Sectoral Analysis and Its Development in Manggarai Regency, East Nusa Tenggara Province

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ABSTRACT. The purpose of this study is to determine the economic sectors that are the leading sectors in Manggarai Regency, formulate strategies for developing leading sectors and explain the interrelationships between the Manggarai Regency area and the surrounding area in the Manggarai Raya area. The data collection method used is the method of documentation, questionnaires and interviews. The data analysis techniques used are LQ, Klassen Typology, Gravity Model and SWOT. Based on LQ analysis, there are 9 economic sectors that are the leading sectors in the Manggarai Regency**.** The results of the gravity analysis show that the strongest interaction with Manggarai Regency is West Manggarai Regency. In this study, the focus of development is on the Mining and Quarrying sector and the Water Supply sub-sector. From the results of the Klassen Typology analysis, the two sectors are potential sectors (still growing rapidly) in quadrant III. Based on the SWOT analysis, a good strategy for developing the Mining and Quarrying sector is the (S-O) strategy. Meanwhile, a good strategy in developing the Water Supply sub-sector is (S-T). This research is useful for Manggarai Regency to focus more on the development of economic sectors based on the potential or advantages of the region.

Keywords: Economic Sectors; Potential Sector Development; Inter-Regional Linkages

1 Introduction

The implementation of regional autonomy is focused on Regency/City governments, so that Regency/City governments are expected to be independent in administering government, determining development policies and funding. Munir (2002), states that the key to the success of a decentralized system through regional autonomy where regional development policies are emphasized on the specific characteristics of the region concerned by using the potential of human resources, institutions, and physical resources locally (Erawati and Yasa, 2011). The development of an area should be in accordance with the conditions and potentials as well as the aspirations of the growing and developing community. With regional autonomy, regional governments are given the opportunity and are given full responsibility in utilizing the potential of their regions, especially in increasing economic growth for the creation of community welfare.

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Economic growth in an area is the increase in overall community income that occurs in the area, namely the increase in all added value that occurs (A. Tafui, et al 2019). An area is said to be experiencing economic growth if there is an increase in real Gross Regional Domestic Product (GRDP) in the region (Erawati and Yasa, 2011). Gross Regional Domestic Production (GRDP) can be used or become one of the indicators to measure or know the rate or level of economic growth of a region. The value of GRDP is contributed by each type of business field or economic sectors that exist in an area. The role of the contribution of each of these economic sectors will have an influence on the formation of the Gross Regional Domestic Product (GRDP) and play an important role in determining the rate of economic growth in a region. East Nusa Tenggara Province is an area that has seventeen types of business fields or economic sectors that contribute to the formation of GRDP to increase or determine the rate of economic growth during 2015-2019, in detail can be seen in the following table.

Table 1. GRDP at Constant Price 2010 Based on Business Field of East Nusa Tenggara Province, 2015-2019 (Billion Rupiah)

NO	Business Field	Years				
		2015	2016	2017	2018	2019
A	Agriculture, Forestry and Fisheries	16,123,200,000,000.00	16,512,700,000,000.00	17,328,900,000,000.00	17,853,800,000,000.00	18,523,000,000,000.00
B	Mining and excavation	833,000,000,000.00	877,800,000,000.00	891,300,000,000.00	908,500,000,000.00	938,700,000,000.00
C	Processing industry	709,900,000,000.00	745,200,000,000.00	799,900,000,000.00	841,200,000,000.00	918,100,000,000.00
D	Electricity and Gas Supply	40,900,000,000.00	46,900,000,000.00	47,200,000,000.00	51,700,000,000.00	52,200,000,000.00
E	Water Supply, Rubbsh Management, waste and recycling	40,000,000,000.00	40,100,000,000.00	40,700,000,000.00	42,900,000,000.00	45,300,000,000.00
F	Construction	5,985,100,000,000.00	6,443,600,000,000.00	6,819,200,000,000.00	7,254,900,000,000.00	7,576,200,000,000.00
G	Wholesale and Retail; Car and Motorcycle Repair	649,300,000,000.00	6,933,200,000,000.00	7,253,500,000,000.00	7,785,400,000,000.00	8,380,000,000,000.00
H	Transportation and Warehousing	2,852,900,000,000.00	3,036,400,000,000.00	3,269,000,000,000.00	3,527,900,000,000.00	3,648,700,000,000.00
I	Provision of Accommodation and Food	337,900,000,000.00	386,800,000,000.00	439,300,000,000.00	492,800,000,000.00	522,300,000,000.00
J	Information and Communication	4,923,600,000,000.00	5,256,300,000,000.00	5,524,300,000,000.00	5,794,300,000,000.00	6,118,100,000,000.00
K	Financial and Insurance services	2,176,800,000,000.00	2,361,100,000,000.00	2,501,600,000,000.00	2,589,200,000,000.00	2,672,500,000,000.00
L	Real Estate	1,456,800,000,000.00	1,506,500,000,000.00	1,581,200,000,000.00	1,657,900,000,000.00	1,657,800,000,000.00
M,N	Company Services	165,000,000,000.00	169,700,000,000.00	172,100,000,000.00	175,000,000,000.00	181,700,000,000.00
O	Government Administration, Defense and Mandatory Social Security	7,248,100,000,000.00	7,656,400,000,000.00	7,886,900,000,000.00	8,482,800,000,000.00	9,175,600,000,000.00
P	Education Services	4,956,200,000,000.00	5,159,100,000,000.00	5,441,200,000,000.00	5,572,400,000,000.00	5,870,000,000,000.00
Q	Health Services and Social Activities	1,212,300,000,000.00	1,287,400,000,000.00	1,382,000,000,000.00	1,480,300,000,000.00	1,564,200,000,000.00
R,S,T,U	Other Services	1,215,800,000,000.00	1,258,900,000,000.00	1,347,000,000,000.00	1,434,000,000,000.00	1,528,000,000,000.00
GDP		**56,770,800,000,000.00**	**59,678,000,000,000.00**	**62,725,400,000,000.00**	**65,944,900,000,000.00**	**69,372,500,000,000.00**

Source: East Nusa Tenggara Province BPS, 2020 (Data Processed)

Table 1.1 shows that for 5 years (2015-2019), the economy of the people of East Nusa Tenggara was dominated by 3 categories of business fields, namely: Agriculture, Forestry and Fisheries; Government Administration, Defense and Mandatory Social Security and Wholesale and Retail Trade, Repair of Cars and Motorcycles. This can be seen from the large role these several business fields play in the formation of NTT GDP. Compared to East Nusa Tenggara Province, Manggarai Regency also has seventeen types of business fields with three main sectors, namely primary, secondary and tertiary sectors. The contribution of each different sector indicates that Manggarai Regency has a lot of potential that can be used as a driving force for the economy in Manggarai Regency. In detail, the type and amount of contribution from the business field in Manggarai Regency can be seen in the following table.

Table 2. GRDP at Constant Price 2010 Based on Business Field of Manggarai Regency, 2015-2019 (Million Rupiah)

NO	Business Field	Years				
		2015	2016	2017	2018	2019
A	Agriculture, Forestry and Fisheries	575,062,120,000.00	584,938,200,000.00	598,840,360,000.00	609,332,500,000.00	625,004,320,000.00
B	Mining and excavation	81,619,790,000.00	86,068,550,000.00	88,681,650,000.00	92,134,290,000.00	92,960,560,000.00
C	Processing industry	10,381,590,000.00	10,824,930,000.00	11,362,660,000.00	11,858,630,000.00	12,885,770,000.00
D	Electricity and Gas Supply	1,950,040,000.00	2,419,790,000.00	2,445,880,000.00	2,756,380,000.00	2,784,870,000.00
E	Water Supply, Rubbsh Management, waste and recycling	2,590,000,000.00	2,609,970,000.00	2,692,990,000.00	2,843,490,000.00	2,999,010,000.00
F	Construction	324,877,500,000.00	346,113,480,000.00	363,613,110,000.00	387,386,990,000.00	411,243,380,000.00
G	Wholesale and Retail; Car and Motorcycle Repair	225,334,600,000.00	240,774,410,000.00	255,529,750,000.00	271,361,640,000.00	293,742,490,000.00
H	Transportation and Warehousing	85,471,200,000.00	90,034,760,000.00	95,241,330,000.00	100,724,340,000.00	105,850,490,000.00
I	Provision of Accommodation and Food	10,618,090,000.00	11,484,520,000.00	12,031,170,000.00	12,847,220,000.00	13,643,670,000.00
J	Information and Communication	231,128,910,000.00	247,564,290,000.00	265,074,610,000.00	281,854,500,000.00	294,121,350,000.00
K	Financial and Insurance services	183,220,660,000.00	186,534,730,000.00	196,581,920,000.00	204,333,850,000.00	206,539,900,000.00
L	Real Estate	64,354,630,000.00	65,788,900,000.00	67,336,990,000.00	68,915,190,000.00	69,273,320,000.00
M,N	Company Services	4,632,310,000.00	4,922,810,000.00	5,239,910,000.00	5,579,150,000.00	5,903,620,000.00
O	Government Administration, Defense and Mandatory Social Security	344,178,560,000.00	370,208,010,000.00	394,389,140,000.00	422,183,660,000.00	455,469,250,000.00
P	Education Services	188,082,780,000.00	201,427,280,000.00	218,021,290,000.00	233,174,170,000.00	248,856,740,000.00
Q	Health Services and Social Activities	46,903,720,000.00	49,062,590,000.00	51,295,790,000.00	53,613,630,000.00	56,875,040,000.00
R,S,T,U	Other Services	96,402,260,000.00	102,056,150,000.00	107,055,440,000.00	112,875,270,000.00	120,648,070,000.00
GDP		**2,476,808,800,000.00**	**2,602,833,400,000.00**	**2,735,434,000,000.00**	**2,873,774,900,000.00**	**3,018,801,900,000.00**

Source: Manggarai Regency BPS, 2020 (Data Processed)

Based on table 1.2, in general, the economic sector that contributed greatly to the economy of Manggarai Regency in 2015-2019 was the tertiary sector. Although East Nusa Tenggara Province and Manggarai Regency have the same types of business fields or economic sectors, these two regions each have main sectors that contribute the most to the formation of GRDP and the rate of economic growth. This indicates that each region will have different potential sectors or leading sectors. Determination of potential sectors in an area will greatly help improve the economy of the region. Judging from the magnitude of the role and contribution of each economic sector to the formation of GRDP and the rate of economic growth in Manggarai Regency, it is necessary to determine which economic sectors are the leading sectors or basic sectors where the sector has the greatest economic potential in Manggarai Regency so that it can maintain economic stability in the Manggarai Regency area. This is very well done because the government and the people of Manggarai Regency tend to pay less attention to what is the advantage or potential of their own region. Therefore, determining potential sectors will be able to help focus development on what is the potential of Manggarai Regency. To see or determine what sectors can be the leading sectors in the economy of Manggarai Regency, the Economic Base Theory approach can be used. Economic activities according to the Economic Base Theory are grouped into basic activities and non-basic activities. The basic sector is where the advantages and disadvantages that occur in the process of meeting these needs lead to an inter-regional export and import mechanism. Meanwhile, the non-base sector is a sector with economic activity that only serves the market in its own area and the regional export capacity has not yet developed (A. Tafui, et al 2019).

In supporting the economic growth of a region, interaction and cooperation with the surrounding areas is required. Each region will definitely need and depend on each other whether in terms of supply or supply, export and import of goods and services of a region will certainly need the surrounding areas. This is supported by the theory of gravity which states that each area will have a hinterland or area around it that will interact with each other. From the statement above, it is clear that Manggarai Regency will need each other and interact/have links with the surrounding regencies in the Manggarai Raya area, namely: East Manggarai Regency and West Manggarai Regency in terms of fulfilling their needs to support economic growth in Manggarai Regency. To what extent Manggarai Regency affects or interacts with the surrounding area can be measured by a gravity model that uses variables or data on population and distance (Soepono, 2000).

Table 3. Total Population and Mileage of Manggarai Regency with Surrounding Regencies in the Greater Manggarai Area

Years	Total Population (People)			Milieage (KM)	
	Manggarai Regency	East Manggarai Regency	West Manggarai Regency	Manggarai-East Manggarai	Manggarai-West Manggarai
2015	319607	272514	251689	67.3	65.5
2016	324014	276620	257582		
2017	329198	280118	273207		
2018	333912	283313	269629		
2019	338264	287207	274707		
Total	1644995	1399772	1326814		

Source: Manggarai Regency BPS, East Manggarai Regency BPS and West Manggarai Regency BPS, 2020 (Data Processed)

Table 1.3 above shows that the population of Manggarai, East Manggarai and West Manggarai Regencies in 2015-2019 has increased with the largest population being Manggarai Regency, meanwhile the distance from Manggarai Regency to East Manggarai Regency is further than from Manggarai Regency to Kabupaten Manggarai. West Manggarai. To make the Manggarai Regency area more advanced or superior in maintaining its economic stability, the thing that must be done is to increase the growth of the leading sectors by developing, utilizing and managing the sector as optimally as possible. One of the policy priorities that must be implemented is (Rini, 2006) the development of economic potential in leading sectors that provide the largest contribution to the regional economy (Ramda and Utama, 2017). The Manggarai Regency Government in the 2016-2021 Regional Medium-Term Development Plan (RPJMD) formulated one strategy, namely "improving the Manggarai economy by optimizing the use of available resources supported by quality infrastructure development".

With the RPJMD, the Manggarai Regency government is easier and more focused in formulating every strategy carried out in developing its economy. However, in fact related to this, the utilization and management of economic resources in Manggarai Regency has not been carried out optimally or has not been further developed by the local government and the people of Manggarai Regency. This tends to be a problem in increasing the rate of economic growth in Manggarai Regency. Based on the above background, the authors are interested in conducting research by analyzing various sectors to determine potential/leading sectors and formulating various things to do in the development of leading sectors in Manggarai Regency in accordance with one of the strategies in the Regional Medium-Term Development Plan (RPJMD) Manggarai Regency 2016-2021, namely improving the Manggarai economy by optimizing the utilization of available resources supported by quality infrastructure development and with the main objective of increasing or stabilizing economic growth in Manggarai Regency. So, the title taken by the author is “SECTORAL ANALYSIS AND ITS DEVELOPMENT IN MANGGARAI REGENCY, EAST NUSA TENGGARA PROVINCE”.

2 Literature Review

2.1 Relevant Past Research

Previous studies that analyzed the determination of the leading sector/regional economic potential and its development strategy used various analytical tools that were able to produce similar results, as was done by Kurniati (2014) who examined Siak Regency using Location Quotient (LQ) analysis and SWOT analysis. The results of the discussion and analysis show that the results of the LQ analysis for the period 2009-2013 state that Siak Regency has three

potential sub-sectors, namely the food crops, plantations, and fisheries sub-sectors with a strategy of using internal strengths to take advantage of external opportunities or the Strengths-Opportunities (S-O) strategy based on SWOT analysis results. Abidin (2009) researched Asahan District using four analytical tools such as LQ, Shift Share, gravity analysis, and SWOT. The results of the LQ analysis show that there are 3 leading sectors, namely the agricultural sector, the industrial sector and the electricity, gas and water sector with a tendency of LQ > 1 while the results from the Shift Share analysis show that the economic growth of Asahan Regency is determined by the economic growth of North Sumatra for all sectors of Rp. 1,129 .779.89 million. The results of the gravity analysis of Asahan Regency have very strong inter-regional economic linkages to Simalungun Regency and Tanjung Balai City. The strategy needed to develop a leading sector based on a SWOT analysis is a strategy (S-O). Chandra and Amiruddin (2015) researched Makassar City in 2015 which examined the most strategic and potential economic sectors to be developed to support economic growth in Makassar City using LQ analysis. The results of this study indicate that of the 9 sectors studied, the coefficient of LQ value greater than 1 is the trade sector with an average value of 1.13, the manufacturing sector with an average LQ value of 1.02, then the services sector with an average value of 1.02. average LQ 1.19. This means that the three sectors have the potential to be developed because these sectors are the leading sectors for the economic growth of Makassar City.

2.2 Economic Growth Theory

Economic growth is one of the benchmarks that can be used to increase the development of an area from various economic sectors which indirectly describes the level of economic change (Badri, 2015: 223). Economic growth is a slow and steady/maximum long-term change that occurs through an increase in savings or income and population in a country or region. Growth Theory David Ricardo (1772-1823) states that the process of economic growth is influenced by factors of land resources, human resources, capital accumulation and technological progress. He focused on economic actors by dividing them into three groups, namely the capitalist group, the working class, and the landlord group. Meanwhile, Simon Kuznets (2003) growth theory states that economic growth is an increase in the long-term capacity of the country concerned to provide various economic goods to its population. The increase in capacity itself is determined by progress or technological, institutional and ideological adjustments (Rachmiyati, et al, 2018).

2.3 Economic Base Theory

Basically, export activities are all activities, both product producers and service providers that bring in money from outside the region, which are called basic activities. Employment and income in the basic sector are functions of exogenous demand, namely internal strength/local demand. Other activity sectors that are not basic activities are included in service activities/sectors, but in order not to create a misunderstanding about the meaning of service, they are called non-basic sectors. The non-basic sector (service) is to meet local consumption needs (Tarigan, 2005). One method that can be used to divide regions into basic and non-basic categories is the Location Queotient (LQ) method. The LQ method compares the magnitude of the role of a sector in a region to the magnitude of the role of the sector in a larger region (Tarigan, 2005), in this case what is being compared is the added value (income level). The formula is:

$$LQ = \frac{xi/PDRB}{Xi/PNB} \quad (1)$$

Description
LQ = Locationt Quotient
x_i = Number of sector i jobs in the analysis area
PDRB = Gross Regional Domestic Product of the area
X_i = The number of jobs in sector i nationally
PNB = Gross National Product

Table 4. Measurement of Results From LQ Analysis

No	Results	Description/Meaning
1.	LQ > 1	The role of sector i in an area is more prominent or greater than the role of the sector nationally, so this sector can also be called the base sector.
2.	LQ < 1	The role of sector i in an area is smaller than the role of the sector nationally, so this sector can also be a non-basic sector.
3.	LQ = 1	These sectors are non-basic sectors where the role of the sector is not prominent in an area and does not have a comparative advantage.

Source: Tarigan, 2005

2.4 Potential Sector Development Concept

According to Tjokroaminoto (1995) the first activity carried out in regional development planning is to conduct a review of conditions, problems and development potentials. Based on the potential of natural resources that we have, there is a potential sector in an area that must be developed as optimally as possible (Saerofi, 2005). The strategy for developing regional economic potential is a way to develop each leading sector which aims to expand and improve the sector's ability to contribute to the formation of GRDP. These systems or methods are structured based on the strengths and weaknesses of the sector or region. Before a development strategy is formulated, it is better to know the strengths and weaknesses of the regions in developing their economy. By knowing the strengths and weaknesses of an area, it will be faster to develop strategies to achieve the desired goals or objectives. Therefore, in preparing the strategy there are steps that must be taken (Mushoffa, 2005), namely:

a) Identify which activity sectors have the potential to be developed by taking into account the strengths and weaknesses of each sector.
b) Identify sectors with low potential to be developed and look for factors that cause low potential for these sectors to be developed.
c) Identify resources (factors of production) which include human resources and which are ready to be used to support the development of each sector concerned.
d) By using a weighting model for the variables of strength and weakness, it will find economic potential that is superior and deserves to be developed.
e) Determine the strategy that will be taken to develop the mainstay sectors that will be able to attract other sectors to grow so that the economy will be able to develop itself (self propelling) in a sustainable manner (sustainable development).

2.5 Spatial Interaction Theory

Spatial interaction is (Brocker, 1989) movement or communication between different areas. Here the area is considered as a mass. Relations between regions are equated with relations

between masses. The mass of the area also has an attraction, so that there is mutual influence between regions as a manifestation of the strength of attraction between regions. Given this reality, the gravity model can be used as an analytical model to measure the strength of interaction between regions where, the variables or data used to measure the strength of interaction (attraction) between regions are the number of residents and distance (Shara, 2018).

The gravity model is (Hayness and Fotheringham, 1984) the most commonly used model for analyzing spatial interactions. The theory of spatial interaction was originally derived from the theory of Gravity by Sir Isaac Newton (1787) where the core of the theory is that two objects that have a certain mass will have an attractive force known as the gravitational force. Newton's model of gravity was then applied by W.J Reilly (1929), a geographer to measure the strength of the spatial interaction between two or more regions. Reilly argues that the strength of the interaction between two regions can be measured by the number of inhabitants and the distance between the two regions (Irsyad and Syahnur, 2018). The formula for the gravity model is as follows:

$$T_{ij} = PiJi / d^2_{ij} \quad (2)$$

Description :
Tij = The attractiveness between area (i) and area (j)
Pi = The amount of mass of the region (i) using a benchmarkpopulation in the area (i)
Pj = The amount of mass of the area (j) that uses a benchmarkpopulation in the area (j)
dij = Distance between (i) and (j)

3 Methodology

3.1 Types of Research

The type of research used in this research is a case study on economic sectors and their development in Manggarai Regency.

3.2 Research Approach

This study uses quantitative descriptive analysis, which is to explain a phenomenon by using numbers that describe the characteristics of the subject under study. Descriptive analysis is used to describe the research results. In this study, quantitative analysis was used in calculating LQ analysis to determine the leading sector and a gravity model to explain the relationship between Manggarai Regency and East Manggarai Regency and West Manggarai Regency. Meanwhile, qualitative analysis is used to develop strategies in developing leading sectors using the Strenghts, Weakness, Opportunities and Threaths (SWOT) analysis methods.

3.3 Research Focus

In this study, researchers focus their research on determining and developing economic sectors that are the leading sectors in Manggarai Regency, covering the 2015 - 2019 period in an effort to increase economic growth in Manggarai Regency.

3.4 Data Types and Sources

3.4.1 Data Type

Quantitative Data, data in the form of numbers. In this study, the quantitative data used are Manggarai Regency GRDP data on the basis of constant prices and East Nusa Tenggara Province ADHK GRDP data for the 2015-2019 period for the calculation of LQ analysis as well as population and mileage data for the calculation of the gravity model analysis. Qualitative data, data in the form of an explanation or general description. Qualitative data in this study are in the form of questionnaires and interviews with parties or resource persons who know best and play an important role in various matters relating to leading economic sectors based on the results of LQ analysis. This was done to formulate a strategy for developing potential sectors in Manggarai Regency using a SWOT analysis.

3.4.2 Data source

Primary Data, is a source of research data obtained directly from the original source / not through an intermediary (Arikunto, 2002). Primary data is specifically collected by researchers to answer research questions. Primary data in this study were obtained through questionnaires and interviews. Secondary data, is a source of research data obtained by researchers indirectly through intermediary media or obtained and recorded by other parties (Arikunto, 2002). Secondary data in this study were obtained from the Central Statistics Agency (BPS) of Manggarai Regency, BPS of East Manggarai Regency, BPS of West Manggarai Regency and BPS of East Nusa Tenggara Province.

3.4.3 Data Collection Technique

Data collection techniques used in this study are as follows:

a) Documentation. In this study, the documentation method was used to determine the 2010 series of GRDP of Manggarai Regency on the basis of constant prices (ADHK), 2015-2019 series of ADHK GRDP data of East Nusa Tenggara Province, 2015-2019, total population of Manggarai Regency, total population West Manggarai Regency and the total population of East Manggarai Regency and the distance between Manggarai and East Manggarai Regency and the distance between Manggarai and West Manggarai Regency.
b) Questionnaire. Questionnaires are a number of written questions that are used to obtain information from respondents in terms of reports about themselves or things they know (Arikunto, 2002). In this study, the questionnaire method was used to collect data on the strengths, weaknesses, opportunities and threats of developing basic sectors that have advantages or potential in Manggarai Regency
c) Interview. The author in this study uses structured interviews, where before the interview a list and number of questions have been prepared and in the interview process the author only wants to get an explanation of a phenomenon and not for the purpose of understanding the phenomenon. In this study, interviews were conducted to obtain additional information related to the actual situation or conditions with leading sectors and the linkages or cooperation between Manggarai Regency and West Manggarai Regency and East Manggarai Regency to support or clarify the results of the analysis obtained in the study.

3.4.4 Data Analysis Technique

The method used to analyze the data in this study are as follows:

In this study, LQ analysis is used to determine the leading or potential sectors in Manggarai Regency with the 2015-2018 time period. The formula is as follows The formula is as follows:

$$LQ = \frac{xi/PDRB}{Xi/PDRB} \quad (3)$$

Description:

xi = added value of sector i in the Manggarai Regency area
GRDP = Gross Regional Domestic Product of Manggarai Regency
Xi = added value of sector i in East Nusa Tenggara Province
GRDP = Gross Regional Domestic Product of East Nusa Tenggara Province

Table 5. Measurement of LQ Analysis Results

No	Result	Description/Meaning
1.	LQ > 1	The role of this sector in the Manggarai Regency area is more prominent than the role of the sector in East Nusa Tenggara Province, so this sector can also be called the base sector.
2.	LQ < 1	The role of this sector in the Manggarai Regency area is smaller/not prominent than the role of the sector in East Nusa Tenggara Province, so this sector can also be called a non-basic sector.
3.	LQ = 1	This sector is classified as a non-basic sector because its role is small in the Manggarai Regency area and does not have a comparative advantage.

Source : Tarigan, 2005

3.5 Klassen Typological Analysis

Klassen typology (Sjafrizal, 2008) is one of the regional economic analysis tools that can be used to determine the classification of economic sectors. Klassen's Typological Analysis is used in this study for the purpose of identifying the position of the leading or potential economic sector in Manggarai Regency by taking into account the economic sector of East Nusa Tenggara Province (NTT) as a reference area (Ramda and Utama, 2017). The results of the Klassen Typology analysis will show the growth position and share of sectors and sub-sectors in Manggarai Regency so that it becomes the basis for developing potential sustainable economic sectors. To identify potential or leading economic sectors in Manggarai Regency into their respective criteria, the Klassen Typology matrix can be used in its determination. Klassen's Typological analysis resulted in four sector classifications with different characteristics as follows (Sjafrizal, 2008):

Table 6. Criteria for Structure and Growth of Regional Economic Sectors

Quadrant I (si > s and ski > s) Advanced and fast-growing sector	Quadrant II (si < s and s > sk) Sector developed but depressed
Quadrant II (si < s and s > sk) Potential sector (still growing rapidly)	Quadrant IV (si < s and ski < sk) Relatively lagging sector

Source : Syafrizal, 2008

Description :
si = Growth Rate of sector i Manggarai Regency
s = Growth Rate of sector i Province of NTT
ski = GRDP sector i Manggarai Regency
sk = GRDP sector i Province of NTT

3.6 Gravity Analysis

In the context of this research, gravity analysis is used to explain how the relationship between Manggarai Regency and the surrounding regencies in the Manggarai Raya area is West Manggarai Regency and East Manggarai Regency. According to this analysis, the attractiveness between the node (center) and the surrounding area is an inverse ratio between the size of the node and the square of the distance between the two regions (Abidin, 2012). The formula used is as follows:

$$T_{ij} = PiPj / d^2_{ij} \quad (4)$$

Description :
Tij = Interesting attraction between the Manggarai Regency area(i) with East Manggarai Regency (j) and West Manggarai Regency (j)
Pi = The area mass of Manggarai Regency (i) whichusing a measure of the population in the area
Pj = The amount of mass from the Manggarai Regency areaTimur (j) and West Manggarai Regency (j) which use the population as a benchmark in the regions
dij = Distance between Manggarai Regency (i) and RegencyEast Manggarai (j) and West Manggarai Regency (j)
The measurements of this analysis are:

a) If the Tij value is greater, then the attractiveness between the Manggarai Regency (i) and West Manggarai Regency (j) and East Manggarai Regency (j) is getting stronger and it can be said that the indicators of socio-economic activities of the two are closely related.
b) If the value of Tij is getting smaller, the attractiveness between the Manggarai Regency (i) and West Manggarai Regency (j) and East Manggarai Regency (j) is getting weaker and it can be said that the indicators of socio-economic activities of the two are less related.

3.7 SWOT Analysis (Strenghts, Weaknesses, Opportunities, Threats)

3.7.1 Definition of SWOT Analysis

SWOT analysis is the identification of various factors systematically based on logic that can maximize strengths and opportunities, but at the same time minimize weaknesses and threats. Performance in potential sectors is determined by a combination of internal and external factors, both of which must be considered in a SWOT analysis (Sjafrizal, 2014).

3.7.2 Strategy Factor Analysis

a) Internal Strategy Factor Analysis

Factor analysis of internal strategy can be done by compiling an IFAS table (Internal Factor Analysis System. Following the method recommended by Freddy Rangkuti (1997), the strategy factor analysis can be formulated in an IFAS table using several steps and stages of calculation as follows:

Table 7. Internal Factor Analysis (IFAS)

No	Internal Strategy Factor	Weight	Score	Rating
1	Determine 1-3 elements of the main strengths and weaknesses of the area concerned	Give each factor or element a weight with a value ranging from 10.0% (not important) to 100.0% (very important) based on the function and role of these factors in the position of the regional development strategy concerned.	Determine the score for each factor or element using a licker scale that moves from 1 (very bad) to 5 (very good) based on the condition and quality of each element of the strengths and weaknesses of the area concerned.	Obtained by multiplying the weights and scores to obtain a score for each factor. The value indicates the strategic level of each of these elements towards the achievement of the regional development goals in question

Source : Sjafrizal, 2014

b) External Strategy Factor Analysis

By analogy with the IFAS Table above, the preparation of the External Factor Analysis Summary (EFAS) Table can be prepared by knowing the external strategic factors that are very important for the development of the region or institution concerned. The following are the methods and steps that need to be taken in determining the external strategy factors using the EFAS table.

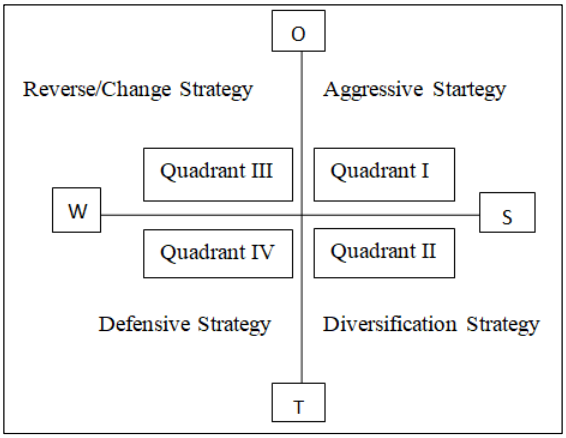
Table 8. External Factor Analysis (EFAS)

No	Internal Strategy Factor	Weight	Score	Rating
1	Determine as many as 1-3 to 10 main opportunities and threats faced by the area concerned	Give weight to each factor in column 3 starting from 10.0% (not important) to 100.0% (very important) according to the function and role of each strategic factor in achieving regional or related goals.	Calculate the score for each of these factors by giving a number in the form of a licker scale ranging from 1 (very poor) to 5 (very high) based on the magnitude of the influence of these factors on the condition of the area concerned.	Obtained by multiplying the weights and scores to obtain a score for each factor. The value indicates the strategic level of each of these elements towards the achievement of the regional development goals in question

Source : Sjafrizal, 2014

3.7.3 Strategy Formulation With SWOT Technique

To determine what strategies are carried out in the development of potential sectors in Manggarai Regency, what is done is to use the SWOT quadrant, which can be seen in the image below:



Source : Rangkuti, 2004

Fig. 1. SWOT Analysis Quadrant

Description:

a) Quadrant I: This is a very favorable situation, the sector hasopportunities and strengths so as to take advantage of existing opportunities and strengths. The strategy that must be applied in these conditions is an aggressive development policy.
b) Quadrant II: Despite facing various threats, the sector is stillhave internal strength. The strategy that must be applied is to use strength to take advantage of long-term opportunities by means of a diversification strategy.
c) Quadrant III: The sector has a very large business opportunity,but on the other hand face some weaknesses or internal constraints. The focus of the sector's development strategy is to turn around in the sense of minimizing internal problems. So that it can create good business opportunities.
d) Quadrant IV: Is an unfavorable situation or a situation that is mostIt is bad because it has to face big challenges that come from the environment and at the same time it is hit by various internal weaknesses. The right strategy in this condition is a defensive strategy.

Based on the results of this identification, through analysis, a strategy can be drawn up which can be grouped into a SWOT Matrix.

Table 9. SWOT Analysis Matrix for Strategy Formulation

Internal / Eksternal	STRENGTHS (S) Determine 1-3 Internal Strength Factors Most Strategy	WEAKNESSES (W) Determine 1-3 Most Strategic Internal Weakness Factors
OPPORTUNITIES (O) Determine 1-3 Highly Strategic External Opportunity Factors	S-O . STRATEGY Define a Strategy that Uses Strengths to Take Advantage of Opportunities	W-O STRATEGY Determine Strategies that Minimize Weaknesses to Take Advantage of Opportunities
THREAT (T) Determine 1-3 Highly Strategic External Threat Factors	S-T STRATEGY Define Strategies Using Strengths to Overcome Threats	W-T STRATEGY Define Strategies that Minimize Weaknesses and Avoid Threats

Source :Sjafrizal, 2014

a) Strategy (S-O) is a strategy that connects elements of strength with elements of opportunity. The results of the use or formulation of this strategy are obtained by utilizing the elements of strength to seize available opportunities.
b) Strategy (S-T) is a strategy that links the elements of strength with threats. In other words, the strategy generated in this quadrant is obtained by utilizing the strengths possessed by the Manggarai Regency area to reduce threats that come from outside.
c) Strategy (W-O) is a strategy by linking elements of weakness with available opportunities. In other words, in this quadrant a development strategy is created by overcoming existing weaknesses to seize available opportunities.
d) Strategy (W-T), namely, a strategy that links between elements of weakness and threats. In other words, in this quadrant a development strategy can be created by overcoming existing internal weaknesses to reduce threats that come from outside.

4 Results and Discussion

4.1 Location Quotient (LQ) Analysis

Location Quotient (LQ) analysis is used to find out which economic sectors are included in the basic sector which are the leading sector or have export potential and which are not the basic sector.

Table 10. Locationt Quotient (LQ) Calculation Results in Manggarai Regency, 2015-2019

NO	Business Field	LOCATION QOUTIENT (LQ) MANGGARAI Regency					Average LQ	Keterangan
		Years						
		2015	2016	2017	2018	2019		
A	Agriculture, Forestry and Fisheries	0.8175	0.8122	0.7924	0.7832	0.7754	0.7961	Non-Base Sector
B	Mining and excavation	2.2459	2.2481	2.2815	2.3272	2.2758	2.2757	Base Sector
C	Processing industry	0.3352	0.3331	0.3257	0.3235	0.3225	0.3280	Non-Base Sector
D	Electricity and Gas Supply	1.0928	1.1830	1.1883	1.2234	1.2260	1.1827	Base Sector
E	Water Supply, Rubbsh Management, waste and recycling	1.4841	1.4923	1.5173	1.5210	1.5214	1.5072	Base Sector
F	Construction	1.2442	1.2316	1.2227	1.2253	1.2474	1.2342	Sektor Basis
G	Wholesale and Retail; Car and Motorcycle Repair	7.9545	0.7962	0.8078	0.7998	0.8055	2.2328	Base Sector
H	Transportation and Warehousing	0.6867	0.6799	0.6681	0.6552	0.6667	0.6713	Non-Base Sector
I	Provision of Accommodation and Food	0.7203	0.6808	0.6280	0.5982	0.6003	0.6455	Non-Base Sector
J	Information and Communication	1.0760	1.0799	1.1003	1.1162	1.1047	1.0954	Base Sector
K	Financial and Insurance services	1.9292	1.8114	1.8020	1.8109	1.7760	1.8259	Base Sector
L	Real Estate	1.0125	1.0013	0.9765	0.9539	0.9603	0.9809	Non-Base Sector
M,N	Company Services	0.6435	0.6651	0.6982	0.7316	0.7466	0.6970	Non-Base Sector
O	Government Administration, Defense and Mandatory Social Security	1.0884	1.1086	1.1467	1.1421	1.1407	1.1253	Base Sector
P	Education Services	0.8698	0.8952	0.9188	0.9602	0.9742	0.9237	Non-Base Sector
Q	Health Services and Social Activities	0.8868	0.8738	0.8511	0.8311	0.8356	0.8557	Non-Base Sector
R,S,T,U	Other Services	1.8174	1.8587	1.8225	1.8063	1.8145	1.8239	Base Sector
GDP		1	1	1	1	1	1	

Source: BPS Kabupaten Manggarai and BPS Province NTT, 2020 (Data Processed)

4.2 Manggarai Regency Per-Sector Discussion

a) Agriculture, Forestry and Fisheries

Based on LQ analysis for the last 5 years (2015-2019), the Agriculture, Forestry and Fisheries sector shows an average LQ value below 1 (LQ < 1), which is 0.7961. This means that this sector is a non-basic sector. The LQ value which is less than one means that the Agriculture, Forestry and Fisheries sector has not been able to meet the needs of the local community of Manggarai Regency. Judging from the real conditions that occur in Manggarai

Regency, the Agriculture, Forestry and Fisheries sector in Manggarai Regency still requires harvests from the East Manggarai Regency and West Manggarai Regency.

b) Mining and excavation

In Manggarai Regency, the Mining and Quarrying sector consists of two types, namely metal and rock minerals (stone, sand and others). The manganese mine in Manggarai Regency is no longer operating, but in the field of Excavation this sector is developing well, so that it is able to make an adequate contribution to PRDB. The results of the LQ calculation during the 2015-2019 research period in the Mining and Quarrying sector show an average value above the number one, which is 2.2757 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet needs outside the region. In other words, this sector is a potential export sector. The mining and quarrying sector in Manggarai Regency does have great potential, especially in the excavation sector, where Manggarai Regency does not have to rely on external goods because they have great potential and are able to meet consumer needs.

c) Processing industry

The results of the LQ calculation during 2015-2019 in the Manufacturing Industry sector showed an average value below one, namely 0.3280 (LQ < 1), which means this sector is included in the non-base sector, where its role is small in Manggarai Regency. The LQ value which is less than one means that the Manufacturing Industry sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported. In fact, the condition of the Processing Industry in Manggarai Regency can be said to be quite bad because there are only types of industry that only produce goods for daily needs such as the textile industry. In Manggarai Regency there are only home industries such as weaving with the original motifs of the Manggarai Regency and there are also cottage industries that can process woven products or other types of fabric into clothes, bags and other accessories.

d) Electricity and Gas Supply

The results of the LQ calculation during the 2015-2019 research period for the Electricity and Gas Procurement sector show an average value above one, which is 1.1827 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. In Manggarai Regency for the Electricity and Gas Procurement sector, the benefits are very visible and it is clear that Manggarai Regency has its own electricity supply and even subsidizes each other with West Manggarai Regency. Ulumbu is a steam power source located in Manggarai Regency.

e) Water Supply, Waste Management, Waste and Recycling

The results of the LQ calculation during the 2015-2019 research period in the Water Supply, Waste Management, Waste and Recycling sector show an average value above one,

which is 1.5072 (LQ > 1), which means this sector is included in the basic sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. In other words, this sector is a potential export sector. The results of this LQ analysis are also clearly supported by the real conditions in the Water Supply, Waste Management, Waste and Recycling sector, especially in the Water Supply sub-sector. broad enough.

f) Construction

The results of the LQ calculation during the 2015-2019 research period in the Construction sector show an average value above number one, which is 1.2342 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. The results of the LQ analysis above are supported or caused by the existence of developments such as infrastructure which is increasing every year and there are many projects in Manggarai Regency where the construction for material and material needs is not too dependent on other regions. This sector has a very large role because the needs of the community, especially those related to infrastructure, are increasing and dependent.

g) Wholesale and Retail Trade; Car and Motorcycle Repair

The results of the LQ calculation during the 2015-2019 research period in the Wholesale and Retail Trade sector; Car and Motorcycle Repair shows an average value above the number one, which is 2.2328 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. If we look at the real conditions in Manggarai Regency for the Wholesale and Retail Trade sector; Repair of Cars and Motorcycles does have a sufficient role. This is because Manggarai Regency is the parent regency in the Manggarai Raya area which is more developed and advanced than the two divisions, namely West Manggarai Regency and East Manggarai Regency. This is evidenced by the large number of supermarkets, large and small kiosks and also a large number of car and motorcycle accessories, including commission agent activities in the wholesale and retail trade of vehicles that can meet consumer needs.

h) Transportation and Warehousing

The results of the LQ calculation during 2015-2019 of the Transportation and Warehousing sector show an average value below one, which is 0.6713 (LQ < 1), which means this sector is included in the non-base sector, where its role is small in Manggarai Regency. The LQ value which is less than one means that the transportation and warehousing sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported.

i) Sector Provision of Accommodation and Food and Drink

The results of the LQ calculation during 2015-2019 for the Accommodation and Food and Drink Provision sector showed an average value below one, namely 0.6455 (LQ < 1) which means this sector is included in the non-basic sector, where its role is small in the Regency. Manggarai. The LQ value which is less than one means that the Accommodation and Food and Drink Provision sector has not been able to meet the needs of the local community in Manggarai Regency so that this sector has the potential to be imported. In real conditions that occur in Manggarai Regency for the Accommodation and Food and Drink Provision sector, it is not very prominent because things related to the increase in this sector such as star hotels and luxury or traditional restaurants do not develop well enough so that they are not sufficient to meet the needs of consumers, especially guests. -Guests who come from outside the region, city or country. So far in Manggarai Regency there are only many hotels/inns and inns that are not starred.

j) Information and Communication Sector

The results of the LQ calculation during the 2015-2019 research period in the Information and Communications sector show an average value above the number one, which is 1.0954 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. The results of the LQ analysis in this sector are also supported or caused by real conditions that occur in Manggarai Regency, where it is clear that the role and benefits of the Information and Communication sector are seen from the increasing use of the internet and other facilities related to this sector in the Regency community. Manggarai. Almost all people from various circles use the internet and these facilities so that it is easy and fast to get information and interact.

k) Financial Services and Insurance

The results of the LQ calculation during the 2015-2019 research period in the Financial Services and Insurance sector show an average value above one, which is 1.8259 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. Manggarai Regency in the field of Financial Services and Insurance is indeed quite good and very beneficial for the people of Manggarai Regency, especially for those who need loans or capital in doing business. This is because there are many financial and capital institutions such as cooperatives in Manggarai Regency that support the community in doing business. The total number of financial institutions, which reached 140 institutions, was sufficient to meet the needs of the people of Manggarai Regency, so there was no need to rely on financial institutions outside the Manggarai Regency area (BPS, 2020).

l) Real Estate

The results of the LQ calculation during 2015-2019 for the Real Estate sector show an average value below one, which is 0.9809 (LQ < 1), which means this sector is included in the

non-base sector, where its role is small in Manggarai Regency. The LQ value which is less than one means that the Real Estate sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported. The increase in the progress of this sector is supported by the existence of housing or luxury buildings and also in the form of land, rental or maintenance. In Manggarai Regency, the role and benefits are not very visible because there are not many facilities related to Real Estate, there is no special housing location, because the average population in Manggarai Regency has a standard amount of wealth.

m) Company Services

The results of the LQ calculation during 2015-2019 for the Corporate Services sector showed an average value below one, which was 0.6970 (LQ < 1), which means this sector is included in the non-base sector, where its role is small in Manggarai Regency. An LQ value that is less than one means that the Company Services sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported. In Manggarai Regency, it only consists of rental services, employment services, services for buildings and landscaping, office administration services as well as office support services and other business support services that are not yet able to meet consumer needs. There are no big companies in Manggarai Regency like in big cities that are able to make a big contribution to the economy of Manggarai Regency. This causes Manggarai Regency to still depend on other regions in the field of Corporate Services.

n) Government Administration, Defense and Mandatory Social Security

The results of the LQ calculation during the 2015-2019 research period in the Government Administration, Defense and Social Security sectors show an average value above one, which is 1.1253 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. For the Government Administration sector, Defense and Social Security are under the supervision of the government, so that this sector can be controlled and guaranteed supervision and security. This sector plays an important role because it involves all aspects of the security and welfare of Manggarai Regency. Because it is under the supervision and control of the government, this sector is guaranteed to be able to meet the needs of the people of Manggarai Regency. This is what supports or causes the results of the LQ > 1 analysis for the Government Administration, Defense and Mandatory Social Security sectors.

o) Education Services

The results of the LQ calculation during 2015-2019 for the Education Services sector show an average value below one, which is 0.9237 (LQ < 1), which means this sector is included in the non-base sector, where its role is small in Manggarai Regency. The LQ value which is less than one means that the Education Services sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported. The level of people's willingness to take education in Manggarai Regency during the 5 year research period is in good condition as evidenced by the increasing contribution every year. However, education services in Manggarai Regency have not been maximized, where

educational facilities are still lacking and there is also a lack of good quality teaching staff so that in relation to Manggarai Regency, they still need good facilities and potential workers from outside the region or city

p) Health Services and Social Activities

The results of the LQ calculation during 2015-2019 in the Health and Social Activities sector show an average value below one, which is 0.8557 (LQ < 1) which means this sector is included in the non-base sector, where its role is small in Manggarai Regency. The LQ value which is less than one means that the Health and Social Activities sector has not been able to meet the needs of the local community of Manggarai Regency so that this sector has the potential to be imported. For health services and social activities in Manggarai Regency, judging from the real condition, it is not too maximal and prominent. Medical personnel are still not very competent and medical equipment is still lacking and below standard so that patients suffering from diseases that are difficult for Manggarai Regency staff to treat must be referred to other regional hospitals or cities. In Manggarai Regency, the latest condition in 2019, the existing health personnel include 34 doctors, 707 midwives, 637 nurses, and others (BPS, 2020). The number of medical personnel is less than the very large number of patients, so they have not been able to meet the needs of consumers.

q) Other Services

The results of the LQ calculation during the 2015-2019 research period of the Other Services sector showed an average value above the number one, which was 1.8239 (LQ > 1), which means this sector is included in the base sector. This means that this sector is a leading sector that has a major role in economic growth in Manggarai Regency and can not only meet the needs of Manggarai Regency, but can also meet the needs of other regions. In Manggarai Regency there are many tourism places, karaoke studios and also museums. In addition, there are many computer rental services (internet cafes), household assistant services and home industry services. All of these activities are able to meet the needs of the people of Manggarai Regency, so there is no need to bring in services from outside the region.

r) Klassen Typological Analysis

Klassen Typology Analysis is used for the purpose of identifying the position of the economic sector which is the leading or potential sector in Manggarai Regency by taking into account the economic sector of the NTT Province as a reference area. The quadrant position occupied by the potential sector which will be further analyzed in its development will be the basis that a potential sector is indeed very good to be developed for the sake of increasing the economic growth of Manggarai Regency in a sustainable manner. The following are the results of Klassen's Typology analysis of potential economic sectors in Manggarai Regency from 2015-2019.

Table 11. Klassen Typology Analysis of potential sectors in Manggarai Regency, 2015-2019

No	Potential Sector	Average GDP Per Sector		Category	Average Growth Rate		Category
		Manggarai Regency (ski)	NTT Province (sk)		Manggarai Regency(si)	NTT Province (s)	
1	Mining and excavation	88,292,968,000.00	889,860,000,000.00	(+)	3.319191	3.042503	(-)
2	Electricity and Gas Supply	2,471,392,000.00	47,780,000,000.00	(-)	9.723962	6.45265	(+)
3	Water Supply, Rubbsh Management, waste and recycling	2,747,092,000.00	41,800,000,000.00	(-)	3.75246	3.186518	(-)
4	Construction	366,646,892,000.00	6,815,800,000,000.00	(+)	6.072292	6.076943	(+)
5	Wholesale and Retail; Car and Motorcycle Repair	257,348,578,000.00	6,200,280,000,000.00	(+)	6.855889	246.8466	(+)
6	Information and Communication	263,948,732,000.00	5,523,320,000,000.00	(+)	6.2166	5.58291	(+)
7	Financial and Insurance services	195,442,212,000.00	2,460,240,000,000.00	(+)	3.054501	5.284035	(-)
8	Government Administration, Defense and Mandatory Social Security	397,285,724,000.00	8,089,960,000,000.00	(+)	7.256545	6.091609	(+)
9	Other Services	107,807,438,000.00	1,356,740,000,000.00	(+)	5.771481	5.889263	(+)

Source: BPS Kabupaten Manggarai and BPS Province NTT, 2020 (Data Processed)

Based on the GRDP growth and the growth rate of the potential sectors in table 4.16, it can be determined the position of each potential economic sector in the Klassen Typology quadrant.

Table 12. Classification of potential sectors of Manggarai Regency according to Klassen's Typology, 2015-2019

Quadrant I (si > s and ski > s) Advanced and fast-growing sector	Quadrant II (si < s and s > sk) Sector developed but depressed
Quadrant III (si > s and ski < sk)	Quadrant IV (si < s and ski < sk)
Potential sectors (still growing rapidly): 1. Mining and excavation 2. Water Supply, Waste Management, Waste and 3. Recycling 4. Construction 5. Electricity and Gas Supply 6. Government Administration, Defense and Mandatory Social security 7. Information and Communication	Relatively lagging sectors: 1. Wholesale and Retail Trade; Car and Motorcycle Repair 2. Financial and insurance services 3. Other services

Source : research results, 2021

Based on Klassen's Typology analysis (table 4.17) of 9 potential economic sectors in Manggarai Regency for the 2015-2019 period, there are 3 sectors that are included in the relatively lagging sector classification in quadrant IV, namely the wholesale and retail trade sector; Car and Motorcycle Repair, Financial Services and Insurance sector, and Other Services sector. This position indicates that the growth rate of the three sectors mentioned above is smaller to the GRDP of Manggarai Regency compared to the growth rate of the three sectors to the GRDP of East Nusa Tenggara Province and at the same time the three sectors have a smaller contribution to the GRDP of Manggarai Regency than the contribution of the three sectors to the GRDP. East Nusa Tenggara Province. Meanwhile, 6 of the potential economic sectors in Manggarai Regency (2015-2019) are sectors that are included in the classification of potential sectors that can still develop rapidly in quadrant III, namely the Mining and Excavation sector, the Water Supply sector, Waste Management, Waste and Recycling. , Construction, Electricity and Gas Procurement, Government Administration,

Defense and Mandatory Social Security; and the Information and Communications sector. This position indicates that the growth rate of the six sectors mentioned above is greater to the GRDP of Manggarai Regency compared to the growth rate of the six sectors to the GRDP of the East Nusa Tenggara Province, however, the six sectors have a contribution value to the GRDP of Manggarai Regency which is smaller than the contribution of the six sectors. to the GRDP of East Nusa Tenggara Province. The classification of the six sectors mentioned above in the Klassen typology analysis is a very good thing, where this sector is not only a leading or potential sector in Manggarai Regency but this sector is a potential sector that can still develop rapidly so it has a huge opportunity to further analysis is carried out in its development.

s) Region Linkage Analysis (Gravity Model)

To find out how strong the relationship or attraction between Manggarai Regency and other areas included in the Manggarai Raya area, namely East Manggarai Regency and West Manggarai Regency, the gravity model is used.

Table 13. Gravity Calculation Results of Manggarai Regency with Regency East Manggarai and West Manggarai Regencies, 2015-2019

Years	East Manggarai Regency	West Manggarai Regency
2015	19,229,809.09	18,749,855.19
2016	19,788,698.16	19,453,452.40
2017	20,359,545.40	20,963,626.36
2018	20,886,631.34	20,985,340.87
2019	21,449,672.83	21,659,224.67
Average	20,342,871.36	20,362,299.90

Source : research results, 2021

As in the table of gravity analysis calculations above, it can be seen that during the author's research period, 2015-2019, the strongest or greatest interaction with Manggarai Regency was West Manggarai Regency with an average value of 20,362,299.90 and the smallest interaction. with Manggarai Regency is East Manggarai Regency with an average value of 20,342,871.36. The strong interaction between Manggarai Regency and West Manggarai Regency is due to the relatively close distance that makes it easier for residents to access. On the other hand, West Manggarai Regency is an area with high economic and social mobility. So this can affect economic and social development. This fact is in line with the theory of spatial interaction (Brocker, 1989) which says that movement or communication between different areas. Efforts to estimate the movement or communication between these areas can be in the form of economic flows (commodities or trade between regions), information flows and population mobility flows. Manggarai Regency does a lot of cooperation or interaction with West Manggarai Regency because there are many common interests between Manggarai Regency and West Manggarai Regency, most of which are collaborations that occur or are related to sectors that produce goods or products such as the Agriculture sector, Forestry and Fisheries; Mining and excavation; Processing industry; Electricity and Gas Procurement; Water Supply, Waste Management, Waste and Recycling; Transportation and Warehousing; Wholesale and Retail Trade; Car and Motorcycle Repair; and Provision of Food and Drink Accommodation so that there is a strong interaction in subsidizing and supplying production, harvest or natural resources so that they are mutually beneficial.

t) Potential Sector Development in Manggarai Regency

In this research, the development is more focused on sectors that produce a product or goods so that it is easy to develop and easy to export to other regions. The Economic Base Theory which 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. Export is selling products/services outside the region either to other regions within the country or abroad (Tarigan, 2005: 28). The determination of the sector to be analyzed further in its development is also based on the growth pattern or position of the sector based on Klassen's Typology analysis so that the sector has the opportunity to develop in a sustainable manner. Mining and Quarrying Sector; and the Water Supply sub-sector, is a potential sector that is considered to have a competitive/comparative advantage in Manggarai Regency so that it will be able to create high economic growth and be able to compete with other regions. Therefore, these two sectors need to be further developed by formulating various strategies. carried out in its development. In addition, based on the Klassen Typology analysis of the Mining and Quarrying sector; and the Water Supply sub-sector is included in the classification of potential sectors that can still develop rapidly (Quadrant III). This indicates that the two sectors have great opportunities in increasing economic growth in Manggarai Regency so that various strategies need to be carried out or formulated in their development.

u) Formulation of Mining and Excavation Sector Development Strategy

Before a development strategy is formulated, it is better to know in advance the internal and external factors of the leading sectors for which the development strategy will be formulated. By knowing internal factors and external factors in the development of potential sectors, it will be faster to develop strategies to achieve the desired goals or targets.

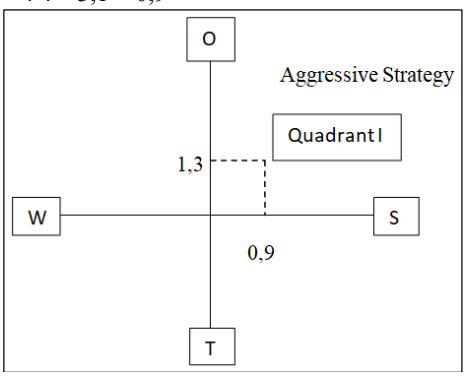
Table 14. Internal and External Factor Analysis Mining and Quarrying Sector

Internal Factors	**Weight**	**Score**	**Rating (W x S)**
Strength :			
1. Mining and Quarrying as a potential/leading sector	0,2	3	0,6
2. Extensive Mining and Excavation Area	0,2	2	0,4
3. Sufficient Natural Resource Potential	0,3	3	0,9
4. Availability of Human Resources (labour that is still productive)	0,3	4	1,2
5. Large industrial locations near the coast to facilitate the flow of goods and raw materials	0,2	3	0,6
Total	1,2	15	3,7
Weakness :			
1. Lack of Facilities and Infrastructure or technology in the field of Mining and Excavation	0,4	1	0,4
2. Limited Quality of Human Resources	0,2	2	0,4
3. Absence of Experts in Management or Utilization	0,3	2	0,6
4. Infrastructure related to distribution is inadequate	0,3	2	0,6
5. Not yet innovative in processing mining materials	0,2	2	0,4
Total	1,4	9	2,4
External Factors	**Weight**	**Score**	**Rating (W x S)**
Opportunity :			

1. Availability of Institutions such as Limited Liability Companies (PT) for Mining and Quarrying Management	0,3	2	0,6
2. The Application of Technology in the Mining and Excavation Sector	0,2	2	0,4
3. Existence of Employment Education and Training Program	0,2	4	0,8
4. Bring in or attract investors			
5. Market demand continues to increase for building raw materials such as sand and others	0,2 0,3	2 4	0,4 1,2
6. Absorption of local labor	0,3	2	0,6
Total	1,2	14	4
Threat :			
1. Mining and excavation activities have the potential to damage/pollute the environment	0,3	3	0,9
2. Absorption of labor from outside the region is higher than local workers	0,2	2	0,4
3. The entry of foreigners to control the results or mining and excavation land	0,3	1	0,3
4. Reduced area of mining and quarrying	0,3	3	0,9
5. Reduced agricultural land	0,2	3	0,6
Total	1,1	9	3,1

Source : Research Results, 2021

Determine the coordinates :
Strength – Weakness : 3,7 – 2,4 = 1,3
Opportunity – Threat : 4 – 3,1 = 0,9



Source : Research Results, 2021

Fig. 2. SWOT Analysis Quadrant of the Mining and Quarrying Sector

Based on the results of internal factor analysis (IFAS) and external factor analysis (EFAS) in the Mining and Quarrying sector, the following values were obtained: strength factors (3.7), weaknesses (2.4), opportunities (4) and threats (3, 1). So that the coordinates point (1,3. 0,9) in quadrant I are obtained. This indicates that the Mining and Quarrying sector has opportunities and strengths so that it can take advantage of the opportunities and strengths that exist in its development. Strategies that must be applied in the development of the Mining and Quarrying sector is the SO strategy, which is a strategy that uses strengths to take advantage of opportunities in other words this strategy supports an aggressive development policy. After

determining what strategy should be done for the development of the Mining and Quarrying sub-sector based on the SWOT quadrant analysis, the next thing to do is to formulate various development strategies. The Manggarai Regency Government it self has carried out several strategies to improve and protect the mining and quarrying sector, such as conducting surveys to find new sources of rock mining, urging miners to take care of permits, directing miners to comply with regulations in the field of Mining and the Environment and other locations. the mining location is included in the Regional RTRW so as not to change its function. This policy will assist in the formulation of strategies for sub-sector development in Manggarai Regency.

Table 15. Determination/Formulation of Development Strategy Mining and Quarrying Sector

INTERNAL FACTORS	**STRENGTH (S)**	**WEAKNESS (W)**
	1. Mining and Quarrying as a potential/leading sector 2. Extensive Mining and Excavation Area 3. Sufficient Natural Resource Potential 4. Availability of Human Resources (labour that is still productive) 5. Large industrial locations near the coast to facilitate the flow of goods and raw materials	1. Lack of Facilities and Infrastructure or technology in the field of Mining and Excavation 2. Limited Quality of Human Resources 3. Absence of Experts in Management or Utilization 4. Infrastructure related to distribution is inadequate 5. Not yet innovative in processing mining materials
EKSTERNAL FACTORS	**STRATEGY S-O**	**STRATEGY W-O**
Opportunity : 1. Availability of Institutions such as Limited Liability Companies (PT) for Mining and Quarrying Management 2. The Application of Technology in the Mining and Excavation Sector 3. Existence of Employment Education and Training Program 4. Bring in or attract investors 5. Market demand continues to increase for building raw materials such as sand and others 6. Absorption of local labor	1. Improve productivity of the mining and quarrying sector by utilizing available technology 2. Increasing the utilization of existing institutions to manage and control the mining and quarrying sector 3. Improving the quality and quality of the workforce 4. Provide or improve policies in the form of subsidies from the government related to the provision of facilities and infrastructure as well as technology	1. Improve infrastructure and improve technology 2. Improve education and training for local workers 3. Creating or building a raw material processing plant such as a smelter. 4. Holding cooperation between the government and the private sector in mining and excavation so that they can operate properly
Threat (T)	**STRATEGY S-T**	**STRATEGY W-T**
1. Mining and excavation activities have the potential to damage/pollute the	1. Improving the quality of workforce education in the form of training and outreach to people who are	1. Affirmation of government policies and regulations 2. Increase technology utilization

environment 2. Absorption of labor from outside the region is higher than local workers 3. The entry of foreigners to control the results or mining and excavation land 4. Reduced area of mining and quarrying 5. Reduced agricultural land	still productive 2. Reinforcing policies on export and import of mining and quarrying materials 3. Pressing production volume (mining or digging according to demand or need only)	3. Provision of subsidies in the form of facilities and infrastructure, especially for workers in the field of excavation 4. Determine a strategic location/area as a mining and quarrying zone by first conducting an Environmental Impact Analysis (AMDAL)

Source : Research Results, 2021

Based on the strategies that have been formulated in the development of the Mining and Quarrying sector, the right policies or programs to be carried out to increase the growth or progress of the Mining and Excavation sector are "regulations on increasing the utilization of the Mining and Quarrying sector by utilizing the strengths and opportunities that exist in the Mining and Excavation sector accompanied by supervision and evaluation from the government".

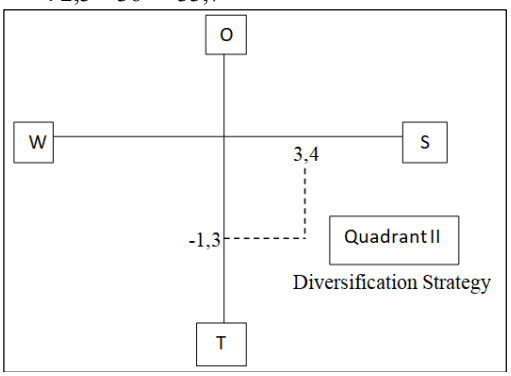
Table 16. Internal and External Factor Analysis Water Supply Sub-Sector

Internal Factors	**Weight**	**Score**	**Rating (W x S)**
Strength :			
1. Water supply, waste management, waste and recycling as potential/leading sectors	0,3	3	0,9
2. There are many springs	0,3	3	0,9
3. There is a mineral water production industry	0,4	4	1,6
4. The existence of facilities and infrastructure in the field of water supply	0,4	4	1,6
5. Availability of Human Resources (labour that is still productive)	0,4	3	1,2
Total	1,8	17	6,2
Weakness :			
1. Low technology	0,3	2	0,6
2. Limited quality of human resources	0,4	2	0,8
3. Lack of public concern for the environment	0,3	2	0,6
4. Low quality and working capital	0,4	2	0,8
Total	1,4	8	2,8
Eksternal Factors	**Weight**	**Score**	**Rating**
Opportunity :			
1. The application of environmentally friendly technology	0,3	2	0,6
2. Employment education and training programs	0,2	2	0,4
3. Availability of industrial zones or areas	0,2	2	0,4
4. The existence of a capital or financial institution	0,3	3	0,9
Total	1	9	2,3
Threat :			
1. Industrial activities can pollute the environment	0,3	3	0,9
2. Reduced Water Debit	0,3	3	0,9
3. Entry of Regional/Overseas Products	0,3	3	0,9
4. There is Competition in Obtaining Raw Materials	0,3	3	0,9

Total	1,2	12	3,6

Source : Research Results, 2021

Determine the coordinates :
Strength – Weakness : 6,2 – 2,8 = 3,4
Opportunity – Threat : 2,3 – 36 = -33,7



Source : Research Results, 2021

Fig. 3. SWOT Analysis Quadrant of Water Supply Sub-Sector

Based on the results of internal factor analysis (IFAS) and external factor analysis (EFAS) in the water supply sector, the following values were obtained: strength factors (6.2), weaknesses (2.8), opportunities (2.3) and threats (3,6). So that the coordinates of the point (3.4. -1.3) are obtained in quadrant II. This indicates that the Water Supply sector in Manggarai Regency faces various threats that come from outside, even though this sector still has internal strength. The strategy that must be applied in the development of the Water Supply sector in Manggarai Regency is the ST strategy, which is a strategy that uses strength to overcome threats in other words this strategy supports the Diversification Strategy. The Manggarai Regency Government itself has carried out several strategies to improve and protect the Water Supply sub-sector and the strategy is more about policies related to licensing, monitoring and evaluation of the process or activity of the Water Supply sub-sector so that it runs well. This policy will assist in the formulation of strategies for sub-sector development in Manggarai Regency.

Table 17. Determination/Formulation of Development Strategy Water Supply Sector

FAKTOR INTERNAL	**STRENGTH (S)**	**WEAKNESS (W)**
	1. Water supply, waste management, waste and recycling as potential/leading sectors 2. There are many springs 3. There is a mineral water production industry 4. The existence of facilities and infrastructure in the field of water supply 5. Availability of Human Resources (labour that is still productive)	1. Low technology 2. Limited quality of human resources 3. Lack of public concern for the environment 4. Low quality and working capital
FAKTOR EKSTERNAL	**STRATEGI S-O**	**STRATEGI W-O**

OPPORTUNITY (O) 1. The application of environmentally friendly technology 2. Employment education and training programs 3. Availability of industrial zones or area 4. The existence of a capital or financial institution	1. Increasing the amount of mineral water production with guaranteed quality 2. Increasing the development of industrial zones/areas along with their facilities and infrastructure. 3. Improvement of human resources and provision of working capital to develop potential sectors	1. Training to improve production quality and strengthen capital sources 2. Increased market segment and capital loan assistance for production facilities 3. Provide socialization to improve the quality of people's thinking
ANCAMAN (T) 1. Industrial activities can pollute the environment 2. Reduced Water Debit 3. Entry of Regional/Overseas Products 4. There is Competition in Obtaining Raw Materials	***STRATEGI S-T*** 1. Increase cooperation between the government and the private sector with regard to supervision and improvement of product and industry quality to prevent the entry of products from outside the region/country 2. Increase business competitiveness opportunities for local workers, industrial product markets, especially small industries and sources of innovation 3. Improving the quality of the use of facilities (facilities and infrastructure) that are environmentally friendly 4. Utilization of springs in obtaining raw materials to avoid the act of giving soil to obtain water	**STRATEGI W-T** 1. Policy affirmation from the government 2. Improving the quality and competence of entrepreneurs in order to increase the competitiveness of industrial products 3. Develop industrial businesses that utilize resources effectively and efficiently

Source: Research Results, 2021 (author's formulation)

Based on the strategies that have been formulated in the development of the Water Supply sub-sector, the right policy or program carried out to maintain the stability of the Water Supply sub-sector is "regulations for establishing cooperation between the government and the private sector with regard to increasing supervision and protection of the Water Supply sub-sector". This is very well done considering the high threats that can occur in the Water Supply sub-sector.

5 Conclusion

a) Based on the results of the Location Quotient (LQ) calculation within a period of five years (2015-2019) there are 9 economic sectors that have become potential or leading sectors in Manggarai Regency, which are as follows. (1) Mining and Quarrying Sector

with an average LQ value of 2.2757. (2) Wholesale and Retail Trade Sector; Car and Motorcycle Repair with an average LQ index of 2.2328. (3) Financial Services and Insurance Sector with an average LQ index of 1.8259. (4) Other Services Sector with an average LQ index of 1.8239. (5) Water Supply, Waste Management, Waste and Recycling Sector with an average LQ index of 1.5072. (6) Construction sector with an average LQ index of 1.2342. (7) Electricity and Gas Procurement Sector with an average LQ index of 1.1827. (8) Government Administration, Defense and Mandatory Social Security Sector with an average LQ index of 1.1253. (9) Information and Communication Sector with an average LQ index of 1.0954.

b) In this research, the focus of its development is the Mining and Excavation sector and the Water Supply sub-sector. The two sectors are potential sectors that produce goods or products that have a comparative advantage in Manggarai Regency. The results of the Klassen Typology analysis of Mining and Excavation and the Water Supply sub-sector are included in the classification of potential sectors that can still develop rapidly so this is the basis for their development. Bearing in mind also that other sectors that are potential sectors in Manggarai Regency are service sectors which have a very broad scope and consist of various kinds of business fields, which are not production businesses, so that their development can be focused on improving service quality.

c) Based on the calculation in the gravity method, the strongest interaction with Manggarai Regency is West Manggarai Regency and the lowest or the smallest interaction is with East Manggarai Regency. The strong interaction between Manggarai Regency and West Manggarai Regency is due to the relatively close distance and high economic and social mobility of West Manggarai Regency. In addition, based on the results of the researcher's interview with the Deputy Regent of Manggarai, this strong collaboration or interaction is due to the common interests between Manggarai Regency and West Manggarai Regency in the Agriculture, Forestry and Fisheries sectors; Mining and Quarrying sector; Processing Industry sector; Electricity Procurement sub-sector; Water Supply sub-sector; wholesale and retail trade sub-sector; transportation sub-sector; and the Accommodation and Food Provision sector.

d) Based on the strengths, weaknesses, opportunities, and threats that exist in the field, several strategies that can be applied related to the development of the Mining and Excavation sector and the Water Supply sub-sector that are raised in this study are as follows:

   1) Mining and Quarrying Sector

      Based on the results of the analysis using the SWOT analysis quadrant, a good strategy applied in the development of this sector is the S-O strategy, which is a strategy that uses strength to take advantage of opportunities in other words this strategy supports aggressive development policies. The formulation of strategies that must be carried out are:

      a) Increase the productivity of the mining and quarrying sector by leveraging available technology
      b) Increasing the utilization of existing institutions to manage and control the mining and quarrying sector
      c) Improving the quality and quality of the workforce
      d) Provide or improve policies in the form of subsidies from the government related to the provision of facilities and infrastructure as well as technology

   2) Water Supply Sector

Based on the results of the analysis using the SWOT analysis quadrant, a good strategy applied in the development of this sector is the ST strategy, which is a strategy that uses strength to overcome threats in other words this strategy supports Strategy Diversification. The formulation of strategies that must be carried out are:

a) Increase cooperation between the government and the private sector with regard to supervision and improvement of product and industry quality to prevent the entry of products from outside the region/country
b) Increase business competitiveness opportunities for local workers, industrial product markets, especially small industries and sources of innovation
c) Improving the quality of the use of facilities (facilities and infrastructure) that are environmentally friendly
d) Utilization of springs in obtaining raw materials to avoid the act of giving soil to obtain water

Limitation and Study Forward

The focus of this research is to determine the economic sectors that are the leading sectors in Manggarai Regency. Especially inleading sectors that have a comparative advantage that has agreat opportunity to be export ed to other region swhich can beeasily formulated for sustainable development strategi es to increase economic growth in Manggarai Regency. So that the authors in this study are more focus e don what is the potential or excellence in Manggarai Regency. For the relationship between regions,the authors in this study only explain the relationship or interaction between Manggarai Regency and other regions in the Manggarai Raya area, namely East Manggarai Regencyand West Manggarai Regency.

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