Analysis of Rubber Marketing In Bunut Sub-District Pelalawan

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Abstract: Rubber plants are cultivated crops down, the marketing system is highly dependent on intermediary traders. The purpose of the study: 1) Knowing the marketing channel of rubber 2) Analyzing margin, farmer share, and marketing efficiency of rubber 3) Correlation of rubber price between farmers and marketing institution in Bunut sub-district, Pelalawan District. The research was conducted in 2016 using survey method, 10% sampling from population of 346 head of families (40 samples). Samples marketing institutions use snowball sampling method. The results of the research are two marketing channels of rubber that is the first channel of farmers to the collecting traders, wholesalers and factories (82.34%) second channel of farmers to wholesalers and factories (17.66%). The first channel of marketing margin is Rp. 1,485 each kg, total marketing costs by farmers of Rp. 923.75 each kg, Farmer Share 79.89%, marketing efficiency 12.51%. Marketing channel of marketing margin Rp 1,335 each kg, total marketing cost Rp 886.75 each kg, farmer share equal to 81.92%, marketing efficiency 12.01% more efficient than first channel, value of price correlation (r) 0.876 the strong relationship between price at plant level and farmer, the value of correlation price (r <1) means the two markets are not integrated perfectly.

Keywords: Rubber; Margin; Price; Marketing Efficiency; Farmer Share.

1. Introduction

Indonesia is still among the largest natural rubber producers in the world, has a very big role in economic life in general and Riau Province in particular. Rubber production increased from 2,734,854 tons in 2010 to 3,157,785 tons in 2015 (86.61%). Rubber production is still dominated by smallholder rubber cultivated by millions of small farmers (small farm) [5]. Rubber plantation area in Riau Province in 2015 amounted to 501,788 ha and production of 374,901 tons, this shows that rubber plant becomes a mainstay commodity and the development is inseparable from human resource factor as the main actors in rubber plantation development activities and play a big role in increasing the income and welfare.

Pelalawan Regency is a regency in Riau Province, where one of rubber commodity commodities become strategic commodity of present and future, rubber production in 2015 is 34,775 tons with wide of 26,791 hectare area. It can not be denied that the potential of agriculture in rubber commodity has a big enough prospect for the source of income and also as regional development.

Bunut sub-district located in Pelalawan district livelihood of the population as plantation farmers such as rubber, rubber plantation business has been entrenched in the daily life of society. Generally cultivated by small-scale farmers with traditional systems but often followed by a drop in prices, so the market has become something very unfriendly for farmers. This is due to (1) inefficient marketing problems and high marketing costs due to the great distance from the factory, (2) the length of marketing channels, the marketing of rubber made by the farmers to the Factory through marketing institutions (3) unfair pricing because of the determination (4) the existence of farmers' attachment to certain marketing institutions, (5) the slow price of information down to the level of farmers where the price increase of consumer level is only enjoyed by the merchants. The need for better handling of this marketing system,
the marketing system the good will provide greater benefits to farmers that will stimulate farmers to increase production both in terms of quantity and quality. This study aims to 1) know the marketing channel of rubber. 2) Analyze margin, farmer share, marketing efficiency of rubber. 3) know correlation of rubber price between farmers and marketing institution in Bunut Sub-district, Pelalawan district.

2. Related Works

Rubber plants are the main source of natural rubber materials, widely known and widely cultivated, as the latex production, tall trees and trunked large enough to grow straight and have a high branching above.

Marketing by [10] is a number of activities aimed at providing satisfaction from goods or services that are exchanged to consumers or users. The marketing system is a unified sequence of marketing institutions that perform the function of marketing functions to facilitate the flow of goods and services from early producers to the hands of end consumers and vice versa facilitate the flow of money. Thus, a marketing system is declared to work effectively if a system is capable of providing incentives for actors (producers, kinsmen, and marketing agencies) capable of encouraging the decision-making of actors appropriately and efficiently [8].

In an effort to smooth the flow of goods and services from producers to consoles, one important factor is choosing an efficient and effective marketing channel, a long channel can affect the cost of marketing costs, margins, recipients as well as marketing efficiency. Margin is the price difference paid by the final consumer and the price the producer receives [13].

Result of research [6] shows there are two marketing channel of rubber, good and efficient that is marketing channel 2 that is rubber farmer to wholesaler and merchant to factory. Total marketing cost on marketing channel I is Rp. 2,914.81 each kg, marketing margin value of Rp 3,350 each kg and marketing efficiency of 21.59%. In channel II, the marketing margin is Rp 2,400 each kg and marketing efficiency is 15.43%.

Based on the research [1] aimed to know the margin and analyze the correlation of price and transmission of TBS price in Kelayang Village Kelayang Sub-district can be concluded the average marketing margin of MCC to farmer during period of March 2014 until February 2015 is Rp. 420.26 each kg with the value of correlation between the price of the farmer level with the price at the level of PKS is 0.832 and the value of the transmission price (b1) is 0.69. The value of b1 <1 indicates that the price transmission formed between the farmer and the consumer market (MCC) is not a perfectly competitive market, as there is a monopsony or oligopsoni power and the marketing system is inefficient.

3. Methodology

The research was conducted in Bunut sub-district Pelalawan district. The selection of this area is based on the consideration of the area whose monograph is the agricultural development area of rubber plantation. The research took place in July 2016 until December 2016. The research was conducted by survey method. Sampling was done by purposive sampling with the provision to choose 2 dominant village of rubber plant and rubber age> 15 years old. As for the villages taken from Balam Merah Village and Sialang Kayu Batu Village, the total population of rubber farmers in 346 head families sub-districts was taken 10% sample so that the number of samples were 40 rubber farmers' households. Samples of rubber traders covering collecting traders from sellers or middlemen as samples through snowball sampling method by following the marketing channel by sample farmers. The number of samples of marketing institutions is determined by conditions in the field.

The data taken consist of primary data and secondary data. Primary data is obtained through direct interviews to the sample by using questionnaires or questionnaires that have been prepared in advance and by doing direct observation in the field. Primary data that. required include: sample identity, extent of cultivated land, marketing costs, rubber sale prices, matters relating to marketing.

The required secondary data is obtained from the relevant agencies and other literature related to the study. Secondary data required include the potential of the research area, the condition of the population, facilities and infrastructure and supporting institutions. Data deemed necessary and relevant to this research.
The marketing cost analysis is calculated by summing up all the costs incurred during the marketing functions. The marketing margin is calculated using the formula according to Sudiyono (2002)

\[ M = H_k - H_p \]  

Where:
- \( M \) = Margin marketing (Rp/Kg)
- \( H_k \) = Price paid factory (Rp/Kg)
- \( H_p \) = Price received by producer farmers (Rp/Kg)

Marketing efficiency is used according to Sudiyono (2002)

\[ \text{Eff} = \frac{TBP}{TNP} \times 100\% \]  

Where:
- \( \text{Eff} \) = Marketing Efficiency (%)
- \( TBP \) = Total marketing cost (Rp/kg)
- \( TNP \) = Total product value (Rp/kg)

The price correlation analysis is calculated using the formula (Sudiyono, 2002)

\[ r = \frac{\sum Pr \sum Pf}{(\sum Pr^2 \sum Pf^2)^{0.5}} \]  

Where:
- \( r \) : The correlation between the price at the factory level and the farm-level price
- \( Pr \) : Factory-level price (Rp/Kg)
- \( Pf \) : Farmer price (Rp/Kg).

4. Results and Discussion

4.1. Sample of Identity Farmer's and Trader

A person's identity greatly influences his actions, mindsets, and insights. The results showed that most of the samples were productive aged between 23 and 65 years old and 42.6 years on average. Traders range from 46-54 years old with an average of 49 years, so that it will contribute better physical ability to develop every business, and increase household income compared to unproductive age farmers.

Judging from the level of sample education varies, the level of education of the largest sample farmers in the dominance of junior high school graduates is 52.43%, as well as the education of 80% of the students graduated from junior high and senior high school. It shows that most of the sample education has taken 9 years of compulsory education as the government program, education of a person, the more so rapid response to absorb new innovations, the number of dependents of sample farmers families and traders in general ranging from 3-4 people will affect income and expenditure cost of living needs of farmers and traders.

The largest rubber farmer sample experience is in the range of 4-7 tahun that is 60.32% and there 16.70% over 12 years the longer experience of farming that is owned more accustomed to risk, and how to overcome or minimize problems in its farming. While the experience of traders working in the marketing of all traders is long (> 10 years), this shows the maturity of traders in marketing, trading experience will affect the number of rubber farmers who sell rubber head traders who have been recognized for a long time, the longer traders become rubber traders will getting easier in the marketing process.

4.2. Rubber Marketing System

Rubber marketing system can be described from channels and marketing institutions conducted from producers to consumers to facilitate the flow of goods and services so as to achieve marketing efficiency. Based on the research result of rubber marketing channel in Bunut District seen in Figure 1.
The results of the research are two rubber marketing channels in Bunut sub-district, the first channel of the farmers to sell rubber to the collecting merchant and then sell to the wholesalers and to the rubber factory (82.34%). The marketing channel of both rubber farmers to big traders and then sold to rubber factory (17.66%). The activity of buying and selling transactions takes place in the farmers' garden or in the rubber trader's house, for the farmers who make the sale and purchase transactions in the garden, cash payment system (cash) or debt that can be directly exchanged at home of the trader.

In the first marketing channel the farmers sell rubber to collecting merchants at an average price of Rp 5,900 each kg, collecting traders sell rubber to large traders at an average price of Rp 6,450 each kg and wholesalers sell to rubber processing plants at an average price of Rp. average Rp 7,385 each kg. Some of the reasons farmers want to sell to swordsmanship because of the well-developed proximity between farmers and traders, farmers get good service such as the accuracy of weight/volume of weighing of crops, weighing that is not detrimental to farmers, and the standard discount is below 10%. The dependence of farmers with traders may be reduced by means of formation of farmer groups or cooperative groups (KUB), but in the research area the farmer groups are not or have not been formed at all, this is due to the farmers' unwillingness in the formation of farmer groups or KUB. Farmers argue that forming a farmer group or KUB is equal to wasting their time, nor will there be any impact on the farmer's life.

The marketing channels of both farmers sell directly to big traders with an average price of Rp 6,050 each kg, wholesalers sell rubber to rubber factories with an average price of Rp 7,385 each kg. The payment system made on channel 2 is by direct payment in cash (there is no money). The farmers deliver the rubber products to the big traders so farmers have to pay for the ossification.

### 4.3. Cost, Margin, Farmer Share and Rubber Marketing Efficiency

Marketing costs incurred on the first marketing channel (Table 1) averaged each kg of Rp.923.75 consisting of, collector cost Rp.374.50 or (40.54%) and wholesalers of Rp.549.25 or (59.46%). While marketing margin of Rp.1,485 with rubber farmer selling price Rp 5,900 each kg and selling big trader to factory Rp.7,385 each kg, farmer share 79.89% efficiency equal to 12.51%. A payment system by a wholesaler to a collecting merchant directly. To reduce the shrinkage of bokar is the treatment given by collectors and wholesalers traders by soaking latex to river or to pond. The amount of depreciation ranges from 5-10%. The payment system made by the factory to the big trader is by direct payment.

**Table 1.** Average Cost, Margin and Marketing Efficiency Rubber First Marketing Channel In Bunut Sub-District Pelalawan District

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Price (Rp/Kg)</th>
<th>Cost (Rp/Kg)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Selling Price</td>
<td>5,900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Collecting Merchant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Purchase Price</td>
<td>5,900</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Selling Price</td>
<td>6,450</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Market Cost</td>
<td>374.5</td>
<td>40.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Margin</td>
<td>550</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows the marketing channels of both marketing costs incurred on average each kg of Rp 886.75 consisting of farmers cost of Rp 337.5 each kg or 38.06%. cost of wholesalers Rp. 549.25 (61.94%). While the marketing margin of Rp 1,335 with the selling price of rubber farmers Rp 6,050 each kg and the selling price of large traders buy factory Rp 7,385 each kg, and farmer share 81.92% efficiency of 12.01%. The payment system made by the wholesalers to the farmers directly there is no money there.

The results of the study Table 1 and Table 2 value of the second marketing channel efficiency of 12.01% greater than the first marketing channel of 12.51%. This shows that the second marketing channel is more efficient than the first marketing channel. Marketing efficiency can be seen from the short length of marketing channels in marketing rubber. According to [12] the smaller the value of efficiency the more efficient the marketing, and vice versa the greater the value of efficiency the more inefficient marketing. In short the marketing channel also affects the share received by farmers. wholesalers who have easy access in bringing the project to the factory, this is because big traders already have SPO (Letter of Introduction Latex) this letter obtained from the factory. SPO is obtained by making direct contract with the factory. In addition, efficiency can also be seen from the margins, costs and benefits received by each marketing agency in the marketing agency.

One of the factors that need to be taken into account in facilitating the flow of goods from producer to consumer is choosing the right channel and efficient as stated [13] that expected by the shortness of
marketing channel passed by producer to consumer can improve marketing efficiency with consequence farmers can get price much better or the share received by farmers will be greater.

4.4. Price Correlation Analysis

The correlation coefficient indicates the strength or closeness of the relationship between two or more variables that are quantitative in nature, but also gives an interpretation to how far the price formation of a commodity at a market level is influenced by other markets. The result of calculation of correlation analysis of price at farmer level with factory level price obtained value of coefficient of price correlation ($r$) at farmer level with trader level equal to 0.876. This means that the correlation value close to 1 indicates the closeness of the strong relationship between the price at the factory level and the farm level, the correlation value of the price ($r < 1$) means that the two markets are not integrated perfectly.

<table>
<thead>
<tr>
<th>Value of $r$</th>
<th>Relationship Criteria</th>
<th>Market Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Correlation</td>
<td>Not Perfect</td>
</tr>
<tr>
<td>0.5-0.8</td>
<td>Weak Correlation</td>
<td>Not Perfect</td>
</tr>
<tr>
<td>&gt;0.8-1</td>
<td>Strong Correlation</td>
<td>Not Perfect</td>
</tr>
<tr>
<td>1</td>
<td>Perfect</td>
<td>Perfect</td>
</tr>
</tbody>
</table>

Table 3. Level of Relationship in Correlation Analysis

5. Conclusion

In Bunut sub-district there are 2 channels of rubber targeting that is the first marketing channel from farmers to collecting traders, wholesalers then to factory (82.34%), second marketing channel from farmers to wholesaler and then sold to factory (17.66%).

Average marketing cost incurred each kg on the first marketing channel is Rp 923.75 and second marketing channel is Rp.886.75 Marketing margin on first marketing channel Rp.1,485 and second marketing channel that is Rp. 1,335. The marketing efficiency of the first marketing channel was 12.51% and a second marketing channel of 12.01% it means turns out the second marketing channel is more efficient than the first marketing channel.

The correlation value of the price ($r < 1$) of 0.876 means the closeness of the strong relationship between the price at the factory level with the farmers level, and also the two markets are not integrated perfectly.

Farmers in marketing should form a group of farmers and KUB so that bargaining position rubber prices can be higher. Traders in making cuts to rubber production to see the quality of rubber, and not freely set the price and need to negotiate with farmers first. Finally, government should be able to make pricing policy to protect farmers so as not to always be depressed with the price set by traders.

References

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