Economics of Date – Fruit Marketing in Damaturu Metropolis, Yobe State, Nigeria

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Abstract

The study examined date-fruit marketing in Damaturu Metropolis, Yobe State, Nigeria. Specifically, the study identified the socio-economic characteristic of the date-fruit marketers, the costs and return associated with date-fruit marketing, the marketing efficiency of date-fruit marketing and the constraints encountered by the date-fruit marketers in date – fruit marketing. The study covered two markets which were Bayan-Tasha and Sunday markets. Purposive sampling was used to select the two markets based on the considerable number of respondents in the markets. While random sampling was used to select 80 respondents with 40 respondents from each of the markets. Data were collected by the administration of well-structured questionnaires to the 80 respondents. Data were analysed with the use of descriptive statistics, gross margin analysis and marketing efficiency analysis. The result showed that majority of the retailers and wholesalers were married young men within the ages of 31 – 40 years, and had household sizes ranging from 6 – 10 members for retailers while wholesalers had more than 10 members. The marketers had years of marketing experience of 6 - 10 years for retailers while wholesalers had more than 16 years of experience. The result also showed all marketers are literate, and have an annual level of income for retailers ranging from ₦150,000 - ₦250,000 and wholesalers had annual level of income of more than ₦350,000. Most of the respondents had initial capital of less than ₦50,000 for both retailers and wholesalers. It was concluded that the marketers are literate married young men, well experienced with large family sizes. Date-fruit Marketing is profitable and inefficient. The constraints faced by marketers were inadequate capital, poor storage facilities and high cost of transportation. It is recommended that the government should provide additional capital (to boost efficiency) and also provide adequate infrastructural facilities especially good roads, in order to enhance transportation and reduce the cost of transportation.

Keywords: *Date-fruit marketing, Profitability, Marketing Efficiency, Yobe State, Nigeria*

Introduction

Date Fruit (*Phoenix dactylifera*) has been described as the "tree of life" and production has increased from about 1.8 million tonnes in 1961 to about 7.5 tonnes in 2011 worldwide. However, Nigeria is not listed among international date producers, though the Sahelian and Guinea savannah zones of northern Nigeria are known for date palm and many economic tree

crops such as Gum Arabic, guava, mango and orange among other crops. It is believed that date-palm fruit was introduced in Nigeria in the early 8th century by Arab marketers from North Africa (Sani *et al*, 2010).

The crop has become a homestead crop in most of the Sudan-Sahel region of Nigeria and it is sold in the open market along with other staple foods. It is a widely consumed fruit among the people of north and its marketing in the country is increasing, and the country has the potential to export date-fruits and its bi-products to the international market, but Nigeria is more of a consumer than an importer of date fruits. FAO (2000) stated that the industry has potential for food provision, employment and income generation, animal feed, shelter belts, and poverty reduction. Employment opportunities exist especially in the areas of nursery production, plantation establishment, harvesting and marketing (Awoyemi *et al.*, 2011).

Marketing plays a vital role in economic development in the present global world (Kenen, 2000). Agricultural or food marketing can be regarded as the main driving force for economic development, the successful delivery of benefits to consumers whiles the focus is on competition captured by the degree of market power.

In Nigeria date palm is very popular among the people of the North. It is one of major sources of income to farmers. Production in Nigeria falls short of demand and date fruit is imported from Niger Republic, Libya and Algeria. Nigeria is thus not recognized as Date producing country in the international market (FAO, 2000).

According to Sambo (2021) in Yobe State, the consumption of date fruit is not an exception, this is because date- fruits are sold all over the state, more especially in the study area by retailers in their shops, those without shops, retailers with tables, hawkers with wheel barrows and those with trays. In addition, the marketing of date-fruit is very high during the fasting and sallah (Ed-el-Kabir) period.

In spite of the economic importance of date- fruit in Nigeria and the value of the crop as the highest yielding palm fruit in the country, more needs to be done to promote its production and marketing. The production and marketing of date-fruits serve as essential factors in the provision of both food and income to the farmers and the entire nation.

Date-fruits are economically important commodities, yet there are no sufficient research studies to identify the functioning and conduct of its marketing system. There is inadequate information on the economics of date-palm marketing system. Therefore, this study aimed to analyse the economics of date-fruit marketing in Damaturu Metropolis Yobe State Nigeria. Specifically, the study described the socio-economic characteristics of date-fruit marketers in the study area, estimated the costs and return associated with marketing of date-fruit, analyzed the marketing efficiency for date-fruit marketing and identified the major constraints associated with the marketing of date-fruit in Damaturu Metropolis Yobe State, Nigeria.

Materials and Methods

The study was carried out in Damaturu Metropolis which is the capital city of Yobe State, Nigeria. The study area falls in the Sahel Savannah zone and lies between latitude 11°44'40" North and longitude 11°57'40" East, occupying an area of 2,366 km^2. The climate of the area is characterized by a long dry season of about 6-7 months of the year. It is usually perched and dry from March to May with an average temperature ranging from 39°C to 40°C.The rainfall distribution is between 650-1000mm annually (Yobe State Ministry of Land and Survey, 2004). According to the National Population Census (2006) and National Bureau of Statistics (2022), Damaturu has a projected population of 137,900 people, at 2.9% growth rate. The major ethnic groups are Kanuri, Fulani and Badawa. The major activities of the area

are livestock rearing and crop farming. The area is suitable for the production of crops such as sorghum, millet, maize, cowpea, cotton, sesame, groundnut and Bambara nuts (Wikipedia, 2017).

The study focused on Date-Fruit marketers in Damaturu, Metropolis Yobe State, Nigeria. Data were collected in December, 2022. Both primary and secondary data were used for the study. The primary data were collected through the use of well-structured open and close ended questionnaires that were administered to the respondents, through an interview schedule, as most respondents (though literate) were reluctant to read and put down the answers. The secondary sources of information were text books, journals, past student projects, the Gazette and the internet among others. Purposive sampling was used to choose two major markets that have a considerable number of date-fruit marketers in the study area: namely Sunday market and *Bayan-Tasha* market. Random sampling was then employed to select the respondents from the two chosen markets. From each of the markets, 40 respondents were chosen at random, giving a sample size of 80 respondents.

Descriptive Statistics, Gross Margin Analysis and Marketing efficiency analysis were used to analyze the data collected. The descriptive statistics involved the use of percentages and frequency distribution tables, which were used to examine the socio-economic characteristics of the date fruit marketers and the constraints associated with date-fruit marketing in the study area. The gross margin was used to determine the costs and return associated with date fruit marketing and it is expressed as;

GM=TR-TVC _____ 1
Where: GM = Gross Margin cost per bag (50kg) of date-fruit
TR= Total Revenue   (₦) per bag (50kg) of date-fruit
TVC= Total Variable Cost   costs per bag (50kg) of date-fruit

If the GM is Positive, it means the market is profitable. If GM is negative, the market is not profitable.

The market efficiency formula was used to determine the efficiency of date- fruit per 50kg bag. Bila and Bulama (2007) defined marketing efficiency as to providing goods and services to consumers in the required time and place with the lowest possible market costs consistent with the interest of the producer. Olukosi and Isitor (1990) defined efficiency in agriculture as the most frequently used measure of market performance and it is expressed as:

ME = Value of output per bag (50kg) of date-fruit x 100 _____ 2
        Value of input per bag (50kg) of date-fruit   1
Where; ME=Marketing Efficiency
        Value of output = difference between selling price and purchasing
        Price per bag (50kg) of date fruits
        Value of input = costs of marketing service per bag (50kg) of date fruits
        The market will be said to be efficient if the ME is close to or above the average of
        50%.

Results and Discussion

Socio-Economic Characteristics of the Marketers

Socio-economics characteristics of date-fruit marketers examined include sex, age, marital status, family size, marketing experience, educational qualification, annual level of income and initial capital. The result of socio-economics characteristics of date-fruit marketers is presented on Table1.

The result on Table 1 showed that most of the respondents fell between the ages of 31 - 40 years for both retailers (41.54) and wholesalers (40%). This agrees with the findings of Obadimu (2015) who revealed majority of the respondents were economically active. This implies that the traders were physically strong and possessed the agility required by the business.

The result also showed that all (100%) of the traders were found to be males, which indicates the dominance of men in the marketing of date – fruit. This result confirms with the norms and values of the study area, where religion does not allow women especially, married women unnecessary movement and exposure. This result agrees with the findings of Abdulaziz (2021) who revealed that date fruit marketing is completely dominated by male traders.

Table 1 shows that majority of the retailers (60%) and wholesalers (80%) were married men. This result agrees with the findings of Hamidu (2014) and Emam and Abu-Algasim (2018) who revealed most of the traders were settled family men with responsibilities. These responsibilities seek more innovative marketing methods to improve their standard of living.

The result also showed that majority of the retailers (44.62%) had household sizes of 6-10 members and wholesalers (66.67%) had more than10 members in their households. The higher the household size the more labour available in marketing activities (Abdulaziz, 2021).

The result on Table 1 shows that majority of the retailers (36.92) had 6 - 10years of experience and wholesalers (66.67%) had more than16 years of experience. This confirms with the work of Obadimu (2015) who revealed that majority of the respondents had 6-10 years of marketing experience in date-fruit marketing and this enabled the marketers to have full knowledge of the marketing activities such as prices of date-fruit at different markets there by exploiting more profit-making opportunities, make better forecast and manage risks more effectively. The result also agrees with the findings of Emam and Abu-Algasim (2018) who found that the marketers had more than six years of marketing experience

The result on Table 1 revealed that all the marketers are literate. This confirms with the work of Hamidu (2014) who revealed that all the date-fruit markets are literate. This can help them understand the market and also the application of the strategies appropriately.

Table 1: Socio-economics characteristics of date-fruit marketers.

Socio-economic xtics	Retailers (N=65)		Wholesalers (n=15)	
	Frequency	Percentage	Frequency	Percentage
Age				
21-30	20	30.77	3	20
31-40	27	41.54	6	40
41-50	8	12.31	2	13.33
> - 50	10	15.38	4	26.67
Sex				
Male	65	100	15	100
Marital Status				
Single	26	40	3	20
Married	39	60	12	80
House Hold Size				
1 - 5	20	30.76	-	-
6 - 10	29	44.62	5	33.33
10 above	16	24.62	10	66.67
Marketing of Experience				
1 - 5	13	20	-	-
6 - 10	24	36.92	-	-
11 - 15	16	24.62	5	33.33
16 - above	12	18.46	10	66.67
Level of Qualification				
Primary	16	24.362	-	-
Secondary	10	15.38	-	-
Tertiary	9	13.85	5	33.33
Qur'anic	30	46.15	10	66.67
Level of Annual Income (₦)				
< -150,000	22	33.85	-	-
151,000 - 250,000	43	66.15	-	-
251,000 - 350,000	-	-	4	26.67
>350,000 and above	-	-	11	73.33
Initial Capital (₦)				
Less Than 50, 000	40	61.54	9	60
51,000 – 100,000	25	38.46	2	13.33
200,000 and Above	-		4	26.67
Total	65	100	15	100

Source: Field survey, 2022.

The result also shows that majority of the retailers (66.15%) earn annual income ranging from ₦151,000 – ₦250,000 and wholesalers (73.33%) had annual level of income above ₦350,000. The higher the level of the business, the more the level of income. This confirms with the work of Obadimu (2015) who clearly indicated that the wholesalers earn annual income higher than the retail traders.

Table 1 shows that the majority of the retailers (61.54%) and wholesalers (60%) started date-fruit marketing with less than ₦50,000.00. This indicated that most of the respondents started the business on a small scale. This confirms with the work of Abdulaziz

(2021) on the marketing of date-fruit in Jigawa state, Nigeria that the initial capital of the respondents (67%) was less than ₦50,000.00.

Analysis of Costs and Return of Date-Fruit Marketing

The result of the Gross Margin per50kg bag of date-fruit per week is presented on Table 2.

Table 2: Costs and Return of the Retailers and Wholesalers.

Retailers (n=65)   **Wholesalers (n=15)**

Items	Value(₦)	Items Value (₦)	Value (₦)
A Total Revenue (TR)	**37,000**	**A Total Revenue (TR)**	**30,000**
B Variable Cost (VC)		B Variable Cost (VC)	
Purchase	30,000		25,000
Transportation	10,000		500.00
Empty Bag (50 Kg)	500.00		400.00
Loading and Offloading	100.00		100.00
Damages	400.00		1000.00
Storage	100.00		200.00
Miscellaneous	400.00		1000.00
Total variable cost (TVC)	**31,600**	**Total variable costs (TVC)**	**28,200**
Gross margin (A-B)	**5,400.**	**Gross margin (A-B)**	**1,800**

Source: Field survey, 2022.

The result on Table 2 shows that the total revenue of the retailer per 50kg bag of date-fruit in the study area was ₦37,000.00 and total variable cost per 50kg bag incurred was ₦31,600.00 while from the wholesale market total revenue per 50kg bag of the date-fruit in the study area was ₦30,000.00 and total variable cost per bag of 50kg incurred ₦28,200.00. Thus the gross margin per 50kg bag of the date-fruit was ₦5,400.00 and ₦1,800.00 for retailers and wholesalers, respectively. The result implied that date-fruit marketing in the study area was profitable business, since the gross margin was positive.

Marketing Efficiency of the Date-Fruit Marketers

The marketing efficiency per 50kg bag of date-fruit is calculated and presented on Table 3.

Table 3: Marketing Efficiency of the Retailers and Wholesalers

Variables	Retailers	Wholesalers
ME	23%	20%

Source: Field Survey, 2022.

The result shows that the retailers incurred a marketing cost of ₦31,600.00 per 50kg bag while the wholesalers incurred a marketing cost of N28,200.00. The marketing efficiency of the retailers is higher (23%) than that of the wholesalers (20 %). This implied that retail outlets are more efficient than wholesale outlets. However the overall market is inefficient because the marketing efficiency ratio for both retailers and wholesalers is low. The market will be said to be inefficient since the outcome of the marketing efficiency is not to close or above the average of 50%.

Constraints to Date-fruit Marketing

Table 4 shows the constraints faced by the retailers and wholesalers in their market activities.

Table 4: Constraints Faced by the Respondents

Problem encountered	Frequency*	Percentage	Rank
Lack of adequate capital	72	90	1
Poor storage facilities	61	76.25	2
High cost of transportation	42	52.5	3
Pests and diseases	26	32.5	4
Poor pricing	22	27.5	5
Insecurity	20	25	6
High taxation	15	18.75	7

Source: Field Survey, 2022.   *multiple responses existed

The result on Table 4 shows majority of the respondents about 90% had problem of inadequate capital, poor storage facilities (76.25%) and high cost of transportation (52.5%). The result indicated that the majority of the traders were small-scale in nature with a small capital base and were unable to get financial assistance from credit institutions. This agrees with the findings of Okere (2016) on Marketing Efficiency of Palm Kernel in Ovia North East Local Government Area of Edo State, Nigeria, who revealed that the greatest constraint of the respondents was inadequate capital.

The result on Table 4 also shows that the marketers were faced with the problem of poor storage facility due to poor infrastructural facilities and high cost of hiring shop in the market. This confirms with the work of Abdulaziz (2021) who revealed about 60% of the respondents in Jigawa State, Nigeria, had problem of poor storage facilities. The result also shows that the cost of transportation is too high probably due to the poor situation of both the rural roads and the urban high ways. Therefore, transporters charge more to convey goods. This agrees with the findings of Obadimu (2015) who revealed transportation cost as the most constraint faced by the respondents in North- West, Nigeria.

Conclusion

It can be concluded that date-fruit marketers in Damaturu Metropolis Yobe State, Nigeria, are literate married young men, well experienced with large family sizes. Date-fruit Marketing is profitable but has an inefficient system.The constraints faced by marketers were inadequate capital, poor storage facilities and high cost of transportation. It is recommended that government should provide adequate infrastructural facilities especially good roads to enhance transportation and reduce the cost of transportation. It is also recommended that the government should provide good storage facilities and preservation techniques to enhance quality of date-fruit and to reduce damage due to spoilage.

References

Abdallah, A. E. (2018). Marketing Efficiency of Date-Fruit in Khartoum State, Sudan, *Journal of Agricultural Science,* 10 (5):384-389.

Abdulaziz, K. B. (2021). Analysis of Market Structure and Conduct of Date-Fruit in Jigawa State Nigeria, *Journal of Marketing and Consumer Research,* 5(3):309-317.

Adesina, A. C. and Kehinde, A. I. (2008). Economic Analysis of Wholesale Fruit Marketing in Ibadan Metropolis of Oyo State, Nigeria. Proceedings of the 22ndAnnual National Conference of Farm Management Association of Nigeria on 15 May 2008, held in Lagos State, Nigeria.

Ani, A. O.and Bawa, D. B. (2009). Inter Market Performance Pricing Efficiency of Imported Rice Marketing in South-South Nigeria. The Case of Akwa Ibom State, Nigeria, *Journal of Agricultural Science,* 1 (2): 53-63.

Awoyemi, T. (2011). Analysis of Profitability of Fish Farming among Women in Osun State Nigeria. *Journal of Economics and Sustainable Development*, 2(2):73-41.

Bila, Y. and Bulama, Y. (2007). Marketing Efficiency: A Case Study of Maiduguri Cattle Market Borno State, Nigeria, *Global Journal of Pure and Applied Science,* 13(1):7-12.

FOA (2000). Food and Agricultural Organization Bimonthly Food Outlook Report.

FAO (2002). The State of Food Insecurity in the World Report Rome.

Hamidu, K. (2002). Socio-Economic Characteristics and Returns of Date-Palm Marketing in Gombe State, Nigeria, *Journal of Economics and Sustainable Development,* 5(10):4923-4932.

Hornly, A. S. (2000). Oxford Audience Learners Dictionary of Current English Sixth Edition, Oxford University Press.

John, T. B. (2011). Analysis of Palm-Kernel Marketing in Barikin Ladi Jos Plateau State Nigeria. Unpublished Project Department of Agricultural Economics, University of Jos, Plateau State Nigeria.

Kenen, P. B (2000). 4th Edition. The International Economic Cambridge University Press Report.

Kohl, R. K. and Uhls, J. N. (2001). Marketing of Agricultural Products. 9th Edition Hall (July, 29th 2001). Report.

Ministry of Land and Survey Yobe State (2004). Report.

Obadimu, M. (2015). Marketing Performance of Date-Palm among Retail Traders in North – West Nigeria, *International Journal of Agriculture, Forestry and Fisheries,* 3 (4): 51-63.

Olukosi, J. O and Isitor, S. U. (1990). Introduction to Agricultural Marketing; and Prices Principles and Application Living Books Series. G. U Published Abuja p. 106 Report.

Okere, R. A. (2016). Marketing Efficiency of Palm Kernel in Ovia North East Local Government Area of Edo State, Nigeria, *International Journal of Business Policy and Strategy Management,*3 (10): 69-78.

Sani, N. (2010). Exploring the Nigeria Date-Fruit Germplasm for in Vitro Collagenases, Paper Presented at the Fourth International Date-Fruit Conference, Held March 15th -17th, 2010, Abu Dhabi United Arab Emirates.

Sambo, A. S. (2021). Analysis of Market Structure of Date-Palm in Northern Nigeria, Borno, Jigawa and Yobe States, *Journal of Marketing and Consumer Research,* 3 (10): 438-443.