
- ii. To make cassava competitive, both for the domestic and export markets, investments in cassava processing machines among others must be a prerequisite. This is because the major cassava producing zones are also the relatively higher rainfall zones and have longer rain fall months. Solar radiation is relatively low, justifying the need to use dryers extensively for cassava commercialization in north-central Nigeria. Although dryers using kerosene, charcoal and electricity exist, they are not used. Their economic advantages have not

been widely demonstrated at farm levels. They are also expensive and not energy-use efficient. Flash dryers are the most appropriate machines for drying cassava in powdered form. There are a number of locally made flash dryers that can be used by small-to-medium scale enterprises.

- iii. There is need for all the stakeholders to upgrade roads linking the major towns. Though the farmer market access road network is better in Nigeria than in other countries, the rural feeder road networks are poorly developed and absent in some places especially in Vandeikya and Ohimini LGAs. This has significant implications for marketing, cost of inputs, access to health facilities and other social services, and may therefore have adverse effects on production and rural standard of living.

- iv. Policy consistency should be ensured in favour of cassava utilization in Nigeria.

- i. Applying soil amendments such as inorganic and organic fertilizers can ameliorate the problem of low soil fertility (agronomic problem). These fertilizers could be made available through the private sector by linking this activity with the USAID/Nigeria project 'Developing Agro-Input Markets in Nigeria (DAIMINA)' implemented by the International Fertilizer Development Center. DAIMINA has had significant impact on its core states of Kano and Oyo, and could be extended to other states north-central Nigeria and Benue state in particular to support this activity.

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