

Analysis of Leading Sector Development in the Mamminasata Region, South Sulawesi

Isramia ^{*1}, Sanusi Fattah ², Retno Fitrianti ³

^{*1} Magister Program in Economic Development & Planning Studies, Hasanuddin University Makassar, South Sulawesi Indonesia

^{2,3} Department of Development & Planning Economics, Hasanuddin University Makassar, South Sulawesi Indonesia

ARTICLE INFO



ISSN: 2620-6196
Vol. 6 Issues 1 (2023)

Article history:

Received – December 31, 2022

Revised – January 01, 2023

accepted – January 02, 2023

Email Correspondence:

isramiamh@gmail.com

Keywords:

Leading Sector, Base Sector, Economic Sector, Growth Sector, Mamminasata

ABSTRACT

The purpose of this research is to analyze and find out the sectors that include the base sector, changes and shifts in the economic sector and the classification of growth in the economic sector in the Mamminasata region, South Sulawesi. Data analysis methods are Location Quotient (LQ), Shift Share, and Klassen Typology analysis from secondary data which is time series data for the last 4 years (2018-2021) of the Central Bureau of Statistics of South Sulawesi. 1). The results of the Location Quotient index analysis ($LQ > 1$), the sector which was the base sector before (2018-2019) and during the Covid-19 pandemic (2020-2021), namely: manufacturing industry; water supply, waste management, waste and recycling; construction; wholesale and retail trade, repair of cars and motorcycles; transportation and warehousing; provision of accommodation and food and drink; information and communication; financial and insurance services; real estate; company services; educational services; health services and social activities; and other services. 2). The results of the Shift Share analysis show that the specialized sectors grew rapidly (positive proportional shift) prior to the Covid-19 pandemic (2018-2019), namely: the manufacturing industry; construction; wholesale and retail trade, repair of cars and motorcycles; information and communication; company services; government administration, defense, and compulsory social security; educational services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: agriculture, forestry, and fisheries; procurement of electricity and gas; wholesale and retail trade, repair of cars and motorcycles; transportation and warehousing; information and communication; company services; health services and social activities; and other services. The sectors that had high competitiveness or competitive (differential shift) before the Covid-19 pandemic (2018-2019), namely: agriculture, forestry, and fisheries; mining and excavation; procurement of electricity and gas; construction; wholesale and retail trade, repair of cars and motorcycles; provision of accommodation and food and drink; real estate; company services; health services and social activities; and other services. Meanwhile, during the Covid-19 pandemic (2020-2021), namely: agriculture, forestry, and fisheries; mining and excavation; processing industry; construction; real estate; government administration, defense, and compulsory social security; and other services. 3) The results of the Klassen Typology analysis, sectors that were classified as developed and growing fast (quadrant I) before the Covid-19 pandemic (2018-2019), namely: construction; wholesale and retail trade, repair of cars and motorcycles; provision of accommodation and food and drink; real estate; company services; educational services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: the processing industry; construction; and health services and social activities.

INTRODUCTION

Regional governance and development throughout the nation are currently entering the era of regional autonomy and fiscal decentralization. Since January 1, 2001, regional governments have been given greater responsibility to promote the development process in their respective regions through the National and Regional Development Planning System (SPPN). The development of new urban areas is carried out by establishing several National Strategic Areas (KSN). Strategic area arrangements are contained in the National Medium-Term Development Plan (RPJMN) and the National Spatial Plan

(RTRWN), which aim to reduce regional regional development disparities and are expected to increase economic competitiveness.

It is hoped that the province of South Sulawesi will be able to encourage socio-economic development in accordance with the central government's policy in establishing the Mamminasata region. Mamminasata became a certain area formed based on the Decree of the Governor of South Sulawesi Province in 2003 covering Makassar City, Maros Regency, Gowa Regency and Takalar Regency (BKSPMM, 2006). The RTRW Mamminasata was formulated based on the Sulawesi Island Planning Concept (RTPS) in the draft of the Directorate General of Spatial Planning in 2004. The RTRW Mamminasata focuses on 1) establishing basic policies for spatial planning; 2) determination of inter-sectoral and inter-regional programs; 3) creating integration in the development of urban areas; 4) stipulation and investment guidelines; and 5) setting up mechanisms for the government and the private sector (Department of Public Works, 2006). The Mamminasata region is designated as a growth and service center for Eastern Indonesia (KTI) and to encourage the development of trade, services, and other investments (BAPPENAS, 2014). The fact that the socio-economic activities of the community occur are interrelated.

In fact, even though the BKSPMM has been formed, coordination between the four Regencies/Cities regarding the formulation of integrated spatial planning and spatial planning for each region is still lacking. The establishment of regional regional cooperation is expected to be an opportunity for each region to increase its potential. Of course, good regional development planning is one that is integrated and works together with the surrounding areas. Based on JICA's findings (2006) that BKSPMM, in carrying out its role as the Mamminasata Metropolitan Development Cooperation Agency, does not have a coordination method, plan formulation, and development implementation, which causes delays in the implementation of development in the Mamminasata area. (Widianingsih & Pancasilawan, 2018). Regional cooperation has not run efficiently because the Regencies/Cities in this region do not yet have the same views or perceptions in seeing the potential they have together.

Since the beginning of the entry of the Covid-19 pandemic in Indonesia, it has made changes to the economic order. From a health standpoint, many people have contracted the COVID-19 outbreak. The government's seriousness in handling this national disaster was confirmed by the issuance of Presidential Decree (Keppres) No. 11 of 2020 concerning the Establishment of a Public Health Emergency for Covid-19 made the government issue various policies such as working, studying, and praying from home in the hope that the spread of the outbreak can be overcome soon. Changes will certainly affect the economy of each region. Based on BPS data, the economic growth rate of South Sulawesi Province in 2020 experienced a contraction of -0.71 percent as seen from the contribution of the GRDP (Gross Regional Domestic Product) as follows:

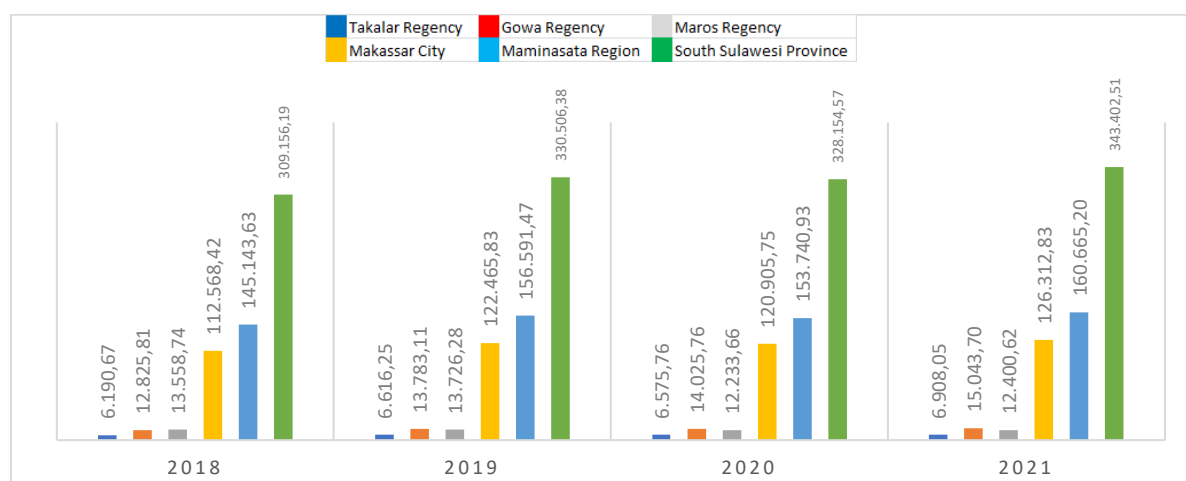


Figure 1. GRDP at 2010 Constant Prices in the Mamminasata Region (billion rupiah), 2018-2021

Source: Central Bureau of Statistics, 2021.

Figure 1 shows that in the period 2012-2019 the overall contribution of GRDP for the Mamminasata region has fluctuated. In the Mamminasata region from 2012 to 2015 it continued to increase to 140,537.67 billion rupiah. However, the following year's GRDP decreased by 16,054.69 billion rupiahs because the contribution of each sector in Makassar City tended to decrease. From 2017 to 2019 it again increased to 156,591.47 billion rupiahs or 8.46 percent but decreased again in 2020 by -1.28 percent. In 2020 the economic growth of the Mamminasata region will improve, marked by economic growth in this region of 160,665.20 billion or 4.50 percent.

Structural changes have gradually shifted agricultural activities to the non-agricultural sector and the industrial sector to the service sector (Yudistira et al., 2020). This transformation is characterized by a shift from the primary production sector (agriculture, forestry, and mining) to the secondary production sector (industry and construction) and the tertiary sector (services). Productivity levels vary by sector due to differences in rapid growth rates between related activity sectors. The difference in the structure of the economy can be seen from the GRDP contribution of the Mamminasata regions as follows:

Table 1. GRDP at 2010 Constant Prices by Regency/City (billions of rupiah) in the Mamminasata Region, South Sulawesi, 2018-2021

Business field	South Sulawesi Province		Mamminasata Region		Makassar city		Maros Regency		Gowa Regency		Takalar Regency	
	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021
A. Agriculture, Forestry, and Fisheries	64,815.46	70,370.27	9,485.16	10,677.89	504.69	518.31	2,312.48	2,572.86	3,711.46	4,289.11	2,956.53	3,297.61
B. Mining and Quarrying	16,788.76	17,228.08	1,779.48	2,153.02	0.66	0	1,253.53	1,522.62	427.99	520.64	97.30	109.76
C. Processing Industry	40,786.59	44,074.16	24,747.43	26,367.08	20856.68	22678.92	2,747.09	2,388.25	811.12	933.50	332.54	366.41
D. Procurement of Electricity and Gas	292.44	353.30	94.96	105.75	49.36	54	11.23	11.74	24.32	28.01	10.05	12.00
E. Water Procurement, Waste Management, Waste and Recycling	363.43	410.19	262.20	286.60	228.61	244.66	13.08	17.55	17.27	20.53	3.24	3.86
F. Construction	37,854.20	43,609.99	16,030.31	24,299.81	13397.67	21101.29	807.44	1,135.85	1,390.95	1,597.53	434.25	465.14
G. Wholesale and Retail Trade; Car and Motorcycle Repair	47,115.92	53,035.21	25,394.41	28,408.05	22484.33	25119.55	451.11	515.35	1,585.64	1,798.11	873.33	975.04
H. Transportation and Warehousing	11,777.68	9,896.80	7,650.45	5,667.49	2737.52	2641.16	4,541.58	2,612.26	181.62	209.82	189.73	204.25
I. Provision of Accommodation and Food and Drink	4,612.02	4,361.95	3,079.52	2,722.73	2682.32	2326.3	46.55	44.75	329.24	329.32	21.41	10:36 p.m
J. Information and Communication	21,028.66	27,522.34	15,591.42	19,954.25	13735.37	17525.17	179.84	228.88	1,423.44	1,886.67	252.77	313.53
K. Financial Services and Insurance	10,754.89	11,587.74	6,699.08	6,914.14	6152.6	6282.85	176.66	203.56	289.66	331.15	80.16	96.58
L. Real Estate	10,695.90	12,005.49	5,167.71	5,659.35	3648.89	3949.18	190.66	225.00	963.12	1,097.61	365.04	387.56
M. N. Corporate Services	1,363.67	1,440.27	1,224.63	1,287.15	1205.39	1266.83	3.37	3.83	15.46	16.06	0.41	0.43
O. Government Administration, Defence, and Compulsory Social Security	13,114.34	14,837.68	5,014.08	5,668.21	3500.85	3917.66	478.68	517.84	632.19	782.53	402.36	450.18
P. Educational Services	17,217.12	20,178.62	11,322.44	12,726.51	10434.5	11695.48	207.04	233.43	594.12	696.91	86.78	100.69
Q. Health Services and Social Activities	6,208.38	7,956.36	3,396.22	4,455.66	3001.17	3952.68	88.46	110.68	237.65	305.13	68.94	87.17
R, S, T, U. Other Services	4,366.71	4,534.06	3,204.12	3,311.48	2947.8	3038.78	49.94	56.16	190.54	201.07	15.84	15.47
Gross Regional Domestic Product	309,156.19	343,402.51	145,143.63	160,665.20	112568.41	126312.83	13,558.74	12,400.62	12,825.81	15,043.70	6,190.67	6,908.05

Source: Central Bureau of Statistics, 2021.

Table 1, wholesale, and retail trade sector; car and motorcycle repair are the sector with the most dominant growth role in the Mamminasata region. The role of the Mamminasata region is very strategic in boosting this sector because it is located between the capital city of South Sulawesi Province as a production and processing center which further enhances its strategic position. The biggest contribution in driving the economy of Makassar City is the wholesale and retail trade sector and the lowest is mining and quarrying. The low level of mining and quarrying in the Makassar City economy has occurred in the previous few years. The location of the city of Makassar as the capital city of South Sulawesi Province as well as being the gateway for the economy of Eastern Indonesia (KTI) has made the wholesale and retail trade sector; car and motorcycle repair is the sector that has the biggest contribution to increasing economic growth.

Increasing economic sectors can have an impact on regional revenues, people's income, and development progress, which can absorb labor, so that it is expected to be able to increase investment both from within the country (PMDN) and foreign investment (PMA). The existence of a base sector characterized by having a relatively large employment absorption rate and a high growth rate will create employment opportunities. Of course, with greater employment opportunities, it will be able to reduce the number of actions, so purchasing on a sector basis must be a priority. The quality of a plan in development determines the success of the implementation of development in the region. Todaro and Smith (2006) says in Wahidin et al. (2021) that economic development is a multidimensional process covering various changes in social structure, societal attitudes, national institutions, handling income inequality, and alleviating poverty.

If seen so far, it turns out that there is still a gap in activities between development actors, both within the government institutions themselves as well as between the government and the private sector and society. The lack of integration of activities within the government agencies themselves can be seen from the strong nature and ego views of sectors between agencies and agencies where each considers their agency or agency to be the most important and needs to be given priority in preparing development plans. All these activities are very important, but if the budget is limited, it should be directed to adjust to the potential conditions of the region.

RESEARCH METHOD

This research is a type of quantitative research with a descriptive analysis approach. This research was conducted in the Mamminasata area of South Sulawesi. When this research is conducted in 2022 departs from secondary data available at the Central Bureau of Statistics. The data used in this study is secondary data which is time series data for the last 4 years (2018-2021). This data was obtained from the Central Bureau of Statistics. Where to obtain documentation of data related to the object under study and use other literature that is in accordance with this research. In addition, conducting Library Research by collecting data from various books, journals, documents, articles, and other literature that can be used as a reference for discussing this issue.

In answering the problems that have been defined in this study, data analysis methods are used, namely Location Quotient (LQ) analysis to determine basic and non-base sectors, Shift Share (SS) analysis to see sector shifts, and Klassen Typology analysis to see classification and grouping economic sectors in the Mamminasata region. The formula for calculating Location Quotient is as follows:

$$LQ_{ij} = \frac{X_{ij}/X_i}{RV_j/RV}$$

Information:

LQ_{ij} = Location Quotient Coefficient of sector i in Regency/City j

X_{ij} = GRDP of sector i in Regency/City j

X_i = GRDP of sector i in the province

RV_j = Total Regency/City GRDP j

RV = Total Provincial GRDP

According to Lutfi (2015) from the results of the LQ calculation, conclusions can be drawn:

Table 2. Interpretation of Location Quotient Values

LQ value	Interpretation		
	Base / Leading / Potential Sectors	Specialization Level	Market Service
$LQ > 1$	Base and featured sectors	Specialized sector	Export, serving domestic and foreign markets
$LQ < 1$	The non-basic and non-superior sectors have no potential	Unspecialized sector	Non-export, not yet able to serve domestic and foreign markets
$LQ = 1$	The sector is in balance with the reference region	The specialization is the same as the reference region	Non-export, only able to serve the market within the region

Source: Mutu'ali, 2015.

The data used in this Shift Share analysis is the GRDP in the Mamminasata region and the GRDP of the South Sulawesi Province for 2018-2021 according to business field at constant prices. The Shift Share analysis technique according to Sjafrizal (2002) in Muta'ali (2015) starts from the assumption that economic growth or added value of a region (D_{ij}) is influenced by three components, namely Regional Share (N_{ij}), Proportional Shift (M_{ij}) or PS and Differential Shift (C_{ij}) or DS.

As for the steps in measuring changes in GRDP of a sector i in an area j (Dij) with the formula:

$$D_{ij} = N_{ij} + M_{ij} + C_{ij}$$

Information:

Dij = Change in GRDP of sector i (Mamminasata Region)

Nij= Changes in sector I GRDP (Mamminasata Region) caused by the influence of economic growth (South Sulawesi Province)

Mij =Changes in GRDP sector i (Mamminasata Region) are caused by the influence of sector i growth in (South Sulawesi Province)

Cij= Changes in GRDP of sector i (Mamminasata Region) caused by the competitive advantage of sector i in (Mamminasata area)

Next, to calculate the Nij, Mij, and Cij components, namely:

$$N_{ij} = E_{ij} \cdot r_n$$

$$M_{ij} = E_{ij} (r_{in} - r_n)$$

$$C_{ij} = E_{ij} (r_{ij} - r_{in})$$

Where:

ri, rin, and rn represent the growth rates of districts/cities in Mamminasata and South Sulawesi Province which are defined as follows:

$$r_{ij} = (E^*_{ij} - E_{ij}) / E_{ij}$$

$$r_{in} = (E^*_{in} - E_{in}) / E_{in}$$

$$r_n = (E^*_n - E_n) / E_n$$

Information:

Eij = GRDP of Sector i in the Mamminasata Region

Ein = GRDP of Sector i in South Sulawesi Province

En = Total GRDP at the South Sulawesi Province level

The Klassen Typology formulation for the potential of the regional economic sector is seen in the following table:

Table 3. Klassen Typology Criteria for Classification of Sector i Performance in a Region

Contribution (y)	The contribution of sector i in the Regency/City is greater than the contribution of the province (yik > yi)	Contribution of Sector i in Kab/City is smaller than Provincial Contribution (yik < yi)
Growth (r)		
The growth rate of sector i Kab/City is greater than the growth rate of the province (rik > ri)	Advanced and Fast-Growing Sector	Fast Growing Sector
The growth rate of sector i Kab/City is smaller than the growth rate of the province (rik < ri)	Pressed Forward Sector	Relatively Underdeveloped Sectors

Source: Mutu'ali (2015)

Information:

rik= Growth rate of sector i in the Mamminasata region

ri = growth rate of sector i in South Sulawesi Province

yik= contribution of sector i to the total GRDP of the Mamminasata region

yi = contribution of sector i to the total production value of GRDP in South Sulawesi Province

RESULTS AND DISCUSSION

Results Study

Sector Base and Non-Base in the Mamminasata Region

The Covid-19 pandemic has resulted in changes in economic and social life in society. The following is the result of calculating the Location Quotient Index (LQ) before and during the Covid-19 pandemic in four districts/cities and in the Mamminasata region.

Table 4. Results of the Calculation of the Location Quotient (LQ) Index for the Economic Sector in the Mamminasata Region in 2018-2021

Business field	Location Qoutient(LQ) Mamminasata Region						
	Before Covid-19		Average	Ket	Momen Covid-19		Ket
	2018	2019			2020	2021	
A. Agriculture, Forestry, and Fisheries	0.31	0.31	0.31	Non-Base	0.32	0.32	Non-Base
B. Mining and Quarrying	0.23	0.25	0.24	Non-Base	0.25	0.27	Non-Base
C. Processing Industry	1.29	1.26	1.28	Base	1.28	1.28	Base
D. Procurement of Electricity and Gas	0.69	0.70	0.69	Non-Base	0.68	0.64	Non-Base
E. Water Procurement, Waste Management, Waste and Recycling	1.54	1.49	1.51	Base	1.50	1.49	Base
F. Construction	0.90	1.18	1.04	Base	1.19	1.19	Base
G. Wholesale and Retail Trade; Car and Motorcycle Repair	1.15	1.16	1.16	Base	1.15	1.14	Base
H. Transportation and Warehousing	1.38	1.31	1.35	Base	1.24	1.22	Base
I. Provision of Accommodation and Food and Drink	1.42	1.41	1.42	Base	1.34	1.36	Base
J. Information and Communication	1.58	1.53	1.56	Base	1.55	1.55	Base
K. Financial Services and Insurance	1.33	1.30	1.32	Base	1.32	1.28	Base
L. Real Estate	1.03	1.02	1.02	Base	1.01	1.01	Base
M, N. Corporate Services	1.91	1.93	1.92	Base	1.92	1.91	Base
O. Government Administration, Defense, and Compulsory Social Security	0.81	0.80	0.81	Non-Base	0.81	0.82	Non-Base
P. Educational Services	1.40	1.38	1.39	Base	1.35	1.30	Base
Q. Health Services and Social Activities	1.17	1.17	1.17	Base	1.20	1.20	Base
R, S, T, U. Other Services	1.56	1.56	1.56	Base	1.56	1.56	Base

Source: Processed Data, 2022.

Table 4 shows that the Mamminasata region before and during the Covid-19 pandemic had thirteen base sectors, namely: 1) manufacturing industry with an average LQ of 1.28; 2) water supply, waste management, waste and recycling sectors with an average LQ of 1.50; 3) construction with an average LQ of 1.19; 4) wholesale and retail trade; car and motorcycle repair with an average LQ of 1.15; 5) transportation and warehousing with an average LQ of 1.23; 6) provision of accommodation and food and drink with an average LQ of 1.35; 7) information and communication with an average LQ of 1.55; 8) financial and insurance services with an average LQ of 1.30; 9) real estate with an average LQ of 1.01; 10) corporate services with an average LQ of 1.92; 11) educational services with an average LQ of 1.32; 12) health services and social activities with an average LQ of 1.20; and 13) other services with an average LQ of 1.56.

Due to the Covid-19 pandemic in early 2020, the GRDP of the Mamminasata region experienced a slowdown which occurred in almost all economic sectors. Even though there has been a decrease in contribution, the pandemic has apparently not had much of an impact on the thirteen base sectors and will continue until 2021. The government is swiftly seeking various ways to recover and improve the economy with reallocations. These sectors are still capable of sustaining economic growth and have the potential to continue to be developed in the Mamminasata region in 2022.

The other four sectors are: 1) agriculture, forestry, and fisheries; 2) mining and quarrying; 3) procurement of electricity and gas; and 4) government administration, defense, and social security must have an average LQ<1, meaning that the sector is classified as a non-base sector. These sectors are not sectors that have potential for economic growth in the Mamminasata region because they are only able to

meet the needs of this region and have not been able to export their products outside the region. Even though the four sectors are classified as non-base sectors, they must have the same concern because it is hoped that they will be able to assist in the development of the non-base sector into a new base sector in the Mamminasata region.

Shifts in Economic Structure in the Mamminasata Region

The magnitude of the contribution of economic sectors is generally influenced by various economic policies. The analysis determines which strategic economic sectors have the advantage of being developed with the aim of accelerating the pace of economic growth in the Mamminasata region. To determine regional/regional specialization sectors and their growth, the Regional Share, Proportional Shift (Mixed Shift), and Differential Shift (Competitive Shift) components are used. The following is the result of the calculation of the District/City Shift Share analysis in the Mamminasata region for 2018-2021.

Table 5. Results of Shift Share Calculations for the Mamminasata Region

Business field	rij	rin	rn	Components of Change Before the Covid-19 Pandemic				rij	rin	rn	Components of Change During the Covid-19 Pandemic			
				National Share (NS/Nij)	Proportional Shift (PS/Mij)	Differential Shift (DS/Cij)	Total (GRDP) Δ				National Share (NS/Nij)	Proportional Shift (PS/Mij)	Differential Shift (DS/Cij)	Total (GRDP) Δ
A. Agriculture, Forestry, and Fisheries	0.04	0.03	0.07	655.04	-391.56	84.87	348.35	0.09	0.06	0.05	455.97	171.68	237.15	864.80
B. Mining and Quarrying	0.13	0.03	0.07	122.89	-75.28	192.00	239.61	0.06	0.01	0.05	94.75	-106.82	125.95	113.88
C. Processing Industry	0.08	0.10	0.07	1709.05	744.69	-407.63	2046.11	0.03	0.03	0.05	1188.80	-416.02	9.74	782.53
D. Procurement of Electricity and Gas	0.08	0.06	0.07	6.56	-0.65	1.76	7.66	0.04	0.11	0.05	4.70	6.30	-6.45	4.55
E. Water Procurement, Waste Management, Waste and Recycling	0.00	0.02	0.07	18.11	-13.58	-5.23	-0.70	0.04	0.04	0.05	12.86	-1.60	-1.40	9.86
F. Construction	0.43	0.09	0.07	1107.05	323.63	5512.22	6942.90	0.04	0.04	0.05	1082.98	-117.59	27.34	992.73
G. Wholesale and Retail Trade; Car and Motorcycle Repair	0.12	0.09	0.07	1753.73	542.86	641.38	2937.96	0.06	0.06	0.05	1250.22	498.11	-246.50	1501.82
H. Transportation and Warehousing	0.03	0.02	0.07	528.34	-395.16	-337.02	-203.84	0.04	0.05	0.05	254.28	28.42	-87.65	195.05
I. Provision of Accommodation and Food and Drink	0.07	0.06	0.07	212.67	-15.09	3.44	201.02	0.04	0.03	0.05	123.90	-45.03	27.38	106.25
J. Information and Communication	0.09	0.11	0.07	1076.74	636.36	-341.92	1371.18	0.06	0.06	0.05	871.61	326.57	-1.96	1196.22
K. Financial Services and Insurance	0.03	0.04	0.07	462.64	-194.56	-60.42	207.66	-0.02	0.01	0.05	328.89	-248.48	-244.49	-164.08
L. Real Estate	0.05	0.05	0.07	356.88	-76.55	2.62	282.95	0.03	0.03	0.05	256.06	-113.98	6.50	148.58
M, N. Corporate Services	0.12	0.11	0.07	84.57	44.34	22.64	151.55	0.06	0.06	0.05	56.69	19.32	-8.80	67.21
O. Government Administration, Defence, and Compulsory Social Security	0.09	0.10	0.07	346.27	154.21	-65.29	435.20	0.03	0.03	0.05	254.57	-94.67	29.65	189.55
P. Educational Services	0.07	0.07	0.07	781.92	2.94	-35.89	748.97	0.00	0.04	0.05	571.70	-120.68	-478.28	-27.26
Q. Health Services and Social Activities	0.09	0.08	0.07	234.54	38.86	39.37	312.77	0.07	0.08	0.05	192.68	129.47	-13.19	308.96
R, S, T, U. Other Services	0.11	0.10	0.07	221.28	90.42	26.83	338.52	0.08	0.08	0.05	143.02	89.67	0.87	233.56
Gross Regional Domestic Product	0.08	0.07	0.07	9678.26	1415.88	5273.73	16367.87	0.05	0.05	0.05	7143.69	4.67	-624.15	6524.21

Source: Processed Data, 2022.

The Shift Share analysis results show that the regional share value in the Mamminasata area before the pandemic and during the pandemic showed a positive contribution. This means that the role of the central government and the economic activities of neighboring regions have had a significant influence on growth in the Mamminasata region. Various central government policies to suppress the Covid-19 pandemic have had a positive effect on economic recovery such as implementing health protocols, massive

vaccination programs, and providing direct cash assistance to those who have experienced the economic impact of the pandemic. This is in line with what Syafrizal (2014) stated in Shift Share analysis that the role of the central government (Nij) will influence economic growth.

The proportional shift component before and during the pandemic varies. proportional shift growth before the pandemic was 1,415.88 billion rupiah, while during the pandemic it was 4.67 billion. This magnitude shows that the growth rate of the economic sector before and during the pandemic was higher than the rate of South Sulawesi Province. If the growth of the proportional shift is positive, it means that the regional economy is specializing in a sector that is growing faster than the Province of South Sulawesi. Conversely, if the proportional shift is negative, it means specializing in sectors that grow more slowly. The results of the analysis above explain that there were nine sectors that grew faster before the pandemic, namely: 1) the manufacturing industry; 2) construction; 3) wholesale and retail trade, car and motorcycle repair; 4) information and communication; 5) company services; 6) government administration, defence, mandatory social security; 7) educational services; 8) health services and social activities; and 9) other services. Opportunities for development must be taken advantage of considering its strategic position as a gateway for the economy of Eastern Indonesia to make trade access run smoothly, develop industrial areas, and rampant development that continues to stretch.

During the Covid-19 pandemic a change occurred where there were eight sectors that were able to survive and had a positive proportional shift, namely: 1) agriculture, forestry and fisheries; 2) procurement of electricity and gas; 3) wholesale and retail trade, car and motorcycle repair; 4) transportation and warehousing; 5) information and communication; 6) company services; 7) health services and social activities; and 8) other services. The decline in the wholesale and retail trade, car and motorcycle repair sectors as a result of a reduction in the quantity of goods sold due to reduced public purchasing power as well as restrictions on operating hours for traders have had an impact on the growth of this sector and others.

The results of the Differential Shift calculation before the pandemic amounted to 5,273.73 billion rupiah and during the Covid-19 pandemic it became -624.15 billion rupiah. This indicates that the economy in the Mamminasata region before the pandemic had high competitiveness, while during the pandemic it had low competitiveness compared to South Sulawesi Province. Based on sectoral growth before the pandemic, there were eleven sectors that had positive differential shift growth, namely: 1) agriculture, forestry and fisheries; 2) mining and quarrying; 3) procurement of electricity and gas; 4) construction; 5) wholesale and retail trade, car and motorcycle repair; 6) provision of accommodation and food and drink; 7) financial and insurance services; 8) real estate; 9) educational services; 10) health services and social activities; and 11) other services. But experiencing changes during the pandemic, where there are seven sectors that have a positive differential shift, namely: 1) agriculture, forestry, and fisheries; 2) mining and quarrying; 3) processing industry; 4) construction; 5) real estate; 6) government administration, defense, and mandatory social security; and 7) other services. It turned out that during a pandemic the agriculture, forestry and fisheries sectors were the sectors that were the most resilient in driving the economy. While some other sectors grew negatively, the agriculture, forestry and fisheries sectors continued to grow positively. Likewise with the construction sector, many developments have stalled because the budget has been allocated for more priority needs. However, there are still ongoing projects to support the handling and prevention of COVID-19, such as building hospitals and providing clean water.

Based on the results of Shift Share GRDP analysis by sector, it can be concluded that the economy of the Mamminasata region is slowly experiencing changes in its economic structure. As stated by (Kuznets in Suwarni, 2006) that in the long-term economic changes follow the growth of national income and bring changes in the economic structure which was originally a traditional economy (agriculture, forestry, and fisheries) experiencing a shift dominated by the modern sector (industry). with increasing returns to scale (a positive relationship between output growth and productivity) as the main engine in driving economic growth. From the labor side, it will cause a shift in labor from the rural agricultural sector to the urban industrial sector, causing the contribution of agriculture to decline.

Classification of Economic Sector Growth in the Mamminasata Region

Each region wants progress in economic development. To promote regional economic development, it is necessary to look at the extent to which the role of the economic sectors is working. Policies and programs for regions with fast economic growth are of course different from those for regions with slow or stagnant growth. The grouping of regions based on the growth structure is very important as a basis for determining policies. Klassen typology analysis is a method used to determine the grouping of economic sectors in the Mamminasata region according to their growth.

Table 6. Average Growth Rate and Average Sector Contribution to the GRDP of the Mamminasata Region and South Sulawesi Province in 2018-2021

Business field	Before the Covid-19 Pandemic				During the Covid-19 Pandemic			
	South Sulawesi Province		Mamminasata Region		South Sulawesi Province		Mamminasata Region	
	Average Growth (ri)	Average Contribution (yi)	Growth Average (rik)	Average Contribution (yi)	Average Growth (ri)	Average Contribution (yi)	Growth Average (rik)	Average Contribution (yi)
A. Agriculture, Forestry, and Fisheries	4.00%	20.82%	4.31%	6.51%	2.84%	20.27%	4.30%	6.44%
B. Mining and Quarrying	1.89%	5.47%	11.85%	1.24%	-0.03%	5.17%	3.29%	1.32%
C. Processing Industry	5.43%	13.58%	4.33%	17.50%	-0.77%	13.15%	-0.73%	16.72%
D. Procurement of Electricity and Gas	6.74%	0.09%	7.93%	0.07%	6.73%	0.10%	1.56%	0.07%
E. Water Procurement, Waste Management, Waste and Recycling	3.61%	0.12%	3.15%	0.18%	5.34%	0.12%	4.70%	0.18%
F. Construction	8.74%	12.26%	13.13%	13.37%	2.85%	12.65%	2.86%	14.99%
G. Wholesale and Retail Trade; Car and Motorcycle Repair	10.29%	15.14%	11.57%	17.51%	1.71%	15.39%	0.27%	17.76%
H. Transportation and Warehousing	6.03%	3.71%	3.06%	5.09%	-8.15%	3.13%	-11.47%	3.95%
I. Provision of Accommodation and Food and Drink	9.56%	1.46%	9.66%	2.08%	-5.36%	1.35%	-7.37%	1.85%
J. Information and Communication	11.49%	6.79%	10.63%	10.63%	8.62%	7.65%	8.48%	11.82%
K. Financial Services and Insurance	4.34%	3.47%	4.16%	4.59%	1.79%	3.42%	0.08%	4.44%
L. Real Estate	5.03%	3.47%	5.09%	3.57%	3.19%	3.49%	1.90%	3.53%
M, N. Corporate Services	10.27%	0.44%	11.27%	0.85%	-1.91%	0.43%	-2.92%	0.82%
O. Government Administration, Defence, and Compulsory Social Security	9.97%	4.25%	10.68%	3.42%	1.44%	4.36%	2.00%	3.52%
P. Educational Services	8.35%	5.52%	8.50%	7.71%	4.70%	5.79%	0.85%	7.78%
Q. Health Services and Social Activities	8.32%	2.01%	9.78%	2.33%	8.91%	2.20%	9.63%	2.61%
R, S, T, U. Other Services	11.43%	1.40%	12.04%	2.19%	-2.23%	1.35%	-2.76%	2.11%

Source: Processed data, 2022

Table 6 shows that during the last four years, the sector that had the largest average contribution to the GRDP of the Mamminasata region before and during the Covid-19 pandemic was dominated by the manufacturing sector where the wholesale and retail trade, car and motorcycle repair sectors before the pandemic amounted to 17.51 percent and experienced an increase during the pandemic to 17.76 percent. This was followed by the processing industry, which was 17.50 percent before the pandemic, then decreased during the pandemic to 16.72 percent. Meanwhile, the contribution of the construction sector before the pandemic was 13.37 percent and increased to 14.99 percent when the pandemic occurred in 2020-2021. These results indicate that the three manufacturing sectors were not significantly impacted by the policies issued in tackling the spread of the pandemic.

Based on the growth rate, the sector that had the highest average growth rate before the pandemic was the construction sector at 13.13 percent, followed by mining and quarrying at 11.85 percent and wholesale and retail trade, car and motorcycle repairs at 11.57 percent. Meanwhile, when the pandemic occurred, the sector that provided the largest average growth was the health services and social activities

sector at 9.63 percent and information and communication at 8.48 percent. This is because the health sector is the focus and priority for handlers during a pandemic while the information and communication sector are increasing given the restrictions imposed such as working, studying and praying from home.

Table 7. Sector Classification in the Typology Klassen Matrix for Mamminasata Region 2018-2019 (Before the Covid-19 Pandemic)

Sector Contribution (y) Economic Growth (r)	Sectoral Contribution above average	Sectoral Contribution below average
Above average economic growth	Quadrant I Advanced and Fast-Growing Sector (rik > ri and yik > yi) Water supply, waste management, waste, and recycling Construction Provision of accommodation and meals Financial and insurance services Real estate Educational services Health services and social activities other services	Quadrant III Fast Growing Sector (rik > ri and yik < yi) Agriculture, forestry, and fisheries Mining and excavation Supply of electricity and gas Administration of government, defense, and mandatory social security
Below average economic growth	Quadrant II Pressed Forward Sector (rik < ri and yik > yi) Processing industry Wholesale and retail trade; car and motorcycle repair Transportation and warehousing Information and communication Company services	Quadrant IV Relatively Underdeveloped Sectors (rik < ri and yik < yi) -

Source: Processed Data, 2022.

Table 8. Sector Classification in the Typology Klassen Matrix for the Mamminasata Region for 2020-2021 (During the Covid-19 Pandemic)

Sector Contribution (y) Economic Growth (r)	Sectoral Contribution above average	Sectoral Contribution below average
Above average economic growth	Quadrant I Advanced and Fast-Growing Sector (rik > ri and yik > yi) Processing industry Construction Health services and social activities	Quadrant III Fast Growing Sector (rik > ri and yik < yi) Agriculture, forestry, and fisheries Mining and excavation Administration of government, defense, and mandatory social security
Below average economic growth	Quadrant II Pressed Forward Sector (rik < ri and yik > yi) Water supply, waste management, waste, and recycling	Quadrant IV Relatively Underdeveloped Sectors (rik < ri and yik < yi) Supply of electricity and gas

Wholesale and retail trade; car and
motorcycle repair
Transportation and warehousing
Provision of accommodation and meals
Information and communication
Financial and insurance services
Real estate
Company services
Education Services
other services

Source: Processed Data, 2022.

The average growth and average contribution of each economic sector in the Mamminasata region in 2018-2019 (before the pandemic) can be seen from sectors that are classified as quadrant I or developed and fast-growing sectors, namely: 1) water supply, waste management, waste and recycling sectors repeat; 2) construction; 3) provision of accommodation and food and drink; 4) financial and insurance services; 5) real estate; 6) educational services; 7) health services and social activities; and 8) other services. Whereas in 2020-2021 (during a pandemic) the sectors included in quadrant I are: 1) the manufacturing industry sector; 2) construction; and 3) health services and social activities where ($r_{ik} > r_i$ and $y_{ik} > y_i$) means that this sector has an average growth rate and an average contribution that is greater than that of South Sulawesi Province. Changes occurred before and during the Covid-19 pandemic. It is undeniable that the processing industry; construction; health services and social activities continue to survive because each regional government focuses on economic development as well as handling the Covid-19 pandemic. If increased regional economic growth is the main target for development in the Mamminasata region, development priorities should be directed at increasing sectors that are classified in quadrant I or developed and fast-growing sectors.

Sectors categorized as quadrant II or developed but depressed sectors in 2018-2019 (before the pandemic), namely: 1) manufacturing industry sector; 2) wholesale and retail trade; car and motorcycle repair; 3) transportation and warehousing; 4) information and communication; and 5) company services. Whereas in 2020-2021 (during a pandemic) the sectors included in quadrant II are: 1) the water supply, waste management, waste and recycling sectors; 2) wholesale and retail trade; car and motorcycle repair; 3) transportation and warehousing; 4) provision of accommodation and food and drink; 5) information and communication; 6) financial and insurance services; 7) real estate; 8) company services; 9) educational services; and 10) other services where ($r_{ik} < r_i$ and $y_{ik} > y_i$),

Sectors categorized as quadrant III or fast developing sectors in 2012-2019 (before the pandemic), namely: 1) agriculture, forestry, and fisheries sectors; 2) mining and quarrying; 3) procurement of electricity and gas; and 4) government administration, defense, and mandatory social security. Whereas in 2020-2021 (during a pandemic) the sectors included in quadrant III are: 1) agriculture, forestry, and fisheries; 2) mining and quarrying; and 3) government administration, defense, and mandatory social security where ($r_{ik} > r_i$ and $y_{ik} < y_i$) means that this sector has a larger average growth than the average growth of South Sulawesi Province and the average contribution is smaller than the average -the average contribution of South Sulawesi Province.

Sectors that are categorized as quadrant IV or relatively lagging sectors in 2020-2021 (during the pandemic), namely the electricity and gas procurement sector where ($r_{ik} < r_i$ and $y_{ik} < y_i$) means that this sector has an average growth and an average contribution of smaller compared to South Sulawesi Province. Whereas before the pandemic there were no sectors that were classified in quadrant IV or relatively lagging sectors.

CONCLUSION

The results of the Location Quotient index analysis ($LQ > 1$), the sector which was the base sector before (2018-2019) and during the Covid-19 pandemic (2020-2021), namely: manufacturing industry; water supply, waste management, waste and recycling; construction; wholesale and retail trade, repair of cars and motorcycles; transportation and warehousing; provision of accommodation and food and drink; information and communication; financial and insurance services; real estate; company services; educational services; health services and social activities; and other services.

The results of the Shift Share analysis show that the specialized sectors grew rapidly (positive proportional shift) prior to the Covid-19 pandemic (2018-2019), namely: the manufacturing industry; construction; wholesale and retail trade, repair of cars and motorcycles; information and communication; company services; government administration, defense, and compulsory social security; educational services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: agriculture, forestry, and fisheries; procurement of electricity and gas; wholesale and retail trade, repair of cars and motorcycles; transportation and warehousing; information and communication; company services; health services and social activities; and other services. The sectors that had high competitiveness or were competitive (positive differential shift) prior to the Covid-19 pandemic (2018-2019), namely: agriculture, forestry, and fisheries; mining and excavation; procurement of electricity and gas; construction; wholesale and retail trade, repair of cars and motorcycles; provision of accommodation and food and drink; real estate; company services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: agriculture, forestry, and fisheries; mining and excavation; processing industry; construction; real estate; government administration, defense, and social security; and other services. provision of accommodation and food and drink; real estate; company services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: agriculture, forestry, and fisheries; mining and excavation; processing industry; construction; real estate; government administration, defense, and social security; and other services.

The results of the Klassen Typology analysis, sectors that were classified as developed and growing fast (quadrant I) before the Covid-19 pandemic (2018-2019), namely: construction; wholesale and retail trade, repair of cars and motorcycles; provision of accommodation and food and drink; real estate; company services; educational services; health services and social activities; and other services. Meanwhile, when the Covid-19 pandemic occurred (2020-2021), namely: the processing industry; construction; and health services and social activities.

Suggestion

To promote economic growth in the Mamminasata region, more serious efforts are needed to unify inter-regional perceptions towards the creation of a mutually beneficial cooperation. The role of the South Sulawesi provincial government and the respective regional governments in the Mamminasata region (Makassar City, Maros Regency, Gowa Regency and Takalar Regency) are needed to prioritize the development of leading sectors.

For future researchers, it is hoped that they will analyze the leading sectors of the regional economy by analyzing based on the sub-sectors of the sectors contained in the Gross Regional Domestic Product and adding analytical methods to make them more accurate.

REFERENCE

- Amen Budiawan. (2013). Factors Influencing Labor Absorption for Small Fish Processing Industries in Demak Regency. *Economics Development Analysis Journal*, 2(1), 1–8.

- Arham, MA (2018). Fiscal Decentralization and Changes in Economic Structure: A Comparative Study of the Regions of Sulawesi and Java. *Equity (Journal of Economics and Finance)*, 18(4).
- Charles, P., Runtunuwu, H., Soamole, B., Kotib, M., Khairun, U., & Utara, M. (2021). The Performance Of Excellent Sectors For Economic In Morotai Island. 2(1), 44–54.
- Public Works Department. (2006). Integrated Spatial Plan For Mamminasata Metropolitan Area. KRI International CORP. Nippon Koei CO., LTD, 91.
- Firmansyah, M., Kusumastanto, T., & Mulyati, H. (2020). Economic development analysis for improving port throughput and regional economic growth in East Java province, Indonesia. In *Journal of Critical Reviews* (Vol. 7, Issue 9).
- Harjanti, DT, Apriliyana, MI, & Arini, AC (2021). Analysis of Regional Leading Sector Through Location Quotient Approach, Shift Share Analysis, and Klassen Typology (Case Study: Sanggau Regency, West Kalimantan Province). *Journal of Geography Gea*, 21(2).
- Hukom, A. (2014). Labor Relations and Changes in Economic Structure on Community Welfare. *Journal of Applied Quantitative Economics*, 7(2).
- Jhingan, ML (2016). Development Economics and Planning. PT. King of Grafindo Persada. Depok: Rajawali Press.
- Kariyasa, K. (2006). Changes in Economic Structure and Job Opportunities and the Quality of Human Resources in Indonesia. *SOCA: Socioeconomics of Agriculture and Agribusiness*, 6(1), 1–21.
- Khusaini, M. (2015). A Shift-Share Analysis on Regional Competitiveness- A Case of Banyuwangi District, East Java, Indonesia. *Procedia - Social and Behavioral Sciences*, 211.
- Kurniasih, EP (2015). Regional Inequality in West Kalimantan Province A Study of the Kuznets Hypothesis. *Exos Journal*, 9(1).
- Lestari, M., & Suhadak. (2019). The Influence of Infrastructure Development on Indonesia's Economic Growth and Economic Equality. *Journal of Business Administration*, 70(1).
- Mutu'ali, L. (2015). Regional Analysis Techniques for Spatial and Environmental Regional Planning. Publishing Board of the Faculty of Geography (BPGF). Yogyakarta: Gadjah Mada University.
- Maryati, S., Handra, H., & Muslim, I. (2021). Labor Absorption and Economic Growth Towards the Era of Demographic Bonuses in West Sumatra. *Indonesian Journal of Economics and Development* Vol., 21(1).
- Mukhlis, I., Utomo, SH, Rahmani, L., & Fernanda, YM (2018). A Competitiveness Analysis of the Economic Sector in Tuban Regency, East Java.
- Nugroho, YF, Qosjim, A., & Widjadjanti, A. (2015). Analysis of Absorption of Labor in the Manufacturing Industry Sector and Its Contribution to the Gross Regional Domestic Product of East Java Province in 2005-2011 (Analysis Of Absortion Labor In The Manufacture Industry Sector And Cotribution To The Gross. *Student Scientific Articles*, 1–6.
- Nurhayani. (2018). The Effect of Village Head Leadership and Community Participation on the Development of Cemba Village, Enrekang District, Enrekang Regency. 6(3), 72–76.
- Sukirno, S. (2016). Macroeconomic Theory Introduction to the Third Edition. PT. King of Grafindo Persada. Jakarta: Rajawali Press.
- Sjafrizal. (2016). Regional Development Planning in the Era of Autonomy. PT. King of Grafindo Persada. Depok: Rajawali Press.
- Sjafrizal. (2018). Regional Economic Analysis and Its Application in Indonesia. PT. King of Grafindo Persada. Depok: Rajawali Press.
- Sayuti, M., & Safitri, WR (2020). Analysis of Leading Sectors and Labor Absorption in Central Lombok Regency in 2014-2018. *Competitive Journal: Information Media Development Economics, Management and Accounting*, 6(1).
- Sulistiawati Rini. (2012). The Effect of Investment on Economic Growth and Labor Absorption and Community Welfare in Provinces in Indonesia. *Journal of Business Economics and Entrepreneurship*, 3(1), 29–50.
- Suryani, T. (2013). Analysis of the Role of the Economic Sector on Economic Growth in Pemalang Regency. *Journal of Economics*, 2(1).

- Suwarni, E. (2006). Changes in Indonesia's Economic Structure. *Journal of Economics and Development*, 4(1).
- Syarifuddin, H., & Dewi, RM (2014). Analysis of Base and Non-Basic Sectors on Labor Absorption in Mojokerto Regency 2003-2012. *Journal of Economic Education (JUPE)*, 2(3), 1–19.
- Tadjudin, Syarif, N. (2020). The Impact of the Transformation of Indonesia's Economic Structure on Inter-Sectoral Mobility of Workers. *Journal of Development Economic Progress (JPEP)*, 5(1).
- Wahidin, M. Firmansyah, & Astuti, E. (2021). Analysis of the pattern and structure of growth in the economic sector of the city of Mataram and the relationship between the city of Mataram and the surrounding districts on Lombok Island, West Nusa Tenggara Province. *Elasticity - Journal of Development Economics*, 3(1).
- Widianingsih, I., & Pancasilawan, R. (2018). Organizational Network in the Development of Mamminasata Urban Areas , South Sulawesi Province Organizational Network in the Development of Mamminasata Urban Areas , South Sulawesi Province. *Scientific Journal of Public Administration: Journal of Thought and Research on Public Administration*, 8, 11–20.
- Yudistira, D., Fadilah, RN, & Setiawan, AB (2020). The Impact of Merapi Mountain Eruption on the Community Economy. *Efficient: Indonesian Journal of Development Economics*, 3(1).