Optimum: Jurnal Ekonomi dan Pembangunan
Vol. 14, No. 2, September 2024, pp. 166-176
DOI:10.12928/optimum.v14i2.8356
ISSN 2613-9464

Competitiveness of Indonesia's export products with IJEPA cooperation framework

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ARTICLE INFO

Received : 14-06-2023
Revised : 22-04-2024
Accepted : 07-05-2024
Published : 30-06-2024

Keywords
Bilateral
Comparative advantage
Competitiveness
IJEPA

ABSTRACT

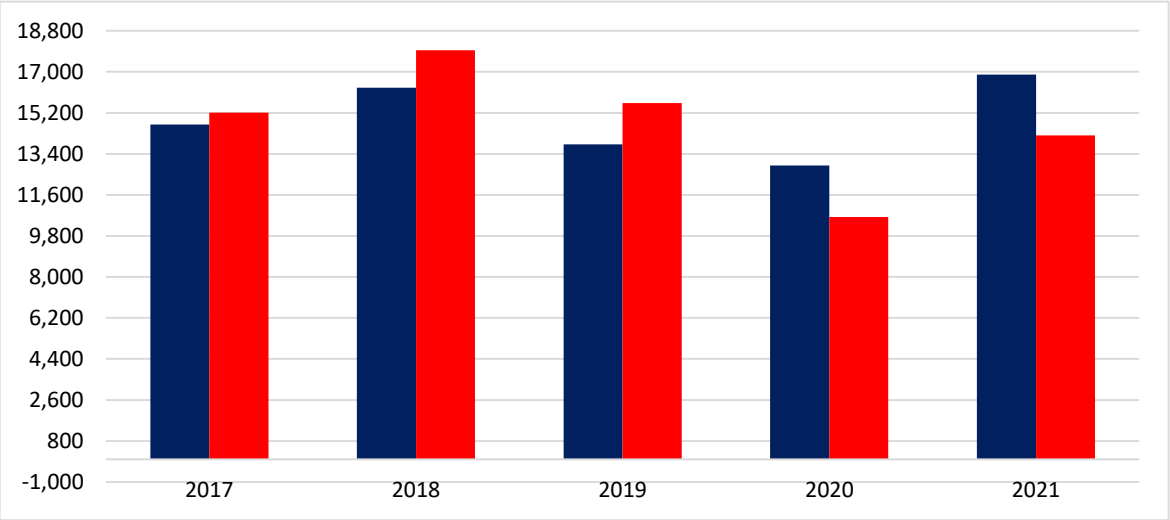
Bilateral cooperation between Indonesia and Japan Economic Partnership Agreement (IJEPA) is a form of bilateral cooperation between Indonesia and Japan that carries the concept of the Economic Partnership Agreement (EPA). With one of IJEPA's goals in the form of capacity building, IJEPA provides space for both parties to collaborate in order to increase the competitiveness of Indonesian producers. Problems in trying to maximize the impact of the IJEPA agreement on increasing domestic product product industries have encouraged Indonesia to be able to determine what products are worthy of being superior products in the context of international trade conducted with Japan. This study analyzes the trade and competitiveness of Indonesian products using Revealed Symmetric Comparative Advantage (RSCA) and Product Mapping.The results of the product mapping analysis show that there are 3 commodities that are included in the top five highest comparative advantage in 2003, 2013 and 2021, namely HS 11 commodities (Milling Industrial Products; Malt; Starch; Inulina; Wheat Gluten) HS code 21 (Extracts, essences and concentrates, from coffee, tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate) and HS code 25 (Salt; Sulfur; Soil and Stone; Plaster, Cal and Cement). This shows that these three products can be used as specialization products for Indonesia's trade with Japan.

1. Introduction

International trade is one of the important elements that support a country's economy. International trade usually occurs due to differences in the factor endowments owned by a country, both differences in the availability of human resources, natural resources, climatic conditions and geographical location as well as political and social differences that occur in a country. The differences in each of these countries lead to differences in the goods produced, the costs required, and the quality of goods that differ between countries (Apridar, 2012). International trade is one of the impacts of the globalization era which encourages countries in the world to expand the scope of their economic activities. Globalization demands openness, both trade openness and financial openness. Trade openness is marked by the disappearance or reduction of international trade barriers, both tariff and non-tariff barriers. Meanwhile, financial openness describes the smooth flow of capital into or out of the country. The disappearance of tariffs is usually one of the characteristics of economic cooperation carried out by two or more countries in order to increase international trade activity among member countries. Research on international trade become most importantly to note that some of the most unresolved issues are the extent to which countries benefit from bilateral trade cooperation (Abasimi & Salim,

2022). International trade led to comparative advantage and product differentiating, it's ideal and typical for countries to engage in international trade, not only for the intensification of their consumption basket, but also to expand and strengthen their economic growth through international capital inflows, transfer of technology, skilled labour and competitive domestic markets (Abasimi et al., 2019).

International trade positively impacts the domestic economy and global market competitiveness, such as the availability of consumer products, capital products, and raw materials under a competitive price and a certain level of product quality (Cahyadin et al., 2022). IJEPA (Indonesian-Japan Economic Partnership Agreement) is an agreement regarding an economic partnership between Indonesia and Japan based on the principles of EPA (Economic Partnership Agreement). Japan is an economic country with the 3rd largest GDP in the world after the United States and China in 2017. Japan is a country that produces large and high-tech industries such as motor vehicles, electronics, machine tools, steel and metal, ships, chemicals, industrial products textiles and processed foods. This country's trade with Indonesia in 2-17 reached USD 33.03 billion with exports of USD 17.79 billion and imports of USD 15.24 billion (Ministry of Trade, 2021).



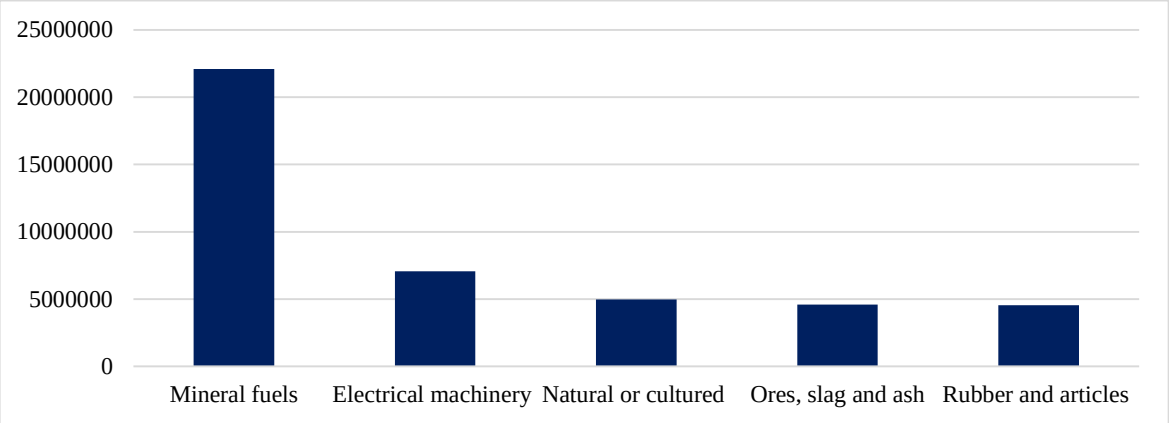
Source: (Ministry of Trade, 2021), Blue line for export and orange line for import.

Figure 1. Indonesia and Japan's non-oil and gas export-import volume in 2017-2021.

IJEPA is based on three main pillars, namely liberalization, investment/trade facilitation and economic cooperation. IJEPA has three pillars which serve as the basis for the two countries in implementing this economic cooperation, namely (i) Trade Liberalization, Figure 1 shows that Japan reducing 90% of its total 9,262 tariff posts, while Indonesia agreed to open 92.5% of its total 11,163 tariff posts; (ii) Trade Facilitation, this facility is provided by the Indonesian government to Japan by removing the import duties on capital goods that are not produced domestically which are given to the driving sector industries, such as the motor vehicle industry and its components, the electrical and electronic industry, the tool industry heavy and construction machinery, as well as the energy equipment industry; Several developments related to Indonesia-Japan trade after the implementation of IJEPA (2009-2017) increased by 155% where exports grew by 101.7% and imports by 322.1%. Figure shows that Japan is the second export destination country and the third import source country for Indonesia. Indonesia's trade with Japan in 2017 reached USD 33.03 billion with exports of USD 17.79 billion, imports of USD 15.24 billion and a surplus of USD 2.55 billion. Indonesia's exports to Japan were dominated by oil and grease, coal, ore copper, scrap precious metals, natural rubber, and insulated wire.

With one of IJEPA's goals in the form of capacity building, IJEPA provides space for both parties to collaborate in order to increase the competitiveness of Indonesian producers (Nurlaili, 2021). Even so, there are problems in trying to maximize the impact of the IJEPA agreement on increasing the domestic product industry. Indonesia certainly faces very complex challenges in the form of intense competition with other countries in capturing market share as well as the ability to produce and the competitiveness of the export product industry itself. If Indonesia's export products have high competitiveness against Japan, then this industry can have an effect on economic growth and stimulate national industry so that it can reach an international scale. Based on Figure 2 that mineral fuels is the

highest export volumes for Indonesia and Japan. In the open economies through international trade allows countries to use their resource efficiently.



Source: UN Comtrade, 2021.

Figure 2. Commodities with the Highest Export Volumes for Indonesia and Japan.

Figure 2 explains that Indonesia showed a significant improvement in export competitiveness, while Japan experienced a decline. However, Japan still has higher competitiveness than Indonesia in terms of innovation, infrastructure quality, and capacity to adapt to new technologies. This study recommends that Indonesia improve the quality of human resources and infrastructure, as well as promote innovation and productivity improvements to enhance export competitiveness in the global market (Handajani & Tambunan, 2019). The purpose of this research is to analyze the market share and competitiveness of Indonesia's export products against Japan which is very important to be used as an indicator in determining the competitiveness of commodity products to be exported by Indonesia. This analysis will use Revealed Symetric Comparative Advantage (RSCA). To the best of our understanding, this is the first analysis that uses the RSCA analysis model to examine the IJEPA relationship. Meanwhile, the trade share of the Japanese market will be analyzed using the Trade Balance Index. This analysis will provide an initial interpretation of the position of Indonesian export commodities in the Japanese market and contribute to the increasingly competitive export product competition.

2. Literature Review

2.1. International Trade

International trade can be interpreted as trade transactions between one country's economic subjects and another country's economic subjects, both regarding goods and services. The economic subject in question is the population consisting of ordinary citizens, export companies, import companies, industrial companies, state companies or the government which can be seen from the trade balance (Sobri, 2001). Mankiw (2008) states that trade between countries in the world is based on comparative advantage. What this means is that the trade is profitable because it makes each country speculate. International trade is also defined as an exchange process based on the voluntary will of each party who must have the freedom to determine whether he wants to trade or not. Trade will only occur if no one party gains and no other party is harmed. The benefits derived from international trade are called trade benefits or gains from trade (Kojima, 2000). Research on international trade has been developed by many previous researchers with varied findings. Study from Shohibul (2013) analyzed export products based on SITC with three classification, which is divided into primary products and manufactured products, the results show that China has a more established trade pattern, while ASEAN's trade pattern is very dynamic. Study from Az-zakiyah et al (2024) shows that ASEAN models is the variable openness ASEAN countries against the China positive effect on ASEAN exports. Both studies shows that international trade between ASEAN and China plays important role to increase export and import for all countries in ASEAN. Another study relate to IJEPA from Goklas & Sulasmiyati (2017) finds there is a significant influence from the implementation of IJEPA on Indonesia's exports to Japan. This can be seen in the average value of Indonesia's annual exports to Japan which increased significantly after the implementation of the IJEPA. In addition, it is also shown in the results of the paired T test which has a value of Sig.

< 0.05, which means there is a significant difference before and after the implementation of IJEPA. De Blouwe et al (2020) argued that Japan's Standardization Policy is the main cause of Indonesia's losses in the Indonesian Japan Economic Partnership Agreement (IJEPA). By raising international issues such as health, security, environmental sustainability and safety, Japan sets high standards for imported products from other countries, including Indonesia as Japan's partner in the IJEPA cooperation. In cooperation with IJEPA.

2.2. Competitiveness

Commodity products of goods and services that are traded internationally must have competitiveness in order to survive in long-term industrial competition. Market share is the total demand for an item in an area. Market segmentation is typically used to identify, define target customers, and provide supporting data for elements of a marketing plan. Market share is the part of the market controlled by a company and all potential sales. Market share is usually expressed as a percentage of the total. An indicator that can be used to measure product competitiveness is Revealed Comparative Advantage (RCA). The concept of RCA comparative advantage was introduced by Balassa (1965) and extended by Balassa & Noland (1989). The RCA index can show changes in comparative advantage. RCA can explain the strength of the competitiveness of Indonesia's export products against similar products from other countries. Apart from RCA, there is also Revealed Symetric Comparative AdvantageRSCA which is a refined form of the RCA indicator which is usually also used in measuring competitiveness.The rationale for this concept is that the results of export performance are determined by relative competitiveness with similar products from other countries. This reveals the existence of a country's comparative advantage, especially in the factor of availability of industrial raw materials.

Andriani & Bendesa (2015) analyzed the comparative advantage of Indonesian footwear products to ASEAN countries in 2013. The results showed that Indonesian footwear products had a declining comparative advantage. Cahyani (2014) analyzes the competitiveness of the steel industry in the face of ACFTA. The results of the analysis show that. From the analysis of Revealed Comparative Advantage (RCA) calculations that compare ACFTA countries, it shows that Indonesia is in the top five with an average of 2,003 until 2012 of 0.5193. CMS results that the effect of competitiveness is that most of Indonesia's market share is taken over by competing countries. The average market distribution effect over the years 2003-2012 yielded a positive value indicating that when the ACFTA import market increased Indonesia's growth responded by increasing the volume of the steel industry. other imported countries. Carolina & Aminata (2019) conducted an analysis of competitiveness and factors influencing coal exports. The results of the analysis show that the average growth in Indonesia's coal exports to the main destination countries for the period 2011 to 2016 was influenced by the effect of import growth compared to the effect of the composition of export commodities and the effect of competitiveness. Wan & Zhou (2017) analyzed China's agricultural export competitiveness using the Revealed Comparative Advantage (RCA) model and the Revealed Comparative Advantage Index (CCI). The results of the analysis show that China has a significant revealed comparative advantage in the export of certain agricultural products, such as seafood, vegetables, and fruits. However, China's export competitiveness is not in line with the CCI, indicating that its competitiveness has diminished in recent years. This study recommends that China improve production efficiency, strengthen technological innovation, and strengthen its comparative advantage in agricultural products that still have the potential to increase its exports in the international market.

Rosson et al (2018) analyzed the export competitiveness of United States pecan nuts using the Dynamic Revealed Comparative Advantage (DRCA) model and the Revealed Comparative Advantage Index (CCI) over the 1989-2014 time period. The results of the analysis showed that the United States had a stable revealed comparative advantage in pecan exports over the time period, despite fluctuations in prices and production in the international market. This study also shows that DRCA provides more accurate results in predicting export competitiveness compared to IKKT. These findings may help United States pecan producers to optimize their export strategies and maintain a competitive advantage in the international market. Nguyen & Nguyen (2021) analyzed the competitiveness of export products from five ASEAN countries and compared two different analysis methods. The data used are global trade data of products from five ASEAN countries for 11 years, from 2008 to 2018. The results showed that all five ASEAN countries have comparative advantage in certain products as shown by RCA. However, analysis using RSCA shows that the five ASEAN countries face considerable competition from countries such as the United States, the

European Union, and Japan in global trade. The researcher concluded that RCA and RSCA are complementary methods and can be used together to produce more accurate results in the analysis of export product competitiveness. In addition, this study also shows that there is a need for product diversification strategies and product quality improvement in order to compete with other countries and improve the export competitiveness of the five ASEAN countries in the global market.

Singh & Singh (2017) explained that India has a comparative advantage shown by RCA which is the result of specialization in the production of certain agricultural products. However, analysis using RSCA shows that India faces considerable competition from countries such as the United States, Canada, and the European Union in global trade in agricultural products. The researcher concluded that RCA and RSCA are complementary methods and can be used together to produce more accurate results in the analysis of export product competitiveness. In addition, this study also shows that to improve the competitiveness of Indian agricultural products in the global market, it is necessary to carry out product diversification strategies and improve product quality in order to compete with other countries. Joseph & Hari (2019) explained that the total import value of rubber and rubber products grew at 17.66% compared to a growth rate of 14.18% in export value. As a result of higher import growth and lower export growth, in the last 10 years, foreign trade in this segment has shown a consistently negative trade balance. The study used Revealed Comparative Advantage, Revealed Symmetric Comparative Advantage and concentration ratio to analyse the comparative advantage of all 17 groups of rubber and rubber products (four-digit level) under chapter 40 of the harmonised system nomenclature. Data from the World Integrated Trade Solution (WITS) from 1996-2016 is used for the analysis. Our results show that although the rubber sector experiences a comparative disadvantage at the aggregate level in the world market, three product groups, namely reclaimed rubber (HS 4003), rubber inner tubes (HS 4013), and hygienic or pharmaceutical goods (including teats) (HS 4014), exhibit a comparative advantage consistently over the 21 years. The two major product groups, namely new pneumatic tyres of rubber (HS 4011) and articles of vulcanised rubber other than hard rubber (HS 4016), which accounted for 68.68% of the total export value of the sector showed varying trends.

Apple sector competitiveness in Türkiye with annual data from 1970-2020. The research objectives explored the long-run and short-run relationships between apple exports and foreign direct investment, apple export prices, apple production, apple sector competitiveness, and trade variables. To achieve this, a newly developed revealed symmetric comparative advantage index (RSCA) was used to calculate export competitiveness, and an autoregressive distributed lag (ARDL) dependent test cointegration approach was used to identify factors affecting Apple exports. The findings confirm the existence of short-run and long-run relationships between Turkish apple exports and the variables under study. On the other hand, there is no short-run or long-run relationship between exports and foreign direct investment. This suggests that foreign direct investment has no impact on Turkish apple exports (Sarica et al., 2023). Rossato et al (2018) looked at the pulp industry as an essential sector in the global economy and a positive contributor to the trade balance in pulp-producing countries. The study analyzed competitiveness in pulp production in the United States, Brazil, Canada, Sweden, Finland, and China. The research method uses two indices - the revealed comparative advantage index (RCA) and the revealed symmetric comparative advantage index (RSCA) - to ascertain the underlying comparative advantage between countries. The results show that all countries except China have a comparative advantage based on the RCA index. RSCA shows that Finland, Canada, and Sweden have the highest comparative advantage. The trade balance, assessed through the TBI index, found a positive trade balance for Brazil, Finland, Canada, Sweden, and the United States. China has the most significant comparative disadvantage. We conclude that the wood pulp industry has a strong positive influence on the export economies of Brazil, Finland, Canada, and Sweden. In the United States, the industry has a moderate positive influence.

Deb & Hauk (2017) stated that practice of using the Revealed Comparative Advantage (RCA) Index to determine trade flows of goods between countries is well established. However, an important issue of concern is whether RCA indices reflect the essence of comparative advantage theory. Examining the consistency of alternative RCA indices with the Heckscher-Ohlin theory of comparative advantage thus opens up space to re-examine the index in the context of the Ricardian theory of comparative advantage, which emphasizes relative factor productivity differences between countries as opposed to Heckscher-Ohlin relative factor endowment differences. Research results point to the fact that specific RCA indices should be regulated. Suppose one wants to compare different sectors in a country or different countries within an industry, given the stability of its

distribution. In that case, NRCA can be the most reliable. However, empirical results cannot provide substantial evidence to support its consistency with the Ricardian theory of comparative advantage relative to other RCA indices. The different factors on which a country's RCA index relies on regression analysis, although we should. Based on the study results, we conclude that it is difficult to identify a particular index with all the features of a good index and, at the same time, that is empirically most consistent with theories of comparative advantage. Algieri et al (2022) examined the patterns of comparative advantage for 42 countries and 91 manufacturing classes of final and intermediate products and their changes between 2001 and 2019. The dynamics and effects of international fragmentation of production processes are also considered. Comparative advantage in each product class is related to three different measures of a country's human capital or technological wealth: labor costs, level of formal education, and number of patents per capita. An indicator of domestic market size enters the model as a control variable. There are no shifts for 51 products. From a policy perspective, the distinction between high- and low-tech production can have some interesting implications. Since high-tech production is characterized by a higher degree of learning-by-doing, governments should encourage domestic firms to improve their production's human capital or technological intensity.

3. Method

The data sources used in this research are statistical data from the ministry of trade and data from the United Nations Commodity Trade Statistics, and scientific papers related to the competitiveness and competitiveness strategies of international trade products. Export-import data was taken using the 2-digit HS code so that a total of 99 commodities will be analyzed in 2003, 2013 and 2021. The competitiveness and market share of Indonesia's exports to Japan are analyzed using the Revealed Symmetric Comparative Advantage (RACA) and the Trade Balance Index. Revealed Symetric Comparative Advantage (RCSA) is used to measure the competitiveness of comparative advantage. The RSCA value formula is as follows:

$$RSCA = \frac{(RCA - 1)}{(RCA + 1)} \quad (1)$$

Mark RSCA below 0 means not having a comparative advantage, on the other hand RSCA above 0 means having a comparative advantage. Trade Balance Index (TBI) is an index created by Lafay (1992) to see whether a country specializes in exports (net exporters) or in imports (net importers) for certain products. The formulation of TBI is as follows:

$$TB_{ij} = \frac{X_{ij} - M_{ij}}{X_{ij} - M_{ij}} \quad (2)$$

Where TB_{ij} is Trade Balance Index of country i for commodity j; X_{ij} is export of commodity j to the world by country I and M_{ij} is import of commodity j from the world by country i. TBI values range from -1 to +1. A TBI value of -1 indicates that a country only imports. Conversely, if the TBI value is +1 it indicates that a country can only export. Meanwhile, if the TBI value ranges between -1 and +1 it indicates that a country exports and imports a product simultaneously. A country is said to be a net importer of certain commodities when the TBI is negative and is said to be a net exporter if the value is positive.

Group B Comparative advantage Net-importer RSCA>0>and TBI<0	**Group A** Comparative Advantage Net-exporter RSCA>0 and TBI>0
Group D Comparative Disadvantage Net-importer RSCA<0and TBI<0	**Group C** Comparative Disadvantage Net-Exporter RSCA<0 and TBI>0

Source: Widodo (2009)

Figure 3. Product Maping.

Figure 3 shows product mapping is a combination of the RSCA index and TBI by Widodo (2009). Commodities are mapped into four groups: A, B, C, and D. Group A consists of commodities that

have a comparative advantage and specialize in exports. Group B consists of commodities that have a comparative advantage but do not specialize in exports. Group C consists of commodities that specialize in export but do not have a comparative advantage. Group D consists of commodities that do not have a comparative advantage and do not specialize in exports.

4. Results and Discussion

The average distribution of 99 2-digit HD commodities in groups A, B, C, and D is shown in Table 1. This distribution data shows an illustration of Indonesia's competitiveness against Japan in the form of unit groups so that it can identify how many of the 99 HS 2 commodity products digits that fall into each division class. Table 1 explain the results of the classification and grouping of the data above, it can be seen that most of Indonesia's trade products with Japan were in category A during the 2003, 2013 and 2021 periods.

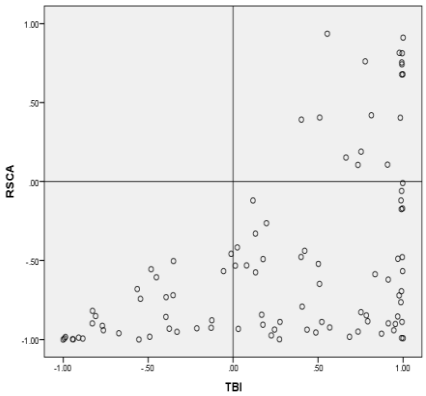
Table 1. Descriptive Statistics

Group	Amount		
	2003	2013	2021
A	28	31	34
B	23	17	24
C	20	24	18
D	28	27	23
Total	99	99	99

Source: data procesed

Top five product mapping of the 99 commodities traded by Indonesia to Japan show Table 2, Table 3 and Table 4. The results of the RSCA and TBI calculations that form the product mapping show that there are not too many changes in the superior products owned by Indonesia against Japan. There are several products that change their ranking order or fall out of the top 5, but in general the superior products are still the same product Table 2, Table 3 and Table 4 present the product mapping for Indonesia's trade with Japan in 2003, 2013 and 2021. The second column represents the top five products listed in category A for each trading activity. These products are considered as the five best products because they have a comparative advantage and have a positive trade balance (net-exporter). Products that have a comparative advantage mean that Indonesia has the ability to produce these goods in relatively large quantities to meet market needs with lower opportunity costs. Thus, comparative advantage can be used as a reference for a country in specializing in the production of goods.

Table 2. Product Mapping of the Top 5 Category A in 2003

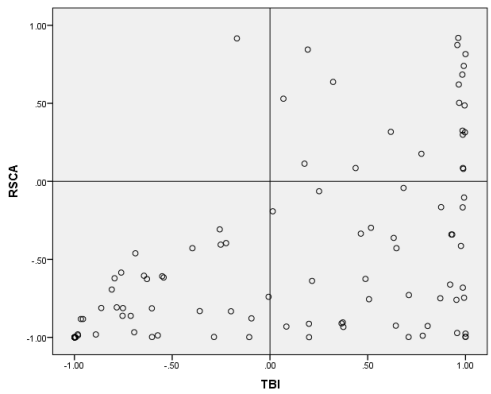
Products Mapping	Top five Products (2003)	
	HS Code	Commodity Name
	11	Milling Industry Products; malt; starch ; Inulina; Wheat Gluten
	21	Extracts, essences and concentrates, of coffee, tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate
	25	Salt; Sulfur; Soil And Stone; Plaster, Cal And Cement
	33	Essential Oils And Resinoids; Perfumery, Cosmetic Preparation Or Toilet Cleaning
	34	Soap; organic surface-active products and preparations for use as soaps, in bar form.

Source: data procesed

Table 2 shows that the top 5 products with the highest comparative advantage in 2003 were sequentially products with HS code 11 (milling industrial products, malt, starch, inulina and wheat gluten), HS code 21 (Extracts, Essens and concentrates from coffee tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate), HS code 25 (Salt, sulfur, earth and

plaster stone and cement), HS code 33 Essential oils and resinoids; Perfumery, cosmetic preparation or toilet hygiene and HS code 34 soap; organic surface active products and preparations for use as soaps, in bar form. Judging from these products, it can be concluded that in 2003 Indonesia's export commodities and comparative advantages were mostly derived from secondary products that had added value.

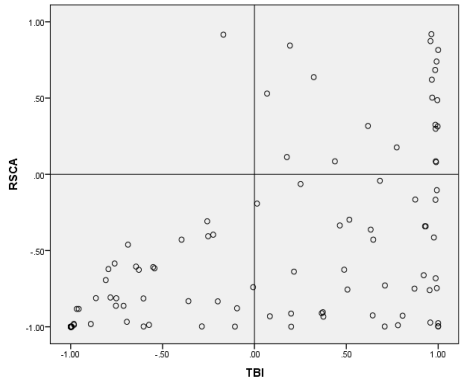
Table 3. Product Mapping of the Top 5 Category A in 2013

Products Mapping	Top five Products (2013)	
	HS Code	**Commodity Name**
	21	Extracts, essences and concentrates, of coffee, tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate
	25	Salt; Sulfur; Soil And Stone; Plaster, Cal And Cement
	11	Milling Industry Products; malt; starch ; Inulina; Wheat Gluten
	35	casein, caseinate and other casein derivatives; casein glue.
	49	Books, Newspapers, Graphics and Other Products of the Graphic Industry; Manuscripts

Source: data procesed

Table 3 which describes the highest comparative advantage in 2013 sequentially are products with HS code 21 (Extracts, essences and concentrates, from coffee, tea or mate and preparations based on these products or based on coffee, tea or mate), HS code 25 (Salt; Sulfur; Soil and Stone; Plaster, Cal and Cement), HS code 35 (Casein, caseinate and other casein derivatives; casein glue) and HS code 49 (Books, Newspapers, Graphics and graphic industry). The comparative advantage shown in table 6 shows that there is no significant change in the product with the highest competitiveness 10 years after the IJEPA Cooperation agreement. The difference that occurred in 2013 was the existence of HS codes 35 and 49 while the other 3 HS codes were commodities with high comparative advantage since 2003.

Table 4. Product Mapping of the Top 5 Category A in 2021

Products Mapping	Top five Products (2021)	
	HS Code	**Commodity Name**
	21	Extracts, essences and concentrates, of coffee, tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate
	25	Salt; Sulfur; Soil And Stone; Plaster, Cal And Cement
	11	Milling Industry Products; malt; starch ; Inulina; Wheat Gluten
	35	casein, caseinate and other casein derivatives; casein glue.
	82	Hand tools, as follows: flat shovel, curved shovel, pickaxe, plow, hoe, harrow and rake

Source: data procesed

Table 4 illustrates Indonesia's comparative advantage over Japan in 2021, which is 18 years after the IJEPA agreement. From the results of the analysis it can be seen that HS code 11, HS code 21 and HS code 25 are still the products with the highest comparative advantage. HS code 35 is also a product with commodity superiority in 2013. Meanwhile HS code 82 (hand tools, flat shovels, curved shovels, pickaxes and scrapers) is a new commodity that is included in the top five products with comparative advantages. Commodities included in the category top five commodities with comparative advantage in 2003, 2013 and 2021 are commodities with HS code 11 HS code 21 and HS Code 25. The entry of

these three types of products into the top five for almost 28 years after the IJEPA agreement shows that Indonesia has the ability to specialize in production the item. The net exporter position also shows that Indonesia will have a surplus if it trades these three products to Japan. A high RSCA value indicates high production capability compared to low production costs.

5. Conclusion

International trade is one of the impacts of the globalization era which encourages countries in the world to expand the scope of their economic activities. Globalization demands openness, both trade openness and financial openness. International trade positively impacts the domestic economy and global market competitiveness, such as the availability of consumer products, capital products, and raw materials under a competitive price and a certain level of product quality. IJEPA (Indonesian-Japan Economic Partnership Agreement) is an agreement regarding an economic partnership between Indonesia and Japan based on the principles of EPA (Economic Partnership Agreement). Japan is an economic country with the 3rd largest GDP in the world after the United States and China in 2017. The purpose of this research is to analyze the market share and competitiveness of Indonesia's export products against Japan which is very important to be used as an indicator in determining the competitiveness of commodity products to be exported by Indonesia. This analysis will use Revealed Symetric Comparative Advantage (RSCA).

The results of the product mapping analysis using the RSCA and TBI show that in the time periods of 2003, 2013 and 2021 the top five commodity products with the highest comparative advantage owned by Indonesia have not experienced too much change. The 3 commodities with the highest comparative advantage in 2003, 2013 and 2021 are commodities with HS code 11 (Milling Industrial Products; Malt; Starch; Inulina; Wheat Gluten) HS code 21 (Extracts, essences and concentrates, from coffee, tea or mate and preparations with a basis of these products or with a basis of coffee, tea or mate) and HS code 25 (Salt; Sulfur; Soil and Stone; Plaster, Cal and Cement). This shows that these three products can be used as specialization products for Indonesia's trade with Japan.

Acknowledgment

This article was written by Lestari Sukarniati, Firsty Ramadhona Amalia Lubis and MD. Modabber Hossain with the research title "Competitiveness of Indonesia's export products with IJEPA cooperation framework". The completion of this research is the result of personal effort. Thanks to Development Economics, Faculty of Economics and Business, Universitas Ahmad Dahlan (UAD) and Central Bank of Bangladesh for the support and academic environment that provided space for the development of ideas and understanding in completing this research. The researcher hopes that the results of this study can provide benefits and positive contributions to the development of science in the field of economics.

Declarations

Author contribution	:	All authors contributed equally to the main contributor to this paper. All authors read and approved the final paper
Funding statement	:	Collaborative research from lecture EP UAD and Staff Central Bank of Bangladesh
Conflict of interest	:	The authors declare no conflict of interest.
Additional information	:	No additional information is available for this paper.

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