

Analysis of Export Competitiveness of Main Commodities of North Sulawesi Province

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Abstract

This study describes the competitiveness of the main Commodity Exports of North Sulawesi Province. This research is quantitative in nature, using secondary data obtained from the Central Statistics Agency (BPS) in the form of time series with a period of 5 years (2017-2021); the type of data used is the realization of the export value of the four main commodities of North Sulawesi 2017-2021. This research uses Revealed Comparative Advantage (RCA) analysis. The results of this study indicate (1) commodities identified as the most superior commodities of North Sulawesi, namely the commodity Animal/vegetable fats & oils, commodities fish and shrimp, meat commodities, and processed fish commodities, have high competitiveness with an RCA value > 1. (2) The results of the analysis show that the various chemical products group in 2017 has a weak competitiveness RCA value < 1 but when viewed from the average RCA value for five years the commodity of various chemical products has an RCA value > 1.

Keywords: Competitiveness, Export, Main Commodities, Revealed Comparative Advantage (RCA)

JEL Classification: F11, F43

INTRODUCTION

In the current era of globalization and free trade, people with ideas, science and technology, and the goods and services produced can easily cross-national borders. The relatively free movement of people, goods, and services produced has led to interconnectedness and dependence, and increasingly fierce global competition. The impact of globalization is that there are no more countries that are "autarchies" or countries that live in isolation without having economic, financial, or international trade relations. International trade is one of the activities that occur as a result of the world's globalization process. With globalization, a relationship of interdependence and competition between countries will be formed in various ways, one of which is in the form of international trade (Salvatore, 2016; Tambunan, 2000). International trade, especially exports, is believed to be a

driving force in Indonesia's economic growth, including those that embrace the open economic system in their economy.

Exports are international trade activities that have become an engine of growth for developing countries, with export activities developing countries can increase foreign exchange so that it will increase the wealth or income of the country, indirectly can also increase per capita income (the explore let growth hypothesis) (Richardson, 1978; Wang, 2017). In the current era of modernization, some countries follow export-dependent development as a maneuver to drive economic stability. International trade can be the driving force of a country's economy if it is carried out efficiently and effectively, as well as knowing the opportunities that a country has (Widyasanti, 2010). The achievement of international trade by a nation can be seen from its competitiveness. Competitiveness is a basic concept used in the field of economics, which refers to the commitment of regional and global market competition depending on the milestones of success. Competitiveness also indicates strengthening the domestic economy with global orientation and competitiveness.

In the 2010 International Merchandise Trade Statistic (IMTS) manual, international trade statistics record all goods that add to or reduce a country's stock of resources by entering (imports) or leaving (exports) to/from its economic territory. On this basis, increasing exports is no longer an option but an obligation for a country. Global product marketing is different from regional product marketing; the global market is very competitive; as a result, only entrepreneurs who have high competitiveness are certainly at the top of the competition. In creating competitiveness, it is necessary to improve the quality of export products to avoid rejection from export destination countries. Therefore, competitiveness is the key for entrepreneurs, countries, and regions to achieve trade success. Competitiveness is the ability of a sector, industry, or company to compete successfully to achieve sustainable growth in a global environment as long as the cost of the draw is lower than the revenue of the resources used (Esterhuizen, 2008). The ability of a commodity to become a leading export commodity depends on the comparative and competitive advantages of the commodity (Nopirin, 2014). The consumptive pattern of consumers determines the ability to be competitive. Several factors greatly affect the level of competitiveness in a country or region, including product composition, industrial structure, and growth rate. Suppose a country or region can realize the appropriate product composition, the right industrial structure, and a high growth rate. In that case, a country or region can compete in the global market. A concept in economics that refers to the commitment to successful international competition is called competitiveness. The high competitiveness will affect export performance, which impacts economic growth by 80 percent.

The concept of comparative advantage is a measure of potential competitiveness (advantage) in the sense of competitiveness that will be achieved if the economy does not experience distortion at all (Simatupang, 1991; Sudaryanto & Simatupang, 1993). Commodities that have a comparative advantage are also said to have economic efficiency. In addition, the comparative advantage of a developing country, at some level, shifts from a process that requires unskilled, abundant, and cheap labor to a process that involves a lot of inputs, capital, expertise, and mastery of technology. A product can become a

major commodity if its production is more incredible than domestic consumption is scarce, cheap, quality, and so on. Increasing competition in international trade will undoubtedly have an impact on the competitiveness of export commodities of a country or region. Local governments' ability to see sectors with advantages/weaknesses in their region is critical. Sectors that have advantages have better prospects for development and are expected to encourage other sectors to develop. North Sulawesi's export products are relatively competitive. Although there are sometimes some issues regarding the low competitiveness of export products, North Sulawesi Province continues to export its commodities. In the macroeconomic index, export performance is one of the main variables. Based on this, it is said that increasing the competitiveness of a country or region is determined by its export performance.

North Sulawesi is one of the provinces in Indonesia, where North Sulawesi Province also participates in international trade because it is in a strategic position and there are two largest ports, namely Bitung port and Amurang Port, maximizing these two ports as the door to international trade that can bring good things for exports. According to the Central Bureau of Statistics, in North Sulawesi's trade balance, exports contribute the most compared to imports. The main export products of North Sulawesi that are developed experience changes in the volume and value of exports yearly. However, on the other hand, the increase or decrease in exports is strongly influenced by the level of competitiveness. The production of the commodity itself strongly influences the ups and downs of the contribution of several major export commodities; therefore, it becomes a challenge and an opportunity to improve competitiveness to compete in the global market. With competitiveness, government elements and business actors should be required to have product quality and quantity. Previous studies related to the commodity competitiveness of a region have been discussed by previous researchers (Ansyah, 2010; Bustami & Hidayat, 2013; Kusuma & Sari, 2021; Ramadhani et al., 2021; Rudi Hartanto et al., 2021; Santoso & Olilingo, 2019; Satryana & Karmini, 2016; Tumengkol et al., 2015; Ustriaaji, 2017; Van Rooyen et al., 2011; Wahyudi & Maipita, 2018). This study aims to analyze the competitiveness of the four main commodities in the province of North Sulawesi.

METHOD

This type of research uses a quantitative approach, and the data used is secondary data in the form of time series data with a period of 5 years, namely 2017-2021. The type of data used is export realization data for the four main export commodities of North Sulawesi: vegetable animal fats & oils, fish and shrimp, processed meat & fish, various chemical products, and oily grains. Furthermore, data on the realization of the total export value of all North Sulawesi commodities. At the same time, the comparison data is the realization of Indonesia's export value of 4 entities, namely vegetable animal fats & oils, fish and shrimp, processed meat & fish, and various chemical products, and data on the realization of the value of exports of all Indonesian commodities. The data was obtained from the Central Bureau of Statistics (BPS) of North Sulawesi and synchronized using the 2-digit Harmonized System Codes (HS Code) to adjust the use of the same code for the four main export commodities of North Sulawesi with international principles.

Data Analysis Method

The method used to determine competitiveness for comparative advantage is the concept of Revealed Comparative Advantage (RCA). RCA was first introduced by (Balassa, 1979) to measure a product's relative. The basic concept of RCA measurement is to measure the export performance of a product from a country which is measured by calculating the share of the export value of a product to the total exports of a country compared to the value of the product in world trade. The level of competitiveness of a country's export commodities or industries can be analyzed by various methods or measured by several indicators. One of them is Revealed Comparative Advantage (RCA). This RCA calculation uses Microsoft Excel 2007 software. An RCA value greater than 1 indicates strong competitiveness. The higher the RCA value of the commodity, the stronger the product's competitiveness, so it is recommended to continue to develop by specializing in the commodity. RCA is measured through the concept that the export performance of a product from a country or region is measured by calculating the share of export value to the total exports of a country or region compared to the share of the product value in world trade.

$$RCA=(X_{ij}/X_{is})/(X_{iw}/X_w)$$

Description:

X_{ij} = Export value of commodity i in North Sulawesi in year t

X_{is} = Total value of North Sulawesi commodity exports in year t

X_{iw} = Export value of commodity i in Indonesia in year t

X_w = Total export value of Indonesia in year t

So, it can be said that if the competitiveness of North Sulawesi commodities is above the average competitiveness of similar commodity export values in national exports, then the RCA value > 1 or has strong competitiveness. Meanwhile, if the RCA value is below the average or RCA < 1, it means that the commodity has weak competitiveness.

RESULTS AND DISCUSSION

This research is to answer all problem formulations using the Revealed Comparative Advantage Analysis method discussed in the previous chapters. This research can only see strong or weak competitiveness.

Vegetable Fats & Oils

Table 1. RCA value of animal/vegetable fats & oils

Year	RCA	Competitiveness
2017	5,152	Strong
2018	4,978	Strong
2019	4,156	Strong
2020	3,918	Strong
2021	3,948	Strong
Average	4,430	Strong

Source: Central Bureau of Statistics (data processed), 2022

Table 1 shows that North Sulawesi animal/vegetable fats and oils commodities have an RCA value greater than one each year with an average RCA

value of 4.430. This figure indicates that the export competitiveness of North Sulawesi animal/vegetable fats and oils commodities during 2017-2021 was better than the average competitiveness of animal/vegetable fats and oils commodities in national exports during the same period of years. The highest RCA value of animal/vegetable fats and oils commodities was in 2017 at 5.152, while the lowest was in 2020 at 3.918. Based on the RCA value, it can also be concluded that North Sulawesi Province specializes in animal/vegetable fats and oils commodities. Exports of animal/vegetable fats and oils accounted for an average of 50-60 percent of North Sulawesi's total exports.

Fish and Shrimp

Table 2. RCA value of Fish and Shrimp

Year	RCA	Competitiveness
2017	3,977	Strong
2018	4,645	Strong
2019	5,730	Strong
2020	23,108	Strong
2021	37,581	Strong
Average	15,008	Strong

Source: Central Bureau of Statistics (data processed), 2022

Table 2 shows the results of the estimation of the RCA value of North Sulawesi fish and shrimp commodities, namely the average RCA value from 2017 to 2021 of 15.008; this identifies that fish and shrimp are one of the commodities that have strong competitiveness as evidenced by the average RCA value > 1. The highest RCA value of fish and shrimp commodities is in 2021, amounting to 37.581. In comparison, the lowest RCA value of fish and shrimp reached a value of 4.645 in 2018.

Processed Meat & Fish

Table 3. RCA value of Processed Meat & Fish

Year	RCA	Competitiveness
2017	10,754	Strong
2018	7,687	Strong
2019	10,683	Strong
2020	7,738	Strong
2021	6,423	Strong
Average	8,659	Strong

Source: Central Bureau of Statistics (data processed), 2022

Table 3 shows that the estimated RCA value of the North Sulawesi Processed Meat & fish commodity in the last five years, namely from 2017 to 2021, has an average RCA value of 8.659; this figure indicates that the processed meat & fish commodity is one of the strong competitive commodities as evidenced by the average RCA value > 1. The processed meat & fish commodity reached the highest RCA value in 2017 of 10.754, while in 2021, it reached the lowest RCA value of 6.423.

Various Chemical Products

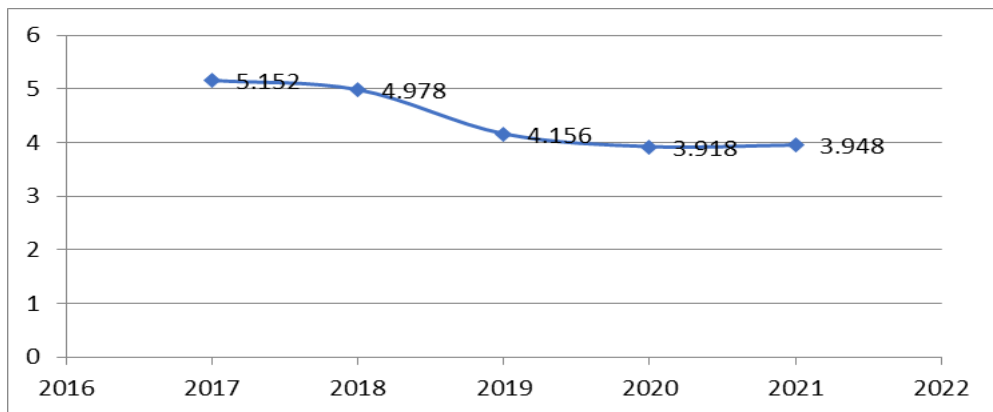
Table 4. RCA value of Various Chemical Products

Year	RCA	Competitiveness
2017	0,998	Weak
2018	1,326	Strong
2019	1,094	Strong
2020	1,180	Strong
2021	1,148	Strong
Average	1,149	Strong

Source: Central Bureau of Statistics (data processed), 2022

Table 4 shows the results of estimating the RCA value of commodities. Various chemical products in the last five years have an average RCA value of 1.149, which means that the commodity has strong competitiveness, as evidenced by the average RCA value > 1. The highest RCA value of various chemical products was in 2020 at 1.180, while in 2017, it reached the lowest RCA value of 0.998

Animal/vegetable fats & oils

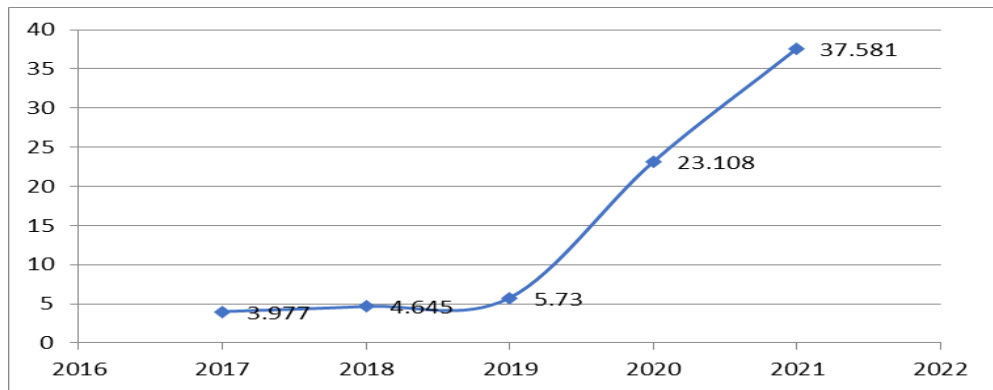


Graph 1: RCA Value of Animal/vegetable fats & oils

Source: North Sulawesi Central Bureau of Statistics (data processed), 2022

Graph 1 shows that the trend in the competitiveness of animal/vegetable fats & oils commodities from 2017 to 2021 tends to decrease yearly. However, if you look at the competitiveness, it is still classified as strong because the RCA value is > 1. The decrease in the RCA value is due to a reduction in the demand by export destination countries, which results in a decrease in the export value of animal/vegetable fats and oils. This figure indicates that the export competitiveness of animal/vegetable fats & oils commodities during 2017-2021 was above the national average of animal/vegetable fats & oils commodity exports. Vegetable animal fats and oils are derivatives or products of coconut. The largest coconut-producing area in North Sulawesi (Rusno et al., 2014) is the South Minahasa Regency, with a land area of 44,997.50 ha. This area is also known as the copra-producing area in North Sulawesi. Countries with large export values of animal/vegetable fats and oils are the United States, the Netherlands, China, and South Korea. America has an immense average export value.

Fish and Shrimp

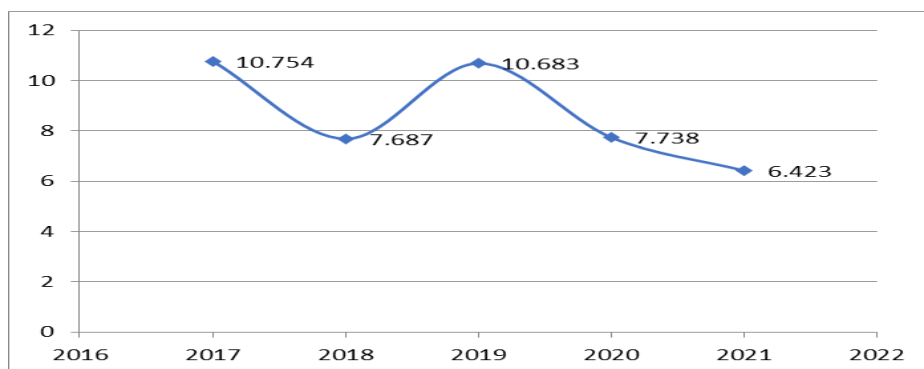


Graph 2: RCA Value of Fish and Shrimp

Source: North Sulawesi Central Bureau of Statistics (data processed), 2022

Graph 2 shows that the trend of competitiveness of North Sulawesi fish and shrimp commodities from 2017 to 2021 tends to increase yearly. This indicates that the export competitiveness of North Sulawesi fish and shrimp commodities is better than the average national competitiveness during the same period of years. Based on the results of the RCA calculation, it can be concluded that North Sulawesi Province specializes in fish and shrimp commodities. In addition, North Sulawesi is one of the provinces that contribute significantly to the export of fish and shrimp commodities in Indonesia, as indicated by the high RCA value of these commodities. The United States and Japan export destinations for North Sulawesi fish and shrimp. Fisheries commodities, more precisely in the fisheries sector, especially fish and shrimp commodities, are one of the leading commodities in the industrialization program where the government seeks to advance and develop the fisheries sector because it sees the benefits and benefits that will benefit the Minahasa, Southeast Minahasa, North Minahasa, and Bolaang Mongondow regencies which prioritize the fisheries sector into one of the industrialization programs by looking at coastal areas and existing marine resources.

Meat & Fish



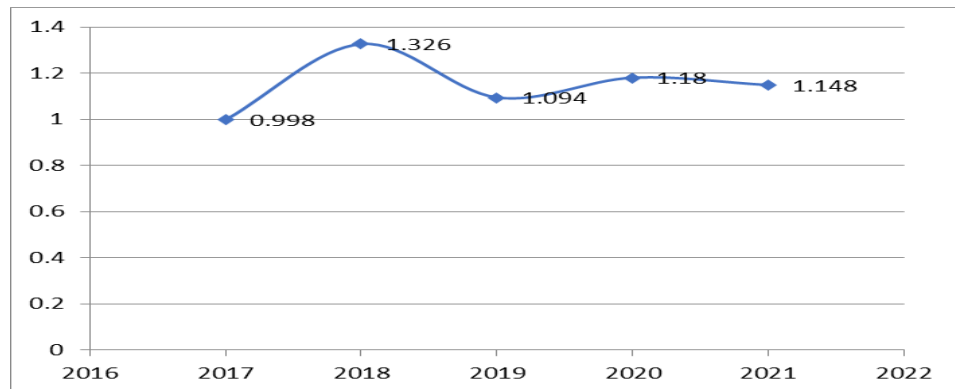
Graph 3. RCA Value Processed Meat & Fish

Source: North Sulawesi Central Bureau of Statistics (data processed), 2022

Graph 3 shows that the trend of competitiveness of processed meat & fish commodities has fluctuated, indicated in the first two years, it decreased with an

RCA value of 7.687. In 2019 competitiveness increased by 10.683 and again reduced in the last two years to 6.423. In addition to the price increase, one of the factors that caused the competitiveness of processed meat & fish commodities to be unstable was a decrease in the number of requests from export destination countries.

Various Chemical Products



Graph 4: RCA Value of Various Chemical Products

Source: North Sulawesi Central Bureau of Statistics (data processed), 2022

Graph 4 shows the trend of commodity competitiveness. Various chemical products in the period 2017 to 2021 tend to experience fluctuations. In the first two years, it experienced an increase reaching a value of 1.326, and then due to a decrease in prices, this commodity in 2019 experienced an increase in the number of requests from export destination countries; this also had an impact on export values which decreased. In line with the theory of demand, where prices decrease, the number of goods or services demanded increases.

From the above research results, a general picture of the leading commodity exports of North Sulawesi was obtained, which experienced fluctuations. Such conditions may be caused by socioeconomic conditions that are still unstable and full of uncertainty. Several factors hamper export activities, especially the ability of exporters to understand exports, including government policies and export credit bureaucracy that tends to be slow to handle. The problems faced can be divided into two, namely internal and external problems. Some internal problems include the increasingly scarce raw materials, limited export channels, low quality of resources and technology, and of course, the weak competitiveness of export commodities. On the other hand, external problems include increasingly intense competition between countries/regions and the tendency of developed countries to accelerate the liberalization agenda. Thus, things that can be done to increase North Sulawesi exports are various government policies related to exports, increasing the production and quality of export commodities, and taking firm action against those who commit illegal levies.

The theory related to the results of this study is Porter's theory of economic competitiveness; according (Porter, 1990) regional competitiveness is one of the main issues in regional development, the concept of competitiveness is generally

associated with the ability of a company, regional city, region or country to maintain or increase competitive advantage on an ongoing basis. This theory departs from the belief that classical economic theory that explains comparative advantage is insufficient or inappropriate. According to Porter, a country gains a competitive advantage if a company, regional city, or region has a competitive advantage.

The results of this study are also consistent with research conducted by (Ustriaji, 2017). They are resulting in some of Indonesia's leading commodities has grown significantly. The palm oil commodity is ranked first as the largest contributor, which has experienced a significant increase in growth with the highest total export value from 2010 to 2014. The results of the RCA analysis showed that coffee, forest products, footwear, palm oil industry, textile cocoa, and rubber from 2010 to 2014 were more competitive than the global average. In addition, this research is also in line with a study (Rudi Hartanto et al., 2021) which found that Indonesian (Tuna, Cakalang, Tongkol) TCT exports to the US market have a comparative advantage because they have an RCA index value of > 1 . This is influenced by the size of a country's commodity export trade. Indonesia's TCT exports are in a rising star position in the US market. Apart from that, various chemical products have weak competitiveness. The results of this study show different findings from the study from (Wahyudi & Maipita, 2018) which found that chemicals have a comparative advantage with a value greater than 1

For this reason, various parties related to exports (local governments, Bank Indonesia, banks in the regions, business actors, and other stakeholders) need to be involved in various policy formulations that affect business activities in general and exports in particular. Increasing export competitiveness, which is an absolute prerequisite for the success of increasing exports, needs to be done not only in the export business activities but in every link and all activities from the production of goods to the delivery of goods to export destination countries. Thus, North Sulawesi non-oil and gas commodities have competitiveness in the international share, especially namely animal/vegetable fats and oils, fish & shrimp, processed meat and fish, and various chemical products. This is based on the measurement of Revealed Comparative Advantage, which shows that the RCA value owned by North Sulawesi in the main commodities is at a value of more than one and even higher.

CONCLUSION

Judging from the results of the calculation of Revealed Comparative Advantage in the 2017-2021 period, commodities that have an RCA value > 1 , namely animal/vegetable fats and oils, fish and shrimp commodities, and meat and processed fish commodities indicate that these commodities have strong competitiveness in the international market. When viewed from the calculation of Revealed Comparative Advantage in the 2017-2021 period, fish and shrimp are one of the leading commodities in the industrialization program where the government seeks to advance and develop the fisheries sector because it sees the benefits and benefits that will benefit the Minahasa Regency, Southeast Minahasa, North Minahasa, and Bolaang Mongondow which prioritize the fisheries sector into one of the industrialization programs. From the results of the calculation of

Revealed Comparative Advantage in 2017, which has an RCA value < 1 , namely commodities of various chemical products have weak competitiveness, but when viewed from the average value of RCA, commodities of various chemical products have an RCA value > 1 . The Chemical Product Commodity can be a superior commodity if developed and worked on

Based on the conclusions that have been drawn, the recommendations that can be given based on the results of this study: The results of research related to commodities that have weak competitiveness indicate that producers and the government must pay more attention to export commodities, especially various chemical product commodities. In addition to increasing the competitiveness of commodities, it is necessary to take steps to improve performance and support conducive export policies to increase productivity and efficient export costs to improve trade performance. Strong competitiveness is a big opportunity in the international trade market; even though the export value of these commodities fluctuates, producers must strive to promote commodities and increase export values and must be more observant in seeing the opportunities for the government to continue to maintain economic stability. Overall. For further research, it is hoped that I will be able to develop the research that I have done to look at other factors that affect the level of export competitiveness.

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