
ASSESSMENT OF PALM WINE MARKET IN EDO STATE

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Abstract: Agricultural marketing system plays an important role in determining the prices received by the farmers and those paid by the consumers. This study assesses the marketing of palm wine in Edo State, Nigeria. A total of 210 respondents comprising of 90 wholesalers and 120 retailers were randomly selected from three villages each in seven local government areas in Edo State, using a multi-stage sampling technique. The studied local government areas include: Oredo, Egor, Ikpoba-Okha, Ovia North East, Ovia South West, Esan West and Igueben. Socio-economic and demographic data were collected from the respondents with the use of structured questionnaire. The data collected were analyzed using descriptive statistics, budgetary techniques, Shepherd Futrel coefficient of marketing efficiency. Findings revealed that most of the marketers were males in their active age; the mean age being about 43 and 38 years for retailers and wholesalers, respectively. About 46% of the retailers and 53% of the wholesalers completed their secondary school education. The average weekly marketing margin and net profit per 100 liters per retailer were ₦7,644.00 and ₦2,923.78 as well as ₦1,529.00 and ₦508.36 per wholesaler respectively. Palm wine marketing in the study area is profitable and efficient as shown by the coefficient of marketing efficiency of 132% for retailers and 113% for wholesalers. The percentage share per liter of the consumer's price along the value chain ranges from 25% for tappers to 37.3% for wholesalers to 37.7% for retailers. The major constraints faced by the marketers were high transportation cost (93.4% and 87.2%), lack of credit facilities (81.82% and 91.3%), inadequate supply (82.50% and 46.75%), inadequate electricity supply (35% and 99%) and excessive charges (42.8% and 72.42%) for wholesalers and retailers respectively. The study concludes that palm wine marketing is very profitable in the study area. The study therefore recommends among others: the provision of credit facilities, promoting potential entrepreneurship in palm wine marketing through awareness and the need for the provision of infrastructural facilities such as good roads and regular supply of electricity to reduce marketing cost.

Keywords: Value Share, Marketing Margin, Palm Wine, Wholesalers, Retailers.

BACKGROUND INFORMATION

Marketing is an institution or mechanism which brings together buyers ("purchasers") and sellers ("suppliers") of particular goods and services. As a basic definition, marketing is the process of satisfying human needs by bringing products to people in the proper form and at the proper time and place. Marketing has an economic value because it gives form, time, and place utility to products and services. As products definition it is the performance of all the transactions and services associated with the flow of goods and services from the point of initial production to the final consumer. As business firm, marketing is as a complete management concept through which the company sells itself as well as its line of product. And from the view

point of society, it is defined as all the processes necessary to determine consumers' physical and societal needs and to conceptualize and affect their fulfillment (Barson and Norvell, 1983). As expressed by FAO (1997) food and agricultural marketing not only means the movement of agricultural produce from the farm (where it is produced) to the consumer or manufacturer but also include the marketing of production supplies to farmers like fertilizer, pesticide, chemicals, machinery, animal feed, tools and equipments.

It is generally believed that small farm agriculture plays a central role in economic development, both in supplying a significant portion of the domestic food crop supplies and in generating income for low-income families, (Minot, 1986). Markets can serve as potential agents of development in two ways. Firstly, they can provide a way to allocate resources ensuring the highest value of production and maximum consumer satisfaction. Secondly, they may stimulate growth by promoting technological innovation and increased supply and demand. Economic development normally requires increased resource productivity that directly demand specialization in production and technological innovation. Specialization requires coordination between producers, distributors and consumers, or between supply and demand. Markets provide one means of such coordination (Scarborough and Kydd, 1992).

The size of market margin is largely dependent upon a combination of (1) the quality and quantity of marketing services provided; (2) the cost of providing such services; and (3) the efficiency with which they are undertaken and priced (Scarborough and Kydd, 1992). For instance, a big margin may result in little or no profit or even a loss for the seller involved depending upon the marketing costs as well as on the selling and buying prices (Mendoza, 1991). However, under competitive conditions, the size of market margins would be the outcome of the supply and demand for marketing services, and they would be equal to the minimum costs of service provision plus "normal" profit (Scarborough and Kydd, 1992; Mendoza, 1991). Therefore, analyzing market margins is an important means of assessing the efficiency of price formation in and transmission through the system.

There are three methods generally used in estimating marketing margin. (1) Detailed analyses of the accounts of trading firms at each stage of the marketing chain (time lag method); (2) computations of share of the consumer's price obtained by producers and traders at each stage of the marketing chain; and (3) concurrent method: comparison of prices at different levels of marketing over the same period of time (Scarborough and Kydd, 1992). This study employs the use of concurrent method due to complexities in data issues in the remaining method.

Recognition of critical role of markets in economic development has led to comprehensive market reforms across a number of developing countries. In spite of these reforms, symptoms of poorly functioning markets in much of Sub – Saharan Africa are evident in the segmentation of markets, low investment in the market infrastructure, the persistence of high margins and marketing imperfections which has greatly reduced marketing efficiencies (Eleni, 2001).

The major constraint to increasing the welfare of smallholders is their inability to access viable markets. Enhancing the ability of poor smallholder farmers to reach markets and actively engage in them is one of the most pressing development challenges. Remoteness results in reduced farm-gate prices, returns to labour and capital, and increased input and transaction costs. This, in turn, reduces incentives to participate in economic transactions and results in subsistence rather than market-oriented production systems. Sparsely populated rural areas,

and high transport costs are physical barriers to accessing markets; lack of negotiating skills, lack of collective organizations and lack of market information are other impediments to market access (Jones, 1972).

An efficient, integrated, and responsive market mechanism, which is, marked with good performance, is of crucial importance for optimum allocation of resources in agriculture and for stimulating farmers to increase output (Jones, 1972; FAO, 1999; Acharya and Agarwal, 1999). Without having convenient marketing conditions, the possible increment in output, rural incomes and foreign exchange resulting from the introduction of improved production technologies could not be effective. An improvement in marketing efficiency, thus, attracts the attention of many countries and viewed as an important national development strategy.

Palm wine production and marketing in Edo State is dominated by small scale producers and marketers. The volume of the processed wine marketed is relatively small and highly seasonal. The dry season is the period of surplus due to high sap flow. The marketing of palm wine is therefore a critical link in the supply and economies of the communities and individuals that depend on it as source of livelihood. There is a paucity of information on the marketing of palm wine in Nigeria. Though some researchers (Amerine and Kunke, 1958, Esechie, 1978, Bassier, 1972, Okereke, 1982, Ndon, 2003, Obahiagbon, 2009, Corley *et al.*, 2007) had conducted studies related to production of palm wine and storage as well as the social and religious relevance of palm wine. There is not much information on the marketing system, the structure and performance to guide policy and programmes needed to profitably exploit this sub-sector.

RESEARCH QUESTIONS

The study will therefore seek to provide answers to the following research questions;

1. What are the socio-economic characteristics of the marketers?
2. What is the efficiency level of the various market intermediaries in the study area?
3. What is the value share of the marketing actors in the study area?
4. What are the major limitations to palm wine marketing in the study area?

OBJECTIVES OF THE STUDY

The general objective of this study is to assess the marketing of palm wine in Edo state. The specific objectives are to;

1. Describe the socio-economic characteristics of the marketers.
2. Estimate the efficiency of palm wine marketing as a measure of market performance in the area.
3. Estimate the value share along the marketing chain.
4. Identify the problems in palm wine marketing in the area.

RESEARCH METHODOLOGY

The study was carried out in Edo State, Nigeria. Edo State is situated in the Mid-Western part of the country. The estimated total land size of the state is 17,802 square kilometers with 180,000 farm families. As at 2005 census, it is estimated to have a population of 3.4 million people. The State shares boundaries with three other states of the Federation. It is bounded in the North and East by Kogi state, in the west by Ondo state and in the South by Delta State. It is a low-lying area except in the North where it is marked by undulating hills. The main towns in the state are Benin, capital of the ancient Benin kingdom which is also the state capital, Ubiaja, Auchi, Ekpoma and Uromi (Edo State information guide, 2011). Agriculture is the

Profit margin of the marketing Institutions were determined by adopting Folayan (2007) as follows:

$$\pi = TR - TC = PQ - TC = PQ - (TFC + TVC) \dots\dots\dots (2)$$

Where;

- π = Profit
- TR = Total Revenue
- TC = Total Cost
- P = Price
- TFC = Total Fixed Cost, TVC = Total Variable Cost
- Q = Quantity

In this study, the efficiency of marketing was measured by Shepherd- futrel model of accurate measurement of efficiency of the productivity of resources invested in the marketing process in quantitative terms. This model was propounded by Shepherd and Futrel (1982), and is given as:

$$ME = \frac{TR}{TC} \times \frac{100}{1} \dots\dots\dots (3)$$

Where;

- ME = Marketing efficiency
- TC = Total marketing cost
- TR = Total value of products sold

The higher the efficiency ratio the higher the marketing efficiency

3. **Margin/Cost Table:** The margin/cost table as developed by DFID (2008) for Value Chain Analysis in market-based programming and adopted by World Food Programme (WFP) (2010) was used to analyze the palm wine value share in this study.

RESULTS AND DISCUSSION

The results of the analysis carried out on the primary data were presented and discussed in this chapter.

Socio-Economic Characteristics of Traders

The age of marketers to a large extent affects their agility and ability to perform their marketing activities which in turn affects their sales. The results on Table 1 showed that 43.4 % of the retailers were between 41 and 50 years of age, while 26.7% were between 31 and 40 years of age. The result also shows that 20.8% of the retailers were above 51 years. Only 9.1% of the retailers were below 30 years. The mean age of the retailers was 43.45 years.

The age distribution of the wholesalers indicated that 47.8% were within the age bracket of 31 and 40 years while 22.2% were between 41 and 50 years. It was also shown that 18.9% of the wholesalers were less than 30 years, while only 11.1% were 51 years and above. The mean age of the wholesalers was found to be 38.37 years. The fact that most of the respondents were in their youthful age implies that palm wine marketing can be a dynamic and efficient activity.

Majority (80.0 %) of the retailers were male and (94.4 %) of the wholesalers were also male. This result implies that male is more dominant in palm wine marketing in the study area. The

distribution by marital status shows that majority (77.5 %) of the retailers were married while 77.8 % of the wholesalers were married.

In terms of household size, 40.0% of the retailers had a household size of less than 4 persons, while 50.8 % of the retailers had household sizes of 5 to 8 members, also 9.2 % of the retailers had a household size of 9 and above. According to the study, 57.8% of the wholesalers had household sizes of less than 4 members; While 42.2% of the wholesalers have household sizes of 5-8 members. The average household sizes of the retailers and wholesalers were 5 and 4 respectively.

Education plays an important role in every business and it is also very crucial in palm wine marketing. The ability of the marketers to understand and use improved marketing strategies and facilities depends on their level of literacy. The distribution result revealed that 11.7 % of the retailers had no formal education. About 38.3% of the retailers had primary education and 45.8 % had secondary education while 4.2% of the retailers had tertiary education.

Similarly, 6.7% of the wholesalers had no formal education. About 40.0% had primary education while 53.3% of the wholesalers had secondary education. The result implies that larger percentages of the respondents had acquired formal education and will be able to innovate and be willing to adopt improved marketing opportunities for their business.

Analysis of Cost, Profitability and Efficiency of Palm Wine Marketing in Edo State

The result in Table 2 revealed that acquisition cost accounted for 74.68% and 49.02% of the total cost for wholesalers and retailers respectively, while cost of transportation accounted for 6.25% and 11.18% of the wholesalers and retailers cost. The cost of transportation is higher at the retailer's level because they have to travel long distances than the wholesalers to purchase the product they sell. The expenses on wage gulped 2.65% for wholesalers and 7.7% for retailers. Store rent accounted for 0.94% of the wholesalers entire cost while it gulped 2.44% of the retailers cost. Other costs incurred by the marketers are tax (0.15%), and electricity bill (0.14%) for the wholesalers while retailers incurred 0.58% and 3.88% for tax and electricity /fuel respectively. The Table revealed that wholesalers and retailers incurred a weekly average variable cost of ₦3374.22 and ₦6865.98 per 100 liters respectively. Result of analysis show that wholesalers and retailers incurred average fixed cost of ₦656.42 and N2393.24 per 100 liters.

Analysis of the Table 2 showed that the gross marketing margin from the enterprise at the wholesale and retail levels were ₦1529 and ₦7644 per 100 liters respectively. The estimated net marketing margins at wholesale and retail levels were ₦508.36 and ₦2923.78 per 100 liters respectively. This result suggested that palm wine wholesalers got the lower net margin from their palm wine business. Though the net margin is lower at the wholesale level, over time the wholesaler benefits more as they usually purchased their palm wine in bulk there by enjoying substantive price reduction from the producers of the commodity.

Data analysis showed that at the retail level, the marketing efficiency was found to be highest (about 132%) while the efficiency at the wholesale level was 113% (Table2). The result generally implies that palm wine market in the study area is efficient.

Analysis of Value Share Along the Marketing Chain of Palm Wine Marketing in Edo State

Table 3, present the value share of palm wine marketing in the study area. Empirical result showed that most value share goes to the retailers with value share of 37.7% of the market. It is evident that the retailers share relatively low costs and has higher profit margin. Wholesalers got 37.3% of the consumer value while the farmers seem to make the lowest operating margin. Overall, the financial position of actors indicated that costs and margins are shared unequally in the value chain and could be an intervention point for a project. In palm wine enterprise, the focus could be on farmers by scaling up their business in the chain in order to make palm wine production more attractive. The result indicated that there is a risk of trade collapse which can undermine farmer's access to markets.

Constraints Faced by the Traders

The major constraints reported by the marketers are presented in Table 4. The wholesalers claimed that high cost of transportation (93.4%), inadequate supply (82.5%), and lack of credit facilities (81.82%) were their major constraints. Inadequate capital was also reported by 66% Of the wholesalers as another serious constraint. Other pressing constraints include excessive charges (42.8%), large number of sellers (32.50 %) and insecurity problem as reported by 29.2% of the wholesalers.

Almost all the retailers (99.00%) complained of inadequate electricity supply. Similarly, majority of the retailers reported lack of credit facilities (91.3%), high transportation cost (87.2%), excessive taxation (72.3%), insecurity problem (68.3%) as well as inadequate capital (59.50%). The retailers also claimed that fighting among customers after getting drunk (42.50%), inadequate supply (46.75%), and large numbers of middlemen (17.5%) were the problems encountered by them. The constraints facing the marketers may likely have a negative effect on the performance and efficient functioning of the palm wine marketing system.

POLICY RECOMMENDATIONS

Based on the research findings the following recommendations were made;

1. There is need for the provision of basic facilities such as infrastructural facilities to reduce marketing cost and eventually enhance marketing efficiency positively.
2. Since palm wine marketing is a profitable venture, more jobs can be created if government should play greater role in promoting potential entrepreneurship in palm wine marketing through awareness and credit financing schemes to encourage more participants in palm wine marketing system.
3. Government through ADP and other palms development partners should give adult education in form of literacy support in palm wine processing and marketing.

Table 1: Distribution of Palm Wine Sellers by Socio-Economic Characteristics

Variables	Retailers Frequency	Percentage	Wholesalers Frequency	Percentage
Age (Years)				
30	11	9.1	17	18.9
31-40	32	26.7	43	47.8
41-50	52	43.4	20	22.2
51	25	20.8	10	11.1
Mean age	43.45		38.37	
Standard deviation	8.82		8.57	
Gender				
Male	96	80.0	85	94.4
Female	24	20.0	5	5.6
Marital Status				
Single	11	9.2	17	18.9
Married	93	77.5	70	77.8
Divorced	13	10.8	3	3.3
Widow	2	1.7	-	-
Widower	1	0.8	-	-
Household Size				
Less than 4	48	40.0	52	57.8
5-8	61	50.0	38	42.2
9 and above	11	9.2	-	-
Mean household size	5		4	
Standard deviation	2.60		2.04	
Educational Status				
No formal education	14	11.7	6	6.7
Primary education	46	38.3	36	40.0
Secondary education	55	45.8	48	53.3
Tertiary education	5	4.2	-	-

Source: Computed from Field Study, 2012.

Table 2: Average Costs, Revenue and Marketing Margin for Palm Wine Marketing in Edo State

Cost items	Wholesalers		Retailers	
	Amount/100L(₦)	% Share of TC	Amount/100L (₦)	% Share of TC
Variable Cost				
Supply price	3010	74.68	4539	49.02
Transportation	251.96	6.25	1,035.15	11.18
Wage	106.66	2.65	712.74	7.70
Electricity bill/fuel	5.60	0.14	359.09	3.88
Association due			220.00	2.38
Total Variable Cost	3,374.22	83.72	6865.98	74.23
Fixed Cost				
Store rent	37.96	0.94	225.68	2.44
Tax	5.93	0.15	53.54	0.58
Dep. on Drum/jerry can	252.51	6.26	210.95	2.28
Dep. on Motorcycle	161.50	4.00	277.92	3.00
Dep. on cups	0.00	0.00	388.01	4.11
Dep. on shed	198.52	4.93	260.42	2.81
Dep. on table/chair	0.00	0.00	310.05	3.35
Dep. on generator	0.00	0.00	666.67	7.20
Total Fixed Cost	656.42	16.28	2393.24	25.77
Total Marketing Cost	4030.64	100.00	9259.22	100.00
Selling Price	4539		12183	
Marketing Margin	1529		7644	
Net Profit	508.36		2923.78	
Marketing Efficiency	113%		132%	

Source: Computed from Field Study Data, 2012

Table 3: Value Shares of Palm Wine Along the Marketing Chain in Edo State

Value Chain Actor	Total Costs or Purchase Price/Litre/₦ -A-	Total Revenue or Selling Price/Litre/ ₦ -B-	Net Income or Gross Margin/Litre/₦ C = B-A	Gross Margin (%) D = C/B	Value Share (%) E = B/R
Tapper	-	30.10	-	-	25%
Wholesaler	40.31	45.39	5.08	11.19%	37.3%
Retailer	92.59	R= 121.83	29.24	24%	37.7%

Source: Computed from Field Study Data, 2012.

Table 4: Major Marketing Constraints of the Respondents

Nature of Problems	Wholesalers (Percentage)	Retailers (Percentage)
High transportation cost	93.4	87.2
Lack of credit facilities	81.82	91.3
Inadequate capital	66.0	59.50
Large number of middlemen	32.5	17.5
Inadequate supply of palm wine	82.50	46.75
Inadequate electricity supply	35	99.00
Fighting among customers	0	42.50
Insecurity problem	29.2	68.3
Excessive charges	42.8	72.42
Total	463.22*	584.47*

Source: Computed from Field Study, 2012.

* Multiple Responses

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Reference to this paper should be made follows: Omofonmwan E.I. (2013), Assessment of Palm Wine Market in Edo State. *J. of Sciences and Multidisciplinary Research*, Vol. 5, No. 2, Pp. 141 – 151.
