

Indonesian international trade analysis in agricultural sector case study of natural rubber commodities exports in the ASEAN free market

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ABSTRACT

Natural Rubber is one of Indonesia's leading export commodities and is also one of the largest suppliers in the global market. Rubber and processed rubber export commodities are categorized under the Harmonized System Code 40001 (HS Code 4001) more frequently referred to as HS-4001 so that it is easier to analyze related to commodity trade transactions where in the last few years since 2011 the share of Indonesian Natural Rubber exports always in the top 10 largest exporters in the world. Besides China as the largest exporter, it turns out that Thailand is Indonesia's strongest competitor as a Natural Rubber exporter in ASEAN, therefore with the implementation of the ASEAN Economic Community (AEC) policy in 2016 it is believed that there has been a change in the trade system, namely the export of various commodities including Natural Rubber in the Market. ASEAN. This study uses a descriptive method using various reference sources and secondary data where a lot of data comes from online media, namely various previous studies, online news, and data collected through official websites of government agencies or organizations both national and international. The results of this study indicate that international trade in Indonesian Natural Rubber commodities experienced a significant increase after the implementation of the AEC in 2016 compared to several previous years. It is hoped that the Indonesian government can further encourage natural rubber producers and entrepreneurs to continue to optimize the export of this commodity.

Keywords:

Commodities, Exports, International trade, Natural rubber

1. Introduction

Natural rubber is one of several leading commodities owned by Indonesia which is categorized as a non-oil commodity or generally belongs to the agricultural sector [1]. Apart from Natural Rubber, in fact there are several other superior commodities owned by Indonesia, specifically classified as plantation commodities, namely Palm Oil, Coffee, Coconut, Tea and Cocoa which have contributed a lot to the country's foreign exchange earnings due to trade carried out in these commodities [2]. However, Natural Rubber remains one of the leading export commodities due to the last few years since 2011 Indonesia has succeeded in becoming the top ten largest exporters of rubber commodities in the world. Available data comes from the Ministry of Agriculture in 2021 showed that Indonesia is in second place after Thailand with an average rubber production in 2014 to 2018 of 3.37 million tons with a contribution of rubber production to the world's total of 23.44% [3]. For more details related to the largest rubber producing countries in the world can be seen in the Table 1.



Table 1. The largest rubber producing countries in the world

Numb.	Countries	Total Production (Tons)	
		2020	2021
1.	Thailand	4,787,000	4,836,000
2.	Indonesia	3,037,000	3,045,000
3.	Vietnam	1,266,000	1,260,000
4.	Ivory Coast	950,000	965,000
5.	China	693,000	851,000
6.	India	685,000	757,000

Source: Statista.com (2023)

The table showed that among some of the largest rubber producers in the world besides Indonesia, three of them are ASEAN member countries namely Thailand and Vietnam. The data shows that the Natural Rubber Commodity is a very dominant product in these countries, making ASEAN a region with tight competition related to the production of these commodities [4]. In Indonesia, it can be seen that the areas that produce Natural Rubber are scattered in several regions, such as: 1) South Sumatra Province; 2) North Sumatra Province; 3) Riau Province; 4) Jambi Province; 5) West Kalimantan Province; 6) South Kalimantan Province; 7) Central Kalimantan Province; 8) Lampung Province, and several other provinces. For more details, see the Figure 1.



Figure 1. Distribution of provinces as natural rubber producers in Indonesia

The huge potential that Indonesia has in Natural Rubber shows that it is important to encourage this commodity to continue to grow so that it can provide optimal benefits, especially in international trade as a leading export commodity [5]. Likewise, the market share of ASEAN where eleven member countries including Timor Leste have joined in 2022 is also a great opportunity to optimize considering that several countries are also importers of rubber products such as Malaysia, Singapore and the Philippines [6]. In addition to several other countries that are also producers and exporters of Natural Rubber, the map of commodity trade competition is very high in the ASEAN market. For this reason, this article will look at how Indonesia's international trade in Natural Rubber Commodities in the ASEAN market, namely before and after the implementation of the free trade policy.

International Trade

In simple terms when discussing trade, it will examine the interactions carried out between one party and another to meet their respective needs. Likewise, international trade also discusses the interactions carried out between each party in the global scope, usually referred to with one country to another in order to meet the needs of that country which cannot be fulfilled independently or can be provided but cannot be fulfilled as a whole [7]. Furthermore, the definition of international trade is simple according to the economic dictionary, namely trade that occurs between two or more countries. Foreign trade is an important aspect of a country's economy. International trade is becoming increasingly important not only in the outward-oriented development of countries but also in finding markets in other countries for domestic production and procurement of capital goods to support domestic industrial development [8]. International trade begins with the exchange or trading of labor for other goods and services. The basis of international trade is the existence of trade in goods and services between two or more countries with the aim of gaining profit.

International trade is also interpreted as a process of exchanging based on the voluntary will of each party who must have the freedom to determine willingness to do so. Trade will only occur if no one party gains and no other party is harmed, namely the benefits derived from international trade are called gains from trade [9]. International trade is economic and trading activities carried out by residents of a country with residents of other countries on the basis of a mutual agreement. The population in question can be [10]: 1) between individuals, namely individuals with individuals; 2) between individuals and the government of a country; or 3) the government of a country with the government of another country. When compared with the implementation of trade in the country, international trade is very complicated and complex. This complexity is caused by several factors, including: 1) Buyers and sellers are separated by national boundaries; 2) Goods must be sent and transported from one country to another through various regulations such as customs, originating from restrictions issued by each government; 3) Between one country and another, there are differences in language, currency, estimates and scales, trade law and others.

ASEAN Free Market

Efforts to eradicate all trade barriers, both tariff and non-tariff, are one of several goals in trade liberalization [11]. The impact given by reducing various barriers will increase the flow of movement of goods from one country to another. The basic theory in trade liberalization is the Heckscher-Ohlin Trade Theory which states that international trade is formed from differences in the factors of production of each country where countries that have relatively more or inexpensive factors of production will specialize and export the goods they produce, while countries Those who have relatively few or expensive factors of production will import certain goods [12]. In line with trade liberalization, it will encourage an increase in trade between each country where each country will also develop specialization and efficiency based on its advantages and competitiveness [13]. ASEAN has implemented the concept of trade liberalization through the AFTA policy or the free

trade area policy between member countries through the CEPT mechanism to jointly determine the stages in reducing tariffs on trade and various other barriers to trade [14].

AFTA is here to encourage increased economic competitiveness of ASEAN countries by making ASEAN a world market production base, to attract investment and increase trade between ASEAN members so that it can be aligned with efforts for the welfare of the whole community [15]. Not only AFTA, later through the AEC it was also formed as the ultimate goal of the regional economic integration process with the hope of creating a single market and product base, a highly competitive region, with equitable economic development, and fully integrated into the global economy [16]. The AEC also includes several priority sectors such as various fields of health services, tourism, logistics, then agriculture-based products, automotive, electronics, fisheries, textiles, and wood-based products, including rubber-based products which are considered very important and potential to be developed [17].

2. Methods

This study uses a descriptive method to provide a detailed description of Indonesia's international trade in the agricultural sector, especially exports of natural rubber commodities in the ASEAN free market [18]. The various data used in this study are in the form of secondary data derived from various literature, both previous research, news published online and offline, as well as other data sources that are very important to support the success of this research. Furthermore, the data analysis technique used is using an interactive analysis model with several stages in the form of conducting an analysis first, conducting a description of the data, and then generating conclusions.

3. Results and Discussion

3.1. *Trading of Natural Rubber Commodities before the Implementation of AEC*

International trade in Natural Rubber Commodities has also become one of the mainstays for Indonesia, including within the scope of ASEAN. Where besides Indonesia, it turns out that there are several other countries which are also one of the biggest producers of these commodities such as Thailand and Vietnam, making the ASEAN market share very competitive for rubber producing countries [19]. Based on data obtained from United Nation Commodity Trade in 2023 stated that Indonesia exports rubber products to several countries in ASEAN such as the Philippines, Singapore, Malaysia, Vietnam, Thailand, and several other countries in smaller quantities compared to the five countries. Broadly speaking, the products exported by Indonesia are still dominated by natural rubber raw materials. To facilitate the analysis of commodity trade, the data was collected using the Harmonized System Code 4001, namely Natural Rubber, Balata, Gutta-Percha, Guayule, Chicle and Similar Gums, In Primary Forms or in Plates, Sheets or Strips. The following table shows how the amount of trade in rubber commodities to several countries in ASEAN from Indonesia before 2016 [20].

Table 2. Indonesian rubber exports volume to several countries in ASEAN

Numb.	Countries	Years				
		2011	2012	2013	2014	2015
1.	Malaysia	4,343	3,852	7,250	5,430	3,629
2.	Philippines	5,604	6,309	5,178	8,628	6,508
3.	Singapore	105,404	64,513	22,850	19,062	32,233
4.	Vietnam	2,066	459	789	1,907	2,384
5.	Thailand	220	-	20	0.085	40

The data showed that among several countries the largest importer of Indonesian rubber commodities from 2011 to 2015 or before the implementation of the AEC, namely Singapore. In 2011 the total volume of Indonesia's exports to Singapore amounted to 105,404 tons, in 2012 to 2015 amounted to 64,513, 22,850, 19,062 and 32,233 tons respectively. The second largest importer of rubber commodities from Indonesia is the Philippines such as 5,604, 6,309, 5,178, 8,629, 6,508 tons from 2011 to 2015, while several other countries also import rubber commodities from Indonesia, namely Malaysia, Vietnam, and Thailand, although with relatively less in number than the other two countries, Singapore, and Philippines. After the implementation of the AEC in 2015, there was a phenomenon of changes in the global trade in Indonesian rubber products in several ASEAN countries due to: 1) an increase in Intra-ASEAN Trade where the AEC facilitated trade in goods and services between ASEAN countries by reducing trade barriers such as tariffs and technical regulations so as to increase Indonesia's rubber exports to ASEAN countries due to easier access to these markets; 2) tighter competition due to increased trade so that in order to remain competitive, Indonesian producers must ensure quality and competitive prices; 3) product diversification where Indonesia can try to further diversify its rubber products. Apart from raw rubber, it can try to produce processed rubber products that have more added values such as tires, technical rubber products, or other rubber-based innovative products. This can help increase competitiveness in the ASEAN market; 4) Collaboration and Investment where AEC can also facilitate cooperation between Indonesian companies and companies from other ASEAN countries; 5) regulation and standardization, namely the AEC also includes harmonization of regulations and standards among ASEAN countries. This can help Indonesian producers to understand and comply with the standards applicable in ASEAN markets, thereby facilitating their exports; and 6) Changes in Distribution and Logistics in the form of AEC can also affect the way distribution and logistics operate within ASEAN. This can affect the costs and efficiency of Indonesian rubber exports to ASEAN countries.

3.2. Natural Rubber Trade after the Implementation of AEC in 2016

ASEAN Economic Community Blueprint contains agreements in the form of support for priority actions, namely aiding and harmonization of several technical standards and policies for several sectors such as automotive, wood products, rubber products, and other sectors [21]. The determination of priority actions is carried out bearing in mind that the rubber commodity is one of several commodities that are prioritized and has potential within ASEAN. In ASEAN agreement also contains the formation of economic integration policies with the aim

of creating a single market and production base that is stable, prosperous, highly competitive, and economically integrated through effective facilitation for trade and investment, in which there is a flow of goods and service, free services and investments; facilitating the movement of business actors, professional workers, talented workers and laborers, and freer flow of capital in order to encourage the creation of welfare for all members of the state [22].

When compared with the export volume of Indonesian rubber commodities in several ASEAN member countries before the implementation of the AEC and after the implementation of the policy in 2016, there have been quite significant changes. Data found from UNComtrade in 2023 using the HS-4001 code to classify rubber products found that for the five dominant importer countries for these products, Singapore is still one of several potential countries for Indonesia to export rubber [23]. However, it turns out that other countries such as Malaysia and Viet Nam have become the new prima donna for Indonesia because there has been a significant increase in several years such as 2019 and 2020, although several countries such as Thailand and the Philippines, which are also importers and competitors to Indonesia in this commodity, have also experienced changes after the implementation of the AEC policy in 2016 [23]. For more details, see Table 3.

Table 3. Indonesian rubber export volume after AEC in ASEAN (tons)

Numb.	Countries	Years				
		2016	2017	2018	2019	2020
1.	Malaysia	3,050	42,335	3,084	5,036	20,192
2.	Philippines	7,217	3,608	3,326	4,334	3,971
3.	Singapore	19,567	17,340	1,659	619	319
4.	Vietnam	5,429	19,288	10,708	6,148	13,651
5.	Thailand	0.075	-	0.072	0.082	0.041

Based on these data, it can be seen that several countries which are importers of Indonesian rubber commodities have not changed, namely Malaysia, the Philippines, Singapore, Viet Nam and Thailand. However, the amount of Indonesia's export volume in 2016 to 2020 has changed for importing countries. Malaysia became the largest importer of Indonesian rubber commodities in 2020 followed by Viet Nam in second place replacing Singapore and the Philippines in 2016. The total volume of exports of Indonesian rubber commodities to Singapore experienced a significant decrease after the implementation of the AEC policy, namely in 2016 it amounted to 19,567 tons, and from 2017 to 2020 totaled 17,340, 1,659, 619, and 319 tons respectively. It was caused by several factors such as the Covid 19 pandemic and the emergence of new competitors namely Thailand, Vietnam, and India in the rubber trade with Singapore. Then, Thailand which is the largest competitor for producers and exporters of Indonesian rubber commodities, is also an export target, but with very small amounts, namely 0.075 tons in 2016, 0.072 tons in 2018, and 0.041 tons in 2020. The largest importer, namely Malaysia, has experienced a significant increase quite significant, namely 20,192 tons in 2020, greater than in 2018 and 2019, which were only 3,084 and 5,036 tons [23].

3.3. Important Role of Indonesian Government in Increasing Exports of Rubber

The ASEAN market is one of the potential markets owned by Indonesia in order to optimize profits in international trade. There are many superior commodities

owned by Indonesia, one of which is Natural Rubber. In fact, Indonesia as the largest rubber producer and exporter in the world can take advantage of the opportunities available by opening market access through free trade policies in the Southeast Asian region. Many countries also need rubber as a raw material to be managed further, but cannot be produced domestically, so they must import it from other countries, including Indonesia. Some of these countries such as Malaysia, Singapore, Philippines, other countries in ASEAN also need rubber, where the Indonesian Government should be able to accommodate the needs of these countries so that rubber exports can increase every year.

Likewise, the ratification of free trade cooperation agreements that have been agreed upon by each country including Indonesia in ASEAN is a potential for developing export capabilities because this policy has minimized various kinds of obstacles both in the form of tariffs and non-tariffs. In addition, ASEAN has also agreed to implement the AEC policy whose aim is to create regional economic integration which is planned to be achieved in 2015 where the main goal is to make the ASEAN free market a single market and production base, where there is a flow of goods, services, investment and free skilled labor and freer flow of capital. In general, if barriers have been reduced or minimized, access to the movement of certain products will be easier, including traded natural rubber commodities. However, referring to data on international trade in rubber commodities through Code HS-4001 shows that for certain countries which are Indonesia's trading partners, namely Singapore, there has been a decrease in the number of exports of rubber commodities after the implementation of the AEC from 2016 to 2020 compared to 2011 to 2015. The data also in contrast to other trading partners, namely Malaysia, which experienced a significant increase in 2020 compared to before the implementation of the AEC in 2015 [23]. For more details, see Figure 2.

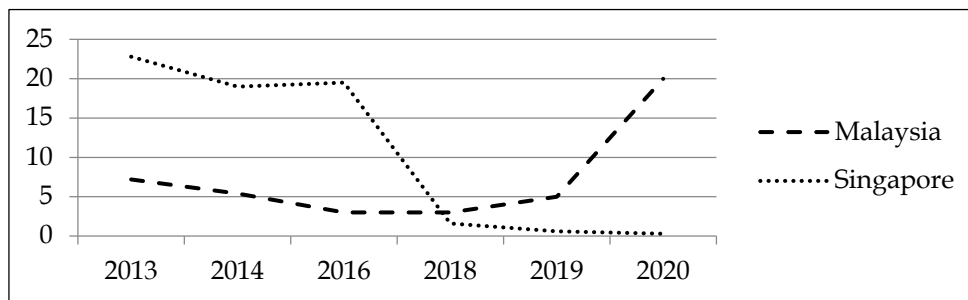


Figure 2. Comparison of Indonesian rubber export volume

The figure showed that there has been a significant change in the total volume of Indonesian rubber exports to the two countries, namely Malaysia and Singapore where in the year prior to the implementation of the AEC Singapore was still the largest importer compared to Malaysia. However, after the implementation of the AEC the amount of rubber exports to Singapore decreased compared to Malaysia because Singapore imports more rubber products from Thailand and Vietnam which are also fellow ASEAN countries compared to Indonesia. The Indonesian government is expected to be able to take advantage of the opportunities available in the ASEAN market share for rubber commodities, bearing in mind that the implementation of free trade policies has minimized various barriers to trade. Various efforts can be made, one of which is by giving encouragement or

reinforcement to rubber commodity producers so they can increase their production and reopen access to trading partners such as Singapore, so they want to re-import rubber products in large quantities. The Indonesian government has made various efforts to increase rubber exports after the implementation of AEC so that it can compete better in the ASEAN regional market and the global market. The following are some of the efforts that have been made: 1) carrying out export promotions where the Indonesian Government has been active in promoting Indonesian rubber products to ASEAN and international markets through trade exhibitions, trade missions and marketing campaigns; 2) improving quality as an effort to win competition in the international market by maintaining production processes and quality standards so that Indonesian rubber products can meet stricter requirements; 3) diversifying products by encouraging diversification of rubber products to create added value; 4) providing incentives where the government can provide incentives to producers to encourage increased quality and production to encourage increased exports; 5) collaborate with several ASEAN countries to facilitate trade and investment in the rubber sector; 6) encourage increased infrastructure development with the aim of encouraging smooth transportation and logistics, thereby reducing shipping costs and accelerating the distribution of rubber products to ASEAN markets.

4. Conclusion

Natural Rubber is one of Indonesia's leading export commodities and is also the largest supplier in the global market where since 2011 Indonesia's Natural Rubber export share has always been in the top 10 largest exporters in the world. Besides China as the largest exporter, it turns out that Thailand is Indonesia's strongest competitor as a Natural Rubber exporter in ASEAN, therefore with the implementation of the AEC policy in 2016 international trade in Indonesian Natural Rubber commodities experienced a significant increase compared to the previous few years even though there was a decline when the Covid 19 pandemic occurred and the presence of Thailand and Vietnam as strong competitors in the natural rubber trade, in 2020 Indonesia again experienced an increase in rubber exports in ASEAN. It is hoped that with the opportunity for this commodity market share, the Government of Indonesia can further encourage Natural Rubber business actors to continue to increase exports of these commodities in ASEAN.

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