

Analysis of Corn Commodity Competitiveness in Gorontalo Province

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Abstract

This study aims to determine and analyze the competitiveness and superiority of corn commodities in Gorontalo Province. The data used in this study is secondary data from Gorontalo Province for five years, namely from 2016-2020, sourced from the Central Statistics Agency of Gorontalo Province. The data analysis used in this research is RCA (Revealed Comparative Advantage) analysis.

The results show that the RCA (Revealed Comparative Advantage) analysis for Gorontalo Province for the last 5 years starting from 2016-2020 that the commodity "Maize" has a very significant role. This can be seen from the amount of Corn's contribution in 2018 and 2020 more than looking at the total export of commodities in that year. This means that "corn" is the most dominant in Gorontalo Province and needs to be analyzed further regarding its export competitiveness nationally. From the RCA calculation, it can be shown that corn production in 2018 ($RCA > 1$) is 1.78%. This means that these exports have competitiveness above the national average competitiveness. The highest competitiveness is in 2020 6.64%.

Keywords: Corn, Competitiveness, Comparative Advantage.

1. Introduction

Economic growth is an increase in the ability of an economy to produce goods and services. In other words, economic growth refers to changes that are quantitative in nature and are usually measured using data on gross domestic product or per capita output income. According to Shumpeter economic growth in Putong (2010), is an increase in output (national income) caused by population growth and a natural increase in the level of savings. Economic growth, according to some development economists, is a term that refers to the success of development in developed countries, and in developing countries the term economic development is used. Economic growth is also an indicator of the success of development carried out and can determine the direction of future development in a country or region influenced by capital, natural resources, talent accumulation, both quantity and quality of population, technological progress, access to information, desire for innovation and progress, and workforce culture.

The Central Statistics Agency (BPS) reports that Indonesia's economic growth in the second quarter of 2021 has increased to 7.07 percent on an annual basis (year on year/yoy). Furthermore, the Indonesian economy in the second quarter of 2021 grew by 3.31 percent (quarter-to-quarter) from the previous quarter. The improvement in Indonesia's economy in the second quarter of 2021 was mainly driven by improved performance in exports, household

consumption, investment, and government consumption. This economic improvement shows that Indonesia has managed to recover after experiencing pressure during the last few quarters due to Covid-19.

According to the Ministry of Investment, BKPM, the economic improvement is indeed a good sign, but it is still important to ensure that there will not be another decline in the next quarter. One of the things that plays a significant role in Indonesia's economic growth is investment. Investment performance as one of the engines of growth began to increase, which was 7.54% (year on year/yoy).

Regions in Indonesia have various characteristics both in terms of natural resources, human resources, regional demographics, and their accessibility to the center of government so that one area is different from another. In addition, in the period before Regional Autonomy, government policies were very dominant towards the regions so that sometimes what the government expected did not match the expectations of the regions.

Indonesia is a country with the 5th largest population in the world in terms of food needs, and of course a very large country. Food production, especially rice/grains, corn, soybeans, cassava, tubers and other carbohydrate sources (Hutabarat, 2014). Food crops as agricultural raw materials include basic human needs that are considered strategic and are often accompanied by emotions and even politics.

Indonesia has several corn production base areas including Lampung, West Java, East Java, South Sulawesi, and East Nusa Tenggara. In addition, there are several very promising areas that can meet domestic and foreign demand for maize, such as Gorontalo, Central Sulawesi, West Sulawesi and West Nusa Tenggara. The four areas need to be further optimized for corn cultivation and of course the supply of corn needed needs to be increased.

According to the Ministry of Agriculture, corn is a raw material for self-sufficiency and currently needs to be developed for sustainable self-sufficiency. However, in reality, Indonesia still imports corn from abroad to meet domestic needs. Below is data on the value of corn exports in Indonesia from 2018 to 2020.

Table 1.3 Export Value of Indonesian Corn Commodities in 2018-2020 (USD)

Year	Commodity	Total Value of Eoexports
2018	Corn	72.936,8
2019	Corn	901,5
2020	Corn	16.516,3

Source: Badan Pusat Statistik Indonesia, 2021

Gorontalo is one area that is expected to produce corn, as evidenced by corn productivity which continues to increase from year to year. The following is a table of corn raw material production and harvested area in Gorontalo from 2010 to 2020.

Table 1.4 Table of Production of Corn Agriculture in Gorontalo Province Year 2016-2020

Year	Hectares Area	Production (Tons)	Produksi Perhektare (HA)
2016	195.606	911.350	4,659105025
2017	336.001	1.552.001	4,619041636
2018	343.241	1.554.751	4,529617439
2019	377.642	1.788.862	4,736924627
2020	304.945	1.387.388	4,549632094

Sumber: Dinas Pertanian Provinsi Gorontalo, Olahan Data 2021

Table 1.4 above shows that the hectare area of corn farming in Gorontalo Province from 2016 to 2019 has increased by 377,642 hectares, but in 2020 it has decreased to 304,945 hectares. While the production table from 2016-2019 increased by 1,788,862 tons, but in 2020 corn production decreased by 1,387,388 tons. Then the production table per hectare (HA) from 2016-2020 experienced fluctuations or ups and downs in production data.

Table 1.5 Total Export Value of Gorontalo Province Year by Commodity 2018-2020 (USD)

Year	Commodity	Export Value
2018	Corn	24.019.225
	Milling industry products; malt; starch	5.537.400
	Sugar & Confectionery	1.950.443
	Copra meal	1.92.500
2019	Sugar & Confectionery	5.134.615
2020	Corn	8.891.750
	Sugar & Confectionery	4.340.170
	Tobacco/tobacco cigarettes	13.039

Source: BPS Provinsi Gorontalo, 2021

Mass production does not guarantee a product has a high comparative advantage. If it can be produced in a cost-effective manner in terms of the cost of domestic resources, those resources have a comparative advantage. This saves foreign exchange and makes domestic production more profitable than imports. Therefore, it is necessary to conduct a survey to determine the magnitude of the comparative advantage of raw materials.

Based on the background described above, the authors are interested in analyzing "Analysis of the Competitiveness of Corn Commodities in Gorontalo Province"

2. Materials and Methods

2.1 Theory Study

2.1.1 Trade and Economic Growth

Humans are living beings who are not far from the economy, especially regarding the fulfilment of the needs of both goods and services. No country in the world is able to live alone, including in meeting the needs of its people. There may be some countries that can meet their own domestic needs by producing goods or services independently.

However, it is not absolute that this can be fulfilled because one country definitely needs the participation of other countries in meeting these needs. Several reasons such as advances in science, availability of raw materials, and so on cause us to need the participation of other countries in meeting the economic needs of a country. If this happens, there is a need for cooperation between countries in order to meet each other's domestic needs.

2.1.2. Gorontalo Province Superior Products

• Hazelnut

Based on the location quotient analysis, candlenut is classified as a leading commodity with an average location quotient coefficient of 2.4077 (during five years of observation). Candlenut is classified as superior because it is also influenced by large production, when compared to the average in Gorontalo Province, which is 402 tons in 2013.

• Aren

Based on the location quotient analysis, sugar palm is classified as a leading commodity with an average location quotient coefficient of 5.4761 (during five years of observation). Sugar palm is classified as superior because it is also influenced by large production, when compared to superior commodities from other forestry sub-sectors.

• Resin

Based on location quotient analysis, resin is classified as a leading commodity with an average location quotient coefficient of 1.5743 (during five years of observation). Damar is classified as superior because it is influenced by large demand, when compared to the average in Gorontalo Province, which is 13,759.69 tons in 2013

• Corn

Corn is a food crop that has an important role. In short, it can be a source of food, raw material for the animal feed industry, corn-based processed food industry, and alternative biofuel fuels abroad. (Varina, 2018).

2.1.3. Competitiveness Analysis

Competitiveness is the ability of an individual, region, or product to outperform others. In the concept of regional economy, competitiveness means the ability of a region to produce higher production than other regions. World Economic Forum Global Competitiveness Report. Competitiveness is defined as a set of institutions, policies, and factors that affect the level of productivity of a country. "The set of institutions, policies, and factors that determine the level of productivity of a country" (Global Competitiveness Report (2012) in Pratama (2015).

The economic competitiveness of a country is an accumulation of the competitiveness of every business entity in the country. Porter (2009) in (Syam, 2019) formulates this competitiveness as economic prosperity and because productivity is considered the most important determinant

in improving the country's standard of living in the long term, it is highly dependent on productivity. From a micro perspective, the relative price level is an indicator of a company's competitiveness. The lower the relative price level, the more competitive the firm. The relative understanding must be interpreted in terms of the various attributes that make up a particular product, both in terms of quality, design, price, comfort, and other attributes. Therefore, the essence of competitiveness is the reduction of production costs. In addition, agricultural competitiveness in the local context is an agricultural business by providing promotion, protection, empowerment and regulation that prioritizes the optimal use of local resources for the maximum welfare of farmers in a sustainable manner in the region. areas to develop (Simatupang (2016) in Dermoredjo, 2018).

2.1.4. Competitive Advantage

The competitiveness of a country in international trade is determined by two factors, namely comparative advantage, natural advantage and competitive advantage, namely advantages that can be created (Tambunan, 2003). From the demand side, the ability to compete means that the commodities sold must match the attributes demanded by consumers. Meanwhile, from the supply side, namely the competitive ability demanded by consumers efficiently (Abdullah et al, 2002).

The theory of comparative advantage is the theory put forward by David Ricardo. In this theory, Ricardo states that international trade occurs when there are differences in comparative advantage between countries.

3. Results and Discussion

The analysis used is the Revealed Comparative Advantage (RCA) analysis to see the competitiveness in Gorontalo Province for the last 5 years starting from 2016-2020. Before conducting the RCA analysis, we first determine which commodities have the largest contribution in Gorontalo Province. In comparing the contribution of each commodity, we can compare it with the total production of all commodities in Gorontalo Province.

3.1 Analysis of Corn Commodity Competitiveness of Gorontalo Province

Based on the analysis in the previous point, it is known that corn is a more dominant commodity compared to the production of other commodities. Therefore, in the analysis of commodity competitiveness at the national level, only corn is taken into account in the analysis of its competitiveness. The analysis technique in this calculation uses RCA analysis, the following is the analysis:

Table 2

Tahun	X _{ij}	X _j	X _{ij} /X _j	X _{iw}	X _w	X _{iw} /X _w	RCA
2016	-	4,308,303	-	5,022,445	144,489,825,811	0.000035	-
2017	-	1,575,508	-	1,059,750	168,828,175,936	0.000006	-
2018	24,019,225	33,434,568	0.72	72,936,801	180,215,035,580	0.000405	1.775
2019	-	5,134,615	-	901,485	167,682,996,134	0.000005	-
2020	8,891,750	13,244,959	0.67	16,516,340	163,306,486,102	0.000101	6.638
Total	32,910,975	57,697,953	1.39	96,436,821	824,522,519,563	0.000552	8.413
Rerata	16,455,488	11,539,591	0.28	19,287,364	164,904,503,913	0.000111	4.206

Notes:

X_{ij} = Export Commodity (Corn) of Gorontalo Province (US\$),

X_j = Total Export of Agricultural Commodities of Gorontalo Province (US\$)

X_{ij}/X_j = Indonesian Corn Commodity (US\$)

X_{iw} = Indonesian Corn Commodity (US\$)

X_w = Total Indonesian Exports (US\$)

RCA = Revealed Comparative Advantage

Source: Data Processed Results, 2022 (Attached)

From the RCA calculation, it can be shown that corn production in 2018 ($RCA > 1$) is 1.78 (rounded up). The highest competitiveness is in 2020 6.64 (rounded up). This means that the competitiveness of maize commodities in Gorontalo Province is quite good. Meanwhile, for data in 2016, 2017 and 2019 the value of the RCA cannot be identified, because corn export activities are not carried out in Gorontalo province as a result of the price of corn in the region is still quite expensive compared to having to export it. go out.

4.2.2 RCA Growth Rate for Corn Commodity Gorontalo Province

In 2020 there was a development of the competitiveness of the Gorontalo corn commodity, previously in 2018 the RCA value was 1.78 to 6.64 in 2020. This means that there was an increase of 274%. This development was caused by an increase in the quantity of exports and corn production owned by Gorontalo Province. Not only that, the success of Gorontalo Province's corn exports is due to the advantage of its location which is close to the corn importing country, namely the Philippines. In 2018, Indonesia exported 80 thousand tons of corn through Gorontalo to the Philippines. Until May 2018, the realization of Indonesian corn exports to the Philippines was almost 200 thousand tons. From January to August 2020, Gorontalo Province succeeded in exporting corn to the Philippines with a total export of 30,400 tons worth Rp 125.5 billion.

Based on the results above, it has previously been explained that:

a. Corn Commodity Competitiveness in Gorontalo Province

Japan is the target market for Indonesian corn exports, although in 2013 Indonesian corn exports reached 3.3 thousand tons in 2013, then decreased to only 1.8 thousand tons in 2016 (Central Bureau of Statistics, 2016). When viewed from the period of decline in 2016, Gorontalo Province did not export corn commodities. This proves that the decline in the quantity of corn exports due to the role of the Gorontalo Province corn export commodity can be taken into account in Asia.

Gorontalo is the ninth largest corn-producing province on a national scale (Ministry of Agriculture of the Republic of Indonesia, 2022). Corn of Gorontalo Province has competitiveness, this can be seen from the results of the RCA. Calculations show that Gorontalo Corn has export competitiveness. Gorontalo's corn export performance is quite good.

This is inseparable from the role of the Gorontalo Provincial Government, the Gorontalo Provincial Government's policy to encourage farmers to increase production, ensuring a relatively profitable selling price. Even the Gorontalo Provincial Government has imposed a ban on collecting from traders who do not buy at the base price. Thanks to this initiative, Gorontalo is able to export corn to various countries including Malaysia, the Philippines, and South Korea.

b. Development of Corn Commodity Competitiveness in Gorontalo Province

The progress of corn commodities can be seen through the growth of corn production over a certain period of time. In looking at the development of corn commodity competitiveness in Gorontalo Province, it can be seen from the RCA index. The next step in looking at the development of the competitiveness of corn commodities can be seen from the amount of production produced by Gorontalo Province. The accumulated export volume of Gorontalo Province corn in 2018 reached 90,000 tons or 33.04 percent of the total export of corn commodities carried out by Indonesia. Meanwhile, in 2020, corn commodities decreased by 37,100 tons or 57.72 percent of the total export of corn commodities carried out by Indonesia. The increase in production produced by the corn commodity in Gorontalo Production is evidenced by the RCA Index value in 2020 of 374%. This means that it proves that the corn commodity in Gorontalo Province has high power and is very promising to remain a leading commodity.

RCA values in 2016, 2017 and 2019 RCA values could not be identified because Gorontalo Province did not export corn because domestic corn prices were quite good (Santoso & Olilingo, 2019). RCA analysis is allowed to use only a few years of data. This is because the calculation of RCA (Revealed Comparative Advantage) has taken into account the magnitude of the comparative advantage in an area as well as a country scale over a larger area.

Apart from that, the success of Gorontalo Province's corn exports is due to the advantage of its location close to the corn importing country, namely the Philippines. In 2017 2018, Indonesia exported 80 thousand tons of corn through Gorontalo to the Philippines. Until May 2018, the realization of Indonesian corn exports to the Philippines was almost 200 thousand tons. From January to August 2020, Gorontalo Province succeeded in exporting corn to the Philippines with a total export of 30,400 tons worth Rp 125.5 billion (Susilowati et al., 2021). This is also explained by the research conducted by Fahrudin Zain Olilingo (2019), corn exports from

Gorontalo Province are quite competitive, as can be seen from the changing competitiveness. Corn commodity in Gorontalo Province does not export corn, nor does it export because the local corn price is very high.

In the results of research conducted by Mantau, (2016) that corn from Lampung Province has a comparative advantage (0.33) higher than East Java (0.44), South Kalimantan (0.62), North Sulawesi (0.65) and Gorontalo (0.86). Meanwhile, East Java's competitive advantage is higher (0.45) than Lampung (0.63), South Kalimantan (0.56), North Sulawesi (0.97) and Gorontalo (1.34). This means that on an Indonesian scale, Gorontalo Province, corn is the most competitive crop compared to other corn exporting provinces.

Therefore, the Gorontalo Corn export market needs to be directed to these countries. In addition, support is needed to increase the national corn production capacity, so that they are able to take advantage of export market opportunities. First, quality is seen from the actual production and production potential which causes investors to be reluctant to invest some of their funds in Gorontalo Province. Second, the basic price at the farmer level is often manipulated by middlemen, even though there is already a Governor's Decree No.19 of 2006 which regulates it. Third, the distribution channels are convoluted. Fourth, the Gorontalo Provincial Government is not serious about promoting.

The results of this study are in line with research conducted by Santoso & Olilingo (2019), which states that the development of the competitiveness of the Corn commodity of Gorontalo Province has good performance and should be taken into account at the national level.

4. Conclusion

Based on the discussion that has been described in the previous chapter, the conclusions obtained are:

1. From the RCA calculation, it can be shown that corn production in 2018 ($RCA > 1$) is 1.78. The highest competitiveness is in 2020 6.64. This means that the competitiveness of maize commodities in Gorontalo Province is quite good.
2. Between 2018 and 2020 there was a development of the competitiveness of maize production in Gorontalo Province 374% this was caused by the calculation of the RCA index considering only 2 years, namely in 2018 and 2020. This is because the export value of corn is only found in that period.

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