

# The Factors in the Emergence of Smallholder Rubber Plantation in Tapanuli: 1906 - 1942

Edi Sumarno <sup>1\*</sup>, Junita Setiana Ginting <sup>2</sup>, Nina Karina <sup>3</sup>, M. Azis Rizky Lubis <sup>4</sup>

<sup>1,2,3</sup> Department of History, Faculty of Cultural Sciences, University of Sumatera Utara, Indonesia

<sup>4</sup> Post Graduate Student in Department of History, Faculty of Cultural Sciences, University of Sumatera Utara, Indonesia

**Abstract.** Latex has become more useful ever since the discovery of vulcanization methods, for it is used for the automotive industry and the manufacturing of electrical appliances. This then makes the price of latex soar as a result of high market demand for this white sticky thick 'liquid'. Thus, it makes people interested in investing in rubber plants because they are considered to have a significant economic impact. Apart from the economic factors offered, there are other factors that are no less important, namely land, capital, laborer, and the existence of a market place for trade. These factors should be the main factors. Because, if these factors do not hold, the people in Tapanuli will still not be able to enjoy it however high the price of rubber is.

**Keywords:** Factor, Land, Capital, Laborer, Market

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## 1 Introduction

The rubber that we know today is the result of tapping from the *hevea brasiliensis* tree, which was first discovered in the Amazon Valley whose name later changed to rubber tree among the people in the community. This was because the nature of the latex produced by *hevea brasiliensis* will flex when it is processed or dried. [1]

Since the discovery of rubber processing techniques, the price of rubber on the international market has become more expensive. This was is to the high demand for rubber by a number of industries to make products that use it as the basic material or mixed material, such as the automotive industry and the electricity industry.

The high demand for processed rubber material accompanied by high prices and economic benefits offered made rubber plantation not only conducted by the plantation industry with large capital, but also by the people. They then flock to look for rubber tree seeds to be planted in the area owned in order to be able to get the benefits from the rubber plantation.

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\* Corresponding author at: Department of History, Faculty of Cultural Sciences, University of Sumatera Utara, Indonesia.

E-mail address: edisumarno64@gmail.com

The economic factor was surely not the main factor that interest people in planting rubber plants. There are other factors which were also the main factors needed for the rubber planting to run smoothly. What are they? This question will be answered in this article.

## 2 Methods

In writing this article, primary and secondary data collection techniques are used through observation while the supporting data are obtained by visiting agencies that are considered competent, such as the National Library of the Republic of Indonesia and the National Archives of the Republic of Indonesia to collect archives, books, and the other forms of publications which are in line with the purpose of this study. After the data are obtained, the next process is to verify the data obtained, and then interpret it into writing.

## 3 Land Availability and The Least Amount of Capital Spent

### 3.1 Land Availability

Land becomes the main capital to start an agricultural activity. A good land, which is in accordance with the criteria for the plants, will be the main factor for them to flourish and to produce satisfying yields. Rubber plants are very well planted in areas that have a height of 600 MASL. At that height, rubber trees are considered capable of growing well and producing good latex (sap), especially for *hevea brasiliensis* tree. If rubber trees are planted on land that has a height of more than 600 MASL, then the growth of rubber trees will be hampered, and will also affect the production of latex. Not only does it affect latex, rubber trees will also be vulnerable to plant diseases as a result of high humidity.

The air humidity must also be considered. The daily temperature needed on rubber trees is 25-30°C. If the temperature rises or exceeds 30°C, the rubber tree will grow slowly or even not grow properly. Vice versa, if there is a decrease in temperature, even below 20°C, the rubber tree cannot grow because the temperature is too cold. The rainfall needed by the tree is 2000 - 5000 mm per year, with minimum sun exposure of 5-7 hours per day. These are absolutely what need to be considered to plant rubber plants.

In Tapanuli, not all areas can be planted with rubber trees. This is because Tapanuli's topography has lowland and highland areas. These are some areas that can be planted with rubber trees; Sibolga, Angkola, Batang Toru, Sipirok, Natal and Batang Natal, Kotanopan, Panyabungan, Muara Sipongi, Tarutung, Pahae[4], Barus, and Padang Lawas.[5]

The people in Tapanuli obtained land by cultivating it. Land that was still overgrown with large trees began to be cleaned by tree logging. During the Dutch colonial era, the government controlled these lands and the people were only given the right to use the land in accordance with the application submitted. Land ownership was certainly limited whereas the clans living in

the residential areas where the transfer of land ownership was in their hands previously controlled it.

The people were allowed to get the widest possible land as long as they were able to work on it. This means that there was a need for responsibility in the cultivation process carried out by the people. Land that was cultivated by the community could be claimed as private property and passed down from generation to generation. In addition, the land could also be sold, but only to people who still lived in the same area. [6]

In order to obtain the land rights, the applicant had to be of sufficient age according to what had been determined, as well as being responsible for the land owned and developing it. In the custom of the people in Tapanuli, those who were willing to own a land ought to bring one coconut, one chicken, and also a handful of rice, all of which were brought to the king of the village (clan) as the holder of the rights to the land. The offerings given were symbols of gratitude for the gift given by the king to them. This could also be interpreted as a form of community recognition of the power of a king. [7]

The easy process of land ownership and widely available lands were the initial factors for the people to start planting, especially cultivating rubber plants that were believed to provide benefits to the people.

### **3.2 The Least Amount of Capital Spent**

In order to carry out planting, the newly acquired land had to be cleared for it to be planted again. When opening a new land, the people were obliged to spend at least f 30 to pay the wages of laborers who cultivated it. Trees in the land were cut down and shrubs in the land were burned. The tools used were very simple, homemade and traditional. Rubber seeds were then bought after the land had been cleared. The rubber seeds were usually directly purchased by the people from the traders in Malaysia. However, not all people made purchases directly. Usually, there were also buyers who sent someone to be an intermediary when the buying and selling process took place.

The fee required was f 300 for  $\pm$  10,000 rubber tree seeds directly delivered to the customers. That means, one rubber tree seed was given a price of 0.03 f. There was no guarantee whether the seeds ordered were all alive or wither or even dead when they reached their destination. Losses received due to the death of tree seeds ranged from 50 - 60% of the number of tree seeds ordered. However, the percentage of tree seed deaths was around 60%.

Some of the people also bought rubber tree seeds from the Dutch Colonial Government through an agricultural consulting service managed by the Agriculture Agency. Seeds sold by the

Agricultural Agency were valued f 10 for every 1000 rubber tree seeds. In addition, the Agriculture Agency also prepared seeds of better quality but with a quite expensive price. They were sold f 45 for every 1000 rubber tree seeds, or 3 times more than the price of ordinary seeds. Although the price was quite expensive, many people preferred to use this seed for they could produce well.

If added up as a whole, the initial costs incurred starting from opening new land to buying rubber plant seeds from the Agricultural Agency was around f 75. Around 900 rubber tree seeds could usually be planted for one shoulder area. This amount certainly did not include the planting and treatment costs. If they were included, then the costs to grow and care for 900 rubber tree seeds were f 270. The farmers ought to at least spend as much as f 310 for financing starting from forest clearing to crop treatment for four years. In the planting, the owner was charged as much as  $\pm$  f 45.50 as wage to plant a tree within 1 shoulder area.

From these details, if farmers only planted 600 rubber trees or about 70% of the total 900 trees, it can be concluded that the cost required to plant 1 tree was f 1. Therefore, in other words, planting rubber trees was relatively cheap, measured by the price of seeds purchased, planting, or treatment.

#### **4 Laborers**

Factor that was no less important than the previous factors was laborers. Laborers were very important because they were the ones who "drive" agricultural activities. Without laborer, any form of business would not work. Laborers were residents who had been or were currently working, attending school or taking care of the household. In other words, laborers were only limited to age levels.[8]

In Tapanuli, labor was an issue that needed more attention. Manpower shortages could occur due to the small population in the areas planted with rubber trees. In conditions where laborers were difficult to find, wives and daughters were allowed to work, either to work on their own land or the ones owned by others. Regarding this matter, men usually became more selective to those who offered them jobs. This more protective attitude was intended so that their wives and children were not trapped in the dynamics of the plantation. They had the right to terminate employment if they felt disadvantaged at the work they did.

To get around this, people who had rubber plantations usually looked for other laborers, especially from outside their area. Even so, the plantation owner still upheld the family system where they chose their closest relatives who were still considered as families to

work as rubber tree tappers. If this did not work, the last effort undertaken by the owners was to look for other workers who came from outside the area but did not have any ties. [9]

Becoming a coolie did not seem to be an option for the villagers, especially those who worked in their own area. *Hasangapon* in Tapanuli community had a big influence on this. People preferred to get out of their villages if they really wanted to work as tapping rubber tree coolies. This then became one of the factors driving the community to migrate to other villages to find jobs (especially as tappers).

This pattern was referred to as a group of family workers and groups of workers outside the family. The latter group could be subdivided into local workers and workers from outside the area.[11] For example, in the Silindung area, due to the increasing need for laborer as tappers and administrators of rubber plantations, people from Siantar and Java Land flocked to the area to try their luck. Javanese also did not want to miss this. They were more easily accepted because they were considered more skilled and had more knowledge about *Hevea* cultivation, although sometimes they could be rougher in term of tapping.

In 1931 in Onderafdeeling Angkola and Sipirok, among 153 people who worked as tappers on a community-owned plantation, 69 were Javanese, 15 were Tobanese, 15 were from Angkola and Sipirok, 13 were from Nias, 1 was from Nias. Minangkabau and 40 people were from their own family members.

People generally came to work to Tapanuli because their relatives who already worked there asked them. In one day, workers could get wages of 50 to 60 cents. It was certainly different if the harvest day arrived, where workers could get a wage of 75 to 85 cents per day.

If daily laborers worked in highly productive areas, they could get at least f 18 per month, plus free rice every month. This rice could also be exchanged for money. If they did not want the rice, then the monthly wage was f 20. In addition, there were also laborers who were paid on a system for two and a system for three. A system for two or profit-sharing system was when the sale of rubber divided equally (half given to owners and the other half given to workers). The system for three that had actually been left behind was a system adopted when the rubber market price was low. There were also those who applied a buyback system, in which the landowner would buy back the part

that the laborers got. The system for two and this buyback system could actually cause damage to trees. This was because laborers tried to get more results.

If we pay attention to the pattern of the use of laborers in Tapanuli, especially regarding when they were needed from outside, either from outside the village or from outside the region, and when family labor was employed were due to the fact that the family labors were no longer able to cultivate the number of rubber trees owned by the farmers. It could be because the area of the tree was not in accordance with the number of laborers, or the land owners had other activities so that they no longer had time to manage or tap rubber trees, while production needed to be increased.

## **5 Market**

The river does have an important role for humans, not only as a source of life, but also as a transportation route and a trade route. This condition does not apply to Tapanuli. The rivers in the Tapanuli region are generally shallow, rocky and have heavy currents. This then makes the river not well functioning because it is impossible to pass. There is at least one river that can be traversed, namely the Barumon River that has enough depth to be sailed on. Barumon River in the Padang Lawas area can be passed from the East Sumatra region through the Bilah River and the Panai River and continues up to Labuhan Bilik by going through different river lines in Labuhan Batu.

The people use land routes to distribute their agricultural products, whether it's coffee, rice or smallholder rubber, due to the fact that the rivers in Tapanuli are generally impassable. This was in accordance with the government in 1909, which had asserted that to connect between one region, and another, Tapanuli was more suited to land transportation. Like the path from Sipirok to Tarutung or from Tarutung to Balige.

These routes certainly also connected one market with another market in the Tapanuli area. These markets were usually open every day of the week. The markets, which were spread from Sibolga to South Tapanuli, were very important markets in the region. They were Hutaimbaru, Kalangan, Lopian, Lumut, Sibabangun, Batang Toru and Marancar, Padang Sidempuan, Pijor Koling, Muara Tais, Sigalongan, Pintu Padang, Sayur Matinggi, Si Hepeng, Mumpang Julu, Panyabungan, Pidoli Bukit, Maga, Laru, Kota nopan, Tamiang, Muara Butong, and Muara Sipongi.

For people who refused to sell their products caused by distance barriers, they could sell them through agents. They were assigned by trading companies and usually resided in the village itself, had good names and close relationships with the people. There were conditions that had

to be fulfilled by farmers if they wanted to sell their produce to an agent, which was a harvest quantity of at least 2 or 3 tons per harvest. If this had been fulfilled, the agent was willing to pay up to 80% down payment to farmers from the agreed price. The company represented by the agent was also not arbitrary in determining the price offered by the owner of the rubber estate. The company would first review the prices in the local market as comparison prices, which were usually opened once a week.

It seemed that the trading patterns in Tapanuli was relatively simple consisting only of producers - traders - exporters. This then made it easier for the people to market their products and allow them to get more profit. The existence of an agent made it even easier for them to market their products so that people's desires to grow rubber plants and gain profits were increasingly accommodated.

## 6 Conclusion

The convenience offered indirectly by the existing conditions made the opportunity to reap the benefits of planting rubber more wide open. Easy access to land and cheap costs incurred starting from land management, planting to treatment become more attractive because the benefits would be multiplied later.

The distance of the market location was not a barrier for the people, because the companies provided facilities by placing company agents to collect the products from rubber farmers. It also made them no longer need to think about how to market them because they had been accumulated in accordance with the agreements that had been agreed between producers and consumers. These factors then made people more motivated to open rubber plantation in addition to economic factor, which was actually the main factor.

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