



Indonesian Processed Chicken Products Trade Competitiveness: Revealed Comparative Advantage Approach

A. H. Wibowo¹, M. A. U. Muzayyanah^{2*}, and B. Guntoro²

¹Doctoral Program in Animal Science, Faculty of Animal Science, Universitas Gadjah Mada, Yogyakarta, 55281, Indonesia

²Department of Livestock Socio-Economics, Faculty of Animal Science, Universitas Gadjah Mada, Yogyakarta, 55281, Indonesia

*m_anggriani_um@mail.ugm.ac.id

Abstract. Indonesia's high potential for chicken production presents significant opportunities for developing downstream poultry industries to enhance product competitiveness in the international market. This study assesses the comparative advantages of Indonesian processed chicken products (IPCP) in the international market. The analysis uses export data for IPCP, and other countries obtained from the Indonesian Central Bureau of Statistics, the Indonesian Ministry of Trade, and UN Comtrade from 2014 to 2023. Data were categorized by Harmonized System (HS) codes 160232 and 160239 and analyzed using Revealed Comparative Advantage (RCA) and Market Share Index (MSI). The results indicate a consistent upward trend in IPCP export values over the study period, peaking in 2023, with Japan emerging as the largest importer. RCA analysis confirms that IPCP under both HS codes 160232 and 160239 possess comparative advantages, while MSI highlights Timor-Leste as the primary market for HS code 160239. These findings demonstrate that IPCP holds competitiveness in the international market. To carry this advantage and expand into new markets, innovations in product development and the utilization of advanced technologies are essential for ensuring the sustainability of Indonesia's poultry industry.

Keywords: International Trade, Competitiveness, Indonesian Processed Chicken Products, Sustainability

1 Introduction

The poultry industry, especially broiler chicken products, is one of the crucial sectors in the Indonesian economy. Based on data from the Central Statistics Agency of Indonesia in 2022 [1], the poultry industry contributes 60% to the Gross Domestic Product of the livestock sector, with broiler chicken products (meat and eggs) reaching 80.77% of livestock production. According to the Ministry of Agriculture data, broiler chicken meat production in Indonesia continues to increase with increasing domestic and export demand. It is recorded that in 2023, broiler chicken meat production has reached 4 million tons [2]. However, even though Indonesia is the sixth largest producer of chicken

© The Author(s) 2025

I. Novianti et al. (eds.), *Proceedings of the 5th International Conference on Environmentally Sustainable Animal Industry (ICESAI 2024)*, Advances in Biological Sciences Research 45,

https://doi.org/10.2991/978-94-6463-670-3_32

meat in the world [3], Indonesian processed chicken products (IPCP) are not yet fully able to compete in the international market.

Comparative advantage is critical in determining a product's competitiveness in the global market. This advantage refers to a country's ability to produce goods and services at a relatively lower cost than other countries [4]. Macroeconomic variables such as inflation, unemployment, interest rates, tax rates, and economic growth rates are essential for a country to have an advantage/competitiveness in the global market [5]. Indonesia's comparative advantage for processed chicken products can be improved through production efficiency, technological innovation, and supportive export policies.

The high potential of chicken meat production in Indonesia provides an excellent opportunity to develop downstream. With the Indonesian government's efforts to strengthen the downstream of livestock products in this decade [6], [7], transforming raw chicken products into processed chicken products with added value is a strategic step in increasing Indonesia's competitiveness in the international market. With proper processing, Indonesian processed chicken products can have a stronger appeal in the global market, especially in countries with high demand for quality and safe food products. However, the challenges faced by Indonesia in increasing the comparative advantage of processed chicken products are complex.

As an illustration, several studies have been conducted to measure the competitiveness of Indonesian livestock products in the international market. Sutawi et al. [8] analyzed the competitive position and specialization of Indonesian beef trade in Southeast Asia. Based on the study's results, the comparative advantage of the Indonesian beef trade is the lowest in Southeast Asia. In addition, Indonesian beef commodities are only at the introduction stage in international trade. Other studies were conducted by Soedjana and Priyanti [9] to discuss the competitiveness of Indonesian livestock production costs compared to countries in the Southeast Asian region. It was found that Indonesia, with the highest poultry population in the area, still applies higher production costs compared to Thailand, Malaysia, and Philippines.

The measurement of the trade competitiveness of IPCP in international markets is increasingly relevant for formulating effective strategies to enhance global competitiveness. Until now, no comprehensive study has specifically examined the competitiveness and comparative advantage of IPCP, particularly focusing on market dynamics over the past decade, including the impact of the Covid-19 pandemic. Previous studies were largely conducted before the pandemic, thus failing to capture significant changes caused by this global disruption. This study provides a novel perspective by presenting an up-to-date analysis of the competitiveness and comparative advantage of IPCP, utilizing recent data and quantitative statistical methods. The approach employs Revealed Comparative Advantage (RCA) and Market Share Index (MSI) analysis to offer an in-depth evaluation of Indonesia's position in the international market. This research not only presents an up-to-date competitiveness mapping but also serves as a strategic foundation for policy-making to enhance IPCP's position in the international market. Therefore, this study aims to measure the comparative advantages of IPCP in the international market using the RCA and MSI approaches.

2 Materials and Methods

2.1 Data Collection

This study utilizes secondary data related to the export value of processed chicken products grouped based on the international Harmonized System (HS) classification, namely codes 160232 and 160239 (Table 1). Export data from Indonesia were obtained from two primary sources, namely Indonesian Central Statistics Agency [10] and Indonesian Ministry of Trade [11]. Meanwhile, export data from other countries is accessed through the United Nations Comtrade database [12], which provides integrated international trade information.

This study uses time series data for the last ten years, covering the period 2014 to 2023, to obtain the latest export trends and dynamics. This period was chosen to provide a comprehensive and updated picture of the development of processed chicken commodity exports, both from an Indonesian perspective and in comparison, with other countries.

Table 1. Description of the harmonized system (HS) codes used in this research.

No.	HS Code	Description
1	160232	Meat preparations; of the poultry of heading no. 0105, (i.e of fowl of the species <i>Gallus domesticus</i>)
2	160239	Meat preparations: of poultry (excluding turkeys), prepared of preserved meat or offal (excluding livers and homogenised preparations)

Source: United Nations Comtrade database [12]

2.2 Data Analysis

Descriptive Statistics. Descriptive statistics identify and describe export trends of processed chicken products from Indonesia and other countries. This analysis provides a clear picture of export patterns and values from year to year so that developments, comparisons, and changes during the analysis period can be identified [13].

Revealed Comparative Advantage (RCA). Descriptive statistics identify and describe export trends of processed chicken products from Indonesia and other countries. This analysis provides a clear picture of export patterns and values from year to year so that developments, comparisons, and changes during the analysis period can be identified [13].

$$RCA_{ij} = \frac{X_{ij}/X_i}{w_{ij}/w_t} \quad (1)$$

where RCA_{ij} is the comparative advantage of product j produced by country i . X_{ij} is the export value of product j of country i to the destination country. X_i is the total export

value of country *i* to the destination country. W_{ij} is the world export value of product *j*, and W_t is the total. The RCA value is shown in the interval between 0 and positive infinity ($0 \leq RCA \leq +\infty$) [14, 16]. These values can be grouped into four categories [14, 17]: (1) no comparative advantage ($0 < RCA \leq 1$), (2) weak comparative advantage ($1 < RCA \leq 2$), (3) moderate comparative advantage ($2 < RCA \leq 4$), and (4) strong comparative advantage ($4 < RCA$).

Market Share Index (MSI). Market Share Index (MSI) is used to find the market conditions of Indonesian processed chicken products (IPCP) in the destination country of exports compared to competing countries. The MSI value is calculated using the formula according to Widyaningtyas and Widodo [18] as follows:

$$MSI = \frac{X_{ia}}{M_{ib}} \tag{2}$$

where *MSI* is the relative percentage of imports from several countries with values ranging from 1–100. X_{ia} is country *a*'s exports for product *i*, while M_{ib} is the total import of product *i* in the destination country. The higher MSI value reflects the extent of the market share controlled by the country.

3 Result and Discussion

3.1 Export Trends in Indonesian Processed Chicken Products (IPCP)

The export value of Indonesian processed chicken products (IPCP) during 2014-2023 is shown in **Table 2**.

Table 2. IPCP Export Value by HS Code for the Period 2014-2023 (in USD).

Year	HS Code	
	160232	160239
2014	275	0
2015	1,103	0
2016	4,071	0
2017	44,177	0
2018	170,775	0
2019	177,603	96
2020	190,335	71
2021	327,454	150
2022	285,699	90
2023	963,254	805
Total	2,164,746	1,266

Exports of IPCP commodities are dominated by products with HS code 160232, namely meat preparations; of the poultry of heading no. 0105, (i.e of fowl of the species *Gallus domesticus*), contributed a value of 2,164,746 USD or around 99% of total exports. The total export value of IPCP during this period reached 2,166,012 USD, indicating a significant contribution of commodities with HS code 160232 to the overall exports of Indonesian processed poultry products.

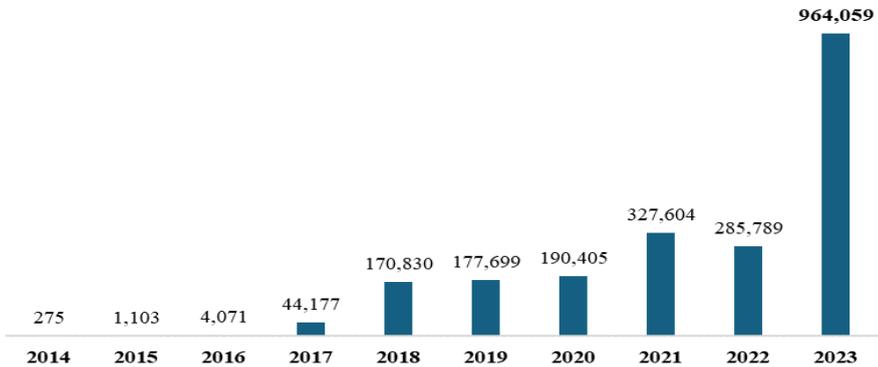


Fig. 1. Trend of Total IPCP Export Value for the Period 2014-2023 (in USD).

Figure 1 visualizes the development of Indonesian processed chicken product (IPCP) exports during the period 2014-2023. Throughout this period, IPCP exports showed a significant linear increase. The export value showed a consistent positive trend, with a gradual increase each year, and peaked in 2023 with an export value of 964,059 USD. Based on this positive trend, IPCP exports are estimated to continue to grow in the international market in the coming years, providing greater opportunities for the IPCP industry.

Table 3. Top Five IPCP Recipient Countries 2014-2023 (in USD).

Year	Country				
	Japan	Timor-Leste	Singapore	Saudi Arabia	Papua New Guinea
2014	0	0	0	0	0
2015	879	0	0	0	0
2016	1,064	0	0	0	0
2017	30	0	65	0	44,082
2018	54,766	60,204	0	0	55,806
2019	71,625	29,139	28,610	0	43,400
2020	113,437	55,302	55	0	19,647
2021	108,228	106,078	3,264	0	56,242
2022	175,470	51,527	70	0	44,065
2023	271,697	59,074	289,814	294,654	30,720
Total	797,196	361,324	321,878	294,654	293,960

This study reported that Indonesian processed chicken products (IPCP) were exported to 29 countries in the international market during 2014-2023. These countries are spread across various regions, including Asia, America, Europe, and Oceania. The five largest recipient countries of IPCP during this period are shown in Table 3. Japan was the largest recipient country, with a total export value of 797,196 USD, followed by Timor-Leste, Singapore, Saudi Arabia, and Papua New Guinea. In addition, the export value of IPCP peaked simultaneously in 2023.

If added up, the value of IPCP exports to the five largest countries reached 2,069,012 USD, or around 95% of the total value of IPCP exports from 2014-2023. This data shows that the five countries significantly contribute to the growth of IPCP export value in the international market, becoming the main markets that support the increase in trade in Indonesian processed chicken products.

The positive trend of IPCP exports over the past decade cannot be separated from the government's efforts to strengthen downstream in the poultry industry. In line with this study, according to Patunru and Rahardja [19], Indonesia's economic growth, especially in the food processing industry, has good potential for development but requires continuous integration with international trade networks.

Downstreaming aims to develop natural resource-based industries to support the development of processed product exports. This effort strengthens the oil-based agricultural, mining, and chemical sectors. Furthermore, downstream is carried out to develop economic industries, increase the spatial distribution of industries throughout Indonesia, and increase the value of exports and local products [20].

3.2 Revealed Comparative Advantage (RCA)

The results of the Revealed Comparative Advantage (RCA) analysis for Indonesian processed chicken products (IPCP) with HS codes 160232 and 160239 are shown in **Table 4 and 5**. Of the 29 IPCP recipient countries during the 2014-2023 period, most countries showed RCA values <1 for HS codes 160232 and 160239. RCA values of less than 1 indicate that IPCP does not have a comparative advantage in most recipient countries compared to similar products from other countries.

However, some countries show comparative advantages for IPCP. For HS code 160232, the RCA value > 1 is found in Palau, with a value of 66.85, reflecting a strong comparative advantage. Meanwhile, for HS code 160239, a moderate comparative advantage is recorded in Timor-Leste, with an RCA value of 3.271. These findings indicate that although most recipient countries have not shown comparative advantages, there are some specific markets where IPCP has a significant competitive position.

Table 4. Revealed Comparative Advantage IPCP for HS code 160232: Meat preparations; of the poultry of heading no. 0105, (i.e of fowl of the species Gallus domesticus).

No.	Country	Revealed Comparative Advantage ¹									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1.	Australia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.	Bangladesh	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3.	Brunei Darussalam	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4.	Bulgaria	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.	Cambodia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6.	China	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.	Christmas Islands	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8.	Timor-Leste	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
9.	Hongkong	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.	Japan	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.004
11.	Korea Republic	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.	Kuwait	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13.	Malaysia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14.	Maldives	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.	Micronesia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
16.	New Zealand	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.	Palau	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	66.85
18.	Papua New Guinea	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.001	0.000	0.001
19.	Philippines	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.	Qatar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
21.	Saudi Arabia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
22.	Singapore	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
23.	United Arab Emirates	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24.	United States	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

¹Can be grouped into four categories: (1) no comparative advantage ($0 < RCA \leq 1$), (2) weak comparative advantage ($1 < RCA \leq 2$), (3) moderate comparative advantage ($2 < RCA \leq 4$), and (4) strong comparative advantage ($4 < RCA$).

Table 5. Revealed Comparative Advantage IPCP for HS code 160239: Meat preparations; of poultry (excluding turkeys), prepared of preserved meat or offal (excluding livers and homogenised preparations).

No.	Country	Revealed Comparative Advantage ¹									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1.	Timor-Leste	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.271	0.000	0.001
2.	Hongkong	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3.	Singapore	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4.	United Arab Emirates	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.	United Kingdom	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

¹Can be grouped into four categories: (1) no comparative advantage ($0 < RCA \leq 1$), (2) weak comparative advantage ($1 < RCA \leq 2$), (3) moderate comparative advantage ($2 < RCA \leq 4$), and (4) strong comparative advantage ($4 < RCA$).

The absence of comparative advantage of Indonesian processed chicken products (IPCP) in most recipient countries, except in Palau and Timor-Leste, is caused by the low competitiveness of IPCP exports in the international market compared to other exporting countries. Although Indonesia has a significant potential for chicken meat production, its production costs are still much higher than those of competing nations. It's one of the main factors hindering the export capability of IPCP. According to Soedjana and Priyanti [9] the cost of producing broiler chickens in Indonesia is more expensive than in Thailand, one of the leading exporters in the Asian region. Ferlito and Respariadi [21] add that broiler chicken prices in Indonesia are up to 24% higher than in Europe and America.

One of the causes of the high cost of broiler chicken production in Indonesia is an inefficient supply chain. To overcome this problem, the government issued the Regulation of the Minister of Agriculture (Permentan) Number 32 of 2017, which requires big poultry business actors to have slaughterhouses and cold chain facilities. This policy aims to increase efficiency and ensure that all production is optimally absorbed to reduce production costs and improve the competitiveness of Indonesian processed chicken products in the international market.

In addition, Ferlito and Respariadi [21] suggested that the government review the protectionist policy on corn imports because the policy pushed domestic corn prices very high compared to international prices. High corn prices directly affect production costs in the poultry industry. The government must also consider exempting Grand Parent Stock imports, giving producers more flexibility in designing their business strategies. In addition to policy reforms, improving infrastructure and modernizing the poultry sector is also very important because inadequate infrastructure is currently an additional burden for the industry, hindering growth and competitiveness in the global market.

3.2 Market Share Index (MSI)

Next, we measure the Market Share Index (MSI) in 29 recipient countries of Indonesian processed chicken products (IPCP) in the international market. Based on the analysis results, **Table 6** shows the most significant MSI value for each HS code.

IPCP with HS code 160232 showed the highest MSI in the Palau market in 2023, with a value of 27.2%. It means that 27.2% of the total processed chicken products with the specification Meat preparations of the poultry of heading no. 0105 (i.e. of fowl of the species *Gallus domesticus*) circulating in Palau are Indonesian products. On the other hand, for HS code 160239, the highest MSI was recorded in Timor-Leste in 2021 with a value of 100%. This shows that all processed chicken products with the specification Meat preparations of poultry (excluding turkeys), prepared of preserved meat or offal (excluding livers and homogenised preparations) circulating in Timor-Leste in that year came from Indonesia. This finding reflects the significant market share of Indonesian processed chicken products in these countries, indicating substantial expansion opportunities in more limited but potential international markets.

Table 6. IPCP Highest Market Share Index.

No.	HS Code	Specification	Country	Year	MSI (%)
1.	160232	Meat preparations of the poultry of heading no. 0105 (i.e. of fowl of the species <i>Gallus domesticus</i>)	Palau	2023	27.2
2.	160239	Meat preparations of poultry (excluding turkeys), prepared of preserved meat or offal (excluding livers and homogenised preparations)	Timor-Leste	2021	100

The results of this MSI analysis reinforce the finding that Indonesia has great potential to develop export markets, especially in countries underserved by other primary chicken exporting countries. However, in relatively small markets, Palau and Timor-Leste show that Indonesian processed chicken products can dominate their markets, which provides excellent opportunities to increase market share in other regions. The high potential for chicken production in Indonesia offers outstanding opportunities. However, a focus on processing and market expansion is needed so that these products can compete with other countries, such as Brazil and Thailand, that have been successful in this sector. Thailand as stated by Boonklum [22], in the processing industry in Thailand, besides product quality and efficiency, factors such as organizational system positioning and branding, capabilities including market skills and building international networks, and innovation play an essential role in developing this industry to be competitive in the global market.

4 Conclusion

This study aims to measure the comparative advantages of IPCP in the international market using the RCA and MSI approaches. The findings indicate that IPCP demonstrates a positive export trend and holds a comparative advantage in specific markets, such as Palau and Timor-Leste. This advantage is partly attributed to the benefits of strengthening downstream activities within the sector. Additionally, government policies such as quality assurance measures, food safety regulations, the mandatory Veterinary Control Number (VCN), and avian influenza-free compartmentalization for business units have enhanced international confidence in Indonesian processed chicken products.

While a country may not have a comparative advantage in the agricultural or food processing sector, it can still exhibit comparative advantages in specific sub-sectors or regions. This research provides a strategic foundation for policymakers to strengthen the international market position of IPCP, particularly in countries where IPCP currently do not have a comparative advantage. Future studies need to evaluate the comparative advantage of each sub-sector using structured data according to the modified methodology.

Acknowledgments. The authors would like to sincerely thank the Directorate General of Livestock and Animal Health of the Ministry of Agriculture of the Republic of Indonesia for facilitating this research.

Disclosure of Interests. The authors have no competing interests to declare that are relevant to the content of this article.

References

1. Indonesian Central Statistics Agency, *Livestock in 2022*. Jakarta: Indonesian Central Statistics Agency (2022)
2. Directorate General of Livestock and Animal Health, *Livestock and Animal Health Statistics 2023*. Jakarta: Directorate General of Livestock and Animal Health, 2023.
3. Agricultural Data and Information Systems Center-Secretariat General of the Ministry of Agriculture, *Commodity Outlook for Broiler Chicken Meat*. Jakarta: Agricultural Data and Information Systems Center-Secretariat General of the Ministry of Agriculture. (2022)
4. S. French, "Revealed comparative advantage: What is it good for?," *J Int Econ*. 106. (2017)
5. S. Suparmono, E. Suandana, and F. Ilmas, "Determining Competitiveness of Indonesian Export Commodities using Revealed Comparative Analysis," *Jurnal Ekonomi & Studi Pembangunan*. 23. (2022)
6. National Food Agency, "NFA Encourages Strengthening Product Downstream in the Poultry Sector," <https://badanpangan.go.id/blog/post/nfa-dorong-penguatan-hilirisasi-produk-di-sektor-perunggasan>. (2022)
7. Directorate General of Livestock and Animal Health, "Minister of Agriculture Amran Encourages Increased Meat Production and Downstreaming Through Cooperation with Entrepreneurs," <https://ditjenpkh.pertanian.go.id/berita/1943-mentan-amran-dorong-peningkatan-produksi-daging-dan-hilirisasi-melalui-kerjasama-dengan-pengusaha>. (2024)

8. S. Sutawi, L. Hendraningsih, and A. Wahyudi, "Competitiveness of Indonesian beef trading in Asean," *J Indones Trop Anim Agric.* 44. (2019)
9. T. D. Soedjana and A. Priyanti, "Competitiveness of Indonesian Livestock Production among ASEAN Countries," *Indonesian Bulletin of Animal and Veterinary Sciences.* 27. (2017)
10. Indonesian Central Statistics Agency, "National Export Import Data," <https://www.bps.go.id/en/exim>. (2024)
11. Indonesian Ministry of Trade, "One Trade Data," <https://satudata.kemendag.go.id/>.
12. United Nations Comtrade, "Trade Data," <https://comtradeplus.un.org/TradeFlow>. (2024)
13. P. Mishra, C. M. Pandey, U. Singh, A. Gupta, C. Sahu, and A. Keshri, "Descriptive statistics and normality tests for statistical data," *Ann Card Anaesth.* 22. (2019)
14. I. Y. Prasada and A. Dhamira, "Non-Tariff Measures and Competitiveness of Indonesia's Natural Rubber Export in Destination Countries," *Agraris.* 8. (2022)
15. B. Balassa, "Trade Liberalisation and 'revealed' comparative advantage," *The Manchester School.* 33. (1965)
16. S. Jagdambe, "Consistency Test of Revealed Comparative Advantage Index: Evidence from India's Agricultural Export," *Foreign Trade Review.* 54. (2019)
17. B. Erkan and E. Yildirimci, "Economic Complexity and Export Competitiveness: The Case of Turkey," *Procedia Soc Behav Sci.* 195. (2015)
18. D. Widyaningtyas and T. Widodo, "Analysis of Market Share and Competitiveness of Indonesian CPO in the European Union," *Jurnal Manajemen Daya Saing.* 18. (2017)
19. A. Patunru and S. Rahardja, "Trade protectionism in Indonesia: Bad times and bad policy," <https://www.lowyinstitute.org/publications/trade-protectionism-indonesia-bad-times-bad-policy> (2015)
20. I. M. Fahmid et al., "'Downstreaming' Policy Supporting the Competitiveness of Indonesian Cocoa in the Global Market," *Front Sustain Food Syst.* 6. (2022)
21. C. Ferlito and H. Respatiadi, *Policy Reform in the Poultry Industry in Indonesia*. Jakarta: Center for Indonesian Policy Studies, (2019)
22. N. Boonklum, "Key Success Factors and Competitiveness Of The Food Processing Industry: Insights From A Qualitative Study," *Corporate and Business Strategy Review*, vol. 4, no. 4 Special Issue, 2023, doi: 10.22495/cbsrv4i4siart16.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

