

# **Economic Importance of Rubber in Thailand**

Hnin Ei Win  
Center for Applied Economics Research  
Thailand

## **INTRODUCTION**

Rubber was cultivated in Thailand since the 1990s. Thailand became the top producer and exporter of natural rubber in the world since that time. This is because the climatic condition is favorable for rubber cultivation in the country. Additionally, effective and innovative cultivation methods are practiced in rubber production (Thailand Board of Investment, 2017). Rubber trees are cultivated in monoculture and commercial scale. The latex is produced tremendously and commercially. Most of the rubber plantations are privately owned (Praktikantin, 2017).

Rubber was first planted in the south and the eastern parts of the country where environmental conditions are favorable for rubber plantation. And then, the government set up the policy for the expansion of the rubber cultivated areas as a new cash crop. The main objective of that policy is to increase the incomes and stabilize the small landholders through rubber plantations in the northeast and in the north (approximately 160,000 ha between the years of 2004 to 2006. After that, Para rubber became the major income generating crops in the Northeast (Poungchompu and Chantanop, 2015).

According to the Thai Rubber Association (2013), the project of rubber plantations was started by the Ministry of Agriculture and Cooperatives in 2011. All rubber farmers across the country were supported by cooperation with the subsidiary organization. In the northeastern Region of Thailand, the areas under rubber plantations have increased after introducing the Para rubber projects ranging from about 240,000 hectares in 2009, or 9.5% of the agricultural area, to 18.3 million hectares in 2010. The tapping areas of 377,441.8 hectares produced 230,504 tons, or 247 kg per acre (7.6% of national production) in 2010. Rubber plantation of northeast Thailand has the potential to play a major role for the whole country. This is because the expansion of cultivated areas will lead to the success of the rubber sector rather than the improvement of yield and technical efficiency (Poungchompu and Chantanop, 2015).

Among the top ten export product groups of the country during 2016, rubber holds the fifth position and the sharing percentage is 5.7% to the total export income of the country (Workman, 2017a). Of the total harvested rubber, over 90% are used for exports (The Daily Records, 2017) and the incomes from the export of rubber is more than that from exports of rice (Praktikantin, 2017).

## **Rubber consumption and production in the world and in Thailand**

Natural rubber is mainly consumed in Asia, Africa, and Latin America. Other emerging industrialized areas are considered the major natural rubber consuming countries around the world. They shared about 75% of the global rubber consumption in 2016. The top six natural rubber producers in the world are Thailand, Indonesia, Malaysia, India, Vietnam and China which contributes 86.5% to the global total output in 2016 (Markets Insider, 2017).

The total consumption of rubber worldwide was 26.8 million tons, with natural rubber accounting for about 46% or 12.2 million tons while that of synthetic rubber was recorded at 54% and accounted for 14.6 million tons in 2015 according to IRSG. According to IRSG, the natural rubber production of the world accounted for 12.3 million tons while the synthetic rubber production accounted for 14.46 million tons in 2015. Of these, 92% was produced in the Asia-Pacific region. As shown in Tables 1 and 2, the global rubber consumption and production steadily increased year after year within ten years (2006-2015) except in 2009 (Thailand Board of Investment, 2016).

Table 1. World rubber consumption (2006-2015)

Year	Rubber consumption (Million Tons)		
	Natural rubber	Synthetic rubber	Total rubber
2006	9.51	12.43	21.95
2007	10.14	12.58	22.71
2008	10.19	12.17	22.36
2009	9.29	11.23	20.52
2010	10.76	13.23	23.98
2011	11.03	13.86	24.89
2012	11.05	13.96	25.00
2013	11.37	14.16	25.53
2014	12.14	14.27	26.40
2015	12.17	14.56	26.73

Source: International Rubber Study Group (IRSG)

Table 2. World rubber production (2006-2015)

Year	Rubber production (Million Tons)		
	Natural rubber	Synthetic rubber	Total rubber
2006	9.85	12.70	22.55
2007	10.06	12.83	22.89
2008	10.10	12.29	22.38
2009	9.72	11.49	21.21
2010	10.40	13.28	23.68
2011	11.24	14.09	25.33
2012	11.66	14.04	25.70
2013	12.28	14.20	26.48
2014	12.12	14.18	26.29
2015	12.31	14.46	26.77

Source: International Rubber Study Group (IRSG)

In 2016, Thailand placed first in natural rubber production accounting for 4.5 million tons and the share of 36.3% (Markets Insider, 2017). Moreover, the country was the first exporter of natural rubber which accounted for 36.8% of the world in 2016 (Workman, 2017). Table 3 shows the natural rubber production, exports and domestic consumption within 10 years (2006-2015)

Table 3. Natural rubber production, exports and domestic consumption in Thailand (2005-2015)

Year	Million tons		
	Production	Exports	Domestic consumption
2006	3.12	2.77	0.32
2007	3.06	2.70	0.37
2008	3.09	2.68	0.40
2009	3.16	2.73	0.41
2010	3.25	2.87	0.46
2011	3.57	2.95	0.49
2012	3.78	3.12	0.51
2013	4.17	3.66	0.52
2014	4.32	3.77	0.54
2015	4.47	3.75	0.60

Source: Rubber Research Institute Department of Agriculture

The production of rubber has been enormously increased due to the expansion of rubber cultivated areas. The tapping areas covered from 2.6 million hectares in 2013 to 3 million hectares in 2015. The southern region of Thailand occupied large areas of rubber plantations accounted for 68% of all tapping areas across the country (Oxford Business Group, 2017), which it also supported over 70% of total national latex production (Thaiturapaisan, 2016). The prices for rubber becomes higher than those for rice. Therefore, the cultivated areas of rubber plants are expanded especially in the Southern region of Thailand (Emery, 2016).

In 2015, the rubber and rubber products industry expanded in the domestic automobile sector. As a result, the production of all types of important rubber products used for tires products are expected to increase. Moreover, rubber gloves also expanded in the domestic market according to the demand of health and cleanliness awareness (The Office of Industrial Economics, 2015).

According to the International Rubber Study Group (IRSG) (2015), the sharing of natural rubber from Thailand accounted for about one-third of the world production. Natural rubber is mainly used for tires, surgeons' gloves, condoms, balloons and other relatively high-value products (Praktikantin, 2017). In Thailand, tires are the major product for domestic consumption followed by elastics, gloves, tires and tubes for motorcycles, and rubber bands (Thailand Board of Investment, 2017). Hence, Praktikantin (2017) stated that the price of rubber largely depends on the economic situation of the world and the price of petroleum.

### **Imports and exports**

Thailand supplies large amounts of raw materials to the world. Furthermore, there is a strong manufacturing sector that produces wide varieties of value-added rubber products which can increase the profits. Besides the production of natural rubber, synthetic rubber can be produced for domestic consumption and export. Nevertheless, the production amount of synthetic rubber does not meet the demands of local consumption yearly. For that reason, nearly 77% are imported to meet the needs for domestic consumption. This opens great opportunities for the producers of synthetic rubber. Moreover, a large amount of rubber products is annually imported. It also highlights the importance and strategic opportunities for the rubber product producers to strengthen its supply and demand for domestic consumption (Thailand Board of Investment, 2017). The major important imported rubber products are pipe, joints and conveyor belts, vehicle

tires, floors and wall tiles, vulcanized rubber and other rubber products The Office of Industrial Economics, 2015).

Thailand exported natural rubber with good quality and large scale of production to many countries across the world. The top five exporting countries are China, Malaysia, Europe, Japan and South Korea (Thailand Board of Investment, 2017). The exports of primary processed rubber are rubber sheets, rubber bars, concentrated latex and other rubbers in 2015. The export amount of primary processed rubber increased. However, the price for rubber export products decreased dramatically. Therefore, the export value decreased as well. Since the US extended the period of Generalized System of Preference (GSP) for Thai products, the exports of rubber products for automobiles also increased (The Office of Industrial Economics, 2015).

### **Government policies**

In the report of the Office of Industrial Economics (2015), the government implemented a project for rubber and rubber products development by cooperation between the enterprises and the research organizations, and the project of the database in depth system development of rubber and rubber tree products industry. From the project, the following outcomes are expected:

- To produce the value-added rubber products which meet the international standards;
- To improve the competitive advantage in the international market; and
- To foster continuous increase of rubber and rubber products sector of Thailand

The Rubber Authority of Thailand is the key actor to support for research and development, production, and commercialization of rubber from the cultivation of latex trees to final processing all over the country. Major companies have already established in the production of rubber products in Thailand since many years ago. Therefore, Thailand becomes the center for the high value rubber goods across the world (Thailand Board of Investment, 2017).

In the first quarter of 2016, there was a business negotiation. In that business activities, 150 rubber importers from 28 countries, including Malaysia, Vietnam, China, South Africa, India, South Korea and Saudi Arabia joined with 109 Thai companies. Such business activities with foreign partners is important for the Thai rubber industry to make the business relationships. Additionally, the companies from Thailand can make the new market links form many other countries. The most international interest for rubber products are tires, latex pillows and mattresses, natural rubber, rubber gloves and automotive parts made from rubber. As for the government side, there has been an effort in the establishment of the research centers for production, marketing and technological research to produce the highest quality rubber and to meet the demands (Department of International Trade Promotion, 2016).

### **Rubber price**

Previously, the latex rubber price has been increased continuously. That encouraged the farmers to grow rubber trees even on unsuitable land. Some farmers have converted the traditional rice fields into rubber plantations (Praktikantin, 2017a). The prices for natural rubber were high till 2011 and the interventions of government support to the rubber industry in 2004-2006 and the expansion for rubber production all contributed to the oversupply in the market (Research and Markets, 2016). Due to the rising demands in the world, the rubber price might increase in the long term. Though, the latex rubber price has dropped intensely due to the oversupply of rubber

in the global market (Praktikantin, 2017a). As a result, most of the producers encountered the losses of stored rubber (Petchseechoung, 2016).

There are many other factors affecting the decline of rubber price in the world market due to the changes in the trend of global rubber price in the world market, the price of world synthetic rubber, the productivity of world natural rubber, the consumption and advanced price of world natural rubber. Consequently, these factors affect the rubber price of Thailand (Cherdchoongam and Rungreunganun, 2016). At present, the rubber sector encounters lack of demand and large rubber stocks. This is because of the decrease of demand from China which is the largest rubber consumer in the world which is the base of its tire-production industry (Research and Markets, 2016). Therefore, the decrease of the world and Chinese economics impacts on the significant decline of the rubber price in the past half-decade. The major natural rubber consuming countries are China, USA, Japan, and Europe. Natural rubber stock is also high in China as well as in Thailand. This can cause the oversupply of the rubber in the world market. Although there is an oversupply of rubber in the market, the demand for the rubber is not as much as supply (Koomkanab, 2015).

### **Rubber city**

According to the report of Maierbrugger (2017), the government started the project to establish rubber city due to the falling price of latex and rubber products. The major purposes of the project are:

- To serve as the center for rubber and rubber products such as rubber innovations, concentrated latex, compound rubbers and others from midstream to downstream industries;
- To attract the investors to develop the rubber processing industries and value-added rubber products in Thailand;
- To encourage the employment and skills training by collaborating with the technical colleges at regional level; and
- To increase the domestic rubber consumption and the exports

To implement the project, the Ministry of Industry assigned the Industrial Estate of Authority of Thailand (IEAT) to establish Rubber City in the Southern region of Thailand near the border of Malaysia. The project for Rubber City creates the business opportunities for the local and foreign investors (Thailand Board of Investment, 2016). During the Global Rubber and Latex Expo 2016 (GRTE2016) on 10 March 2016, IEAT invited both Thai and foreign investors to participate in the Rubber City (Thaiturapaisan, 2016).

The oversupply of rubber in the global market is one of the main reasons for the decline in rubber price. Therefore, Thailand, Malaysia and Indonesia (accounting for 60% of total world production) made a cooperation to reduce the amounts of rubber export and on the other hand, to increase the domestic rubber consumption in each country. As a result, it can reduce the rubber supply in the global market to a large amount. If the cooperation between these three countries becomes strong and united, it can become a great center for the whole rubber processing industry in the coming years worldwide (Thaiturapaisan, 2016).

The authority from Thailand sold the land to the foreign investors to construct their factories in the first phase of the project. The investors from France has already started work for their tire factory in the Rubber City Industry Estate. The investors from China and Malaysia are also interested to invest in the production of rubber glove. They have already touch based with

producer Glove Corp and condom maker Karex. At present, the project has already finished 50% and is expected to be completed by 2018 in which they can operate downstream rubber product factories in 2019 Maierbrugger (2017).

### **Thailand-Indonesia-Malaysia Cooperation**

According to the Thai Rubber Association (2017), the rubber price depends on the world economics trend and hence it is not stable. It drops very often and consequently producers and consumers encounter the problems related to rubber throughout the world. To solve the rubber problems including that, International Natural Rubber Organization (INRO) was founded in 1980. However, the view on the minimum rubber price are different between producers and consumers. Thus, that organization ended its operations in 1999. In 2001, the International Tripartite Rubber Council (ITRC) was established by cooperating with Thailand, Malaysia and Indonesia, the world's top rubber producing and exporting countries, to solve the price decrease and help it become stable. In 2003, the International Rubber Consortium (IRCo) was established. The major issues discussed in the annual meeting of ITRC in 2017 are :

- To increase the the rubber consumption in each country at the annual rate of 10% by rubber innovation research and development;
- To develop the domestic rubber market in the future and invite more buyers and sellers from all member countries;
- To cooperate strongly in the management of rubber supply for better price and sustainability of the rubber industry by a long-term measure in balancing demand and supply (Supply Management Scheme (SMS));
- To follow rubber price situation closely by a short-term measure (Agreed Export Tonnage Scheme (AETS)); and
- To accept Vietnam as an associate member by ITRC as there is a high production level and significant role in Vietnam

### **CONCLUSION**

Thailand is the top rubber producer and exporter in the world market in 2016. Over 90% of the total rubber production is used for exports. It contributes about one-third of the global rubber production. The export income from rubber is more than those from rice. Of the total national rubber latex, 70% was contributed by the Southern region of Thailand which is the largest rubber plantation area in the country. Since rubber price generates more incomes, rubber cultivated areas are expanded especially in the Southern region of Thailand which supports 70% of its total national latex production. However, the rubber price fell due to the economic conditions of the world. China, which is the largest rubber importer across the world, also contributed to the falling of rubber price plus the oversupply in the global market. Thailand-Indonesia-Malaysia made a cooperation to decrease the rubber price and help stabilize the market. Rubber City project was started to develop rubber and value-added rubber products by stabilizing rubber price.

## REFERENCES

- Cherdchoongam, S. and Rungreunganun, V. (2016). Forecasting the Price of Natural Rubber. KMUTNB International Journal Applied Science Technology, Vol,9, No. 4, pp 271-277, 2016.
- Department of International Trade Promotion. (April, 2016). Thai Rubber Industry Expands Overseas. Retrieved on October 20, 2017 from <http://www.thaitradeusa.com/home/?p=21151>
- Emery, R. (2016). Thailand's Rubber Price Issues Not Caused by Lack of Rubber Processing. Retrieved on 12<sup>th</sup> October, 2017 from <https://ethailand.com/opinion-editorial/thailands-rubber-price-issues-not-caused-by-lack-of-rubber-processing/1754/>
- International Rubber Study Group (IRSG). (2015). Statistical Summary of World Rubber Situation.
- Koomkanab, T. (2015). Education Attainment of Rubber Plantation and Future Prospects for the Rubber Cultivation: A Case Study of Rubber Farmers in Nakornsrihammarat, Thailand.
- Maierbrugger, A. (July, 2017). Thailand to open Rubber City in early 2018. Retrieved on October 25, 2017 from <http://investvine.com/thailand-open-rubber-city-early-2018/>
- Markets Insider. (2017). Global and China Natural Rubber Industry Report, 2017-2021. Retrieved from October 12, 2017 from <http://markets.businessinsider.com/news/stocks/Global-and-China-Natural-Rubber-Industry-Report-2017-2021-1002266986>
- Oxford Business Group. (2017). The Report: Thailand 2016. Retrieved on October 12, 2017 from <https://www.oxfordbusinessgroup.com/overview/world%E2%80%99s-kitchen-despite-some-short-term-hurdles-thailand-continues-rank-among-world%E2%80%99s-leading>
- Petchseechoung, W. (2016). Rubber Industry. Thailand Industry Outlook 2016-2018.
- Poungchompu, S. and Chantanop, S. (2015). Factor Affecting Technical Efficiency of Smallholder Rubber Farming in Northeast Thailand. American Journal of Agricultural and Biological Sciences.)
- Praktikantin. (June, 2017a). Rubber Farm Economics in Thailand. Retrieved on October 12, 2017 from <https://pugnatorius.com/rubber/>
- Praktikantin. (May, 2017). Rubber Farm Economics in Thailand. Retrieved on October 12, 2017 from <https://pugnatorius.com/rubber-farm-investments/>
- Research and Markets. (2016). Assessment of Thailand's Rubber Industry 2016. Retrieved on October 12, 2017 from [https://www.researchandmarkets.com/research/nl9trn/assessment\\_of](https://www.researchandmarkets.com/research/nl9trn/assessment_of)
- Thai Rubber Association. (September, 2017). Thailand-Indonesia-Malaysia Cooperation. Retrieved on October 26, 2017 from <http://www.thainr.com/en/>
- Thailand Board of Investment. (2016). Thailand: The World's Leader in Natural Rubber. Strategic investment location in the heart of Southeast Asia.
- Thailand Board of Investment. (2017). Thailand's Rubber Industry.
- Thaiturapaisan, T. (March, 2016). Rubber City and the Hope of Thai Rubber Industry Amid Challenges. Retrieved on October 20, 2017 from <https://www.scbeic.com/en/detail/product/2101>
- The Daily Records. (September, 2017). Top 10 Largest Rubber Producing Countries in the World. Retrieved on October 26, 2017 from <http://www.thedailyrecords.com/2018-2019-2020-2021/world-famous-top-10-list/world/largest-rubber-producing-countries-world-10-top/6857/>

The Office of Industrial Economics. (2015). **Industrial Economic Conditions in 2015 and Outlook for 2016.**

The Thai Rubber Association. (2013). Rubber situation. Udonthani, 2013. Udonthani province.

Workman, D. (September 3, 2017). Natural Rubber Exports by Country. Retrieved on October 12, 2017 from <http://www.worldstopexports.com/natural-rubber-exports-country/>

Workman, D. (September 30, 2017a). Thailand's Top 10 Exports. Retrieved on October 12, 2017 from <http://www.worldstopexports.com/thailands-top-10-exports/>

Date submitted: Nov. 13, 2017

Reviewed, edited and uploaded: Nov. 30, 2017