
ANALYSIS OF REGIONAL COMPETITIVENESS ON COMMODITY DEVELOPMENT FEATURES IN NORTH SULAWESI PROVINCE, CENTRAL SULAWESI AND GORONTALO PROVINCE

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Abstract

The research was conducted in Sulutenggo Province aiming to assess and to analyze the regional competitiveness in Gorontalo Province, North Sulawesi Province and Central Sulawesi Province for the period of 2010-2020 as well as the determination of regional superior commodities in Gorontalo Province, North Sulawesi Province and Central Sulawesi for the period of 2010-2020. This research applied a quantitative descriptive research with a development planning model. The data used were time series data, namely GRDP data for the 3 provinces for the period of 2010 to 2020 that were analyzed using 2 analytical tools, Location Quotient (LQ) and Revealed Comparative Advantage (RCA) Methods.

The results of the LQ analysis showed that the base sectors for North Sulawesi province were 7 basic sectors, namely the agricultural sector, the water supply sector, waste management, waste and recycling, the construction sector, the transportation and warehousing sector, the real estate sector, the government administration sector, defense and Mandatory Social Security, Health Services and Social Activities Sector and the rest are non-basic sectors. For Central Sulawesi Province, the basic sectors were agriculture, forestry and fisheries, Water Supply, Waste Management, Waste and Recycling, Government Administration Sector, Defense and Mandatory Social Security, Education Services Sector, Health Services Sector and Social Activities and the rest are non-basic sectors. Finally, for Gorontalo Province, the basic sectors were agricultural sector, forestry and fisheries, construction sector, transportation and warehousing sector, government administration Sector, defense and mandatory social security, education sector, health services sector and social activities and the rest are non-basic sectors. Based on the analysis using the Revealed Comparative Advantage (RCA) method, it revealed that the superiority of the commodity for North Sulawesi Province was Tongkol, for Central Sulawesi Province was Seaweed aquaculture, and for Gorontalo Province was Tuna.

Keywords: Base Sector and Regional Leading Commodities

Preliminary

The preamble to the 1945 Constitution in the fourth paragraph expressly emphasizes that the purpose of the establishment of the Government of Indonesia is to promote public welfare and to realize social justice for all Indonesian people. This paragraph means that the intended goal is that the government is expected to create and continued to promote welfare for the people but must be accompanied by the principle of justice for all communities wherever they are throughout Indonesia from Sabang to Marauke.

Indonesia is one of the countries in the world consisting of many large and small islands spread in all provinces and sometimes are difficult to reach in the process of implementing government activities when it is to attempt the community in remote area. Therefore, in carrying out various activities, it is always left to the respective regional governments, because it is hoped that all programs to be implemented can be completed properly, on time and on target so that all businesses can be distributed evenly and economic growth can increase rapidly.

Ginting (2013) said that to create economic growth in Indonesia, it must be done continuously and balanced with the principles of justice and equity. Hence, the impact does not widen the development inequality between regions, which is very visible in the presence of developed regions and backward or less developed regions. So in the current era of development, a policy of economic growth is required which is accompanied by strengthening the distribution of income.

The development of the leading sector must take place effectively and efficiently, besides considering its attachment with the supporting elements, and a good chain management or network structure is also well developed. So, the development process starting from the provision of raw materials, processing, warehousing, distribution and reaching the target market can be carried out more efficiently (lower production costs), especially the value of production and labor costs in according to Sa'id pada Nugroho, Iwan and Dauhuri, (2012)

The development of these various activities has essentially been enshrined in the essence of Regional Autonomy in Law no. 32 of 2004 concerning Regional Government and Law no. 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments which is the distribution of authority based on the principles of decentralization, deconcentration and assistance tasks at the government level, in order to encourage regional initiatives to build their independence in the unitary State of the Republic of Indonesia.

The enactment of Law no. 32 of 2004 concerning Regional Autonomy, each region strives to be able to develop various potential sectors to increase regional GRDP, both developed by the private sector and by the regional government itself. In this era, regional economic development faces various challenges, both from within the region and from outside the region, such as the problems of inequality and globalization issues that require each region to be able to compete at home and abroad. Disparities and globalization have implications for each region to carry out the acceleration of regional economic development through the development of the region and its flagship products with the aim that regions that are still lagging behind can adapt to free market competition.

Basically, the development aims to increase high economic growth so it can provide benefits that are directly received by the community, and changes in the economic structure will be better than before. An important indicator to determine the economic condition of a region or region in a certain period is indicated by the Gross Regional Domestic Product (GRDP) data of the region; when the GRDP of a region shows very good conditions, economic growth in that area is used as one of the important indicators in conducting an analysis of the economic development occurred

in a country, because the economic growth shows the economic activity that generates additional income for the community in each certain period.

Aggregate economic growth indicators can be calculated through Gross Regional Domestic Product (GRDP) which is averagely weighted of its sectoral growth rate. It means that if a sector has high contribution and its growth is very slow, it will hamper the rate of economic growth in aggregately, and it will become an indicator of economic development in a particular area. Conversely, if a sector has a relatively large contribution to the totality of the economy, the sector will have a high growth rate and at the same time can further increase economic growth.

Regional potential that has been used optimally will certainly be able to contribute to the growth of people's income so that the GRDP picture will increasingly show a significant increasing trend where the level of economic inequality that occurs in the community is decreasing nationally.

Economic growth can increase its performance which is followed by the increase of community acceleration in order to increase the movement of its economic activity. Then, the potential of the area needs to be processed and utilized and created into goods and services required by every household. As for the regional potential of each region, it is always found to have differences because the regional conditions are different so that the natural resources in the area are also different. To develop a region, the government needs to look at the resources, if the resources are abundant then the development of the region will be fast, and vice versa.

The competitiveness of a region will be seen through the process of inter-regional (inter-regional) and international trade. In fact, in general, all countries tend to prioritize the industrial sector which is seen as a sector that has a high level of productivity, and the advantages of the industrial sector will gain high added value, including the development of existing economic potential to be processed into productive goods, the creation of new jobs, so equitable distribution of income can be created and ultimately can overcome the growth of unemployment in the area. Therefore, the goal of creating prosperity for the community can be quickly realized. Despite the variety of industrial sector development strategies in each country, it is believed that this sector has become a priority and many countries show their capability in creating various industries based on both the competitive and comparative advantages if the products are sold internationally.

Then in the Sulawesi Island, several provinces that have developed autonomously with potential area and population to be developed until 2018 have formed 6 definitive provinces, the following will describe the condition of the area and population in Table 1 below :

Table 1. The state of the area and population All Sulawesi Province in 2018

No	province	Area (Km2)	Total Population (Soul)
1	Sulawesi North *	13,851,64	2,461,028
2	Central Sulawesi *	61,841.29	2,966,325
3	South Sulawesi	45,764.53	8,690,294
4	Southeast Sulawesi	38,067,70	2,602,389
5	West Sulawesi	16,787.18	1,330,960
6	Gorontalo *	12,435.00	1.168.190
	Amount	188,747.34	19,219,186

Data source: BPS – Statistics Indonesia 2019

Note: * is the Research Study Area

Taking into account the condition of the area and population, the area used as the object of research turns out that Central Sulawesi Province has the largest area and the largest population compared to North Sulawesi and Gorontalo Provinces. The following describes the development of the Gross Regional Domestic Product and its growth rate for the Sulawesi region compared to national growth, which can be a reference in seeing the various types of businesses that have developed and which will be developed in each area around the community on the island of Sulawesi until 2018. The following table will describe the state of GRDP and its growth rate in the Sulawesi region and focus on the 3 provinces that are used as case studies of the research area, namely:

Table 2. GRDP Situation and GRDP Growth Rate by Cash Prices in 2010 for Sulawesi Province Year 2018

No	province	GRDP(Million Rp)	GRDP Growth Rate (%)
1	SulawesiNorth *	79,495,340	6.32
2	Central Sulawesi *	97,551,644	7.14
3	South Sulawesi	288,908,620	7.23
4	Southeast Sulawesi	83,038,500	6.81
5	West Sulawesi	29,361,960	6.67
6	Gorontalo *	25,092,735	6.74
	All Sulawesi	603,448,799	6.82
	National	9,912,749,300	5.07

Data source: BPS – Statistics Indonesia 2019

Note: * = Research Study Area

Based on the data in Table 1, it is explained that the growth value of Gross Regional Domestic Product (GDP) in 2018 shows an increase and the growth rate is very good, but the national increase has not shown significant changes because the value is still low but the growth rate for the region in Sulawesi exceeds the national standard namely 6.82% (national: 5.07%).

Looking at the data on the area, population and real GRDP development, they are not comparable to each other where the geographical conditions of the area are large but the population is very less so that this will also trigger the lack of development of creativity and the idealism of the community is not developed too, so it is not surprising that there are differences in content. Abundant resources are not utilized optimally and there may be a crisis of human resource shortages between one region and another. So if this occurs for long period of time, it will increase economic inequality in the area and those affected are the surrounding community in which the community who has already been poor becomes poorer and vice versa.

The concept of regional development like this is said to be the development of economic zones that are interdependent with each other in the problems of the transportation service sector, the industrial sector and trade of production products and the natural resource development sector and employment which are considered as opportunities for regional economic development. This is described in the same way as the relationship between the regions between Indonesia, Malaysia and Singapore (Batam-Bintan-Karimun).

The development of Special Economic Zone-Sulutenggo (SEZ-Sulutenggo) is expected to give an opportunity for area development in various potential economic sectors in Manado, Palu, and Gorontalo, hence the potential of the provinces can provide more opportunities for the development of basic economic sectors of each area of these provinces so which area produces a certain commodity will be found out, hence the product specialization process will be occurred for one and another region to compete.

The concept of calculating GRDP in the three provinces can provide an overview to the local government in determining various policies based on the potential of the basic sector that occurs every year, as well as making it easier for investors to invest their capital which can create a faster economic turnover and increase people's purchasing power. Finally people's income can increase, and unemployment and inequality can decrease in the future.

As well as North Sulawesi Province is precisely in a strategic position on the Pacific sea lane which is directly facing East Asian and Pacific countries which makes this Province the gateway to the Pacific Indonesia and has the potential to become a center of economic growth that supports the center of production and processing of products. agriculture, plantation, fisheries and national mining.

Strengthening the development of the Special Economic Zone (SEZ) for the Sulutenggo Region must be supported by a strong form of cooperation between provinces through a connectivity approach through the multigate system, namely the establishment of a connected transportation network that connects sea, land and air transportation modes as a whole, so that the span of control between regions and between islands can be achieved. achieved efficiently in terms of time and cost, and can strengthen the concept of construction of transportation routes and information and communication technology (ICT) as well as related regulations provide opportunities to increase the expected competitiveness between regions.

Based on the previous explanation, the researchers took several problem statements as follows:
1) Why does regional competitiveness need to be analyzed in North Sulawesi Province, Central Sulawesi Province and Gorontalo Province in the 2010-2020 period? and 2) Why is it necessary to analyze regional superior commodities in the North Sulawesi Province, Central Sulawesi Province and Gorontalo Province in the 2010-2020 period?

Based on the problem statements that have been formulated, it can be concluded that the objectives of this research are: 1. To analyze regional competitiveness in Gorontalo Province, North Sulawesi Province and Central Sulawesi Province for the 2010-2020 period and 2. To analyze the determination of regional superior commodities in Gorontalo Province, North Sulawesi Province and Central Sulawesi Province 2010-2020 period

Literature Review

Regional Economic Growth Theory Adam Smith's Theory (1723-1790)

Adam Smith was the first economist to pay attention to the problem of economic growth. His book is *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776). He stated about the process of economic growth in the long term in a systematic way.

Friedrich List theory

Friedrich List is seen as a pioneer in laying the foundation for the economic growth of the Historismus school in the 19-20 centuries with his book *Das National der Politichen Oekonomie* (1840). According to him, a Laissez-faire liberalism system can guarantee an optimal allocation of resources that divides the stages of economic growth into five successive stages starting from the primitive stage, livestock, agriculture, processing industry, to the trading stage.

Theory of Whalt Whitman Rostow

According to Rostow in his book *The Stage of Economics Growth* (1965) the process of economic growth is divided into 5 stages, namely: 1. The stage where the production function is limited is characterized by the traditional way of production of society with production methods that are still primitive with hereditary habits. 2. Take-off prerequisites stage: there is a transformation in all sectors of life such as the transformation from the agricultural sector to the urban sector. 3. Take-off stage: there have been drastic changes in the form of a political revolution, the creation of various innovations and the emergence of new markets. 4. Stage towards maturity: industry has developed rapidly, technology is used effectively in all sectors of production, workforce skills are increasing and social change is taking place. 5. High consumption stage: everything is oriented to consumption problem not production, Arsyad (1999).

Harrod Domar's Theory on Regional Systems

This theory was developed by Roy F. Harrod (1948) in England and Evsey D. Domar (1957) in the United States. Unlike Keynes who saw the economy in the short term, this theory looked at the long term side which was based on several assumptions: a. The economy is closed; b.

The desire to save ($MPS = s$) is constant; c. The production process has fixed coefficients; d. The rate of growth of the labor force is constant and equals the rate of population growth.

Theory of Thomas Robert Malthus

Malthus focuses on the "development of welfare" of a country, namely economic growth can be achieved by increasing the welfare of a country which largely depends on the amount of output produced by labor and the value of the product, but the welfare of a country does not always increase in the same proportion. with an increase in value, Jhingan (2012).

Regional Economic Growth Theory

According to Tarigan (2005) regional economic growth is the increase in overall community income that occurs in the region in the form of an increase in all added value that occurs.

The benefits of regional economics, Tarigan (2005) can be divided into two, namely: a. Macro benefits are related to how the central government can use them to accelerate the overall growth rate of the region, b. Micro benefits are how regional economics helps regional planners save time and costs in the process of determining the location of an activity or project.

The following is conveyed by Syafrizal (2012) regarding the ideas and formulations of the three regional economic growth models: a. Export Base Model (Export–Base Model). The economic growth of a region is basically determined by the amount of competitive advantage that the region has. If a certain region can encourage the growth of a sector that has a competitive advantage as a basis for export activities, then the economic growth of that region will increase rapidly. This can happen because the increase in exports will have a large double impact on the economy of the region concerned; b. Interregional Income Model. this model exports as a factor in the economic system of the region concerned (endogenous variable) whose fluctuations are determined by the development of trade activities between regions; c. Shift-Share Analysis.

Productivity Theory

Productivity is a measure that states how well resources are managed and utilized to achieve optimal results. Productivity can be used as a measure of the success of an industry in producing goods and services, the higher the comparison, the more the product produced, (Samuelson and William (2001), Kaldum (2018).

Productivity in theory is defined as a comparison between output (goods and services) with inputs (labor, materials and money). Low productivity is a reflection of the company's organization wasting its resources.

Productivity is one of the measuring tools for companies in assessing the work performance of their employees. Productivity is a concept that describes the relationship between capital, land, and energy used to produce these results, Basu Swasta (2002)

Productivity is how to produce or increase the results of goods and services as high as possible by utilizing human resources efficiently. Productivity is often defined as the ratio between output and input in certain units, Sedarmayanti, (2001). Productivity is a comparison between output

and input and prioritizes how to make good use of resources in producing a good or service, Hasibuan (2005).

Investment Theory

According to Rahardja and Manurung (2005), the decision to postpone the consumption of resources or share of income in order to increase the ability to add or create life value (income or wealth) in the future is called investment. The factors that influence investment are: a. The company's internal conditions are factors under the company's control, for example the level of efficiency, the quality of human resources, and the technology used. These three aspects are positively related to the expected rate of return. The higher the level of efficiency, quality of human resources and technology, the higher the expected return on investment, b. The company's external conditions need to be considered in making investment decisions, especially estimates of production levels and optimistic national and world economic growth, usually the level of investment increases because the rate of return on investment can be increased. c. The government's policy to increase taxes, which is expected to reduce the level of aggregate demand, d. Socio-political factors also determine the desire to invest where if the socio-political situation is more stable, investment generally increases.

Some of the main factors that determine the level of investment can develop, Sukirno (1997) is: a. The expected rate of return on investment will be obtained; b. Interest rate; c. Forecasts regarding future economic conditions; d. Technology advances; e. The level of national income and its changes; f. Profits earned by companies.

International Trade Theory

Globalization currently provides evidence of openness, linkage or dependence and increasingly fierce competition, especially in the economic field. International economics is a part of economics that studies and analyzes transactions and international economic problems (exports and imports) which include trade and finance/monetary as well as organizations (private and government) and economic cooperation between countries (international), Hamdy Hady (2001). The problems faced in the international economy are on the factor of scarcity and choice of products in the form of goods and services as well as ideas needed and produced or processed by humans.

Classical Theory: Adam Smith, and David Ricardo

The classical theory is known, several theories put forward by Adam Smith are: 1. The theory of Absolute Advantage (Theory of Absolute Advantage) Adam Smith's theory, says that every country will benefit from international trade (gain from trade) because it specializes in production and exporting goods if the country has absolute advantage and importing goods if the country has absolute disadvantage, 2. The theory of Comparative Advantage (Comparative Advantage) David Ricardo's theory, a. Cost Comparative Advantage (labor Efficiency). This theory is based on the value of labor (theory of labor Value) which states that the value or price of a product is determined by the amount of time or working hours required to produce it. where countries benefit from international trade if they specialize in production and export goods where the country can produce relatively more efficiently and import goods where the country produces

relatively less or less efficiently, b. Production Comparative Advantage (labor productivity). This theory explains that a country will benefit from international trade if it specializes in production and exports goods where the country can produce relatively more productively and imports goods where the country produces relatively less or is not productive. Production Comparative Advantage (labor productivity). This theory explains that a country will benefit from international trade if it specializes in production and exports goods where the country can produce relatively more productively and imports goods where the country produces relatively less or is not productive. Production Comparative Advantage (labor productivity). This theory explains that a country will benefit from international trade if it specializes in production and exports goods where the country can produce relatively more productively and imports goods where the country produces relatively less or is not productive.

Modern theory pioneers Eli Heckscher and Bertil Ohlin (HO Theory), Wassily Leontief, G. Harberler, Marshall and Edgeworth.

The Heckscher–Ohlin (HO) Theory

It is explained that the difference in the opportunity cost of a product from one country to another can occur due to differences in the number or proportion of production factors owned (endowment factors) of each country, these differences can lead to international trade. Countries that have relatively many factors of production or are cheap in producing them will specialize in products and export their goods. On the other hand, each country will import certain goods if the country has production factors that are relatively scarce or expensive to produce.

Leontief's Paradox Theory

The main pioneer in the Input-Output analysis, it was explained that the United States' exports consisted of labor-intensive goods, on the contrary, its imports consisted of capital-intensive or capital-intensive goods. less than other countries.

Regional Competitiveness Theory

Here are some definitions of competitiveness theory from various points of view that are the same but slightly different in form, region and regional level, namely: a. The theory of competitiveness according to the Ministry of Finance of the Republic of Indonesia, Director General of Financial Balance, who in his study said that competitiveness is the ability of a region compared to other regions in determining the right strategy to improve people's welfare; b. The theory of competitiveness (competitiveness) according to Irawan et al (2012) is considered as one of the parameters in the concept of a sustainable city where the higher the level of regional competitiveness of a city, the significantly higher the level of community welfare.

c. Theory of State competitiveness is the ability of a country to achieve: 1. High per capita GRDP growth continuously (World Economic Forum, Global Competitiveness Report, 1996). Competitiveness can be divided into various levels, namely national and regional competitiveness, in fact the two competitiveness have the same meaning, but only on a different regional scale. d. The theory of regional competitiveness, according to the UK Department of Trade and Industry (UK-DTI), regularly publishes "Regional Competitiveness Indicators In

United Kingdom" is the ability of a region to generate high income and employment opportunities while remaining open to domestic and international competition. While the definition put forward by the "Center For Urban and Regional Studies (CURDS) in the UK, competitiveness is the ability of the business sector or company in an area to generate high income and a more equitable level of wealth for the population. e. The theory of competitiveness according to the Minister of National Education defines competitiveness as the ability to show better, faster or more meaningful results. f. Competitiveness theory according to Irawati (2012) "The competitiveness of the region demonstrated the ability of an area to create added value to achieve a high and sustainable prosperity to remain open to domestic and international competition, Comparison of the relative level of competitiveness between the city district; based on 3 (three) variables, namely the level of the regional economy, the availability of infrastructure and natural resources, as well as the availability and quality of human resources was done to see the extent to which these areas have the advantage to overcome the problem these issues in the development of the region, g.

Competitiveness theory can cover areas, as follows:

- a. Competitiveness of place (locality and area) is the ability of the economy and local (local) community to provide an increase in living standards for residents/residents.
- b. Regional competitiveness is related to the ability to attract foreign (external) investment and determine its productive role
- c. Regional competitiveness is the ability of the regional economy to achieve a high and sustainable level of welfare growth while remaining open to domestic and international competition.

Several things are very influential on competitiveness, namely:

- a. conducive climate, increasing competitiveness depends on the climate. For example, a tea product, if the climate is not supportive, the competitiveness in the market will decrease because the tea plant cannot be produced, the climate is not supportive, it could be a prolonged drought or there are other reasons.
- b. Comparative advantage, this theory is a theory put forward by David Ricardo. According to him, international trade occurs when there is a difference in comparative advantage between countries. Comparative advantage will be achieved if a country is able to produce more goods and services at a lower cost than other countries and is more directed at how a region uses its advantages to compete or compete with other regions.
- c. Competitive advantage, As in the example above, Indonesia's competitive advantage will be greater than Malaysia's to compete in the international market. On the other hand, in the Tin trade, Malaysia has a better competitive advantage than Indonesia.

Economic Base Theory

Tarigan (2007) says the theory of economic basis bases its view that the rate of economic growth of a region is determined by the magnitude of the increase in exports from that region.

According to Arsyad, the economic base theory (2004) states that the main determinant of a region's economic growth is directly related to the demand for goods and services from outside the region, where the growth of industries that uses local resources, including labor and raw materials for export will generate regional wealth and create job opportunities (job creation).

The regional economy can be divided into two sectors namely basic and non-basic activities. Basic activities are exporting goods and services to places outside the boundaries of the economy concerned. Meanwhile, non-basic activities are activities that do not export, i.e. only activities carried out to meet needs within the region itself. Increasing the number of basic activities in an area will increase the demand for goods and services in it and cause an increase in the volume of non-basic activities. On the other hand, reduced basic activities will result in reduced income flowing to the area concerned and demand for products from non-basic activities.

Increasing the number of base sectors in an area will increase the flow of income into the region concerned, demand for goods and services in it, increase the value of investment and lead to an increase in the volume of non-basic activities.

According to Glasson (1990) basic activities are activities of exporting goods and services outside the economic boundaries of the community or marketing their goods and services to people who come from outside the economic boundaries of the community concerned. Meanwhile, non-basic activities are activities that provide goods needed by people who live within the economic boundaries of the community concerned. These activities do not export finished goods; wide scope of production

Daryanto and Hafizrianda (2010) see that competitiveness is done by: Location Quotient (LQ)

There are two ways to measure the LQ of a sector in the regional economy, namely through the added value approach or GRDP and labor. Each measurement can be described as follows:

Workforce Approach

$$LQ = \frac{L_i}{N_i} \div \frac{L_t}{N_t}$$

Where:

L_i = Number of workers in sector i in the region lower L_t = Total workforce in more areasn low

N_i = Number of workers in sector i in the region more above N_t = Total workforce in the upper regions

b. Value Added Approach

$$LQ = \frac{V_i}{Y_i} \cdot \frac{Y_t}{V_t}$$

Where:

V_i = GRDP value of sector i in the lower region

V_t = GRDP value of sector i in the lower region

Y_i = GRDP value of sector i in the upper region

Y_t = Total GRDP at the regional level above

The regional economic literature that is widely found states that a sector that has an LQ number > 1 means that the sector is the basis sector to become a regional power to export its products outside the region concerned. On the other hand, if the value of $LQ < 1$ means that the sector is an importer, if the value of $LQ = 1$, then there is a tendency for the sector to be closed because it does not carry out transactions from and to outside the region, this condition is difficult to find in a regional economy.

Shift-Share Analysis

This analysis is used to analyze and determine the shift and the role of the economy in the region. This method is used to observe the structure of the economy and its shifts by emphasizing sector growth in the regions, compared to the same sector at a higher regional or national level, according to Yolamalinda (2014).

The birth of the concept of SSA (Shift-Share Analysis) in regional economic analysis is intended to reduce the weaknesses of the calculation of concentration indices such as LQ and IS. so that SSA has dynamic properties (LQ and SSA are static which is considered to have more benefits than LQ and IS). The LQ method cannot explain the factors causing changes in the

Economic structure, while through SSA the changes in the economic structure are described based on the causal factors.

Analysis shift-share recognizes the differences and similarities between regions. This analysis assumes that changes in income, production, or labor in a region can be divided into three growth components, namely: regional growth component, proportional or industry mix growth component, regional share growth component (growth components).

Revealed Comparative Advantage (RCA)

Revealed Comparative Advantage (RCA) is a method used as a tool to measure the competitiveness of a country's export commodities and to see which commodities have weak competitiveness and which commodities have strong competitiveness. RCA is a method based on the premise that a country's export performance is largely determined by its level of relative

competitiveness against similar products made in other countries, this method was introduced by Bela Balassa, the Balassa method was later known as the Balassa RCA Index.

The RCA index shows a comparison of the share of commodity exports in a country compared to the share of exports of the same commodity from around the world. This index shows the comparative advantage or competitiveness of a particular country with the assumption (*ceteris paribus*) that other factors affecting export growth remain unchanged. Bustami and Hidayat (2013). In the RCA calculation, if the result shows a commodity number greater than 1, then the country has a comparative advantage. On the other hand, if the result is less than 1, the comparative advantage is low or below the world average (kemenkeu.go.id).

Balasa (1965) in Riady Ibnu Khaldum (2018) suggests that the basic principle of the Revealed Comparative Advantage (RCA) method is that there are differences in opportunity costs between countries and production specialization which is the cause of trade. RCA can show the export performance of a product to the total exports of a region which is then compared with the share of the product's value in world trade. For this reason, the RCA index is an indicator to calculate the amount of export competitiveness of a particular commodity. Where the RCA index is greater than one, it indicates export specialization and means it has a comparative advantage. Mathematically, the RCA Index is formulated as follows:

$$RCA = \frac{X_{ij} / X_i}{X_{wj} / X_w}$$

Information:

X_{ij} = Value of one commodity in the base Sub-Sector in a particular Province

X_i = Total commodity value in the base Sub-Sector in a particular Province

X_{wj} = Value of one of the commodities in the national sub-sector base

X_w = Total value of one commodity in the national sub-sector base

Planning Theory Regional Development

Regional development planning, said Nugroho and Dahuri (2012) that planning is a presentation or description of future conditions regarding the area efficiently and sustainably. Planning contains the objectives and targets of supporting management and contains strategic steps, action management, financing and zoning. Regional planning seeks to maximize benefits and minimize the negative impacts of management. This plan is contained in a policy document, as a reference for formulating a management plan and technical requirements.

There are three the stages of regional development, namely industrial development, industrial efficiency and regional advantages, can be described as follows: 1. Industrial development in a region is triggered by export activities. The industry develops to meet demand outside the region, guided by the export base theory. The success of this stage is determined by the role of the government in various incentives for taxes, infrastructure, industry and other facilities. 2. In this stage, the industry carries out consolidation to streamline production systems and improve economies of scale. The government facilitates various deregulations in order to form a

competitive business environment, thus creating strong and globally competitive private business actors. 3. Regional advantage. This stage is characterized by internal strengths generating significant added value in the global market. The internal strength is innovation based on knowledge and technology and entrepreneurial ability. Innovation is like fuel while entrepreneurship is a machine. Both are sources of employment, income and welfare. The regional economy is not played by big businesses, but small and medium businesses that are agile and efficient. The success of this stage is determined by the comfort of the business climate, research and quality human resources.

Competitive advantage or competitiveness of a region is created if the region has a core competence that distinguishes it from other regions. Core competencies can be achieved through the creation of factors, namely efforts to create various production factors that are much better than their competitors. Core competencies in the context of regional development are in an effort to coordinate and integrate developing sectors in certain regions. The better the coordination and integration, the higher the creation of core competencies, and the more difficult it is for other regions to compete with them.

Daryanto and Hafizrianda (2010) say that the region or region that reaches the core competency stage has four attributes, namely (Board, 1993): 1. The ability to provide access to a wider variety of markets, 2. The ability to make a significant contribution to customer perceptions of the benefits obtained of the goods and services offered, 3. The ability to produce superior goods and services that are very difficult to imitate will create entry barriers for other regions to provide similar services, 4. The ability to perform complex coordination of various applied technologies and expertise.

Research Methods

This research is categorized as a descriptive research applying quantitative approach with a regional economic planning model. The data used were secondary data obtained from Statistical Centre Bureau to 3 provinces in Sulawesi Island in 2007-2011. To complete the data needed by the researcher, the data were collected and processed through library study procedures and documentation methods. The data obtained were processed and analyzed to answer the problem statements. The data analysis techniques used were as follows:

Location Quotient (LQ) Analysis

LQ analysis is used to determine the basic and non-basic sectors through the value-added approach to GDP and the number of workers in each sector. In this study, researchers used a value-added approach to GRDP where the formula used was as follows:

$$LQ = \frac{Vi/Vt}{Yi/Yt}$$

Note:

- Vi = GRDP value in sector I at the lower regional level
- Vt = Total GRDP at the lower regional level
- Yi = GRDP value in sector I at the higher regional level

Y_t = Total GRDP at higher regional level

With the stipulation that if the LQ value is > 1 , then the sector is the base sector which becomes the regional strength to export its products outside the region concerned. On the other hand, if $LQ < 1$, the sector becomes an importer or a non-basic sector. And if $LQ = 1$ then there is a tendency for the sector to be closed because it does not carry out transactions to and from outside the region, but conditions like this are rarely found in a regional economy.

The following methods are used:

Revealed Comparative Advantage (RCA) Method

The RCA method is formulated as follows:

$$RCA = \frac{X_{ij} / X_i}{X_{wj} / X_w}$$

Information:

X_{ij} = Value of one commodity in the base Sub-Sector in a particular Province

X_i = Total commodity value in the base Sub-Sector in a particular Province

X_{wj} = Value of one of the commodities in the national sub-sector base

X_w = Total value of one commodity in the national sub-sector.

Results and Discussion

Calculation of Location Quotient (LQ)

This Location Quotient analysis is used to determine and assess the competitiveness of the regions in the 3 provinces in the Sulutenggo region during the 2010-2020 period from 17 developing sectors, so that it can be obtained that there are several sectors that are base and non-base sectors in each of the province's regions. . In this LQ analysis, criteria are determined where if a sector has an LQ value > 1 then the sector is included in the base sector and if the LQ value

< 1 then the sector is a non-base sector. The following are the results of calculations from the Location Quotient (LQ) analysis, which will be described in succession to the 3 provinces:

The LQ value for North Sulawesi Province can be seen in the following table:

Table 3. Results of LQ Calculation of North Sulawesi Province Year 2010-2019

Sek Tor	Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	1.66*	1.60*	1.60*	1.62*	1.59*	1.54*	2.38*	1.51*	1.55*	1.57*
2	0.45	0.47	0.48	0.49	0.51	0.56	0.57	0.61	0.67	0.72
3	0.49	0.49	0.50	0.50	0.48	0.47	0.45	0.46	0.47	0.45
4	0.08	0.08	0.09	0.09	0.10	0.11	0.12	0.12	0.12	0.12
5	1.69*	1.74*	1.79*	1.73*	1.63*	1.62*	1.59*	1.51*	1.53*	1.49*
6	1.30*	1.32*	1.30*	1.31*	1.28*	1.30*	1.30*	1.29*	1.34*	1.33*
7	0.87	0.89	0.87	0.89	0.91	0.92	0.93	1.23	0.96	0.99
8	2.20*	2.17*	2.15*	2.12*	2.15*	2.13*	2.13*	2.04*	2.12*	2.09*
9	0.67	0.67	0.67	0.67	0.69	0.71	0.75	0.74	0.77	0.74
10	1.07	1.07	1.01	0.98	0.97	0.73	0.93	0.89	0.93	0.91
11	0.97	1.00	1.01	0.98	0.95	0.89	0.96	0.98	0.95	0.92
12	1.17*	1.19*	1.17*	1.16*	1.19*	1.21*	1.21*	1.24*	1.33*	1.31*
13	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
14	1.82*	1.81*	1.92*	1.87*	1.97*	2.01*	2.01*	2.05*	2.08*	1.98*
15	0.85	0.86	0.84	0.81	0.79	0.77	0.78	0.78	0.83	0.87
16	3.62*	3.67*	3.61*	3.52*	3.42*	3.40*	3.44*	3.41*	3.63*	3.56*
17	1.00	1.02	1.03	1.02	0.97	0.94	0.93	0.92	0.97	1.01

Data Source, BPS Data processed by Researchers in 2020

Sign * = Base Sector

From the results of the calculation of the LQ analysis, it is found that there are 7 basic sectors namely the agricultural sector, the water supply sector, waste management, waste and recycling, the construction sector, the transportation and warehousing sector, the real estate sector, the government administration sector, defense and compulsory social security, The Health Services and Social Activities sector and the rest are non-basic sectors.

Then after calculating the LQ value of the sector, it will be continued with the calculation of the LQ value for each base sector obtained in the previous table 3. The criteria set are the same as in the determination of the previous LQ value. The following will be described in the table below, the calculation of the LQ value in the base sub-sector in North Sulawesi Province is:

Table 4. Results of Calculation of Base Sub-Sector LQ Value in North Sulawesi Province 2010-2019

Sub Sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	0.91	0.86	0.86	0.82	0.85	0.87	0.86	0.86	0.85	0.87
2	0.53	0.52	0.52	0.50	0.49	0.49	0.48	0.46	0.45	0.43
3	2.03*	2.04*	2.02*	1.92*	1.99*	1.77*	1.69*	1.66*	1.64*	1.73*
4	1.05	1.08	1.16	1.12	1.12	1.06	1.03	0.99	0.96	0.95
5	0.82	0.85	0.83	0.79	0.83	0.85	0.84	0.84	0.84	0.85
6	0	0	0	0	0	0	0	0	0	0
7	1.62*	1.62*	1.60*	1.44*	1.58*	1.58*	1.54*	1.50*	1.50*	1.50*
8	2.64*	2.71*	2.61*	2.44*	2.69*	2.80*	2.89*	2.91*	2.85*	2.95*
9	0.16	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.03
10	1.32*	1.26*	1.26*	1.21*	1.33*	1.28*	1.35*	1.26*	1.30*	1.15*
11	0.37	0.38	0.37	0.34	0.36	0.36	0.36	0.35	0.35	0.43
12	1.41*	1.41*	1.40*	1.31*	1.42*	1.45*	1.54*	1.56*	1.56*	1.54*
13	0.21	0.21	0.20	0.19	0.21	0.21	0.22	0.21	0.22	0.23
14	0.74	0.76	0.75	0.88	0.77	0.79	0.79	0.81	0.84	0.84
15	1.16*	1.16*	1.23*	1.24*	1.27*	1.31*	1.31*	1.35*	1.31*	1.27
16	2.30*	2.36*	2.32*	2.14*	2.22*	2.22*	2.23*	2.23*	2.29*	2.29*

Data source, BPS data processed by researchers, 2020

Sign * = Base Sub-Sector

Information:

1= Agriculture, Livestock, Hunting, and Services Sub-Sector 2= Forestry and Logging Sub-Sector

3= Fishery Sub-Sector

4= Water Supply Sub-Sector, Waste Management, Waste and Recycling 5= Construction Sub-Sector

6= Rail Transport Sub-Sector 7= Land Transport Sub-Sector 8= Sea Transport Sub-Sector

9= River, Lake, and Ferry Transport Sub-Sector 10=Air/Air Transport Sub-Sector

11=Sub-Sector Warehousing and Transportation Support Services 12= Accommodation Provision Sub-Sector

13= Food and Drink Provision Sub-Sector 14= Sub-Sector Real Estate

15=Sub-Sector Government Admin Mandatory Social Security and Defense 16= Sub-Sector Health Services and Social Activities

From the calculation results of the basic sub-sector LQ analysis, it was found that there are 7 (seven) basic sub-sectors, namely: (1) Sea Transportation Sub-Sector, (2) Health Services Sub-Sector, (3) Fisheries Sub-Sector, (4) Land Transportation Sub-Sector, and (5) Accommodation Provision Sub-Sector, (6) Air Transport Sub-Sector and (7) Government Administration, Defense and Social Security Sub-Sector. And the rest are non-basic sub-sectors totaling 9 sub-sectors which support the development of the basic sub-sector.

If we look at the 7 basic sub-sectors that can provide very high advantages, namely the Sea Transportation sub-sector, then the Health services sub-sector and the third is the Fisheries Sub-sector. However, the very smallest sub-sector is the air transportation sub-sector which is considered to have not contributed too much to the development of economic growth in North Sulawesi Province today.

Revealed Comparative Advantage (RCA) Method of North Sulawesi Province.

The calculation of the RCA value is based on the category of determining the base sub-sector in the study above, so that researchers only look at one sub-sector, namely the fisheries sub-sector, which is used as a study to see commodities that are very superior in the province of North Sulawesi for the 2010-2019 period. Here is nRCA values for North Sulawesi Province that can be seen in the following table:

Table 5. Calculation of the RCA Value of North Sulawesi Province for the 2010-2019 period

No	Commodity	2011	2012	2013	2014	2015	2016	2017	2018	2019	Category
1	Tuna	1.86	1.98	2.04	2.02	2.33	2.56	2.85	3.05	3.15	Excellent Enough
2	Skipjack	1.49	1.66	2.44	2.37	2.90	2.99	2.64	2.59	2.88	Superior
3	Cob	2.99*	3.11*	3.08*	2.96*	2.90*	3.13*	3.43*	1.36*	1.28*	Very Excellent
4	Other fish	0.21	0.12	0.17	0.18	0.17	0.28	0.22	0.22	0.19	Not Superior
5	Shrimp	0.05	0.05	0.04	0.04	0.03	0.08	0.04	0.04	0.05	Not Superior
6	Parrot fish	0.12	0.09	0.08	0.09	0.10	0.11	0.21	0.16	0.08	Not Superior
7	Goldfish	0.59	0.65	0.58	0.62	0.62	0.47	0.56	0.66	0.73	Not Superior

Data Sources, Processed Results in 2020

Sign * = Commodity that is very superior

Based on table 5 above, from several fishery commodities that have been carried out, it has been obtained that there is one commodity considered very superior, namely: capture fisheries commodities in the type of tuna which is the prima donna in North Sulawesi Province.

The LQ value for Central Sulawesi Province can be seen in the following table:

Table 6. Results of LQ Calculation of Central Sulawesi Province Year 2010-2019

Sek Tor	Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2.70*	2.68*	2.62*	2.56*	2.62*	2.43*	2.30*	2.27*	2.26*	2.18*
2	0.82	1.02	1.23	1.47	1.08	1.30	1.67	1.86	1.93	2.18
3	0.30	0.28	0.28	0.27	0.27	0.46	0.56	0.58	0.62	0.77
4	0.04	0.05	0.05	0.041	0.04	0.04	0.04	0.04	0.05	0.05
5	2.06*	1.99*	1.90*	1.85*	1.91*	1.72*	1.65*	1.64*	1.60*	1.48*
6	0.97	1.04	1.06	1.09	1.28	1.32	1.16	1.10	1.08	1.14
7	0.79	0.76	0.73	1.04	0.75	0.71	0.69	0.67	0.66	0.63
8	1.25	1.19	1.15	1.10	1.13	1.03	0.97	0.93	0.92	0.88
9	0.19	0.19	0.19	0.18	0.19	0.17	0.16	0.17	0.17	0.15
10	0.97	0.95	0.92	0.89	0.91	0.82	0.79	0.75	0.76	0.75
11	0.68	0.72	0.65	0.62	0.61	0.55	0.56	0.57	0.54	0.50
12	0.78	0.74	0.72	0.69	0.71	0.68	0.64	0.64	0.63	0.59
13	0.20	0.19	0.18	0.18	0.17	0.17	0.16	0.13	0.13	0.12
14	1.63*	1.60*	1.66*	1.71*	1.82*	1.72*	1.68*	1.73*	1.75*	1.74*
15	1.49*	1.47*	1.41*	1.34*	1.35*	1.23*	1.18*	1.20*	1.17*	1.12*
16	1.57*	1.51*	1.47*	1.38*	1.40*	1.28*	1.20*	1.20*	1.21*	1.19*
17	0.68	0.64	0.60	0.55	0.56	0.52	0.49	0.46	0.43	0.40

Data Source, BPS Data processed by Researchers in 2020

Sign * = Base Sector

Information:

From the calculation results of the LQ analysis, it is found that there are 5 basic sectors, namely the agricultural, forestry and fishery sectors, the water supply sector, waste management, waste and recycling, the government administration sector, defense and compulsory social security, the education services sector, the health services sector and Social Activities and the rest are non-basic sectors.

Then after calculating the LQ value of the sector, it will be continued with the calculation of the LQ value for each base sector obtained in the previous table 6. The criteria set are the same as in the determination of the previous LQ value. The following will be described in the table below, the calculation of the LQ value in the base sub-sector in Central Sulawesi Province is:

Table 7. Calculation Results of Base Sub-Sector LQ Value in Central Sulawesi Province 2010-2019

Sub Sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	1.14*	1.14*	1.14*	1.14*	1.14*	1.12*	1.11*	1.10*	1.09*	1.09*
2	1.17*	1.28*	1.25*	1.29*	1.43*	1.35*	1.43*	1.45*	1.47*	1.47*
3	1.39*	1.34*	1.34*	1.30*	1.24*	1.19*	1.22*	1.20*	1.20*	1.20*
4	0.89	0.88	0.86	0.85	0.85	0.81	0.82	0.82	0.81	0.81
5	0.71	0.71	0.75	0.78	0.81	0.81	0.84	0.86	0.88	0.88
6	0.65	0.65	0.64	0.61	0.61	0.58	0.59	0.59	0.59	0.59
7	0.68	0.67	0.66	0.63	0.63	0.60	0.60	0.60	0.60	0.60

Data source, BPS data processed by researchers, 2020

Sign * = Base Sub-Sector

Information:

1= Agriculture, Livestock, Hunting, and Services Sub-Sector 2= Forestry and Logging Sub-Sector

3= Fishery Sub-Sector

4= Water Supply Sub-Sector, Waste Management, Waste and Recycling 5= Sub-Sector Government Admin Mandatory Social Security and Defense 6= Education Services Sub-sector

7= Sub-Sector Health Services and Social Activities

From the calculation results of the basic sub-sector LQ analysis, it is found that there are 3 (three) basic sub-sectors, namely: (1) Agriculture, Livestock and labor sub-sectors; (2) Forestry and Logging Sub-Sectors; (3) Fisheries Sub-Sector; and the rest are non-basic sub-sectors totaling 4 sub-sectors which support the development of the basic sub-sector.

If we look at the 3 sub-sectors that can provide very high advantages, namely the Forestry sub-sector, then the Fisheries Sub-sector and the third is the Agriculture Sub-sector.

Revealed Comparative Advantage (RCA) Method of Central Sulawesi Province

The calculation of the RCA value is based on the category of determining the base sub-sector in the study above, so that researchers only look at one sub-sector, namely the fisheries sub-sector, which is used as a study to see commodities that are very superior in the province of Central Sulawesi for the 2010-2019 period.

The RCA value for Central Sulawesi Province can be seen in the following table:

Table 8. Calculation Results of Central Sulawesi Province RCA Value 2010-2019 period

No	Commodity	2011	2012	2013	2014	2015	2016	2017	2018	2019	Category
1	Tuna	0.14	0.12	0.18	0.48	0.11	0.09	0.19	0.14	4.92	
2	Skipjack	0.62	0.75	0.87	0.94	0.71	0.72	0.43	0.37	0.44	
3	Cob	0.39	0.44	0.53	0.06	0.33	0.46	0.88	0.81	1.13	
4	Shrimp	0.29	0.09	0.18	0.08	0.18	0.26	0.09	0.39	0.19	
5	Seaweed	1.39	1.41	1.33	1.34	1.31	1.34	1.26	1.14	1.45	Superior
6	Milkfish	0.19	0.12	0.10	0.15	0.24	0.26	0.14	0.61	0.28	
7	Parrot fish	0.03	0.04	0.03	0.04	0.04	0.04	0.03	0.05	0.03	
8	Goldfish	0.12	0.08	0.07	0.08	0.08	0.07	0.07	0.17	0.02	

Data Source, Provincial Fisheries Service. Central Sulawesi Processed Results in 2020

Based on table 8 above, from several fishery commodities that have been studied, it has been obtained that there is one commodity that is considered very superior, namely: Seaweed Cultivation fishery commodity which is the prima donna in Central Sulawesi Province.

The LQ value for Gorontalo Province can be seen in the following table:

Table 9. Results of Calculation of LQ in Gorontalo Province Year 2010-2019

Sek Tor	Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	2.77*	2.78*	2.80*	2.81*	2.81*	2.79*	2.83*	2.93*	2.99*	3.03*
2	0.15	0.15	0.15	0.15	0.15	0.16	0.15	0.16	0.16	0.16
3	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.18	0.19	0.20
4	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08
5	0.59	0.59	0.61	0.61	0.61	0.58	0.63	0.69	0.73	0.77
6	1.28*	1.27*	1.26*	1.25*	1.32*	1.26*	1.24*	1.17*	1.11*	1.06*
7	0.70	0.70	0.73	0.75	0.75	0.77	0.80	0.83	0.85	0.90
8	1.56*	1.55*	1.54*	1.54*	1.50*	1.50*	1.51*	1.44*	1.39*	1.35*
9	0.74	0.74	0.72	0.72	0.71	0.73	0.74	0.77	0.77	0.77
10	0.73	0.71	0.67	0.65	0.63	0.62	0.62	0.62	0.62	0.61
11	0.97	1.03	1.03	0.98	0.96	0.96	1.03	1.05	1.04	0.97
12	0.64	0.63	0.63	0.63	0.64	0.65	0.67	0.67	0.67	0.68
13	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05
14	2.57*	2.55*	2.56*	2.59*	2.65*	2.60*	2.48*	2.39*	2.25*	2.18*
15	1.18*	1.23*	1.28*	1.33*	1.40*	1.39*	1.36*	1.37*	1.40*	1.42*
16	3.55*	3.39*	3.35*	3.32*	3.28*	3.36*	3.41*	3.30*	3.30*	3.28*
17	1.31	1.26	1.40	1.22	1.15	1.10	1.04	0.98	0.92	0.86

Data Source, BPS Data processed by Researchers in 2020

Sign * = Base Sector

Information:

From the results of the calculation of the LQ analysis, it is found that there are 6 basic sectors, namely the agricultural sector, Forestry and Fisheries, Construction sector, Transportation and Warehousing sector, Government Administration Sector, Defense and Mandatory Social Security, Education Sector, Health Services Sector and Social Activities and the rest are non-basic sectors.

Then after calculating the LQ value of the sector, it will be continued with the calculation of the LQ value for each base sector obtained in the previous table 9. The criteria set are similar to the determination of the previous LQ value. The following will be described in the table below, the calculation of the LQ value for the base sub-sector in Gorontalo Province is:

Table 10. Calculation Results of Base Sub-Sector LQ Value in Gorontalo Province 2010-2019

Sub Sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	1.27*	1.28*	1.30*	1.30*	1.29*	1.30*	1.33*	1.39*	1.45*	1.48*
2	0.43	0.46	0.47	0.49	0.54	0.55	0.55	0.51	0.51	0.57
3	1.92*	1.88*	1.86*	1.82*	1.75*	1.73*	1.76*	1.79*	1.78*	1.82*
4	0.61	0.16	0.60	0.60	0.59	0.60	0.60	0.57	0.55	0.54
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.91	0.92	0.92	0.89	0.89	0.93	0.92	0.90	0.88	0.84
7	0.42	0.42	0.41	0.41	0.39	0.38	0.38	0.38	0.37	0.38
8	0.90	0.89	0.93	0.94	0.94	0.94	0.92	0.88	0.88	0.87
9	0.90	0.85	0.63	0.86	0.86	0.83	0.77	0.7	0.67	0.73
10	0.18	0.19	0.19	0.20	0.20	0.20	0.19	0.18	0.18	0.17
;11	1.21*	1.21*	1.23*	1.24*	1.27*	1.25*	1.20*	1.16*	1.10*	1.08*
12	0.56	0.59	0.61	0.63	0.67	0.66	0.66	0.67	0.69	0.70
13	1.68*	1.62*	1.60*	1.59*	1.57*	1.61*	1.65*	1.61*	1.62*	1.62*

Data source, BPS data processed by researchers, 2020 Sign * = Base Sub-Sector

Information:

- 1= Agriculture, Livestock, Hunting, and Services Sub-Sector
- 2= Forestry and Logging Sub-Sector
- 3= Fishery Sub-Sector
- 4= Construction Sub-Sector
- 5= Rail Transport Sub-Sector
- 6= Land Transport Sub-Sector 7= Sea Transport Sub-Sector
- 8= River, Lake, and Ferry Transport Sub-Sector
- 9=Air/Air Transport Sub-Sector
- 10=Sub-Sector Warehousing and Transportation Support Services

- 11=Sub-Sector Government Admin Mandatory Social Security and Defense
- 12=Sub-Sector Education Services
- 13=Sub-Sector Health Services and Social Activities

From the calculation results of the basic sub-sector LQ analysis, it was found that there are 4 (four) basic sub-sectors, namely: 1. Agriculture sub-sector, 2. fisheries sub-sector, 3. government administration, defense and social security sub-sector, 4. health and Social Services Sub-sector, and the rest are non-basic sub-sectors totaling 9 sub-sectors which support the development of the basic sub-sector.

If we look at the 4 basic sub-sectors that can provide a very high advantage, it is the Fisheries sub-sector, but the very smallest sub-sector is the Fisheries sub-sector. Government Admin, Defense and Mandatory Social Security are considered not too big a contribution to the development of economic growth in Gorontalo Province today.

Revealed Comparative Advantage (RCA) method of Gorontalo Province

The calculation of the RCA value is based on the category of determining the base sub-sector in the study above, so that researchers only see one sub-sector, namely the fisheries sub-sector, as a study to see commodities that are very superior in the Gorontalo province for the 2010-2019 period.

The RCA value for Gorontalo Province can be seen in the following table:

Table 11. Results of Calculation of RCA Value of Gorontalo Province 2010-2019 period

No	Commodity	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Tuna	1.01*	1.00*	1.00*	1.54*	2.59*	3.39*	4.69*	4.80*	4.94*
2	Skipjack	1.06	0.99	0.87	0.99	0.69	0.59	0.54	0.48	0.48
3	Cob	1.36	1.34	1.18	1.30	1.18	1.26	0.88	0.90	0.96
4	Other fish	0.90	0.87	0.90	0.83	0.78	0.72	0.68	0.66	0.61
5	Shrimp	1.36*	1.68*	2.10*	2.12*	2.17*	2.01*	1.50*	1.22*	1.35*

Data Sources, Processed Results in 2020

* Sign = Excellent Commodity

Based on Table 11, from several fishery commodities that have been studied, it has been obtained that there is one commodity considered very superior, namely: capture fishery commodities in the type of tuna which is the prima donna in Gorontalo Province.

Conclusions and suggestions Conclusion

From the results of the discussion that has been carried out in the previous chapter, several conclusions can be drawn to answer the problem statements previously formulated by the researcher:

- 1) Determination of competitiveness in each province based on base and non-base sectors are:

(1) In North Sulawesi Province from 2010-2019 there are 7 basic sectors namely Agriculture, Water Supply, Waste Management, Waste and Recycling, Construction Sector, Transportation and Warehousing Sector, Real Estate Sector, Government Administration Sector, Defense and Mandatory Social Security, Health Services Sector and Social Activities and the rest are non-base sector.

(2) In Central Sulawesi Province, there are 5 basic sectors namely agriculture, forestry and fisheries sector, water supply sector, waste management, waste and recycling, government administration sector, defense and compulsory social security, the education services sector, health services sector and social activities and the rest are non-basic sectors.

(3) In Gorontalo Province there are 6 basic sectors, namely agricultural sector, Forestry and Fisheries, Construction sector, Transportation and Warehousing sector, Government Administration Sector, Defense and Mandatory Social Security, Education Sector, Health Services Sector and Social Activities and the rest are non-basic sectors.

2) Determination of Leading Commodities in each Province are: a. North Sulawesi Province from several fishery commodities that have been studied, it has been obtained that there is one commodity considered to be very superior, namely: Tuna fishing commodity which is the prima donna in this area, b. And Central Sulawesi Province from several fishery commodities that have been studied, it has been obtained that there is one commodity considered very superior, namely: Seaweed Cultivation fishery commodity which is the prima donna in this area, c. Then the Province of Gorontalo from several fishery commodities that have been studied, it has been obtained that there is one commodity that is considered very superior, namely: capture fisheries commodities in the type of tuna which is the prima donna for the region.

Suggestion

Based on findings obtained by the researchers, some suggestions are made as follows: (1) The basic sector should be more maintained and developed without neglecting the development of other non-basic sectors in each province. (2) The existing basic sector needs attention to its sub-sectors so that a real increase in competitiveness can be obtained in each province. (3) Determination of commodities in each of these provinces is very necessary in order to obtain commodities that must be developed by the government so that they become prima donna in increasing income for the region and strategies for industrial development on these commodities.

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