WOMEN PARTICIPATION IN PALM OIL MARKETING ACTIVITIES IN DEKINA LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA

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Abstract
The study was carried out on women participation in palm oil marketing activities in Dekina Local Government Area of Kogi State, Nigeria. Data were collected with the use of structured questionnaire which was administered on a total of 120 palm oil marketers randomly selected in the three *major markets of Abocho, Anyigba and Iyale in the three districts, Biraidu, Dekina and Okura of the Local Government Area. Data collected were analysed using simple descriptive statistics such as mean, percentages and frequency distributions. Gross margin analysis was used to determine the profitability of palm oil marketing and mean scores were used to identify the constraints. The results showed that (96%) of the women participating in palm oil marketing were married. The marketers were between the ages of 46 and 50 years. Retailing was the most effective channel for the distribution of palm oil. The gross margin analysis shows that palm oil marketing was profitable. The major constraints encountered were inadequate capital (4.07) and inadequate storage facilities (3.97). It was recommended that palm oil marketers should store more palm oil so that there would be enough during the off-season this would stem price variation in the study area. They should also form palm oil marketer's cooperative society for savings mobilization so as to improve their capital base.*
Key words: Women, Participation, Profitability, Palm oil, marketing.

Introduction

Oil palm (*Elaeis guineensis Jacq*) originated in the tropical rainforest region of West Africa. The oil palm is found growing in wild clusters in groves or cultivated in the tropics between latitudes 15^0 North and South of the equator. From the centre of origin, the oil palm has spread to other developing regions with similar climatic conditions. In Africa, it is found throughout tropical West Africa and Central Africa, from coastal Senegal to the area around Luanda in Angola and the Congo. Thus, oil Palm locally called Nkwu (Igbo), Okpe (Yoruba) and Ekpe (Igala)) in Nigeria is native to West Africa humid tropics. The Congo basin and Central Africa oil palm is found growing wild in secondary forest (Ugochukwu, *et al.,* 1999; Ukwuteno, 2011; Ugwu, 2015). Oil palm belongs to the family Palmae, subfamily *Cocoideae* and has three basic varieties namely the dura, *pisifera* and the tenera (Opeke, 2005). Oil palm is a low land crop although it can grow up to an altitude of 900m. It has fibrous root system and thrives well in deep well-drained fertile soil; requires plenty sunshine, thus productivity reduces drastically when subjected to areas of excessive weather over-cast. The oil palm has large compound leaves (fronds), unbranched stem, fibrous root system, the oil palm fruit is a sessile drupe and consists of a leathery exocarp, fleshy mesocarp and a hard endocarp (shell) which encloses the kernel (seed) (Udoh *et al.,* 2005).

A well ripe oil palm fruit changes in colour of the fruit. The changes in colour at ripening ranges from black to red, green to reddish orange with greenish tip, white to pale yellow, depending on the type of oil palm fruit. Udoh *et al. (*2005) also discussed various agronomic practices involved in oil palm which include: nursery establishment, time of planting, nursery maintenance, transplanting, pests and diseases control, fertilizer application, harvesting and processing of palm fruits. The oil palm gives rise to two district oils. These are red palm oil from the mesocarp of the fruit and palm kernel oil from the kernel (seed) which varies in colour from grey yellow to dark brown. Both oils are edible and have medicinal values. However, the red palm oil is most used in cooking food. Palm oil is currently the second largest traded edible oil and accounts for about one-quarter (¼) of the world's fats and oil supply (Ibekwe, 2008). The two products, palm oil and palm kernel are important in international trade and they have been part of economic foundation of the Nigerian economy (Ukwuteno, 2011).

Historically, this subsector has been a growth stimulator in a stagnant economy because of the numerous economic potentials of the oil palm (Oluwatayo *et al.,* 2002). Ahmed, (2001) highlighted the importance of oil palm in providing direct employment to about four million Nigerians in about 20 oil palm growing

states in Nigeria and indirectly to other numerous people involved in marketing of palm oil. Omoti (2001) stated that Nigeria has enormous potentials to increase her production of palm oil and palm kernel primarily through application of improved processing techniques. Nwawwe and Edokpayi (2003) opined that improved technologies that meet both growth and sustainability goals can effectively be used by oil palm processors. However, most technologies are designed for developed rather than developing countries. However, this study will focus more on women participation in palm oil marketing. In different agro-ecological zones of Nigeria, women are predominantly engaged in the processing and marketing of palm oil. In the study area, a good number of women are into processing and marketing of palm oil which basically is for consumption and sales. FAO (1996) and Ugwu (2015) reported that women contribution to labour is about 33% of the workforce, 70% of the production of food for household consumption and sales, 90% of the basic processing of food stuff, 80% of food storage and transport and 66% of harvesting and marketing activities. Ibekwe (2008) noted that women spent about 1.4 hours a day in food processing and marketing activities while men spent about 0.25hours only on the same activity per day. Ugwu (2015) noted that female labour is more productive than male labour in food processing and that account for more than half of the labour force in oil palm processing and marketing. Before the boom in the petroleum sector which has become the mainstream of the economy, the country depended on agriculture particularly oil palm fruit processing and marketing in the South Eastern states. But during the past decades, Nigeria has become an importer of palm oil from Malaysia. Nigeria's palm oil production which in the past accounted for about 43% of the world, now accounts for about only 7% of the world's production (Ukwuteno, 2011; Ugwu, 2015).

Notwithstanding the rapid decline, palm oil marketing still provides for about 80% of rural and small-scale farmers in which women form a great percentage. However, with the tripartite burden of child bearing, domestic chores and agricultural activities, women in Dekina Local Government Area are sandwiched between several constraints as the marketing of palm oil is increasing at a fast rate as a result of the demand of the growing urban population for palm oil. Since the major marketers of palm oil are households in which majority are women, the study is targeted at the participation of women as means of improving palm oil marketing in the study area and the state in general.

In Nigeria, there exist various constraints being faced by women participating in palm oil marketing activities. One of the daunting constraints apart from inadequate capital facing women participation in palm oil marketing in the study area, is price variation from one area to the other due to affluence of the bulk assemblers and price fluctuation in the market which has led to price instability in the study area. Besides, women participation was also constrained by inadequate storage facilities where palm oil could be stored for marketing during the peak of the season, lack of stalls where palm oil marketers can stay to market their products, lack of market information due to poor communication network especially those at the interior villages (Daniel, 2009). This coupled with the involvement of women in the participation of household activities such as child bearing, cooking, fetching of water and firewood among others has limited their participation in the palm oil marketing activities thereby making little or no profit. The study therefore seeks to investigate the activities of women participating in palm oil marketing in Dekina local Government Area of Kogi state.

Methodology
The study Area
The study was carried out in Dekina Local Government Area of Kogi State, Nigeria. The Local Government Area has three districts, namely: Biraidu, Dekina and Okura districts. The Local Government Area has twelve electoral wards viz: Dekina, Abocho, Anyigba, Odu1, Odu2, Egume, Okura, Iyale, Oganenigu, Emewe, Ojikpadala and Ogbabede. It is bounded to North West by Bassa Local Government Area to the East by Omala and Ankpa Local Government Area to the South by Ofu Local Government Area. It has a total land area of 7,691km^2 and a population of 260,312 people which represents 9.61% of the total population of Kogi State (NPC, 2007). The Local Government is located between Latitudes $6^0$30'and $7^0$30N and Longitudes $7^0$00' and $8^0$00' E. The Local Government Area has vast expanse of woodland Savanna which is a mixture of several vegetation: wooded Savanna, rain and mangrove forests found particularly in South of Dekina. Agriculture is the principal means of livelihood in the Local Government Area. About 80% of the people are farmers engaged mostly in subsistence farming. The Local Government has a large hectare of cultivable land but less than one-quarter (¼) is presently under

cultivation. About 74% of the cultivable land can be cultivated during the rainy season while the remaining 26% is suitable for dry season farming. The climatic and soil conditions favour agriculture and livestock production. Cash crops and food crops produced in commercial quantities in the Local Government Area include such crops as yam, millet, maize, cowpea, sorghum, cassava, oil palm, mangoes, cashew nuts and so on.

The Local Government Area is inhabited by the Igala as the main ethnic groups and Igala is spoken by the people. Other ethnic groups inhabiting the area include Igbos, Yoruba, Ebiras, Bassas, Hausas, and Idomas among others. The Local Government has eight functional markets located at Anyigba, Dekina, Egume, Abocho, Iyale, Okura, Elubi, and Ewune. However, there are no standard lockup stalls. Apart from Anyigba market that has daily transactions, others are periodic in nature. The Local Government Area experiences two main seasons: the dry season and rainy season. The rainy season is between April and October, while the dry season is between November and March. It is within the Guinea Savanna ecological zone of Nigeria.

Sampling Procedure

Random Sampling procedure was employed for the study. The study was based on the three districts in the Local Government Area which are Biraidu, Dekina and Okura districts. One market was selected from each of the three districts. Markets selected were; Abocho, Anyigba, and Iyale markets. A random selection of forty respondents (Palm oil sellers) were made from each of the markets making a total of one hundred and twenty respondents for the study.

Method of Data Collection

Primary data were collected for the study. The data were collected by the use of structured questionnaire which was administered on 120 respondents. Information sought and collected were on socio-economic variables such as age, household size, Marital status, sex, Educational status, Marketing experience, major occupation and approximate annual income, women participation in palm oil marketing, variation in prices of palm oil and constraints militating against marketing of palm oil in the study area.

Method of Data Analysis

Data collected were analysed based on the objectives stated. Objectives 1,2, and 3 were achieved using simple descriptive statistics, objective 4 was achieved using gross margin analysis while objective 5 was achieved using mean score analysis.

Gross Margin Analysis

Gross margin also called gross profit is the difference between the total revenue and the total variable cost.

It is expressed thus:

Gross margin (GM) = TR - TVC

Where

TR = Total Revenue (₦)

TVC = Total Variable Cost (₦)

$$\text{Mean Score (M)} = \frac{\Sigma f_i (A_i)}{N}$$

Where f_i = Frequency of the respondents

A_i = Value assigned to each rating rule

N = Sample size

Σ = Summation sign

Decision rule: 5+4+3+2+1/5 = 3. Any constraints with a mean score of 3.0 and above was considered as serious and less than 3.0 as not serious. Mean score analysis: A 5-point Likert scale was used to analyse the problems militating against palm oil marketing in the study area. The problems were rated in the following order: 5- Strongly agreed, 4- Agreed, 3- Undecided, 2- Disagreed, 1- Strongly Disagreed.

Results and Discussion

The socio-economic characteristics analysed in this section include: age, sex, marital status, educational level, major occupation, household size, marketing experience and approximate annual income.

Age of the respondents

The age of the respondents shows that the majority 78% of the respondents were between the ages of 46 and 50 years, about 13% were below the age of 25years while 9% were above the age of 50years. This shows that majority of the palm oil marketers were in their active age and were well able to move their merchandize. The summary is presented in Table 1.

Sex of the respondents

Table 1 show that majority (96%) of the respondents were females while males constitutes only 4%. This implies that majority of the palm oil sellers in the study area were females indicating that retailing business is feminine in nature. The result agrees with the finding of Nwauwa, (2010) which says that women feature prominently in marketing especially in the rural markets where men constitutes less than 5% of the traders.

Marital status of the respondents

Table 1 show that 86% of the respondents were married. This is an indication that palm oil marketing requires support from both the spouse and the children. Children help in carrying out palm oil business activities. This may also imply sufficient influence of the family unit in the marketing of palm oil. Singles, divorced and widows constitutes only 14%.

Educational level of the respondents

Table 1 show that about 88% of the respondents had formal education. This actually aided them in carrying out various activities in the marketing of the palm oil. This agrees with the findings of Dogondaji and Baba (2010) who observed that high literacy level could positively impact on the adoption of technologies. Only 12% of the respondents had no formal education.

Occupation of the respondents

Most of the respondents (88%) were traders. About 8% were farmers and 4% were in civil service and other occupations. It implies that majority of women were into trading business in the study area. The summary of the results is presented in Table 1.

Household size of the respondents

The study shows that respondents with household size of 6-10 persons constituted about 48.0%. The second group has household size of 11-15 persons which was about 28.0% of the respondents. About 8.0% had a household size of above 20persons. This implies that majority of palm oil marketers had moderate household size. The summary is presented in Table 1 below.

Marketing experience

Experience counts if it comes to matter of business. The distribution of the respondents according to marketing experience shows that 35.0% of marketers had 11-15 years of experience. This was followed by those with 16-20years of experience that constitutes about 29.0%. About 7.0% had experience of twenty years (20yrs) and above. This agrees with the findings of Ali *et al*. (2008) that marketing experience is important in determining the profit level of marketers, the more experience, the more the marketers understand the marketing system, conditions, trends and prices. The summary is presented in Table 1.

Approximate annual income of the respondents

Annual income of the respondents shows that majority, 83.0% had an income of between ₦31,000.00 and ₦45,000.00, about 13.0% had income range of 46,000.00 and ₦50,000.00 while only about 4.0% had income of N50,000 and above. From the income range it is clear that these marketers were small-scale business women. They will also need financial assistance to be able to improve their capital base. This may call for their forming cooperative society and also government establishing financial house to give small scale loans.

Table 1: Distribution of Respondents According to the Socio-Economic characteristics.

Socio-economic indicators	Frequency	Percentage	Mean
Age			
21 – 25	15	12.50	
26 – 30	26	21.67	
31 – 35	30	25.00	
36 – 40	0	0	37
41 – 45	0	0	
46 – 50	38	31.67	
>50	11	9.16	
Total	**120**	**100.00**	
Sex			
Male	5	4.17	
Female	115	95.83	
Total	**120**	**100.00**	
Marital status			
Single	9	7.50	
Married	103	85.83	
Widowed	3	2.50	
Divorced	5	4.17	
Total	**120**	**100.00**	
Educational status			
Non-formal education	15	12.50	
Primary education	60	50.00	
Secondary education	45	37.50	
Tertiary education	0	0	
Total	**120.00**	**100.00**	
Major Occupation			
Trading	106	88.33	
Farming	10	8.33	
Civil servant	4	3.34	
Total	**120**	**100.00**	
Household size			
1 – 5	19	15.83	
6 – 10	58	48.33	11
11 – 15	33	27.50	
>15	10	8.34	
Total	**120**	**100.00**	
Marketing experience			
1 – 5	12	10.00	
6 – 10	23	19.17	
11 – 15	42	35.00	13
16 – 20	35	29.17	
>20	8	6.66	
Total	**120**	**100.00**	
Approximate Annual Income			
31,000 – 35,000	24	20.00	
36,000 – 40,000	31	25.83	
41,000 – 45,000	45	37.50	39,550
46,000 – 50,000	12	12.50	
>50,000	5	4.17	
Total	120	100.00	

Source: Field Survey, 2014

Marketing Channels

Marketing Channels are the paths through which commodities from their raw state or form move from the producer to the final consumers. They are important in evaluating marketing system because they show how the various market participants are organized to accomplish the movement of a product from the producer to the final consumers. The distribution of respondents according to marketing channels, the summary is presented in Table 2.

Table 2: Distribution of Respondents according to Marketing Channels

Channel	Frequency	Percentage (%)
Farm-gate	18	15.00
Retailing	78	65.00
Wholesaling	24	20.00
Total	120	100.00

Source: Field Survey, 2014

Table 2 shows that in retailing, 65.00% is the major channel of distribution of palm oil marketing in the area. They buy palm oil in small containers for sale while 20% of the distributions were through wholesales by the wholesalers. About 15% of palm oil sales were by the farm gate.

Women participation in Palm Oil Marketing
The distribution of the respondents was based on the extent of women participation in palm oil marketing. A three-point Likert scale was used to establish the mean scores. This was used to measure the extent of women participation in Production, Processing, Storage, and Marketing of the product.
Table 3 shows that women participated more in marketing and storage. The marketers were least involved in production of palm oil with the mean score of 1.13 and processing which constituted about 17% or a mean score of 1.23 and were more involved to a great extent in marketing and storage with a mean score, M of 2.54 and 2.16 that is 36% and 31% respectively. This implies that the marketers were more involved in marketing and storage of palm oil than engaged in production and processing. The summary is presented in Table 3.

Table 3: Distribution of Respondents According to the extent of Women participation in Palm Oil Marketing.

Item	To a great Extent	To some Extent	To Extent	Total sum of scores	Percentage (%)	Mean Score (M)
Production	0	15	105	135	15.96	1.13
Processing	5	17	98	147	17.38	1.23
Storage	42	55	23	259	30.61	2.16
Marketing	65	55	0	305	36.05	2.54
Total				846	100.00	

Source: Field Survey, 2014

Seasonality in Price Variation of Palm Oil Sales
The variation in price of palm oil follows the seasonality in the production of the commodity. In April-May, a 20 litre Jerrycan of palm oil was sold at ₦4,000. This is the period when the production of palm oil is high and reaches its peak in May. Beyond this period, prices begin to rise or increase gradually and steadily and reaches peak in December – January, when Jerrycan of 20 litres sells for ₦5,500. This marks the period of low production of palm oil. In April – May, traders or palm oil marketers are expected to store the products as prices are low and the production is high. The summary is presented in Table 4.

Table 4: Price Variation of Palm Oil (20 litre Jerrycan)

Period	Price (₦)
April – May	N4,000.00
June – July	N4,200.00
August – September	N4,500.00
October – November	N5,000.00
December – January	N5,500.00
February – March	N4,500.00

Source: Field Survey, 2014
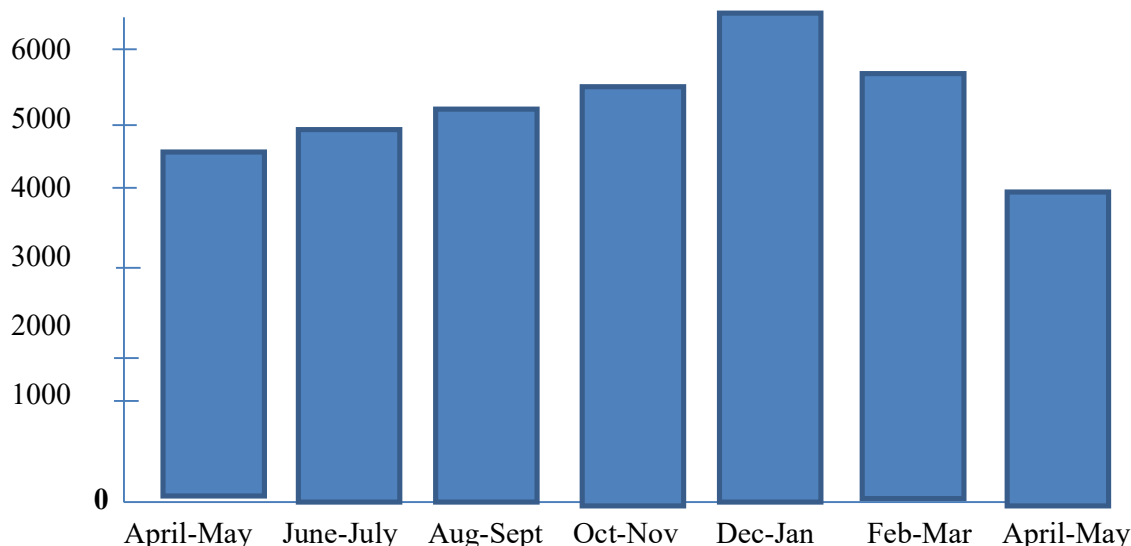
Price Variation of Palm Oil

Figure 1: Variation in prices (N) of 20 litres of palm oil along the season

Gross Margin Analysis

The gross margin analysis, the summary is presented in Table 5.

Table 5: Gross Margin Analysis

Market	Total income (₦)	Total Variable cost (₦)	Gross Margin (₦)
Abocho Market	146,368.75	106,450.00	39,918.75
Anyigba Market	225,225.00	163,800.00	61,425.00
Iyale Market	153,793.75	111,850.00	41,943.75

Source: Field Survey, 2014

Palm oil marketing in Dekina Local Government Area was generally profitable. At Anyigba market, the gross margin was N61,425.00, at Iyale market the gross margin was N41,943.75, while at Abocho market the gross margin was N39,918.75 indicating that Palm oil marketing was profitable in all the markets in Dekina Local Government Area of Kogi State, the seasonal fluctuation notwithstanding.

Table 6: Constraints Militating Against Marketing of Palm Oil in the Study Area

Constraint	Total sum of Scores	percentage (%)	Mean Score (M)	Established cut-off
Inadequate capital	488	15.52	4.07	
Inadequate storage facilities	476	15.14	3.97	
Price instability	464	14.75	3.87	
Too many Retailers	458	14.56	3.82	3.00
Low Quantity Produced	296	9.41	2.47	
Traditional method of Processing	267	8.49	2.23	
Poor Market Information	253	8.04	2.11	
High Cost of Transportation	234	7.44	1.95	
Poor Communication System	209	6.65	1.74	
Total	3145*	100		

Source: Field Survey, 2014, * Multiple scores

Table 6 above presents the summary of constraints of palm oil marketing in the study area. From the table, the major constraints were inadequate capital (4.07), inadequate storage facilities (3.97), price instability is the next serious constraint (3.87) and too many retailers (3.82). The least constraint was poor Communication system (1.74). Inadequate capital can affect the level of profit made. This is because marketers were unable to stock their stores during peak period of production so that during the period of

scarcity they have not much for sales. Besides, given enough capital base, the marketers would even be able to build up their own lock-up stores or shops to store their produce.

Conclusion and Recommendations

Palm oil marketing in Dekina Local Government Area of Kogi State Nigeria, was carried out mostly by the women who were married and were capable of carrying out all the marketing functions. Palm oil marketing in the study area was found to be profitable despite the various constraints faced by the marketers. The marketing activities could be improved if financial assistance could be given to the members and other marketing facilities were provided by Government or its agencies. Also, formation of marketing cooperative could enhance their opportunity to increase their capital base and attract government financial assistance. It could be recommended that palm oil marketers should be able to store more palm oil, so that there would be enough during off-season. This will also ensure that there is enough palm oil all year round and also provides the palm oil marketers with more profits. Financial institutions especially the Bank of Agriculture should be able to provide loans to palm oil marketers at very low interest rate. The palm oil marketers should be able to form marketing cooperative so as to increase their capital base. This will help them to buy off surplus at the peak of production for storage.

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