

Analysis Of Performance And Competitiveness Of Indonesian Coffee Exports To Japan

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Abstract – Coffee is Indonesia's leading plantation export commodity, contributing to the country's foreign exchange growth. The main objective of this research is to analyse the performance and competitiveness of Indonesian coffee exports to Japan. The Revealed Comparative Advantage (RCA) method is used to analyse the competitiveness between coffee-exporting countries in the Japanese market. Next, the Export Product Dynamics (EPD) method is used to analyse Indonesian coffee's performance and competitive position in Japan. The X-Model Potential Export Product method is used to see the potential for developing the Indonesian coffee market in Japan. The results show that Indonesia has power strong competition with an average RCA score of 4.87, though Still under Colombia, Brazil and Vietnam. Indonesia is in position Power Saing Retreat, meaning Indonesian coffee is not in demand in the Japanese market. Also, Indonesia's coffee export potency and lack of market development indicate a potential decline in the performance of Indonesian coffee exports to Japan.

Keywords – Competitiveness, Coffee, Revealed Comparative Advantage (RCA), Export Product Dynamics (EPD), X-Model Potential Export Product.

I. INTRODUCTION

Trading internationally is important in creating fieldwork, improving per capita income, and reducing poverty in the countries involved in trading [1]. Coffee is one of the commodity strategic superior nationally focused on 2020 as commodity export superior plantations [2]. Coffee is one of the commodity-owned plantations role important Enough in the activity economy of Indonesia because coffee is one of the commodity export mainstay producers overseas foreign exchange oil and gas. Apart from being a source of coffee foreign exchange as well as a provider of fieldwork and resources income for farmer coffee plantations as well as perpetrator economy, others involved in activity cultivation, processing, eye chain marketing

Indonesia was in the world's top 6 largest coffee-exporting countries from 2016-2019. In 2017, Indonesia became the 4th largest coffee-exporting country in the world after Brazil, Vietnam and Colombia, with an amount of exports of 491,854 tons [3].

Japan is a partner in Indonesian trade because it has bilateral cooperation that has been around for a long time and occupies position third after China and the United States as the destination country's main non-oil and gas exports [4]. In doing activity trading, No obstacle to trade exists by importing countries. Swift Impact non-tariff resistance to flow trading No can confirm Because can meaningful ambiguous (negative and positive). On the side negative, enactment of non-tariff barriers can cause request products in the importer market to become lower Because its height standard product and existence increase the cost of trading from party exporter due to enforcement of non-tariff barriers. The most extreme case is termination in a way direct product incoming imports consequence No by established standards. However, the positive side is that the determination of standard quality must be fulfilled by the party exporter, which can reduce information asymmetry between countries.[5]

During 2000-2021, Indonesia's coffee exports were the highest on average compared to the United States, Japan and Germany. However, if reviewed from the export volume side from 2000-2021, the performance of Indonesian coffee exports to Japan shows decreased growth to 3.27 per cent each year. Indonesia's coffee export volume to Japan Initially in 2000 amounted to 65,327 tons. Keep continued to experience a decline until finally, in 2021, it reached a figure of 27,297 tons. If seen from mark Indonesian coffee exports to Japan, growth marks the export Still experience increased growth although no significant amounting to 1.78 per cent. [6]. This thing compared backwards with the performance Indonesian coffee exports to the United States and Germany experience enhancement Good from volume side as well mark export

The decline in the volume of Indonesian coffee exports to Japan No, regardless of the existing obstacles to trade carried out by Japan. The challenge in trading current internationally is related to non-tariff barriers in the form of Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT). Japan's government, since July 2006, has set 200 types of material chemistry that cannot be contained in coffee commodities to exceed the known permissible threshold of a uniform level of 0.01 ppm. Provision government Japan This is considered the most stringent compared to other countries. Suppose the coffee commodity is an element active in one of 200 types of material chemistry that exceeds the permitted uniformity level. In that case, the rejected coffee enters Japan and must be destroyed or exported back [7].

The obstacles faced by Indonesia in exporting this coffee resulted in the volume of Indonesian coffee exports to Japan, the destination country's main Indonesian coffee exports, experiencing fluctuation with trend trending growth decreased. Indonesian coffee exports to Japan in 2010 were 59 thousand tons, down to 24 thousand tons in 2021. This compares backwards with competing countries. Indonesia's exports are like Brazil's export volume, increasing from 123 thousand tons to 146 thousand tons in 2021. Likewise, Vietnam's export volume increased from initially as much as 54 thousand tons up to reach 100 thousand tons in 2021 [8]

Different from Indonesian coffee exports to Japan, growing in export volume tends to experience a decline each year without a significant increase in export volume. The volume of Indonesian coffee exports to the United States and Germany, which are also destination countries main Indonesian coffee exports from 2010 to 2021, show trend development is decreasing, but over the years, certain experience significant growth, such as in 2012, 2015 and 2019. The volume of Indonesian coffee exports experienced a decline to Japan, resulting in the performance of Indonesian coffee exports regularly experiencing a decline. This is because, from 2010 to 2021, the volume and value of Indonesian coffee exports fluctuated with the trend of its development. Indonesia's coffee export volume is experiencing a decline of as much as four times in range time that, mark Indonesian coffee exports experienced a decline five times. The value of Indonesian coffee exports experienced a decline in 2013, 2014, 2016, 2018 and 2020, followed by a decline in the volume of Indonesian coffee exports to Japan [6]. This proves that Japan's role is important in the performance of Indonesian coffee exports.

Based on this, studies were conducted to disclose the performance and power of competitive Indonesian coffee exports to Japan.

II. RESEARCH METHODS

The study was carried out in Indonesia. Election location nature deliberately (purposively) considers Indonesia one of the world's largest coffee exporters. Method used in study This is quantitative with secondary data in the form of time series data. Internal data type study This is secondary data. Study This is done by retrieving data from several related institutions with research. Institutions include the *Badan Pusat Statistik RI*, *Kementerian Perdagangan RI*, *Kementerian Pertanian RI*, International Coffee Organization, UN COMTRADE, and others who support research and previous research—variables and definitions operations used in the study presented in Table 1.

Table 1. Variables and Definitions Operational

No	Variable	Definition Operational
1.	Value of coffee exports from exporting countries (Indonesia, Brazil, Vietnam and Colombia) to Japan	Total value of coffee products produced in a country (exporting country) and sold to Japan. In research this, value This be measured in United States Dollar units, 2000-2021
2.	export value from exporting countries (Indonesia, Brazil, Vietnam and Colombia) to Japan	The total value of goods and services produced in a country (exporting country) and sold to Japan. In research, value export This be measured in United States Dollar units, 2000-2021
3.	The total value of world coffee exports to Japan.	The total value of coffee products produced by countries worldwide and sold to Japan. In research this, value This be measured in United States Dollar units, 2000-2021
4.	The total value of world exports to Japan	The total value of goods and services produced by countries worldwide and sold to Japan. In research, value export This be measured in United States Dollar units, 2000-2021

To describe policy non-tariff barriers by Japan that Indonesia faces using qualitative form analysis descriptive. To analyse the power of competitive comparative Indonesian coffee in the Japanese market compared to exporting countries (Brazil, Colombia and Vietnam), use the Revealed Comparative Advantage (RCA) method. To analyse position Power competition and performance of Indonesian coffee exports to Japan, use the Export Product Dynamics (EPD) method, and to analyse potency market development, use the method X-Model analysis.

III. RESULTS AND DISCUSSION

3.1 Overview of Indonesian Coffee Exports

Sixty percent of Indonesia's coffee production is exported abroad, and only about 40 percent is used For domestic consumption. This means that Indonesia is very dependent on exports to promote coffee production. However, 95% of Indonesian coffee production is cultivated by smallholder plantations, of which smallholder plantations produce some coffee the quality is classified as low. The low quality of people's coffee is due to, among other things, factor cultivation plants, post-harvest, need economy, and the level of knowledge less farmers [9]. As well as Coffee products exported by Indonesia, coffee beans, both green coffee (raw coffee) and processed coffee beans baked as well as processed coffee (coffee powder). However, Coffee beans dominate coffee exports in Indonesia compared to the amount of processed coffee exported to foreign markets [10]—so that mark plus of exported coffee low.

A large supply supports Indonesian coffee exports. This thing proven by Indonesia from 2000 to 2021, always entering ten big, even top five world coffee exporters. [11]. To maximise the coffee industry's potency, the Government supports improving governance upstream, institutional farmers' governance, and post-harvest governance. To increase productivity, brands up to standard packaging in frame enter the global market [12].

The government also issued Regulation of the Minister of Trade Number 19 of 2021 concerning Policies and Settings Export controls provision of various products, including coffee. Regulation This aims To increase Power competitiveness, value-added, and the welfare of society. The regulation also delivers convenience and incentives for coffee exporters, such as liberation duty out, facilities credit exports, and assistance promotion. To increase the quality of Indonesian coffee, the government focus on increasing the production of domestic coffee commodities through the provision of seed quality height, fertilisation appropriate time, water management and rejuvenation programs To replace existing coffee plants. Coffee development in the future will also take more notice of local wisdom to generate valuable types of speciality coffee from various areas [13].

Although the government has emitted various policies to push exports and increase the quality of Indonesian coffee, many obstacles are still faced. Several constraints like lack of knowledge and awareness lot coffee farmers and exporters who do not know or do not care about the standard coffee quality determined by the government and international markets. They tend to

prioritise the amount of production over quality production. The National Standardization Agency (2016) stated that No up to 50% of products marked with SNI quality by standards have been set, not yet Again added product fake and fake SNI marks [14]. Apart from that, the facilities and infrastructure needed to support coffee processing and exports are still very limited in Indonesia. For example, lack tool modern drying, access to smooth transportation, lack of coffee quality testing laboratory, etc. [15]. Ascension tariff duty enters it's no barrier main for export, but rather prevalence restrictive non-tariff barriers state capabilities develop for increase export processed agriculture them. Non-tariff barriers are usually set as standards, regulations or provisions. Every country has a set rule type for product domestic and import. However, different countries' policies result in standard non-tariff barriers between one country and another. Therefore, this research focuses on discussing policy non-tariff barriers from Japan.

3.2 Overview of Non-Tariff Barriers in Japan

Japan apply non-tariff barriers to Indonesian coffee exports, namely possible actions limit or hinder trading without involve rates. Most Non-Tariff Barriers Japan imposes are Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT). Japan applied SPS and TBT to Indonesian coffee with reason For secure product food, including coffee from polluted material chemistry. Japan, since 2006, has set Positive List System rules for materials chemistry agriculture For green coffee beans that set. Green coffee beans contain material chemistry agriculture above the uniform limit or residue limit maximum. No can imported, distributed, or processed in Japan. Chemicals regulated agriculture in the Constitution are as follows: Fungicides, insecticides and ingredients, other chemicals used for control fungi, nematodes, mites, insects, mice, or animals and plants others, or harmful viruses plants (including trees and products agriculture and forestry) as well substance pusher growth and substances suppressor germination and materials other chemicals used For promotion or emphasis function physiological plants [16].

Although policy non-tariff barriers by Japan started to be enforced in 2006, Indonesia's coffee exports in 2006 Still experience an increase. However, since 2012, Indonesia found a case violation of non-tariff barriers; the volume of Indonesian coffee exports to Japan has always decreased yearly. This is because Japan becomes No believe in the quality of Indonesian coffee, so Japan is reducing the volume of coffee imports from Indonesia.

During 2000-2021, Japan will be the destination country for main Indonesian coffee exports. However, because of strict policy non-tariff barriers imposed by Japan compared with other countries, Indonesian coffee exports to Japan decrease yearly. This thing because the type of pesticides prohibited by the government of Japan far more lots if compared to pesticides banned by the United States and European Union governments as the largest coffee importing country in the world [17].

3.3. Competitiveness of Indonesian Coffee in the Japanese Market.

Research results This shows RCA values from each country in Table 2 as follows:

Table 2. RCA Value of Coffee in the World's Main Exporting Countries, 2000-2021

Year	Exporting Country			
	Indonesia	Brazil	Vietnamese	Colombia
2000	1.43	14.74	1.96	163.60
2001	1.43	16.82	2.25	199.69
2002	4.84	44.68	6.43	641.51
2003	1.95	23.15	2.92	274.14
2004	1.31	15.37	1.86	197.32
2005	2.36	39.96	3.55	402.82
2006	10.44	147.30	18.39	1395.01
2007	1.47	19.66	3.90	168.13
2008	5.29	53.82	16.56	727.10

2009	8.61	98.71	20.74	1081.11
2010	11.54	126.24	25.39	1680.94
2011	8.66	111.37	18.18	1044.98
2012	7.77	134.66	24,20	1135.75
2013	3.72	55.95	11.58	571.48
2014	2.64	43.94	6.30	338.14
2015	6.78	109.97	13,17	636.60
2016	4.37	73.04	10.18	462.00
2017	5.89	78.30	14.34	575.48
2018	6.93	124.48	15.74	683.34
2019	4.25	67.95	7.71	423.34
2020	2.60	54.88	6.21	386.88
2021	2.93	61.38	8.07	389.99
Average	4.87	68.93	10.89	617.24

Table 2 shows Power coffee competitiveness in four exporting countries world in general own Power competitive Because own RCA value >1 and is classified as power competitive strong. This also explains that coffee is one of the most commodities exported and is commodity superior from each of these countries. However, each country's RCA value still fluctuates each year. Although each country has the same experience fluctuations, however Power coffee competition with the highest average RCA value are Colombian, Brazilian, and Vietnamese coffee. At the same time, Indonesia is in the position smallest from owned RCA value. Condition This describes that, happens competition in demonstrated global trade with existing fluctuation mark export each country and will impact on excellence comparative and competitive. All The RCA figures obtained by Indonesia are bigger than one that shows that product Indonesia's coffee exports have competitiveness in a way comparatively in the world market, with an average RCA of 4.87. The highest competitiveness of Indonesian coffee occurred in 2010, with an RCA value of 11.54. This is because Indonesia's coffee exports were the highest in 2000-2021, to total exports of Indonesian commodities in the year by 0.55 percent.

Deep Indonesia do coffee exports to Japan from 2012-2021 experienced several times constraints in the process because Indonesia doesn't get away with policy non-tariff barriers set by Japan. This also affects Power Indonesian coffee competition with Japan before the non-tariff barriers (2000-2011) and after the non-tariff barriers (2012-2021), as seen in Table 3.

Table 3. RCA Value of Indonesian Coffee, Period I (2000-2011) and Period II (2012-2021)

Period	Year	RCA	Period	Year	RCA
I	2000	1.43	II	2012	7.77
	2001	1.43		2013	3.72
	2002	4.84		2014	2.64
	2003	1.95		2015	6.78
	2004	1.31		2016	4.37
	2005	2.36		2017	5.89

2006	10.44	2018	6.93
2007	1.47	2019	4.25
2008	5.29	2020	2.60
2009	8.61	2021	2.93
2010	11.54	Average	4.79
2011	8.66		
Average	4.94		

In Table 3, you can see that the average RCA value for period I, which is the period when there was no case violation policy Indonesia's non-tariff barriers, is 4.94, namely bigger than the RCA period II value, which is the period when case violation policy non-tariff barriers, the value of which is only of 4.79. This proves that non-tariff barriers influence Power Indonesian coffee competition with Japan.

3.4. Performance of Indonesian Coffee Exports in Japan

Export performance can be measured with the Export Product Dynamic (EPD) method that can show performance or position Power competitive something commodities in a region. In research, the position of Power competitive from each coffee exporting country can seen in Table 4.

Table 4. EPD results for coffee exporting countries in Japan.

Country	Share Export (X)	Share Product (Y)	Competitive Position
Indonesia	-0.002995	-0.037217	Retreat
Brazil	0.008368	0.000159	Rising Star
Vietnamese	0.008376	0.002841	Rising Star
Colombia	-0.001935	0.000006	Lost Opportunity

In Table 4, you can see that Indonesia is in a position of Power competitive *retreat* with an average growth Indonesian coffee market share in Japan of -0.002995 and an average growth share of world coffee products in Japan of -0.037217. This result indicated a decline in Indonesian coffee market share in Japan, followed by a decline in requests towards Indonesian coffee. This also shows that Indonesian coffee is not in demand in the Japanese market. Condition This caused exists policy non-tariff barriers implemented by the government of Japan. Condition *healthy protection* (protection health) and *eco-friendly cultivation* (how to match a friendly planting environment) and various related regulations with security food implemented by the government of Japan To protect the consumer. However, Indonesia cannot fulfil the requirements provided by the Japanese state. So, coffee from Indonesia was banned For exported to Japan several times. Policy non-tariff barriers set by Japan to Indonesia resulted in the volume of Indonesian coffee exports continuing to decrease each year, with the performance of Indonesian coffee exports continuing to decrease, resulting in a request from Japan that alone decreased. This is because Indonesia doesn't consistently ensure coffee availability to fulfil Japan's request. So, Japan chose to supply coffee from other countries and consistently fulfilled its request.

Table 5. Results of X-Model Analysis of Coffee Commodities in Main Exporting Countries

Country	RCA	EPD	Market Potential	Development
Indonesia	4.58059	Retreat	Less Potential	
Brazil	66.79427	Rising Star	Optimistic	
Vietnamese	10.44287	Rising Star	Optimistic	
Colombia	592.9927	Lost Opportunity	Potential	

In Table 5, you can see that Indonesia's coffee exports lack market development potential. Indonesia's coffee exports show this has Power strong competitiveness ($RCA \geq 1$) and position Power competitive fewer exports profitable (*retreat*) because No Again desired by the Japanese market. Whereas the countries Brazil and Vietnam have potency optimistic market development, which is shown by coffee exports from the country own strong Power competitiveness ($RCA \geq 1$) and position Power competitive ideal export (*rising star*). Country Colombia has potency potential market development because although its position Power less competition profitable (lost opportunity), which results in Colombia losing its market in Japan, Colombian coffee Still owns Power strong competition ($RCA \geq 1$).

IV. CONCLUSION

Indonesia has strong competitiveness for coffee commodities in Japan with an average RCA value from 2000-2021 4.87, although it is still below Colombia, Brazil and Vietnam. The average RCA value of Indonesian coffee during period I, when Indonesia had not violated non-tariff barriers, was 4.94. In contrast, the average RCA value was greater than during period II, namely after the violation of non-tariff barriers by Indonesia. which is only worth 4.79. This means that non-tariff barriers affect the competitiveness of Indonesian coffee exports to Japan. Indonesia's competitive position is in a retreat competitive position with an average growth in the share of the Indonesian coffee market in Japan of -0.002995 and an average growth in the share of world coffee products in Japan of -0.037217. These results indicate that there has been a decline in the growth of the Indonesian coffee market share in Japan, and a decline has followed this in demand for Indonesian coffee. This also shows that Indonesian coffee is no longer in demand in the Japanese market. Indonesian coffee exports have less potential for market development, which indicates a decline in the performance of Indonesian coffee exports to Japan.

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