

# Market Analysis of Patchouli Oil in Aceh Jaya Aceh Province

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## Abstract

Patchouli from Aceh is a source of patchouli oil producer with the best quality in the world. Aceh Jaya is one of the areas that is very suitable for the development of patchouli cultivation in Aceh and produces patchouli oil which exported to abroad. In the marketing process will involve institutions marketing institutions whose role is to convey the results of production from producer farmers to consumers. This research was conducted to determine the structure, behavior and performance of the patchouli market in the patchouli marketing process in Aceh Jaya. The method used was in-depth interviews assisted by questionnaires to be analyzed in a qualitative description by using Concentration Ratio for The Biggest Four (CR4). The results of the study showed that, the patchouli oil market structure in Aceh Jaya was highly concentrated and leads to monopoly, while the behavior of marketing institutions in determining the choice of patchouli oil marketing channels in Aceh Jaya was divided into 3 types namely, channel 1: farmers- small collectors-cooperatives-exporters-consumers; channel 2: farmer – small collector- bog collector- exporter-consumer; channel 3: farmer-cooperative-exporter-consumer. Judging from the marketing margin and farmer's share, the most efficient market performance was channel 3.

Keywords: Market Structure; Efficient Market; Patchouli Oil

# Introduction

Patchouli (*Pogostemon cablin Benth*) is an important producer of essential oils in Indonesia. This species originates from the Philippines, famous for its fragrant and distinctive smell, so that it is widely used as a perfume and a fixative or binding agent (Suyono, 2001). Patchouli oil (*patchouli alcohol*) is produced from distillation in almost all parts of the plant, especially its leaves which have the highest yield and quality of oil (Rukmana, 2004). Patchouli oil is very important as raw material for the food, beverage, cosmetics and pharmaceutical industries because it has binding properties (fixative) that are difficult to wash and can last long, and can be mixed with other essential oil components.

Aceh Province has the potential to develop large-scale patchouli commodities. In addition to supporting natural conditions, Aceh's patchouli quality is also considered the best in the world, so it is not surprising that Aceh is the largest contributor to patchouli exports in Indonesia.

Currently, Aceh Jaya is one area that very suitable for the development of patchouli cultivation in Aceh. Not surprisingly, outside Aceh, patchouli farmers are very interested in getting patchouli seedlings from Aceh Jaya. Patchouli plant area in the district of Aceh Jaya currently around 572 hectares (BPS, 2015) which is divided in six districts, namely the Districts of Java, Sampoiniet, Setia Bakti, Krueng Sabee, Panga and Teunom. Patchouli oil in Aceh Jaya is marketed overseas, such as the United States and France with high selling prices and reaching 700.00 rupiah / kg (BPS, 2016).

In the marketing process will involve marketing institutions. The role of marketing intitution is very necessary and important to deliver production results from producers to consumers. The more efficient the work of marketing institutions will be more profitable for all parties, both producers, consumers and for the marketing institutions themselves. For producers, it will increase the benefits received (Idrus, 2007).

From the background above, regarding the condition of patchouli marketing in Aceh Jaya, the writer wants to examine the structure, behavior and performance in the patchouli marketing process in Aceh Jaya.

## **Research Methods**

The method used to test the existing market structure towards the patchouli market in Aceh Jaya. This research was a type of qualitative research that will be analyzed descriptively from the results of indepth interviews guided by questionnaires.

Market structure uses the following analysis tools:

#### **Determination of Market Concentration Degrees**

Market Share to determine the market share of companies or producers in a market area, then it can be made as follows (Pappas, 1999).

Table 1. Market share					
Intitutions	Product Capacity That Can Be Absorbed From A Market Area	Market Share (%)			
1	A	a/x			
2	В	b/x			
3	С	c/x			
4	D	d/x			
Ν	Ν	ni/x			
Total	A+b+c+d+ni=x	100			

Table	1.	Market	share
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CR4 (Consentration Ratio for The Biggest Four)

CR4 is the largest company or institution in a patchouli market area. According to Baye (2010) market concentration can be calculated by measuring how much output is produced from the four largest companies or institutions in an industry. In this research, companies were institutions involved in patchouli marketing channels in Aceh Jaya. The analytical method used was the Four Firm Concentration Ratio (CR4).

CR4 values close to 0 are indicated to be in a market that has many sellers and provides increased competition among producers to sell to consumers. However, if the CR4 value is close to 1, it was indicated that the market experiences less competition (concentrated market) between producers to sell it to consumers (Baye 2010).

Hirschey (2009) adds that if  $CR4 \ge 0.8$  shows that the industry is highly concentrated, 0.5 <CR <0.8 the market is moderately concentrated and  $\le 0.5$  the market was weakly concentrated.

$$\frac{CR4}{ST} = \frac{S_1 + S_2 + S_3 + S_4}{ST}$$

Description :

CR4 = concentration ratio

 $S_1$  = market share of patchouli by institutions 1 (kg/month)

 $S_2$  = market share of patchouli by institutions 2 (kg/month)

 $S_3$  = market share of patchouli by institutions 3 (kg/month)

 $S_4$  = market share of patchouli by institutions 4 (kg/month)

ST = total purchase of all patchouli market institutions (kg/month)

According to Pappas (1995) the criteria for determining market structure are:

- a. CR4 <20%: is a competitive market and approaches the perfect competition model
- b.  $20\% \le CR4 \le 80\%$ : is a competitive market and leads to monopolistic competition
- c. CR4> 80 %: is a highly concentrated market and tends towards monopoly

# **Market Behavior**

To analyze market behavior, the study conducted descriptive qualitative by looking at the activities created among patchouli marketing institutions. Market behavior was analyzed by observing sales and purchasing practices, pricing systems and ways of payment, and cooperation between institutions involved in patchouli marketing in Aceh Jaya.

#### **Market Performance**

The performance was analyzed by using descriptive method that focused on survey and interview respondents, then for marketing efficiency the following analysis was used:

a. Marketing margin analysis

The amount of marketing margin can be calculated by the formula:

MP = Pr - Pf

Description: MP = Patchouli marketing margin (Rp / kg) Pr = average price of patchouli at the consumer level (Rp / kg)Pf = average price of patchouli at the producer level (Rp / kg) b. The advantages of the i marketing institution were:  $Ski = \frac{Ki}{Pr} \ge 100\%$ 

Description:

Ski = profit sharing of market institution i (%) Ki = profit marketing intitution i (Rp. / kg) ISP = price of patchouli in the market institution i (Rp. / kg) Bij = cost marketing institution i of various types

c. Share costs of the i and j marketing institution  $Sbi = \frac{Bi}{Pr} \times 100\%$ 

Description:

Sbi = cost sharing of market institution i-th (%) Bi = cost marketing institution i (Rp / kg) Pr = average price of patchouli at the consumer level (Rp / kg) Pf = average price of patchouli at the producer level (Rp / kg)

d. Share price received by farmers:

$$SP = \frac{Pf}{Pr} \ge 100\%$$

e. Calculation of Profit Margin Distribution:  $Ski = \frac{Ki}{MP} \times 100\%$   $Ki = Pji - Pbi - \sum Bji$ 

Description:

Ski = profit sharing of market institution i (%)

Ki = Profit institution i (Rp. / ton)

MP = Marketing margin (Rp / ton)

Pji = Selling price of the i institution (Rp./ton)

Pbi = Buting price of the i institution (Rp. / ton)

Bij = Marketing costs of the i marketing institution of various types of the j

f. Calculation of Cost Margin Distribution:  $Sbi = \frac{Bi}{MP} \ge 100\%$ 

Decision making criteria:

- 1) Marketing Margin Interpretation (MP) The smaller the MP value, the more efficient marketing channels
- 2) Interpretation of profit on the distribution of margins (DM) Ski Difference = 0-5 then the profit is evenly distributed Ski Difference => 5 then the profit was not evenly distributed
- 3) Interpretation of profit and cost sharing Ski> Sbi = the marketing system was said to be efficient, then it could continue to be implemented Ski <Sbi = the marketing system was said to be inefficient, then it is detrimental if it continues to be implemented

g. To analyze the marketing efficiency of cassava, marketing efficiency analysis was used with the following formula:

 $ME = \frac{marketing \ costs}{Value \ of \ Products \ Marketed} \ge 100\%$ 

The indicators used to evaluate the results of marketing efficiency calculations are guided by Soekartawi's opinion (1991), namely:

- 1) If Marketing Efficiency is% 50%, it means that marketing channel is efficient.
- 2) If Marketing Efficiency> 50%, it means that marketing channels are inefficient.

Conclusions were drawn by looking at marketing efficiency (ME). The value of marketing efficiency was seen by comparing the value of marketing efficiency of each marketing channel. If the ME value of a marketing channel was smaller than the ME value of other marketing channels, then the marketing was said to have higher marketing efficiency than other marketing channels.

## **Research Results and Discussion**

Analysis of patchouli oil market structure in Aceh jaya aims to identify the level of competition that occurs in patchouli oil in Aceh jaya Regency. The calculation was done by using market share analysis, barriers to market concentration (concentration ratio). Market concentrations were analyzed using a concentration ratio of the four largest exporter companies (CR4) and for barriers to market entry would be analyzed using the Minimum Efficiency Scale (MES).

Market Share and Market Concentration in the patchouli oil marketing system of Aceh Jaya, most of the production of Patchouli Oil produced would be channeled to overseas.

No.	Institutions	Average purchase volume of patchouli oil that can be accommodated (kg / month)	Market share (%)	CR 4
1	KINA Jaya	1000	17.03	86%
2	Meulaboh 1	800	14	
3	Meulaboh 2	750	13	
4	Medan	1200	21	
5	PT.General	2000	34,7	
	aromatic			
	TOTAL	5750	100	

Table 2. Market Share and Market Concentration from 10 Patchouli Oil Marketing Institutions in
Aceh Jaya

Source: Data processed, 2018

The results of the analysis of four firm concentration ratio (CR4) showed that the four largest companies controlled 86 percent of the total availability of patchouli oil in Aceh Jaya. This means that the level of competition of institutions (both collectors and KINA Jaya) is concentrated with a small level of competition. This condition illustrates that the market is highly concentrated and tends towards

monopoly. It was in accordance with the opinion of Pappas (1995) which states that if the concentration ratio of the four largest companies is greater than 80 percent, then the market is highly concentrated and tends towards monopoly.

#### **Market Behavior Analysis**

Patchouli oil market behavior in Aceh Jaya analyzed descriptively. Analysis of market behavior will illustrate the behavior of each marketing institution in dealing with the existing market structure. The elements contained in market behavior include institutions and practices of marketing functions in which conditions of cooperation between marketing institutions (Dahl and Hammond, 1977), marketing channels, pricing mechanisms and payment systems will be seen.

## **Institution and Practice of the Supplier Function**

A marketing institution is a business entity or individual that carries out marketing activities or functions so that the product or service will move from producers to consumers. The marketing institutions involved in the marketing of patchouli oil include farmers, collectors / cooperatives, and exporters.

- a. Farmers are the owners of products that have their own land. Farmers are members of cooperatives and take part in product certification programs.
- b. Collecting traders, namely traders who collect patchouli oil from farmers. Collector traders are usually referred to as collectors because they have cooperation with cooperatives.
- c. Cooperative, which is a business entity formed by a group of people who have the same goal. The cooperative consists of farmers, collectors (collectors) and capital owners.
- d. Exporter, which is a company or institution that markets Aceh Jaya's patchouli oil to overseas.

Each institution is able to create value specifically for the product or service offered (Levens 2010). This value creation can be done through marketing functions. The marketing function can be grouped into three categories, namely the exchange function (purchase, sale), physical function (processing, transportation / transportation, storage) and facility functions (standardization, risk management, financing, market information) (Kohls and Uhl, 2002). The following would described the marketing functions carried out by each patchouli oil marketing agency in Aceh Jaya.

## 1. Farmers

Harvesting activities in the research area were carried out every 3 months. For patchouli cultivation, harvesting could be done 3 times a year. Harvesting was done manually. For labor, it was done individually, but there were also family workers for children, wives and siblings. The sales process, farmers sell patchouli oil to collectors and cooperatives.

In the sales process, oil prices are largely determined by market prices and market demand. the average selling price obtained by farmers is Rp. 350,000, - 400,000, - the price difference was also influenced by the type of distillation. If the oil is refined using stainless steel, the price would be 5-10% more expensive than the price of refining with used drums. The table shows collaboration and marketing functions at the respondent farmer level.

Table 5. Marketing and Conaboration Functions at Respondent Farmers Lever					
Marketing function	Description	Collaboration*			
Exchange function	Sales	Cooperatives and collector traders			
Physical function	Harvesting, chopping and distillating	- Cooperatives			
Facility function	Risk Insurer Financing	Collector traders, cooperatives			

Source: Data processed, 2018

\* Interaction conducted by farmers in carrying out marketing functions

Farmer financing sources mostly obtained from collectors. Banking as a formal financial institution will issue credit if farmers can provide collateral, either in the form of land certificates, houses or vehicles. The administrative process that requires a long time causes farmers to prefer to borrow from traders. Borrowing was done when patchouli oil has not yet entered the harvest season, due to pressure from the economic needs of the family, farmers must find a source of income other than patchouli oil and the fastest alternative for farmers is to borrow money from collectors and promise to pay it with their oil harvest. Therefore, farmers' limitations in obtaining sources of capital and price information affect the bargaining potency of farmers in the price determination process.

# 2. Collector Traders

Collector traders are often referred to as collectors. In the marketing activities of Aceh Jaya Patchouli Oil, the collector performs the exchange, physical and facility functions. Collector activity in carrying out the marketing function is inseparable from the characteristics of the oil produced and the amount promised beforehand.

Marketing Function	Description	Collaboration*
Exchange function	Purchases and Sales	Farmers and Cooperatives
Physical function	Storage	-
	Distillation	Koperasi dan kilang minyak
Facility function	Risk Insurer	Banking, Cooperative
	Financing	Farmers and cooperatives
	Market information	-

 Table 4. Marketing and Collaboration Functions at Collector Trader Level

Source: Data processed, 2018

\* Interaction conducted by farmers in carrying out marketing functions

# 3. Cooperative

Cooperatives as a business entity consisting of capital owners (investors), employees, farmers and collecting traders have a strategic role in supporting the development of Aceh Jaya Patchouli Oil agribusiness. The presence of cooperatives is able to provide confidence to buyers (exporters, importers and industry) to trade Aceh Patchouli Oil both in the domestic market and in the international market. The number of cooperatives in Aceh is jaya have 5 cooperatives. However, there were only one cooperative active in the seller's purchase.

Table. Marketing and collaboration functions at the respondent farmer level				
Marketing Function	Description	Collaboration*		
Exchange function	Purchases and Sales	Farmers and Cooperatives		
	Sales	Importers and exporters		
Physical function	Storage	-		
	Distillation	Cooperatives and oil refineries		
Facility function	Risk Insurer	Banking, Cooperative		
	financing			
	Market information	Collectors, exporters, importers		
Courses Data and coord 2019		Concetors, exporters, impor		

Table. Marketing and collaboration functions at the respondent farmer level
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Source: Data processed, 2018

\* Interaction conducted by farmers in carrying out marketing functions

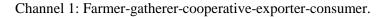
#### 4. Exporters

Exporters are companies or institutions that market patchouli oil to the world market. Exporters in the sales of patchouli aceh jaya oil amounted to 2 large companies, namely PT. General Aromatic and PT. Payand betrand.

#### Analysis of Patchouli Oil Marketing Channel in Aceh Jaya

Marketing channel analysis was done to see the behavior of each marketing agency in determining the choice of channels used. Some marketing institutions involved in marketing Aceh Patchouli Oil include farmers, collectors, cooperatives and exporters. In the process of distribution, each marketer has a choice in marketing their form of oil. This color difference was due to the processing carried out. The difference in the color of the oil being marketed will affect the level of prices received by farmers.

Analysis of marketing channels will illustrate the types of channels and volumes of Aceh Jaya Patchouli Oil that go in and out through certain marketing channels. Based on data from sample farmers (n = 30), collectors (n = 4), wholesalers (n = 5), cooperatives (n = 1) and exporters with legal entities as cooperatives (n = 2) could be described in marketing channels. Sales of Aceh Jaya Patchouli Oil production could be channeled through cooperatives and collectors. Farmers are free to sell their produce anywhere. However, there were some farmers who have previously entered into cooperation agreements with cooperatives and collecting traders, which causes farmers to only sell oil to institutions that have cooperated with the patani. Based on the research results, there were 3 types of marketing channels conducted by Aceh Jaya Patchouli Oil farmers, namely:



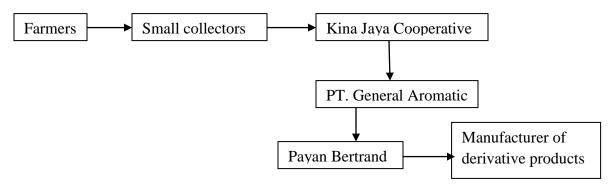


Figure 1. of Patchouli Marketing Channel I in Aceh Java

In general, the patchouli marketing chain in Aceh Jaya consists of 3 marketing channels as illustrated in the Channel 1 Based on the picture Channel 1 Regarding patchouli marketing channel I in Aceh Jaya District, farmers play a role as patchouli cultivator. The, small traders are brokers who are directly related to farmers (middleman). This marketing channel is due to the location of KINA JAYA cooperative which is far from the cultivation location and also due to farmers who are not members of the cooperative. the farmer does not. Small traders then supply KINA JAYA cooperatives. Collector traders take part in the marketing of patchouli from farmers sold to KINA JAYA. Then KINA JAYA Cooperative partnered with PT General Aromatic. Then PT. General Aromatics acts as an exporter by buying patchouli oil from the KINA Jaya cooperative at a price difference of around Rp. 20,000 - Rp. 30,000 per kg of farm gate prices. PT. General Aromatic gives higher prices to farmers who sell their raw materials for distillation in the cooperative compared to the results of distilling themselves in the traditional way. PT General Aromatic bought patchouli oil from the KINA Jaya cooperative at a price difference of around Rp. 50,000 - Rp. 100,000 per kg. Then the producers of derivative products buy patchouli oil according to prices in the global market through Payan Bertrand as the base ingredient for perfume or other derivative products with high quality patchouli oil requirements.

Channel 2: Farmer-small collectors-large-collectors-consumer-exporter

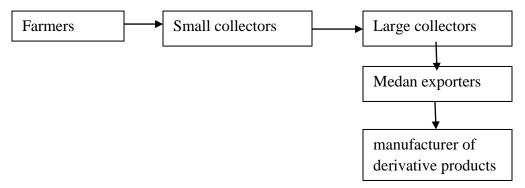


Figure 2. of Marketing Channel II in Aceh Jaya

Based on the channel II of patchouli marketing in Aceh Jaya Regency collectors take an important role in this channel from small then to large collectors. It as also influenced by the distance between distant cultivation and cooperatives and also partners built by traders and farmers. Then the collector sells at a slightly higher price to the exporter in Medan with additional costs.

Channel 3: Farmer-cooperative-exporter-consumer.

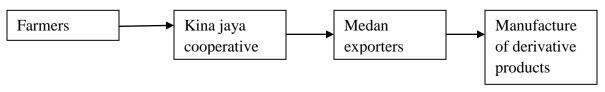


Figure 3. of Marketing Channel III in Aceh Jaya

Based on Channel III of patchouli marketing in Aceh Jaya explained that, there was cooperation between parties in the Aceh patchouli marketing chain in Aceh Jaya. The marketing chain starts from patchouli farmers who sell patchouli oil to the Aceh Jaya Patchouli Industry Cooperative (KINA Jaya Cooperative), dry terna from farmers refined into patchouli oil using a kettle in the cooperative. Patchouli oil refining in KINA Jaya Cooperative with modern kettle still uses firewood but the results are more optimal and lower operating costs. KINA Jaya Cooperative's role is to buy raw materials and patchouli oil from farmers at a higher price from local collectors. However, there were some collecting traders who also sell patchouli oil to the KINA Jaya cooperative. The cooperative is buying patchouli oil from farmers at the current price of around Rp. 380,000 - 400,000 per kg. KINA JAYA Cooperative also partners with exporters in Medan in supplying patchouli oil to exporters. Then the uke bar is a manufacturer of derivative products.

#### **Payment System**

The payment system for Aceh jaya patchouli oil was carried out in two ways: cash (direct) and delayed payment (indirect). Direct payments ere made as usual, ie directly given to farmers. Indirect payment would be paid if the oil was fulfilled in accordance with the agreement previously agreed. From farmers, there were 5 farmers who make indirect payments, cooperation conducted by farmers with cooperatives and farmers with collectors. In the beginning of the agreement, the farmers were given input in the process of patchouli cultivation, with the agreement that the quantity of oil sold was determined and must be sold to the institution that has cooperated with the farmer.

#### **Market Performance Analysis**

Market performance will reflect the interactions that occur between market structure and market behavior (Dahl and Hammond 1990). The analysis used to measure market performance includes marketing margins, farmer shares and vertical market integration.

#### **Marketing Margins**

Analysis of the marketing margin of Aceh Jaya Patchouli Oil was carried out starting from collectors (traders), cooperatives and exporters. The definition of margin here was the difference between the buying and selling prices at each level of the marketing institution. Thus, the total margin was the difference in price at the farm level with the price at the exporter level. Margin analysis in this study uses accounting methods that aim to determine the distribution of marketing margins among institutions involved in marketing channels. Existing channels would be analyzed consisting of 3 marketing channels. The amount of margins in each marketing channel varies, depending on the channel traversed and the number of marketing institutions involved. The following was an explanation of the patchouli marketing channel in Aceh Jaya.

No	Marketing Institute and	Marketing Channels (Rp / kg)					
	Margin Elements	Ι		II		III	
		Buy	Sell	Buy	Sell	Buy	Sell
1	Farmers	-	380.000	-	380.000	-	400.000
2	Small collectors	380.000	400.000	380.000	400.000	-	-
3	Large collectors	-	-	400.000	470.000	-	-
4	KINA JAYA Cooperative	400.000	450.000	-	-	400.000	470.000
5	PT General Aromatic	450.000	480.000	-	-	-	-
6	Payan Bertrand	480.000	550.000	-	-	-	-
7	Medan exporters	-	-	470.000	540.000	470.000	550.000
	<b>Total Marketing Margins</b>	170	.000	160.	.000	150	.000

#### Table 5. Patchouli marketing channel in Aceh Java

Source: Data processed, 2018

The largest total marketing margin was in the first channel of Rp. 170,000 / kg. Long marketing channels affect the level of patchouli prices differently. Farmers who sell to Kina Cooperative were patchouli farmers who as members of the cooperative. For farmers KINA JAYA members provide a

profit of Rp 20,000. whereas in channel I and II patchouli farmers sell to traders at a price of Rp 380,000 lower when compared to KINA Cooperatives. The total marketing margin generated by channel two is Rp 160,000 / kg and channel three was Rp 150,000 / kg. The highest marketing costs were for patchouli marketing channels in Aceh Jaya District.

## **Farmers Share**

Farmer's share is the second indicator of marketing efficiency after marketing margins. Farmer's share measures how much proportion of patchouli farmers receive to patchouli prices at the final level. Based on the results of the study, there were three values of farmer's share based on the final patchouli selling price with a division such as channel distribution in the marketing margin analysis. The value of the farmer share was the percentage of the selling price received by the farmer against the selling price of rice paid by the final level. farmer's share received by patchouli farmers in patchouli marketing channels in Aceh Jaya Regency as follows:

No	Marketing channel	Price for patchouli farmers (Rp / kg)	Price of final leve institutions (Rp kg)	
1	Channel I	380.000	550.000	69%
2	Channel II	380.000	540.000	70%
3	Channel III	400.000	550.000	73%

 Table 6. Farmer's share on patchouli marketing channels in Aceh Jaya

Source: Data processed, 2018

The value of farmer share in patchouli supply chains of channels one and two was 69 percent and 70 percent, respectively. The value of the farmer share on channel three were greater than that of channels one and two, which is 73 percent, so that the three marketing channels were the most profitable for patchouli farmers in Aceh Jaya.

# **Marketing Efficiency**

Marketing efficiency in this study was an approach used to measure supply chain performance, with analytical tools in the form of marketing margins and farmer's share. Marketing efficiency could be achieved if the existing marketing system gives satisfaction to the actors involved in it, such as farmers, marketing institutions, to the end consumers. Patchouli marketing efficiency is measured to find out how efficient marketing activities were carried out by supply chain members and how to use supply chain resources whether it could be said to be optimal or not.

Patchouli marketing efficiency describes the distribution of benefits received by each member of the supply chain. Based on the results of the study, the value of marketing efficiency for each marketing channel could be seen in Table.

Table 7. Value of marketing efficiency in each patchouli marketing channel pattern in Aceh Jaya

No	Marketing channel	Price <sup>a</sup> (Rp/Kg)	Margin <sup>b</sup> (%)	Farmers Share (%)
1	Channel I	380000	31%	60%
2	Channel II	380000	30%	70%
3	Channel III	400000	27%	73%

Source: Data processed, 2018

When viewed from the marketing margin and farmer's share, then channel three was relatively more efficient compared to other channels. Besides that, it could also be seen from the price received by patchouli farmers where the highest price among other channels was in channel three, which Rp 400,000 / kg. This shows higher favorability for farmers and for farmers who as members of the KINA JAYA Cooperative would be more profitable.

#### **Conclusions and Recommendations**

- 1. The results of the analysis of four firm concentration ratio (CR4) showed that the four largest companies controlled 86 percent of the total availability of patchouli oil in Aceh Jaya. This means that the level of competition of institutions (both collectors and KINA Jaya) is concentrated with a small level of competition. This condition illustrates that the market is highly concentrated and tends towards monopoly. It was in accordance with the opinion of Pappas (1995) which states that if the concentration ratio of the four largest companies is greater than 80 percent, then the market is highly concentrated and tends towards monopoly.
- 2. When viewed from the marketing margin and farmer's share, the third channel below is relatively more efficient compared to the other channels. Besides that, it can also be seen from the price received by patchouli farmers where the highest price among other channels is in channel three, which is Rp 400,000 / kg. This shows higher favorability for farmers and for farmers who are members of the KINA Cooperative will be more profitable.



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