Enhancing the Marketing Efficiency of Honey Products in Cooperatives in Ethiopia

R Dayanandan*

Abstract

The honey marketing cooperatives were established to provide nutritional, economic and ecological security to the rural community in Ethiopia. However, all the producers in the study area are not selling their products to the cooperatives. Therefore, improving the marketing efficiency of the cooperatives is essential to attract the members and non members. Hence the main focus of this paper is to assess the marketing efficiency of honey cooperative in the study area. To collect the primary data, 124 members from one honey marketing cooperative were selected randomly. The collected data were analyzed statistically to arrive the meaningful results. Ratio analysis was carried out to assess the performance of cooperative. In addition, Binary Logistic Regression model was used to trace out the influential factors that determine the marketing efficiency. The outcome of this study showed that the efficiency of the cooperative in terms of performance was poor and the financial ratio result showed that the value of the Birr outcome was below the average to the bench mark (0.15). Participation of members in the cooperative affairs was also poor and they lacked managerial and technical skills to run the cooperative business which leads to inefficiency. Regression analysis results indicated that out of 32 exploratory variables, 11 variables were found to be significant either 1% or 5% level. Also due to the negative attitude of members towards the society, most of the honey products were sold to the retailers and brokers. To improve the efficiency, the management has to minimize the operating expense save accumulated profit for capital growth. Periodical training to the members and management body is a vital to increase the efficiency of marketing.

Keywords: *People's Organization, Marketing Efficiency, Honey Products, Profitability.*

Introduction

Ethiopia's economy is dependent heavily on agriculture (just like many other countries in Sub-Saharan Africa) which accounts for 40.2% of its total Gross Domestic Product (GDP) and 80% of total employment. Over 80% of its population are farmers with a significant number of smallholder farmers, the expansion of the agricultural and service sectors is the main fuel for the country's recent economic growth (Olingo, 2015).

Honey is one of the agricultural products which is being produced and marketed in Ethiopia. It is the largest producer of honey in Africa and is one of the top 10 producers of honey in the world and is the largest one in Africa (USAID, 2012). The country accounts for 23.6% of the continent's total honey production with 1.8 million smallholder beekeepers, managing more than 7.5 million bee colonies in hives, the potential for production is roughly 500,000 tons per year (CSA, 2011). In addition, honey production is an integral part of Ethiopian culture, as beeswax and honey are prominent in the religious and cultural life of Ethiopian people (Gidey and Mekonen, 2010). It is either consumed as a food supplement or is fermented to make the traditional alcoholic drink (tej). Globalization has changed the trade by opening market opportunity and increasing competitive pressure for producers in many countries. The domestic market in Ethiopia is illegal and not regulated. While beekeepers complain about the lack of product markets, consumers complain about the increasing price of honey (Gemechisa, 2015).

In the study area (Loka Abaya District), due to the high honey production potential, the smallholder beekeepers need a market to sell their crude honey produce to town/village collectors nearby. But, they are not satisfied from village markets and farm gate

*Professor, Hawassa University, Awassa, SNNPR 005, Ethiopia. E-mail: afianand@gmail.com

prices from the merchants who enter door to door in farmers home. A rather lengthy chain of the actors involved leads to a large gap for producer access to larger markets with better pay. Smuggling is another issue that drives legal actors away from the market.

According to the live stock and fish office annual report (2016), in study area there is high honey production potential but the producers are selling their products to the local markets and getting lower price. To overcome these problems, honey marketing cooperatives (peoples' organizations) were established in the district. But in many cases the honey marketing cooperatives lack proper collection, storage and transportation facilities and hence the quality of honey is compromised (Gemechisa, 2015). They also have low awareness of business concepts: information gathering and analysis, pricing and promotion. Different aspects need to be considered for performance evaluation and for assessing the economic efficiencies and inefficiencies. Cooperatives must plan and control their operation to achieve economic efficiency

(Knapp, 2000). In this background, the central focus of this paper to assess the efficiency of honey marketing cooperative and its determinant factors in the study area.

Objectives of the Study

1. To examine the proportion of honey sold through the cooperative by the member producers in study area.
2. To understand the channels of honey marketing by the cooperative in the study area.
3. To assess the efficiency of honey marketing cooperative in the study area.
4. To identify the factors that influences the marketing efficiency of honey cooperative in the study area.

Review of Literature

Agutya (2011) conducted a study on performance of multipurpose cooperatives in the province of oriental mindro, Philippines, and found that multipurpose cooperatives under the study area were properly managed. He arrived at the conclusion from financial records and reports, which were up to date and available to members.

According to Alema (2008), the cooperatives' liquidity ratios were fluctuating during the consecutive years due to a difference in loan amount from year to year with regards to interest payable. As borrowing decreased the liquidity ratio, it was suggested that cooperatives increase their capital to minimize their loans.

Suri and Singhal (2013) made an extensive study on comparative analysis of financial performance of Indian farmers' fertilizer cooperatives. Profitability and financial soundness was compared using the Profit and Loss Statement and examining solvency, liquidity and profitability ratios. The results revealed that, operating profit, turnover ratio, debt to equity ratio and current ratio were at a desirable position.

Muthyalu (2013) examined the performance of 4 multi-purpose primary cooperatives and their members' participation in marketing of the agricultural input and output by taking a total of 163 sample respondents in Adwa district. Logit econometrics model was employed to identify the determinant of members' participation. Out of total respondents, about 63.8% and 36.2% were active participants and passive participants respectively. 12 explanatory variables were considered in the econometric model out of these, age of the household, education status, shares holding of members, land owned, distance from cooperatives to home of respondents were found to significantly influence the level of participation on marketing of agricultural input and output.

Ratio analysis was used by Daniel (2006) for performance evaluation of the cooperatives, and the liquidity ratio showed below the satisfactory rate. Financial leverage was majorly used and the profitability ratio was also weak for cooperatives in two districts (i.e. an average 89.35% of the assets was financed with creditors fund). Returns earned by the cooperatives were on their assets and were below their interest rate at which the credit was provided from the financial institutions. Debt therefore becomes an increasing percentage of the funding source of the cooperatives. The result of studies carried out by Gebremeskel et al. (2015) indicates that profit margin and marketing efficiency of marketing actors varied with the location and marketing channel size. Agricultural commodities have also been studied using marketing costs, profit analysis and market concentration ratio.

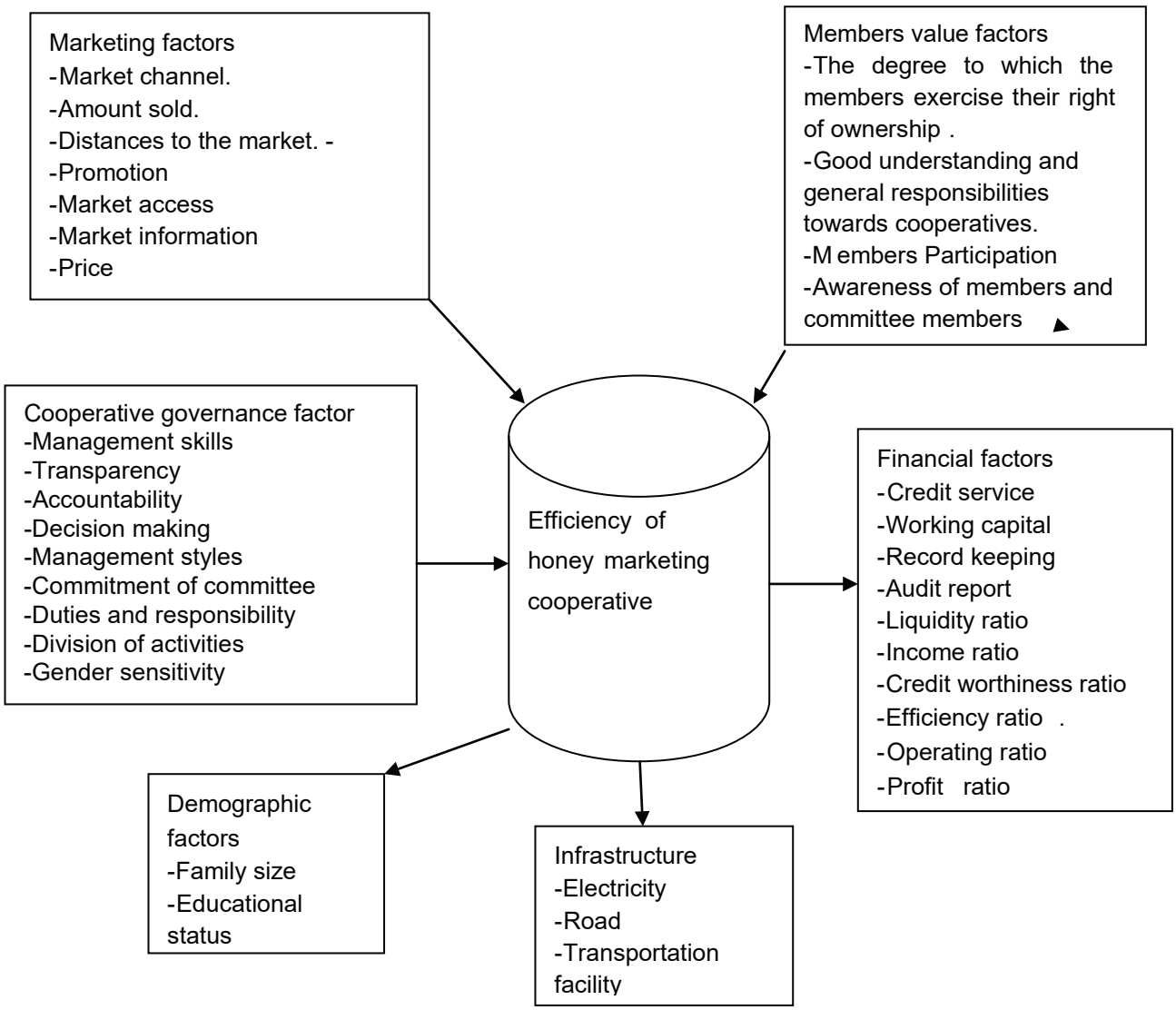
Modified Policy Analysis Matrix (PAM) approach was used by Mohanty et.al. (2002) to examine the efficiency of cotton production in five major producing states of India. The study results indicated that, cotton was not efficiently produced and marketed in the second largest cotton producing state of the country.

To summarize, several studies have been conducted in Ethiopia, on many aspects of cooperative societies, but very few studies are available in assessing the efficiency of honey marketing cooperative. Among the studies reviewed, some of them have carried out on the performances of cooperatives. Other studies included were not conducted directly on the efficiency of honey marketing cooperative. But they have shown the factors influencing the marketing efficiency of cooperative. Thus reviewing them is believed to be necessary as it enables, to guess the level of efficiency of the honey marketing cooperative. Moreover, no studies have been made so far in assessing the efficiency of the cooperative, in Ethiopia in general and honey marketing cooperative in particular. In such away, the present work is an attempt to fill the research gap.

Conceptual Framework

The conceptualized interrelations in the study are defined by the conceptual framework, including the key independent variables were involved and they were interrelated with the dependent variables. The dependent variables determined by different independent variables and this variables further classified into, demographic and institutional, market factor, members value factors and cooperative governance factor as exploratory variables were used. Based on the above theoretical back grounds following conceptual frame work has been framed and presented in Figure 1.

Figure 1: Conceptual Framework of Honey Marketing Cooperative



Source: Author's Analysis

Methodology Used

This paper is based on descriptive design concentrated on both qualitative and quantitative research approach. To select the district, sample cooperative and the members, multistage sampling procedure was used. In the 1st stage, Loka Abaya district was purposively selected due to its high production potential of honey due to the natural forests. In the 2nd stage, one honey marketing cooperative was selected purposively since only one cooperative is available in the district. There are 184 producer members registered in the cooperative including 170 members and 14 committee members. To select the sample size of 119, Yamane (1967) formula was used with 95% confidence level. In addition, from the 14 committee members, 5 sample committee members were selected randomly as sample. Thus a total of sample respondents were selected for this study. The primary data were collected from the sample producer members, management committee and the key informants through the semi-structured interview schedule. Secondary data was obtained from the reports of cooperative promotion offices, journals, and documents of the cooperative.

IBM SPSS version 21 was used for data analysis and output. Frequencies and percentages were used as v descriptive statistics. To assess the efficiency of the honey marketing cooperative, ratio analysis was carried out and to identify the factors influencing the marketing efficiency, binary logistic regression model was applied.

Model Specification

Binary logistic regression model was used to predict a categorical dichotomous variable from a set of predicator variables which are a mix of continuous and categorical variables. Moreover, some of the models pose difficulties when the dependent has two outcomes and the independent variables are a mixture of categorical and continuous variables. Thus, binary logistic regression was appropriate and recommended to predict the binary dependent variables. (Hosmer and Lemeshow, 1989 cited in Muhabie, 2012)

The most popular technique available for modeling dichotomous dependent variables is Binary Logistic Regression. The logistic regression equation takes the form $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 \ldots\ldots\ldots \beta t\ Xt + Ut$, that explained the marketing efficiency of honey cooperative under the indicators of the exploratory variables through the correlation and regression techniques. Where:

Y: Dependent variable is marketing efficiencies of honey marketing cooperative

β0: Intercept

β1. …… βt : Vectors of estimated coefficient of the explanatory variables

X1. ……Xn: Vectors of explanatory variables independent variables

There were 32 variables extracted based on the literature and included as explanatory variables in the model.

Results and Discussion

Profile of the Respondents

It is important to understand the profile of the respondents and it gives the basic information about them and their activities. Under this section sex, age, education level and family size of cooperative members are analyzed and discussed.

Cooperatives tend to be a road way of the members and community. Knowing the sex of the respondents enables to know which sex category is dominant in the cooperative or has the greater aspiration for the membership of the cooperative in the study area. As can be seen from the Table 1, majority (73.3%) of the members are male and the remaining (26.7%) females. From this, it is clear to understand that, beekeeping and honey marketing is an activity which is dominated by male. The reasons could be the nature of activities itself due to fact that, the participation of females in beekeeping is greatly hampered by lack of confidence. Female workers are fearful of the bees especially during harvesting and climbing trees. Most females do not have ability to construct their own hives, the activity that involve labor of cutting big log and make hives from it.

Regarding the respondents' age, the majority (57.1%) of the respondents are under the age category of 31-45 years. The rest (25.2%) under the age category of year 46-60, 10.1% is between the age category of 18-30 years and 7.6% between 61-75 years. Majority of the respondents are within the productive age group and can supply honey to the cooperative.

Education provides encouragement for members to participate actively in the cooperatives. Literate members are aware of their rights and obligations. They also have a positive relationship with the marketing and supplying of honey to the cooperative because return from the cooperative is high. The survey results indicate that a large number (44.5%) of respondents are under the category of read and write. 22.7% has completed diploma and 4.2% attained degree and the remaining (28.6%) not attended any formal education.

The size of the family members has an impact on the supply of the honey. Because if there is large family size in one household, they use more honey for the consumption purpose and they may not have excess product to supply to the cooperative. Majority (65.5%) of the respondents has between 6-8 members, 28.6% of the respondents have the family size that ranges from 4-6 and while 5.9% has the family size that ranges from 1-3. Regarding to the religion as shown in the Table 1, out of the total respondents, majority (72.3%) of the respondents are protestants, and the remaining are catholic (13.4%),, Muslim (8.4%),, orthodox(3.4%), and others constitutes 3%

Table 1: Distribution of the Respondents on the basis of their Sex, Age, Educational Level, Family Size and Religion

Characteristics	Items	Frequency	Percentage
Sex of the respondents	Male	87	73.3
	Female	32	26.7
	Total	***119***	***100***
Age in group of the respondents	18-30	12	10.1
	31-45	68	57.1
	46-60	30	25.2
	60-75	9	7.6
	Total	***119***	***100***
Educational level	Not attending formal education.	34	28.6
	Read and write	53	44.5
	Diploma	27	22.7
	Degree	5	4.2
	Total	***119***	***100***
Family size	Having 1-3	7	5.9
	4-6	34	28.6
	6-8	78	65.5
	Total	***119***	***100***
Religion	Orthodox	4	3.4
	Protestant	86	72.3
	Muslim	10	8.4
	Catholic	16	13.4
	Others	3	0
	Total	***119***	***100***

Source: Author's Analysis

Proportion of Honey Sold

It is the amount of honey the members supplied to the cooperative and it quantifies that, how much members produced and supplied to the cooperative market, how much was used for the consumption purpose and it helps to identify the reason why they not selling the whole produce to the cooperative. Based on the responses obtained, the analysis and interpretation of data are presented according to the information in STable 1. Regarding to the amount of honey sold to the cooperative, the survey results show that, majority (47.9%) of the respondents sold the honey to the cooperative between 3-15 Kg, 33.6% sold between 25-32 Kg and the remaining (18.5%) sold between 16-25 Kg. This shows that, members supplied below half of production and most of the members not sold their honey to the

cooperative. Due to the less amount of honey bought from the members, cooperative could not have maximum earning. Due to that, cooperative profit was small and inadequate to provide services to the members therefore cooperative was not efficient.

Regarding to the distance the members needs to reach the cooperative to the sold honey, majority (52.1%) of the members traveled between 1-2 hours, 21% traveled 4 hours from their home to the cooperative site, 18.5% traveled 3-4 hours and the remaining (8.4%) was near to the cooperative location and travels less than an hour. This indicates that, majority of the members living scattered and far from the cooperative site and small amounts of honey were sold to the cooperative. Due to most of the honey were sold to the local collectors on farm gate, those who were retailers and brokers, cooperative was inefficient. Regarding to the selling way, majority (60.5%) of them sold by the market prices and 27.7% sold by negotiation, and 11.7% sold below the market price. Finally, regarding to the term of sale of the honey, as indicated in Table 2, 47.9% sold honey by both cash and credit, 33.6% sold by cash on hand and the remaining (18.5%) sold by credit.

Table 2: Proportion of Honey sold to the Cooperative by the Members

Variables	Parameters	Frequency	Percentage
Amount of Honey sold	3- 15 Kg	57	47.9
	16-25 Kg	22	18.5
	25-32 Kg	40	33.6
	Total	***119***	***100.0***
Distance	less than 1 hr	10	8.4
	1-2 hr	62	52.1
	3-4 hr	22	18.5
	4-6 hr	25	21.0
	Total	***119***	***100.0***
Honey price	Negotiation	33	27.7
	The market price	72	60.5
	Below the market price	18	11.7
	Total	***119***	***100.0***
Terms of sale	Cash	40	33.6
	Credit	22	18.5
	Both	57	47.9
	Total	***119***	***100.0***

Source: Author's Analysis

Marketing Channel of Honey Products

Marketing channel is defined according to Cough et al, (2002) as "a set of interdependent organizations involved in the process of making available a product or service for use or consumption". The path one's goods follow from their source of original production to final destination (Ayelech, 2011; Muhammed, 2011). According to Sudan Integrated Security Information for Action (FAO, 2011), market channels involve a group of people or organizations that direct the flow of agricultural commodities from producers to consumers vertically (FAO, 2011). It was observed that there were three types prominent honey marketing channels in the district. In order to understand how honey moves through various market channels, it is necessary to identify the roles of various market participants involved in the study area.

Producers: The primary link in the marketing chain. They decide what to produce, how much to produce, when to produce and how much to sell. After that, they harvest the produce and supply to the second agent.

Cooperative: A peoples' organization that is responsible for collection and sale of a wide range of

products required by all members of the community accounting for the availability of different brands.

Agents and Brokers: They are the middlemen who sell products of different brands to wholesalers, institutional markets, and food chains. They deal with major products and brands and also operate under contracts and franchise agreements and earn through commissions and fees.

Retailers: They break the bulk goods received from the wholesalers into manageable portions and sell those to consumers in small units. They include sales persons with super market establishments and other large scale retailers who form the chain between wholesalers and consumers.

Consumers: They form the final link in the marketing chain. Their functions often overlap with those of other participants. A consumer is also a seller for a further downward consumer. Consumers in the chain include wholesalers, trader-wholesalers and wholesaler-retailers.

The survey result showed that there are three marketing channels in the area. As depicted in Table 3, direct channel producers carry only 21.8% of honey supply to the cooperative market. The longest channel includes producers- brokers- retailers-consumers. Through this channel, 73.3% of the respondents sold their honey products. Therefore, the marketing of the honey was concentrated on the retailers and brokers rather than the cooperative. This shows that, most of the honey was sold to the local collectors and middle men rather than cooperative which reduce the efficiency of the cooperative.

Table 3: Distribution of the Marketing Channel of the Honey Products

Variables	Responses	Frequency	Percent
Channel I Producers - Cooperative	No	93	78.2
	Yes	26	21.8
	Total	***119***	***100.0***
Channel II Producers - Consumers	No	97	81.5
	Yes	22	18.5
	Total	***119***	***100.0***
Channel III Producers - Brokers – Retailers - Consumers	No	32	26.7
	Yes	87	73.3
	Total	***119***	***100.0***

Source: Author's Analysis

Assessing the Efficiency of Honey Marketing Cooperative

To assess the efficiency of the honey marketing cooperative, ratio analysis was carried out using five years financial data. Ratio analysis refers to assess a firm's performance and it measures the firm's efficiency by calculating profit ratio, income ratio, operating ratio, efficiency ratio, and liquidity ratio (see Table 4).

Table 4: Efficiency of Cooperative through Ratio Analysis

Variables/Year	2014	2015	2016	2017	2018
Profitability Ratio	-	0.1	0.14	0.11	0.15
Liquidity Ratio	0.001	0.0018	0.009	-	0.002
Operating Ratio	-	1	1	1	1.11
EfFiciency Ratio	0.17	0.1	0.08	0.13	0.15
Income Ratio	-	0.1	0.14	0.11	0.15

Source: Author's Analysis

Profitability Ratio: It is the ratio derived by comparison of income with sales. It gives an idea of what makes up a honey marketing cooperative income and usually expressed as apportion of each Birr (National Currency) of sales. According to Teweldemedhin (2010), profitability ratios measure the success of the cooperative in earning net returns on operations. Cooperative must operate profitably but its definition of profitability might differ from an investor owned business. From the net profit, 30% is used for the expansion and social services and the remaining 70% is used to distribute the dividend to the members according to their patrons and shares. Profitability ratio is calculated by dividing the net income/ sales.

The profitability ratio within the five years was, -, 0.1, 0.14, 0.11 and 0.15 and the average profit ratio was 10%. However, in most of business organization the pricing objective might be 5-8% of return on sale or Net profit margin ratio (FAO, 2006). It implies that, cooperative has 10% from the each unit of sale and this shows that the cooperative has been increasing its fixed assets from the year to year except the year 2017. This shows that it is above the average of benchmark from the 5-8%. Due to this the cooperative operated efficiently in its financial operation.

Liquidity Ratio: Liquidity ratios measure the cooperative's ability to pay the credit. It establishes the relationship between total current assets and current liabilities during a particular period. Liquidity ratio measures the ability to fulfill short term commitment with liquid assets. The current assets are those assets which are easily converted into cash. The liquidity ratio for the five years period was, 0.001, 0.0018, 0.009 and 0.002. This shows that, the cooperative could pay the current obligation and the minimum amount of the loan the cooperative have. Due to that the efficiency of the cooperative was poor. The ratio measures the extent to which the member patrons own all of their assets. The higher the ratio, the better position the cooperative in overlooking the debt financing so the very high ratio indicates that, the cooperative is not taking advantage of its debt financing capacity. But the average liquidity ratio of the cooperative was 0.00276. This result implies the liquidity ratio of the cooperative is very low. It is not beyond the cooperative capacity to pay the amount credited. The bench mark of the liquidity ratio is 2:1.

Operating Ratio: It is the amount of the working capital the cooperative used for the day to day activities of the business. It is calculated by dividing the gross profit margin/ Net income margin and helps to know the amount the cooperative uses to run the business within the specified years.

Operating ratio is calculated by using operating expense margin. It is the deference between gross profit margin and net income margin. This margin was determined by deducting the honey marketing cooperative net income margin from its gross profit margin for each five financial years. The operating expense of the cooperative in the years 2014, 2015, 2016, 2017 and 2018 was 0, 1, 1, 1 and 1.11 Birr of the total sales respectively. On an average for the last five years the cooperative incurs 0.822 or 82.2% of total sales as operating costs to achieve its objectives. This result shows that, cooperative incurs large amount of the money for the working capital and administrative expenses. Since the average was above 50%, the efficiency of the cooperative reduced. According to Druy, (2006), if the average of the working capital is above average 50% the performance of the cooperative is decreases, due to it believes the large amounts of the expense and decreased the earning or the net income of the cooperative.

Income Ratios: These ratios compare income components with sales. For a honey marketing cooperative, income is usually expressed as an apportion of each Birr of sales and it is used to judge profitability or net income (return on assets, return on equity, and return on sales). The homecoming on sales shows how large an operating margin the enterprise has on its sales. As indicated in Table 3, the net profit margin ratio of the cooperative in the year 2014, 2015, 2016, 2017 and 2018 was -, 0.1, 0.14, 0.11 and 0.15 respectively. It shows that in the last five years, the cooperative could earn -, 10%, 14% 11% and 15% respectively of the total sales as a net profit. The average net profit margin ratio of the five year was 10%. However, in most of business organization the pricing objective might be 5-8% of return on sale or Net profit margin ratio (FAO, 2006). Although the cooperative accomplished efficiently in its financial operation, in principle, unlike other business firms, cooperatives are responsible to provide services at reasonable price than maximizing profit.

Efficiency Ratio: If the efficiency ratio was below the average, it indicates low performance and cooperative efficiency was poor. To calculate the efficiency ratio, operating expense was divided by the revenue and compared to the ratio result. The efficiency ratio of the five respective years was 0.17, 0.1, 0.08, 0.13 and 0.15, 0.11. This implies that the efficiency position of the cooperative was satisfactory to fulfill the objectives. The value of the amount sold was decreased and working capital was high, the reasons were due to, lack of proper management and awareness of the members to provide honey to the cooperative. In addition, the working capital of the cooperatives was greater than revenue.

Factors influencing the Marketing Efficiency

Efficiency is a commonly used measure to achieve the goal of consumers, marketing organizations, and society. Higher efficiency means better performance. Active involvement of the members in the business causes generation of surplus in the cooperative. To identify the factors that influence the marketing efficiency of the cooperative, binary logistic regression model was used. Under this model, member's value factors and cooperative governance factors were used as independent variables and the efficiency of the honey marketing cooperative as dependent variable. The member's value factors are, member's participation, members' awareness, members' satisfaction and members exercise their rights of ownership. The concept of members' participation implies participation in the general assembly, election of the management body and participation in the business. Member absenteeism could cause a loss of democratic character and may encourage vested interests.

The member's view of participation was assessed based on the participation in the formulation and implementation of their cooperative policies and regulations. The survey results show that 65.5% strongly disagreed and 21.8% were neutral. Members are owners, users, decision makers and highest authority of the cooperative. Regarding the members satisfaction, the results show that, most (62.2%) of them was not satisfied. The services needed by the cooperative were dividend, price information, provision of credit, transportation facility, awareness creation and market service. Because of lack of members' satisfaction, the cooperative was not efficient. In line with member's participation for the board members election, and approving annual audit reports, 24.4% strongly disagreed, 44.5% disagreed, 20.2% neutral and only 10.9% agreed. This indicates that, the participation of members the decision-making activities of their cooperatives was considerably poor. To conclude, cooperative was not granting loan to the members, due to the lack of credit from the cooperative, members were not interested to participate on the affairs of cooperative and to supply honey. Due to this, cooperative was not efficient (see Table 5).

Table 5: Members' Value Factors for the Efficiency of Honey Marketing Cooperative

Statements/Scale	Strongly disagree	Disagree	Neutral	Agree	Strongly disagree	Total
Participation in the formulation and implementation of the cooperative policies and regulations	-	78 (65.5)	26 (21.8)	15 (12.6)	-	119 (100)
Members' loyalty	-	87 (73.1)	06 (5)	26 (21.8)	-	119 (100)
Members' satisfaction	-	74 (62.2)	36 (30.3)	9 (7.6)	-	119 (100)
Participation in the annual general assembly meeting	29 (24.4)	53 (44.5)	24 (20.2)	06 (5.0)	07 (5.9)	119 (100)

Source: Author's Analysis

Note: Figures within parenthesis denotes percentages.

The general assembly of the cooperative cannot control or manage the day to day operations of the cooperative. For such reason, they should elect management committees to control and follow up the cooperative on behalf of them.

Managing financial and human resources successfully means that the management committee requires adequate management knowledge. Cooperatives require highly skilled management people who can manage it like a private enterprise by

making informed business decisions (Keeling, 2004). Another critical aspect is education, as a low level of education among the cooperative's members allows leaders to misuse the cooperative for their own priorities (Chirwa et al. 2005). Capacity of the management body and management styles are the leading role of the efficiency of the cooperative business.

Lack of Awareness: Information to the people about the cooperatives is imperative in emphasizing the objectives of the movement and its rules and regulations. However, cooperatives are also seen as platforms that can be used to obtain governmental concessions, as long as they can continue functioning.

Table 6: Governance factors for the efficiency of honey marketing cooperative

Statements/Scale	Strongly disagree	Disagree	Neutral	Agree	Strongly disagree	Total
The committee members have awareness, knowledge and skill	33 (27.7)	80 (67.2)	-	06 (5.0)	-	119 (100)
Accountability	31 (26.1)	40 (33.6)	27 (22.7)	06 (5.0)	12 (10.1)	119 (100)
Gives quick decision and fulfils the responsibilities according to the by-laws of the cooperative	54 (45.4)	40 (33.6)	16 (13.4)	01 (0.8)	8 (6.7)	119 (100)
Gender sensitivity	20 (16.8)	60 (50.4)	26 (21.8)	13 (10.9)	-	119 (100)
Management styles	-	23 (19.3)	95 (79.8)	-	01 (0.8)	119 (100)

Source: Author's Analysis

Note: Figures on the parenthesis denotes percentages.

Weak Governance: Management committees are often staffed by people of low caliber and the due diligence is left to members with limited financial knowledge. Committee members elected for specific tenures do not have any priority for good governance and for skill up gradation. Thus, the governance of the cooperatives suffer.

Inadequate Support, Weak Regulation and Supervision: The capacity of Federal Cooperative Agency and Regional Cooperative Promotion Agency has to effectively promote, regulate and supervise cooperatives has its limitations as there are no specialized units at federal, regional and district levels to regulate the cooperatives. Mobility is also limited due to shortage of vehicles and required staff, and the high levels of costs associated with them.

Table 6 presents that most (67.2%) of the respondents disagreed and 27.7% respondents strongly disagreed which show that most of the leaders have little knowledge, skills and awareness to handle the cooperative efficiently. This may limit the management to handle the cooperative property properly and reduces the efficiency. For the question whether the cooperative governance body was accountable or responsible for their duty, 12% agreed and the majority (82%) disagreed on the statement. Regarding their decisions based on the cooperative by-laws, around 80% of the sample members disagreed. For taking quick decision, majority (80%) shown their disagreement. Regarding the management body's planning and leading the cooperative based on the principles, 19.3% disagreed and majority (79.8%) was neutral stand. From this, it is inferred that in terms of governance, the cooperative is inefficient in its functioning.

Binary Logistic Regression Analysis Results

As stated in the methodology, to identify the factors influencing the marketing efficiency of cooperative, binary logistic regression analysis was carried out. For this purpose, 32 exploratory variables were included. Among these variables as shown in Table 9, 11 variables namely Family Size, Members' loyalty, Members' satisfaction, Working capital, Accountability, Knowledge of the management body, Gender sensitivity, Members' participation on decision making, Buyers, Terms of sale, Market

information, Linkages with other cooperatives, Division of activities, Cooperatives providing services and Market channel were found to be significantly affecting the efficiency of honey marketing cooperative.

While using Chi-square test, the p-value from the likelihood ratio test is equal to 0.000<0.05 implying that predictor variables used in logistic regression model were jointly efficient in explaining the efficiencies of the honey marketing cooperatives. Before fitting the logit model, it is essential to check, whether there is any degree of association between the exploratory variables. To check the model fitness, variance inflation factor and chi-square test were carried out. As a result, all the 32 variables were retained and entered in to logistic analysis. Similarly the result of Chi-square Test is significant at 1% level with w/c confirms the model fitness (see Table 7).

Table 7: Omnibus Test of Model Coefficients

Chi-square	Df	Sig.
-1.997	1	158
67.544	18	000
67.544	18	000

Source: Author's Analysis

Pseudo R-square comprises of the Cox & Snell and Nagelkerke R-squared values, which are to be interpreted in a manner similar to that of R-squared in Linear Regression. Nagelkerke's R-squared improves over Cox and Snell's R-squared to attain a value of 1 and predict data perfectly. SPSS output for these two statistics are given in Table 8. The Cox & Snell R square is 0.433 and Nagelkerke R square is 0.586. This demonstrates that the final binary logistic regression model with in the eleven explanatory variables has explained 58.6% of the variability in the dependent variable.

Table 8: Model Summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
92.134	0.433	0.586

Source: Author's Analysis

Classification Table

The classification table provides a way of assessing the degree of model fit for the observed data and prediction of the outcome variable. It can be observed from the Table 9 that with eleven predictors correctly predicted and 87.5% of honey marketing cooperative is inefficient and 74.5% shows the honey marketing cooperative is efficient. The overall percentage of the correct prediction of the model is 82.4%.

Table 9: Classification Table

Observed		Predicted		
	Efficiency of Management Committees		Percentage Correct	
		Inefficient	Efficient	
Efficiency of Management Committees	Inefficient	63	9	87.5
	Efficient	12	35	74.5
Overall Percentage				82.4

Source: Author's Analysis

The standardized value of Beta Coefficient in the Table 10 indicates the contribution of each predictor on dependent variable. The test will be significant, if the p-value is less than 5%. The Beta Coefficient is used to determine which independent variable has the most influence on the dependent variable. The variables employed in binary logistic regression were marketing factor, member's value factors and cooperative governance factors as independent variables and efficiency of honey marketing cooperative as dependent variables. As seen in the Table 10, out of 32 variables as stated in the methodology, 11 exploratory variables are found to be significantly affecting the efficiency of honey marketing cooperative.

Family size was found to be significant at 5% level (p<0.002) and beta value was also positive. This indicates that members having larger family size are more likely to supply more and more, the odds of the cooperative efficiency will be increased about 7.872 times if the family size of the members increases by one (B= 2.063 OR=7.872, p=0.002). In addition, most of the farmers produced honey and supply to the market rather than consumption purpose. The total volume of honey production in the country during 2011 was estimated to be 39.89 million Kgs. Of this, 10% of honey produced was consumed by the beekeeping households and the remaining 90% was sold for income generation (Miklyaev et al., 2014).

Market Channel: has significant contribution of the efficiency of the honey marketing cooperative. It is significant at (p<0.037) level and the beta value positive. Due to selling the large amount of honey to

Table 10: Results of Binary Logistic Regression Model

Variables	B	Sd	W ald	Def	Sig	Exp(b)
Working capital	1.166	.638	3.336	1	.068	312
Accountability	1.255	474	7.017	1	.008**	3.509
Knowledge of the management body	1.182	410	8.288	1	.004**	307
Gender sensitivity	1.376	554	6.179	1	.013**	253
Members loyalty	1.140	496	5.291	1	.021**	320
Members satisfaction	1.114	431	6.673	1	.010**	328
Members participation on decision making	1.228	455	7.286	1	.007**	293
Family size	2.063	665	9.631	1	.002**	7.872
Buyers	863	464	3.455	1	.063	422
Term of sale	1.621	782	4.295	1	.038**	5.057
Market information	427	247	2.982	1	.084	652
Linkages with other cooperatives	2.388	1.138	4.403	1	.036**	10.890
Division of activities	2.067	1.083	3.644	1	.056	127
Cooperative providing service.	0.608	255	5.680	1	.017**	544
Market channel	3.412	1.637	4.344	1	.037**	033
Constant	9.480	3.181	8.881	1	.003**	13100.42

Source: Author's Analysis

Note: **significant at p<0.05; SE: Standard error; B: Regression coefficient

the retailer and brokers, the odds ratio for the efficiency of the cooperative was decreased by 0.977. (b=3.142, p=0.037 and exp B=0.033).

Member's Loyalty: has the positive relationship with the dependent variable and it is significant at (p<.021) and beta value also positive. If the members are loyal to the cooperative, they participate in all the activities of the cooperative.

Awareness of the Management Body: influences the cooperative efficiency positively and is significant at (p < 0.004), with positive beta value. This implies that if the awareness of the committee members regarding the principles and values of the cooperative, there is a probability of increasing the efficiency of the honey marketing cooperative.

Member's Participation in Decision-making: The members are the owners, users and the highest organ of the cooperative, the cooperative by-law guides members to participate and take part in decision making. It influences the efficiency of honey marketing cooperative positively with significant at (p<0.007) and the beta value is positive. However, it has been argued that usefulness of participation has shown conflicting outcomes with regard to attitudes and performance (Drury, 2008).

Accountability: Management body must be the conscientious and ready to respond the members' questions and also it must be answerable, open to discussion and legally responsible for the cooperative activities. It must fulfill its duties and responsibilities according to the by-laws of the cooperative. The analysis results indicate that, it influences the efficiency of honey marketing cooperative positively and is significant at (p<.008).

Members Satisfaction: This concept measures the efficiency by considering the extent to which the members of the cooperative have benefitted and whether their aspirations have been met. It was found to be significant (p<0.010) and members satisfaction influences the efficiency of the honey marketing cooperative positively.

Cooperative Service: It is significant (p<0.017) and beta value is positive. The services provided by the cooperative to the members are dividend, market facility, credit service and transportation facility. If the members get these services from the cooperative, they participate more and cooperative increased the efficiency.

Gender Sensitivity: It influences the efficiency of the honey marketing cooperative positively and is significant (p<0.013). This means, if both sex are participated without gender bias, the volume of supply increase and gender sensitivity influences the efficiency of the cooperative positively.

Linkages with Other Cooperatives: It influences the efficiency of the honey marketing cooperative positively and is significant (p<0.036). Cooperation among cooperative is the leading force to build the cooperative financial capacity.

Conclusion and Recommendations

People's organizations are meant to provide efficient services to its members especially to increase the efficiency of honey marketing. However the study findings show that financial performance of the cooperative with respect to activity ratio, income ratio, operating ratio and efficiency ratio are not the satisfactory which is an essential yardstick to determine the efficiency. However, during the study period it is found that the cooperative was able to generate profit. The management committee was undemocratic and lack of management skills to manage the cooperative business. All the honey producers do not participate in the market fully in

cooperative due to this marketing efficiency of cooperative may be affected. Marketing efficiency requires effective participation of members in decision-making which is lacking. The main aim of organizing a cooperative is to enhance access to information for farmers, credit services, market access, improve their negotiation capacity, and help them in attaining economies of scale. These services were not found to be satisfactory found to be not satisfactory and needs serious attention to enhance the efficiency of honey marketing. To overcome such problems and to enhance the efficiency of marketing cooperative, following recommendations are made:

1. Most of the members of the honey marketing cooperative studied were not selling their produce to their own cooperative regularly. This could be either due to a lack of awareness or ownership among themselves.
2. This may be due to the lack of sense of ownership among the members and proper awareness should be created.
3. Continuous training and education should be given for the cooperative leaders especially for committee members to enhance their conceptual, technical and managerial skills.
4. By increasing the equity capital of a cooperative and designing a mechanism to promote member's buying and selling of shares, the poor financial capacity issue of the cooperative can be solved. Greater active participation of members, directors, and government bodies are required to make the cooperative become more competent and efficient.
5. To improve financial performance of the cooperative, the cooperative should work hand in hand with the accountants and control daily basis. Generally, the cooperative's financial and physical data management system should be improved.

References

Central Statistical Authority (CSA) (2011). *Report on livestock in West Shoa Zone proceeding of the Livestock characteristics (prevent peasant holdings).* Addis Ababa, Ethiopia: Ethiopian Beekeeper Association.

Chirwa, E., Dorward, A., Kachule. R., Kumwenda, I., Kydd, J., Poole, N., Poulton, C. & Stockbridge, M. (2005). Walking tightropes: Supporting farmer organizations for market access. *ODI Natural Resource Perspectives, 99*(5), 42-57.

Food and Agriculture Organization (FAO). (2011). *Sudan Integrated Food Security Information for Action - Price and market structure analysis for some selected agricultural commodities in Sudan: Marketing costs and margins.* Geneva, Switzerland: Author.

Gebremeskel, Y., Tamir, B. & Begna, D. (2015). Honeybee production trend, potential and constraints in eastern zone of Tigray, Ethiopia. *Agriculture and Biology Journal of North America, 7*(5), 212-223.

Gemechisa, L. (2015). *Honey production and marketing in Ethiopia. American Journal of Life Sciences, 12*(2), 35-39.

Kifile, T. (2015). Cooperative movement in Ethiopia: Development, challenges and proposed intervention. *Journal of Economics and Sustainable Development, 6*(5), 22-34.

Keeling, J. (2004). Lessons from a failed cooperative – The rice growers association experience, *Agricultural and Resource Economics, 7*(3), 1-4.

Miklyaev, M., Jenkins, G.P. & Barichello, R.R. (2014). *Honey production in Ethiopia: A cost benefit analysis of modern versus traditional beekeeping technologies.* Cambridge, MA: Cambridge Resources International Inc.

Olingo A. (2015, November 28). Ethiopia's fve-year plan to grow the economy. *The East African.* Retrieved from https://www.theeastafrican.co.ke/news/Ethiopia-s-five-year-plan-to-grow-the-economy/2558-2976316-otsng2/index.html

Teweldemedhin, Y. (2010). *Performance and challenges of cooperatives in Ethiopia: The case of Werie Multipurpose Cooperative Union in central zone of Tigrai, Addis Ababa, Ethiopia.* Addis Ababa, Ethiopia: Addis Ababa University (AAU). Retrieved from http://etd.aau.edu.et/handle/123456789/12000

USAID (2012). *Cost-benefit analysis of the honey value chain in Ethiopia: Graduation with resilience to achieve sustainable development.* Addis Ababa, Ethiopia: Author.

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). New York, NY: Harper and Row.

Additional References and Recommended Readings

Guyo, S., & Solomon, L. (2015). Review on beekeeping activities, opportunities, challenges and marketing in Ethiopia. *Journal of Harmonized Research in Applied Sciences, 3*(4), 201-214.

Okwoche,V.A., Oogura, B.C. & Chuwudi, P.O. (2012). Evaluation of agricultural credit utilization by cooperative farmers in Beneu state of Nigeria. *European Journal of Economics, Finance and Administrative Sciences, 13*(47), 32-43.