

Economic analysis of poverty among cashew nut marketers in Ogbomoso north local government area of Oyo State, Nigeria

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Abstract

Nigeria was ranked the second largest producer of cashew after Vietnam. Ogbomoso North Local Government, Oyo State has a thriving domestic cashew nut trade but despite this, cashew nut marketers face pervasive income poverty, necessitating an in-depth investigation into the root causes. This study therefore focused on the economic analysis of poverty among cashew nut marketers in Ogbomosho north local government area of Oyo state, Nigeria.

Primary data were collected and descriptive statistics, Gross Margin Analysis, Benefit Cost Ratio (BCR), Two-Third of the Mean Per Capital Household Expenditure approach as well as Logistic regression analysis were employed to analyze the data collected.

The result revealed that majority of the cashew nut marketers (48.50%) were between the age range of 36 and 50 years, 43.40 percent of them had secondary school education and 40.40 percent had 11-20 years of cashew nut marketing experience. The result further showed that cashew nut marketing is profitable in the study area with the average total revenue, average gross margin, average profit and BCR of ₦61,022,881.31; ₦7,421,099.545; ₦6,495,495.505 and 1.12. Also, total fixed cost and age of the respondents significantly influenced their poverty status while poor marketing information, finance constraints, transportation issues, storage difficulties, and seasonality of the supply/demand among others were also identified as prevalent concerns of cashew nut marketing in the study area.

The study therefore recommended cost reduction strategies, proper drying of the cashew nuts, government intervention in market price stabilization, and financial support for the cashew nut marketers.

Keywords: Cashew nut marketers; Benefit Cost Ratio Poverty; Expenditure approach; Gross Margin Analysis; Logistic regression analysis

1. Introduction

Agriculture is still one of the most critical sectors of the Nigerian economy. It is an important source of employment, local raw materials and government revenues (Farayola et al. 2013). Cashew nut is among the prominent agricultural commodities exported from Nigeria (Ameh et al., 2013). In 2014, Nigeria was ranked the second largest producer of cashew with an annual production of 836,500 tonnes, behind Vietnam which was the highest producer with 1,190,900 tonnes (FAO, 2016). Anayochukwu et al., (2022) stated that three main cashew products are traded in the international

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market: raw nuts, cashew kernels, and cashew nut shell liquid (CNSL). Annually, Nigeria's export earnings from cashew nuts ranged from US\$25 to 35 million (Busari and Wahab, 2023).

Marketing is one of the significant aspects of Nigerian agriculture. Agricultural marketing is the performance of all the activities involved in the flow of agricultural products and services from the initial points of production until they reach the hands of the ultimate consumers (Khairi, 2021). For the cashew nut produce, its marketing involves several players and channels. It starts from the sale of raw cashew nuts by gatherers and farmers to the retailers who then sell to the wholesalers until it reaches the level of the processors, for selling of the processed and graded kernels to the ultimate consumers (Onyenobi et al. 2009).

According to the World Bank (1990), poverty is the inability to attain a minimum living standard. The most common definitions of poverty relate to income poverty, which is defined according to absolute and relative poverty. Absolute poverty is experienced when an individual's income is not enough to meet his or her basic needs in life while Relative poverty is when the financial conditions of someone are compared with another who is living in absolute poverty (Mobolaji, 2010).

Jaiyeola and Bayat (2019) stated that in measuring poverty in an economy, an income poverty measure helps to gauge the poverty of each unit and then aggregate them. When the poverty line has been identified, the income of the individual is compared with the poverty line. The income poverty has different measures to determine people in poverty. These measures include but not limited to the: Dollar per day measure; the new international poverty line is set at \$2.15. This means that anyone living on less than \$2.15 a day is considered to be living in extreme poverty (World Bank, 2022). As for the Basic needs perspective; Poverty is seen as deprivation suffered as a result of the lack of some resources which are important to meet the minimum acceptable needs of humans such as housing, food, clothing, health care, education and employment. Two-Third of the Mean Per Capita Household Expenditure is also an approach to measuring poverty.

In the thriving domestic cashew nut trade of Ogbomoso North Local Government, Oyo State, Nigeria, cashew nut marketers face pervasive income poverty, necessitating an in-depth investigation into the root causes. Therefore, this study addresses the following research objectives:

Research Objective

The specific research objectives are to:

- Describe the socio-economic characteristic of the cashew nut marketers in the study area.
- Highlight the cost and return of cashew nut marketing in the study area.
- Examine the factors affecting poverty status of cashew nut marketers in the study area.
- Describe problems militating against cashew nut marketing in the study area.

2. Methodology

2.1. Research Design

Quantitative research design was adopted to investigate the income poverty of cashew nut marketers in Ogbomoso North Local Government Area of Oyo State, Nigeria, employing a cross-sectional quantitative approach.

2.2. Sampling Technique and Sample Size

The population of this study consist of all cashew nut marketers in the study area while only 99 the purposively selected 110 marketers were found useful for the analysis.

2.3. Data Collection

Primary data was used and were collected through the use of structured questionnaire.

2.4. Method of Data Analysis

Descriptive Statistics, Gross Margin Analysis, Benefit Cost Ratio, Two-Third of the Mean Per Capital Household Expenditure Approach and Logistic Regression were employed to analyzed the data collected. Descriptive statistics such as frequency and percentage distribution table were used to analyze the objective one and four. Gross margin (GM) analysis was used to analyze the objective two while two-third of mean household expenditure and Logistic regression

analysis was used to analyze the objective three. Analytical Package used was SPSS (Statistical Package for the Social Sciences) 22 and Microsoft Excel Spreadsheet.

2.5. Gross Margin (GM) Analysis:

Gross margin (GM) analysis is the difference between gross income (revenue) and total variable cost (TVC) of production (Kodua et al., 2018).

$$GM = TR - TVC$$

Where: GM = Gross margin, TR = Total revenue, TVC = Total variable cost.

$$\text{Net return} = TR - TC,$$

where: TR = Total revenue, TC = Total cost

$$\text{Benefit Cost Ratio (BCR)} = \frac{\sum \text{Total Revenue}}{\sum \text{Total Cost}}$$

3. Result and Discussion

The result presented in Table 1.0 shows the distribution of the respondents by sex. 77(78%) of the respondents were male while the remaining 22(22.2%) were female. This implies that men were more involved in cashew nut marketing than their women counterpart in the study area; this could be as result of high level of drudgery involved in its marketing activities in the study area.

Table 1 Socio-economic characteristics of the respondents

Characteristics	Frequency	Percentage (%)
Sex		
Male	77	77.8
Female	22	22.2
Age (years)		
Below 21	2	2.0
21 – 25	30	30.0
36 – 50	48	48.5
51 – 65	17	17.2
Above 65	2	2.0
Level of education		
Informal education	4	4.0
Adult education	3	3.0
Primary education	12	12.1
Secondary education	43	43.4
Tertiary education	37	37.4
Household size		
5 people or less	71	71.7
6 – 10 people	28	28.3
Major source of capital		

Personal savings	24	24.2
Bank loan	15	15.2
Cooperative society	40	40.4
Family/Friends	8	8.1
Money lender	12	12.1
Marketing experience (years)		
≤ 10	35	35.4
11 – 20	40	40.4
21 – 30	14	14.1
Above 30	10	10.1

Source: Field Survey, 2019

Table 2 Cost and Returns of Cashew nut marketers in the Study Area

Items	Cost/ Amount (₦)
Variable Items	
Cost of cashew nut purchased	5115900800
Sack/Jute Bag	116756500
Needle	341900
Thread	1695860
Bucket	726050
Rake	271000
Packer	120270
Broom	81100
Needle	32451900
Transportation	25109240
Labour	13121775
Government Tax	511590080
Total Variable Costs	5,306,576,395
Fixed items (Depreciated)	
Warehouse	29189800
Vehicle	29690731
Measuring scale	29690731
Tarpaulin	2375660
Total Fixed cost	91,634,800
Total cost	5,398,211,195
Total Revenue	6,041,265,250
Gross Margin	734,688,855
Profit	643,054,055
BCR	1.12

Source: Field Survey, 2019

Table 3 Factors affecting poverty status of cashew nut marketers in the study area

Logistic regression	Number of obs	=	77
	LR chi2(9)	=	22.82
	Prob > chi2	=	0.0066
Log likelihood = -40.489814	Pseudo R2	=	0.2199

Poverty status	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	Interval]
Sex	0.8331132	0.5287472	-0.29	0.774	0.2401468	2.890222
Age	0.8862248	0.0397945	-2.69	0.007	0.8115627	.9677557
Marital Status	0.9684128	0.4261941	-0.07	0.942	0.4087432	2.294407
Level of Education	0.7240715	0.2731994	-0.86	0.392	0.3456325	1.51687
Household Size	0.7938956	0.1745362	-1.05	0.294	0.5159749	1.221513
Primary Occupation	0.9779703	0.3064186	-0.07	0.943	0.529208	1.807278
Secondary Occupation	0.5361026	0.2346195	-1.42	0.154	0.2273677	1.264058
Total Variable cost	1	5.23e-09	-0.50	0.614	1	1
Total Fixed Cost	1.000001	5.18e-07	2.63	0.009	1	1.000002
_cons	10121.54	37813.23	2.47	0.014	6.686979	1.53e+07

Source: Field Survey, 2019

Table 4 *Problems militating against cashew nut marketing

Problems militating against cashew nut marketing	Frequency	Percent (%)
Price fluctuation	92	92.9
Poor marketing information	47	47.5
Finance	42	42.4
Transportation problem	24	24.2
Storage problem	27	27.3
Spoilage problem	44	44.4
Low demand	4	4.0
Processing problem	1	1.0
Seasonality of supply/demand	45	45.5

Source: Field Survey, 2019 *Multiple Responses

The result further revealed that majority of the cashew nut marketers 48(48.50%) were between the age range of 36 and 50 years, 30(30.30%) were within the age range of 21 and 35 years, 17(17.20%) were within the age of 51 and 65 years, while 2(2.00%) of the respondents were within the age of less or equal 20 and the rest 2.00% were 66 years and above. This implies that the majority of cashew nut marketers in the study area were in their economic active age.

Also, it was indicated that the majority of the respondents 43(43.40%) had secondary school education while 37(37.40%), 12(12.10%), 4(4.00%) and 3(3.00%) had tertiary, primary, informal and adult education respectively. This implies that majority of the respondents have one form of educational qualification or another and that literacy level is high among cashew nut marketers in the study area. Hence, they are expected to be more informed and updated about cashew nut marketing activities.

Regarding the household size of cashew nut marketers, the table showed that 71(71.70%) of the respondent have household size of less or equal to 5 persons, while 28(28.30%) of them have between 6 – 10 people.

The result in Table 1.0 likewise showed that 40(40.40%) of the respondents had 11 -20 years of cashew nut marketing experience, while 35(35.40%), 14(14.10%) and 10(10.10%) of the cashew nut marketers had years of farming experience ranging of less or equals to 10 years, 21 – 30 years and greater than 30 years respectively. This implies that majority of cashew nut marketers in the study area are experienced in the business.

It was also revealed that majority 40(40.40%) of the respondents used credit acquired from cooperative society, while 24(24.20%), 15(15.20%), 12(12.10%,) and 8(8.10%) obtained credit from personal savings, bank loan, money lender, and family/friends respectively. This implies that most of the cashew nut marketers belong to one cooperative society of the other which enables them to have access to credit facilities for their marketing activities.

About 40(40.40%) of the respondents had 11 -20 years of cashew nut marketing experience, while 35(35.40%), 14(14.10%) and 10(10.10%) of the cashew nut marketers had years of farming experience ranging between, less than or equals to 10 years, 21 – 30 years and greater than 30 years respectively. This implies that majority of cashew nut marketers in the study area are experienced in the business.

Table 2.0 presents the cost and return analysis of cashew nut marketers in the study area. The table further showed the cost of variable items, cost of fixed items depreciated, the total cost, the total revenue from marketing activities of the cashew nut, the gross margin, profit and benefit cost ratio. From the table, the result showed that cashew nut marketing is profitable in the study area with the average total revenue, average gross margin, average profit and BCR of ₦61,022,881.31; ₦7,421,099.545; ₦6495495.505 and 1.12. Since the BCR is greater than 1, it indicates cashew nut marketing is a profitable venture in the study area.

This study revealed that 37% of the cashew nut marketers in Ogbomoso North Local Government were categorized as poor while 62% were non-poor based on the poverty line estimated with Two-Third of the Mean Per Capital Household Expenditure. Furthermore, the result of Logistic regression analysis presented under Table 3.0 pinpoint factors that significantly affect poverty status of cashew nut marketers in the study area. It identifies two significant factors affecting the poverty status of cashew nut marketers in the study area. The positive z-value (2.63) implies that there is likelihood of a statistically significant rise in the odds of experiencing poverty as total fixed costs increase. In contrast, Age exhibits an odds ratio of 0.8862248, implying that for each year a cashew nut marketer's age increases, the likelihood of falling into poverty reduces by a factor of 0.886. The statistically significant p-value (0.007) underscores the connection between age and poverty status. The negative z-value (-2.69) suggests that an increase in age is associated with a likely decrease in the odds of experiencing poverty. Other variables like sex, marital status, level of education, household size, primary occupation, secondary occupation, and total variable cost are not statistically significant (p-values > 0.05).

The result presented in table 4.0 underscores the complex array of hurdles in the cashew nut market, with low demand, processing issues, and price fluctuation being the most pressing concerns which is backed up by 95(96.0%), 98(99.0%), 92(92.9%) respectively. Also, poor marketing information, finance constraints, transportation issues, storage difficulties, spoilage problems and seasonality of the supply/demand were also identified as prevalent concerns of cashew nut marketing in the study area.

4. Conclusion

The findings of this study revealed that majority of the cashew nut marketers were male, aged 36 – 50 years, educated, with household size below six people and have marketing experience above 10 years. Also, the major source of capital identified is through cooperative society. The result of the study further showed that cashew nut marketing is profitable in the study area with the average total revenue, average gross margin, average profit and BCR of ₦61,022,881.31; ₦7,421,099.545; ₦6495495.505 and 1.12. Since the BCR is greater than 1, it indicates cashew nut marketing is profitable in the study area. In addition, it was revealed that 37% of the cashew nut marketers in Ogbomoso North Local Government are categorized as poor while 62% were non-poor based on the poverty line estimated with Two-Third of the Mean Per Capital Household Expenditure. Also, the result of this study showed that total fixed Cost and age are the key factors impacting the poverty status of cashew nut marketers in the study area. Finally, the result of the study underscores the complex array of hurdles in the cashew nut market, with low demand, processing issues, and price fluctuation being the most pressing concerns.

Recommendations

Based on the findings of this study, recommendations such as cost reduction strategies, proper drying of the cashew nuts, government intervention in market price stabilization, and financial support for the cashew nut marketers were suggested.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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