

THE EFFECT OF INDONESIAN SPICE EXPORT TRADE LIBERALIZATION ON COMPETITION AND COMPETITIVENESS IN INTERNATIONAL MARKETS

Herdiana Anggrasari^{1*}, Dhika Cahyasita², Dinda Dewi Aisyah³

^{1,2,3} *Agribusiness Study Program, Faculty of Agriculture,
Universitas Pembangunan Nasional Veteran Yogyakarta
Jl. SWK Jl. Ring Road Utara No.104, Ngropoh, Condongcatur, Kec. Depok, Kabupaten
Sleman, Daerah Istimewa Yogyakarta 55283*

**Email: herdiana.anggrasari@upnyk.ac.id*

ABSTRACT

Since long time ago, Indonesia has had a comparative advantage because of its geographical advantage in spice commodities. In the era of liberalization, in order to be competitive in the same industry, Indonesian spice commodities must increase their export share by having a distinct advantage compared to competitors from other countries. Therefore, the purpose of this study is to determine the effect of Indonesia's trade liberalization based on competitiveness with competing countries and the level of competition for Indonesian spice commodities in the international market. The analytical methods used are Revealed Comparative Advantage (RCA), Export Similarity Index (ESI), and Export Overlapping Index (IEO) which are discussed descriptively using secondary data from UNComtrade for 1989-2021. Trade liberalization is indicated by Indonesia's entry into the WTO, AFTA and ACFTA. The results of the analysis show that even though Indonesia has very strong competitiveness, the existence of trade liberalization is not enough to increase Indonesia's competitiveness because the international market is increasingly open. The level of competition for Indonesian spice exports with its competitor countries tends to decrease. The existence of trade liberalization makes each country increase its trade specialization in order to expand its market share. Indonesia needs to improve quality as well as standardize and increase differentiation for spice products in order to maintain and expand its market share so that it can be competitive in the international market.

Keywords: *competition, competitiveness, FTA, spices*

ABSTRAK

Indonesia sejak lama memiliki keunggulan komparatif karena keunggulan geografisnya dalam komoditas rempah-rempah. Di era liberalisasi, agar dapat bersaing dalam industri yang sama, komoditas rempah Indonesia harus meningkatkan pangsa ekspornya dengan memiliki keunggulan tersendiri dibandingkan pesaing dari negara lain. Oleh karena itu, tujuan penelitian ini adalah untuk mengetahui pengaruh liberalisasi perdagangan Indonesia berdasarkan daya saing dengan negara pesaing dan tingkat persaingan komoditas rempah Indonesia di pasar internasional. Metode analisis yang digunakan adalah Revealed Comparative Advantage (RCA), Export Similarity Index (ESI), dan Export Overlapping Index (IEO) yang dibahas secara deskriptif menggunakan data

sekunder dari UNComtrade tahun 1989-2021. Liberalisasi perdagangan ditandai dengan masuknya Indonesia ke dalam WTO, AFTA dan ACFTA. Hasil analisis menunjukkan bahwa meskipun Indonesia memiliki daya saing yang sangat kuat, namun adanya liberalisasi perdagangan tidak cukup untuk meningkatkan daya saing Indonesia karena pasar internasional semakin terbuka. Tingkat persaingan ekspor rempah Indonesia dengan negara pesaingnya cenderung menurun. Adanya liberalisasi perdagangan membuat setiap negara meningkatkan spesialisasi perdagangannya guna memperluas pangsa pasarnya. Indonesia perlu meningkatkan kualitas serta melakukan standarisasi dan peningkatan diferensiasi produk rempah-rempah guna mempertahankan dan memperluas pangsa pasarnya sehingga dapat bersaing di pasar internasional.

Kata kunci: *daya saing, FTA, kompetisi, rempah-rempah*

INTRODUCTION

Indonesia is one of the spices producers in the world that is in demand by other countries, including the United States, Vietnam, India, the Netherlands, Singapore, Germany, Japan, Italy, Malaysia, France, China, Australia (Sae, 2017). Since long time ago, Indonesia has had a comparative advantage because of its geographical advantage in spice commodities. This makes Indonesia a major producer and exporter of spices (Anggrasari & Mulyo, 2019). According to UNComtrade data, in 1989 Indonesia dominated the world's spice market, particularly vanilla and cinnamon, with market shares of 59.57% and 64.90%. As for all spice commodities, Indonesia's market share reached 23.68%. However, since trade liberalization, Indonesia's spice market share has tended to decrease. In 2021, Indonesia's market share will only be 8.44% and will experience a decline rate of 0.04% annually. Meanwhile, the trend for demand for world spice commodities has

a tendency to increase every year with a demand rate of 10.38% per year. This shows that the spice commodity has a prospective market and plays an important role in the international market (Anggrasari et al., 2021).

Free trade is the goal of most countries in the world, so that every country has the same opportunities and expectations to increase trade volume and value, which in turn can increase economic growth, trade surplus, and human welfare. With a free trade system, the use of resources is more efficient, so that the welfare achieved is more optimal. Currently free trade is growing rapidly because every country is actively carrying out economic integration by entering into trade agreements.

The existence of trade integration based on regional proximity or economic scale requires that each country has specialization and also the ability to compete in existing markets (Anggrasari & Mulyo, 2022). A country's market power can be used to measure a

country's ability to compete for certain goods. Indonesia as one of the world's largest spice producers and exporting and importing countries must prepare itself to face competition in international trade. The process of trade liberalization is closely related to opening access to world markets, as well as opening access to domestic markets to other countries. On the other hand, every country can increase its trade, but it must also protect the domestic economy against foreign products that can threaten the competitiveness of domestic products.

Indonesia is a member of various trade agreements both multilaterally and regionally. Indonesia ratified the agreement with the WTO through Law no. 7 of 1994 which contains the agreement to form a world trade organization. On January 1, 1995 Indonesia and several other countries officially became members of the WTO. Indonesia has also ratified various international agreements, one of which is the ASEAN Free Trade Area (AFTA) since 2003, and the ASEAN-China Comprehensive Economic Cooperation Agreement since 2010. Indonesia and ASEAN countries have similar biodiversity resources. This causes Indonesia and several ASEAN countries such as Vietnam, Malaysia and Thailand to have tight competition in the same commodities. One of them is Vietnam,

which is one of Indonesia's competitors in the spice commodity. Indonesia and Vietnam are the largest producer and exporter of spices in the world. It is feared that the similar ownership of biological resources will make these countries tend to compete in the ASEAN and international markets. In addition, there are India, China, Madagascar and the Netherlands which are also competitors in the international market. Overall, these countries vary considerably in size, endowment factors, economic structure, trade orientation, level of economic development, and socio-cultural background. Some of these countries have entered into regional and bilateral trade agreements with Indonesia. This will support the realization of economic growth.

Studies that have been carried out by Zulkarnaen et al., (2012), shows that developed countries dominate the benefits of trade liberalization such as Japan and China. All countries that participated in this policy experienced an increase in economic growth and prosperity which also resulted in an increase in the GDP deflator and terms of trade terms of trade which resulted in a decrease in competitiveness. The ACFTA policy through tariff reduction also has an impact on increasing household income in Indonesia and China (Sabaruddin, 2016). Even so,

Indonesia's economic growth was not large enough, namely only 0.05% (Budiyanti, 2017). In general, economic openness and trade liberalization affect the level of exports (Aida & Riyanto, 2021). However, the existence of trade liberalization has also increased the volume of Indonesian imports and many commodities with cheaper prices have entered Indonesia and harmed farmers (Amin, 2015). The discussion on the impact of trade liberalization in Indonesia is still being discussed in general and has not specifically discussed a type of commodity, especially spices.

In the era of liberalization, in order to be competitive in the same industry, Indonesian spice commodities must increase their export share by having a distinct advantage compared to competitors from other countries. The natural advantage that Indonesia has is the abundant amount of labor and raw materials as well as the characteristics of Indonesian spice commodities that not all countries have. In addition, Indonesia has a fairly high production of spices (Saputro & Anggrasari, 2021). Indonesia is one of the 5 countries that produce some of the world's largest spice commodities, namely cinnamon, cloves, nutmeg, pepper and vanilla, so it has great opportunities and potential for development. In relation to this information, it can be said that Indonesia

has sufficient capability in fighting over the share of the world spice market. Therefore, it is necessary to evaluate the effect of Indonesia's trade liberalization based on competitiveness with competing countries and the level of competition for Indonesian spice commodities.

METHOD

The analytical methods used are Revealed Comparative Advantage (RCA), Export Similarity Index (ESI), and Export Overlapping Index (IEO) which are discussed descriptively using secondary data from UNComtrade for 1989-2021. Trade liberalization is indicated by Indonesia's entry into the WTO, AFTA and ACFTA.

Analytical Methods for Measuring the Competitiveness of Indonesian Spices in the International Market

The RCA index (Revealed Comparative Advantage) in this study uses an index Balassa (1965):

$$RCA_i^k = \frac{(X_i^k / X_i)}{(X_w^k / X_w)}$$

Description:

X_i^k = Export value of country i in commodity k to international market

X_w^k = Total world export value of commodity k

X_i = The total value of country i's exports to international markets

X_w = Total value of world exports

K = Commodity spices

The RCA index value is between 0 to infinity ($0 \leq RCA_i < \infty$). Based on the RCA value, it can be classified into four categories of comparative advantage, namely very strong ($RCA > 2.5$), strong ($1.25 \leq RCA \leq 2.5$), moderate ($0.8 \leq RCA \leq 1.25$), and weak ($RCA < 0.8$) (Yu and Qi, 2015).

Analytical Method for Measuring the Structural Similarity of Indonesian Spice Exports in International Markets: Export Similarity Index (ESI)

The ESI formula can be written as follows (Finger dan Kreinin, 1979):

$$ESI = \left[\sum_{min} \left(\frac{X_{iw}^k}{X_{iw}}, \frac{X_{jw}^k}{X_{jw}} \right) \right] \times 100$$

Description:

X_{iw}^k = Export value of commodity k from country i to international market

X_{jw}^k = Export value of commodity k from country j to international markets

X_{iw} = Total value of spice exports from country i to international markets

X_{jw} = Total value of spice exports from country j to international markets

Σ_{min} = Total smallest value in comparison to the export share of commodity k countries i and j

i = Indonesian

j = Vietnam, India, Netherlands, Madagascar, and China

k = spice commodity group

The ESI index value is between 0-100. A value of zero indicates that the structure of commodity exports from country i and j is different. Meanwhile, a value of 100 indicates that the structure of commodity exports from countries i and j are identical (similar). Thus, an index that is closer to 100 indicates that the structure of commodity exports from the two countries will increasingly show similarities and trade competition in world markets will intensify (Yao dan Wan, 2014). In this case, ESI tends to ignore the effect of its export size, so it is often compared with IEO (Export Overlapping Index) to obtain a more comprehensive analysis of competitiveness (Hermawan, 2015).

Analytical Methods for Measuring the Level of Indonesian Spice Trade Competition in the International

Market: *Index Export Overlapping (IEO)*

IMF (2007) in the World Economic Financial Survey using the overlapping index equation which is expressed by the equation:

$$IEO_{k,i,j} = \left[\frac{\sum_{\min}(X_i^k, X_j^k)}{\sum(X_i^k; X_j^k)} \right] \times 100$$

Description:

X_i^k = Export value of commodity k from country i to the international market

X_j^k = Export value of commodity k from country j to international markets

Σ_{\min} = Total smallest value in comparison to the export share of commodity k countries i and j

i = Indonesian

j = Vietnam, India, Netherlands, Madagascar, and China

k = spice commodity group

The greater the index overlap, the greater the level of competition between the two countries. The index is between a value of 100 which indicates full overlap and 0 which indicates no overlap (Hermawan, 2015).

RESULTS AND DISCUSSION

Indonesian spice commodities are known to be one of the mainstay agricultural commodities which have a world export role (Zuhdi et al., 2021). A country's commodity competitiveness is described by high comparative advantage. Competitiveness or ability to compete in international markets is very important as a strategy to enter export markets, because high competitiveness reflects the ability to win an adequate market share. (Haryono, 2014). Comparative advantage can be analyzed using the Revealed Comparative Advantage (RCA) method. The development of the competitiveness of Indonesian spices in the international market from time to time is shown by the Revealed Comparative Advantage (RCA) index in Table 1. The RCA value of Indonesia's spice export trade as a whole in 1989-2021 has a strong competitiveness value. Even though Indonesian spices have a comparative advantage in the international market ($RCA > 1$), the competitiveness of Indonesian spices in the international market from 1989-2001 was known to fluctuate and in general had a decline in the value of competitiveness.

Table 1. Development of Competitiveness of Indonesian Spices (RCA) in the International Market since joining the FTA

FTA	Year	0904	0905	0906	0907	0908	0910	Rempah
-	1989	12.21	32.47	35.38	1.64	13.49	3.64	12.91
-	1993	7.52	18.82	22.11	0.28	7.62	7.08	9.99
WTO	1995	18.92	20.63	32.36	0.60	16.07	4.16	15.91
AFTA	2003	11.90	5.27	18.40	24.17	17.64	1.17	9.20
ACFTA	2010	10.41	4.94	18.54	7.38	14.50	0.89	7.57
	2021	8.80	4.75	19.90	25.09	23.73	0.54	8.80

Source: Secondary data analysis (UNCOMTRADE, 2022)

Remarks: HS0904 (Pepper, chili and capsicum), HS0905 (Vanilla), HS0906 (Cinnamon), HS0907 (Clove), HS0908 (Nutmeg, mace, and cardamom), HS0910 (Ginger, turmeric, saffron, thyme, curry leaves , and bay leaf)

From 1989 to 2021 Indonesia has joined various trade agreements both multilaterally and regionally. In 1989 until before joining the WTO policy in 1995, the average competitiveness of Indonesian spices was very strong, namely 15.91. Since 2003, with the existence of various trade policies, both AFTA and ACFTA, until 2021, the average competitiveness of Indonesian spices tends to decline. Reinforced statement Ibrahim et al., (2016) which mentions the elimination of trade barriers (FTA) poses a challenge to domestic products. This situation is caused by the proportion of the export share of Indonesian spice commodities compared to Indonesia's overall exports which tends to decrease. Good trade performance and strong competitiveness from competing countries then became one of the factors that influenced the decline in the competitiveness of Indonesian spices in general, such as Vietnam, India, China and Madagascar (Anggrasari et al., 2021).

The spice commodity HS0904 (pepper, chili and capsicum) had the highest RCA index value in 1995 of 18.92 and the lowest in 2017 of 5.67. In line with research (Mahdi & Suprehatin, 2021) that in 2015-2018 the value of pepper exports decreased by 34.02%. The suboptimal performance of Indonesian pepper exports is influenced by demand that is sensitive to price changes and weak product quality standards. Indonesian pepper is mostly exported to Vietnam, even though the price bids set by the United States and several European Union countries such as Germany, France and the Netherlands are far above Vietnam's prices. (Balqis & Yanuar, 2021). Weak downstreaming of national products to production processes that have not been standardized causes contamination of microorganisms which affects the low quality standard of national pepper.

The spice commodity HS0905 (vanilla) has strong competitiveness in the international market with the highest

index in 1995 of 20.63 until then in 2003 it dropped dramatically in 2021 to only 4.75. This situation was affected by the drastic decline in the price of vanilla on the international market in 2000 which then led to a decrease in production area. (Abdat et al., 2022). Even though the price of vanilla has improved, the competitiveness index for Indonesian vanilla in the international market is still fluctuating. As for the commodity HS0906 (cinnamon) from 2003 to 2021 the RCA index value tends to be stable and increasing. The competitiveness of the cinnamon commodity in 2021 is very strong, namely 19.90.

Indonesia is the world's largest exporter of Commodity HS0907 (cloves). In 2021 the clove commodity has the largest RCA value compared to the previous year, namely 25.09. This is in line with research (Zuhdi & Rambe, 2021) that in 2018 which mentioned Indonesia had succeeded in increasing production and exports reaching 16.4% of total production. In 2010-2017 the value of the clove RCA index tended to decrease, reinforced by Hidayah et al., (2022) which stated that in 2008 Indonesia's clove production decreased and in 2012-2014 Indonesia experienced a trade balance deficit. The loss of market share that year was also affected by the shift of trading partner countries to other importing countries, such as Madagascar

which is a strong competitor in Indonesia's clove exports. (Anggrasari et al., 2021). Hidayah et al (2022) in the results of his research stated that the competitiveness status of Indonesian clove exports to importing countries was a rising star, which meant that the commodity experienced an additional share.

The spice commodity HS0908 (nutmeg, star anise and cardamom) is an Indonesian spice commodity that has strong competitiveness and tends to increase, so that in 2021 the RCA value is known to be 23.73. However, in 2010 the RCA value of the spice commodity HS0908 decreased. This is in line with the enactment of the ACFTA cooperation agreement which according to (Ibrahim et al., 2016) ACFTA has a negative impact on the decline in Indonesia's overall trade balance. The ACFTA scheme is known to be more profitable for China because of its stronger comparative advantage and is supported by high investment (Qiu et. al., 2007 via Kurniawati, 2014). The other factor was caused by the decline in HS0908 spice exports which occurred due to the quality of Indonesian HS0908 spices which did not meet the health standards set by the European Union (Suhartini et al., 2021).

HS0910 Commodity (Ginger, Turmeric, Saffron, Thyme, Curry Leaves and Bay Leaves) experienced a

significant decrease in its competitiveness value. In 2021 the RCA value for the HS0910 commodity is only 0.54, which means that the competitiveness of the HS0910 spice commodity is in the weak category in the international market. Based on FAO data, Indonesia is the fifth largest prudent for ginger commodities, but this is not in line with the level of Indonesian ginger exports, which only ranks 19th in ginger exporting countries. The decline in the competitiveness of HS0910 spices was influenced by the volume of exporters from other countries, one of which was China. In the period 2006-2020 China became the world's largest ginger exporter (Mazzlin et al., 2022).

In 2021, the competitiveness of Indonesian spice commodities except HS0905 and HS0910 will increase. This is in line with the Ministry of Agriculture's program because since 2017 it has focused on increasing the export volume of Indonesian spices in the international market. Even though the condition of the competitiveness of Indonesian spice commodities has fluctuating competitiveness, Indonesia has very strong competitiveness. This shows that Indonesian spice commodities have competitiveness in the international market. The decline in the export contribution of Indonesian spice commodities could be due to the

fluctuating and low prices of Indonesian spice commodities. Based on data, some prices for Indonesian spices are still below the market price in the international market, for example, the price of Indonesian cinnamon is around 1.87 US\$/kg, while the price in the international market is around 3.30 US\$/kg. However, there are some commodities that have good prices in the international market, for example pepper and vanilla, which have prices above the international market average (Saputro & Anggrasari, 2021). Therefore the provision of added value and good quality is an important indicator to increase the price of Indonesian spice commodities. Apart from competitiveness, an important aspect to note between Indonesia and its competitors is the similarity in export structure and level of competition. The results of the study show that Indonesia and its competitor countries have different levels of export structure and level of competition. In table 2 it can be seen changes in the level of similarity in exports and the level of competition between Indonesia and its competitor countries before and after the existence of the FTA.

Several of Indonesia's competitor countries are member countries that have ratified the same trade agreement with Indonesia, namely

Vietnam in the AFTA since 2003, China in the ACFTA since 2010, the Indonesia-India bilateral agreement since 2011. The six countries have also joined the WTO since 1995, except for China, which only

joined in 2001. Based on research results, trade liberalization has had quite an effect on the degree of similarity in exports and competition between Indonesia and its competitor countries.

Table 2. Changes in the Level of Export Similarity (ESI) and the Level of Export Competition (IEO) before and after joining AFTA (2003), ACFTA (2010), and Indonesia-India bilateral

<i>Export Similarity Index (ESI)</i>					
Year	IDN-VIET	IDN-IND	IDN-BEL	IDN-CHN	IDN-MAD
2000	73.72	70.06	83.72	43.70	6.98
2003	55.83	63.24	63.84	61.11	22.05
2010	67.98	67.16	47.65	40.31	16.92
2011	54.74	61.54	57.36	49.25	9.28
2021	26.87	35.57	40.69	19.83	16.96
<i>Index Export Overlap (IEO)</i>					
Tahun	IDN-VIET	IDN-IND	IDN-BEL	IDN-CHN	IDN-MAD
2000	47.30	29.24	23.03	16.71	4.39
2003	47.72	31.52	22.60	27.66	10.24
2010	33.06	27.56	17.65	24.56	5.00
2011	22.33	21.93	23.78	23.25	4.48
2021	16.25	19.27	12.95	9.36	9.13

Source: Secondary data analysis (UNCOMTRADE, 2022)

Notes: VIET (Vietnam), IND (Indonesia), CHN (China), IDN (Indonesia), MAD (Madagascar), and BEL (Netherlands)

The level of export similarity can be seen from the convergence of the export structure of the two countries, if the similarity index between the two countries increases from time to time indicating greater competition in the export market. If the index value decreases, it indicates an increase in specialization between the two countries in the third market and trade relations between the two countries are complementary (Wang & Liu, 2015). Meanwhile, the level of export competition is indicated by the share of exports that overlap between the two economies from each of their total exports (Hermawan, 2015).

Based on table 2, trade liberalization has quite an effect on the structure of Indonesia's exports with its competitor countries. After the ratification of AFTA, the similarities between Indonesia and Vietnam's export structures tended to decrease, as did the level of competition. This shows that the two countries are specializing and differentiating the spice commodity in order to expand their market share so as to reduce the level of competition. This condition opens opportunities for Indonesia to increase its market share. Differentiation of agricultural commodities is very important to reduce the level of competition and competition

so as to expand market reach (Ramana & Retnosari, 2018).

China's ratification of the ACFTA in 2010 based on research results has the same effect as AFTA. The level of similarity and export competition between Indonesia and China has also decreased. However, the level of similarity and competition between Indonesia and Vietnam is increasing. The export value of Indonesia and Vietnam experienced an increase in 2010 with growth rates of 69.98% and 62.82%. The existence of ACFTA allows Indonesia and Vietnam to increase their exports to China. The level of similarity in exports and the level of competition in spices between Indonesia and India has also decreased. According to Narayan & Nguyen (2016) shows that the existence of trade liberalization makes each country carry out specialization and differentiation of its commodities in order to expand its market share and reduce the level of competition. This condition opens opportunities for Indonesia to increase its market share. Differentiation of agricultural commodities is very important to reduce the level of competition and competition so as to expand market reach.

Meanwhile, in 2021 the share of Indonesian spice exports will experience a decrease in the level of export similarity for all competing countries except

Madagascar. OEC (2022), data shows that in 2020 Indonesia is ranked the 26th largest exporter of spices in the world with the main export destinations being India, Japan, Malaysia and China. One commodity that has great potential in the export market is clove.

The weakness in the competitiveness of agricultural products and commodities in Indonesia is one of the obstacles that must be addressed immediately in order to compete well in the global market as well as in the domestic market itself. Weaknesses in Indonesia's competitiveness occur because Indonesia still relies on products that are produced with the support and basis of natural resources and labor (comparative advantage), and are not supported by a basis of knowledge or creativity which is one of the major assets in increasing competitive advantage (Haryono, 2014).

Indonesia needs to improve quality as well as standardize and increase differentiation for spice products in order to maintain and expand its market share so that it can be competitive in the international market. Trade liberalization is an opportunity for Indonesia to increase its competitiveness, but it can also become a target market for other countries. Indonesia has a comparative advantage in spice commodities so that spice productivity can still be optimized.

CONCLUSION

The trade agreements ratified by Indonesia (WTO, AFTA and ACFTA) have made trade competition in the international market increasingly stringent, even though Indonesia has very strong competitiveness, Indonesia's share of exports has tended to decline. The level of competition for Indonesian spice exports with its competitor countries tends to decrease. The existence of trade liberalization makes each country increase its trade specialization in order to expand its market share. Indonesia needs to improve quality as well as standardize and increase differentiation for spice products in order to maintain and expand its market share so that it can be competitive in the international market.

REFERENCE

- Abdat, H. S., Santoso, S. I., & Nurfadillah, S. (2022). Daya Saing Komoditas Vanili Indonesia di Pasar Internasional. *Jurnal Ekonomi Pertanian Dan Agribisnis*, 6(3), 1084. <https://doi.org/10.21776/ub.jepa.2022.006.03.28>
- Aida, N., & Riyanto, F. D. (2021). Pertumbuhan Ekonomi dan Kemiskinan Indonesia: Analisis Dampak Liberalisasi Perdagangan pada Mitra Dagang Utama. *Jurnal Akuntansi, Keuangan, Dan Manajemen*, 2(3), 243–253. <https://doi.org/10.35912/jakman.v2i3.107>
- Amin, K. (2015). Kebijakan Liberalisasi Perdagangan Indonesia di Sektor Pertanian. *Jurnal Interdependence*, 3(1), 70–81.
- Anggrasari, H., & Mulyo, J. H. (2019). The trade of Indonesian spice commodities in international market. *Agro Ekonomi*, 30(1), 13–26.
- Anggrasari, H., & Mulyo, J. H. (2022). Tingkat kemiripan dan kompetisi struktur ekspor komoditas rempah-rempah Indonesia di Pasar Internasional. *SEPA: Jurnal Sosial Ekonomi Pertanian Dan Agribisnis*, 19(1), 11–20.
- Anggrasari, H., Perdana, P., & Mulyo, J. H. (2021). Keunggulan Komparatif dan Kompetitif Rempah-Rempah Indonesia di Pasar Internasional. *Jurnal Agrica*, 14(1), 9–19.
- Balassa, B. (1965). Trade liberalisation and revealed comparative advantage. *The Manchester School*, 33(2), 99–123. <https://doi.org/https://doi.org/10.1111/j.1467-9957.1965.tb00050.x>
- Balqis, P., & Yanuar, R. (2021). Daya Saing Ekspor Lada Indonesia di Pasar Amerika dan Eropa. *Forum Agribisnis*, 11(2), 182–194. <https://doi.org/10.29244/fagb.11.2.182-194>
- Budiyanti, E. (2017). Dampak liberalisasi perdagangan terhadap pertumbuhan ekonomi di Indonesia. *Kajian (Pusat Penelitian Badan Keahlian DPR RI)*, 4(5), 45. <https://doi.org/10.15373/2249555x/may2014/105>
- Erlat, G., & Ekmen, S. (2009). Export similarity and competitiveness: The case of Turkey in the EU market. *Anadolu International Conference in Economics*, 1–27.

- Finger, J. M., & Kreinin, M. E. (1979). A Measure of 'Export Similarity' and Its Possible Uses. *The Economic Journal*, 89(356), 905. <https://doi.org/10.2307/2231506>
- Haryono. (2014). *Memperkuat Daya Saing Produk Pertanian* (Haryono (ed.)). IAARD Press.
- Hermawan, I. (2015). Daya saing rempah indonesia Di pasar Asean periode pra dan pasca krisis ekonomi global. *Buletin Ilmiah Litbang Perdagangan*, 9(2), 153–178. <http://jurnal.kemendag.go.id/index.php/bilp/article/view/6/3>
- Hidayah, M., Fariyanti, A., & Anggraeni, L. (2022). Daya Saing Ekspor Cengkeh Indonesia. *Jurnal Ekonomi Pertanian Dan Agribisnis*, 6(3), 930. <https://doi.org/10.21776/ub.jepa.2022.006.03.14>
- Ibrahim, Permata, M. I., & Prabowo, W. A. (2016). Dampak Pelaksanaan Acfta Terhadap Perdagangan Internasional Indonesia. *Ekonomi Moneter Dan Perbankan*, 4(2), 277–295.
- Kurniawati, I. (2014). Dampak ACFTA Terhadap Perdagangan Sektor Industri dan Pertanian Indonesia (Studi Komparatif Indonesia-China dan Indonesia-Vietnam). *Eko-Regional*, 9(2), 114–124.
- Mahdi, N. N., & Suprehatin, S. (2021). MARKET'S POSITION OF INDONESIAN PEPPER IN THE GLOBAL MARKET Naufal. *Jurnal Ekonomi Pertanian Dan Agribisnis (JEPA)*, 5(2), 595–605.
- Mazzlin, N. E., Widayanti, S., & Nugroho, S. D. (2022). Analisis posisi komoditas jahe indonesia di pasar internasional. 2748(105).
- Narayan, S., & Nguyen, T. T. (2016). Does the trade gravity model depend on trading partners? Some evidence from Vietnam and her 54 trading partners. *International Review of Economics and Finance*, 41, 220–237. <https://doi.org/10.1016/j.iref.2015.08.010>
- Ramana, F., & Retnosari, L. (2018). Analysis of Priority Countries and Products for Indonesian Export Diversification in Latin America. *International Journal of Industrial Distribution & Business*, 9(8), 17–26.
- Sabaruddin, S. S. (2016). Dampak Liberalisasi Perdagangan RI-China Terhadap Perubahan Perdagangan dan Kesejahteraan Masyarakat Indonesia: Ssebuah Pendekatan Ekuilibrium Parsial (SMART Model) dan Pemanfaatan Sistem Neraca Sosial Ekonomi 2008. *Jurnal Ekonomi Dan Bisnis*, 17(3), 33. <https://doi.org/10.24914/jeb.v17i3.287>
- Sae. (2017). *Rempah Nusantara Pilihan Dunia*. Kompasiana. <https://www.kompasiana.com/sae/59f7edfe74bbb019264754e4/remapah-nusantara-pilihan-dunia?page=all>
- Saputro, W. A., & Anggrasari, H. (2021). The Role , Development and Opportunities of Spice Commodities for International Relations between Indonesia and Other Countries in the International Market. *Journal of Advance in Social Science and Policy*, 1(1), 154–166.
- Suhartini, N. A., Widi, R. H., & Dasruma, D. (2021). Daya Saing Pala, Lawang, Dan Kapulaga Indonesia Di Pasar Internasional.

Jurnal Agristan, 3(2), 84–110.
<https://doi.org/10.37058/agristan.v3i2.3685>

Wang, P., & Liu, X. (2015). Comparative analysis of export similarity index between China and EU. *International Conference on Management Science and Management Innovation*, 222–227.

Yao, A., & Wan, L. (2014). Competitiveness of China's agricultural product export to the United States of America. *Asian Agricultural Research*, 6(12), 9–13.

Zuhdi, F., Rahmadona, L., & Maulana, A. S. (2021). The EXPORT COMPETITIVENESS OF INDONESIAN SPICES TO EUROPEAN UNION-15. *Agric*, 32(2), 139–162.
<https://doi.org/10.24246/agric.2020.v32.i2.p139-162>

Zuhdi, F., & Rambe, K. R. (2021). Daya Saing Ekspor Cengkeh Indonesia Di Pasar Global. *SEPA: Jurnal Sosial Ekonomi Pertanian Dan Agribisnis*, 17(2), 165.
<https://doi.org/10.20961/sepa.v17i2.43784>

Zulkarnaen, I., Oktaviani, R., Tambunan, M., & Yulius, Y. (2012). Analisis Dampak Liberalisasi Perdagangan Kawasan Ekonomi Asia Terhadap Kinerja Ekonomi Makro Asean. *Jurnal Ekonomi Dan Kebijakan Pembangunan*, 1(2), 104–119.
<https://doi.org/10.29244/jekp.1.2.2012.104-119>