

2 THEORETICAL BASE AND LITERATURE REVIEW

2.1 THEORETICAL BASE

2.1.1 Comparative Advantage Theory

The concept of comparative advantage, introduced by David Ricardo in *On the Principles of Political Economy and Taxation* (1817), is a cornerstone of international trade. It suggests that countries should specialize in goods and services with the lowest opportunity cost compared to others, benefiting from exchange by trading what they produce most efficiently. Empirical studies by Bernhofen and Brown (2018) and Costinot and Donaldson (2012) confirm the relevance of this principle in modern trade, while Deardorff (1980) and Grossman and Helpman (1991) highlight its broad and dynamic applicability. Indonesia, endowed with abundant natural resources like palm oil, coal, and gas, enjoys clear comparative advantages.

This principle also applies to Indonesia's coffee exports to the European Union (EU). With favorable climatic conditions and rich natural resources, Indonesia produces high-quality coffee at relatively low costs. By leveraging this advantage, Indonesia effectively taps into the EU's strong demand for specialty coffee, improving its trade balance and strengthening its global market position. The adoption of sustainable practices, fair-trade certifications, and consistent quality improvements further boost Indonesia's competitiveness, allowing it to meet the evolving preferences of European consumers and maintain a stable market share.

2.1.2 Heckscher-Ohlin Theory

The Heckscher-Ohlin (H-O) theory, developed by Eli Heckscher and Bertil Ohlin, offers a classical explanation for international trade based on a country's factor endowments. The theory posits that countries will specialize in the production and export of goods that intensively use the factors of production they possess in abundance, and import goods that require relatively scarce factors. In this framework, a labor-abundant and land-rich country like Indonesia is expected to export agricultural goods such as coffee, which are both labor- and land-intensive. In contrast, capital-abundant regions such as the European Union tend to import these raw materials and export capital-intensive goods, including machinery and high-value processed products. However,

despite its explanatory power, the H-O theory has limitations. It assumes immobility of factors across countries and does not consider the role of modern elements such as global value chains, technological advancements, branding, or economies of scale. In reality, production and competitiveness are influenced not just by factor endowments, but also by government policies, international regulations, consumer preferences, and global disruptions. For example, the COVID-19 pandemic disrupted global coffee supply chains, impacting both exporting and importing nations in ways that the H-O model cannot fully predict. European market preferences often favor premium coffee brands, where value addition through branding and processing plays a crucial role—factors outside the scope of traditional trade theories.

Indonesia's position as a major coffee exporter to Europe aligns with many aspects of the Heckscher-Ohlin (H-O) theory. The theory, developed by Eli Heckscher and Bertil Ohlin, suggests that countries specialize in the production and export of goods that make intensive use of their abundant factors of production (land, labor, capital) and import goods that require relatively scarce factors. The following analysis examines how Indonesia's coffee exports to Europe reflect the predictions of the H-O model and highlights the role of factor endowments in shaping trade patterns.

Factor Endowments and Specialization: According to the H-O theory, countries will export products that require the factors they have in abundance. Indonesia's abundant land and **large labor force** are key factors that contribute to its specialization in coffee production. The country has vast areas of agricultural land with a tropical climate ideal for coffee cultivation, making coffee a labor- and land-intensive commodity. This aligns with the H-O model's prediction that land- and labor-rich countries, like Indonesia, will focus on agricultural products that are intensive in these factors. As a result, coffee is one of Indonesia's most important exports.

Trade Patterns between Indonesia and Europe: The trade relationship between Indonesia and European countries is also in line with the H-O theory. The model suggests that capital-rich countries, such as those in Europe, specialize in the production of capital-intensive goods and often import raw materials for processing. Indonesia exports raw coffee beans to Europe, where countries like Germany, Italy, and the Netherlands are major importers. These countries then refine, brand, and distribute the coffee, taking advantage of their capital abundance and advanced processing technology. This division of labor between Indonesia and Europe follows the H-O

model's prediction that capital-rich countries will add value to raw materials imported from labor- and land-abundant nations.

Government Policies and Trade Facilitation: While the H-O theory focuses on factor endowments, government policies also play a significant role in shaping a country's trade competitiveness. The Indonesian government has introduced various strategies to support its coffee industry, including export incentives, subsidies for farmers, and trade agreements with European countries. These policies aim to increase productivity, improve the quality of exports, and expand market access. By strengthening its coffee sector through these initiatives, Indonesia maximizes its comparative advantage in coffee production, ensuring its continued competitiveness in the global market.

European Market Regulations and Non-Tariff Barriers: The H-O theory assumes that trade is primarily driven by differences in factor endowments, but real-world trade is also influenced by non-tariff barriers, such as market regulations. European countries have strict quality standards and sustainability certifications, which can be challenging for Indonesian exporters to meet. For example, there are requirements for organic and fair-trade coffee certifications, which necessitate investment in sustainable farming practices. These regulations influence trade flows and create an additional layer of complexity, demonstrating that while the H-O model explains the basic trade pattern, market regulations and consumer preferences play an equally important role.

Limitations of the Heckscher-Ohlin Theory: Although the H-O theory provides a useful framework for understanding Indonesia's coffee export competitiveness, it has limitations. The theory assumes that production factors are immobile between countries, yet globalization has facilitated the movement of capital, technology, and even labor across borders. For example, foreign investment in Indonesian coffee processing and technology transfer have enhanced the country's productivity. Additionally, the H-O model does not account for the significance of branding, marketing strategies, and consumer preferences. In Europe, consumers often prefer premium coffee brands with strong marketing, which adds value beyond just the cost of production. These non-economic factors are increasingly important in determining competitiveness in global markets, particularly for agricultural products like coffee.

Impact of Global Disruptions: The COVID-19 pandemic serves as an example of an external disruption that the H-O theory does not predict. Global supply chains for coffee were

significantly disrupted during the pandemic, affecting both production and distribution. These disruptions highlight how trade patterns can be influenced by global events, such as health crises or geopolitical tensions, which are beyond the scope of the H-O model.

2.1.3 Porter's Five Forces Model

Porter's Five Forces model, developed by Michael E. Porter in 1979, is a framework for analyzing the competitive dynamics within an industry. According to Porter, the five forces that shape industry competition are: (1) the threat of new entrants, (2) the bargaining power of suppliers, (3) the bargaining power of buyers, (4) the threat of substitute products or services, and (5) the intensity of competitive rivalry (Porter, 1979). This model helps businesses assess the attractiveness and profitability of a market by understanding the underlying forces that influence competition. As highlighted by Bruijl (2018) in *The Relevance of Porter's Five Forces in Today's Innovative and Changing Business Environment*, the model remains relevant for strategic decision-making in a dynamic and globalized market. By identifying these forces, firms can develop strategies to enhance their competitive advantage and navigate market challenges effectively.



Figure 1. Five Forces Model

2.1.3.1 Threat of new entrants

The threat of new entrants in the European coffee import market is moderate to high. Many developing countries, such as Brazil, also export coffee to Europe. Entering the European coffee market is not easy due to strict regulations like the **EU Deforestation Regulation (EUDR)** and high quality standards. Indonesian exporters who already have long-standing relationships with European buyers and certifications (such as Fair Trade or Organic) have a competitive edge. Nevertheless, new exporters from other countries may still enter and increase competition, especially if they offer lower prices or higher traceability.

2.1.3.2 Bargaining power of buyers

In the European market, the bargaining power of buyers is high. European coffee roasters, retailers, and distributors have access to many coffee-producing countries, so they can easily switch suppliers if Indonesian coffee does not meet expectations or if prices are too high. This forces Indonesian exporters to maintain competitive pricing and consistent quality. To reduce buyer power, Indonesian exporters need to differentiate their coffee by focusing on specialty beans, unique flavors, and certifications that appeal to European consumers.

2.1.3.3 Bargaining power of suppliers

In the case of Indonesia's coffee exports, suppliers refer to the farmers and cooperatives that grow and process the beans. Since most of Indonesia's coffee comes from smallholder farmers, individual suppliers have low bargaining power. However, when farmers are organized into cooperatives or supported by NGOs or government programs, they may gain more influence, especially if they produce specialty or organic coffee. Exporters must work closely with suppliers to ensure traceability, sustainability, and quality—key concerns for European buyers. If farmers can consistently meet these standards, they may gradually gain more power in negotiations.

2.1.3.4 Rivalry among competitors

Competition among coffee-exporting countries to the European market is intense. Indonesia competes with other major exporters like Brazil. Each country tries to attract buyers with better pricing, higher quality, or stronger sustainability credentials. Rivalry becomes even stronger in the specialty coffee segment, where flavor profiles, storytelling, and certifications matter a lot. To stay competitive, Indonesian exporters must invest in quality improvement, supply chain transparency,

and branding (e.g., promoting the uniqueness of Indonesian coffee producing techniques and origins like Toraja, Mandailing, or Flores).

2.1.3.5 Threat of substitute products

Substitute products are those that can perform the same function as the industry's offerings. The threat of substitutes is influenced by factors like switching costs, availability of alternatives, and technological advancements, which can impact demand and pricing (Porter, 1985).

The threat of substitutes is moderate. While coffee itself has few direct substitutes for coffee drinkers, some consumers in Europe are shifting to alternatives like tea, energy drinks, or plant-based beverages due to health, lifestyle, or environmental concerns. Technological innovation in beverage production may also introduce new alternatives. This trend pressures coffee exporters to promote not only the taste but also the sustainability and health benefits of their products. Promoting Indonesian coffee as organic, natural, and responsibly sourced can help reduce the threat from substitutes.

2.2 LITERATURE REVIEW

2.2.1 Concept of Export Competitiveness

Export competitiveness is broadly defined as the ability of a country or firm to compete in international markets by offering products or services that meet the demands of global consumers. It includes things like price, quality, innovation, and productivity, which all play a role in determining a country's or firm's position in the global market. According to *Paul & Dhiman (2021)*, competitiveness is shown through the ability to keep or grow market share in global trade. *Jambor & Babu (2016)* also explained that competitiveness reflects not just current performance, but the long-term capacity to stay competitive.

Export competitiveness can be examined from different perspectives, but two of the most common are price competitiveness and value competitiveness. These two concepts highlight the different strategies that countries and exporters can use to compete in international markets. Price competitiveness refers to the ability to offer products at lower prices than competitors, which often depends on cost-efficiency, exchange rates, labor costs, and production technology. This approach is typically used by countries that aim to attract buyers in price-sensitive markets. On the other hand, value competitiveness focuses more on the quality, uniqueness, and branding of the products. Rather than relying on low prices, exporters that adopt this strategy can demand higher prices due to superior product characteristics, specialized features, or strong brand identity. This is especially important for agricultural products such as coffee, where differentiation in flavor, origin, and quality can significantly affect market demand and price. As *Pustovoit (2021)* stated, “countries with high value competitiveness can command premium prices through superior product quality or unique market offerings.” In this case, exporters that manage to build a strong reputation or meet niche market standards often gain a more stable and profitable position in global trade.

To understand how competitive a country or sector really is in exports, researchers and policymakers use several methods to measure it. Some of the most common tools include composite indices, the Revealed Comparative Advantage (RCA) index, and measures based on the value-added content of exports. Each of these has its own strengths and limitations. Composite indices usually combine several indicators—such as productivity, innovation, infrastructure, and

trade performance—into one score, giving a broad picture of overall competitiveness. Meanwhile, the RCA index is more specific and widely used in trade analysis. It shows whether a country is relatively more efficient in exporting a certain product compared to the rest of the world. If the RCA value is greater than 1, it means the country has a comparative advantage in that product. As *Bruneckiene & Paltanaviciene (2012)* emphasized, different tools are more appropriate depending on whether the focus is at the national level, industry level, or firm level. For instance, RCA may be suitable for a specific commodity like coffee, while composite indices might be better for assessing a country's overall trade competitiveness. Additionally, *Negrea (2015)* mentioned that combining different methods can lead to a more accurate and reliable result, since each indicator captures different aspects of competitiveness. Using multiple tools also helps to minimize the risk of bias or misinterpretation that may arise from relying on just one index.

2.2.2 Importance of Export Competitiveness

Export competitiveness has emerged as a key determinant of economic development and long-term growth in the globalized economy. It refers to a country's ability to produce and sell goods and services in international markets efficiently and sustainably. According to *Gaglio (2015)*, export competitiveness encompasses various dimensions including productive diversification, export sophistication, product space, and economic complexity. These elements emphasize not only how much a country exports, but also *what* it exports—highlighting the significance of the composition and complexity of export goods in influencing trade performance and economic resilience.

Building on this, *Stratan and Fala (2023)* assert that export competitiveness is inherently tied to a country's innovation capacity and productivity levels. As they explain, “export competitiveness refers to a country's ability to produce goods and services that meet international market standards, driven by innovation and productivity. It reflects the sophistication of a country's export basket and its capacity to generate income from trade.” This definition underscores the role of technological advancement, quality improvement, and production efficiency in maintaining a competitive edge in global trade. Export competitiveness enhances a country's ability to integrate into global value chains which are essential in today's fragmented production networks. Through participation in GVCs, countries can specialize in specific stages of production where they hold

comparative advantages, facilitating technology transfer, skill development, and industrial upgrading (*Stratan & Fala, 2023*). This involvement not only improves export capacity but also strengthens domestic industries, contributing to more stable and diversified economic growth.

