

A Comparative Study of Japanese Trade Regulation against Indonesia and Philippines with Case Study of Banana

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ABSTRACT

The purpose of this research are to determine the development and the competitiveness of export from Indonesia and Philippines. Export products studied is banana based on the International Trade Centre (ITC). The data used in this study is time series data from the years 2015-2018. Data analysis method used is the method of competitive analysis Revealed Comparative Advantage (RCA), Trade Specialization Index (TSI) and Acceleration Ratio (AR).

Keywords: Japanese trade regulation, banana, Philippines, Indonesia

JEL, classification: D₂₄, O₄₇, O₁₃, Q₁₉

INTRODUCTION

1.1. BACKGROUND

Japan is one of the countries in the world that consumes bananas in large quantities and 99% of bananas in Japan are imported bananas.

The consumption of Japanese fruits per year reaches 5.4 million tons. While the import of fruits from various countries reached 1.7 million tons per year. Of this amount, the most fruit consumption is banana. So much so that in 2017, Japan must import as many as 985,709 tons. The per capita consumption of Japanese bananas averages 7-8 kilograms per year or 50 pieces a year. 80% of them are consumed by households. Japan applies very high quality and health standards for the import of agricultural products. Therefore, bananas from Indonesia and Philippines are considered to have met the minimum quality standards set by the Japanese Government.

Banana import statistics to Japan in the year 2017 are listed in the table.

Table 1.1. Trade Statistics Ministry of Finance (Imports), Banana Commodities in 2017

	Country	Quantity	Unit	Total (Thousand Yen)
1	Philippines	790,655,415 (80.21%)	Kg	76,874,192
2	Ecuador	147,071,890 (14.92%)	Kg	13,585,475
3	Mexico	20,236,091 (2.05%)	Kg	1,975,823
4	Guatemala	9,853,136 (1.00%)	Kg	821,118
5	Peru	4,428,616 (0.45%)	Kg	467,077
6	Costarica	3,536,656 (0.36%)	Kg	335,018
7	Indonesia	2,638,363 (0.27%)	Kg	190,553
8	Others	7,206,693 (0.73%)	Kg	784,261
Total		985,626,860 (100%)	Kg	95,033,517

Source: 2017 Report on Compliance by Major Trading Partners with Trade Agreements (Japan)

Since the signing of the Indonesia-Japan Economic Partnership (IJEPA) in 2008, until

now it turns out that Indonesian agricultural products (bananas) can now enter the Japanese market which is 3% in 2018. IJEPA is recognizing the desirability of increasing freedom of trade between the two countries, both sides will eliminate or reduce tariffs comprehensively. Major commitments by both sides cover agriculture, forestry, and fishery sector and industrial sector, which would contribute to the expansion of trade and other trade-related activities between the two countries.

Based on the data in the table above, the number of banana imports from Indonesia to Japan in 2017 reached 2,638 tons with a total trade value reaching 190,553,000 Japanese Yen. This number was only 0.27% of total bananas import.

Meanwhile, Philippines is one of the countries in Southeast Asia that has enormous potential of the countries that supply bananas to Japan by exporting The total needs of Japanese banana imports as listed in the table above, 80.21% or 790,655 tons.

From the description above, it is very important to know the comparison of bananas from Indonesia and Philippines.

1.1 RESEARCH OBJECTIVES

Starting from the problems above, this study aims to:

1. Knowing the competitiveness of Indonesian and Philippine banana products in world trade.
2. Knowing the tendency of banana products to export or import from Indonesia and the Philippines

3. Knowing the growth rate of banana product exports from Indonesia Philippines.

LITERATURE REVIEW

2.1 Revealed Comparative Advantage

The competitiveness of an export commodity of a country or industry can be analyzed by various methods or measured by a number of indicators. One of them is Revealed Comparative Advantage (RCA). Likewise can be done with the Constant Market Share and Real Effective Exchange Rate methods. In addition, the annual report from the World Economic Forum (WEF) regarding the Global Competitiveness Index (GCI) can also be a measure of a country's competitiveness each year. GCI is a composite index of a number of empirically tested economic indicators that have a positive correlation with the growth of the gross and domestic product (GDP) in the medium and long term. Theoretically, it also has a positive correlation with the performance or level of export competitiveness. (Tambunan, 2000).

To see more detailed Indonesian commodities that compete with other countries on the world market, it can be measured by the Revealed Comparative Advantage (RCA) of each export product (Balassa, 1965). RCA values greater than 1 indicate strong competitiveness. The higher the commodity RCA value, the stronger the competitiveness of the product, the more it is recommended to continue to be developed by specializing in the commodity. One indicator that can show a change in comparative advantage is the RCA index. This index shows a comparison between the share of commodity exports or a group of commodities of a country against the share of commodity exports from around the world. In other words, the RCA index shows the comparative advantage or competitiveness of exports from a country in a commodity to the world. The ways to calculate RCA are as follows:

$$RCA = \frac{X_{in} / (total X_a)}{X_{iw} / (total X_w)}$$

Explanation :

X = value of commodity exports
i = types of products
a = country of origin
w = world

If the RCA index of a country for a particular commodity is greater than 1, then the country concerned has a comparative advantage above the world average in that commodity. Conversely, if the result is smaller than 1, the comparative advantage for the commodity is low or below the world average.

2.2 Market Concentration Index and Trade Specialization Index

The Trade Specialization Index (*TSI*) is used to analyze the position or stages of development of a product. This *TSI* can describe whether for a type of product, Indonesia tends to be an exporter or importer country. Implicitly, this index considers the demand side and supply side, where exports are identical to domestic supply and imports are domestic demand, or in accordance with the theory of international trade, namely the theory of net of surplus, where exports of goods occur when there is an excess of the goods domestic market. Mathematically *TSI* values can be calculated using the formula:

$$TSI = \frac{(X_{ij} - M_{ij})}{(X_{ij} + M_{ij})}$$

Explanation:

TSI = trade specialization index
X_{ij} = export value of country j commodities i
M_{ij} = import value of country j commodity i

This index value has a range between -1 and +1. If the value is positive above 0 to 1, then the relevant commodity is said to have strong competitiveness or the country concerned tends to be an exporter of the commodity (domestic supply is greater than domestic demand). On the contrary, competitiveness is low or tends to be an importer (domestic supply is smaller than domestic demand), if the value is negative below 0 to -1. If the index rises, it means small purchasing power than domestic

demand. In other words, for this commodity, at this stage the country imports more than exporting.

2.3 Acceleration Ratio (AR)

Acceleration Ratio (AR) shows whether a country can win markets abroad (in the sense that it can defeat rival countries) or its position is increasingly weak in the export market or domestic market. Acceleration Ratio which is an acceleration ratio or an increase in speed ratio. The use of an acceleration ratio index or an increase in the AR speed ratio is to show whether a country can capture the export market (in the sense that it can defeat its competitors), or its position is getting weaker in the export market or in the domestic market. Mathematically the AR index can be calculated as follows (Tambunan, 2004):

$$AR = \frac{(trend X_{ij}) + 100}{(trend M_{ij}) + 100}$$

Explanation:

X_{ij} = export value of country i commodities j

M_{ij} = import value of country j commodities i

RESEARCH METHODS AND ANALYSIS

3.1. THE SCOPE OF RESEARCH

This study will identify and analyze Indonesian Banana exports and compare that with banana export from Philippines, to the Japanese market. The type of research used is quantitative research, namely research that emphasizes testing theories through measuring variables with numbers and analyzing data with statistical procedures (Indriantoro and Bambang, 1999: 12). Quantitative methods are more suitable in this study because it makes easier to identify and analyze the competitiveness of Indonesian banana exports. It is done by measuring related variables based on Indonesian banana export data. The results of the identification and analysis will then be interpreted and described for future policy directions for developing Indonesian banana exports to Japan.

3.2 DEFINITION OF OPERATIONAL VARIABLES

Variable research includes factors that play a role in the event or symptom to be studied (Narbuko and Achmadi, 2003: 118). In this study, the variables that are the object of research include:

a. Export

Export activities are trading systems by issuing domestic goods out of the country by fulfilling applicable regulations. Export is the total of goods and services sold by a country to another country, including between goods, insurance, and services in a given year. In this study the exports studied were Indonesian banana exports to Japan.

b. Import

Import is the activity of entering goods into the customs area. The company or individual conducting the import activity is called an Importer. The imports examined in this research are imports of banana commodities in Japan.

c. Balance of trade

Balance of trade or export-import balance is the difference between the value of exports and imports of a country in a given period, measured using the applicable currency. Trade Balance describes a portrait of trade or trade performance in a country. Positive balance means a trade surplus occurs if the export value is higher than imports, and vice versa for the negative balance sheet. The trade balance is often divided based on the goods sector and service sector.

3.3. METHOD OF COLLECTING DATA AND ANALYSIS RESULT

3.3.1 Types and Data Source

The data used in this study is secondary data sourced from various official documents issued by the Indonesian government, the Philippine government and the Japanese government. The data is related to trade, and it can also be sourced from other journals or scientific writings and official websites

that publish trade activities between countries.

3.3.2 Data collection techniques

For the purposes of this study the author uses documentation techniques. According to Suharsimi in Saerofi (2005: 33) the documentation method is a way to obtain data or information about various things that have to do with research by looking back at written reports, both in the form of numbers or information (writing or boards, paper places and people). In this study the documentation method was used to find out the export and import data of Indonesian and Philippine banana commodities to Japan obtained from various sources. In addition to written report data, for the purposes of this study various data, information and references were also extracted from various library sources, mass media and the internet. Most of the data, information obtained from ITC (International Trade Centre) of Trade Map that provide trade statistics for international business development monthly, quarterly and yearly trade data. Import & export values, volumes, growth rates, market shares, etc. Trade Map was developed by the International Trade Centre (ITC), UNCTAD/WTO with the objectives of facilitating strategic market research, monitoring both national and product-specific trade performance, revealing comparative and competitive advantage, identifying the potential for market or product diversification and designing and prioritizing trade development programmes for both firms and trade support institutions.

3.4 DATA ANALYSIS AND RESULT

3.4.1 Data And Results of RCA Calculations

Total Banana Export	Unit : US Dollar thousand		
	Indonesia	Philippines	World (Total)
2015	13,006	439,902	9,990,127
2016	10,806	618,830	10,709,028
2017	8,878	1,128,280	11,773,745
2018	14,610	1,504,777	13,561,701

All Comodity Export	Unit : US Dollar thousand		
	Indonesia	Philippines	World (Total)
2015	150,366,281	58,648,083	16,420,073,252
2016	144,489,796	56,312,748	15,898,104,800
2017	168,810,043	68,712,611	17,554,807,807
2018	180,215,034	67,487,668	19,346,601,921

RCA INDEX	Indonesia	Philippines
2015	0.1422	12.3284
2016	0.1110	16.3140
2017	0.0784	24.4828
2018	0.1157	31.8081

The results of the RCA calculation above show that the RCA value for Indonesian banana commodities has a difference compared to Philippine bananas. Indonesian banana commodities since 2015-2018 show a value of less than 1 with a value of 0.1422-0.1157. Indonesia's RCA value continues to decline until 2017 and rises slightly in 2018. This small amount of 1 means that Indonesia's banana commodities are below the world average. On the other hand, the value of RCA commodities of bananas from the Philippines since 2015-2018 continues to have a drastic increase of 12,3281 to more than double in 2018 at 31,8081. The value of the RCA from the Philippine banana commodity not only shows that the commodity value of the Philippine banana is more than the average world banana, but also shows the dominance of the Philippine banana in world of trade.

3.4.2 Data and Results of TSI Calculations

Total Banana Export	Unit : US Dollar thousand		
	Indonesia	Philippines	World (Total)
2015	13,006	439,902	9,990,127
2016	10,806	618,830	10,709,028
2017	8,878	1,128,280	11,773,745
2018	14,610	1,504,777	13,561,701

Total Banana Import	Unit : US Dollar thousand		
	Indonesia	Philippines	World (Total)
2015	0	73	14,629,494
2016	0	46	14,671,333
2017	1	34	15,801,876
2018	16	22	16,119,654

TSI Index

	Indonesia	Philippines
2015	1.0000	0.9997
2016	1.0000	0.9999
2017	0.9998	0.9999
2018	0.9978	1.0000

The results of TSI calculations between 2015-2018 show that the value of TSI Indonesia has a high value because it is between the values of 0 and 1. The table above also shows that Indonesia has competitiveness for banana commodities and tends to be an exporter. The value of TSI from the Philippines is also almost the same as Indonesia because both are between the values of 0 and 1. The difference is the value of TSI Indonesia has decreased since 2017. From the value of 1,000 in 2015-2016 to 0.9998 in 2017 and down to 0.9978 in 2018. Whereas the value of TSI from the Philippines continues to increase from 0.9997 in 2015 to 1,000 in 2018.

3.4.3 Data and Results of AR Calculation

Unit : US Dollar
thousand

Total Banana Import	Indonesia	Philippines	World (Total)
2015	0	73	14,629,494
2016	0	46	14,671,333
2017	1	34	15,801,876
2018	16	22	16,119,654

Unit : US Dollar
thousand

All Goods Import	Indonesia	Philippines	World (Total)
2015	142,694,802	70,153,466	16,525,131,152
2016	135,652,800	85,908,572	16,057,668,572
2017	156,925,130	101,889,432	17,810,322,321
2018	188,711,172	115,038,016	19,689,785,570

AR INDEX

	Indonesia	Philippines
2015	0.0155	0.5211
2016	0.0118	0.6701
2017	0.0106	1.3262
2018	0.0161	1.6473

The results of the AR calculation above shows that the value of AR Indonesia is 0.0155 in 2015, falling to its lowest point in 2017 to 0.0106 and rising to the highest figure in 2018. Meanwhile the AR value of the Philippines continues to increase every year from 0.5211 in 2015 and more than tripled to 1.6473 in 2018. This shows that AR speed ratio Philippines is growing more

rapidly each year compared to Indonesia, which is still in the same range of around 0.01 each year. Which is mean Philippines banana are getting stronger in the market.

4.1 OUTPUT

Indonesia banana commodities are below the world average bananas export. Since 2015-2018 Indonesia shows a value of less than 1 with a value of 0.1422-0.1157. On the other hand, bananas from the Philippines since 2015-2018 continues to have a drastic increase of 12,3281 to more than double in 2018 at 31,8081. It shows the dominance of the Philippine banana in world of trade. However, both Indonesia and Filipin actually has competitiveness in banana commodity and tends to be exporter rather than importer by showing value from 2015-2018 around 0.9 to 1. Meanwhile, Indonesia Acceleration ratio of Banana growing from 0.0155 (2015) to 0.0161 (2018). This number still weak in compare to Philippines which is started from 0.5211 (2015) and more than tripled to 1.6473 (2018). This means Philippine banana getting stronger in the export market.

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