

Honey Marketing in Ibadan Metropolis of Oyo State, Nigeria: An Economic Analysis

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ABSTRACT The study was carried out to analyze the profitability of honey marketing in Ibadan metropolis of Oyo State. The study examines the socio-economic characteristics of honey marketers, estimate the cost and quantify the returns and determine the factors that influence the level of profitability. Purposive sampling technique was used to select 100 honey marketers and 98 questionnaires were valid for analysis. The data were analyzed with percentage, frequency distribution, gross margin analysis and regression model. The findings revealed that 76.5% of the marketers were male. 82.7% are literate and 61.2% had marketing experience of less than 10 years. Also, 84.7% of the respondents obtained their capital from informal source and 75.5% of the respondents used hired labour in their marketing activity. The study further revealed that the business could be profitable with average gross margin of ₦33,852.40 per month. The regression analysis shows that variables such as age, gender, marketing experience and cost of starting the honey marketing business contributed significantly to the profitability of the business. It was recommended that the government should provide credit facility while the honey marketers should organize themselves to cooperative society so as to access such loans.

INTRODUCTION

Honey can be described as the sticky, juicy and sweet like substances obtained from the social and colonial insect called Honey bees (*Aspismellifera*) (Issa 1990). Honey bees are a subset of bees which fall into the order of hymenoptera and sub-order apocrita. The science and practice of exploiting bees' products and services known as Apiculture has been in existence for thousands of years (Keystone 2001).

Men have been harvesting honey from wild nest for several years and it was discovered that honey crop can be obtained in a more convenient and easier way if bees are encouraged to nest in hives. This led to the origin of beekeeping and management in hives. It is widely practiced in Nigeria and other countries of the world as a result of extensive and magnificent importance of honey in the areas of food and medicine (Ojeleye 1990). Honey being a biological substance and intended for food and pharmaceutical use need greater attention in quality and handling.

The quality of honey produced is of more concern to consumer and producers to attain a good quality product. Effective handling of honey crop can be best achieved through an efficient marketing system (Dandant 1967).

As reported by Fabunmi (2010), the relevance of honey to both the local, national and global economies cannot be over-emphasized. According to him, honey bees contribute \$15bn to the value of US crops annually. The use of bees in biological (non-pesticide) control of agricultural pests is also an industry generating \$20m in the US per year. About \$200m worth of honey is produced in the US annually while over \$30m is made by American beekeepers from renting out bees for crop pollination. The market for honey beverages in the US is worth about \$195m per year aside the processing and packaging of honey-by products such as pollen, propolis and royal jelly as food supplements, which generate more than \$1bn annually. Moreover, the beneficiaries of the bee wealth in the US are not limited to beekeepers put at about 212,000 and crop farmers. Many non-beekeepers also generate income from other bee based businesses like honey packaging, production of honey-based cosmetic, candle making, medical practice predicated on bees and honey (bee therapy), beekeeping equipment manufacturing, research, food service industry such as baking with honey, production, honey sports beverages and honey wine. Beekeeping is also a veritable means of creating jobs particularly for the unemployed youth and poor rural population.

Ojeleye (1999) reported that some industries such as food, pharmaceutical and cosmetics as

well brewery industries depend on honey as part of their raw materials in production of their commodities, for example, drugs, body creams, lip balm, confectionaries etc. Honey is a sweetener in food, alternative to sugar whose consumption can be detrimental to human health. It can be used as food supplement since it contains most of the nutrients needed for body metabolism; thereby combating malnutrition.

Bianchi (1979) claimed that honey contains a diversity of substance which are indispensable of all living things. This claim is confirmed by the fact that honey is used in the treatment of various ailments such as cough, constipation, diabetes, sore, burns, indigestion, arthritis, used as elixir to relieve sore throat (Keystone 2001). Honey is useful in the treatment of acetomenia (a disease of cow) in veterinary medicine (Adejare 1990). According to FAO (1980), honey is very useful in preventing infections, reducing inflammation and promotes rapid healing. Coggin (1975) submitted that honey brings about an increase in hemoglobin when taken as food.

Kale (1977) stated that honey and bee wax which are the main products are in great demand in local markets of many third world countries and the international markets. Unfortunately, there is a shortage of these products amidst an ever increasing demand.

The production of any commodity is said to be incomplete until the commodity concerned reaches the ultimate consumers. Therefore, marketing is very important aspect of the production system.

Concept of Marketing

Marketing means different things to different people. The difference in meaning is as a result of differences in view point; not from differences in the activity itself. Some observers view marketing broadly while others view it narrowly. Some individual recognizing the many varied viewpoints that can be taken of marketing prefer not to attempt to define it (Olufokunbi 1993).

According to Rachman and Mescon (1985), marketing is finding out what buyers want or need and then getting it to them for the profit or benefit of everyone involved in the transaction. Sellers must search for buyers, identify their needs, design good products and services, set reasonable prices for them to the benefit of both buyers and sellers, that is, the parties involved

must at least be better after the process than before.

The definition of marketing given by Rachman and Mescon (1985) is in line with that of Kotler and Armstrong (1997), which is of the opinion that marketing occurs when people decide to satisfy needs and wants through exchange in the area of needs and wants satisfaction. Exchange is the act of obtaining a desired object from someone by offering something in return. Whereas exchange is the core concept of marketing, a transaction in turn, is marketing's unit of measurement. Transaction is a trade between two parties that involves at least two things of value, agreed upon conditions, a time of agreement, and a place of agreement. To Kotler and Armstrong (1997), transaction marketing is part of relationship marketing; relationship marketing is the process of creating, maintaining and enhancing strong value-laden relationship with customers and other stakeholders. They then concluded that marketing means managing markets to bring about exchanges and relationship for the purpose of creating value and satisfying needs and wants.

McCarty (1996) viewed marketing as the performance of business activities which direct the flow of goods and services from producer to consumers and accomplish the company's objectives.

According to Olufokunbi (1982), the definition that is most succinct and all embracing is the one given by the British Institute of Marketing, which runs thus: "Marketing is the management process for anticipating, identifying, and satisfying customer requirements profitably".

From the definition, it can be inferred that:

- a. Marketing concerns itself with a clear definition of business objectives, for example, profitability, marketing share, prospect, corporate image etc.
- b. A clear definition of the company's suppliers and customers.
- c. Proactive and consistent anticipation of customer's needs, wants, perception and preferences through organized efforts.
- d. Continuously sourcing or designing need satisfying products that are appropriately priced and distributed.

One of the major themes that run through the definitions is that marketing philosophy regards the customer as the king and the main focus in the entire business processes. The definitions

equally emphasize on balancing company prospects and customer satisfaction. Also the definitions underline the essence of continuous planning environmental scanning and adaptation.

All of the above are contained in the four ingredients of marketing usually referred to as the marketing mix which are identified as the four Ps in marketing via product, price, promotion and place.

In line with the definitions of marketing, Adegeye (1985) defined agricultural marketing as the stages of operation which helps the movement of agricultural product from the farms to the consumers in the proper form and at the proper time and place.

From the definition of marketing as given by various authors, agricultural marketing according to Folayan (2005) can be defined as comprising all the operations involved in the movement of food and raw materials from the farm to the final consumer. It, therefore, includes the assembly, preparation for consumption, and final distribution. In order to achieve the aim, services such as transportation, storage, grading and packaging, financing, risk bearing, price determination, generation and distribution of market information are all needed.

As regard marketing and in conformity with its definition and its relevance to this study in respect to honey marketing, it is salient to state that marketing is applicable to honey marketing and as it is to most businesses, since honey marketing is about customers.

Agricultural marketing has a multiplier effect on the storage, processing, packaging etc. requires the establishment of industries to handle these activities. This leads to increase in employment and stimulate local production (Adegeye and Dittoh 1985). Efficient marketing paves way for increase in volume that consequently motivates government to provide necessary infrastructure such as good roads, pipe borne water, storage facilities, provision of agricultural credit etc. in order to develop the economy and create convenience to the masses.

Marketing ensures that seasonal goods especially in agriculture are available throughout the year with slight fluctuation in price. This creates a sort of assurance in the producer of selling all the producers and consumers are also assured of obtaining the product throughout the year through an effective storage system (Adegeye and Dittoh 1985).

Adegeye and Dittoh (1985) posited that marketing stimulates research into techniques of food and meat preservation and preparation of various food items to meet the different taste of the consumers through market surveying. Agricultural marketing serve as an indicator or consumer preference through the price they are ready to pay which helps in studying the economic problems of how much to produce as farmers are ready to produce product that have high demand.

Problem Statement

Despite high demand for honey in our society, it was discovered that the supply of the honey and its products seem not enough to meet the demand in the market in the area of study. The inherent problems of honey marketing could be traced to poor transportation and logistics, inefficient processing of honey, poor packaging and handling.

Poor transportation is a conspicuous problem of any marketing activities in Nigeria as most of the road links from rural to urban center are in bad stages. This discourages markets from distributing the product to big cities due to rigours it entails in reaching the urban centers from rural areas. More so, most motorists in the fear of damaging their vehicles avoid such horrible road (Adegeye and Dittoh 1985). Inefficient processing of honey and its products for sale constitute the problem faced by marketing. Some apiarist do not understand the techniques involve in processing of honey after harvesting such as straining, floating, pressing, centrifuging to attain good quality product (FAO 1986).

Poor packaging and harvesting of honey products result in rapid deterioration of the products. Adulteration of honey is also another major problem experienced in its marketing (Ojeleye 1999). Some marketer in order to offer large quantity of the product for sale add sugar, water and saccharine to honey which eventually alters its quality, nutrient composition and moisture contents. This is the reason why some individual desist from the purchase of the product as the unadulterated product is so scarce. This causes inefficiency in marketing of honey.

The aforementioned problems no doubt account for slackness in the marketing of honey and its products. For these reasons, one needs to be categorical as to the factors that affect mar-

keting of honey as well as to whether honey marketing is profitable or otherwise the category of people involved, the experience, attraction, sources of inputs, level of demand and problems faced by honey marketers in the area of study.

RESEARCH METHODOLOGY

This study was carried out in Ibadan North West Local Government. It was created out of the defunct Ibadan Municipal Government (IMG) in 1991. The town and villages in the Local Government Area are Dugbe, Onireke, Eleyele, Jericho and Mokola. According to census 2006 figure, the population of the Local Government was 327,250. It consists of people from different ethnic groups. Commercial activity in the Local Government is very lucrative with the markets in Ibadan metropolis on daily basis while that of other towns and settlement are on periodic basis. The economy of the area revolves round trading, agriculture, civil service, artisans, sawmilling etc.

Sampling Techniques

Purposive sampling technique was used to select five (5) markets namely, Dugbe, Onireke, Eleyele, Jericho and Mokola on the basis of intensity of honey marketing. Twenty respondents were purposively selected from each market to make a total of one hundred respondents.

Method of Data Collection

Well-structured questionnaire was used to collect data used in this study. The questionnaire elicited information on age, gender, marital status, level of education, sex and years of experience in bee keeping as demographic characteristics of the respondents while further information was collected on cost and returns, factors affecting the level of profit, problem encountered and other relevant information.

Method of Data Analysis

Data were analyzed with the use of descriptive statistics such as frequency distribution and percentages while inferential statistics such as gross margin and regression.

Gross margin analysis was used to estimate cost and returns and to determine the level of profitability of operation of the marketers.

The gross margin can be represented thus:

$$GM = TR - TVC$$

Where

GM = Gross Margin

TR = Total Revenue

TVC = Total Variable Cost

Regression Analysis

The implicit function relating to marketer's regression analysis can be expressed thus

$$Y = F(X_1, X_2, X_3, X_4, X_5, X_6 \dots e)$$

Y = Gross Margin

X_1 = Age

X_2 = Gender

X_3 = Family size

X_4 = Educational level

X_5 = Marketing experience

X_6 = Cost of starting the business

e_i = error term

RESULTS AND DISCUSSION

Table 1 shows age, gender, marital status, family size and level of education of the respondents.

Majority (74.5%) of the respondents were below the age of 46 years. This implies that most of the respondents are in their active age because honey marketing may involve using aggressive marketing strategies with high level of risk that can be undertaken only by the youth. About 51.1 percent of the respondents were married with 87.7 percent having a family size of less than 7 members. Most of the respondents had secondary education (29.6%) while primary education, adult literacy /non-formal education and tertiary education accounted for 20.4, 19.4 and 13.3 percent respectively. It could be inferred that most of the honey marketers in Ibadan metropolis were married with moderate family size. The moderate family size might enhance their ability to invest earnings in the business. Though a large percentage were literate, their educational level is very low. The literacy level of the respondents might influence their operational efficiency and marketing strategies. Also, majority (82.7 percent) of the respondents had formal education.

Table 2 shows that above 61.2 percent of the respondents had been in the business for less than 10 years, while 38.8 percent had been in the business for over 10 years. This may imply that honey marketing can be successfully combined with

Table 1: Demographic characteristics of honey marketers in the study area

<i>Characteristics</i>	<i>Frequency</i>	<i>Percent</i>
<i>Age</i>		
18 – 25	17	17.30
28 – 35	17	17.30
36 – 45	39	39.80
46 – 55	25	25.50
Total	98	100.0
<i>Gender</i>		
Male	75	76.50
Female	23	23.50
Total	98	100.0
<i>Marital Status</i>		
Married	54	55.10
Single	21	21.40
Widowed	1	1.50
Divorce	8	8.20
Total	98	100.0
<i>Family Size</i>		
1 – 3	40	40.80
4 – 6	46	46.90
7 – 9	10	10.20
10 – 12	2	2.00
Total	98	100.0
<i>Level of Education</i>		
No formal education	17	17.30
Primary education	20	20.40
Secondary education	29	29.60
Tertiary institution	13	13.30
Adult literacy	19	19.40
Total	98	100.0

Source: Marketing survey 2007

other vocations to ensure continuous and stable flow of income to the household.

Majority, (70 percent) of the respondents were attracted into the business by profit, while 27.6 percent joined due to lack of employment. The main factor of attraction is expected as profit making is the major goal of business investors.

Table 3 shows that majority (84.7%) of the respondents finance their activities through credit from informal source. This may imply that honey marketers do not have access to institutional source of credit. Also, majority (81.6%) of the marketers obtained their supply of honey from farmers. This may be because they want to avoid the exploitative tendencies of the middlemen. 75.5 percent of the respondents make use of family labour for the marketing activities. While 69.4 percent of the respondents submitted that the level of demand for honey is low. The low demand for honey might be due to low knowledge. Lack of awareness of the importance of honey to human health, availability of substitutes as well as the inability to differenti-

Table 2: Socio-economic characteristics

<i>Characteristics</i>	<i>Frequency</i>	<i>Percent</i>
<i>Years of Experience</i>		
Less than 10 years	60	61.20
11 – 20 years	23	23.50
21 – 30 years	13	13.30
31 – 40 years	2	2.00
Total	98	100.0
<i>Secondary Occupation</i>		
Civil servants	23	23.50
Trading	46	46.90
Farming	27	27.60
Others specify	2	2.0
Total	98	100.00
<i>Attraction into the Business</i>		
Profit	70	71.40
Unemployment	27	27.60
Government policy	1	1.0
Total	98	100.0
<i>Membership of Trade Union</i>		
Yes	17	17.30
No	81	82.70
Total	98	100.0

Source: Market survey 2007

ate between the original and fake honey thus considering investing a huge amount on the purchase as a waste of money.

Table 3: Source of input and level of demand and problems encountered

<i>Characteristics</i>	<i>Frequency</i>	<i>Percent</i>
<i>Source of Finance</i>		
Personal savings	27	27.60
Cooperative	15	15.30
Commercial bank	15	15.30
Friends and relation	41	41.80
Total	98	100.0
<i>Source of Purchasing</i>		
Farmer	80	81.60
Wholesalers	9	9.20
Retailers	9	9.20
Total	98	100.0
<i>Source of Labour</i>		
Family labour	54	55.10
Self labour	20	20.40
Hired labour	24	24.50
Total	98	100.00
<i>Level of Demand</i>		
High	19	19.40
Average	11	11.20
Low	68	69.40
Total	98	100.00

Source: Market survey 2007

Table 4 shows that 40.82 percent of the honey marketers in the study area faced the problem of inadequate finance; 37.75 percent faced problem of adulteration while 21.43 percent faced problem of poor processing.

Table 4: Problems encountered by respondents

<i>Problems encountered</i>	<i>Frequency</i>	<i>Percent (%)</i>
Inadequate finance	40	40.82
Adulteration	37	37.76
Poor processing	21	21.42
Total	98	100.00

Source: Market survey 2007

Gross Margin Analysis Result

The Total Variable Cost (TVC) is ₦184,167.50 while the Total Revenue (TR) is ₦4,204,400. The number of respondents (N) is 98.

The gross margin analysis of the respondents per month is calculated thus.

$$GM = TR - TVC$$

$$GM = \text{Gross Margin}$$

$$TR = \text{Total Revenue}$$

$$TVC = \text{Total Variable Cost}$$

$$TR = ₦4,204,400$$

From the above, TR per month is

$$\frac{TR}{12} = \frac{₦4,204,400}{12} = 350,366.6$$

$$\text{Average Total Revenue (ATR)} = \frac{350,366.6}{98}$$

$$ATR = ₦35,731.70$$

$$\text{Variable Cost} = ₦15,513.3$$

$$\text{Cost of Labour} = ₦90,325$$

$$\text{Cost of Packaging} = ₦74,100$$

$$\text{Cost of Purchase} = ₦4,229.20$$

$$\text{Total Variable Cost (TVC)} = ₦184,167.50$$

$$AVC (\text{Average Variable Cost}) = \frac{₦184,167.50}{98}$$

$$₦1,879.30$$

Therefore

$$GM \text{ per month} = ATR - AVC$$

$$= ₦35,131.70 - ₦1,879.30$$

$$= ₦33,852.4$$

The average gross margin per marketer per month is ₦33,852.4. This implies that honey marketing could be profitable, if the earning is compared with minimum wage of Federal Civil Service of about ₦11,200 per month. Honey marketing could therefore be said to be a worthwhile venture in the area of study.

Result of Regression Analysis

The outcome of linear and semi-log regression models is as shown in Table 5. The semi-log regression model was selected as the lead

equation based on econometric and statistics, F-test, and coefficient of determination criteria.

Table 5: Outcome of regression analysis

	<i>Linear</i>	<i>Semi-Log</i>
Constant	310.748 (252.188)	5.966 (0.191)
Age X_1	24.839 (44.576)	0.027968 (0.34)
Gender X_2	239.922 (109.781)	0.153 (0.083)
Family size X_3	-85.306 (63.265)	-0.07914 (0.045)
Educational level X_4	-16.40 (35.124)	-0.00564 (0.045)
Marketing experience X_5	-31.000 (59.736)	0.01682 (0.045)
Cost of starting the business X_6	35.154 (32.240)	0.02896 (0.024)
R – Square (R^2)	8.7%	8.7%
Adjusted R Square (R^2)	2.6%	2.7%
F-Statistics	1.438	1.45

* Significant @ 5% level

Computed from data analysis 2007

From the result, it could be seen that the coefficient of variability of $R^2 = 2.7$ percent. This shows that the specified explanatory variable explained 2.7% of the total variations in the respondents' income from honey marketing. It could be seen that the variables (X_2), gender and (X_3) family size were significant at 5% level. However, variables such as (X_4) educational level, (X_5) marketing experience and cost of starting the business (X_6) were not significant at 5% level.

The positive sign associated with age (X_1), gender (X_2), marketing experience (X_5) and cost of starting the business implies that the higher these variables are the higher the income earned by the marketers.

CONCLUSION

Findings from the study shows that honey marketers in the study area were dominated by young, married and literate men who derived their capital from the informal source and used mainly family labour for marketing operations. They were attracted into the business by profit and lack of employment. The challenges faced by the marketers include, inadequate finance, adulteration of honey and poor processing. The problems faced by the marketers include, inadequate finance, adulteration of honey and poor pro-

cessing. The business of honey marketing could be said to be profitable with an average gross margin of ₦33,852.4 per respondents per month in the area of study.

RECOMMENDATIONS

Based on result and conclusion from this study, it is imperative to make the following recommendation in order to improve the efficiency of honey marketing in the study area.

- Government should put in place adequate and efficient credit facility for worthy honey marketers so as to finance their honey marketing activities while the honey marketers should organize themselves to co-operative society so as to be able to access loans and credit from various financial institutions.
- Honey marketers should be educated on the marketing strategies that will enhance honey marketing.
- There is need to sensitize the public on the importance of honey to healthy living while the association of honey marketers should put in place strategies for detecting fake / adulterated honey with defaulters being prosecuted

REFERENCES

- Adejare S 1995. Beekeeping in Africa. *FAO Agricultural Science Bulletin*, 68: 130.
- Adegeye AJ, Dittoh JS 1985. *Essentials of Agricultural Economics*. Ibadan: Impact Publishers Nigeria Limited.
- Bianchi EM 1979. Honey has a greater nutritional value than sugar. *American Bee Journal*, 119(7): 97.
- Coggin J 1975. Tropical and Subtropical Agriculture. *FAO Paper No. 20*. Rome: FAO, pp. 101-168.
- Dandant P 1967. *First Lesson in Beekeeping*. Washington D.C.: University of California Press.
- Fabunmi T 2010. Untapped Billion from Bees. *The Sunday Punch*, March 21st, P. 2.
- Folayan JA 2005. *Economic Analysis of Cocoa Marketing in Ondo and Ekiti States of Nigeria*. Ph.D Thesis, Unpublished. Department of Agricultural Economics and Extension, Federal University of Technology Akure, Nigeria.
- Food and Agricultural Organization FAO 1986. *Tropical and Subtropical Agriculture*. Rome: FAO.
- Issa YA 1999. Economic Benefits of Beekeeping. *A Paper presented at the Beekeeping Training in Ibadan Oyo State, Nigeria, Organized by Beekeepers* held at Premier Hotel Ibadan on 4th July, 1999.
- Kale VE 1977. World Prospects for Honey. Rome, Italy: FAO, *World Animal Review*. P. 28.
- Keystone RC 2001. *Marketing of Agricultural Products*. 3rd Edition Ibadan: Macmillan Company.
- Kotler P, Armstrong G 1997. *Marketing: An Introduction*. New Jersey: Prentice Hall International.
- McCarty E 1996. *Basic Marketing*. New York: Macmillan Publishing Company Inc.
- Ojeleye B 1999. Chemical composition of honey. *The Beekeeper Journal*, 1: 4-5.
- Olufokunbi B, Utomakili JB 1982. *Structure, Conduct and Performance of the Rice Marketing Industry in Bendel State of Nigeria*. Mimeo P. 176.
- Olufokunbi B 1993 *Marketing and Successful Living*. Ile-Ife: Obafemi Awolowo University Press Limited Inaugural Lecture Series 104, March, 1993.
- Rachman DJ, Mescon MH 1985. *Business Today*. New York: Random House Inc.