

Analysis Competitiveness Indonesian Nutmeg Commodities in Global Market

Analisis Daya Saing Komoditas Pala Indonesia Di Pasar Global

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ABSTRACT

Nutmeg has high economic value and is an important trade commodity for Indonesia. However, the decline in nutmeg exports shows that there are problems that must be resolved in order to remain competitive in the global market. To assess the comparative competitiveness of Indonesian nuts in export destination markets, namely China, Vietnam, India, the Netherlands, and the United States, this study uses the Revealed Comparative Advantage (RCA) method and secondary data, namely time series data for 10 years from 2013 to 2022, with a statistical descriptive approach. Based on this data, it can be concluded that Indonesian nutmeg is competitively in the global market, as evidenced by the RCA value of more than one in five export destination countries. India has the lowest RCA value, while the Netherlands is the main market with the highest value. For future development, the Indonesian government should prioritize the development of markets such as China, Vietnam, and India, and stakeholders should work together more closely to increase the competitiveness of Indonesian nutmeg commodities in the international market.
Keywords: Competitiveness, Nutmeg, RCA, Indonesia, International

ABSTRAK

Pala memiliki nilai ekonomi yang tinggi dan merupakan komoditas perdagangan penting bagi Indonesia. Namun, penurunan ekspor pala menunjukkan bahwa ada masalah yang harus diselesaikan agar tetap kompetitif di pasar global. Untuk menilai daya saing komparatif rempah-rempah Indonesia di pasar tujuan ekspor, yaitu China, Vietnam, India, Belanda, dan Amerika Serikat, studi ini menggunakan metode Revealed Comparative Advantage (RCA) dan data sekunder, yaitu data deret waktu selama 10 tahun dari 2013 hingga 2022, dengan pendekatan deskriptif statistik. Berdasarkan data ini, dapat disimpulkan bahwa pala Indonesia bersaing secara kompetitif di pasar global, yang dibuktikan dengan nilai RCA lebih dari satu di lima negara tujuan ekspor. India memiliki nilai RCA terendah, sementara Belanda adalah pasar utama dengan nilai tertinggi. Untuk pengembangan ke depan, pemerintah Indonesia harus memprioritaskan pengembangan pasar seperti China, Vietnam, dan India, dan para pemangku kepentingan harus bekerja sama

lebih erat untuk meningkatkan daya saing komoditas pala Indonesia di pasar internasional.

Kata kunci: Daya saing, Pala, RCA, Indonesia, Internasional

INTRODUCTION

In the era of globalization and free trade, exports are the main element that can drive a country's economic growth. Export potential refers to a country's capacity to market goods and services to the international market. Sustainably, export activities will stimulate the growth of domestic industry, which will ultimately increase economic growth through increased foreign exchange generated from exports (Tyas, 2022; Larasati & Sulasmiyati, 2018) .

Nutmeg (*Myristica fragrans*) is a highly valued spice due to its unique flavor, aromatic properties, and versatile applications in culinary, medicinal, and cosmetic industries (Outlook for Nutmeg Plantation Commodities, 2022). Historically, nutmeg has been a crucial component of global spice trade, and Indonesia holds a significant position as one of the largest producers and exporters of nutmeg, particularly from regions such as Maluku and North Sulawesi. The economic significance of nutmeg to Indonesia can be seen through its contribution to export revenues, employment generation in rural areas, and its role in sustaining agroforestry systems. Due to its strong demand in food processing, especially for baked goods, drinks, and processed foods, nutmeg also plays a significant role in the global spice market. Its attractiveness has also grown as more people become aware of its therapeutic advantages, which include its usage as an antibacterial, antioxidant, and anti-inflammatory agent. The demand for nutmeg is increased globally by the use of its essential oil in traditional treatments and perfumes (FAO, 2020; Gibbon, 2018).

With well-established providers fighting for market dominance, traditional markets are frequently developed and fiercely competitive. As a result, exporters like Indonesia face more price rivalry and fewer prospects for expansion. Conversely, non-traditional markets—such as those in East Asia, the Middle East, and Africa—are seeing a rise in population as well as a shift in eating habits. Due

to rising disposable incomes and globalization of cuisine, these areas show an increasing interest in spices (WTO, 2020 ; Anggrasari et al., 2021)

The area of Indonesian nutmeg farms grew by 6.84% year between 2013 and 2022. The acreage of nutmeg plantations increased from 140 thousand hectares in 2013 to 272 thousand hectares in 2014, 2022, the largest amount ever recorded. Only 0.34% of Indonesia's entire plantation acreage is temporarily administered by Plantation Big Private (PBS); the majority, 99.76%, is managed by individual plantations. Despite an increase in wide-area plantations, nutmeg productivity fell by 0.82% annually. In 2013, Indonesia produced nutmeg production of 469 kg/ha; however, the decline will reach 432 kg/ha in 2022. Efficiency 2017 saw the lowest output, at 441 kg/ha, while 2018 saw the most nutmeg production, at 543 kg/ha. (Nutmeg, Plantation Commodity Outlook 2022).

The development of nutmeg trade from 2013 to 2021, showing export and import volumes, values, and trade balance. Exports are a significant economic activity in a nation (Khalish, 2023). The COVID-19 epidemic has also affected the commerce industry in a number of nations, including Indonesia. Export trends export volumes increased steadily from 13,552 tons in 2013 to 26,461 tons in 2021. Export values also rose significantly, from \$122.37 million in 2013 to \$198.06 million in 2021. Meanwhile import trends import volumes fluctuated, peaking at 540 tons in 2018, but remained much lower than export volumes. Import values showed slight variation, ranging from \$626,000 in 2014 to \$2.24 million in 2018. Then trade balance shows the balance sheet consistently showed a surplus, reflecting strong export performance. It increased from \$120.64 million in 2013 to \$197.03 million in 2021, highlighting robust growth in net export earnings over the years (Nutmeg Plantation Commodity Outlook, 2022).

Choose the destination that is most important first. The United States came in at 5.56%, the Netherlands at 7.03%, Vietnam at 10.64%, India at 9.9%, and China at 37.65% (Nutmeg Plantation Commodity Outlook, 2022). Although China imports, Indonesia imports more than any other nation. Analyzing competitiveness is crucial to comprehending a scenario. nuts as a commodity product in international trade. Quality, which is distinct from human resources, natural

resources, culture, climate, technology, and comparative advantage between nations, is a factor that drives international trade. The ability of a nation to create goods and services at comparatively lower costs than other nations is known as comparative advantage. Comparative advantage is the capability of a country in do production goods and also service with cost relatively low compared to other countries. If a nation has a comparative advantage, it can boost its competitiveness in international trade. Comparative advantage (RCA) is one of the disclosed methods that can be used to assess a nation's competitiveness in a certain commodity (Wijayanti and Ardhian, 2023; Kusnaedi and Ernah, 2024).

There has not been many empirical research on nutmeg's competitiveness in the global market. Using the RCA method, research on the competitiveness of nutmeg in the global market by Suhartini et al., 2021; Nurhayati et al., 2019; Simanjourang et al., 2022; and Samhina et al., 2023 revealed positive results and greater than one, indicating that Indonesia is a highly competitive nutmeg producer. Meanwhile, a study on the potential for nutmeg commodity development in Indonesia was carried out by Fauziyah et al. in 2016. Based on this, the study's objectives are to explain the overall situation of nutmeg commodities and assess Indonesia's competitiveness with other nations.

METHOD

The study is quantitative in nature and makes use of secondary data, namely time series covers a period from 2013 to 2022. Secondary data was gathered from Indonesian nutmeg exports, production data, and data from a number of rival nations, including the US, China, Vietnam, the Netherlands, and India. These countries were selected due to their growing demand for spices, increasing economic development, and the opportunities they present for market diversification.

The data for this research is obtained from reliable and internationally recognized sources, including UN Comtrade Database, World Bank and FAO Reports, Badan Pusat Statistik (BPS) and Ministry of Trade of Indonesia and also information was gathered from a variety of sources, including books, journals, papers, literature, and results studies. This study examines the competitive position

of Indonesian nutmeg based on its export value using the Revealed Comparative Advantage (RCA) method analysis, which measures a nation's dominance in the global market. Additionally, this processes data using Microsoft Excel. In contrast, a descriptive and statistical analysis of the performance will be conducted.

$$RCA = \frac{X_{ij}/X_{in}}{X_{rj}/X_{rn}}$$

- X_{ij} = Export value from commodity exporting country i to country j
- X_{rj} = Total mark export all over commodity country exporter to country j
- X_{in} = Total export value country j
- X_{rn} = Total mark export world

In the interpretation of RCA values, there are two possibilities:

If the RCA value is more than 1 ($RCA > 1$), this means that the commodity has a comparative advantage above the world average so that have strong competitiveness. The higher the RCA value, the stronger Also Power competition commodity the. By Because That, a country expected to always carry out specialized activities on products or the commodity.

If the RCA value is less than 1 ($RCA < 1$), it indicates that the commodity has a comparative advantage below the world average, or with say others, have weak competitiveness. This is due to because a country does not specialize in products.

RESULTS AND DISCUSSION

One of the spices that Indonesia is proud of is nutmeg (*Myristica fragrans*). Several Indonesian provinces, including North Sulawesi, North Maluku, Aceh, Maluku, West Sumatra, and West Papua, are major producers of nutmeg. Over the past few decades, Indonesian nutmeg products have remained among the top sellers on the global market. However, a number of variables, like as price, quality, and international trade regulations, affect how competitive Indonesian nutmeg is on the global market. Indonesian nutmeg is renowned for its great quality, particularly the Maluku variety, which has a unique flavor and scent. Because of this characteristic, Indonesian nutmeg is highly prized on the international market. However, a number of variables, like as price, quality, and international trade regulations, affect how

competitive Indonesian nutmeg is on the global market. Indonesian nutmeg is renowned for its great quality, particularly the Maluku variety, which has a unique flavor and scent. Because of this characteristic, Indonesian nutmeg is highly prized on the international market. (Yuhendra et al., 2023).

Costs, production, and changes in global market pricing all have a significant impact on nutmeg's price on the international market. Indonesian businesses need to lower logistics costs and boost production efficiency in order to stay competitive. Improved agricultural technologies, supply chain supply optimization, and expanded infrastructure in the nutmeg producer's location can all help achieve this. Additionally, by providing subsidies, training, and access to contemporary technologies, the government may significantly assist farmers and producers.

Competitiveness the international trading policy has an impact on Indonesian nutmeg as well. Indonesia must negotiate a number of free trade agreements with other nations in order to get greater access to new markets. However, exporters of Indonesian nuts may face difficulties due to non-tariff barriers such as stringent quality standards and certification requirements. As a result, cooperation between the government and interested parties is crucial to meeting international standards. Additionally, this strengthens Indonesia's trade agreement discussions (Muh. Asharudin, 2024). Notwithstanding the fact that Indonesian nuts have historically sold in Europe and the US, expanding into East Asia, the Middle East, and Africa can boost competitiveness. These markets show increasing demand to spices, including nutmeg, as material in industry food, beverages, and pharmaceuticals.

Additionally, diversification lessens reliance on a small number of important markets, which lowers the risks of shifting policies or fluctuating demand in these markets. In the global market, Indonesia must improve its commodities branding. Indonesian nutmeg may be distinguished from rivals like Grenada and India with the aid of effective branding. Global knowledge of the quality and excellence of Indonesian nutmeg can be raised through efficient promotion using exhibition trade, mission trade, and campaign digital marketing. For Indonesian

nutmeg to have a positive reputation and increase customer trust abroad, cooperation between the government, trade associations, and manufacturers is also crucial.

Nutmeg performance export with an index RCA, Indonesia, which has HS code 0908, is impacted by power rivalry to five other nations (Table 1). With an average RCA value above one, it can be said that Indonesian nut exports to China, Vietnam, India, the Netherlands, and the US are competitive during the 2013–2022 timeframe. According to study (Asrol & Heriyanto, 2017), Indonesian nutmeg's RCA value from 2007 to 2016 varied between 17,103 and 21,096 (more than one), suggesting that it holds a strong and competitive position in the international trade market (Assagaf et al, 2021; Purba et al, 2021).

Table 1. Value RCA Nutmeg Indonesia in Country Objective Export

Year	Market Country Objective Export				
	China	Vietnam	India	Netherland	Amerika Serikat
2013	0.49	46.76	3.42	76.74	74.01
2014	0.00	55.15	4.51	78.25	65.23
2015	0.79	48.34	4.84	79.10	55.93
2016	0.95	34.66	4.35	83.86	54.68
2017	3.11	47.31	5.69	56.46	43.14
2018	5.35	48.83	9.43	53.09	30.10
2019	44.41	51.22	7.04	61.43	29.46
2020	46.22	54.04	8.10	50.51	21.35
2021	37.55	35.49	12.39	56.33	22.15
2022	27.83	41.94	7.54	57.80	24.48

Source: United Nations Comtrade Database (2024)

India had the lowest average results, with an average of 6.73, while the Netherlands had the highest value RCA, with an average of 65.36. The RCA index of Indonesian nutmeg commodities in the US, China, Vietnam, India, and the Netherlands fluctuated. With the exception of 2020, when Vietnam succeeded in taking the top spot, the Netherlands has consistently remained in order first from 2013 to 2022. Nonetheless, the drop had a significant impact on Indonesia's power struggles in the US, Vietnam, and the Netherlands, by 2.79%, 10.47%, and 1.08%, respectively. Meanwhile, the value of RCA in the Chinese market and India actually showed a positive trend, with RCA in China increasing quite significantly by 49.7%

and in India it increased by 8.22%.

China consumes nutmeg through a variety of products, including derivatives, mace, and nutmeg. Traditional Chinese dishes like nutmeg porridge, nutmeg pudding, and nutmeg cake can be prepared with nutmeg and mace as cooking spices, chili sauce, and seasonings. The use of nutmeg as the primary ingredient in traditional Chinese medicine may potentially be connected to nutmeg consumption in China. Inflammation, stomach-aches, nervous system diseases, rheumatism, menstruation disorders, and sleep disorders can all be treated with nutmeg as a spice. The potential for Indonesian nutmeg exports to China remains strong due to the country's high nutmeg consumption.

CONCLUSION

India had the lowest average RCA value (65.36), while the Netherlands had the highest, according to the RCA estimates. 6.73. Conversely, the RCA values in the Indian and Chinese markets exhibit a favorable trend despite their tendency to vary. Since China, Vietnam, and India present growth potential for nutmeg exports, the government of Indonesia must identify these nations as prospective international markets in order to promote and improve nutmeg exports from Indonesia. The government can also raise the nutmeg's quality. An integrated effort involving all stakeholders, including farmers, producers, exporters, and the government, is required to preserve and improve Indonesian nutmeg commodities' competitiveness in the global market.

REFERENCES

- Anggrasari, Herdiana, Putri Perdana Jangkung Handoyo Mulyo. (2021) . Comparative and Competitive Advantages of Indonesian Spices in the International Market *AGRICA JOURNAL* Vol.14 No.1/April
- Assagaf, Muhammad, Ahmad Musyavak, Abdul Wahab, Hermawati Cahyaningrum and N Tenriawaru.(2021). The Competitiveness Analysis of Nutmeg Farming As Spices In Ternate, North Moluccas. IOP Conference Series: Earth and Environmental Science
- Asrol, A., & Heriyanto, H. (2017). Export Competitiveness Of Indonesian Nutmeg In The International Market. *Agricultural Dynamics* , 33 (2), 179–188. [https://doi.org/10.25299/dp.2017.vol33\(2\).3831](https://doi.org/10.25299/dp.2017.vol33(2).3831)

- Larasati, IS, & Sulasmiyati, S. (2018). The Effect Of Inflation, Exports, And Labor On Gross Domestic Product (GDP) (Study on Indonesia, Malaysia, Singapore, and Thailand). *Journal of Business Administration* , 63 (1), Article 1.
- Outlook Commodity Plantation Nutmeg. (2022). Center for Agricultural Data and Information Systems, Secretariat General - Ministry of Agriculture. Accessed on August 29, 2024 https://satudata.pertanian.go.id/assets/docs/publikasi/Outlook_Pala_2022.pdf
- FAO. (2020). *Global Trade in Spices: Nutmeg's Economic Significance*. Rome: Food and Agriculture Organization.
- Fauziyah, E., Kuswantoro, DP, & Sanudin, S. (2016). Development prospects nutmeg (*Myristica fragrans* Houtt) in community forests. *Journal of Forestry Science*, 9(1), 32-39.
- Gibbon, P. (2018). Spices Market Analysis: Opportunities and Threats. *Journal of Agricultural Trade*, 12(4), 45-60.
- Khalish, Fahmil. (2023). Comparative and competitive advantages of Indonesian spice commodities in the United Arab Emirates market. *Indonesian Multidisciplinary Journal* . Volume 2 Number 8 August.
- Kusnaedi, PM, & Ernah, E. (2024). Analysis of Black Tea Commodity Competitiveness Indonesia in Market Global. *Pulpit Agribusiness: Journal Thinking Scientific Society for Agribusiness Insight*, 10(1), 1580-1588.
- Muh. Asharuddin, Amzul Rifin and Rita Nurmalina.(2024). Factors That Influence Flow Trading Product Between countries Ecosoc 2023. *Jurnal Dinamika Sosial Ekonomi* Vol. 25 No. 1, June
- Nurhayati, Ely, Sri Hartoyo & Sri Mulatsih. (2019). Analysis of Development of Indonesian Nutmeg, Mace, and Cardamom Exports. *Indonesian Journal of Economics and Development* Vol. 19 No. 2 July
- Purba, Helena Juliani, Eddy Supriadi Yusufi and Juni Hestina. (2021). Performane and Competitiveness of Indonesian Nutmeg in Export Market. *E3S Web of Conferences* 232
- Tyas, HP (2022). Analysis Of Indonesian Exports 1990-2019. *Transekonomika: Accounting, Business And Finance* , 2 (2), Article 2. <https://doi.org/10.55047/transekonomika.v2i2.114>
- Samhina, Lina, Rita Nurmalina and Netti Tinaprilla. (2023). Competitiveness of Indonesian Nutmeg Seeds in the International Market *Indonesian Journal of Agricultural Sciences (JIPI)*, April 2023 Vol. 28 (2) 209-221
- Suhartini, Nyimas Aliya, Riantin Hikmah Widi and Dedi Darusman.(2021). Competitiveness of Indonesian Nutmeg, Fenugreek, and Cardamom in the International Market. *Agriстан Journal* Vol. 3 No. 2 – November
- Simanjourang, Tienni Mariana, Irham, Lestari Rahayu Waluyati, Jangkung Handoyo

- Mulyo.(2022). The Role of Government in Increasing the Comparative and Competitive Advantages of Smallholder Farming Businesses in Maluku Province. *Agricultural Policy Analysis*, Vol. 20No. 1, June
- United Nations Comtrade Database. (2024.)Trade Data. Accessed 31 August 2024
<https://comtradeplus.un.org/TradeFlow>
- Wijayanti, Irene Kartika Eka and Ardhian Rachmanto. (2023). Competitiveness and Factors Affecting Indonesian Clove Exports. *Jurnal Dinamika Sosial Ekonomi*. Vol. 24. No.2, December
- WTO. (2020). *Emerging Markets for Agricultural Commodities*. Geneva: World Trade Organization.
- Yuhendra, A., Pebrian, S., & Adevia, J. (2023). Analysis of Nutmeg Export Competitiveness Indonesia In Market International: Evaluation SSR, IDR, RCA, And ISP.*Journal of Management, Accounting, Economics*, 2(3), 18-25.