MARKET PERFORMANCE OF NATURAL RUBBER COMMODITY ON SMALLHOLDER PLANTATION IN SINTANG REGENCY

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ABSTRACT

This research aims to; 1) identify the rubber farmers marketing channels and which agencies are involved in it; 2) Analyze marketing margin, share price received by farmers and the marketing efficiency of smallholder rubber in Sintang Regency. The research is conducted by surveying three research sites; Sepauk, Dedai, and Tempunak District. A total of 150 rubber farmers area asked to be the respondents. The respondents of marketing agencies which involved in the marketing of smallholder rubber to the factory is determined by the method of snowball sampling. The result of the Research shows that there are four marketing channels and there are two different factory sales area, they are at the factory in the county and factories in the province. The highest marketing margin occurs on the marketing channel 3 that is Rp. 7.700, - per kg, and the lowest on the marketing channel 2 Rp. 4.500, - per kg., while the areas which farmers receive most are also available on line two and four around 60.9 percent and 52.7 percent. The most efficient marketing channel of the four marketing channels is the marketing channel two and four, which are from the rubber farmers to large traders without passing through intermediate traders with the smallest efficiency value 6:03 percent and 11. 33 percent.

Keywords: marketing channels, margins, farmer share, marketing efficiency, smallholder rubber

INTRODUCTION

The agricultural sector has a very important role in economic activities in Indonesia, this can be seen from its contribution to Gross Domestic Product (GDP) which is quite sizeable at around 13.38 percent in 2014 or the second after the manufacturing sector (BPS , 2015). At the time of economic crisis, the agricultural sector is a sector that is strong enough to face unstable economic and it can be relied upon in national economic recovery.

One of the most potential major subsectors is the plantation sub-sector. Although the plantation sub-sector contribution to GDP is not too high of 3.77 percent in 2014 (BPS[1], 2015) or a third-agricultural sector after sub sectors of food crops and fisheries, but this sub-sector is a provider of raw materials for rested in industry, the main employer and foreign exchange earner.

One of the strategic commodity of plantation sub-sector is that rubber experiencing rapid development in recent decades, both from the plantation area, as well as the production values. Rubber agribusiness conditions today shows that the rubber is managed by the smallholder, country estates and private estates. The growth of smallholder rubber is still positive, although slow; 1.58% / year, while the state and private plantations are equally decreased 0.15% / year. Therefore, the foundation of the development will be more rubber on smallholder agriculture. Rubber plantation area in 2011 totaled more than 3.4 million acres are spread all over Indonesia, which is 85% is a rubber plantation owned by the smallholder, and only 7% of the country estates and 8% private owned large estates. This amount will be increased further still by rejuvenating and empowering agricultural lands owned by farmers as well as vacant / unproductive land suitable for rubber plantations (Ditjenbun[2], 2012).

Smallholder rubber plantations in West Kalimantan, especially in Sintang already entrenched in society's every day life and is the main livelihood. Generally operated by small-scale farmers in the traditional system, contrary to the company operated by governments or private companies, which operation is conducted on a large scale with modern technology system. In determining the price of rubber, usually done by the middlemen then received by farmers. Farmers themselves have almost no bargaining power on the prices determined by the middlemen. In the economic field, if one of the parties of a transaction has more or better information than the other party is called as *asymmetric information*. Generally, the seller has more information about the product than the buyer, even though the opposite condition may also occur.

Currently, rubber prices received by farmers is still low at around 25-30% of the price of rubber market in the world, while the Malaysian rubber farmers can get the price of 70-80% . according to Mubyarto and Dewanta (1991), this condition is an indicator that Indonesian rubber is generally still not efficient, especially on the marketing and the control of information by farmers. From the description of the problem, the research aims: (1) identify the rubber farmers marketing channels and which agencies are involved in it; (2) To analyze the marketing margin, part of the price received by farmers and the marketing efficiency of smallholder rubber in Sintang regency.

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[1] BPS (Badan Pusat Statistik/ Central Statistical Institution).

[2] Ditjenbun (Direktorat Jenderal Perkebunan/ The Directorate General Of Plantations)

RESEARCH METHOD

The basic method used in this research is descriptive analytical method, a method that focuses on solving the problems that exist. The data which has been collected, initially conceived, described and analyzed (Surakhmad, 1994). Research location was determined intentionally (*purposive sampling*), namely by selecting the research location in Sintang which is a center of rubber production in West Kalimantan. District of Sepauk, Tempunak, and Sei Tebelian was chosen randomly from the fourteen Districts exist. The number of respondent farmers was determined as much 150 respondents who are distributed equally in each sub-district.

Respondents marketing agencies involved in the marketing of smallholder rubber until the factory was determined by the method of snowball sampling, namely the determination of respondents marketing institution which firstly based on information from the respondent farmers, the next based on marketing agency appointed by the respondent farmers, and so on until saturationof respondents or respondents difficult to achieve. This model is used because the targetof populations marketing agencies is obviously not known and difficult to reach by other means (Sarantakos, 1993).

Marketing Margin

To determine the amount of rubber marketing margin which is the difference between the price at the factory level with the price at the farmer level by Sudiyono (2001) can be calculated by using the formula:

$$MM = Pk - Pf$$

Where: :
MP   = marketing margin (USD / kg)
Pk   = average price of rubber at the factory level / processor (Rupiah)
Pf   = average price of rubber at the level of the farmer / grower (Rupiah)

Whereas for the middleman marketing margin represents total marketing costs added by the profits of a trader marketing.

$$MMT = \pi i + MCi$$

Where:
MPPI   = marketing margin traders to-i
πi = profits of traders to-i
MCi   = marketing costs of traders to-i

Share prices received by farmers (*farmer's share*)

The analysis was performed to determine the percentage share of rubber prices received by farmers from marketing margin which is the price received by farmers and the prices paid by the rubber factory can be calculated using the following formula:

$$S_f = \frac{Pf}{Pk} \, x100\%$$

Where: :
Sf   = part (share) which is received by the rubber farmers (%)
Pf   = average price of rubber at the level of the farmer / grower (Rp/kg)
Pk   = the average price of rubber at the factory level (Rp/kg)

Then it was analyzed by calculating the percentage of share price received by farmers (farmers share), in each marketing channel, based on the ratio of prices at the farmer level and at the factory level. So, the average of share prices that have been received by farmers, on each institution marketing and channel marketing can be known.

According to Kohl and Uhl (1980) in Mahreda (2002), if the share that the farmers received less than 50%, it can be said that marketing system is not efficient yet.

Marketing Efficiency

According Sheperd in Soekartawi (1993), the marketing efficiency is the ratio between the total cost with the total value of the producs marketed, can be formulated:

$$ME_f = \frac{TC}{TPV} \text{ x } 100\%$$

Information:

ME_f = Marketing Efficiency
TB   = Total Cost (Rp/Kg)
TNP   = Total Product Value (Rp/kg)

RESULTS AND DISCUSSION

Marketing channel

Fluctuating prices or sharp price declines is often felt by rubber farmers in the research area. Farmers can only follow how much the price paid by the trader per kilo, although in fact they have the freedom to sell more expensively to other traders who want to, but it can not be done because farmers usually have been "tied up" in advance by the trader with debt.

Rubber farmers in Sintang sell their crops or rubber material to the market traders. Farmers who sell bokar[3] below one quintal is usually sold in a way brought the bokar himself to the trader. In contrast, if bokar above one ton, usually the traders who picked the bokar to the farmers' home. Below is a chart of the marketing channels of smallholder rubber in Sintang Regency:
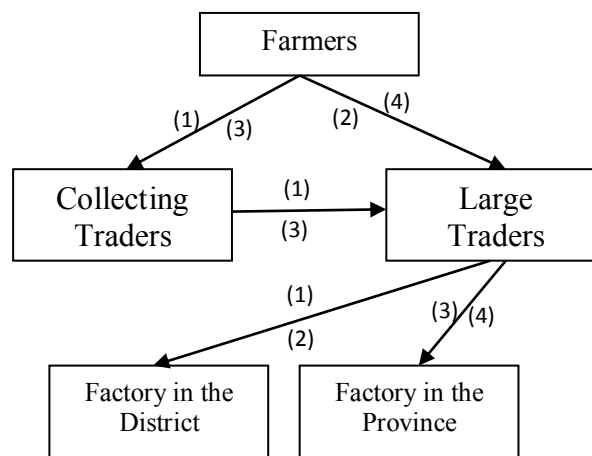

Figure 1. Rubber Marketing Channels in Sintang Regency.

The Analysis of the four marketing channels shown in Figure 1 is channel 1 (Farmers→collecting traders→large traders→factory in the District), channel 2 (Farmers→ large traders→factory in the District), channel 3 (Farmers→collecting traders →large traders →Factory in the province), channel 4 (Rubber Farmers→large traders→factory in the province).

Marketing Margins

The highest marketing margin occurred in the marketing channel 3 is Rp. 7.700, - per kg, and the lowest on the marketing channel 2 Rp. 4.500, - per kg. The data in Table 1 demonstrate that the

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[3] bokar ; bahan olah karet (raw material of rubber)

longer the marketing chain is, the greater the costs issued by marketing institutions involve. So, the bokar can arrive to the final consumer that implicates high marketing margins.

Hutabarat (2006) stated that a real great marketing margin is not inefficient but rather the amount of marketing margins is due to the existence of traders who actually benefit the farmers whose location are remote and scattered. The existance of the traders provide the access to farmers to be able to market their production of rubber although additional costs such as transportation and other marketing costs may be required. Of course if the trader who picked directly to farmers who are in remote area, the price from the traders will be cheaper because of the costs borne by the traders in the retrieval process of bokar. The interesting thing to study is the number of large traders that sell bokar to the factory of the province, even though the costs paid are higher than selling to the factories in the District, but the factory in the province want to buy at a higher price, for example, is provided in Table 1 that when factory in the District just bought at a price of Rp.11,500, - per kg, factories in the Province buy at a price of Rp.15,000, - per kg. Thus, in mathematical calculations, it would be advantageous if bokar sold to factories in the province.

Table 1. Margin, share farmer and Rubber Marketing Efficiency

Number	Description	Channel I	Channel II	Channel III	Channel IV
A	**Farmers**				
1	Selling price	6500	7000	7300	7900
B	**Collecting Traders**				
1	Buying price	6500		7300	
2	Marketing cost				
	a. bokar picking up	56		56	
	b. depreciation (1-3%)	65		65	
	Total marketing cost	121		121	
3	Benefit	879		1579	
4	Selling price	7500		9000	
C	**Large Traders**				
1	Buying price	7500	7000	9000	7900
2	Marketing cost				
	a. Filling	20	20	60	60
	b. downgrade	10	10	30	30
	c. transportation	115	115	420	420
	d. retribution (pajak)	120	120	120	120
	e. depreciation (3-11%)	279	279	791	791
	f. Truck Rentals	100	100	229	229
	g. bokar picking up		50		50
	Total marketing cost	644	694	1650	1700
3	Benefit	3356	3806	6050	5400
4	Selling price	11500	11500	15000	15000
D	**Rubber Factory**				
1	Buying price	11500	11500	15000	15000
	Marketing Margin	5000	4500	7700	7100
	Marketing efficiency	6.65	6.03	11.81	11.33
	Farmer share	56.5 %	60.9 %	48.7 %	52.7 %

Share Price Received by Farmers

The results of data analysis shows that the highest share that farmers receive of channel 1 to channel IV is from channel 2 (Farmers→large traders→factory in the District) that is equal to 60.9 percent. Although can be said that it is more profitable to sell directly to large traders, but this can not be done by all of the rubber farmers, especially those with a narrow land area.

Farmers who sell directly to large traders usually are farmers who have a very wide rubber plantation; more than 3 acres, so they can sell the bokar directly to large traders with a minimum of 5 to 10 tons of all sales.

Marketing efficiency.

The marketing system is more efficient if the cost ratio against the value product is getting smaller, and if the cost ratio against the product is bigger means that the marketing system is more inefficient. Research results show that the marketing channel to 2 is the most efficient in the amount of 6.03 percent. For the marketing channels that sell directly to the factory in the province, channel 4 is the effecient one, that is equal to 11:33 percent. This is consistent with the theory of Soekartawi (1993) who states that the shorter the marketing chain is, the less the marketing costs will be, the marketing channels will be efficient. Efficient marketing channel can decrease marketing costs so that the marketing advantages is larger and prices received by farmers is higher. But more importantly, as stated by Mubyarto (1989) marketing system is considered efficient if it is able to convey the results of farmers producers to consumers with the lowest possible prices and is able to hold a fair sharing of the overall price paid by the last consumers to all those who participate in the activities of producing and marketing the goods.

Conclusion

Studies of the rubber on the marketing of smallholder rubber plantations in Sintang found four marketing channels. Two channels are the sales which sell the bokar to factories in the county and two other channels sell to the factories in province. The Analysis of the data obtained shows that the longer the marketing channel is, the bigger marketing margins and the more inefficient marketing channels will be.

It needs a standard quality of bokar to be sold by farmers based on criteria established by the factory and bokar should be clean and the farmer does not include the chips or something like it in order to add weight to the bokar. In addition, it also needs the existence of a written contract between farmers and traders so that farmers no longer be disadvantaged side because they can not determine the price or just being the pricetakers.

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