

## ANALYSIS OF FACTORS THAT AFFECT THE COMPETITIVENESS OF FISHERY EXPORT VALUES IN THE GLOBAL MARKET

<sup>\*1</sup>Rianto Nurchayo,<sup>2</sup>Christopher Keanee,<sup>3</sup>Damar Aji Irawan

<sup>1,2,3</sup>International Business Management, Universitas BINUS, Jakarta, Indonesia

Author's email:

<sup>1</sup>[murtjahjo@binus.edu](mailto:murtjahjo@binus.edu); <sup>2</sup>[christopher.keane@binus.ac.id](mailto:christopher.keane@binus.ac.id); <sup>3</sup>[damar.irawan@binus.ac.id](mailto:damar.irawan@binus.ac.id)

\*Corresponding author: [murtjahjo@binus.edu](mailto:murtjahjo@binus.edu)

**Abstract.** International trade activities are carried out by business actors who can offer a product with a market share internationally. The aim of this research is so that we can analyze the competitiveness and factors that influence Indonesia's fisheries exports on the international market. In this research, the author will conduct research on international trade activities using quantitative research methods. In this research, the author will conduct research related to the export performance activities of Indonesian fisheries commodities that occur in the international market. The author will conduct export performance research using secondary data as the data studied for this research. Through research, we know the competitiveness and factors that influence Indonesia's fisheries exports on the international market. So, from this research, the author and readers can understand the analysis of competitiveness and the factors that influence Indonesia's fisheries exports in the international market, which is one of the international trade activities. In this research, the author will use Excel 2013 and E-Views 12 SV.

**Keywords:** Competitiveness, Foreign Direct Investment (FDI), Gross Domestic Product (GDP), Gross Domestic Product (GDP) Indonesia, Real Effective Exchange Rate (REER), Value Indonesia Export Fishery

### 1. INTRODUCTION

International trade activity is a buying or selling activity that occurs between one country and another. International trade activities are carried out by business actors who are able to offer a product that has a market share in the international market. In this study, the author will examine the competitiveness and factors that influence Indonesia's fisheries exports in the international market. According to (Nguyen & Do, 2020), the definition of DFI itself is a form of investment that occurs between countries where this activity can be carried out with the flow of funds from abroad into the country. With DFI, an increase in a country's export activity can occur so that it can be a positive value for a country. An increase in a country's DFI can provide increased capital and potential for a country in the international market. Innovation and technological developments that can occur because DFI can provide increased efficiency in a country's export growth.

According to (Nurhayati et al., 2019), the GDP per capita variable in this study shows the purchasing power of a country's people for the commodities analyzed. In addition to GDP per capita, population is also a factor that influences export demand. In general, a country's economic development can be measured by looking at the development of GDP (Gross Domestic Product). If the GDP of a country that imports increases, then the ability of the people of the importing country to buy products on the international market will increase. According to (Nguyen & Do, 2020) in international trade activities, the aspect of REER (Real Effective Exchange Rate) can affect the value of exported commodities. This can happen because if the REER value increases, the price of a product will become more expensive. The opposite applies if the REER value decreases, then the price of the product becomes cheaper. Being able to explain the word or decrease in REER affects the value of the product itself in the international market. Likewise, if Indonesia experiences an increase or decreases in REER, it will have an impact on the export performance of commodities from Indonesia. International trade

plays an important role in meeting the needs of countries in the world. The occurrence of international trade requires tools. According to (Laurie, 2023) The activities of a country's international trade, especially exports, can have a very positive impact on a country, and this positive impact can have a significant impact on the development of the country.

The positive impact on the country that can be seen is that a country's foreign exchange reserves can increase. Where the country's foreign exchange is a foreign asset of the government and foreign exchange banks that must be managed properly for the needs of international transactions in the global market. According to (Laurie, 2023) One of the impacts that has a significant impact on a country is because commodity export activities are unable to add to the country's foreign exchange reserves. The amount of foreign exchange reserves collected by a country because export activities are an important component for a country in participating in international trade with other countries. Not only that, sufficient foreign exchange can also have a significant impact on a country, for example, facilitating the efforts of both importers and exporters in carrying out their trade with mature shipping and transaction needs and interests. Not only that, the equipment that is collected can also be used for the development of a country's infrastructure. It can be concluded that export activities can provide a significant positive impact for the exporters themselves, the country, and also the surrounding community.

In this study, the author will conduct research on international trade activities using quantitative research methods. In this study, the author will examine the export activities of fishery products that occur in covering companies engaged in this sector fisheries that participate in the international market. The author will conduct research on export performance through secondary data obtained by the author from Trademap.org with HS Code 0300. By conducting an analysis of the competitiveness and factors that influence the export of fishery commodities in Indonesia in competing in the international market. The conclusion sought through this study is whether the competitiveness and factors that influence the export value of fishery products in Indonesia are one of the activities in international trade.

## **2. LITERATURE REVIEW**

### **2.1 International Trade**

The role of international trade is very influential on a country and also the people of the country itself. According to (Xu et al., 2020) International trade plays an increasingly important role in reducing regional resource scarcity, facilitating efficient consumption of global resources, stimulating economic growth and improving social welfare because the transfer of goods and services not only helps meet regional demand but also preserves local resources that are important for commodity production. According to the quote, it is explained that the importance of international trade activities has a major influence on aspects of a country.

Export is one of the activities in international trade, export can occur if a country's resources that are commodities in the market have met domestic needs or can be said to be surplus, so that the abundant commodities can enter the international market. While imports will occur if a country has a need for a product that has not been met, with these conditions, imports from other countries to meet domestic needs. International trade activities have an important role in the growth and development of countries all over the world

### **2.2 Competitiveness**

Competitiveness can be seen from the ability of a country to innovate and strive to improve its capabilities in the international market. The concept of competitiveness can be associated with the superiority of a country in a sustainable manner in the international market. According to (Capobianco-Uriarte et al., 2019) In a globalized world,

there is increasing concern about economic growth, and the concept of competitiveness is increasingly used to analyze economic development. The ability to develop a country is needed in order to excel in international market competition, this is needed so that competing countries can excel and not lose in competing in the international market.

### **2.3 Gross Domestic Product**

According to (Nurhayati et al., 2019) The GDP per capita variable in this study reflects the purchasing power of a country's people for the commodities studied, thus affecting export demand. In addition to GDP per capita, population is also a factor that affects export demand. In general, a country's economic development can be measured by looking at the development of GDP (Gross Domestic Product). If the GDP of a country that imports increases, the ability of the people of the importing country to buy products in the international market will increase. However, for countries that export, the GDP condition shows that the exporting country's ability to produce products for the international market has increased.

### **2.4 Real Effective Exchange Rate (REER)**

According to (Nguyen & Do, 2020) In international trade activities, the aspect of REER (Real Effective Exchange Rate) can affect the value of exported commodities. This can happen because if the REER value increases, the price of a product will become more expensive. The opposite applies if the REER value decreases, the price of the product becomes cheaper. An increase or decrease in REER can affect the value of the product itself in the international market. Likewise, if Indonesia experiences an increase or decreases in REER, it will have an impact on the export performance of commodities from Indonesia.

## **3. RESEARCH METHODS**

In this study, the author uses the Quantitative method, a rational, systematic and empirical scientific method is used for this study. In this study, the researcher uses quantitative analysis of the variables that have been determined to obtain the desired research results. According to (Muryani et al., 2019), the use of quantitative methods in this study can test the theory of an object in this study in the form of numbers or numbers that can then be understood. In this study, the author also applies descriptive research, according to (Muryani et al., 2019) Where through descriptive research the results can be studied objectively. The descriptive method can be applied by collecting the data to be studied, then compiling the data as a process of processing the data, and analyzing the data into a collection of data that can be understood in completing this study. In this study, the author measures the comparative advantage or can be called the competitiveness of Indonesian fishery commodity exports against the international market, in this study the indicator used is Revealed Comparative Advantage (RCA).

The index in the RCA method can show that the comparison of the export performance of fishery commodities from each country studied in the international market, countries that have an RCA index with a value of more than 1 ( $RCA > 1$ ) have a highly competitive advantage above the average international market. So, it can be determined if the country studied has a value of less than 1 ( $RCA < 1$ ) then the country can be determined as a country that does not have a solid competitive position. Panel data regression analysis is a method used in this study by observing several objects that have been determined in consecutive periods. In this study there are 3 types of data, including: time series, cross-sectional, and panel data. For the panel data type, the author collects the objects studied during a certain period. In the panel data regression technique, 2 data are combined, namely: cross-sectional data and time series data, where the units of the data are measured at different times. The combination of the two data will produce more efficient information for research. For data panels, it is divided into 2, namely balanced panels and unbalanced panels. For balanced panels, data with

the same number of time units for each object studied, while unbalanced panels are data with a different number of time units for each object studied.

#### 4. RESULTS AND DISCUSSION

Revealed Comparative Advantage (RCA) is a method used to show the comparative advantage of a commodity in a country competing in the international market. The RCA calculation will explain if a country's fishery commodity exports in total commodities are superior to global fishery commodity exports in total exports of all commodities in the world. In this study, the author will conduct an RCA test, with the aim that through this study the author can conduct an analysis and then the results of the test can be understood for research purposes, through this study the author can find out whether these countries have a comparative advantage in exporting coffee beans. In this study, if the RCA index value is greater than 1 (one), it indicates that the market share of fishery commodities to a country's total exports is greater than the average market share of fishery commodities in the world globally. Meanwhile, if the RCA index is less than 1 (one), it indicates that the total share of the country's fishery commodities in the international market is smaller than the average market share of world fishery commodities. This is because fishery commodities must have strong competitiveness to penetrate the international market. Table 4.1 Average Revealed Comparative Advantage Results Source: author from Trademap.org (2023) Based on the table above that has been prepared by the author, there are 6 countries selected to be research components. According to the data above processed by the author, there are 5 countries that have an RCA value of more than 1 ( $RCA > 1$ ) and there is 1 country that has an RCA value of less than 1 ( $RCA < 1$ ). The data is the result of data obtained by the author from the period 2013 to 2022. According to the data above, Indonesia itself has an average score of 2.86 from the period 2013 to 2022, based on the table above, Indonesia is in fourth position, according to the table above, Indonesia's highest RCA value from the period 2013 to 2022 is 3.36, and the RCA value of 3.36 occurred in Indonesia in 2020. The regression results using the Random Effect Model (REM) estimation model produce a statistical effect of independent variables on the dependent variable. The following is the effect of the four variables on the dependent variable.

**Table 1.** Average results of Revealed Comparative Advantage

YEAR	COUNTRY					
	Indonesia	Malaysia	Thailand	Vietnam	India	Argentina
2013	2,82	0,49	1,67	6,91	2,70	3,52
2014	2,96	0,48	1,57	6,43	2,83	3,82
2015	2,88	0,41	1,35	4,87	2,83	4,12
2016	2,91	0,40	1,37	4,26	2,90	4,20
2017	2,87	0,35	1,33	4,23	3,33	4,93
2018	2,84	0,34	1,21	4,07	3,06	5,30
2019	2,96	0,41	1,14	3,56	2,96	4,26
2020	3,36	0,41	1,06	3,20	2,92	4,83
2021	2,65	0,38	1,04	3,11	2,83	4,17
2022	2,31	0,32	0,98	3,18	2,52	3,31
MEAN ( $\bar{x}$ )	2,86	0,40	1,27	4,38	2,89	4,25

(Source: Trademap.org)

Based on the table above that has been prepared by the author, there are 6 countries selected to be research components. According to the data above processed by the author, there are 5 countries that have an RCA value of more than 1 ( $RCA > 1$ ) and there is 1 country that has an RCA value of less than 1 ( $RCA < 1$ ).

The data is the result of data obtained by the author from the period 2013 to 2022. According to the data above, Indonesia itself has an average score of 2.86 from the

period 2013 to 2022, based on the table above, Indonesia is in fourth position, according to the table above, Indonesia's highest RCA value from the period 2013 to 2022 is 3.36, and the RCA value of 3.36 occurred in Indonesia in 2020. The results of the regression using the Random Effect Model (REM) estimation model produce a statistical effect of independent variables on the dependent variable. The following is the effect of the four variables on the dependent variable:

Dependent Variable : Indonesian fisheries exports				
Method Panel : EGLS (Cross Section random effects)				
Date : 5/4/25 Time : 06.00				
Sample : 2013 - 2022				
Period Include : 10				
Cross Sections Included : 10				
Total Panel (balanced) observations : 100				
Swamy and Arora estimator of Component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob
Indonesian fisheries Export	4.15E+08	4.71E+08	0.879923	0.3811
FDI INDONESIA	0.00293	0.001979	1.480312	0.1421
GDP INDONESIA	0.0000151	8.75E+06	1.731271	0.0866
GDP_EXPORT DESTINATION COUNTRIES	0.000101	9.00E+08	11.20232	0
REER	-4422981	4426767	-0.99915	0.3203

**Figure 1.** Model RAM (Source: SPSS, 2024)

The result of the equation is:

$$Y = 414756530.382 + 0.00293012125552X_1 + 0.000151434890499X_2 + 0.000100851138431X_3 + 4422981.02284X_4 + \mu$$

Based on the equation above, the constant value obtained is 414756530.382, where from this constant value it can be interpreted that if the independent variable increases by one unit evenly, the dependent variable will also experience an increase of 414756530.382. Based on the above solution:

1. The regression coefficient of the Indonesian Foreign Direct Investment (FDI) variable has a positive value (+), where the value is 0.00293012125552 indicating that every time the Indonesian Foreign Direct Investment (FDI) variable increases, the Indonesian Fishery Commodity Export Value variable will also increase by 0.00293012125552, and vice versa
2. The regression coefficient of the Indonesian Gross Domestic Product (GDP) variable has a positive value (+), where the value is 0.000151434890499 indicating that every time the Indonesian Gross Domestic Product (GDP) variable increases, the Indonesian Fishery Commodity Export Value variable will also increase by 0.000151434890499, and vice versa

## CONCLUSION

It should be emphasized that the conclusion is not a summary but the results of research that describe the opinion or analysis of the author/researcher. Generally, the conclusion is written in a paragraph, without using serial numbers or citations. However, each journal or proceeding has its own writing rules, so the author must comply with the writing guidelines. 1) Based on the results of the it can be concluded that the application of Revealed Comparative Advantage (RCA) in an effort to analyses the export competitiveness of Indonesian fishery commodities in the international market shows export competitiveness of Indonesian fishery commodities in the international market shows that Indonesia has an RCA value of 2.86, the value of the RCA value is more than 1 which indicates that the export of fishery commodities Indonesia has comparative competitiveness in the international market. In the RCA method in this study, Indonesia is in the fourth position based on the competitors studied, and from this study it can be

seen that Indonesia has a strong competitiveness in the international market, meanwhile in Southeast Asia where Indonesia is in the second position in the Southeast Asian market after Vietnam, which has an RCA index of 4.38. So from the results of this study the country of Indonesia has a strong competitiveness in the scope of Southeast Asia, but the country needs to improve its performance in the international market; 2) Indonesia needs to improve its performance in the international market globally. Foreign Direct Investment (FDI) in Indonesia has no influence on the export value of Indonesian fisheries commodities, because foreign companies that invest in Indonesia have the aim of seeking market share in the country, they invest in. invested; 3) Gross Domestic Product of Indonesia (GDP) has no influence on the value of Indonesian fishery commodity exports, because the GDP per capita of Indonesia has increased every year and with the increase in GDP makes the purchasing power of the Indonesian people also increase; 4) Gross Domestic Product (GDP) of export destination countries has an influence on the value of Indonesian fishery commodity exports, if the export destination country has a higher GDP per capita than Indonesia, then the country has a higher GDP per capita than Indonesia; 5) The Real Effective Exchange Rate (REER) has no influence on the value of Indonesian fishery commodity exports. In general, when the rupiah exchange rate decreases, then for countries that have a stronger exchange rate, the country's products will be more valuable. stronger exchange rate.

## REFERENCES

- Capobianco-Uriarte, M. de las M., Casado-Belmonte, M. del P., Marín-Carrillo, G. M., & Terán-Yépez, E. (2019). A bibliometric analysis of international competitiveness (1983-2017). *Sustainability (Switzerland)*, 11(7). <https://doi.org/10.3390/su11071877>
- Dang, T. T., Zhang, C., Nguyen, T. H., & Nguyen, N. T. (2020). Assessing the influence of exchange rate on agricultural commodity export price: evidence from Vietnamese coffee. *Journal of Economics and Development*, 22(2), 297–309. <https://doi.org/10.1108/jed-02-2020-0014>
- Gaspar, J. M. (2020). Paul Krugman: contributions to Geography and Trade. *Letters in Spatial and Resource Sciences*, 13(1), 99–115. <https://doi.org/10.1007/s12076-020-00247-0>
- Jerzy, S., & Oleksandr, O. (2022). International Trade Theories and Decision-Making Areas in the Field of Development Strategy. *WSEAS Transactions on Business and Economics*, 19, 521–530. <https://doi.org/10.37394/23207.2022.19.47>
- Kusdiantoro, K., Fahrudin, A., Wisudo, S. H., & Juanda, B. (2019). Kinerja Pembangunan Perikanan Tangkap Di Indonesia. *Buletin Ilmiah Marina Sosial Ekonomi Kelautan Dan Perikanan*, 5(2), 69–84. <https://doi.org/10.15578/marina.v5i2.8053>
- Laurie, R. (2023). Agness. Weaving a Malawi Sunrise, 89–92. <https://doi.org/10.1515/9781772121155-013>
- Lestari, S. D., Leon, F. M., Widyastuti, S., Brabo, N. A., & Putra, A. H. P. K. (2020). Antecedents and consequences of innovation and business strategy on performance and competitive advantage of SMEs. *Journal of Asian Finance, Economics and Business*, 7(6), 365–378. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO6.365>
- Muryani, Sari, D. R., & Landiyanto, E. A. (2019). Competitiveness analysis and factors that influence the export of Indonesian shrimp commodities. *Opcion*, 35(Special 75 Issue 22), 1417–1432. Nguyen, V. C., & Do, T. T. (2020). Im
- Nguyen, V. C., & Do, T. T. (2020). Impact of exchange rate shocks, inward FDI and import on export performance: A cointegration analysis. *Journal of Asian Finance, Economics and Business*, 7(4), 163–171. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO4.163>
- Nurhayati, E., Hartoyo, S., & Mulatsih, S. (2019). Analisis Pengembangan Ekspor Pala, Lawang, dan Kapulaga Indonesia. *Jurnal Ekonomi Dan Pembangunan Indonesia*, 19(2), 173–190. <https://doi.org/10.21002/jepi.2019.11>
- Oyatoye, E., Arogundade, K., Adebisi, S., & Oluwakayode, E. (2011). Foreign direct investment, export and economic growth in Nigeria. *European Journal of Humanities and Social Sciences*, 2(1), 66–86.
- Xu, Z., Li, Y., Chau, S. N., Dietz, T., Li, C., Wan, L., Zhang, J., Zhang, L., Li, Y., Chung, M. G., & Liu, J. (2020). Impacts of international trade on global sustainable development. *Nature Sustainability*, 3(11), 964–971. <https://doi.org/10.1038/s41893-020-0572-z>