MARKETING OF FERMENTED CASSAVA FLOUR IN AKINYELE LOCAL GOVERNMENT AREA, OYO STATE

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ABSTRACT

The study was carried out in Akinyele Local Government Area of Oyo State on marketing of fermented cassava flour (*lafun*) with the objective of examining the socio-economic characteristics of cassava marketers, determining the profit margin, ascertaining effect of some variables influencing the supply of cassava flour and identifying associated constraints. Primary data used for the study was collected from 80 respondents using simple random sampling technique. The empirical evidence from the analysis shows that the traders are predominantly female (70%) and mostly married (62.5%). The study further reveals that the marketing of *lafun* is a profitable venture at both the wholesale and retail levels with a profit of N6,890.32 per month. The quantity of cassava supplied was significantly determined by transportation cost ($P_{0.01}$), marketing experience ($P_{0.05}$), years of education ($P_{0.10}$) and cost of storage ($P_{0.05}$).The markets were observed to face transportation, storage and packaging problems. As transportation cost increased, the quantity of *lafun* supplied to market was also found to increase. The study recommends the assistance of government in the provision of infrastructural facilities.

Keywords: Marketing, Cassava, Fermented, Flour, Oyo State

INTRODUCTION

Cassava forms a major part of the dietary intake of Nigerians, especially in Southern Nigeria (Ugwu,1996) and it is said to have a daily per capita dietary calorie equivalent of 238kcal. The operators of cassava marketing in Nigeria are independent and decentralized in decision making; they have fairly homogenous products though some exhibit certain levels of price differentiation. Ikpi (2002) reported this as having monopolistic tendencies. The general outlook is that the degree of competition in the market is fairly high. Moreover there exists free mobility of resources in the industry. Philip *et al.* (2004) also stated that cassava producers in Nigeria are independent. They are not unionized; neither do they have agencies that exert any form of control over the producers or marketers. Most of them are small scale producers located in the rural areas of the country but predominantly south of the river Niger.

*S.A. ADEWUYI, **A.O. ADENUGBA, ***A.D. DADA AND O.O. OYEWOLE

There exist local and improved varieties of cassava and they differ mainly in terms of yield per hectare, resistance to pests and diseases and maturity dates. The products too are fairly homogeneous and very little attention is paid to coloration sorting or selecting and even packaging. Buying is equally large and has no forum to discuss or agree on prices. In essence therefore, the principle of demand and supply is the key to pricing in this market. As cassava comes from many small units, each individual farmer has very little control over prices.

There are both cassava flour fermented (*lafun*) and non-fermented (high quality cassava flour) markets. Also, over 70% of the production of the commodity in Nigeria is consumed locally (Philip *et al.*, 2004). There has been a steady growth in cassava production in Nigeria from 12 million tons in 1986 to 31 million tons in 1996 with current production estimated at 34 million tons. The increase is fully due to an increase in number of hectares under cultivation. Average production per hectare remained stable at about 11 tonnes (FMANR, 1997). The unfermented flour is used in bakeries and for confectionery while the fermented flour is consumed directly in food. Fermented cassava flour of fine white flour obtained from processed cassava tubers has various local names such as "paki", "Amala fufu" and 'gari' (Dipeolu *et al.* (2007). The scope of consumption has for long been restricted to some geographical zones or ethnic groups. This is due principally to habit and food preparation techniques.

The peculiar features of agricultural product marketing including cassava flour *lafun* in Akinyele local Government area of Oyo State as in other parts of Nigeria include small scale operation, multiplicity of traders and infrastructural inadequacies. The infrastructural inadequacies include poor storage, traditional processing equipment and methods, transportation bottleneck and information problems and losses during distribution. To provide insight into the problems confronting agricultural product marketing and food chain of cassava product marketing, there is, therefore, the need to study the marketing system to identify its problems and find a way of overcoming the short comings.

Specifically, the study captured the following objectives:

1. examine the determinants of the supply of cassava in the study area;

2. identify associated constraints towards effective cassava marketing; and

3. determine the retailers and wholesalers market margin.

METHODOLOGY

This study was carried out in Akinyele local Government Area of Oyo state. Both primary and secondary data were used. Primary data were collected through the use of questionnaire. The questionnaire was administered through interview for the research work. Secondary data were obtained from reports, journals periodicals, relevant magazine and other publications from universities and research institute. Simple random sampling technique was employed to select 80 cassava flour marketers for the study. The information were collected from 12 different markets namely Akinyele central market, Alabata, Adekumbi, Ijaye, Igbooloyin, Iware, Moniya, Ojoo, Onidundun, Olunlosin, Sasa and Elekuru to get more detailed and representative information on marketing of cassava in the study area. The details of the distribution of the respondents in the markets

are shown in Table 2. Descriptive analysis, profit margin analysis and regression analysis were used in analyzing the data.

Gross Margin analysis

$$GM = TR - TVC.............Equation\ 1$$

where, GM = Gross margin

TR = Total revenue

TVC = Total Variable Cost.

The regression analysis

This was used to analyse the effect of some variables affecting the quantity supplied of cassava flour .

$$Y = f(X_1, X_2, X_3, X_4, X_5, U)....Equa.\ 2$$

where

Y is the revenue from cassava flour supplied in naira

X_1 represents the transportation cost in naira

X_2 is experience of marketers in years

X_3 is educational status (years spent in school)

X_4 Amount of credit obtained in naira

X_5 is the dummy variable (rainy season 0, dry season 1)

X_6 is the cost of storage in naira

U is the error term.

RESULTS AND DISCUSSIONS

Socio-economic characteristics of cassava flour marketers

Table 1: Socio-economic characteristics of Respondents

Education	Frequency	Percentage (%)
No-education	25	13.3
Primary	37	46.3
Secondary	13	16.3
Tertiary	5	6.3
Total	80	100.0
Age		
0-10	1	1.3
11-20	9	11.3
21-30	15	18.8
31-40	21	26.3
41-50	29	33.8
51-60	7	8.85
Total	80	100
Marital Status		
Married	50	62.5
Single	25	31.3
Divorced	5	7.2
Total	80	100
Sex		
Male	24	30
Female	56	70
Total	80	100
Farming Experience		
<10 yrs	21	26.3
11-20yrs	27	33.8
21-30 yrs	18	22.5
31-40yrs	13	16.3
41-50	1	1.3
Total	80	100

Source: Field Survey Data, 2007.

*S.A. ADEWUYI, **A.O. ADENUGBA, ***A.D. DADA AND O.O. OYEWOLE

Marketing of cassava flour in the study area is dominated by married women who are seen to be more efficient in the marketing of this product as they are good in persuading customers and in bargaining. The distribution of marketers by educational status reveals that about 46.3% and 16.3% respectively had primary and secondary education. It could therefore, be said that the cassava flour *lafun* marketing sub-sector is a major employer of unskilled but fairly educated labour. The educational status of the marketers is expected to help in ensuring uniform and standard weighing method and grading techniques as well as keeping adequate record of the business.

Majority of the cassava marketers had been in business for over 15 years.

The years of experience is expected to positively contribute to marketing conduct and performance. Most of the marketers (33.8%) of them are between 51-60 years.

Marketing Conduct

The higher percentage of respondents are those from Iware market followed by those from Onidundu and Elekuru markets This shows a higher number of cassava flour {lafun} marketers in this area. The lower percentages are from Adekumbi and Alabata with 1.3% and 2.5% respondents respectively.

Most of the respondents (as shown in the table below) are both wholesalers and retailers combined with the highest percentage of 86.3%. While the wholesalers are 7.5% and

Table 2: **Distribution of Respondents according to the type of seller**

Type of Seller	Number of Respondents	Percentage
Retailer	5	6.3%
Wholesaler	6	7.5%
Both	69	86.3%
Total	80	100%

Source: Field Survey 2007.

Most of the sellers sell in bags and in *kongo.* The wholesalers and retailers combined are found to perform the important function of packing, financing, transportation, grading and storage of *lafun* in the study area. Some retailers buy from the wholesalers, usually buying commodities which they then prepare in small quantities suitable for the consumers. Their major assignment is to ensure that consumers obtain their needs

every day of the year. The wholesalers are found to be those who purchase in smaller quantities and sell in larger quantities. They are mostly on-the-farm collectors.

Table 3: **Distribution of Respondents by Markets**

Name of Market	Frequency	Percentage
Akinyele	3	3.8
Alabata	2	2.5
Adekumbi	1	1.3
Elekuru	11	13.8
Ijaye	7	8.8
Iware	12	15.0
Igboloyin	3	3.8
Moniya	5	6.3
Ojo	6	7.5
Onidundu	11	13.8
Olunloson	4	5.0
Sasa	15	18.8
Total	80	100

Source: Field Survey Data, 2007.

Equally evident is the fact that most of the markets open on a 5-day interval while 20% of the markets open on a daily basis. There are also some markets which open every day but the patronage and ware display of these markets is usually not as large when compared to the patronage and ware display market day. These markets are those mostly found in the suburbs and the villages. An experienced buyer may exert pressure on the measures thereby increasing the weight and consequently the volume of *lafun* obtained. Some buyers even asked for extra after purchase as a way of maximizing the quantity purchased at a given price. In cases where contractual arrangement exists between processor or seller and buyers, the prices are slightly reduced. The prices of local measures offered to consumer along roadside also vary. Generally, consumers in private cars are charged higher prices than those in commercial vehicles. It should also be pointed out that the local measure price also varies with season. During the rainy season, the prices are slightly higher than during dry season. This is partly because of the increase in cassava tubers' price due to reduction in cassava supply. The major processing operation performed by marketers is grinding the dry pellets into flour which costs an average of N81.00 per bag. The processing is done by marketers mainly to add value and meet market demand.

3.3 Gross Margin Determination

Table 4: Determination of Wholesalers Gross Margin per month

Cost Item	N
Cost of purchase	50,129.60
Transportation	1,983.12
Storage cost	1,466.25
Processing cost/bag	81.13
Value of loss	833.33
Total	54,493.43
Average Revenue	81,893.75
Average Variable Cost	54,493.43
Gross margin	26,400.32

Source: Field Survey Data, 2007.

Table 5: Analysis of Retailers Gross Margin per month

Cost item	N
Cost of purchase	6,200
Transportation	3,000
Storage cost	2,000
Processing Cost/bag	1,600
Value of loss	590
Total variable cost	13,390
Revenue	28,000
Gross margin	14,610

Source: Field Survey, 2007.

The table indicates that the profit derived from marketing of *lafun* at the retailer level is N14,610 per month. This is less as compared to N26,400.32 gross margin derived from marketing of *lafun* at the wholesalers and retailer combined level. This is responsible for more number of respondents marketing at the wholesaler and retailer combined levels.

Regression result of the determinants of quantity of cassava supplied.

$$\text{Log } Q = -6.169^{***} + 5.601 \text{ Log } X_1^{**} -1.791 \text{Log } X_2^{*} -2.398 \text{Log} X_3 {}^{*} -0.131 \text{Log } X_4$$
$$(-7.535) \quad (0.887) \quad (-2.29) \quad (-6.26) \quad (-1.325)$$

$$+ 0.870 \text{ Log } X_5^{***}$$
$$(10.827)$$

***=Significant at 1%**=Significant at 5%*=Significant at 10%; R^2=0.0667;

The regression analysis was employed to examine the determinants of the value of cassava flour supplied to the market. The double logarithmic was chosen as the lead equation based on relative agreement with the *a priori* expectation of the parameters statistical signs and significance of independent variables. The coefficient of multiple determinations (R^2) is 0.667. This indicates that 66.7% of the variation in the quantity of *lafun* supplied to the market was accounted for by cost of transportation, marketing experience, year of education and quantity sold per month. The remaining 33.3% was accounted for by some other factors not considered in the model. These may include increase in quantity of cassava produced, weather and market charges and standard error.

The value of cassava supplied was significantly determined by transportation cost ($P_{0.01}$), marketing experience ($P_{0.05}$), years of education ($P_{0.10}$) and cost of storage ($P_{0.05}$). The positive coefficient of transportation cost implies that as the cost of transportation increases more cassava will be made available by the marketers. This is not surprising because high transport fare will encourage the vehicle owners to make their vehicles available as more money will be needed to accommodate the damages to their vehicle, given the bad state of the roads.
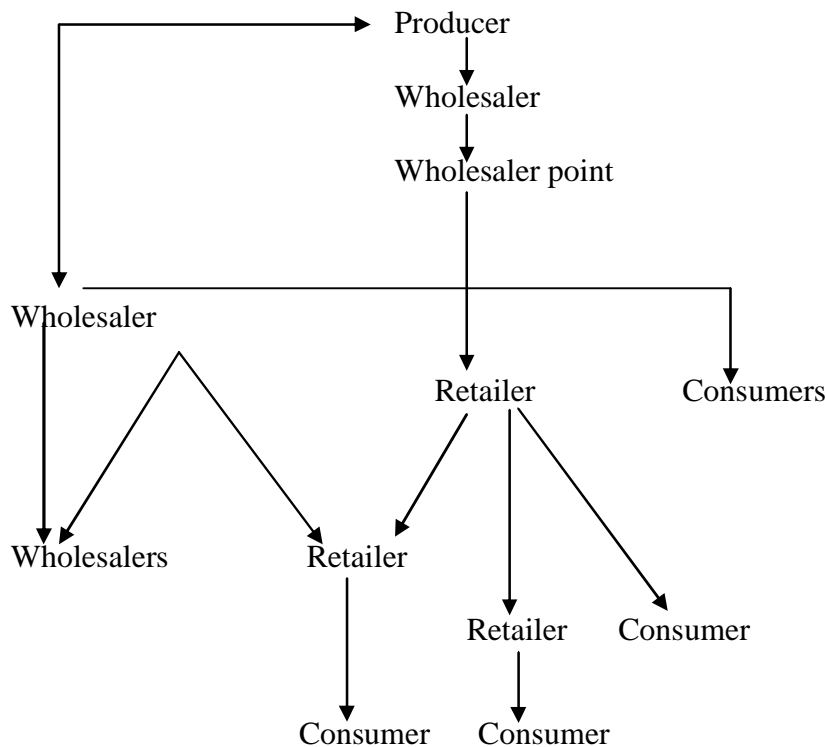

Figure 1: Channel of Distribution
Sources: Field Survey, 2007

The producers comprise the people from Oke-Ogun and those of the settlement of Akinyele Local Government Area of Oyo State. The first channel is from producers to wholesalers who also act as middlemen. The second channel is from the wholesalers middlemen to the wholesale points which are the big markets and periodic markets such as Elekuru, Iware Ikereku and Akinyele. At the third channel, wholesalers, retailers and few consumers are involved, buying from the wholesale point. At the fourth channel, wholesalers and retailers especially those who sell around the neighborhood buying from the main wholesalers and retailers. The fifth channel entails the direct supply from the producers to the wholesalers and retailers. It sometimes involves the wholesalers and retailers buying directly from the producer at the production points thereby by-passing the middlemen. Marketers from various villages nearby converge in the market on the market day. It should be noted that this presence of large number of sellers also has a reducing effect on price.

Problems encountered in marketing of cassava flour

The table below shows the various problems encountered by cassava marketers in the study area.

Table 6: Problems encountered in marketing

Problems of marketing	Frequency	Percentage (%)
Transportation	13	16.3
Supply	18	22.5
Storage	41	51.3
Processing	10	12.5

Source: Field Survey Data, 2007.

The distribution shows that inability to obtain effective storage facilities for cassava constitute the problem faced by majority (51.3%) of the cassava marketers. Most markets lacks storage facilities and warehouse facilities and the amount of wastage that occurs due to lack of these facilities often accounts for increasing cost of marketing and hence retail prices. This is closely followed by high cost of transportation which has a reducing effect on the net income of the processor or seller. This is not unconnected with the poor state of feeder road which are maintained only through communal efforts.

CONCLUSION AND RECOMMENDATIONS

The study shows that marketing of cassava products is a profitable venture especially at the wholesale and retail combined levels. Marketing channel involves about five channels with the most profitable channel bringing the link between the producers, wholesalers and retailers directly. It reduces purchase cost and increases revenue.

The majority of marketers were women as compared to other commodities like rice, beans, etc, for which men are mostly involved as wholesalers. Major cost of market-

ing comes from transportation, in terms of conveyance loading and unloading. Most of the respondents attribute this to bad road and fuel scarcity. It is important, therefore, to ensure that good roads are provided to enable the marketers convey their product to the markets at a reduced cost.

Majority of the marketers (58%) do not belong to any association. This is preventing the ability to organize themselves into groups or cooperatives and they could not derive the benefit of reducing cost of transportation and obtaining loans from financial institutions. There were also observed differences in price during the rainy season and dry season. The price is relatively high during rainy season. This is due to the inability and the risk of drying during rainy season. Nevertheless, it can be concluded that marketing of *lafun* is a profitable business and can be improved if the marketing, structure, conduct and performance is more organized.

In order to achieve effective cassava marketing, the study recommends the grading of feeder roads within the local government area to ensure easy and smooth transportation of *lafun* to markets.

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