

Marketing and Economic Empowerment of Rubber Farmers in Gunung Toar Sub-District of Kuantan Singingi Regency: Comparative Study of Auction and Conventional Marketing Systems

Rosnita¹, Eri Sayamar¹, Roza Yulida¹, Deby Kurnia¹, Yulia Andriani¹, Aung Ezra Alfatah²

¹Staff of Agribusiness, Faculty of Agriculture, University of Riau

²Alumni of Agribusiness Department, Faculty of Agriculture, University of Riau
Bina Widya Campus Km 12.5 Simpang Baru, Tampan Pekanbaru, 28293, Indonesia

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Abstract: This research aims at comparing the rubber marketing of auction and conventional systems: 1) Analyze the profile of rubber farmers 2) analyze cost, margin, efficiency, and profit in both systems, 3) analyze the rubber farmers' empowerment. The research used Survey method to 89 rubber farmers as samples using Slovin formula. The sample consisted of 39 rubber farmers with marketing of auction system and 50 rubber farmers with conventional system. The research was conducted in Gunung Toar Sub-district of Kuantan Singingi Regency from September 2016 until September 2017. The Data analysis used descriptive analysis of respondent profile and marketing system, different test analysis was conducted on margin, efficiency, and profit in both marketing system by rubber farmer in Gunung Toar Sub-district. The results of this study illustrate that the profile of farmers of the auction system comes from male and female but to conventional farmers are all male and both are in productive age. Education in auction farmers is dominated by high school and elementary school in conventional level. Land ownership area > 2 Hectares with status as owner of auction farmers and < 2 Hectares on conventional farmers with status of farm workers and tenants. There are differences in cost, margin, efficiency and profit between the auction system and the conventional system.

1 INTRODUCTION

Kuantan Singingi Regency is one of the regencies in Riau Province which has potential in rubber plantation. Rubber farming system conducted by rubber farmers has not been profitable for rubber farmers. It can be seen from the long distribution channels, the farmers are not getting information and transparency in the price, and have limitations in the fund / capital (Department of Industry and Trade, 2005).

The Rubber plantations in Riau Province are dominated by smallholder plantations cultivated independently on a small scale and management systems are still traditional. Kuantan Singingi Regency has the largest land in Riau Province compared to other districts which in 2016 reached 144,314.70 hectares with 62.770 rubber farmers and 88,487.73 tons / year. A total of 6,236 families from 62,770 families in Kuantan Singingi Regency are

located in Gunung Toar Subdistrict (Department of Plantation of Kuantan Singingi Regency, 2017).

At first Farmers market their rubber traditionally / conventionally to their tauke (boss) who came to the farmers in the farm place done. The marketing system is done every day that the price trend is set by the tauke. Farmers assume the tauke is their savior in helping to overcome the economic problems. The farmer feels that the tauke is the foster father of the farmer (patron-client) even though the farmer realizes that the price received is very low and the farmer resignedly accepted it. The patron-client relationship is a special relationship between two parties, where the party with a higher economic status uses its influence to protect and profit the party whose economic status is lower. The reward will be given by the client in the form of assistance, or support including service to the patron.

In 2014 under guidance and assistance by extension worker then formed a rubber marketing auction system in Gunung Toar sub-district.

Through these two marketing system approaches the farmers are given the freedom to choose the existing marketing system. Marketing with auction system invites farmers to join in Farmer Groups and Combined Farmer Groups. Through this marketing system farmers have a better bargaining position than the previous marketing system (conventional) with better quality / level of rubber marketed. Although auction system marketing system is more promising in terms of price for farmers, the apparent problem is that not all farmers are interested in participating in the marketing of the auction system. It is alleged that farmers do not have a favorable picture for farmers in the marketing of auction systems yet. This makes farmers still think that conventional marketing is still able to help farmers overcome the problems they face, so that there are farmers who have followed the marketing of the auction system back to become farmers who market conventionally. This is what makes the author interested to review the marketing through the approach of both systems by doing comparison (comparison) on both systems.

2 RESEARCH METHODS

The research used survey method in two villages (Gunung Village and Lubuk Terentang Village) Gunung Toar Sub-district of Kuantan Singigi Regency with research time from September 2016 until September 2017. Sampling is done by cluster sampling with Slovin formula approach and proportionally to farmers who market by auction system and conventional systems. The research sample consisted of 89 people consisting of 39 rubber farmers with auction system marketing and 50 conventional farmers.

The analysis is done by using several analytical approaches:

- a. Descriptive Analysis. Descriptive analysis is used in analyzing the profile of rubber farmers.
- b. Marketing analysis is done on margin, efficiency and profit.

Marketing margins is analyzed using the formula (Hanifah et al, 1986) which is:

$$M = Hk - Hp \quad (1)$$

Which:

M = Marketing margins (Rp/Kg)

Hk = Prices paid by the final consumer (Rp/Kg).

Hp = Prices received by producer farmers (Rp/Kg).

Marketing efficiency is calculated using the formula (Soekartawi, 2002):

$$EP = \frac{TB}{TNP} \times 100\% \quad (2)$$

Which:

EP = Marketing Efficiency (%)

TB = Total Cost (Rp/Kg)

TNP = Total Product Value (Rp/Kg)

The lower or a smaller percentage of marketing efficiency the more efficient the marketing. Conversely, the higher or greater the percentage of marketing efficiency the more inefficient marketing.

The marketing profit uses Soekartawi's formula in Iskandar (2008),

$$\pi = M - B \quad (3)$$

Which:

π = Marketing profit (Rp/kg)

M = Marketing Margin (Rp/kg)

B = Marketing Cost (Rp/kg)

- c. The difference in marketing of auction system with the conventional in terms of margin, efficiency and profit using different test formula (Sugiyono, 2010).

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Which :

\bar{X}_2 = Average gain of conventional trader

S_2 = Standard deviation conventional

n_2 = Number of conventional samples

\bar{X}_1 = Average gain of auction trader

S_1 = Standard deviation of auction

n_1 = Number of auction samples

- d. The empowerment of rubber farmers using Likert Scale analysis. Likert scale is used to measure attitudes, opinions and perceptions of a person or group of social events or symptoms (Sugiyono, 2010). Table 2 illustrates the empowerment of rubber farmers through the marketing system used.

Table 1: Likert Scale Value, score and category of rubber farmers empowerment in Gunung Toar Sub-District 2016.

Number	Category Economic Empowerment	Scale	Score
1.	Very Powerful	3	2,32 – 2,97
2.	Powerful	2	1,66 – 2,31
3.	Powerless	1	1,00 – 1,65

3 RESULT AND DISSCUSSION

3.1 Profile of Rubber Farmers

Profile of rubber farmers is a general description of farmers who can show farmers from all sides and can give an overview of farmers' social and economic conditions. The social and economic conditions of this farmer will give description of ability and farmer in doing their farming activity. The profile of rubber farmers in the auction and conventional systems is presented in Table 2.

Table 2 shows that the profile of rubber farmers in the auction system is better than the rubber

farmers in the conventional system, both from the level of education, the area and the land ownership status, as well as the experience in rubber farming. The lower the ability level of rubber farmers then the tendency to do marketing with conventional system. It shows that dependence on tauke is bigger if the economic ability and human resource of farmer is still low. Looking at the conditions that exist farmers need to be guided and nurtured so that farmers become more empowered and can choose marketing channels with a better system and have the ability to determine the price (price maker).

3.2 Rubber Marketing System in Gunung Toar Sub-district

Gunung Toar Sub-district is one of the districts in Kuantan Singingi Regency that conducts conventional marketing and also with auction system conducted by the community since 2014. Through the auction system the price received by farmers is better than the price on conventional marketing system because rubber farmers are fostered and accompanied by extension workers in

Table 2: Profile of rubber farmers in the auction and conventional system in Gunung Toar Sub-district 2016

Number	Description	Auction system		Conventional System	
		Total	%	Total	%
1	Male gender	30	76,90	50	100,00
2	Productive age (15-54 years old)	28	71,70	28	56,00
3	Education:				
	a. Elementary School			27	54,00
	b. Senior High School/equal	20	51,20		
4	Family dependents:				
	a. 0 - 3 persons	35	89,70		
	b. 4 - 6 persons			20	40,00
5	Land ownership area				
	a. < 2 Hectares			31	62,00
	b. >2 Hectares	22	56,40		
6	Ownership status :				
	a. Owner	39	100,00	31	62,00
	b. Worker / tenant				
7	Experience in rubber farming				
	a. 11-15 years			20	40,00
	b. 16-20 years	21	53,80		

The Auction system marketing mechanism in Gunung Toar Sub-district is done through closed auction system and managed by auction market organizers formed from Combined Farmer Groups (CFG). The organizer of the auction market consists of Chairman, Secretary and Treasurer. The

Chairman's job is to carry out and oversee the implementation of the auction market, the Secretary notes all things related to the auction market activity, and the Treasurer in charge of finance in the auction market.

The Combined Farmer Groups fostered and accompanied by the organizer, especially in maintaining the quality or level of Marketed Rubber materials. Extension workers in guiding farmers to maintain the quality of the rubber materials always refers to the Regulation of the Minister of Agriculture No. 38/Permentan/OT.1401/8/2008. The regulation of the minister of agriculture policy is to oblige farmers in rubber tapping with the correct technique, skilled manpower, and good equipment. Rubber materials produced quality by giving freedom to farmers to determine the type of rubber materials produced according to market demand (garden latex, wind sit, slab, or lump). The auction market is conducted once a week at a mutually agreed place.

The Farmers who do not join the market auction market, market their rubber to tauke conventionally. Conventional marketing can be done every day. Farmers who market their rubber to conventional markets are generally farm workers and tenant farmers where landowners already have patron-client bonds with traders in the conventional market. Dependence on tauke ultimately makes it difficult for farmers to market their production through an auction system. The production and price in a single marketing on auction and conventional systems are on average presented in Table 3.

Table 3: The production and price on auction and conventional system.

No	Description	Auction Market	Conventional Market
A	Production marketed (kg)	1.239,75	250,00
	a. Highest	684,07	106,52
	b. Average	194,25	60,00
	c. Lowest		
B	Price of Auction Market (Rp)	10.100,00	6.615,00
	a. Highest	8.824,54	7.600,00
	b. Average	8.025,00	6.050,00
	c. Lowest		

Table 3 illustrates that the average production and prices contained in the auction system are higher than conventional systems. The amount of average production marketed due to market day only occurs once a week and the high price in the auction market due to farmers already incorporated in the farmer group and Combined Farmer Groups so have a better bargaining position. The marketing mechanism of rubber through two systems namely the Auction and Conventional systems have differences both from the characteristics of farmers

and prices received, as well as market days. The marketing mechanism is presented in figure 1.

3.3 Rubber Marketing System in Gunung Toar Sub-district

In the marketing system of agricultural products, the marketing agencies involved vary greatly depending on the type of commodity being marketed. They may consist of: middlemen, (directly related to farmers), collecting traders (who buy agricultural products from middlemen), wholesalers (who collect the proceeds from collecting merchants), agents (who buy from wholesalers) in large quantities, and retailers (who are dealing directly) with consumers.

A marketing approach with auction system is a very appropriate tool in empowering farmers, because both farmers and traders are brought together in a place and transparency exists in many ways for both parties. The role of middlemen who harm farmers can be trimmed (Bappebti, 2005). The profit of an auction market for farmers can provide price assurance, reduce costs, improve efficiency and provide better returns for farmers. Costs, margins, efficiency, and profit of farmers in both marketing systems are presented in Table 4.

Table 4 illustrates that the marketing of rubber with auction system further strengthens the bargaining position and provides better prices for farmers, where the price received by farmers in the auction system is higher at Rp 7,240.65 (78.70 percent) than the price received by conventional farmers Rp 6,293.41 (68.40 percent) of the price paid by the final consumer (Factory). The auction system is more profitable for tauke with the comparison of tauke profit in the auction system is only 4.35 percent compared to conventional systems that give a profit of 6.52 percent for tauke. The efficiency of auction system marketing is more efficient with 0.08 percent greater than conventional marketing system with 0.14 percent efficiency. This means that auction system marketing can increase the selling price and reduce marketing costs for rubber farmers.

Table 4. Cost, Margin, Profit and Marketing Efficiency on Auction and Conventional System in Gunung Toar Sub-district 2016

No	Description	Auction Market		Conventional Market	
		Rp/Kg/week	%	Rp/Kg/week	%
1.	FARMER				
	Price Received by Farmer	7.240,65	78,70	6.293,41	68,40
	Total Cost	759,35	8,25	1.306,59	14,20
	Cost				
	1. Group cuts 3%	240,00	2,61	500,00	5,43
	2. Transportation	86,02	2,20	197,59	2,15
2	TAUKE (BOSS)				
	Price Paid by Tauke	8.000,00	86,96	7.600	83,61
	Total Cost	800,00	8,69	1.000,00	10,87
	Cost				
	1. Unloading	400,00	4,35	400,00	4,35
	2. Weighing	200,00	2,17	200,00	2,17
3	FACTORY				
	Price in Factory	9.200,00	100,00	9.200	100,00
	Margin	1.200,00	13,04	1.600,00	17,39
	Efficiency		0,08		0,14

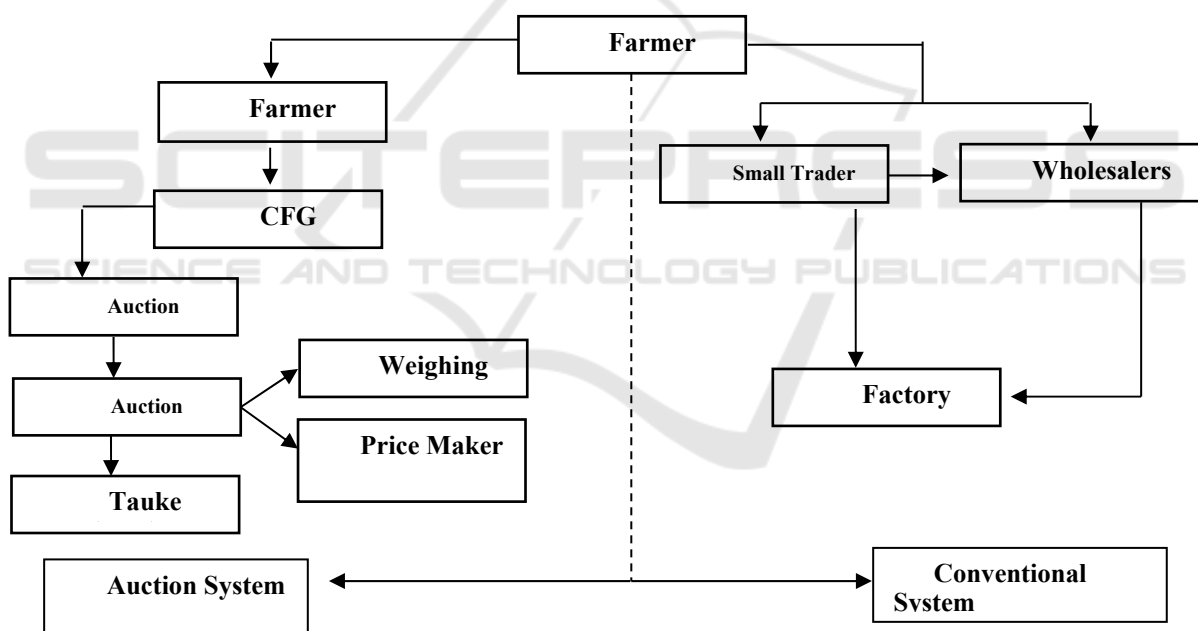


Figure 1: Rubber marketing system in Gunung Toar Sub-district

Seeing the difference is statistically significant different statistically between the two marketing systems viewed from cost, margin, efficiency, and profit. Using the proposed hypothesis and the analysis used (Test Z and Test t), the proposed hypothesis is as follows:

H_0 = There is no difference in cost, margin, efficiency and profit between marketing with auction system and conventional systems.

H_a = There is difference in cost, margin, efficiency and profit between marketing with auction system and conventional systems.

The consideration in decision making in this research is:

H_0 = Accepted, if the significance value or sig.(2-tailed) < 0,05

Ha = Accepted, if the significance value or sig (2-tailed) > 0,05

Based on the proposed hypothesis and the analysis conducted then obtained the results of the analysis presented in Table 5.

Table 5: Different test of marketing of auction and conventional system seen from margin cost, efficiency and profit in Gunung Toar Sub-district 2016

No	Description	Significance	Decision
1	Cost paid by Tauke	0,00**	Ha Accepted
2	Marketing margins	0,00**	Ha Accepted
3	Marketing efficiency	0,00**	Ha Accepted
4	Profit receiver by Tauke	0,42	Ho Accepted

Table 5 reveals that there is a very significant difference in both marketing systems (auction and conventional systems) in terms of cost, margin, efficiency on the basis of the marketing system, but the profitability of traders in both marketing systems is statistically no different.

3.4 The Empowerment of Farmers

Empowerment is an effort to provide opportunity, strength or power so that farmers are able to identify and analyze their own needs and able to solve problems themselves by optimizing the resources and potentials (Soetomo, 2012).

The empowerment of rubber farmers is illustrated by the amount of capital owned, the use of technology, worker, and marketing. In the auction system, farmers' capital in the auction system ranges from Rp 1,000,000.00 to Rp 68,000,000.00. The use of technology can be seen from the information technology in doing marketing, and the average worker usage of 2 people, with marketing auction farmers can save Rp 150.000,00 to Rp 250.000,00. Farmers with large conventional marketing system of farmer's capital ranged from Rp 900,000.00 to Rp 13,962,600.00. Farmers do not use information technology in the price where direct marketing between farmers and tauke without using Mobile phone as teir aid. Farmers have not been able to use the workforce outside the family. Farmers have not been able to save from marketing done because farmers are always bound by debt with tauke but farmers can repay the debt that has been done to tauke. Farmers' empowerment between the auction and conventional systems is presented in Table 6.

Table 6. The empowerment of rubber farmers in the marketing of the auction and conventional system in Gunung Toar Sub-District in 2016

No	Indicator	Marketing			
		Auction System		Conventional System	
		Score	Category	Score	Category
1	Capital	2,19	Powerful	1,66	Powerful
2	Technology	2,25	Powerful	1,42	Powerless
3	Worker	2,21	Powerful	1,47	Powerless
4	Marketing	2,30	Powerful	1,67	Powerful
	Average	2,24	Powerful	1,55	Powerless

Table 6 illustrates that farmers who do marketing with auction system are powerful compared to farmers with conventional system that is powerless. The empowerment of farmers with the marketing of auction system can be carried out by farmers in terms of capital, technology, worker, and marketing, while farmers doing marketing with conventional systems are powerless in terms of technology and worker. It is seen that farmers have not been able to use technology in obtaining price information and have not been able to use the workforce (worker) outside the family. For that it is expected to the relevant agencies to be able to guide and foster farmers in order to change the mind set to do marketing with the auction system. Thus, it is expected that the empowerment of farmers can be improved.

4 CONCLUSIONS AND RECOMMENDATIONS

1. The profile of rubber farmers in marketing of auction system is better than farmers in conventional system both in terms of education, area and land ownership status, and length of experience in farming. The need for support to conventional farmers, especially non formal education and capital assistance in order to improve rubber land election in the cultivation.
2. Rubber farmers have a better bargaining position on the auction than conventional system. The cost, margin and efficiency of a conventional and auction system in rubber marketing are significantly different in both systems, but there is no difference in profit. Therefore, it is suggested to related offices to develop rubber marketing through auction system.
3. Rubber farmers with marketing of auction system are more powerful than farmers with conventional systems. Guidance and assistance to conventional farmers, especially on the ability of technology use and the use use of worker

needs to be improved so as to increase the empowerment of rubber farmers with marketing of conventional system.

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