
STRATEGY TO ENHANCE THE COMPETITIVENESS OF COFFEE BEAN EXPORTERS IN NORTH SUMATRA



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Abstract

This study aims to formulate strategies to enhance the competitiveness of coffee bean exporters in North Sumatra in facing global market dynamics. Considering North Sumatra's strategic role as one of Indonesia's leading producers of high-quality Arabica coffee, this research focuses on four key factors affecting competitiveness, namely product quality, production costs, pricing, and international trade policies. The research employs a mixed-method approach with case studies involving five coffee export companies: PT. Ujang Jaya International, PT. Tibeka Jaya Abadi, PT. Arvis Sanada Sanni Indonesia, PT. Mulya Sari Mandiri, and PT. Indokom Citra Persada. Data collection was conducted through in-depth interviews, observations, document studies, and questionnaire distribution. Qualitative data were analyzed using the SOAR (Strengths, Opportunities, Aspirations, Results) framework, while quantitative data were analyzed using the Analytical Hierarchy Process (AHP) method to determine strategic priorities. The findings indicate that enhancing product quality through international certifications and cupping tests, improving production cost efficiency through modern sorting processes and direct farmer partnerships, as well as optimizing government export promotion policies are key factors in strengthening the competitiveness of North Sumatra's coffee bean exports. These findings are expected to provide practical contributions for exporters, policymakers, and the development of academic literature in agricultural export management.

Keywords: Strategy, Competitiveness, Export, SOAR, AHP

INTRODUCTION

Globalization has driven economic openness among countries and expanded access to international markets. Amid increasingly competitive free trade, developing countries are required to enhance the competitiveness of their leading products. In international trade, exports refer to the activity of selling domestically produced goods and services to other countries, while imports involve purchasing goods and services from abroad. These two activities are interconnected: imports help address domestic resource limitations, whereas exports utilize excess resources to meet external demand. In Indonesia, export activities are divided into oil and gas (migas) and non-oil and gas (non-migas) exports, the latter including agricultural, industrial, mining, and other products. As an agrarian country, Indonesia relies on the agricultural sector to drive economic development. One of its leading commodities with high export potential is coffee.

Coffee is a high-value agricultural commodity in the international market. According to the Coffee Market Report by the International Coffee Organization (February 2025), coffee exports from Asia and Oceania rank second globally, although they experienced a significant decline of 31.9%, from 5.06 million bags (January 2024) to 3.44 million bags (January 2025), mainly due to a 43.8% drop in Vietnam's exports. Meanwhile, Indonesia recorded a 47.4% increase, reaching 0.68 million bags in January 2025. In the first four months of the shipping period, Indonesia achieved a record-high export volume of 3.14 million bags, likely driven by rising global coffee prices. Based on data from Tradeint.com (2024), Brazil remains the largest coffee exporter in the world with an export volume of 50.44 million 60-kg bags, followed by Vietnam (30 million), Colombia (12.9 million), and Indonesia in fourth place with 10.9 million bags, surpassing Ethiopia, Uganda, India, Honduras, Peru, and Mexico.

Indonesia's position as a major exporter highlights its strategic role in the global coffee industry. This advantage is reinforced by the diversity of coffee varieties, ranging from Arabica to Robusta, as well as distinctive flavor profiles from regions such as Sumatra, Java, and Sulawesi. The increase in Indonesia's coffee exports in recent years has been influenced by product diversification, quality improvements through farmer training and post-harvest processing, and growing demand from countries such as the United States, Japan, and European regions. With this strong potential, Indonesia has significant opportunities to further enhance the competitiveness and added value of its coffee exports in the global market. Statistical data show that although national coffee exports have increased, export values from North Sumatra tend to fluctuate. Global demand for specialty coffee—such as organic and single-origin coffee continues to rise, creating substantial opportunities for coffee-producing regions like North Sumatra to strengthen their export position through appropriate strategies.

In 2024, Indonesia's total coffee export value reached approximately USD 1.64 billion, representing a 76.33% increase from the previous year. Lampung contributed the largest share at USD 840 million (51.28%), followed by North Sumatra at USD 305.8 million (18.7%), East Java at USD 260.1 million (15.9%), and Aceh at USD 155 million (9.5%). Despite ranking second, North Sumatra's export value is less than half that of Lampung. Its position is also increasingly challenged by East Java, which has a comparable export value despite not being a primary Arabica-producing region. This indicates that North Sumatra has substantial potential that has not yet been fully optimized. The region is well known for

producing high-quality Arabica coffee with distinctive flavors favored in international markets. However, its export competitiveness still faces challenges such as inconsistent quality, high production costs, global price fluctuations, and the impact of international trade policies. Major export destinations include the United States, Egypt, Germany, and Malaysia. Indonesian coffee is unique due to its diverse flavor profiles shaped by geographical conditions and local traditions.

This phenomenon highlights competitiveness challenges faced by North Sumatran coffee exporters, particularly in terms of quality, production cost efficiency, pricing, and international trade policies. Compared to Lampung, which benefits from a more integrated supply chain and logistics system, North Sumatra still encounters obstacles such as limited distribution infrastructure, product quality variability, and reliance on traditional markets. Therefore, it is necessary to formulate strategies to enhance coffee export competitiveness in North Sumatra, ensuring that its strong production potential is matched by increased export value. These strategies may include improving quality, enhancing cost efficiency, optimizing pricing, and advocating for supportive international trade policies.

Export data from North Sumatra between 2019 and 2023 show significant fluctuations in both volume and value. In 2019, export volume reached 77,719 tons with a value of USD 416.53 million. However, declines occurred in subsequent years: 74,579 tons (USD 336.96 million) in 2020 and 74,946 tons (USD 312.66 million) in 2021. In 2022, although volume decreased to 71,168 tons, export value increased significantly to USD 415.17 million, indicating higher global coffee prices or improved export quality. In 2023, export volume dropped sharply to 56,117 tons, accompanied by a decline in value to USD 362.07 million. These fluctuations suggest that while North Sumatra has strong potential, its export competitiveness remains challenged by factors related to quality, production costs, pricing, and international trade policies. Hence, a comprehensive strategy is needed to strengthen competitiveness sustainably.

The competitiveness of coffee bean exports is influenced by both internal and external factors. These include product quality, production cost efficiency, pricing strategies, production capacity, export promotion, access to financing, logistics infrastructure, and international trade policies. According to Michael Porter (1990), a country's competitiveness in international trade depends on firms' ability to create advantages through productivity, innovation, and responsiveness to global market dynamics. In the context of coffee, the International Coffee Organization (2023) emphasizes that coffee quality, production efficiency, and trade regulations are key to maintaining a competitive position in export markets.

This study focuses on four main factors: quality, production costs, pricing, and international trade policies. These aspects are selected because they directly influence the success of Indonesia's coffee exports, particularly from North Sumatra. Coffee quality is essential for product differentiation and meeting increasingly selective consumer preferences regarding taste, sustainability, and origin. Efficient production costs allow exporters to maintain profitability while competing with major producers such as Brazil and Vietnam. Price, as a highly sensitive market variable, determines product attractiveness and serves as a key competitive indicator. Meanwhile, international trade policies including tariffs, trade agreements, and export regulations significantly affect market access and distribution efficiency.

At the national level, improving coffee export competitiveness contributes significantly to foreign exchange earnings. As a key export commodity, coffee plays an important role in stabilizing Indonesia's trade balance, increasing national income, strengthening its position in the global coffee market, supporting agricultural sustainability, and driving overall economic development.

However, gaps remain in previous studies. First, most research focuses on national-level competitiveness without specifically examining exporters in North Sumatra. Second, prior studies are largely quantitative and limited to measurements such as RCA or export value, without exploring adaptive strategies used by exporters. Third, few studies integrate the four key factors quality, production cost, price, and trade policy into a comprehensive strategic framework. Fourth, qualitative approaches that capture exporters' perspectives in responding to global price dynamics and trade policies are still limited.

This study addresses these gaps by comprehensively exploring strategies that can be implemented by coffee bean exporters in North Sumatra using both qualitative and quantitative approaches. Grounded in industry realities and contemporary challenges, this research aims to provide in-depth insights into effective ways to overcome challenges and capitalize on opportunities in the global coffee market.

REVIEW OF LITERATURE

Competitiveness Theory

Export competitiveness refers to the ability of a country or region to produce goods or services that can compete in international markets in terms of quality, price, and speed of delivery (Porter, 1990). In the context of coffee beans, export competitiveness can be enhanced through various strategies, such as improving production quality, adopting technological innovations in processing, and increasing efficiency within the supply chain. Competitiveness is determined by factors of comparative and competitive advantage. Comparative advantage is naturally endowed, while competitive advantage is achieved through efficiency and innovation in production (Petrovic, Antevski, & Vesic, 2008).

Comparative Advantage Theory

Comparative advantage is one of the fundamental concepts in international trade, first introduced by David Ricardo (1817). According to Ricardo, a country should specialize in producing and exporting goods that it can produce at a relatively lower cost compared to other countries. In this context, North Sumatra has a comparative advantage in coffee production, particularly the Arabica variety, due to its highly favorable geographic and climatic conditions for cultivating high-quality coffee. Moreover, comparative advantage can be further strengthened through efforts to improve productivity, both by adopting technological innovations and enhancing efficiency in the production process. Countries that are able to optimally utilize their comparative advantage will have a stronger competitive position in the global market.

Porter's Diamond Model

The Diamond Model proposed by Michael Porter (1990) highlights four main factors that determine the competitiveness of a country or region in international markets: factor conditions, domestic demand conditions, the presence of related and supporting industries, and firm strategy, structure, and rivalry. In the context of coffee bean exports from North Sumatra, this framework can be used to assess how local production factors, global demand

for high-quality coffee, and the role of supporting industries influence the competitiveness of North Sumatran coffee in the global arena. Porter also emphasizes the important role of government in supporting export competitiveness through policies that promote innovation, infrastructure development, and improved access to international markets. In this regard, Indonesian government policies related to coffee exports such as incentives for farmers and exporters can be a determining factor in enhancing the competitiveness of North Sumatran coffee.

Export Theory

Export refers to the activity of delivering goods or services to foreign markets, which plays an important role in supporting national economic growth. The level of export demand is influenced by various factors such as product prices, consumer preferences, income levels, exchange rates, shipping costs, and government policies. Products that exceed domestic consumption capacity are generally directed to global markets (Mankiw, 2009).

Quality

Quality is one of the key factors in both business and non-business fields, as the performance of an organization can be assessed through the quality of the products and services it produces. Based on the Indonesian National Standard (SNI 19-8402-1991) as cited in Ariani (2008), quality is defined as the overall characteristics and features of a product or service that determine its ability to satisfy needs, whether explicitly stated or implicitly understood. The term “needs” here includes specifications stated in contracts as well as predetermined criteria. Sunyoto (2012) states that quality is a measure used to evaluate the extent to which a product or service provides utility in accordance with expectations. In other words, a product or service is considered to have good quality if it is able to function as desired by consumers.

Cost

Cost is defined as cash or cash equivalents used to acquire goods or services that are expected to provide benefits for an organization either in the present or in the future (Hansen and Mowen, 2007). Carter (2009) states that cost represents an exchange value, expenditure, or sacrifice made to obtain certain benefits. According to Karen (2022:2–3), cost is a measure of resources that can be sacrificed, either in the form of assets or expenses. If the cost provides future benefits, it is recorded as an asset on the balance sheet; however, if the benefit is not sustained, the cost is reported in the income statement as an expense.

RESEARCH METHOD

This study employs a mixed-method approach, which combines qualitative and quantitative methods systematically within a single research design, with the aim of obtaining a deeper and more comprehensive understanding of the phenomenon under study (Creswell & Plano Clark, 2018). This approach is chosen because the research not only seeks to explore the perceptions, experiences, and strategies of coffee exporters in North Sumatra in depth (qualitative aspect), but also to measure and analyze numerical data through quantitative instruments (quantitative aspect), particularly in assessing strategic priorities using the Analytical Hierarchy Process (AHP) method.

Research Subjects

In qualitative research, research subjects are referred to as informants, namely individuals who possess experience, knowledge, and important roles in coffee export

activities. Informants provide responses, insights, and relevant information in accordance with the research focus (Rachmasary, 2021). According to Basrowi & Suwandi (2008), the criteria for research subjects in qualitative studies are as follows:

- Having sufficient and intensive experience in coffee export activities.
- Actively involved in strategic decision-making within the company.
- Willing to allocate time and provide in-depth information to the researcher.

Qualitative research is not intended to produce generalizable findings. Therefore, concepts such as population and sample, as used in quantitative research, are not applied. Informants are selected using purposive sampling, based on considerations of expertise, experience, and relevance to the research focus. In this study, the selected informants consist of owners, managers, or individuals responsible for managing and formulating export strategies in coffee exporting companies in North Sumatra, namely PT. Ujang Jaya International, PT. Tibeka Jaya Abadi, PT. Arvis Sanada Sanni Indonesia, PT. Mulya Sari Mandiri, and PT. Indokom Citra Persada. In addition to serving as qualitative data sources through in-depth interviews, the same informants are also involved as respondents in completing quantitative questionnaires using the Analytical Hierarchy Process (AHP) method. Through the AHP questionnaire, informants are asked to provide pairwise comparisons of factors and alternative strategies for improving coffee export competitiveness. By using the same subjects in both approaches, data consistency is expected between qualitative exploration results and quantitative measurements within the mixed-method framework.

Data Collection Techniques

This study employs a qualitative approach with a phenomenological design and a descriptive case study framework, aiming to provide a comprehensive understanding of the coffee bean export phenomenon in North Sumatra (Asyhar, 2019). The data analysis process is conducted systematically, involving stages of data collection, presentation, and conclusion drawing in a continuous manner. Interaction with subjects is carried out through in-depth interviews and direct observation in companies engaged in coffee exports. Documentation such as notes, audio recordings, videos, and photographs is used to complement the research data. Sugiyono (2020:105) identifies four main data collection techniques: observation, interviews, documentation, and triangulation (a combination of observation, interviews, and documentation).

Data Sources

a) Primary Data

Primary data are obtained or collected directly by the researcher or a particular institution from the original source, and the results are used directly by the researcher or institution to address the research problem (Agung, 2012:60). In this study, primary data were collected through in-depth interviews with decision-makers within the companies, as well as through direct observation.

b) Secondary Data

Secondary data refer to data obtained or collected by other individuals or institutions (Agung, 2012:60). Thus, secondary data sources are acquired indirectly or through intermediaries. In this study, the researcher utilized literature sources such as books,

scientific journals, articles, internet sources, previous studies, and internally sourced data.

RESULTS AND DISCUSSION

SOAR Analysis Results

a) Strengths

Coffee exporters in North Sumatra possess a primary strength in product quality, reinforced through cupping tests and international certifications such as Organic, Fairtrade, Rainforest Alliance (RFA), and Q-Grader. This quality enhancement is supported by experienced and competent human resources in maintaining production standards. In addition, the adoption of modern post-harvest technologies, such as sortex machines and automated quality testing tools, contributes to improved production efficiency. In supply chain management, companies eliminate intermediaries by purchasing directly from farmers, ensuring better raw material quality while reducing production costs. Pricing strategies that follow global market fluctuations such as the New York Coffee Market (C Market) and USD exchange rates provide flexibility, allowing exporters to remain globally competitive. Strong connections with international buyers, along with active participation in international exhibitions and government-led promotions, further strengthen exporters' positions in the global market.

b) Opportunities

Significant opportunities arise from the increasing demand for coffee in emerging markets such as China, India, and the Middle East, driven by the growth of the middle class and lifestyle changes. Beyond exporting coffee beans, there is strong potential for developing derivative products such as premium ground coffee, ready-to-drink coffee, and exotic coffee varieties that cater to niche markets. The adoption of modern production technologies enables simultaneous improvements in efficiency and production capacity. Government support through international exhibitions, export promotion, and the opening of new market access serves as a key catalyst for strengthening export competitiveness.

c) Aspirations

Exporters expect continuous government support, particularly in farmer development, land revitalization, provision of superior seedlings, and enhancement of national productivity. Other aspirations include stabilizing production costs through the regulation of fuel prices, electricity tariffs, and simplification of regional taxes. Strategic collaboration between the government and private sector in developing export incentives, simplifying regulations, and opening new markets is also highly anticipated. Flexible, competitive, and demand-adaptive pricing strategies are expected to ensure business sustainability in response to global market dynamics.

d) Expected Results

Coffee exporters in North Sumatra aim to achieve international quality standards through certifications such as Q-Grader, SCAA, and specialty coffee certifications to expand access to premium global markets. Efforts to reduce production costs by 10–15% are expected to be achieved through technological optimization and direct supply chain management from farmers. Increased production capacity and expanded market access

are projected to drive sustainable export growth. Altogether, these measures are expected to maintain stable profit margins despite fluctuations in international market prices.

Consistency Analysis

All AHP questionnaire results completed by each company show that the Consistency Index (CI) and Consistency Ratio (CR) values are below 0.10. With the highest CR value at 0.08 and the lowest at 0.06, the assessment results can be considered consistent and meet the feasibility requirements for decision-making based on the Analytical Hierarchy Process (AHP).

Strategy Priority Results

Based on the AHP analysis results, it can be concluded that the strategy “Optimizing coffee quality (certification, cupping tests, competent human resources)” ranks as the top priority across all companies, with an average weight of 0.251. This indicates that improving product quality is the primary foundation for strengthening the export competitiveness of coffee beans from North Sumatra. The next strategies with significant weights are “Utilizing modern sorting technology” (0.160) and “Expanding international buyer networks with government support” (0.137). The use of modern sorting technology is considered crucial to ensure the uniform physical quality of coffee beans, while strengthening international buyer networks is viewed as strategic in expanding access to export markets.

Other strategies such as market diversification, production technology innovation, and international certification occupy a moderate priority level. Meanwhile, strategies related to production cost efficiency, profit margin stability, leveraging opportunities in emerging markets, and optimizing government policies are ranked lower in priority. This phenomenon reflects that exporters in North Sumatra tend to emphasize strengthening internal company capacities, particularly in terms of quality and technology, as the key drivers of competitiveness, rather than relying on external factors such as policies or emerging market conditions. Overall, these AHP results reinforce the importance of strategies focused on product quality enhancement, mastery of modern technology, and continuous development of international buyer networks as the main approaches to improving the export competitiveness of coffee from North Sumatra.

CONCLUSION

Based on the results of research conducted on five coffee bean exporting companies in North Sumatra PT. Ujang Jaya International, PT. Tibeka Jaya Abadi, PT. Arvis Sanada Sanni Indonesia, PT. Mulya Sari Mandiri, and PT. Indokom Citra Persada the following key findings can be concluded:

1. The results of the SOAR analysis indicate that the exporters' main strengths lie in strengthening product quality through the implementation of cupping tests, international quality certifications (Organic, Fairtrade, Rainforest Alliance, Q-Grader), the development of competent human resources, and the application of modern technology in post-harvest processes. In addition, supply chain control through direct purchasing from farmers and price adjustments aligned with global markets are key factors in maintaining efficiency and competitiveness.
2. In terms of opportunities, there is potential for export growth to emerging markets such as China, India, and the Middle East, as well as the development of coffee derivative

- products. Government support in export promotion, market access expansion, and production technology development serves as a catalyst for improving export competitiveness.
3. The exporters' aspirations include stronger government support, particularly in farmer development, land revitalization, provision of superior seeds, stabilization of production costs, and simplification of export regulations.
 4. The expected outcomes of these strategic efforts include achieving internationally standardized product quality, reducing production costs by 10–15%, increasing export volume, and ensuring sustainable profit margin stability.
 5. The priority strategy results based on the Analytical Hierarchy Process (AHP) method show that the main priority is optimizing coffee quality (certification, cupping tests, competent human resources), followed by the utilization of modern sorting technology and expansion of international buyer networks. Market diversification strategies, production technology innovation, and international certification are ranked as medium priorities, while strategies related to cost efficiency, margin stability, emerging markets, and government policy optimization are considered lower priorities.
 6. Enhancing the export competitiveness of North Sumatran coffee beans requires strengthening internal company capabilities, particularly in product quality, technological mastery, and the continuous development of international buyer networks.

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