

Marketing Performance of Onions in Ikwuano and Umuahia Local Government Area, Abia State, Nigeria

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Abstract

One of the major aims of agricultural production is the satisfaction of the consumers, and the guarantee of benefit to the various participants in the marketing channel. This objective is therefore achieved when the marketer finally transfer the products to the consumer after various utilities like form; place and possession utilities have been added on them through the marketing system. This study on marketing performance of onions (*Allium cepa*) was conducted in Umuahia North and Ikwuano Local Government Area of Abia state. Two markets were purposively sampled, while forty (40) onions marketers were randomly sampled from the two markets. Descriptive statistics, cost and return analysis and regression models were used to analyze the data collected. The result from the study shows that the business was profitable. The average net return from the business was ₦17, 131.75 in a month. The significant variables that influenced marketing efficiency were cost of transportation, volume of sales, amount of credit used, and household size. Major problems of onion marketing include the frequent price fluctuations, high transportation cost and insufficient capital. Based on findings from the study, it was recommended that the significant factors that influenced marketing efficiency should be considered in policy issue to enhance efficiency. Also, access to credit should be enhanced in order to expand the capacities of these marketers. Policies that will ensure the provision of social and marketing infrastructure that can assist in reducing marketing cost should also be implemented.

Keywords: performance, onion, marketing.

Introduction

Onion (*Allium cepa*) is a vegetable which belongs to the family *Liliaceae* (Alabi and Adebayo, 2008). It is also known as “garden” or “bulb” onions and is one of the oldest cultivated vegetables in history. The bulb grows underground and is used for energy storage, leading to the possibility of confusion with a tuber which it is not (Wikipedia, 2010). The leaves are bluish green and hollow, the bulb are large, fleshy and firm (Azu *et al.*, 2007). It is marketed mainly as a fresh fruit vegetable and features prominently in most household in the preparation of food and is effective against common cold, heart diseases, diabetes, osteoporosis, and cough and sore-throat. They are high in flavanoids which is concentrated on the outer layer of the flesh (Nemeth *et al.*, 2007).

Hussani *et al.*, (2000) noted onion as the second most important vegetable after tomato. Onion (*Allium cepa*) is mainly grown in Nigeria, Niger, Ethiopia, Burkina Faso and Senegal. It is extensively cultivated throughout the country, under a wide range of climatic condition, and it can be biennial, triennial or a perennial crop. Cultivation of this crop has developed steadily in tropical areas for more than 40 years. Over the past 15 years, the total surface area dedicated to onion crop in the world has doubled reaching a percentage figure of 2.74 million hectare (Pelter, *et al* 1992; FAO, 2002).

In agriculture, horticultural crops including onions have a significant place; the crop not only contributes to the share of agriculture in national economy, but possesses a great potential and comparative advantage to compete in the economy. Agricultural marketing assumes greater importance in the Nigerian economy because the excess production from the farm must be disposed off in order to earn income with which farmers can purchase goods and services not produced by them.

Marketing usually begins at the farm when the farmer harvests his products. The products when harvested cannot get to the consumers; firstly, it is likely to be located some distance from the place of consumption in regular and continuous manner throughout the year. Secondly, storage is required to adjust supply to meet demand. Thirdly, a product when it has been harvested, it is rarely in a form acceptable to consumers. Therefore, it must be sorted, cleaned and processed in various ways and must be presented to the consumers in convenient quality and quantities for sale (Asogwa and Okwoche, 2012). Hence, marketing can be said to cover all business functions including production and the intermediaries until the commodity gets to the final consumers. Marketing performance measures the efficiency of this process. Market performance refers to the assessment of the market in terms of norms of marketing efficiency. The performance of any industry is determined by the structure of the industry and market conduct. Studies on food marketing have established a direct, casual and deterministic performance relationship between market structure, conduct and performance (Anuebunwa *et al.*, 2006).

Onion (*Allium cepa*) in terms of its trade value can stand comparison with tomatoes and peppers. It is in focus because of its unique position as a popular vegetable that is utilized almost daily in every home (Dogondaji, *et al.*, 2006), In spite of the medical, economic and industrial potential of onion, little research work has been done on the marketing of the crop in most parts of Eastern Nigeria.

The growing of vegetables (onions) is positive, empowering and rewarding; it cuts across different class, race and culture like no other. Onion consumption is spread throughout the year and there is a constant demand for onion bulb all year round, hence, it poses a problem because most of the onion produced in (dry tropical zone) Nigeria comes from the northern part of the country, such as Kano, Sokoto, Borno, Bauchi, Jigawa, Kastina, Zanfara (Inuwa, 2001), these causes its movement from the north to consumers in the eastern states who are very far apart a difficult task.

Therefore, consumers in the other part of the country depend on the mechanism of marketing function for the availability of these commodities. This tells on the price of the commodity. Also, marketing facilities and socio economic infrastructure are inadequate in most developing countries. It is obvious that this has effect on both consumers and sellers, and ultimately the marketing of onion.

The objectives of the study are to:

- i. determine the marketing cost, returns and marketing efficiency among onion marketers in the study area.
- ii. estimate the determinants of marketing efficiency for onion marketers in the study area.
- iii. examine the major constraints encountered in the marketing of onion.

Methodology

The study was conducted in Ikwuano Local Government Area and Umuahia North Local Government Area (LGA) of Abia State, Nigeria. Two major markets from the LGAs were purposively sampled based on the availability of the commodity. 20 respondents each were randomly selected from the markets (Ndoro market and market and Ahia Ugwumabiri or Umuahia main market), bringing about a total of 40 respondents for the study. Data collected were analyzed according to objectives.

Objective I, to determine the marketing cost and returns of onion marketing was analyzed using the relationship:

$$TC = TVC + TFC \dots\dots\dots (1)$$

$$TR = P \times Q$$

$$NR = TR - TC$$

Where, TC = Total cost of marketing, TVC= Total variable cost ,P = price of commodity (₦), Q = Quantity, TFC = Total fixed cost, NR = Net return, TR = Total revenue

Estimating the efficiency among onion marketers, the Shepherd Futrell model as adopted by Adebayo *et al* (2006) was used, it is expressed as:

$$\text{Marketing efficiency} = \frac{\text{Total return (₦)}}{\text{Total marketing cost}} \dots\dots\dots(2)$$

Objective ii, evaluating the determinant of marketing efficiency, the Ordinary Least Square regression analysis was used. It is expressed implicitly as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7) \dots\dots\dots (3)$$

Where; Y = Marketing efficiency (as expressed in equation 2)

X₁ = Age of the marketers in years

X₂ = Level of education of marketers in years of schooling

X₃ = Cost of transportation in (₦)

X₄ = Level of patronage (volume of sales monthly)

X₅ = Years of onion marketing experience

X₆ = amount of credit used (₦)

X₇ = household size (number of persons staying under the same roof).

Results and discussion

The results from the analyses carried were discussed according to objectives.

Marketing Cost and Return Analysis

Table 1: Cost and Return analyses

A	Cost and return items	Mean value (₦)	
	Selling price per bag	7412.50	
	Quantity sold (kg)	10.9	
	Total returns (₦)	80,796.25	
B	Cost		
	Purchase price	5000	
	Purchase cost	54,500	85.60
	Cost of transportation	3925.0	6.17
	Cost of loading and offloading	752.5	1.18
	Cost of rent	908.75	1.43
	Cost of feeding	3,000.0	4.71
	Cost of market charges	527.75	0.83
	Depreciation	50.5	0.08
	Total Cost (₦)	63,664.5	100
C	Net Returns (A-B)		
	Total Returns	80,795.25	
	Total cost	63,664.5	
	Net returns (₦)	17,131.75	
D	Marketing efficiency (TR/TC)	1.27	

Source: Market survey, 2013

The result in Table 1, shows that onion marketing in Umuahia and Ikwuano Local Government Area was profitable as revealed by the positive net returns. The result shows that cost of purchase of onion was higher than other costs, and this accounted for 85.65% of the total marketing cost. The second most important cost was the cost of transportation, which accounted for 6.17%. The cost of feeding accounted for 4.71%, after which cost of rent with 1.43%, then the cost of loading and offloading 1.18%, cost of market charges with 0.83% and the cost of depreciation 0.08%. The average net returns of ₦17,131.75 was realized per month. The market was efficient since the value was greater than 1. It revealed that for every ₦1 invested in onion marketing, about ₦1.27k was obtained by the marketers. This agrees with a study on marketing performance of *Irvingia wombulu* in different market locations in Ibadan Nigeria, which shows efficiency of 1.58 (Adebayo *et al* 2006) and a study on sun-dried meat trading in Ibadan, which shows efficiency of 1.14 (Okunmadewa *et al*, 2000).

Regression analysis on determinants of market efficiency
The determinants of marketing efficiency are shown in Table 2.
Table 2: Regression result of determinants of market efficiency

Variable	Linear	Double log ⁺	Semi log	Exponential
Constant	0.989 (3.427)***	2.128 (10.872)	3.624 (1.343)	-0.190 (-0.475)
Age (X ₁)	0.04 (0.942)	0.020 (0.72)	0.072 (0.239)	0.006 (1.049)
Level of education (X ₂)	-0.015 (-1.119)	-0.193 (-0.838)	0.190 (4.747)***	-0.010 (-0.512)
Cost of transportation(X ₃)	-3.608 (-1.242)	-0.349 (-1.897)*	-0.371 (-1.824)*	-2.299 (-0.570)
Volume of sales (X ₄)	0.034 (3.164)***	0.377 (2.772)**	0.392 (2.610)**	0.038 (2.497)**
Marketing experience in years (X ₅)	-0.013 (-1.994)*	0.045 (0.350)	0.083 (0.586)	-0.028 (-3.006)***
Amount of credit used (X ₆)	1.118 (0.354)	0.001 (3.006)***	-0.021 (-0.168)	-8.576 (-0.1965)
Household size (X ₇)	0.006 (3.285)***	0.124 (4.325)***	0.203 (3.483)***	0.12 (0.383)
R-squared (R ²)	0.438	0.874	0.854	0.570
R-adjusted (Adj R ²)	0.392	0.652	0.599	0.512
F-ratio	2.335**	3.950***	3.343***	2.554***

Source Market survey data 2013

* = Significant at 10%, ** = Significant at 5%; ,*** =Significant at 1%, Figures in parentheses are the T – ratio, + = lead equation;

From the four functional forms in Table 2, the double- log was chosen as the lead equation based on the number of significant variables, F-ratio, R² and conformity to *a priori* expectation. The R² was 0.874 showing that about 87% variation in the marketing efficiency was accounted for by the variables in the model while about 13% was due to error.

The regression result from the lead equation in Table 2, shows that four variables; cost of transportation, volume of sales, amount of credit and house hold size were the significant variables that influenced the marketing efficiency of the onion marketers.

From the result, the co-efficient of transportation was negatively significant implying an inverse relationship with the marketing efficiency. This conforms to *a priori* expectation because an increase in transportation is likely to reduce the marketing efficiency of the marketers. This result is also in line with the earlier work by Popoola (2001) in Uhumwode and Ovia North Local Government Areas of Edo States, which shows that transportation contributed much to the marketing cost paid by the respondents.

Volume of sales was found to be positive and significant at 5% level of significance. This implies that if the volume of sales increased the marketing efficiency of the marketers also increased. Amount of credit was also positive and significant at 1%. It therefore means that the amount of credit used led to a higher level of marketing efficiency.

The coefficient of the household size from the regression analysis was significant and positive at 1% level of significance. This indicates that the number of household would help increase the marketing efficiency of the marketers because less hired labour would be used and most of the duty involved in onion marketing would be performed by the household hence, reducing cost and increasing the efficiency of the market.

Problems of onion marketing

The problems that the marketers faced are shown in Table 3.

Table 3: Problems of the onion marketers

Problems encountered	Frequency	Percentage
Transportation	50	27.78
Insufficient capital	40	22.22
Inadequate and unreliable market	30	16.67
Weather condition	30	16.67
Competition	30	16.67

Source: market survey 2013 * multiple responses recorded.

The result in Table 3 reveals that the major problems encountered by the marketers were cost of transportation with the highest percentage of 27.78%. This is in view of the fact that most of the onion crops produced come from Northern Nigeria. Therefore it becomes very difficult to get them down to Eastern Nigeria without significant transportation costs. About 22.22% of the respondents complained of insufficient capital for buying of their onion produce so as to make more profit and expand the market size. Indicated inadequate and unreliable market (16.67%), was another major problem faced by the marketers. This also applies to weather condition (16.67%) and unhealthy competition. t.

Conclusion and Recommendation

The study showed that onion marketing was profitable in Umuahia North and Ikwuano Local Government Areas of Abia State, Nigeria. The profit level was relatively sustainable and can even attract new entrants into business. Hence, it serves as a source of income and employment for the marketers. The business can also help in generating jobs and reducing poverty. Therefore, efforts should be made to eliminate the constraints to onions marketing in the study area by improving on socioeconomic facilities such as roads, markets and related amenities. Government can do their own part by renovating existing bad roads and constructing new ones, especially those that link the points of production to points of consumption. To overcome the problem of price fluctuations, the private sector should be encouraged to establish onion dehydration plants to process the onion into more durable product. This may help to enhance the year round availability of the commodity in addition to preparing it for export. The significant variables that influenced marketing efficiency should be considered in policy issues concerning the commodity or related commodities in order to improve the marketing efficiency.

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