

Analysis of Rubber Price Difference in Regency Level and Integrated Market in West Sumatera Province

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Abstract—The purpose of this study is to analyze the price of rubber in each district and city in West Sumatra. Analysis of rubber prices is influenced by distance factors between cities and districts. The research approach method used is a multiple linear regression. If the quality of infrastructure does not meet the transportation of rubber from cities and districts, the impact of rubber prices will increase. This problem causes a high cost of transporting raw rubber to be sent to rubber processing companies. The result, Quality of the raw rubber production produced by farmers also has an impact on the rubber price. If the farmer's rubber is in a good quality, the price of rubber will increase. The price difference is a matter of production per hectare, and output, which is the level of commodity output normalized by the society of West Sumatra province. West Sumatra Province is an area where the plantation commodities play important role for the industrial economic activities. The price game is set by the rubber suppliers in *Pasar Nagari* and big traders in regencies.

Keywords—rubber price; distance; production; land area

I. INTRODUCTION

West Sumatra has very optimal plantation commodities in increasing economic growth. It is one of the provinces that has the biggest contribution in producing plantation commodities to increase an economic growth. The plantation sub-sector in West Sumatra contributes to economic growth for 24.06% [1].

Plantation sector is one of the agricultural businesses whose orientation is mainly on exporting and this sector could give an added value. One the most exported agricultural product is rubber plantation where its agricultural products is still surplus [2]. West Sumatra province is still located in Sumatra corridor, which has a great potency as a production center, natural resources processing, and national energy saving for rubber.

Rubber is one of the plantation commodities that could grow for \pm 30 years. Rubber commodity has a large potency but unfortunately, it is not supported by an increase of the rubber commodity price. The price is still causing problem for the West Sumatra farmers and finally, it really affects their live.

West Sumatra province consists of 19 districts and cities where not all of its regions become the center of rubber plantations. Only some parts of the region with certain natural conditions could be a rubber plantation producing area and has a potency for rubber plantation. Optimization of agriculture in West Sumatra having great rubber commodities is only found in 13 districts / cities. However, those large areas do not match with the price for a qualified rubber production.

There is a different price of rubber in each of regency. Quality of raw rubber production of each regency produced by farmers has an impact on the price of rubber itself. If the rubber has good qualities, the price would increase. If the quality of infrastructure does not meet the transportation of rubber from cities and districts, it also affects the rubber prices significantly. It will cause a high cost of transporting raw rubber to be sent to rubber processing companies. The price difference is a matter of production per hectare, and output, which is the level of commodity output normalized by the society of West Sumatra province.

The different price in each region of West Sumatra is also interfered by suppliers. There could be some suppliers set the price, so that it causes the farmers' economy weak and even it leads to poverty category. Therefore, this study aims to analyze the price of rubber in each district and city of West Sumatra Province.

II. METHOD

This research applied quantitative and qualitative approaches. Quantitative approach was used to answer the results of analysis of rubber price differences among 13 districts and cities in West Sumatra province with the research approach method used is a multiple linear regression. Meanwhile, qualitative approach was conducted to find out the causes of different price set by *Pasar Nagari* or supplier market. So that, it will have an impact for the economy of rubber farmers.

Empirical data were collected from primary and secondary data. Primary data were conducted through observation and interviews with leading commodity business parties such as rubber farmers and other stakeholders in the main related and

industrial centers. Secondary data were from each province using data published by related provincial Central Bureau of Statistics. The research location was the areas producing rubber commodities in West Sumatra province.

Analytical method used to analyze different price among districts in West Sumatra were qualitatively focused on market analysis of rubber commodities in West Sumatra Regency and quantitatively using analysis of Multiplier Linear Regression.

$$Y = a + b_1X_1 + b_2X_2 + e$$

Where:

Y = Rubber Price per Regency

X₁ = Rubber production

X₂ = Distance between regency and city producing rubber commodity

e is Error term

III. DISCUSSION AND FINDINGS

Rubber plant areas in West Sumatra province are located on 13 districts and cities. Variance and quality of the rubber sap produced by each district are various. The highest areas of rubber land are in Sijunjung district where it has 33,848 hectares and Dharmasraya district for 43,162.75 hectares. The land area is not the only factor determining the rubber farmer economics but there are many others factors influencing the rubber price itself.

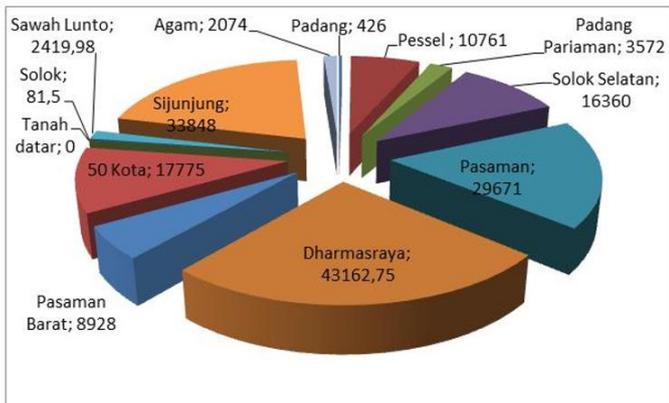


Fig. 1. Rubber land areas on 13 regencies in West Sumatra.

It can be seen for rubber production in 13 West Sumatra regencies, there are rubber commodity producers in Dharmasraya district with a production value i.e. 35065 tons and it is the following the diagram:

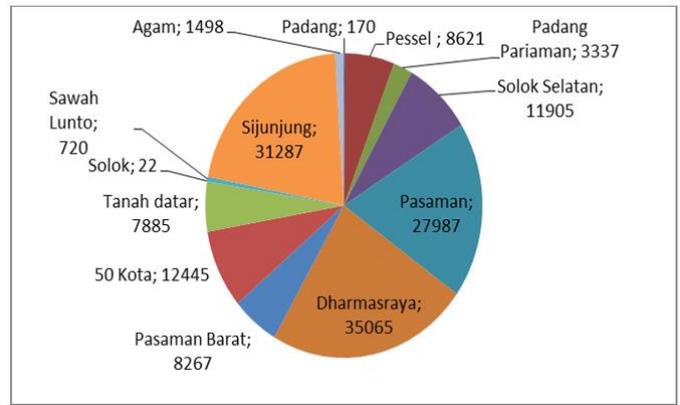


Fig. 2. Rubber production in 13 regencies in West Sumatra.

Based on the figures above, it can be explained that West Sumatra province has the most potential production and area of rubber plants. West Sumatra, as a research area, provides a portion of rubber production in the region for 5.79%, while national production for 4.51%. The regional portion of rubber planting area is 5.02% and national is 4.95%. It means that rubber production in West Sumatra province is one of the rubber production supporters in Sumatra and National, but it is not as wide as South Sumatra, Riau and Jambi.

West Sumatra province export value, which is an export volume included into three rubber export supporters in Sumatra region, is smaller than export value from South Sumatra, Riau, and even other provinces. It is because the traded rubber commodity is in the form of rubber latex (Bokar) in *Pasar Nagari* market and up to exporters [3]. The rubber processing industry has not developed in the province of West Sumatra. The rubber industry tree reaching the export commodities has not been expanding because exporters only export the rubber in the form of latex. It has not been processed it into latex rubber and crumb rubber, which can be passed on to various household items and industry.

The short tree chain of rubber industry in West Sumatra, which is still in the form of raw producing called latex or in the trading term in *Pasar Nagari* called "bokar" could be one of the factors for the lower portion of West Sumatra province's rubber sales value compared to South Sumatra, Jambi, Riau and Bengkulu provinces. Based on interviews with rubber farmer and traders in Sijunjung and Dharmasraya districts, rubber trading volume is more transacted to Jambi and Riau provinces compared to Padang [2].

The farmer's rubber price does not match with the efforts made. It is because of the farmer's limited equipment to produce rubber in the form of latex rubber. The price set by the rubber suppliers is very irrelevant to the production produced. This is due to the price policy from *Nagari* traders who cannot raise the economy of the *Nagari* community.

Determining factors of rubber price are influenced by rubber production and the distance between rubber-producing districts and the merchant market. Through a quantitative approach, it shows that price regression coefficient value is 0.1977 and the coefficient value for distance is 0.2779. It means that the distance between the rubber producer and the

market determines the price of the rubber. If the infrastructure is in good condition, it will minimize the transportation costs imposed on the farmer, so that the farmer can receive more than the previous conditions. Based on this problem, trade integration is decreasing in line with changes in economic growth, income per capita and accessibility improvement, especially in districts and cities where it becomes the rubber production centers.

The price game is set by the rubber suppliers in *Pasar Nagari* and big traders in regencies. It is in line with Zuzmelia's 2007 theory who states that the playing actors on price settlement are traders in *Pasar Nagari* and big traders in regencies. Market regulation is set between group members and interpersonal social networking to make prices lower. Members make a purchase circulation in each auction market subjected to leading market such as monopsony market [4].

IV. CONCLUSION

Based on data analysis of price differences at the district / city level and integration in the market of Sumatra, it is concluded as followings: Trade integration is decreasing in line

with changes in economic growth, income per capita and accessibility improvement, especially in districts and cities where it becomes the rubber production centers. It means that rubber production in the West Sumatra province is one of the rubber production supporters in Sumatra and National, but it is not as wide as South Sumatra, Riau and Jambi. The price game is set by the rubber suppliers in *Pasar Nagari* and big traders in regencies.

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