

Structur analysis, behavior and performance of the red big chili (*Capsicum annuum L.*) in Malang district market

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ABSTRACT

Chili peppers is getting attention because the price is very fluctuating. The frequent fluctuations in the price of red chile are generally caused by the unequal supply of red chile throughout the year. However, the price of large red chilled commodities will soon fall when supply from production centers increases in the market. One of the big red chilean production centers in Malang Regency is Bocek Village, Karangploso District, Malang Regency. The problem of marketing large red chile in Malang is also the same as other regions in general, which is often quite significant price fluctuations.

This research tries to analyze the market structure, study the market and improve the chili peppers in Bocek Village. The basic method of research is analytical descriptive. Determining the location of research carried out intentionally or intentionally. Farmer sampling method using simple random sampling method, with a total sample of 13 respondents. The sampling method used by traders uses the snowball sampling method with the number of brokers 3, wholesalers 2 respondent, and 2 respondent retailers. Data were analyzed by SCP (Structure, Behavior and Performance) methods. The results showed the structure of the chili peppers market in Bocek Village has a tendency in imperfectly competitive markets namely the oligopsonistic market. This structure is completed inefficient markets. Market behavior discusses the marketing activities of Chile Peppers in Bocek Village. While the market performance (market performance) is 50%. This shows that the marketing of chili peppers in Bocek Village is included in the efficient category.

Keywords: Chili peppers, Marketing Efficiency, SCP (Structure, Behavior and Market Performance)

I. INTRODUCTION

Based on data from the Directorate General of Horticulture (2015), consumption of red chilies in 2002 reached 1,429kg / capita / year then fluctuated to 1.46kg / capita / year in 2014 or an average of 0.46% per year. So it can be seen that the consumption of chilies from year to year has fluctuated. Big red chilies are gaining attention as their prices fluctuate so much. However, the commodity price of large red chilies will soon decline when supply from production centers increases in the market. One of the major red chili production centers in Malang Regency is Bocek Village, Karangploso District, Malang Regency. The problem of marketing large red chilies in Malang Regency is the same as in other areas in general, namely that there are often significant price fluctuations.

Marketing efficiency is how much sacrifice must be spent in marketing activities to support the results that can be obtained from these marketing activities (Soekartawi, 2002). According to Asmarantaka (2014), two measurement tools are used to determine marketing efficiency, namely, pricing efficiency and operational efficiency. According to Putri et.al (2018) price efficiency

emphasizes the ability of the marketing system to allocate resources and coordinate all agricultural production and marketing processes so that they are efficient according to consumer desires. Meanwhile, operational or technical efficiency is related to the implementation of marketing activities that can increase or maximize the marketing output-input ratio.

1. Analyzing the market structure in the marketing of large red chilies
2. Analyzing market behavior in the marketing of large red chilies
3. Analyzing market performance in the marketing of large red chilies in Bocek Village, Karangploso District, Malang Regency. The results of this study are expected as an alternative in the selection of efficient marketing channels at the research location.

II. RESEARCH METHODS

The research was conducted in Bocek Village, Karangploso District, Malang Regency. The choice of research location was based on the consideration of Bocek Village, Karangploso District, Malang Regency, which is one of the chili production centers in Malang Regency. This research was conducted in January - March 2020. There are two respondents who will be selected in this study, namely farmers and marketing institutions. The sampling method for farmers was simple random sampling. Based on the results of the preliminary survey in the study area, it was found that there were 127 chili farmers in Bocek Village. The number of samples taken was 10% of the total chili farmers in Bocek Village so that the total sample size was 13 large red chili farmer respondents. This is in accordance with the opinion of Gay and Diehl (1992), where the sample size of the descriptive study is a minimum of 10% of the population. The sampling method in this study was carried out using simple random sampling. Meanwhile, for respondents to the chili marketing agency, it was carried out using the snowball sampling method, namely following the ongoing chili marketing flow. The sample of marketing agencies consisted of 3 collectors, 2 wholesalers, and 2 retailers who were obtained from tracing, namely following marketing channels based on information from sample farmers. Data collection was carried out with two types of data, namely primary data and secondary data. Primary data collection was carried out by observing the object in the study, namely large red chili farmers in the research location. As well as interview techniques to farmers and marketing institutions using a questionnaire. Meanwhile, secondary data were obtained using archival documents from various scientific literature sources relevant to the research topic to support the findings of the research results.

The data analysis method used in this research is descriptive statistical analysis and quantitative analysis. Descriptive statistical analysis to provide a description of market behavior, namely institutional and functional approaches. Meanwhile, quantitative analysis is used to analyze market structure and market performance. The following is an explanation of each indicator in analyzing marketing efficiency at the research location.

1. Market Structure Analysis

Market structure analysis is carried out by looking at the number of sellers and buyers in the market, barriers to entry and exit, the types of products being marketed, and market information obtained by each party. Here are the calculations in the market structure analysis:

a. Concentration Ratio for Biggest Four (CR4)

Concentration Ratio for Biggest Four (CR4) is used to measure the market share of the existing output at the marketing agency and calculate the percentage value of the market controlled by the marketing agency. The amount of CR4 value is expressed by the formula:

$$CR_n = x 100\% \frac{\text{amount purchased}}{\text{amount traded}}$$

Information:

CR = Concentration Ratio

CR4 = CR1 + CR2 + CR3 + CR4

CR1 = Concentration Ratio (1st largest market share)

CR2 = Concentration Ratio (2nd largest market share)

CR3 = Concentration Ratio (3rd largest market share)

CR4 = Concentration Ratio (4th largest market share)

According to Anindita and Nur (2016), the criteria for determining market structure are:

- a) $CR4 < 0.4$, is a competitive market and leads to a perfect competition model.
- b) $0.4 \leq CR4 \leq 0.8$, is a competitive market and leads to oligopsony competition.
- c) $CR4 > 0.8$, is a highly concentrated market and tends towards monopsony.

b. *Hirschman's Herfindhal Index (IHH)* Herfindhal Index Analysis

Hirschman (IHH) is the sum of the squares of the market share of all marketing agencies in a market.
 Great value

IHH shows a measure of market concentration formed which is expressed by the formula:

$$IHH = (100 \times CR1)^2 + (100 \times CR2)^2 + \dots + (CRn)^2$$

Information:

n = The number of traders in a large red chili product market area

CRn = Share of purchase of large red chili commodity from the i-th trader (i = 1,2,3, ..., n)

The criteria:

IHH = 1,800 - 10,000, leads to a monopoly / monopsony market

IHH = 1,000 - 1,800, leading to an oligopoly / oligopsony market

IHH = 0 - 1,000, leads to perfectly competitive markets

c. Barrier to Entry

Barriers to entry are conditions where there are barriers to entering or leaving the industry. Barriers to entry were analyzed descriptively by the presence of factors that could prevent new entrants from entering the market, for example, tax regulation policies, levies and others.

d. Market Knowledge

Market knowledge by knowing the type of information held, the sources and flow of market information including prices, supporting facilities and government policies related to the marketing of large red chilies. Market knowledge includes the knowledge of farmers, traders and other market players involved in marketing large red chilies.

2. Market Behavior Analysis

Market behavior is a form of response from farmers and traders to the market structure that is formed and the goals desired by each marketing agency actor.

a. Institutional Approach

Includes several activities that allow seeing the activities of each market participant and the role of each marketing agency in marketing large red chilies, including the flow of distribution. As well as marketing activities provide opportunities for business coordination (business coordination) between marketing agencies.

b. Functional Approach

Activities in the large red chili marketing process include exchange functions in the form of buying and selling, physical functions in the form of harvesting, packaging, transportation, storage and function of financing facilities, and risks.

3. Market Performance Analysis

Market performance is a combination of market structure and market behavior which shows that there are interactions that influence each other. The measurement of market performance is as follows:

3.1 Price Efficiency Analysis

a. Transportation costs (Transportation cost)

$$H_i - H_{(i-1)} = BT$$

Where:

H_i : Selling price of large red chilies at the 1st marketing agency (Rp / kg)

$H_{(i-1)}$: Price of large red chilies at the previous marketing agency i (Rp / kg)

BT : Transportation costs of large red chilies (Rp / kg)

Price efficiency criteria according to the transportation function for marketing agencies, namely:

$H_i - H_{(i-1)} > BT$, then efficiency is achieved

$H_i - H_{(i-1)} < BT$, then efficiency is not achieved

b. Processing Fee

$$H_{j1} - H_{j(i-1)} = BP_i$$

Where:

H_{ji} : The selling price of big red chilies from the i th marketing agency (Rp / kg)

H_j : Selling price of big red chilies to marketing agencies to $(i-1)$

BP_i : Costs for implementing the marketing functions of the first agency, which consist of costs packing, loading and unloading, sorting and grading, and packaging.

i : 1, 2, 3,... n , is a large red chili marketing agency involved.

Price efficiency criteria for marketing agencies, namely:

$H_{ji} - H_{j(i-1)} > BP_i$, then efficiency is achieved

$H_{ji} - H_{j(i-1)} < BP_i$, then efficiency is not achieved

3.2 Operational Efficiency Analysis

a. Marketing Margin Analysis

Marketing margin analysis is carried out by calculating the price difference at the farm level (P_f). This analysis aims to calculate the level of marketing efficiency of large red chilies starting from the farmer to the last institution in each marketing channel. According to Sudiyono (2002) marketing margin is calculated by the following formula:

$$MP = BP + K \text{ or } MP = Pr - Pf$$

Where:

MP : Marketing Margin (Rp / Kg)

BP : Marketing Costs (Rp / Kg)

K : Marketing Profits (Rp / Kg)

Pr : Price at the Last Agency Level in Each Marketing Channel (IDR / Kg)

Pf : Prices at Farmers Level (Rp / Kg)

$$M_{total} = M_1 + M_2 + M_3 + \dots + M_n$$

b. Farmer's Share analysis

The calculation of farmer's share analysis is done to see the percentage of profit received by farmers. This farmer's share analysis has an inversely related relationship with marketing margins. If

the marketing margin is higher, the farmer's share will be lower and vice versa. The farmer's share formula is as follows:

Where: $FS \times 100\% = \frac{Pf}{Pr}$

Fs: Farmer's Share (%)

Pf: Price of large red chili (IDR / kg)

Pr: Price of large red chilies at the last institutional level of each marketing channel (IDR / kg)

c. Profit and Cost Ratio

The ratio of profit to cost is the ratio between the percentage of marketing profits to marketing costs. This analysis shows how much profit is obtained for the marketing costs incurred. The higher the ratio value, the greater the benefits that will be obtained and vice versa. The following is a systematic form of the profit ratio (Fahriyah, et.al., 2011):

$$\text{Profit ratio} = \frac{\pi i}{ci}$$

Where:

πi : Big Red Chili Marketing Agency Profits (%)

(%)

ci : Marketing Costs of the Big Red Chili

The K / B ratio value has the criteria to determine whether large red chili marketing is efficient or not. If the value of the K / B ratio <1, then it is not efficient because it is not yet profitable. If the K / B ratio = 1, then BEP or break even. If the value of the K / B ratio > 1, it is efficient because it is profitable.

Ratio > 1, then profit or efficiency

Ratio = 1, then BEP or not yet efficient

Ratio <1, then loss or inefficient

Indicators of the level of marketing efficiency of large red chilies by using several indicators. The following is an indicator of the efficiency of marketing large red chilies in Bocek Village.

Table 1. Indicators of efficiency levels big red chilli marketing

No.	Marketing efficiency level indicator	Information
1.	Market Structure Analysis	Efficient/ Inefficient
2.	Market Behavior Analysis	Efficient/ Inefficient
3.	Market Performance Analysis	Efficient/ Inefficient

Source: Secondary data processed, 2020

III. RESULTS AND DISCUSSION

a. Market Structure

Market structure can also show the competition between sellers and buyers through the process of forming prices and the number of products offered in the market. Market structure analysis can show whether the market leads to a perfectly competitive market or an imperfectly competitive market.

Table 2. Indicators of Market Structure for large red chilies from Bocek Village

No.	Marketing Agency	Nature of the Market			
		Number of Sellers	Number of Buyers	Product Differentiation	Entry and Exit Barriers
1.	Farmer	13	-	There is no	There is
2.	Collectors	-	3	There is no	There is
3.	Wholesalers	-	2	There is no	There is

4.	Retailer	-	2	There is no	There is
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Source: Primary data processed, 2020

Based on Table 2, it can be seen that 13 large red chili farmers sell their products to Collectors (3 people), wholesalers (2 people), and retailers (2 people). The ratio between sellers and buyers of large red chilies from Bocek Village is not balanced, because the number of sellers (large red chili farmers) is more than the number of buyers. The number of sellers and buyers shows that the market structure is not perfectly competitive. Farmers and large red chili marketing agencies are still faced with obstacles or obstacles in entering the market. This obstacle is caused by several things, among others, the amount of cost or capital that is owned to enter the market. The obstacles faced by some large red chilli farmers in general are limited information on the price of large red chilies and lack of capital in farming large red chilies, so farmers have to buy agricultural inputs such as fertilizers and pesticides on a debt basis. Barriers to market entry and exit faced by large red chili marketing agencies in this study are collectors, wholesalers, and retailers, that partially owned business capital is loan capital.

1. Concentration Ratio (CR4)

Table 3. Calculation of the Concentration Ratio (CR4) analysis

No.	Information	CR4 value	Market structure
1	Retailer	0.71	Oligopsony

Source: Primary data processed, 2020

Based on Table 3, the CR4 value based on the calculations that has been done is between 0.4 - 0.8 or 40% - 80%. The market concentration value of large red chilies in Bocek Village for retail institutions shows a value of 0.71 or 71%, which means that the large red chili market structure includes the oligopsony market, which is one type of imperfect competition market. Oligopsony competition is shown in the market structure at the level of traders, especially retailers, because retailers are more dominant in price formation. The price decline at these retailers tends to cause large red chili retailers to also reduce prices so that they do not lose subscriptions (Sukirno, 2005). The level of market knowledge is also limited to information obtained around market players, so that market participants' knowledge of price information only revolves around conditions around it.

Large red chilli farmers in the research location sell large red chilies for their harvest, assisted by regular collectors who still have family or close neighbors. This is based on the level of trust of farmers in collectors. There is a relationship of trust between farmers and traders so that farmers do not pay much attention to price or their weak bargaining position. Collectors also often bring large red chilies first and pay them to farmers after they are sold. So that large capital is needed for collectors.

2. Hirschman's Herfindhal Index (IHH)

Table 4. Calculation of the Herfindhal Hirschman Index (IHH) analysis

No.	IHH Value	Market structure
1	1,050.26	Oligopsoni Market

Source: Primary data processed, 2020

Based on Table 4, the IHH value obtained by the Herfindhal Hirschman Index analysis is 1,050.26. The value of IHH is in the range of 1,000 to 1,800 or $1,000 < IHH < 1,800$ which leads to an oligopsony market structure. The market is in small competition with high concentration. Based on the results of interviews in the research, red chilli farmers in Bocek Village stated that farmers often sell their crops to collectors they subscribe to because of family or relative relationships and because farmers borrow for capital needs. There is a relationship of trust between farmers and traders so that they do not pay much attention to prices. Collectors also often bring large red chilies first and pay them to farmers after they are sold.

3. Barrier to Entry

Aspects of entry barriers include whether or not there are difficulties in trying to market large red chilies, which allows potential competitors outside the industry to enter the market. Several aspects identified as barriers to entry include business barriers, market access barriers and regulatory barriers. Based on observations and interviews, several forms of obstacles were found, namely obstacles to doing business in the form of business capital because it required a large amount of capital. Meanwhile, regulatory barriers are in the form of levy policies in the market

4. Market Knowledge

Large red chilli farmers lack knowledge of market mechanisms such as the price of large red chilies which develops dynamically at the merchant level. This limited market knowledge is exacerbated by the low level of formal education, namely 55.6% having basic education and low means of communication. This contributed greatly to the weak bargaining power of farmers in marketing large red chilies.

b. Market Behavior Analysis

1. Big Red Chili Marketing Agency Marketing activities of large red chilies in Bocek Village involve several marketing agencies that play a role in distributing large red chilies, namely farmers, collectors, wholesalers and retailers.
2. Big Red Chili Marketing Funnel

Based on the research results, there were three (3) marketing channels for large red chilies in Bocek Village, Karangploso District, Malang Regency, namely as follows:

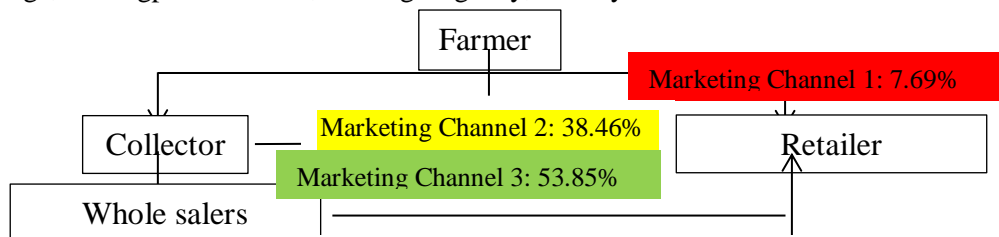


Figure 1. Distribution Chart of Large Red Chili in the Study Area

3. Big Red Chili Marketing Functions

Table 5. Marketing Functions in Marketing Channels 1,2, and 3.

No.	Marketing Function	Lemb. Marketing 1		Lemb. Marketing 2			Lemb. Marketing 3		
		Farmer	Retailer	Farmer	Collectors	Retailer	Farmer	Collectors	Ped. Big
1	Purchase	-	√	-	√	√	-	√	√
2	Sales	√	√	√	√	√	√	√	√
3	Harvesting	√	-	√	-	-	√	-	-
4	Packaging	√	√	-	√	√	-	√	√
5	Transportation	√	-	-	√	-	-	√	√
6	Storage	-	√	-	√	√	-	√	√
7	Risk	-	√	-	√	√	-	√	√

Source: Primary data processed, 2020

Information:

(√): Performs a marketing function.

(-): Does not perform a marketing function.

c. Market Performance Analysis

1. Price Efficiency Analysis

The efficiency of prices shows the relationship between costs and output. Price efficiency is calculated from transportation costs and processing costs.

a.) Transportation costs

In all marketing channels, the selling price at marketing agencies at the collector level is the selling price at marketing agencies at the farmer level. The following is a table of transportation cost calculations:

Information	SP. 1	SP.2	SP.3
	Price (Rp / kg)		
Selling Price at Level Retailer	63,000	63,000	-
Selling Price at Level Ped. Big	-	-	65,000
Selling price level Collectors	-	58,000	59,000
Selling Price at Level Farmer	57,000	55,000	55,000
Price gap	6,000	8,000	10,000
Transportation costs :			
- Workers' salaries	-	200	500
- Fuel costs	-	400	800
Total Cost	0	600	1,300
Transportation			

Source: Primary data processed, 2020

Marketing channels 1,2, and 3 calculated from transportation costs show that the difference in selling prices between agencies is greater than the transportation costs incurred. This means that the marketing efficiency of the three marketing channels has been achieved. According to Anindita and Nur (2016), if the difference in selling prices is smaller than the transportation costs incurred, it is still not efficient, but if the difference between the selling price is greater than the transportation costs incurred, it is efficient. Several agencies that incur transportation costs also have a higher selling price difference than the total marketing costs incurred. Therefore, the analysis of price efficiency according to the transportation function of the three large red chili marketing channels has been efficient.

b.) Processing Fee

The following is a table of calculations of processing costs.

Table 7. Calculation of Processing Costs in Marketing Channels

Information	Channel Marketing 1	Channel Marketing 2	Channel Marketing 3
	Price (Rp / kg)		
Sell at the Retailer			
Price Level	63,000	63,000	-
Sell at the Ped.Large			
Price Level	-	-	65,000
Selling Price at Collector Level	-	58,000	59,000
Price Sell at the Farm Level	57,000	55,000	55,000
Price gap	6,000	8,000	10,000
Marketing Costs:			
- Harvesting	700	620	670
- Packaging	100	100	100
- Transport	700	600	1,300
- Storage	50	100	100

- Risk	1,140	1,710	2,910
Total Marketing Costs	2,690	3,130	5,080

Source: Primary data processed, 2020

Based on Table 9, the results of the calculation of processing costs show that in all marketing channels marketing efficiency is achieved. Price efficiency according to processing costs can be said to be efficient if the price difference is higher than the costs incurred (Anindita and Nur, 2016), so it can be said that price efficiency according to the processing function in the three large red chili marketing channels is efficient

2. Operational Efficiency Analysis

Table 8. Operational Efficiency Analysis

Marketing channel	Marketing Agency	Selling Price (Rp)	Cost (Rp)	Profit (Rp)	Margin (Rp)	FS (%)	K / B
1	Farmer	57,000	1450	-	-	90.47	3.8
	Retailer	63,000	1,240	4,760	6,000	-	
2	Farmer	55,000	620	-	-	87.30	1.4
	Collectors	58,000	1,250	1,750	3,000	-	
	Retailer	63,000	1,260	3,740	5,000	-	
3	Farmer	55,000	670	-	-	84.62	2.48
	Collectors	59,000	1,150	2,850	4,000	-	
	Wholesalers	65,000	3,260	2,740	6,000	-	

Source: Primary data processed, 2020

Based on the calculation of marketing margin analysis. The difference in margin indicates that marketing channels 1 and 2 have been efficient. Whereas in marketing channel 3, the total margin of Rp. 10,000, the difference in margin between farmers and wholesalers is high. This is because the marketing functions that should be carried out by farmers such as packaging and transportation are incurred by the collectors. Based on this explanation, although the difference between high margins and the cost of performing marketing functions is also high, marketing on marketing channel 3 is inefficient. According to Rasoki T et.al (2016) the higher the value of the marketing margin, the more inefficient the marketing is. This is reinforced by the opinion of Indriyo (2001) that the longer and more marketing agencies involved in the marketing process, the greater the total margin and net profit received by marketers, on the contrary, the shorter and the fewer marketing agencies involved in the marketing process. the total margin and net profit for the marketing agency. An increase in marketing margins can occur due to an increase in marketing services (Anindita and Nur, 2016). Based on Table 8, the marketing channel that has the highest farmer's share is marketing channel 1 where this marketing channel provides the largest share of the price for large red chili farmers, which is 90.47% of the price paid by the end consumer. Meanwhile, the marketing channel which has the lowest farmer's share is marketing channel 3, giving the lowest price share for large red chili farmers of 84.62% of the price paid by the end consumer. Based on the results of the farmer's share analysis, it can be seen that the value of the share price received by farmers from all channels is in the efficient category. This is in accordance with the research of Aprilani TR and Azrul F. (2016) which states that the farmer price share can be said to be efficient if it has a value of more than 50% and if the value is less than 50%, then the marketing of large red chilies is inefficient. Commodities that are sold fresh have a higher share value for farmers than processed commodities in the form of processed products (Kohls and Uhl, 2002). If the percentage of the farmer's share value is greater, the marketing of the large red chili commodity will be more efficient and vice versa. The K/B values of marketing channels 1 and 2 are efficient because values more than 1 indicate that this marketing channel is also efficient. Meanwhile, Marketing Channel 3 is not efficient because there is a K / B value of less than 1. The ratio of profits achieved by each marketing agency in each large red chili marketing channel has different values. Marketing agencies that get a ratio of profits and marketing costs > 1, then the marketing agency gets a greater profit than the costs incurred and can be said to be efficient (Serawai, BA and Adly, 2017). Based on

the results of the analysis of the ratio of profits and marketing costs, It can be seen that $\geq 50\%$ of the existing marketing channels get a K / B ratio value > 1 , which means that the marketing of large red chilies based on a review of the profit and cost ratios of marketing channels 1 and 2 is said to be efficient. However, marketing channel 3 is not yet efficient.

Table 9. Indicators of the level of marketing efficiency of large red chilies

No	Efficiency level indicator	Information
Marketing		
1	Market Structure Analysis	Not efficient
2	Market Behavior Analysis	Efficient
3	Market Performance Analysis	Efficient

Source: Primary data processed, 2020

Based on Table 9, the results of the assessment of the level of marketing efficiency of large red chilies with the SCP approach in Bocek Village, one of which is the analysis of market performance on inefficient operational efficiency. Field conditions indicate that most farmers are price takers that have been determined by the marketing agency chosen and the farmers' bargaining position is weak in determining prices. This situation is in accordance with the research of Dewi et.al (2018) that changes in prices at the consumer level are greater because buyers act as price determinants, while large red chili farmers are only price recipients so prices at the farmer level of large red chili are more volatile when compared to prices at consumer level.

The weak bargaining position of the farmers is due to the majority of farmers not doing their marketing function and selling farmers who are assisted by transportation and farming capital by their regular collectors. This is in accordance with the research of Widiastuti N. and Mohd H. (2013) which shows that the cause of the farmers' weak bargaining position is that they have not done post-harvesting and there is a relationship of trust between farmers and traders so that they do not pay too much attention to prices. In addition, according to research (Ali, et.al., 2017) a price agreement is formed with a supply and demand until both parties agree on the price. With one inefficient indicator, marketing efficiency still needs to be improved in order to benefit all parties, both farmers and marketing institutions. In today's modern era, farmers should start learning the technology that is developing for the sustainability of marketing their products. Farmers use the internet to find out the price of large red chilies that are growing in the market so that farmers can get a more profitable and suitable price.

IV. Conclusion

1. The market structure in Bocek Village has a tendency that leads to imperfect competitive markets, namely the oligopsony market, there are barriers to entry and exit from the market, as well as lack of knowledge about marketing to large red chili farmers so that the marketing of large red chilies is included in the category not efficient.

2. Market conduct shows the efficient category that there are 3 types of marketing channels for the large red chili marketing activities in Bocek Village.

a. Marketing Channel 1: Farmers - Retailers - Consumers

b. Marketing Channel 2: Farmers - Collectors - Retailers - Consumers

c. Marketing Channel 3: Farmers - Collectors - Wholesalers (Outside the City) - Retailers (Outside the City) - Consumers (Outside the City)

3. Market performance shows that the marketing channel 1 is the channel with the highest level of efficiency because it has the lowest marketing margin percentage. Meanwhile, marketing channel 3 is the channel with the lowest level of efficiency because it has a high percentage value of marketing margin. Price efficiency shows efficient while operational efficiency is not efficient at load factor

efficiency. This shows the efficiency level of the large red chili marketing in Bocek Village is included in the efficient category.

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