Stevenson's Scheme and People's Rubber Exports at Labuhan Bilik Harbor, 1922-1928

Edi Sumarno¹, Junita Setiana Ginting², Nina Karina³, M. Azis Rizky Lubis⁴
¹,²,³Department of History, Faculty of Cultural Science, University of Sumatera Utara, Indonesia
⁴Postgraduate Program in Department of History, Faculty of Cultural Science, University of Sumatera Utara, Indonesia
edisumarno64@gmail.com

Abstract
This paper discusses the policy of unilaterally limiting rubber exports by the UK with the so-called Stevenson's Scheme for smallholder rubber exports through Labuhan Bilik Harbor. The limitation scheme that took place during the 1922-1928 period was implemented by the UK for the phenomenon of the decline in world rubber prices after World War I. England, whose colonies dominated world rubber exports, hoped that the Netherlands would join in this plan to restrict exports. However, the Dutch refused. This decision brought blessings to the Dutch Indies rubber producers, including in Labuhan Batu with its main port of Labuhan Bilik. These port export figures show an increase over the period that Stevenson's Scheme was applied. Even so, the question is, is it true that the increase in smallholder rubber exports through Labuhan Bilik Harbor was caused by the application of Stevenson's Scheme? Or, are there other factors that need to be considered around the increase in exports in that period? This descriptive-analytic study attempts to answer these questions using colonial sources. The sources used in this paper are in the form of colonial reports, such as the Colonial Verslag, the Report of the Dutch Indies People's Rubber Inquiry Commission, the Dutch Indies People's Rubber Periodic Report, the Job Handover Report, and other literature sources.

I. Introduction

The presence of a foreign nation into a new territory often creates resistance from rulers as well as local residents due to fears of loss of power and their freedom. Such a thing also took place in the archipelago, which is since the presence of the Dutch which led to resistance by the people to drive the foreign troops from the homeland. Resistance against the Dutch took place in various regions led by the struggling figures. (Masri et al, 2018)

In 1922 Britain and its colonies controlled about 75% of the world's rubber and established a policy to restrict rubber exports. The policy, which was named Stevenson's Scheme, was motivated by the decline in rubber prices due to over-production of rubber, especially after the end of World War I. Britain as a world rubber producer tried to partner with the Netherlands to increase prices, but was rejected. Thus, the Netherlands was not attached to this scheme, and had an influence on the rubber of the Dutch East Indies. When this scheme proved able to increase prices, smallholder rubber farmers in the Dutch East Indies benefited. Dutch Indies rubber production also increased. In addition, the number of people's rubber exports also experienced the same thing. This phenomenon also occurs in Labuhan Bilik Harbor.
A harbor is a seaport which is equipped with buildings such as wharves and moorings with all of their equipment to serve cargoes and passengers. The development of seaports in Indonesia used to be ledges or riversides where ships and boats could moor and drop their anchors in order to do shipping activities. Seaports or harbors are always interesting to be studied because they are functioning as seaward gates where merchants meet and market their merchandise such as commodities from the land to be exchanged with the commodities from foreign countries. (Suprayitno et al, 2020)

Labuhan Bilik harbor is an important smallholder rubber export port in East Sumatra. This port accommodates the people's rubber production Onderafdeling Labuhan Batu, Afdeling Asahan, East Sumatra residency, especially in production centers along the Barumun and Bilah Rivers. In the 1920s, the port people's rubber exports accounted for about 70% of the total rubber exports for the people of Afdeling Asahan, and 38% of smallholder rubber in the Cultuurgebied region. This figure is not surprising if you see in Labuhan Batu there are still many vacant lands left for agricultural residents outside Onderneming. This is what causes the region's rubber production to be relatively high, as illustrated by the increasing numbers of Labuhan Bilik Port exports, especially during the implementation of Stevenson's Scheme by Britain between 1922-1928.

This study tries to analyze the effect of the implementation of Stevenson's Scheme by the UK on the increase in the smallholder rubber export of Labuhan Bilik Harbor. Is it true that the increase was solely due to the application of Stevenson's Scheme? Or, are there other factors causing the increase in export figures? To answer this question, this study attempts to analyze colonial data. The sources of this research are colonial reports, such as the Colonial Verslag, Memorie van Overgave, the Netherlands Indies People's Rubber Investigation Committee Report, and the Dutch Indies People's Rubber Periodic Report.

II. Review of Literatures

2.1 Stevenson's Scheme

As a commodity that is needed by the global world, the price of rubber is very dependent on market needs. Therefore, the price of rubber is very volatile according to the law of supply and demand. When demand increases and production is low, rubber prices are high. Likewise, vice versa, when the need for rubber decreases while production is abundant, the price tends to fall. The price of rubber in the London Market, for example, notes that the price of rubber in the period 1890-1910 was between 3 shillings 1 pence and 8 shillings 9 pence per pound on average. This last price occurred in 1910 and was the highest price of rubber in the London Market until at least 1940. From 1910 to 1921 the price of rubber each year continued to experience a significant decline. In 1921, a year before the enactment of Stevenson's Scheme,

The decline in world rubber prices in the 1910s was triggered by the efforts of industrialized countries such as the United States, Germany and Russia to reduce their dependence on natural rubber produced by England. These three countries then developed synthetic rubber for various reasons. Russia, for example, began to develop synthetic rubber in connection with the October Revolution of 1917. Despite the slow development, the actions of these three industrial countries were quite successful in putting pressure on the price of natural rubber. In addition, the United States, through the US Rubber Company, began investing in natural rubber production since 1910 in Southeast Asia. Finally, World War I also contributed to the decline in rubber prices, in line with sluggish consumer demand for natural rubber production.
These unfavorable conditions had a major impact on Britain. In the midst of this economic and political situation, in 1920 the British Rubber Growers Association asked Winston Churchill, as Secretary of State for the Colony, to help. Churchill then formed an investigative committee composed of representatives from the British Rubber Growers Association chaired by Sir James Stevenson. This committee then produced a plan to restrict rubber exports known as Stevenson's Scheme which was applied to British Colonies in Asia, namely Sri Lanka and British Malaya, and became effective from 1 November 1922. Before this scheme was implemented, Britain tried to partner with other countries. World rubber producers, especially the Netherlands. This invitation was not approved by the Dutch.

The application of Stevenson's Scheme has an effect on world rubber prices. In 1922 when the plan for this scheme was implemented, the London Rubber Market recorded an increase in the average price of 9 pence in the previous year, to 1 shilling 9 pence per pound in 1922. Until 1926 in the same market the average price of rubber per year ranges between 1 shilling 11.75 pence and 2 shilling 1 pence. In 1927 the average price fell sharply to only 6 pence per pound, and slightly increased to 10.75 pence in 1928, the year when Stevenson’s Scheme policy was later canceled by the British government. This figure is identical to the conversion to guilders, namely 1.47 guilders in 1922, increased to 1.65 guilders in 1924, and 2.56 guilders in 1925.

2.2 Rubber Community in Labuhan Batu

Historical development cannot be separated from the development of architecture. As we know our nation has experienced a long-period colonialism. Some countries have ever come and colonized this country and the Netherlands is the longest-running country in Indonesia. Colonial power has an impact on the social conditions of the community and the identity of the local community. (Pane and Suwantoro, 2019)

The unilateral adoption of Stevenson's Scheme by England benefited the Dutch East Indies rubber producers, both cultivated through plantations and by farmers. This advantage is also enjoyed by rubber farmers in Labuhan Batu. From existing data, the initial involvement of farmers in Labuhan Batu in rubber is estimated to have occurred since the 1890s. At that time they obtained rubber sap from the ficus elastica tree, which is abundant in tropical forests in the region.

Therefore, this activity was still in the category of forest product collection, as the Dutch colonial government also called this a boschproduct (forest products). Towards the turn of the century, there are indications of a shift from gathering forest products to ficus cultivation. This transition is motivated by at least two reasons. First, the shortage of ficus trees in the forest. This effort is carried out by taking seeds from the forest and planting them on people's lands. Second, the price of latex at that time was quite tempting.

Not long after cultivating ficus, around 1910 the population in this area began to switch to Hevea brasiliensis. Hevea was chosen because it is more economical than ficus. First, the tapping period for Hevea is shorter, which is between 4-6 years, while ficus is between 7-10 years. Second, the milk sap (latex) produced by Hevea is much more than that of ficus. Third, according to the tapping field, hevea trees are easier to tap than ficuses. Fourth, the price of rubber is increasing. In 1900, for example, the average rubber on the London Market was priced at 4 shillings 3 pence per pound. This figure went up more than 100% in 1910 in the same market, which was 8 shillings 9 pence per pound. With prices like that, fifth, the people do not mind buying Hevea seeds even though the prices are quite expensive. From the data obtained, The inhabitants of this area obtain rubber seeds from the Peninsula, either through traders who trade there, as well as residents who go on the pilgrimage and stop there to buy Hevea seeds. Hevea was planted in Labuhan Batu around 1910 and thereafter reached peak
production just when Stevenson's Scheme was introduced by the British. At that time the rubber trees had reached the age of 10 or more.

The locations for community rubber planting in this area are generally not far from the river banks or tributaries adjacent to the Barumun, Bilah, or Panai Rivers. The location of planting close to a river seems to be based on at least two reasons. First, the lack of land roads, so farmers can only reach areas close to rivers and plant their rubber there. Second, practical considerations and reduced transportation costs. Evidence shows that community rubber in these two areas is generally brought to Labuhan Bilik by water transportation, by raft, sagur and other simple means of water transportation.

The planting of rubber by residents in these two regions seems simple. Starting with clearing the forest, the residents then planted it with rubber seedlings, often at irregular spacing. Waiting for the plants to grow, farmers usually plant rice or other seasonal crops intercropping with rubber. Sometimes people plant fruit trees on the same land, such as coconuts, while on the land boundaries are planted with areca trees. While waiting for the rice harvest, residents take care of their rubber plants. After harvesting, rubber trees are usually abandoned and sometimes farmers do land clearing to make room for rubber to grow more freely. And so on until the rubber tree is deemed adequate for tapping. Although it is required that wiretapping begins at the earliest age of 4 years, sometimes residents do it before that age. Tapping is also carried out improperly using knives, machetes, and even axes. For farmers who have sufficient funds, they usually buy and use the recommended tapping equipment as used in plantations. Coconut shells, cans, and even bamboo are used to store the sap, while the latex is made of cans, bamboo, or leaves for the storage of latex. The collected latex is then coagulated with an acidic liquid to be used as a rubber latex (slab) pad in the prepared places such as buckets, cans, or other tools. The latex process is done in a hut that is deliberately made in a farmer's rubber plantation, but sometimes it is done in their own homes. The resulting slab is then ready to be sold and accommodated by traders.

The rubber trade chain from the upstream to Labuhan Bilik Harbor to the Peninsula (Penang and Singapore) is quite long. Because the factory is located on the Peninsula, exporters generally place their trusted people in the production area, including in Labuhan Bilik. The rubber tycoons, as they called them, were generally Chinese, while their representatives were usually relatives or confidants. This representative received capital from the big bosses on the Peninsula. In order to support their movement, they established a network with traders in villages along the riverbanks along the Barumun, Bilah and Panai rivers. These small traders were given capital by the representative tauke in Labuhan Bilik.

Sales of rubber in villages located along the river are carried out once a week at the market (weekends). Along the river flow, different weekdays are held. But still on the same day every week. Given the poor communication network, the price of rubber along the river can vary. However, the farther the distance from the port to the village located on the river basin, the lower the price tends to be. Sometimes, there are also those who take the initiative to bring the slab directly to Labuhan Bilik, in order to get a higher price. This of course requires time, money, and courage, so that the profit earned is not much different from selling it to collectors who sail upstream of the river.

From a search of various sources, the researcher did not obtain quantitative data on the number of farmers, the price of rubber, the number of trees, and the total production in Labuhan Batu in 1922-1928. The quantitative data obtained is only related to the export of smallholder rubber in Labuhan Bilik Port, which covers the Labuhan Batu production area. It is understandable that the people's agricultural sector was not the main concern of the colonial government, so it was considered unnecessary to be noted. The government's attention to smallholder rubber farming was only seen in the early 1920s. This was proven by
the establishment of the Dutch Indies People's Rubber Agriculture Inquiry Commission in 1925. However, qualitatively, many sources state how the people in this area really enjoyed the profits obtained from the smallholder rubber plantation during the implementation of Stevenson's Scheme. During this period, it was stated that on weekends, the market was crowded with residents. Not only for selling rubber products, but also for other trading activities. Traders roam from one market to another. Traffic on the river is also busy with traders and residents back and forth. Residents can buy luxury goods, such as clothes, jewelry, bicycles, radios, and other imported goods. During this period, it was stated that many residents could repair and build luxurious houses for the size of that time. Some residents are also able to send their children to school, even have weddings and circumcisions. Such a qualitative picture proves that the implementation of Stevenson's Scheme provides great benefits for smallholder rubber farmers in Labuhan Batu.

2.3 Export of Labuhan Bilik Harbor

Labuhan Bilik Harbor is the main export port for people's rubber onderafdeling Labuhan Batu. This port is located on the Panai River which borders Tanjung Sarang Elang. Upstream from Tanjung Sarang Elang is the Barumun River which has many tributaries. The most important of these tributaries are Sungai Kanan, Batang Pane, Sihapas, and Aek Siangkilon. The Barumun River and its tributaries all head up at the Barisan Hill which is located in Padang Lawas. The Barumun River itself originates at Siraisan in Padang Lawas, and has a length of about 440 km to the Malacca Strait.

Labuhan Bilik Harbor is located about 20 km from the mouth of the Panai River in the Malacca Strait. This port is on a fairly wide and relatively deep bend in the river, about 1 km across slightly downstream from Tanjung Sarang Elang. Meanwhile, the distance between Tanjung Kuntung as the downstream of the Bilah River and Labuhan Bilik Harbor is about 3.5 km to the upstream of the Panai River. Judging from this position, Labuhan Bilik Harbor is very strategic because it is the closest place to the upper reaches of the Bilah River and the Barumun River, or vice versa.

Along the Barumun River and its tributaries there are many settlements. Several villages on the Barumun River include Tanjung Sarang Elang, Ajamu, Sei Rakyat, Bagan Bilah, Malindo, Tolan, Kota Pinang, to Gunung Tua. Meanwhile, along the Bilah River, the most important ones are Sijawi-jawi, Sei Tampang, Negeri Lama, and Rantau Prapat. Considering that naturally large rivers have tributaries, there are actually many other villages on the two rivers. In Sungai Bilah, for example, there is the Merbau River, which one of the largest villages is Merbau. Meanwhile in the Barumun River, for example, there is the Kanan River, which has a village on its sides. These villages are the hinterlands of Labuhan Bilik Harbor. In other words, Labuhan Bilik Harbor is the main port of the existing tributaries, along with the Barumun River and the Bilah River itself. Labuhan Bilik Harbor is the gateway for traffic of people and goods. Through this port the upstream produce is exported outside, and through this port the imported goods are imported for distribution to the upstream part.

With regard to smallholder rubber exports, community rubber production in the upstream areas along the Barumun and Bilah Rivers and their tributaries is also exported through the Labuhan Bilik Port. The results of the investigation committee's research show that around 3/8 of Labuhan Bilik Port people's rubber exports come from Sungai Bilah, and 5/8 come from the Barumun River. From these villages, people's rubber is brought downstream by river transportation and then collected at Labuhan Bilik Harbor. After being collected in the exporters' warehouses, the export documents are then transferred to the port
officers at Labuhan Bilik, to then be exported to the Peninsula by using ships owned by Koninklijke Paketvaart Maatschappij (KPM). In 1925, Labuhan Batu people's rubber production during Stevenson's Scheme was reflected in the number of exports per year from Labuhan Bilik Harbor. The following is a table of smallholder rubber exports at the Port of Labuhan Bilik for 1920 to 1930. Figures for 1920 and 1921 are intentionally presented to see a picture prior to the establishment of Stevenson's Scheme in 1922. For 1929 and 1930 it is also deliberately shown to see its development after Stevenson's Scheme ended.

**Table 1. Labuhan Bilik Harbor People's Rubber Export, 1920-1930 (in tons)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Exports</th>
<th>Year</th>
<th>Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>497</td>
<td>1926</td>
<td>?</td>
</tr>
<tr>
<td>1921</td>
<td>253</td>
<td>1927</td>
<td>?</td>
</tr>
<tr>
<td>1922</td>
<td>701</td>
<td>1928</td>
<td>3,760</td>
</tr>
<tr>
<td>1923</td>
<td>1,127</td>
<td>1929</td>
<td>4,132</td>
</tr>
<tr>
<td>1924</td>
<td>1,868</td>
<td>1930</td>
<td>2,948</td>
</tr>
<tr>
<td>1925</td>
<td>3,250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: CG Slotemaker, De Bevolkingsrubbercultuur in Nederlandsch-Indie, VI, Riouw en Onderhorigheden, Oostkust van Sumatra, en Atjeh en Onderhorigheden, 1926, and Verslag van "De Handelsvereeniging te Medan", 1928-1940.

The table above shows that there was an almost 100% decline in the people's rubber exports at Labuhan Bilik Port from 1920 to 1921. This decline is closely related to the decline in world rubber prices after the end of World War I, and the issue of rubber restrictions by the UK. In the London Market, for example, the price of rubber was 10.50 pence in 1920 and fell again to only 9 pence per pound in 1921. Compare with the price of rubber in the same market ten years earlier, which was 8 shillings 9 pence. If we compare the price of rubber in 1910 with the average in 1920 and 1921, it can be said that during a decade the price of rubber fell by more than 900%. Furthermore, the table above shows a sharp increase in exports during the first year of Stevenson's Scheme implementation in 1922, namely from 253 tonnes to 701 tonnes, or an increase of 177%. This figure continued to increase significantly from year to year until the end of Stevenson's Scheme in 1928.

What is surprising is that a year after the end of this scheme, it turned out that the rubber exports of the people at Labuhan Bilik Harbor in 1929 continued to increase, although not more than 10% from the previous year. Meanwhile, it can be seen that in 1930 there was a decrease of 1,184 tonnes, or around 28.6%. These figures can be explained that in 1929, even though Stevenson's Scheme had ended, the stretching of farmers and exporters was still quite high even though the price of rubber had shown a sharp decline, from 10.75 pence per pound in 1928 to 10.25 pence in 1929, and plummeted in 1930 to only about 5 pence per pound. This decline must have occurred in the aftermath of the abolition of Stevenson's Scheme in 1928 which resulted in an overproduction of world rubber.

The end of Stevenson's Scheme was followed by the Great Depression which began in late 1929. Since then the golden age of rubber, especially for smallholder rubber farmers in Labuhan Batu, ended. For Labuhan Bilik Harbor, since the end of Stevenson's Scheme which was followed by the Great Depression, it has signaled the collapse of its glory as a rubber export port for the people of East Sumatra in the later times.
III. Research Methods

The method used in this research is the historical method including heuristics, verification, interpretation, and historiography. For research sources, library sources are used, in the form of contemporary reports related to the history of Labuhan Bilik port and smallholder rubber farming in Labuhan Batu and Padang Lawas, as well as other supporting literature. These sources are obtained from the National Archives of the Republic of Indonesia, the National Library of the Republic of Indonesia, and several libraries in Medan City.

IV. Discussion

Stevenson's Scheme Labuhan Bilik Port Community Rubber Exports: Analysis

The description above shows that during the implementation of Stevenson's Scheme by Britain, the export of smallholder rubber through Labuhan Bilik has increased. This fact is difficult to argue with. However, several other things need to be considered. First, the rubber that was produced and then exported through Labuhan Bilik was certainly not the rubber that was grown when Stevenson's Scheme was implemented. Although there are indications that the population tapped the rubber before the tapping age, of course the rubber tapped in the years when Stevenson's Scheme was applied was the result of planting several years earlier. Evidence suggests that the age of tapped rubber in 1925 was between the ages of 8 and 10 years. That means, on average, the community rubber tapped in Labuhan Batu was planted in 1915-1917. According to records from the Investigative Committee, from this figure it can be said that about 51.5% of the trees were tapped, 33% were not tapped, and 15.5% were not tapped. These data indicate that approximately one-third of the total rubber trees were planted at the time the Stevenson's Scheme was implemented. This means that Stevenson's Scheme has an impact on new planting in smallholder rubber farming in Labuhan Batu. However, the figure of 15.5% for non-tapping rubber also needs close attention. If this figure is classified as a plant that can be tapped, but for some reason it cannot, then there are 4,050,000 trees that can be tapped or 67% of all trees in 1925. This means that 67% of the rubber was actually planted at an average interval of 1915-1917.

Second although relatively small, it is necessary to further observe the number of trees that are not tapped as many as 1,050,000 trees or 15% of which are not tapped. From the committee's investigation, trees that were not tapped could be caused by the condition of the trees that were not possible to tap because of their slow growth, as well as a shortage of labor. Although there is no detailed data on the number of rubber trees that are not tapped, it can be said that lack of maintenance of rubber trees and lack of labor are two factors of production that need to be taken into account.

Third, as a commercial crop, the desire of farmers in Labuhan Batu to plant rubber is also based on the profit factor that they receive. There are indications that the beginning of rubber cultivation was also triggered by falling prices and the emergence of pepper disease throughout East Sumatra in the 1910s. To make a profit, it seems that farmers in this area are starting to look to rubber. Coincidence or not, in the same period the price of rubber was promising to benefit farmers. Although since 1910 the price of rubber has continued to decline, as long as there are profits, farmers in Labuhan Batu continue to cultivate rubber.

Fourth, the absence of land infrastructure in the form of roads and railways that can reach productive lands. This transportation factor is believed to be one of the obstacles to increasing smallholder rubber production in Labuhan Batu, which has an impact on the number of exports in Labuhan Bilik. Almost all smallholder rubber production centers in
Labuhan Batu until the implementation of Stevenson's Scheme relied on water transportation, both to reach production land and production transportation.

From the four descriptions above, it can be said that Stevenson's Scheme actually did not really have an effect on increasing exports during its implementation in 1922-1928. It is true that there was an increase in the number of trees planted in this period. It is also true to say that the peasants made a sizable profit during this period. However, it should also be considered that the factors of profit, availability of labor, and the presence of land infrastructure are factors that need to be considered in increasing production, as well as exports.

V. Conclusion

The scheme to restrict rubber exports by the UK which controls 75% of world rubber production through Stevenson's Scheme, which was in effect from 1922-1928, was able to increase the world price of rubber. This scheme, which was carried out unilaterally by the UK, gave big profits to the smallholder rubber farmers in Labuhan Batu. During the period when Stevenson's Scheme (1922-1928) was implemented, there was an increase in the export of smallholder rubber exports at Labuhan Bilik Harbor. On the other hand, smallholder rubber farmers in these two regions really benefit from the implementation of Stevenson's Scheme. However, it should also be noted that the increase in the number of smallholder rubber exports through Labuhan Bilik Harbor is due more to the increase in production of rubber trees planted in the years before Stevenson's Scheme was implemented. In addition, it should also be noted that the increase in production, which in turn has an effect on increasing exports, is not only influenced by a policy that is believed to be able to help producers. As long as a commodity is still able to provide an advantage regardless of its price, as well as the availability of labor and supporting infrastructure, the increase in production and exports will be optimized. The study of Labuhan Batu people's rubber during the implementation of Stevenson's Scheme can be a lesson for us all. as well as the availability of manpower and supporting infrastructure, the increase in production and exports will be more optimized. The study of Labuhan Batu people's rubber during the implementation of Stevenson's Scheme can be a lesson for us all.

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