

Competitiveness Analysis of Indonesian Coffee Exports to The European Union Market



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ABSTRACT: Indonesia will be the fourth largest coffee-producing country in the world by 2020, after Brazil, Vietnam, and Colombia. Coffee is one of the plantation commodities that is starting to be in great demand by the people of Indonesia. There are many types of coffee in the world that have the best quality and quality. This makes certain types of coffee so popular and sought after by many coffee lovers worldwide. The purpose of this study is to determine the competitiveness of coffee exports in the European Union market. The data used in this study are secondary data processed and sourced from the trade map. The data analysis method used is Revealed Comparative Advantage (RCA) to analyze a country's competitiveness and Comparative Export Performance (CEP) to evaluate a country's export specialization in certain products. Based on the results of the analysis, Indonesia is still ranked fourth with an RCA value of 6.89, this is due to the low quality of coffee in Indonesia. It can be seen that Colombia has an RCA value of 57.02 in the EU market followed by Brazil whose value is 25.78, slightly different from Vietnam's RCA value of 25.54.

KEYWORDS: CEP; Competitiveness; Coffee; Export; RCA

INTRODUCTION

The plantation sector has an important role in economic growth in Indonesia, including providing employment, improving people's welfare, and a source of national development. According to the Central Bureau of Statistics (2021) this sector contributes greatly to the value of national exports, which is 50% consisting of rubber, coffee, cocoa, tea, and palm oil commodities. Indonesian coffee is one of Indonesia's leading products in international trade. Coffee exports are an opportunity for Indonesia to develop its economy and gain profits. Indonesia is one of the world's largest exporters, Indonesia's coffee planting areas are spread across several islands such as Sumatra, Java, Bali, Flores and Papua (Sinta et al., 2017). The archipelago's coffee variants are in great demand in the European and East Asian markets because in addition to having a distinctive taste, Indonesian exported coffee has also been tested for quality standards and can be accepted in all countries in the world because it has been certified by the International Coffee Organization (ICO) as a quality coffee product (Syofya, 2023); (Lestari Baso & Anindita, 2018).

Coffee is one of the plantation commodities that are starting to be in great demand by the Indonesian people. There are many types of coffee in the world that have the best quality and quality. This is what makes certain types of coffee so popular and sought after by many coffee lovers around the world. Arabica and Robusta coffee types are some of the most popular types of coffee. Arabica coffee has flavors ranging from sweet, mellow, to strong and sharp flavors. While robusta coffee has a variety of neutral to sharp flavors and is often considered to have a wheat-like taste (Ardila et al., 2019).

Indonesia is the fourth largest coffee producing country in the world in 2020 (FAOSTAT, 2016). When viewed from BPS data in 2021 and data from the Director General of Plantations of the Ministry of Agriculture in 2021, Indonesia has exported dry/primary beans by 98.01%. The development of the value of coffee exports in the last six years tends to fluctuate, ranging from 31% to 18%, making Indonesia ranked 4th in the world of coffee bean producers after Brazil, Vietnam and Colombia. In 2020, Indonesia's coffee plantation area amounted to 1.25 million ha, dominated by smallholder plantations with an average contribution of 98.14% while large plantations amounted to 1.86%. Estimated coffee production in 2022 is 793 thousand tons and productivity is 832 kg / ha Director General of Plantations (2023)

According to (International Coffee Organization n.d. 2022) noted that the level of coffee consumption in the European Union is very high but they cannot produce coffee in their own country, so the European Union is the largest coffee importer in the world and absorbs almost half of world coffee production. Therefore, changing market dynamics, evolving consumer trends,

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and changing international trade policies create unique challenges and opportunities for coffee exporters. Therefore, an analysis of the competitiveness of Indonesian coffee exports in the EU market is becoming increasingly relevant in the context of economic globalization.

Some of the factors affecting Indonesian coffee exports in the EU market include coffee quality, price, environmental interest, and the EU market's high standards for coffee quality and safety (Sudjarmoko et al., 2022); (Bedy Sudjarmoko, 2021). In addition, internal and external efforts can also affect the competitiveness of Indonesian coffee exports in the EU market. Internal efforts such as improving coffee quality and quantity, coffee specialization, strengthening human resources, and supporting manufacturing policies (Rachmaningtyas et al., 2021b); (Manalu et al., 2022). Meanwhile, external efforts such as bilateral cooperation with the EU and other countries, and the implementation of coffee quality specifications (Bedy Sudjarmoko, 2021).

In analyzing the competitiveness of Indonesian coffee exports in the EU market, the Revealed Comparative Advantage (RCA) and Comparative Export Performance (CEP) methods can be used (Rachmaningtyas et al., 2021); (Syofya, 2023). RCA and CEP are used to measure a country's competitive advantage in exposing a particular product. Several previous studies have been conducted related to the analysis of the competitiveness of Indonesian coffee exports in the European Union market. One of them is research by Purnamasari, Hanani, and Huang (2014) which analyzes the competitiveness of Indonesian coffee exports in the world market (Rachmaningtyas et al., 2021). This study shows that the CEP of Indonesian coffee has an average of 1.7 which is the lowest, because there is no specialization of coffee exported from Indonesia to the international market. Recommendations that can be given are efforts to improve the quality and quantity of coffee, including coffee specialties, strengthening human resources, and supporting manufacturing policies.

This study aims to determine the competitiveness of Indonesian coffee exports in the European Union. With quantitative analysis, this study is expected to provide in-depth insights into the strategies needed to maintain and improve Indonesia's market position in the global coffee industry.

METHODS

The data used in this study are export data from four major coffee exporting countries such as Brazil, Colombia, Vietnam and Indonesia from 2003 to 2022. This data is obtained from Trade Map.

The calculation method used to calculate this competitiveness analysis is using two indicators (1) Revealed Comparative Advantage (RCA) Index, and (2) Comparative Export Performance (CEP) Index.

Some previous researchers mentioned several methods in calculating the strengths and weaknesses of a country. If a country can produce at a lower cost than other countries, then it sells at a lower price, so it can be said that it has a comparative advantage. On the other hand, comparative advantage describes the tendency of a country to export its superior commodity relative to other countries. The method often used is the concept of Revealed Comparative Advantage (RCA) by Balassa (1965). Some previous researchers used the Balssa index to calculate the superior sector of a country. This index is used to calculate specialization in an industry using international trade data. RCA can be calculated using the following formula:

$$RCA = \frac{(X_{ij} / Y_{ij})}{(X_{rj} / Y_{rj})}$$

Where:

X_{ij} : Export value of coffee commodity (i) from Indonesia to EU (j)

Y_{in} : Total export value of coffee (i) from all over the world to EU (j)

X_{rj} : Total export value (r) from Indonesia to EU (j)

Y_{rj} : Total export value (r) from the rest of the world to Europe (j)

When a country has $RCA > 1$, it has a cooperative advantage and specializes in that commodity. When $RCA < 1$, the country does not have a competitive advantage. The higher the RCA index value, the better the country's domestic trade performance, and vice versa.

In the second calculation, we calculate using Comparative Export Performance (CEP). This calculation is used to evaluate a country's export specialization in certain products. If a country has a CEP value > 1 then the country has a relative advantage in its exports. To calculate, the following formula is used:

$$CEP = \frac{(X_{iB} / X_B)}{(X_{rW} / X_W)}$$

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Where:

X_iB : Export of country B for product i

XB : Total exports of country B

X_iW : Total world exports for product i

XW : Total world exports

RESULTS AND DISCUSSION

Indonesia's coffee exports compared to three countries, namely Brazil, Colombia, and Vietnam in the 2003-2022 period presented in Figure 1 show that Indonesia has a stable average RCA value during the 2003-2022 period of 6.89. Brazil has an average RCA value of 25.79 during 2003-2022. Colombia is the country that has the highest average value of 57.02 during the 2003-2022 period. Vietnam has an average RCA value of 25.55 during the 2003-2022 period.

This illustrates that although Indonesia is one of the main coffee exporters, it still has a comparative advantage under the main competitor countries of world coffee exports. This is due to several reasons, including the low quality of Indonesian coffee exports, 90% of which is green coffee. In addition, according to most Indonesian coffee farmers are smallholders with limited skills, which makes most Indonesian coffee farmers harvest coffee while it is still green. In addition, coffee does not reach the recommended moisture content (12.5%) so that a lot of coffee is moldy and broken due to the use of poor peeling tools. This will certainly reduce the selling value received by Indonesia. Although Indonesia still has a low comparative advantage, Indonesia has a competitive price.

As said by (Tanjung et al., 2020) Indonesian coffee is generally cheaper than other countries' coffee, making it more attractive to price-sensitive European consumers. To increase the competitive advantage of Indonesian coffee in the European market through improving cultivation techniques, providing capital, and providing supporting infrastructure for the Indonesian coffee industry so that it can produce quality coffee and be able to compete with coffee producing countries in the world. This attention can be in the form of policies on the ease of coffee production facilities and infrastructure, procurement of fertilizers and medicines, procurement of superior seeds and in the form of more intensive agricultural counseling, especially in coffee production centers (Rachmaningtyas et al., 2021).

Coffee consumers in the European market tend to be more price sensitive for several reasons. First, the European market is known to have high standards for coffee quality and safety, so consumers tend to be more selective in choosing coffee products that meet their standards (Haidar, 2016). In addition, economic factors such as slow economic growth and intense competition in the European market may also make consumers more price sensitive. In addition, the price difference between different coffee products can also affect consumers' purchase intention. With high standards, consumers in the European market tend to pay attention to product quality, brand image, and brand attitude, but price remains an important factor in purchasing decisions. Therefore, coffee producers need to pay attention not only to product quality, but also to pricing strategies that suit consumer preferences in the European market.

According to (Ferguson, 2017) the country of Colombia is also experiencing changes in coffee prices at the global level, which has an export value and has decreased due to the weak competitiveness of coffee commodities. The decline in coffee prices in Colombia was caused by an outbreak of coffee leaf rust in 2008-2011. The impact of the outbreak of coffee leaf rust caused coffee prices to decline dramatically and as many as 100,000 Colombians lost their jobs as coffee farmers (Council and Session 2003). Oversupply of coffee in the world, the global economic crisis, declining demand for coffee in several major consumer countries such as the United States and Europe, world wars that disrupted the security of coffee production and exports and uncertain climate change were important factors in the decline in the value of coffee exports in Colombia.

This is in line with research conducted by Doni Sahat Tua Manalu, Harianto, Suharno (2022) entitled Competitiveness Analysis and Factors Affecting Market Share of Major Coffee Exporting Countries in Major Coffee Importing Countries. He explained that Colombia also experienced a decline in the value of coffee exports. This is due to competition in global trade which is indicated by fluctuations in the export value of each country which is different and results in comparative and competitive advantages.

The results of this study also have similarities with research conducted by Sabrina Tasya & Suhaeni (2022) entitled Comparative Competitiveness Analysis of Indonesian Coffee Commodities in the International Market. He gave a statement that the high or low value of RCA in a country for a particular commodity is caused by the transaction value of a commodity's exports as well as the total exports of all commodities of a particular country. Thus, the export value of the commodity will be influenced by the price of the commodity in the international market. In the international market, the price has the power to measure the purchasing power of the world population as consumers of a product.

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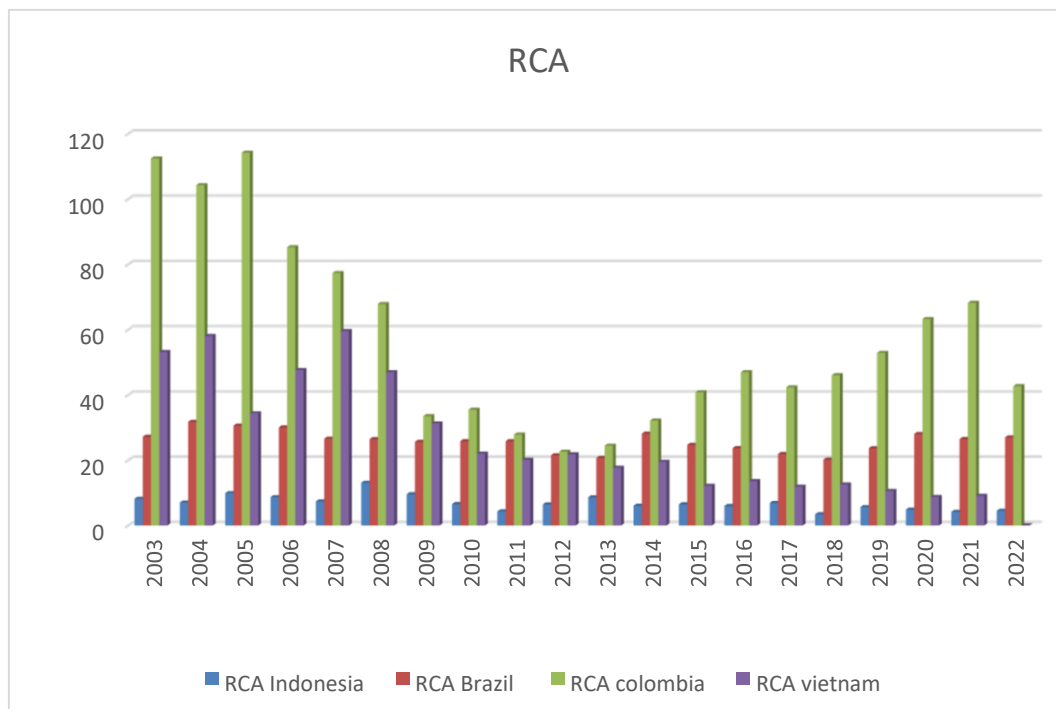


Figure 1. RCA calculation results from Indonesia, Brazil, Colombia, and Vietnam.
 Source: (Trademap 2022), processed (2023)

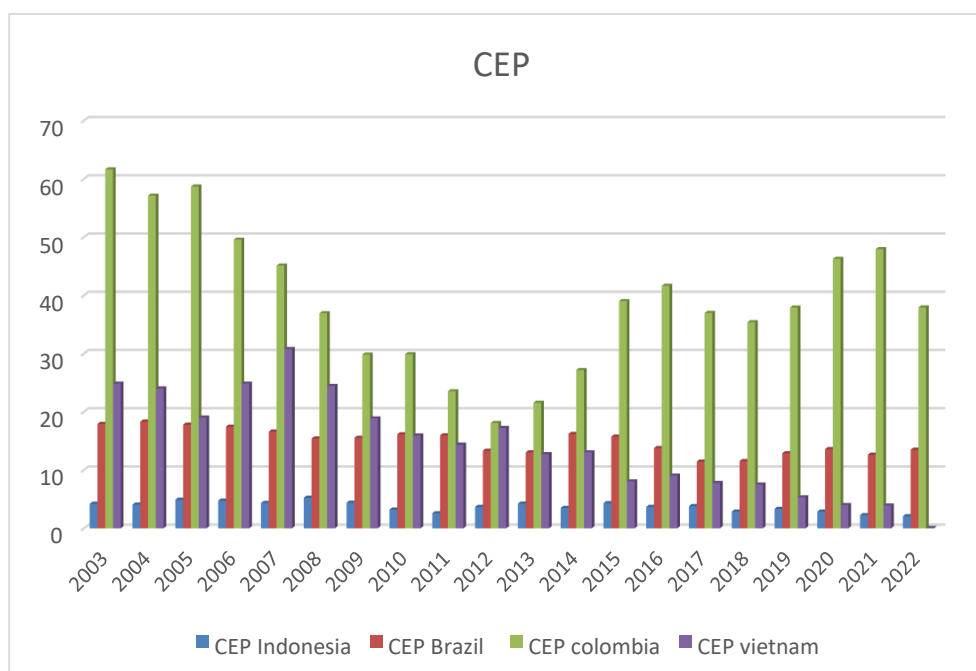


Figure 2. CEP calculation results from Indonesia, Brazil, Colombia, and Vietnam
 Source: (Trademap 2022), processed (2023)

Based on the calculation of Comparative Export Performance (CEP) which if a country has a CEP value > 1 then the country has a relative advantage in its exports. In the 2003-2022 time period Indonesia has an average CEP value of 3.71. Brazil has an average value of 14.94 in the period 2003 to 2022. Colombia is the country with the highest CEP value of 39.11 for the period 2003 to 2022. Vietnam has an average CEP value of 14.29 in the 2003 to 2022 time period. Colombia's superior CEP and RCA values are due to productivity, infrastructure, competitiveness, and production. Colombia's coffee competitiveness is much better than Indonesia's so that Colombian coffee has a higher competitiveness than Indonesian coffee, even though Indonesia has RCA and CEP values that are always positive, Indonesia still cannot compete with Colombia which has a greater RCA and CEP value (Zuhdi and Yusuf 2021).

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To increase the comparative value of coffee in the European market, improvements in coffee cultivation techniques can be made in several aspects, such as coffee varieties, processing, and sustainability. Here are some strategies that can be explored: (1) Coffee varieties: Indonesia has various excellent coffee varieties, such as Arabica, Robusta, and Catimor (Mayrowani, 2013). By developing and managing appropriate coffee varieties, Indonesian coffee products can meet the increasing demand of the international market; (2) Coffee processing: Coffee processing affects the quality and flavor of the coffee produced. Coffee processing can generally be divided into two, namely wet processing and dry processing. Indonesia has developed coffee processing technologies used, such as coffee bean warehousing and coffee bean inclusion (Anggraini et al., 2020); (3) Sustainability: Sustainable coffee farming is one way to increase productivity and improve farmers' welfare. In this practice, farmers combine coffee farms with other crops, such as trees, to produce high-quality coffee products and maintain environmental welfare; (4) Technological innovation: Technological innovations in coffee farming, such as the development of innovation-based coffee plantations, can help increase crop productivity and reduce adverse impacts on the environment (Hafif et al., 2013); (5) Human resource development: Developing farmers' skills and awareness on coffee cultural management is essential to improve their competitiveness and understanding of financial record keeping (Andani et al., 2016); (6) Training and education: Training and education on coffee cultivation techniques, especially technical and financial aspects, can help farmers improve the quality of their coffee products and generate higher income (Andani et al., 2016); (7) Supply chain development: Establishing a good supply chain, from farmers to wholesalers, can help maintain the quality of coffee products and improve competitiveness in the international market. By developing and managing coffee cultivation techniques in various aspects, Indonesia can increase the comparative value of coffee in the international market and maintain the position of the world's leading coffee exporter (Mayrowani, 2013).

In the research (Suyanti Kasimin, Bagio Bagio, 2021), it is mentioned that increasing the competitiveness of arabica coffee can be achieved through increasing added value and cooperation between stakeholders in the development of organic arabica coffee agribusiness in Aceh. Analysis of comparative advantages and advantages Competitiveness is also an important factor in improving coffee competitiveness in the international market. In addition, (Prasetia, 2012) research also shows that international trade, market distribution, and competitiveness have an influence on the growth of Indonesia's coffee export value. From the results of these studies, it can be concluded that the provision of coffee farming infrastructure, increasing added value, cooperation between stakeholders, as well as international trade factors, market distribution, and competitiveness are important factors in increasing the competitive value of coffee in the international market. Thus, coffee farming infrastructure development, value-added improvement, and cooperation between stakeholders can be effective strategies in improving coffee competitiveness in the international market.

Providing capital to coffee farmers can increase their competitive value in the international market through various strategies. In West Java, improving the quality of coffee farmers through community service activities has proven effective in strengthening the coffee farming community network, which in turn will increase the added value of coffee farmers (Sekarningrum et al., 2022). In addition, the target costing approach can be used to improve the efficiency of ground coffee production, so that companies can compete in the market with competitive prices. On the other hand, to increase Indonesian coffee exports to the EU market, it is necessary to increase productivity, farming efficiency, product quality, and farmer resilience, as well as cooperation between stakeholders in coffee agribusiness development (Suyanti Kasimin, Bagio Bagio, 2021). In addition, increasing capital, labor, technology, and land area also positively affect the production and income of coffee farmers in Kintamani, Bangli Regency (Bagus Gde Yogi Jenana Putra & Ketut Sudibia, 2023). Thus, strategies involving quality improvement, production efficiency, stakeholder cooperation, and capital improvement can help coffee farmers increase their competitive value in the international market.

CONCLUSIONS

In general, Indonesia's coffee production is among the four largest in the world, but it does not yet have a competitive advantage when compared to the other three countries. The main cause of the low export value received by Indonesia is inseparable from the low quality of the coffee itself. This can be caused by most of the coffee that Indonesia exports in the form of unprocessed raw materials and post-harvest handling that tends to be less precise and still uses traditional tools. In addition, on the production side, although Indonesia's coffee area is the largest after Brazil, its production is still lower than Colombia and Vietnam.

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