

COMPARATIVE ANALYSIS OF THE PERFORMANCE OF PALM OIL MARKETING IN OBINGWA LOCAL GOVERNMENT AREA OF ABIA STATE, NIGERIA

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ABSTRACT

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The study analysed the performance of palm oil marketing in Obingwa Local Government Area of Abia State. Marketing margin and marketing efficiency of palm oil marketing were analysed. A multistage sampling procedure was adopted in selecting eighty (80) marketers for the study, forty wholesalers and retailers respectively. Data were analyzed using marketing margin and marketing efficiency analysis. The results showed a marketing margin and marketing efficiency of 47%, 81% and 45%, 74% for wholesalers and retailers respectively. Among the constraints that militated against palm oil marketing were high cost of transportation, inadequate funding and price fluctuation therefore the study recommends that feeder roads should be rehabilitated, and efforts should be made in attracting micro-credit institutions and schemes which could provide more opportunities for the marketers to obtain the capital they need to expand their sales, and acquire better storage facilities.

Keyword: Palm oil, wholesale, retail, marketing performance

INTRODUCTION

Oil palm (*Elaeis guineensis*) is a native of West Africa seen mostly in Nigeria, Ghana, Cote d'Ivoire and Sierra Leone (Ofosu-Budu and Sarpong, 2013). The palm is also a source of palm oil used in the manufacture of soaps, fats, drugs and edible vegetable oil. Nigeria was a top exporter of palm oil and had a flourishing domestic trade (Igiri *et al.*, 2015). The Southern part of Nigeria serves as the Palm oil belt which supplies most of the palm oil consumed in the south and also in the North (Ezealaji, 2012). Currently, South East Asia have surpassed West Africa as the largest producer of palm oil with Malaysia and Indonesia leading (Wahid *et al.*, 2005). According to Basiron, (2002), Oil Palm sustainability in Malaysia, the palm oil market has the potential to revive rural economies. This potential can be achieved by increasing the income of palm oil marketers and reducing poverty while serving its purpose as a food product, non-food product, input in the production of drugs, cosmetics and its use as a renewable energy.

Palm oil marketing focuses on all the activities that are responsible for delivering palm oil from the producers to the consumer (Ezealaji, 2012). The study of performance in marketing shows how well the marketing system is in terms of creating utility that satisfies all participants involved in the marketing system ranging from producers to consumers. It shows how well the marketing activities are carried out at different stages by various market participants as the commodity moves from producers to consumers. The study of performance in marketing also help to ascertain the relationship between the marketing margins and the cost of marketing that brings about efficiency. In marketing various agencies such as the intermediaries (middlemen) of different levels participate in the marketing activities. These agencies could be facilitators, brokers, transporters, wholesalers and retailers who perform different functions as the products move along the marketing chain from one point to another. Olukosi *et al.* (2005) stated that the wholesalers and retailers add value to products and improve marketing efficiency by reducing distribution cost as they perform marketing activities. The wholesalers and retailer purchase large quantities of goods from the manufacturers but sell only one or few at a time to different customers. They are also intermediaries who reduce the number of transactions by creating assortment and providing a wide range of products in one location so that customers can purchase different items from seller at a time. It ask questions such as is the marketing system efficient? Is the business viable? Is any group of the participants exploited? This is because an efficient marketing system is that which ensures the flow of commodity and services at minimum price acceptable by all participants. The producers are able to break even and earn income, the various middle men earn income from the margins while consumers are not exploited. Despite the potential of oil palm in lowering the level of poverty and improvement on peoples' welfare, its production is in the hands of rural farmers who are resource poor. Nevertheless, government in recent times is making concerted effort to boost its production. This she does by providing improved seedling to farmers in order to bridge the gap between demand and supply. It is worthwhile to know that most research work carried out have been on oil palm production neglecting its marketing aspect, but, production without adequate market outlets for a commodity leads to waste of limited resources. Therefore, this study compared the performance of palm oil marketing by wholesalers and retailers. Specifically, the study investigated the socioeconomic characteristics of the marketers, marketing margin and efficiency of wholesalers and retailers, compared net returns of the two groups and identified the constraints to palm oil marketing in the study area.

METHODOLOGY

The study was carried out in Obingwa Local Government Area (LGA) of Abia State in Nigeria. Obingwa is located geographically along latitude $5^{\circ} 8'$ and $5^{\circ} 15' N$ and longitude $7^{\circ} 27'$ and $7^{\circ} 47' E$. It has a land mass of 395 km^2 and a population of 181,439 (NPC, 2006). Obingwa local government area shares a common boundary with Isiala Ngwa South, Osisioma Ngwa, Aba North, Aba South, Ukwa East LGA and Akwa-Ibom State (Ministry of Lands, Survey and Urban Planning, 1999). It is composed of 19 autonomous communities and 223 villages and has farming as a dominant occupation. The people speak Ngwa dialect and the general Igbo language. A multistage sampling procedure was adopted for this study. At stage one (1), five (5) autonomous communities were selected to represent those communities with the highest palm oil production. These communities are Mgboko Ori Efula, Mgboko Itungwa, Mgboko Umuanunu, Abala Ibeme and Osaa Ukwu. Stage two (2) involved a random selection of one (1) market from each of the five communities while at stage three (3), a random selection of sixteen (16) marketers was done with equal numbers of wholesalers and retailers. This gave a total of eighty (80) respondents made up of forty (40) wholesalers and forty (40) retailers. Data were collected by the use of questionnaires as well as personal interviews with the respondents. Data generated were analysed using descriptive statistics and marketing margins of both the wholesalers and retailers were estimated using the marketing margin equation adopted from Oganiru *et al.* (2014).

$$\text{Marketing Margin (MM)} = \frac{Sp - Pp}{Sp} \times \frac{100}{1} \dots 1$$

Where,

Sp = Selling price

Pp = purchasing price.

MM = Marketing margin

The marketing efficiency for each group was determined with the formula as shown in equation 2

$$\text{Marketing Efficiency Index} = \frac{NR}{TMC} \times \frac{100}{1} \dots 2$$

Where,

NR = Net return

TMC = Total marketing cost incurred.

To determine wholesalers and retailers net return, the net return equation was estimated as follows

$$NR = TR - TMC \dots 3$$

Where,

NR = Net return

TR = Total revenue

TMC = Total marketing cost.

A comparison between the performance in net return of wholesalers and retailers was achieved using a Z-test

$$Z_{cal} = \frac{(X_1 - X_2)}{(SX_1 - X_2)} \dots 4$$

$$= SX_1 - X_2 \sqrt{\frac{S^2 X_1}{n_1} + \frac{S^2 X_2}{n_2}} \dots 5$$

Where, X_1 is the mean net return for wholesalers, X_2 is the mean net return for retailers, $S^2 X_1$ is the mean variance for wholesalers, $S^2 X_2$ is the mean variance for retailers, n_1 is the sample size for wholesalers and n_2 is the sample size for retailers. Finally, the constraints were identified and presented using tables showing their frequency of occurrence and percentages.

RESULTS AND DISCUSSION

Socioeconomic characteristics of respondents

The socio-economic characteristics of the respondents show that, there were more female palm oil marketers than there were of male for both wholesalers and retailers. That is about 70% female wholesalers and 80% female retailers. This indicates that the palm oil market like other agricultural markets is one dominated by females. This is in line with the findings of Ibitoye, (2014) who reported that about 90% of the respondents of palm oil marketers were females. About (65%) of the wholesalers and (72.5%) of the retailers were in their active age. This is within the age bracket of 21-40 years. The result is similar to the finding of Ojo *et al.* (2014) who reported that majority of the marketers (about 83%) were between 21 to 40 years of age while about 6.7% were above 40 years. This has strong implications for the adoption of innovations as indicated by Okwoche *et al.* (1998). Most of the marketers were married. They have relatively large households with over four (4) members. This household

could provide family labour required in marketing activities. About 90% of all the marketers (wholesalers and retailers) were educated. The wholesalers being more educated than the retailers. This also corroborates with the findings of Ojo *et al.* (2014) who posited that majority of their respondents were educated. Most of the marketers have over 4 years of palm oil marketing experience. This implies that the marketers are well experienced to carry out their marketing activities. This could help them to handle challenges associated with palm oil marketing and hence maximize their net return. About (100%) of the wholesalers get their palm oil supply directly from the processor while (30%) and (70%) of the retailers get their supply from both the processors and wholesalers respectively.

Table 1: Socio-economic characteristics of the marketers

	Wholesalers		Retailers	
	Frequency	Percentage	Frequency	Percentage
Sex				
Female	28	70	32	80
Male	12	30	8	20
Age (years)				
21-30	11	27.5	20	50
31-40	15	37.5	9	22.5
41-50	8	20	6	15
51-60	4	10	4	10
61 and above	2	5	1	2.5
Marital Status				
Single	8	20	12	30
Married	32	80	28	70
Household Size				
1-3	7	17.5	6	15
4-6	12	30	10	25
6-above	21	52.5	24	60
Level of education				
No formal education	4	10	10	25
Adult education	3	7.5	8	20
Primary education	8	20	4	10
Secondary education	16	40	15	37.5
Tertiary education	9	22.5	3	7.5
1-3	5	12.5	7	17.5
4-6	21	52.5	18	45
7-10	12	30	10	25
Source of supply				
Processors	40	100	12	30
Wholesalers	-	-	28	70
Retailers	-	-	-	-

Source: Field Survey 2

Marketing efficiency of palm oil marketing and wholesalers retailers

The costs and return of the wholesalers presented in Table 2 showed a marketing efficiency of 81% which indicates that these wholesalers have been able to manage their cost content and processes efficiently. A monthly average net return of ₦827,567.63 was realized by the wholesalers. This implies that the business was viable. A marketing margin of 47% representing the cost of the value added by this group of marketing agents and is also responsible for the gap between the purchase price of ₦151.02 per litre and the selling price of ₦286.88 per litre. The cost item shows that transportation, loading and storage cost constituted the bulk of variable cost.

Table 3 shows the costs and return, marketing margin and marketing efficiency of palm oil marketing by retailers. The palm oil was purchased at a price of ₦ 230.00 per liter and sold at ₦ 420.00 per liter. A net return of ₦127,534.95 was realized. This implies that palm oil marketing in the study area was profitable. This finding is in line with the findings of Ibitoye, (2014) who reported that palm oil marketers had a gross margin of ₦568,000 representing the net returns. A total marketing cost of ₦178,645.00 was incurred out of which the variable cost was ₦174,667.45. This implies that, the variable cost constituted the major cost item of the business. The marketing margin and marketing efficiency estimates of 45.2% and 73.6% respectively showed that retail marketers were efficient in their business activities.

In comparing these two groups as shown in Table 4, it was observed that the wholesalers were more efficient in managing their costs and processes with a marketing efficiency index of 81% than the retailers. Nevertheless, the market performance of the retailers in terms of net margins is rewarding and a clear proof that palm oil marketing is lucrative. Also, a close look at wholesale and retail activities indicated a wide gap in the volumes of palm oil

sold by the wholesalers and retailers. Also, the wholesalers with more sales are responsible for moving the product outside the local government to other parts of the state and the country.

Table 2: Costs and return of palm oil marketing by wholesalers

	Units (litres)	Amount (₦)
Sales		
Unit selling price per litre		286.88
	5	1,434.40
	10	2,868.80
	20	5,737.93
	25	7,172.00
Total revenue	6,474.15	1,857,304.15
Marketing cost		
(a) Variable costs		
Purchases		
Purchase price per litre		151.02
	5	755.10
	10	1,510.20
	20	3,020.40
	25	3,775.50
Total purchase	6474.15	977,726.13
Transportation		10,790.00
Loading and offloading		13,466.83
Storage		15,014.90
Other cost		3,059.51
Total variable costs		1,020,057.37
(b) Fixed costs		
Rent		3,829.27
Tax		978.05
Depreciation on equipment		4,871.83
Total fixed costs		9,679.15
Total marketing cost		1,029,736.52
Net returns		827,567.63
Marketing margin (%)		47.36
Marketing efficiency (%)		81.31
Sample size		40.00

Source: 2015 Market Survey

Table 3: Costs and return of palm oil marketing by retailers

Items	Units (litres)	Amount (₦)
Sales		
Unit selling price		420.00
Quantity sold other days	291.6	122,472.00
Quantity sold market day	437.4	183,708.00
Total revenue	729	306,180.00
Marketing Cost		
(a) Variable costs		
Purchases		
Unit purchasing price		230.00
	5	1,150.00
	10	2,300.00
	20	4,600.00
	25	5,750.00
Total Purchased	729	167,670.00
Transport cost		1,212.75
Loading and Offloading		1,215.00
Storage		1,653.70
Others cost		2,916.00
Total Variable Cost		174,667.45
Rent		2,500.00
Tax		700.00
Depreciation on Equipment		777.60
Total Fixed Cost		3,977.60
Total Marketing Cost		178,645.00
Net Returns		127,534.95
Marketing Margin (%)		45.24
Marketing Efficiency (%)		73.62
Sample Size		40.00

Source: 2015 Field Survey

Comparing the net return of palm oil marketing between the wholesalers and retailers

Although the wholesalers and retailers operate at different scales, comparing their net return is important in understanding the motivation to remain in business. A Z-test was used to compare their mean net return for significant differences. The result of this test is presented in Table 4 with a z-value of 24.36 which falls outside the critical value. This implies that the wholesalers made more returns than the retailers.

Constraints to palm oil marketing in Obingwa LGA

Previous studies have highlighted a range of constraints that can adversely affect the performance of palm oil marketers (Ada-Okungbowa *et al.*, 2014; Ekine *et al.*, 2006; Ibitoye, 2014). Table 6 shows the constraints faced by marketers (wholesalers and retailers) in palm oil marketing. About 28% of the wholesalers and 30% of the retailers reported price fluctuation as the most constraint faced by them. Also, others include inadequate capital, high transportation and low quantity produced for both of them. While for retailers, inadequate storage is included. The least constraints faced by wholesalers were inadequate storage and scarcity of product while for retailers, it was scarcity of product.

Table 4: Difference in net return of wholesalers and retailers

Statistics	Wholesalers (Net return)	Retailers (Net return)	Z-value	Z-Critical (2-tail)
Mean	827,246.78	127,534.95	24.36	1.96
Standard deviation	434,477.23	39,557.77		
Range	1,709,566	146,110		
Sum	72,085,284	8,305,418		

Source: 2015 Field Survey

CONCLUSION

Palm oil production and marketing have the potential to drive the economy of rural areas in Nigeria and improve the welfare of rural households. In Obingwa L.G.A. of Abia state, palm oil marketing is dominated by females within the age of 21-40 years. The marketing performance indicated that the marketers were efficient in their activities by reducing cost and increasing their margins. The main constraints faced by the marketers were, price fluctuation, inadequate capital and high cost of transportation. Local Government's should make efforts in attracting micro-credit institutions and schemes which will provide more opportunities for the marketers to obtain the capital they need to expand their sales. Development of basic infrastructures like good road networks within Obingwa L.G.A will go a long way in increasing the efficiency of the marketers. This will reduce the cost of transportation which is a major cost element. There is also need to acquire better storage facilities, in order to boost the availability of palm oil in and out of season.

Table 5: Constraints militating against palm oil marketing

Constraints	Wholesalers		Retailers	
	Frequency	Percentage	Frequency	Percentage
Price Fluctuation	11	27.5	12	30
Inadequate capital	10	25	9	22.5
High Transportation cost	8	20	8	20
Low quantity produced	5	12.5	6	15
Inadequate Storage	3	7.5	4	10
Scarcity of product	3	7.5	1	2.5

Source: 2015 Field Survey

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