ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/326543061

ANALYSIS OF CASHEW NUTS MARKETING IN KWARA STATE, NIGERIA

Research · January 2017

DOI: 10.13140/RG.2.2.32298.52168

CITATIONS
2

READS
5,748

3 authors:



Shehu Abdulganiyu Salau
Kwara State University
32 PUBLICATIONS **166** CITATIONS
SEE PROFILE



Nofiu Babatunde Nofiu
Kwara State University
19 PUBLICATIONS **34** CITATIONS
SEE PROFILE



Popoola G.O
Kwara State University
2 PUBLICATIONS **6** CITATIONS
SEE PROFILE

All content following this page was uploaded by Nofiu Babatunde Nofiu on 22 July 2018.

The user has requested enhancement of the downloaded file.

ANALYSIS OF CASHEW NUTS MARKETING IN KWARA STATE, NIGERIA

****Salau, S.A., Popoola, G.O. and Nofiu.B. N***
Department of Agricultural Economics and Extension Services, College of Agriculture, Kwara State University, Malete, Nigeria
*Corresponding Author e-mail: talk2salaushehu@yahoo.com

Abstract
This study analysed cashew nut marketing in Kwara State, Nigeria. Data were collected from the respondents with the aid of a structured questionnaire. The analytical tools employed were the herfindahl index, descriptive, gross margin and regression analyses. The study revealed that most of the wholesale marketers (81.1%) were male with mean age of 33.5 years. The study revealed a monthly gross margin of ₦1, 821, 922. The average rate of returns to total investment was 25.5% implying that an average profit of ₦0.25k could be realized on every naira invested in cashew nuts marketing in the study area. The Herfindah index was 0.007 and this revealed that cashew nut market tended towards pure competition. The coefficient of multiple determinations (R^2) was 0.506%, implying that about 51% of the total variation in output was explained by the independent variables. Moreover, the purchase cost (X_1), transport cost (X_3), agent cost (X_4) and storage cost (X_5) were indicated as the important variables determining the returns of cashew nut marketing. The marketing of cashew nuts is mostly affected by price instability due to the seasonal nature of cashew nut production, poor storage and processing facilities. Consequently, a controllable pricing system for efficient and effective marketing is recommended. Marketers are to ensure good quality nuts as well as observe good hygiene practices in drying, sorting and packaging of cashew nut to enhance their profitability. More researches into the production of high yielding varieties of cashew nuts and policies that lower the costs of marketing should be vigorously pursued.

Key Words: Agriculture, Marketers, Cashew Nuts, Herfindahl Index, Budgetary and Regression Analyses

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. However, the sectors potentials are far from being fully harnessed and these has had serious implications for food security and endurable economic development. The underdevelopment of agriculture is, indeed, worrisome given the fact that the country is agriculturally well endowed and has witnessed considerable efforts in agricultural planning (Farayola *et al*. 2013). Nigerian agriculture can be divided into sub-sectors such as: crop production, livestock, forestry and the fishery sub sectors. The crop production sub-sector comprises of the cash crops like cotton, cashew, cocoa, coffee, kolanut, tobacco, beniseed and palm produce; and the arable crops.

Cashew known botanically as *Anacardium occidentale L.*, is one of the commodities that has given Nigeria recognition worldwide. It was introduced into Nigeria between 15th and 16th

centuries by the Portuguese explorers and the crop has rapidly spread to all agro-ecologies of the country (Hammed and Anikwe, 2008). The cashew tree grows with minimum attention and is easily cultivated (Aliyu, 2001). It is usually found from sea level to an altitude of 1000m (3000 feets). The average yield of nuts from a mature tree ranges from 7 – 11kg per annum. The tree is capable of living for between fifty and sixty years and produce nuts for about fifteen to twenty years (CTCS, 1993).

Nigeria is the second largest producer of cashew nuts, producing 950,000 tonnes per year after Viet Nam which produces 1,110,800 tonnes (FAOSTAT, 2013). In Nigeria, over 20 States engage in commercial cashew production. These include Kwara, Kogi, Oyo, Edo, Ondo, Anambra, Enugu, Benue, Cross River, Imo, Sokoto, Nassarawa, Ogun, Osun, Plateau and Kebbi among others (Ezeagu, 2002). Cashew is a highly nutritious and concentrated form of food, providing a substantial amount of energy. The cashew nut kernel has a pleasant taste and flavor and can be eaten raw, fried and sometimes salted or sweetened with sugar (Manay *et al.* 1987). It also serves as an important source of invisible fat in the diet, being widely used in a variety of ways. The demand for cashew nuts has been rising in many temperate countries. The produce therefore requires an efficient trading system (Russel, 1979).

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. Poor trading systems of some crops and their products partly lead to the inherent inefficient agricultural commodity marketing in Nigeria. 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 sells to the wholesalers until it reaches the level of the processors, for selling of the processed and graded kernels to the ultimate consumers. The marketing channel may vary for different commodities depending on the nature, use, value of commodities, marketing margin and the mark-up policy of the traders in the marketing system (Onyenobi *et al*. 2009).

Despite the critical roles of marketing in Nigeria's agricultural development, successive governments paid more attention to the production aspect of agriculture, with little attention to marketing related activities (Idachaba, 2000). One of the major problems facing farmers/marketers in the developing world is lack of storage and processing facilities for the perishable and seasonal agricultural commodities (Bani, 1995). This is more so for cashew nuts that are mostly harvested prematurely and store without beung dried properly. These resulted in low quality and poor priced nuts when taken to the market. In addition, most consumer markets in Nigeria are not well developed particularly in the area of weights and measures. There are no standard units of measurement and lack of uniform means of measurement in most areas and where such exist, they have been tampered with. This leaves the consumer to their preferences

and bargaining capabilities in securing a good deal. The cashew nut gatherers are often times exploited by the so-called cashew nut retailers and wholesalers. They end up getting peanuts for the sales of their nuts just because they cannot afford to transport their nuts to the cities. Thus, this study described the marketing functions, estimated costs and returns to cashew nuts marketing and determines the factors influencing net returns of cashew nuts marketers

Materials and Methods

Area of Study

The study was carried out in Kwara State, Nigeria. The choice of Kwara state for this study was deemed to be appropriate given its antecedent in agriculture and food marketing. The State lies midway between the Northern and Southern parts of the Country (Figure 1). It has a projected population of about 2,454,077 with a total landmass of 32,500 Square Kilometres, most of which is arable (NPC, 2010). About 1,094,232 people of the State are engaged in direct farming out of which 26,865 are vegetable farmers. The State has two main climatic seasons, the dry and wet season with annual rainfall ranging between 1,000 and 1,500 mm while the average temperature lies between 30ºC and 35ºC. The rainy season lasts between April and October while the dry season starts in November and ends in March of the following year providing ample opportunity for cash crops production and marketing. The principal cash crops are cotton, cashew nuts, cocoa, coffee, kola nut, tobacco, beniseed and palm produce. Marketing of cashew nuts is normally done over four months annually between February and May.

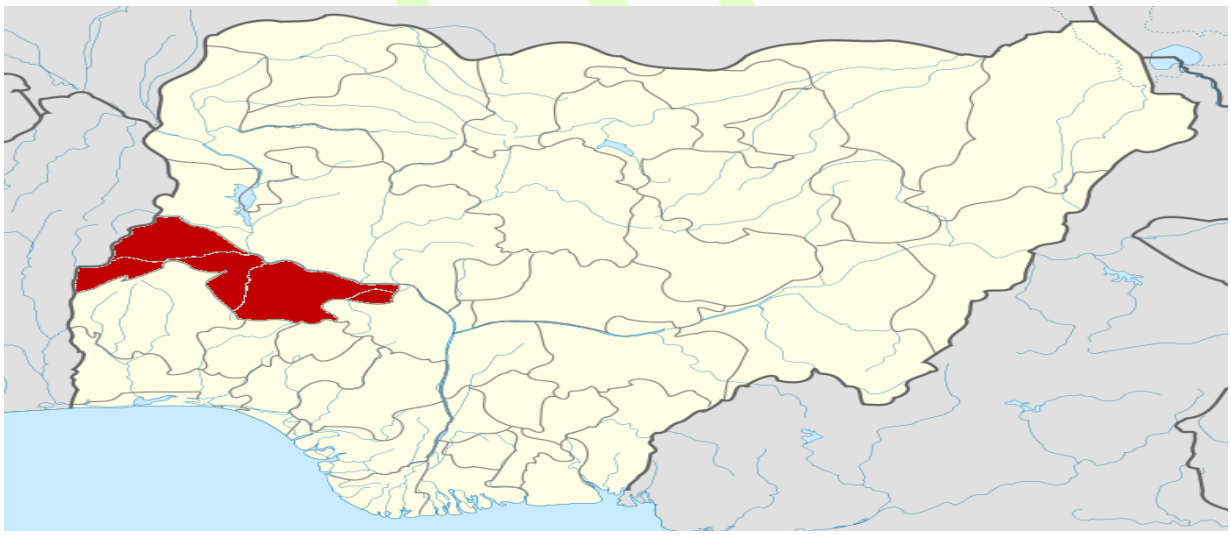


Figure 1: Map of Nigeria showing the location of Kwara State
Source: Adapted from Muhammad-Lawal *et. al.* 2015.

Data Collection and Sampling Methods

Primary data were used in this study. The data were obtained from a field survey through the use of questionnaires, administered through personal interview. The questionnaire was designed to elicit information on marketing activities, functions and structure of cashew nuts marketers, cost and returns and factors determining the net return of marketers in the study area. The cashew nut marketers in Kwara State constitute the target population for this study. A two–stage sampling method was used to select the respondents for the study. The first stage involved purposive selection of three (3) Local Government Areas (LGAs) in Ilorin metropolis that are known for cashew nut wholesale marketing. Secondly, sixty cashew nut wholesale marketers were randomly selected from the list of cashew nuts marketers in each LGA to make up a sample size of 180 respondents.

Analytical Framework

Simple frequency tables and percentages were used to profile the socio-economic characteristics and constraints facing cashew nuts marketers.

Herfindahl Index

The Herfindahl index was used to determine the structure of cashew nuts marketers.

The Herfindahl index ***(HI),*** $HI = \Sigma S_i^2$ ***(1)***

Where S_i = Market share for respondent i, calculated as: $S_i = Q_i/Q$,

Q_i = tonnes of cashew nuts sold per month by respondent i, and

Q = total number of tonnes of cashew nuts sold per month by all respondents.

Gross Margin (GM) Analysis

Gross margin (GM) analysis is the difference between gross income (revenue) and total variable cost (TVC) of production (Olukosi and Erhabor, 2005). This was used to determine the costs, returns as well as profitability of cashew nuts marketers.

$GM = TR-TVC$ ***(2)***

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

The net return represents the total profit and was determined using:

Net return = TR-TC,

where: TR = Total revenue, TC = Total cost, and

Rate of return to investment $(ROR) = TR-TVC/TVC \times 100$ ***(3)***

The depreciation of the fixed cost was calculated using the straight line method of depreciation:

$D = C-S/N$ ***(4)***

Where: D = Depreciated amount, C = Initial cost of the assets, S = Salvage value,
N = Expected useful life. The salvage value was assumed to be zero.

Multiple Regression Technique

To determine factors influencing the net returns of cashew nuts marketers, a multiple regression analysis was used.

The implicit form of the model is:

$$Q = f(X_1 + X_2 + X_3 + X_4 + X_5 + \mu) \quad (6)$$

Where:

Q = Net return (measured in Naira)

X_1 = Purchase cost (Naira)

X_2 = Labour cost (Naira)

X_3 = Transport cost (Naira)

X_4 = Agent cost (Naira)

X_5 = Storage cost (Naira)

μ = error term assumed to fulfill all the assumptions of the classical linear regression model.

Results and Discussion

Socio-economic Characteristics of the Respondents

Marketing of cashew nuts though usually seen as a male occupation, this study found that a sizeable proportion of female were also involved in cashew nut marketing. Table 1 revealed that most of the respondents (81.1%) were male and the remaining were female, implying that males were more involved in cashew nut wholesale marketing than their female counterparts.

Most of the cashew nut marketers (40.6%) fell within the age bracket of 35-44 years. The remaining respondents; 32.2% and 15.6 % fell into the 45-54 and 25-34 years age brackets respectively. The average age was 33.5 years which shows that majority of the marketers were in their active age. Majority of the respondents (92.8%) were married. This indicates a higher chance of involving family labour in cashew nut marketing. Household size is the sum total number of people that were leaving with the respondents and benefit from the income generated from marketing. Majority of the respondents had relatively large household size. Over half of the respondents (54%) had households of 6-10 persons, while others (40%) had 1-5 persons. The mean household size was 6 persons, implying that the high profit margin in the industry may have been the motivational factor sustaining the business and their households for years. Most of the marketers (85%) were Muslims while 15% were Christians. This implies that cashew nut marketing cut across religious boundaries. Education shows whether a person is literate or learned. Education is very important in the development of any country's economy. The educational levels of respondents were based on the numbers of years spent in school. The average years of education were 13. This shows that educated people were involved in cashew nut marketing in the study area. Furthermore, some of the respondents (39.2%) had marketing

experience ranging from 1-10 years. Others 40.2%, 14% and 6.6% had between 11-20, 21-30 and between 31-40 years bracket. The average marketing experience was 15.8 years. It is expected that the higher the experience the better the marketing skills. All the respondents (100%) belonged to one association or the other. Membership of an association is expected to enhance information dissemination and efficient marketing of cashew nuts.

Table 1: Socio-economic Characteristics of the Respondents

Variables	Frequency	Percentage (%)
Gender		
Male	146	81.1
Female	34	18.9
Age (years)		
15-24	3	1.7
25-34	28	15.6
35-44	73	40.6
45-54	58	32.2
55-64	18	10.0
Marital Status		
Single	11	6.1
Married	167	92.8
Divorced	1	.6
Widowed	1	.6
Household Size		
1-5	72	40.0
6-10	98	54.4
11-15	10	5.6
Religion		
Christianity	27	15.0
Islamic	153	85.0
Years of schooling		
1- 10	60	33.3
11-20	102	56.7
21-30	18	10.0
Years of Marketing Experience		
1-10	71	39.2
11-20	72	40.2
21-30	25	14.0
31-40	12	6.6

Source: Field survey, 2017

FUOJAHE

Table 2 shows that the respondents performed transportation function, and in doing this, most of them used vehicles as means of transport while few employed head loads.

Table 2: Marketing Function and Practices

Variables	Frequency	Percentage%
Purchase source		
Farm	171	95.0
Suburb	1	.6
Market Place	8	4.4
Total	180	100.0
Storage facilities		
Rented Shop	95	52.8
House	85	47.2
Total	180	100.0
Transport means		
Vehicle	178	98.9
Head load	2	1.1
Total	180	100.0
Distribution channel		
Wholesaler	44	24.4
Processor	121	67.2
Exporter	15	8.4
Total	180	100.0
Source of fund		
Personal savings	100	55.6
Family	58	32.2
Bank	4	2.2
Moneylender	18	10.0
Total	180	100.0

Source: Field survey, 2017

Most of the respondents (95.0%) purchased cashew nut directly from the farms while others bought from the market place. About half of the respondents (53%) stored their cashew nuts in rented shops while others (47.2 %) stored their produce right in their houses. The respondents employed different channels for carrying out their distributing functions. Few of the respondents (24%) sold their nuts to other wholesalers. The remaining 67.2% and 8.3% sold directly to processors and exporters respectively. Moreover, about three-quarters of the respondents sold cashew nuts weighed between 1-5 tonnes per week while the others sold between 6-10 tonnes per week. The major source of funding for the respondents was personal savings. This was closely followed by family sources.

Results of Herfindahl Index HI

The highest value obtainable here is 1. The Herfindahl index of 0.007 indicated that the concentration ratio for cashew nuts marketers was very low. This shows that the market structure shifted towards perfect competition which is characterized by homogenous product, no barrier to entry into the business and many buyers and sellers.

Costs and Returns Analysis of Cashew Nuts Marketers

Cashew nuts were found to be usually available for trading between February-June every year. At the beginning of the cashew nut marketing period in March, the average price was ₦350,000 per tonnes, while it rose steadily and reached a peak within the months of May to June at an average price of ₦580,000 per tonnes. The gross revenue and total variable cost obtained from cashew nuts marketing per season were ₦8, 953,333 and ₦7, 131, 411 respectively, leaving a gross margin of ₦1, 821, 922 (see Table 3). The average rate of returns to total investment was 25.5%. This implies that an average profit of ₦0.25k was realized on every naira invested in cashew nuts marketing in the study area.

Table 3: Costs and returns to cashew nuts wholesale marketers per season in Kwara State.

Item	**Costs (₦)**	**Returns(₦)**
Gross revenue (GR)		8, 953, 333
Less	7, 131, 411	
Total variable costs (TVC)		
Cashew nuts purchased	6, 681,388	
Transport	223,644	
Storage	10, 016	
Agent	155, 467	
Labour	60, 896	
Equals		
Gross margin (GR-TVC)	1, 821, 922	
Fixed costs		
Sacks	190, 194	
Jute bags	340,861	
Scale cost	123,300	
Shed and warehouse	10,560	
Total fixed cost	664,915	
Total cost	7,796,326	
Net return		1, 157, 007
Rate of return on investment (GR-TVC/TVCx 100/1)		25. 5%

Source: Field Survey, 2016.

Results of Regression Analysis

The double-log functional form was chosen as the best fitted equation (see Table 4). The regression analysis revealed a coefficient of multiple determinations (R^2) of 0.506 implying that the estimated variables explained about 50% of variation in the net returns of the cashew nuts marketers.

Table 4: Results of Regression Analysis.

Variable	Coefficient	Std. Error	t-ratio	p-value
Constant	−3.16478	2.20355	−1.4362	0.1543
Transport cost (X_3)	0.377288	0.177128	2.1300**	0.0358
Storage cost (X_5)	0.198639	0.111841	1.7761**	0.0790
Labour cost (X_2)	0.0875105	0.164788	0.5310	0.5967
Purchase cost (X_1)	0.977813	0.130457	7.4953***	0.0001
Agent cost (X_4)	−0.48379	0.175885	−2.7506 ***	0.0072

R^2 = 0.506; Adjusted R^2 = 0.479; F-statistic = 18.863, *** significant at 1%, ** significant at 5%.

Furthermore, four variables were found to be important in determining the net returns of respondents. These variables are purchase cost (X_1), transport cost (X_3), agent cost (X_4) and storage cost (X_5). Table 4 revealed that cashew nut purchase cost variable was significant at 1%. This implies that the purchase cost of cashew nut has a direct effect on revenue. The reason for this may be attached to the fact that when respondents invested more to purchase good looking and healthy nuts, it brings more revenue thereby increasing their net returns in the long run. Agent cost (X_4) was negative and statistically significant at 1% level of probability. This implies that an increase in this variable will reduce the net returns of marketers. Transport cost (X_3) and storage cost (X_5) were positive and significant at 5% level of probability. This suggests that the higher the transport cost incurred by the marketers, the more the availability of the produce for sale. Thus, the effect of higher transport cost paid is compensated for, by the higher profit margin.

Challenges facing Cashew Nuts Marketers

Table 5 shows the major problem facing marketers is price fluctuation at 29.4%. Others: 26% and 21.1% claimed high transportation cost and spoilage when the commodity was not properly dried and harvested prematurely, as their major problems, respectively.

Table 5: Most Important Challenges facing Marketers

Variable	Frequency	Percentage
Transportation	47	26.1
Spoilage (when not properly dried)	38	21.1
Price fluctuation	53	29.4
Low demand	8	4.4
Finance	10	5.6
Storage	13	7.2
Poor marketing information	11	6.2
Total	180	100

Source: Field survey, 2016.

Conclusion

This study examined the marketing of cashew nuts in Kwara State, Nigeria. The results showed that the market was dominated by males, with an average age of 33.5 years. The Herfindahl index of 0.007 indicated that cashew nuts market tended towards pure competition. The costs and returns analysis revealed that cashew nuts marketing were profitable in the study area with an average monthly gross margin of ₦1, 821, 922. The average rate of returns to total investment was 25.5%. This implies that an average profit of ₦0.25k was realized on every naira invested in cashew nuts marketing in the area. Furthermore, the regression analysis revealed that purchase cost, labour cost, transport cost and agent cost were the important variables determining the net returns of cashew nut marketers. The study further revealed that price instability due to seasonality nature of its production and lack of storage and processing facilities were the major problems facing cashew nuts marketers. Marketers are to ensure quality nuts devoid of immature ones, proper as well as observe good hygiene practices in drying, sorting and packaging to enhance profitability. More research into the production of high yielding varieties of cashew nuts is also recommended, since it has a great market potential within and outside the country. Policies and strategies that lower the costs of marketing should be vigorously pursued.

References

Aliyu, O.M (2001). Development of rapid method of propagating improved cultivars of cashew through budding, grafting and marcotting. Annual Research Report of the cocoa Research Institute of Nigeria, Ibadan, Nigeria. pp. 30-31.

Bani, R.J. and Stening, B.C. (1995): Stores and Storage: Postharvest Technology and Commodity Marketing. Proceedings of a Postharvest Conference on 2nd November-1st December, 1995. International Institute of Tropical Agriculture (IITA), Ghana. pp 284.

Caribbean Technological Consultancy Service (CTCS) Network. (1993). Information Package on Cultivation, Processing and Marketing of Cashew nuts. St. Michael, Barbados. Delhi.

Ezeagu W. (2002). Assessment of the situation and development prospects for cashew nut sector. A report. Nigerian Export Council, Abuja, Nigeria.

Farayola, C.O; Akintonde, J.O.; Awoyemi, S.O and Akintaro, O.S. (2013). Economic analysis of cashew nut marketing among produce buyers in Ogbomoso metropolis of Oyo State, Nigeria. International journal of agriculture innovations and research, 2(1):130-136.

FOASTAT (2013). Food and Agriculture Organization Statistics.

Hammed, L.A and Anikwe, J.C. (2008). Cashew nuts and Production Development in Nigeria. Journal of Scientific Research, 3(1):54-61.

Idachaba, F. S. (2000). Food Policy in Nigeria.Agricultural Research Bulleting, 2000. Vol. 1:162.

Manay, N., and M. Shadaksharaswamy (1987): Facts and Principles. Wiley Eastern Ltd, New

Muhammad-Lawal, A., Salau, S.A., and Olawusi, C.O (2015): Sorghum Storage and Pest Control among Farming Households in Kwara State, Nigeria. Tropical Agricultural Research and Extension 18(2): 57-64. Published by the Faculty of Agriculture, University of Ruhuna, Sri-Lanka.

National Population Commission (NPC) (2010). Kwara state Population.

Olukosi, J.O and Erhabor, P. O. (2005): Introduction to Farm Management Economics, Principles and Application, Agitab publishers Limited, Zaria, 2005. pp 23.

Onyenobi, V.O; Ewuziem, J.E and Ogbona, M.C (2009): Analysis of Effect of Marketing Channel on Market Performance of Ware Yam in Abia State, Nigeria. Proceedings of the Annual Conference of the Agricultural Society of Nigeria (ASN). Abuja, Nigeria, 20th – 23rd October, pp 360-362.

Russel, (1979). Cashew nut Processing. Food and Agriculture Organization Agricultural Services Bulletin. Third Ed. FAO.

View publication stats