Analysis of Leading Sectors and Economic Development Strategies in Deli Serdang Region

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Abstract

Leading sectors are expected to be able to overcome the problems of economic development in Deli Serdang Regency. The purpose of this study is to find out which sectors are the leading sectors in Deli Serdang Regency and to find out how the growth rate and contribution of Deli Serdang Regency influence. The type of data used in this study is secondary data obtained from the Central Statistics Agency for Deli Serdang Regency and the Central Statistics Agency for North Sumatra Province. The analysis in this study uses Microsoft Excel 2013 and the data used is data from 2018-2022. The results of this study are based on the analysis of Location Quotient, Typology Klassen, and Overlay, there are two sectors that are leading sectors in Deli Serdang Regency, namely the Electricity and Gas Procurement sector, and Construction and the results of the SWOT analysis are Utilizing foreign investment and tourism so that they can manage natural resources and strategic location, Utilizing foreign investment and strategic location in placing human resources to work in the manufacturing industry, Improving the quality of human resources and infrastructure so that more and more investors are able to manage untouched tourism, Eliminating sectoral egos in government so that there are more investors and reducing the unemployment rate, Improving the quality of natural resources and utilizing the location to meet standard community needs so that they can compete with other regions, Optimizing health protocols in industrial areas so that the Covid-19 pandemic does not recur. Improving facilities and infrastructure so that distribution can quickly meet the needs of the community, Create good cooperation between the government and other (foreign) parties in maintaining health protocols after the Covid-19 pandemic.

Keyword: PDRB; Leading Sector; Location Quotient; Tipologgy Klassen; Overlay; SWOT protocols after the Covid-19 pandemic

1. Introduction

The economic growth of a region is influenced by various economic sectors, one of which is the manufacturing industry sector. The manufacturing industry is the primary sector contributing to the increase in National GDP, reaching 21% in 2016. Small businesses or industries currently play a significant role as the largest contributors to regional economic growth [1].

Regional development through its potential, particularly in the manufacturing industry, will enhance regional economies and enable them to compete with other regions. Economic competition can be achieved through competitive and comparative advantages, aligned with the competencies and leading products of each region, particularly in agriculture (broadly defined), forestry, mining, and small-scale handicraft industries [2]. Therefore, each region must be able to optimize its potential, such as leveraging its flagship products. Products are processed outputs of existing commodities, adding value to the original commodities [3].

Deli Serdang Regency is one of the regions endowed with significant potential, ranging from food agriculture, smallholder plantations, large-scale plantations, marine fisheries, aquaculture, poultry farming, and tourism. These sectors need further development to enhance community income and the regional economy. The economic growth rate of Deli Serdang Regency is supported by its leading economic sectors, which serve as key assets for regional development.

Several well-known commodities have become agricultural development mainstays and are cultivated extensively in this region. For example, *Pisang Barangan* bananas are grown in Biru-Biru, STM Hilir, and Namorambe subdistricts; star fruit and guava in Pancur Batu subdistrict; durian in Sibolangit, Biru-Biru, Namorambe, and STM Hilir subdistricts; and oranges in Gunung Meriah subdistrict.

Tourism in Deli Serdang Regency also has a unique appeal. Popular local tourist destinations include Pemandian Alam Sembahe (Sembahe Natural Bath) in Pancur Batu subdistrict, Hill Park Recreational Park in Sibolangit, Siba Island Marine Tourism in Hamparan Perak, Loknya Waterfall in Bandar Baru, Mutiara Indah Beach in Deli Serdang, Danau Linting Tourism

Area in Talun Kenas, and Dua Warna Waterfall, also known as Telaga Biru Waterfall, in Sibolangit. Additionally, the region boasts numerous natural attractions, hot springs, nature reserves, beaches, and scenic areas that remain untapped and hold significant potential for further exploration and development. he agricultural land area in Deli Serdang Regency spans approximately 214,797 hectares. This indicates that around 86% of the regency's territory consists of agricultural land, including rice fields and non-rice fields used for horticultural crops, plantations, dry fields, upland farms, fishponds, grazing fields, and other uses.

The area of rice fields covers about 43,106 hectares, or approximately 17% of the regency's territory, comprising irrigated and non-irrigated rice fields. The largest proportion of the population's livelihood is in the agricultural sector. To this day, Deli Serdang Regency remains a key region in North Sumatra Province, serving as a rice granary and achieving self-sufficiency in rice production. In addition to agricultural land, the plantation sector in Deli Serdang Regency also shows considerable potential and has been steadily increasing. This is evident from the continuous expansion of smallholder plantation areas and the growing enthusiasm of the local community for plantation activities.

Table 1. Growth Rate of Gross Regional Domestic Product at Constant 2010 Prices by Business Field (Percentage)

Business Field	Growth Rate of Gross Regional Domestic Product at Constant 2010 Prices by Business Field (Percentage)		
	2019	2020	2021
A. Agriculture, Forestry, and Fisheries	4.38	0.74	2.84
B. Mining and Quarrying	4.65	-0.57	4.11
C. Manufacturing Industry	3.82	-1.92	2.82
D. Electricity and Gas Supply	4.88	5.03	3.73
E. Water Supply, Waste Management, Waste Treatment, and Recycling	3.44	3.66	7.23
F. Construction	6.69	-0.74	2.94
G. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	7.02	-1.06	4.15
H. Transportation and Warehousing	3.27	-12.10	-5.96
I. Accommodation and Food Service Activities	7.98	-8.46	-0.79
J. Information and Communication	7.89	8.83	7.96
K. Financial and Insurance Activities	1.21	2.13	4.76
L. Real Estate	6.84	1.57	-1.33
M,N. Professional, Scientific, and Technical Activities	6.87	-1.69	-0.05
O. Public Administration, Defense, and Compulsory Social Security	6.45	-0.09	-0.20
P. Education Services	6.46	1.52	3.65
Q. Health and Social Work Activities	6.63	-1.32	-1.17
R,S,T,U. Other Services	6.35	-3.74	1.84
GRDP	5.18	-1.78	2.23

Source: Deli Serdang Regency Central Bureau of Statistics, 2024

Based on Table 1, the highest growth rate was observed in the Accommodation and Food Service sector in 2019, with a growth rate of 7.98%. However, it experienced a decline of -8.46% in 2020 and a smaller decrease of -0.79% in 2021. The second-highest growth rate occurred in the Information and Communication sector, with a growth of 7.89% in 2019. This sector saw an increase to 8.83% in 2020, followed by a slight decline to 7.96% in 2021. The third-highest growth rate was in the Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles sector, which grew by 7.02% in 2019. It then declined by -1.06% in 2020 but rebounded to 4.15% in 2021.

Table 1 also highlights the sectors with the lowest growth rates. The Financial Services and Insurance sector had the lowest growth rate in 2019 at 1.21%, followed by an increase to 2.13% in 2020 and 4.76% in 2021. The second-lowest growth rate was observed in the Transportation and Warehousing sector, which grew by 3.27% in 2019, declined sharply by -12.10% in 2020, and slightly recovered to -5.96% in 2021. The third-lowest growth rate was in the Water Supply, Waste Management, and Recycling sector, which recorded a growth rate of 3.46% in 2019, increased slightly to 3.66% in 2020, and further rose to 7.23% in 2021.

Table 2. Distribution of Gross Regional Domestic Product at Constant Prices by Business Field (Percentage)

Business Field	Distribution of GRDP at Constant Prices by Business Field (Percentage)		
	2019	**2020**	**2021**
A. Agriculture, Forestry, and Fisheries	10.08	10.46	10.59
B. Mining and Quarrying	0.71	0.70	0.72
C. Manufacturing Industry	30.93	31.05	31.41
D. Electricity and Gas Supply	0.12	0.13	0.13
E. Water Supply, Waste Management, Waste Treatment, and Recycling	0.04	0.04	0.05
F. Construction	16.09	16.32	16.49
G. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	17.23	17.53	17.78
H. Transportation and Warehousing	8.97	7.80	7.12
I. Accommodation and Food Service Activities	2.75	2.51	2.38
J. Information and Communication	1.14	1.25	1.31
K. Financial and Insurance Activities	2.57	2.59	2.69
L. Real Estate	4.16	4.30	4.17
M,N. Professional, Scientific, and Technical Activities	0.48	0.49	0.49
O. Public Administration, Defense, and Compulsory Social Security	1.98	2.02	1.92
P. Education Services	1.50	1.55	1.54
Q. Health and Social Work Activities	0.97	0.99	0.94
R,S,T,U. Other Services	0.29	0.28	0.28
GRDP	100.00	100.00	100.00

Source: Deli Serdang Regency Central Bureau of Statistics, 2024

Based on Table 2, the highest distribution of GRDP was in the manufacturing sector, accounting for 30.93% in 2019. This increased to 31.05% in 2020 and then slightly declined to 31.41% in 2021. The second-highest distribution was in the wholesale and retail trade; repair of motor vehicles and motorcycles sector, which contributed 17.23% in 2019, rose to 17.53% in 2020, and further increased to 17.78% in 2021. The third-highest distribution was in the construction sector, contributing 16.09% in 2019, increasing to 16.32% in 2020, and further to 16.49% in 2021.

Table 2 also highlights the sectors with the lowest GRDP distribution. The lowest was the water supply, waste management, waste treatment, and recycling sector, which accounted for 0.04% in both 2019 and 2020, with a slight increase to 0.05% in 2021. The second-lowest was the electricity and gas supply sector, which contributed 0.12% in 2019 and increased to 0.13% in 2020 and 2021. The third-lowest was the other services sector, contributing 0.29% in 2019 but decreasing to 0.28% in 2020 and 2021. From the GRDP data, the sector with the highest growth rate was the accommodation and food service sector, growing by 7.98%. However, this was inversely related to its distribution, which was only 2.75%. On the other hand, the manufacturing sector had the highest GRDP distribution at 30.93%, yet its growth rate was only 3.82%. This phenomenon of disparity between growth rates and GRDP distribution across sectors has motivated me to conduct research titled: "Analysis of Leading Sectors and Economic Development Strategies in Deli Serdang Region."

2. Introduction

2.1. Economic Growth

In general, economic growth refers to a situation where there is an increase in income resulting from the rise in the production of goods and services. However, this income increase is not compared to the growth of the population. This can be observed from the improvements in various fields, such as technology. Economic growth is also described as a process in a country's economy that occurs over a specific period of time, with the goal of achieving better economic conditions. A country can be considered to have experienced economic growth if the quality of life of its citizens improves compared to before.

By understanding the rate of economic growth, the government can then make plans regarding state revenue and future development. Additionally, business sector players can use the rate of economic growth as a basis for making plans related to product development and available resources. According to (Sukirno, 2011) in the book by Lincolyn Arsyad, "The key difference

with economic development is that, in economic development, the per capita income continuously increases, while economic growth does not necessarily result in an increase in per capita income."

Economic growth is defined as the increase in Gross Domestic Product (GDP) or Gross National Income (GNI), regardless of whether this increase is larger or smaller than the population growth rate, or whether there is a change in the structure of the economy or not [4].

2.2. Leading Sectors

The definition of a leading sector usually relates to a comparison, whether at a regional, national, or international scale. On an international level, a sector is considered a leading sector if it can compete with the same sector in other countries. Meanwhile, at the national level, a sector can be categorized as a leading sector if it can compete with the same sector produced by other regions, whether in the national or domestic market. A region will have a leading sector if it can outperform other regions in the same sector, thereby enabling it to generate exports [5]. A leading sector is ensured to have a greater potential for faster growth compared to other sectors in a region, particularly due to supporting factors such as capital accumulation, growth in absorbed labor, and technological progress. Creating investment opportunities can also be achieved by empowering the potential of the region's leading sectors.

The leading sector in a region is closely related to the Gross Regional Domestic Product (GRDP) data of that area. As a crucial sector in the economic development of a region, the leading sector does not merely refer to geographical location but also encompasses a sector that spans various economic channels, thereby driving the economy as a whole. A leading sector is one that can stimulate growth or development in other sectors, whether in sectors supplying its inputs or those utilizing its outputs as inputs in their production processes.

2.3. Development Strategy

The term "strategy" originates from the Greek word *strategos*, meaning "a general set of maneuvers carried out to overcome an enemy during combat," essentially referring to the generals' art of winning battles. In the Dutch-Indonesian dictionary, "strategis" derives from a compound word meaning "war tactics." The term strategy was initially used in military contexts as an effort to achieve victory, requiring good and accurate tactics and planning.

According to [6], strategy refers to incremental (constantly increasing) and continuous actions based on perspectives of what customers are expected to want in the future. Thus, strategy almost always begins with what *could* happen rather than what *has* happened.

The *Kamus Besar Bahasa Indonesia* (Indonesian Dictionary) defines strategy as a careful plan of activities to achieve specific goals. Strategy is a choice regarding what an organization wants to achieve in the future and how to realize that desired state. This view sees strategy not as a concept of "fit and match" (compatibility and alignment) but as a concept of "stretch" (expansion). It considers strategy a "game of aspirations," where creating a gap between current conditions and aspirations must be continuously pursued [7].

Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions to guide actions in human resources, marketing, finance, production, and other functions to enable the organization to achieve its goals.

Strategic planning is a managerial process for developing and maintaining a suitable alignment between the company's objectives and resources with the ever-changing market opportunities. The purpose of strategic planning is to continually refine the company's business and products to ensure they synergize to generate satisfactory profit and growth.[8]

3. Research Method

The research is qualitative, which focuses on understanding the quality of meaning (nature and essence) of the subject under study. The data used in this research are secondary data, including the Gross Regional Domestic Product (GRDP) for each economic sector in Deli Serdang Regency and North Sumatra Province from 2018-2022. This data is obtained from the Central Bureau of Statistics (BPS) of North Sumatra, the Central Bureau of Statistics of Deli Serdang, various literatures, the internet, and other sources. The data collection technique involves direct recording of time series data for analysis using:

a. Location Quotient (LQ) Method
    According to (Sjafrizal, 2014), Location Quotient, or LQ, is a comparison of the size of an industry sector in a specific region against its national role.

b. Klassen Typology
    The Klassen Typology is an analytical method used to understand the patterns and structure of regional sectoral growth. This analysis is based on two main indicators: regional economic growth and regional per capita income. Furthermore, Klassen Typology categorizes economic sectors by examining their growth rates and contributions to the total Gross Regional Domestic Product (GRDP). The primary purpose of this analysis is to identify which economic sectors are classified as rapidly advancing and which sectors are relatively underdeveloped [9].

c. Overlay
    Overlay analysis is used to describe potential economic activities by applying two key criteria: growth and comparative advantage. This method helps identify sectors or activities with the most potential for development based on their performance in these two areas.[10]

d. SWOT Analysis
    SWOT analysis is a strategic planning method used to evaluate Strengths, Weaknesses, Opportunities, and Threats related to a project, business venture, or to assess one's own product lines or those of competitors. In conducting the analysis, the objectives of the business or the specific object to be analyzed are determined first. Strengths and Weaknesses are categorized as internal factors, while Opportunities and Threats are identified as external factors.[11]

4. Results and Discussion

4.1. Location Quotient Analysis

Table 3. Location Quotient

Sector of GDP	LOCATION QUOTIENT					Average
	2018	2019	2020	2021	2022	
A. Agriculture, Forestry, and Fisheries	0.491	0.491	0.490	0.481	0.464	0.483
B. Mining and Quarrying	0.560	0.558	0.547	0.574	0.595	0.567
C. Manufacturing Industry	1.587	1.624	1.609	1.608	1.599	1.606
D. Electricity and Gas Supply	1.068	1.058	1.088	1.090	1.106	1.082
E. Water Supply, Waste Management, Waste Treatment, and Recycling	0.436	0.432	0.435	0.452	0.448	0.441
F. Construction	1.136	1.131	1.202	1.225	1.223	1.183
G. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	0.920	0.916	0.928	0.941	0.934	0.928
H. Transportation and Warehousing	1.789	1.767	1.738	1.707	1.934	1.787
I. Accommodation and Food Service Activities	1.137	1.137	1.149	1.157	1.156	1.147
J. Information and Communication	0.537	0.530	0.548	0.561	0.567	0.549
K. Financial and Insurance Activities	0.887	0.879	0.893	0.906	0.901	0.893
L. Real Estate	0.813	0.813	0.817	0.816	0.813	0.814
M,N. Professional, Scientific, and Technical Activities	0.440	0.443	0.461	0.472	0.465	0.456
O. Public Administration, Defense, and Compulsory Social Security	0.531	0.536	0.544	0.543	0.549	0.541
P. Education Services	0.807	0.814	0.813	0.827	0.818	0.816
Q. Health and Social Work Activities	0.964	0.946	0.955	0.948	0.962	0.955
R,S,T,U. Other Services	0.499	0.495	0.499	0.506	0.499	0.500
GRDP	1.000	1.000	1.000	1.000	1.000	1.000

Based on the results of the Location Quotient (LQ) analysis of seventeen economic sectors in Deli Serdang Regency using constant prices, it shows that there are five sectors classified as base sectors with an average LQ value greater than 1. These sectors include the Manufacturing Sector (LQ=1.606), Electricity and Gas Supply Sector (LQ=1.082), Construction Sector (LQ=1.183), Transportation and Warehousing Sector (LQ=1.787), and Accommodation and Food and Beverage Supply Sector (LQ=1.147).

This indicates that these sectors are performing well in the economy of Deli Serdang Regency. These sectors have been able to meet local demand and have the potential for export to other regions, thus contributing to economic growth in Deli Serdang.

On the other hand, there are two sectors considered non-base sectors due to their average LQ value being less than 1. These sectors include the Agriculture, Forestry, and Fisheries Sector (LQ=0.483), Mining and Quarrying Sector (LQ=0.567), Water Supply, Waste Management, and Recycling Sector (LQ=0.441), Wholesale and Retail Trade; Motor Vehicle and Motorcycle Repair Sector (LQ=0.928), Information and Communication Sector (LQ=0.549), Financial and Insurance Services Sector (LQ=0.893), Real Estate Sector (LQ=0.814), Professional Services Sector (LQ=0.456), Public Administration, Defense, and Social Security Sector (LQ=0.541), Education Services Sector (LQ=0.816), Health Services and Social Activities Sector (LQ=0.955), and Other Services Sector (LQ=0.500).

The highest average LQ value is found in the Manufacturing Sector at 1.606, which has experienced fluctuations, although it has shown a decline in LQ values year after year from 2020 to 2022. The respective LQ values for the Manufacturing Sector during this period were 1.587, 1.624, 1.609, 1.608, and 1.599. Despite a decrease in its contribution to the regional economy, the Manufacturing Sector remains the largest contributor and continues to have the highest LQ value.

4.2. Klassen Typology Analysis

Table 4. Sector Classification

Quadrant I	Quadrant II
Advanced and Rapidly Growing Sectors	Advanced but Under Pressure Sectors
1. Electricity and Gas Supply Sector	1. Manufacturing Sector
2. Construction Sector	2. Accommodation and Food and Beverage Supply Sector
3. Transportation and Warehousing Sector	
Quadrant III	Quadrant IV
Developing Sectors	Relatively Lagging Sectors
1. Mining and Quarrying Sector	1. Agriculture, Forestry, and Fisheries Sector
2. Information and Communication Sector	2. Water Supply, Waste Management, and Recycling Sector
3. Professional Services Sector	3. Wholesale and Retail Trade; Motor Vehicle and Motorcycle Repair Sector
4. Public Administration, Defense, and Social Security Sector	4. Financial and Insurance Services Sector
5. Educational Services Sector	5. Real Estate Sector
	6. Health Services and Social Activities Sector
	7. Other Services Sector

Based on the classification table of advanced and rapidly growing sectors, the Electricity and Gas Supply Sector shows an average growth rate in Deli Serdang higher than the average growth rate of North Sumatra Province, which stands at 6.41%. Additionally, the average contribution of Deli Serdang is greater than the average contribution of North Sumatra Province by 0.12%.

Next, the Construction Sector has an average growth rate in Deli Serdang higher than the average growth rate of North Sumatra Province, which is 6.67%. The average contribution of Deli Serdang to the economy is also greater than that of North Sumatra Province by 16.17%.

The Transportation and Warehousing Sector also shows an average growth rate in Deli Serdang that exceeds the average growth rate of North Sumatra Province, which is 6.97%. Furthermore, the average contribution of Deli Serdang to this sector is higher than the average contribution of North Sumatra Province by 8.32%.

Sectors that are categorized as advanced but under pressure, due to lower growth rates but high contributions compared to the same sectors in the GDP of North Sumatra, include the Manufacturing Sector and the Accommodation and Food and Beverage Supply Sector. These two sectors are considered advanced but under pressure, as they show significant contributions to the regional economy but have experienced slower growth compared to other sectors.

4.3. Klassen Typology Analysis

Table 5. Overlay

Sector of Regional Gross Domestic Product (RGDP)	Location Quotient	Tipologgy Klassen	Explanation
A. Agriculture, Forestry, and Fisheries	-	-	Non-Prioirty
B. Mining and Quarrying	-	-	Non-Prioirty
C. Manufacturing Industry	+	-	Potential
D. Electricity and Gas Supply	+	+	Prioirty
E. Water Supply, Waste Management, Waste Treatment, and Recycling	-	-	Non-Prioirty
F. Construction	+	+	Prioirty
G. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	-	-	Non-Prioirty
H. Transportation and Warehousing	+	+	Prioirty
I. Accommodation and Food Service Activities	+	-	Potential
J. Information and Communication	-	-	Non-Prioirty
K. Financial and Insurance Activities	-	-	Non-Prioirty
L. Real Estate	-	-	Non-Prioirty
M,N. Professional, Scientific, and Technical Activities	-	-	Non-Prioirty
O. Public Administration, Defense, and Compulsory Social Security	-	-	Non-Prioirty
P. Education Services	-	-	Non-Prioirty
Q. Health and Social Work Activities	-	-	Non-Prioirty
R,S,T,U. Other Services	-	-	Non-Prioirty

Based on the results from the Overlay analysis table, the Electricity and Gas Supply Sector qualifies as a leading sector because, according to the Location Quotient analysis, it has an average value of 1.082. In the Typology Klassen analysis, the sector shows an average growth rate of 6.41% and an average contribution to the regional GDP of 0.12%. As a result, the Electricity and Gas Supply Sector is positioned in Quadrant I, based on the combination of Location Quotient and Typology Klassen analysis, which indicates two positive values (++).

The second leading sector is the Construction Sector, with an average Location Quotient value of 1.136. In the Typology Klassen analysis, the sector shows an average growth rate of 6.67% and an average contribution to the regional GDP of 16.17%. Based on the Typology Klassen analysis, the Construction Sector also falls in Quadrant I. According to the combination of Location Quotient and Typology Klassen analysis, this sector also has two positive values (++).

4.4. SWOT Analysis

Table 6. Matrix SWOT

Internal Factors	Strength	Weakness
External Factors	1. (S1) Rich and Diverse Natural Resources 2. (S2) Strategic Location 3. (S3) Industrial Area Available	1. (W1) Low Quality of Human Resources 2. (W2) Inadequate Infrastructure 3. (W3) Sectoral Ego
Opportunity 1. (O1) Foreign/Domestic Investment 2. (O2) Untapped Tourism Potential 3. (O3) Large Number of Human Resources	**Strategy SO** 1. Leverage foreign investment and tourism to manage natural resources and strategic locations (S1, S2, O1, O2). 2. Utilize foreign investment and strategic location to place human resources in the processing industry (S2, S3, O1, O3).	**Strategy WO** 1. Improve the quality of human resources and infrastructure to attract more investors and effectively manage untapped tourism (W1, W2, O1, O2). 2. Eliminate sectoral ego within the government to attract more investors and reduce the unemployment rate (W3, O3).
Threats	**Strategy ST**	**Strategy WT**

Internal Factors	Strength	Weakness
External Factors		
1. (T1) High Standard of Community Needs	1. Improve the quality of natural resources and utilize strategic locations to meet community needs standards, enabling competition with other regions (S1, S2, T1, T2).	1. Improve facilities and infrastructure to ensure fast distribution that meets community needs (W1, W2, T1, T2).
2. (T2) Regional Competition	2. Optimize health protocols in industrial areas to prevent a recurrence of the COVID-19 pandemic (S3, O3).	2. Establish good cooperation between the government and external partners (foreign) to maintain health protocols during post-COVID-19 recovery (S3, T3).
3. (T3) Post-COVID-19 Recovery		

Based on the SWOT analysis, which compares internal factors (Strengths and Weaknesses) with external factors (Opportunities and Threats) of the potential sectors, an alternative strategy for the economic development of Deli Serdang Regency is developed using the Cartesian method. Based on the recapitulation of the weighting and rating of internal strategic factors (IFAS) and external strategic factors (EFAS), the following scores are obtained:

1. Total Strength Score: 2.0
2. Total Weakness Score: 1.1
3. Total Opportunity Score: 1.85
4. Total Threat Score: 0.95

Based on this data, the coordinates for the internal and external analyses are determined as follows:

1. Internal Analysis Coordinate
   = (Total Strength Score - Total Weakness Score)
   = 2.0 – 1.1 = 0.90
2. External Analysis Coordinate
   = (Total Opportunity Score - Total Threat Score)
   = 1.85 – 0.95 = 0.90

Finally, an alternative strategy is formulated by determining the quadrant position in the SWOT analysis diagram. The purpose of determining the coordinates in the SWOT analysis diagram is to identify the position of the strategy for improving the economic growth of Deli Serdang Regency, whether it is located in Quadrant I, II, III, or IV. This helps identify whether the company's strategy is Aggressive, Diversification, Turnaround, or Defensive. In this case, with both coordinates (internal and external) equal to 0.90, the strategy is positioned in Quadrant I, which suggests an Aggressive strategy. This strategy focuses on leveraging strengths and opportunities to maximize growth potential.
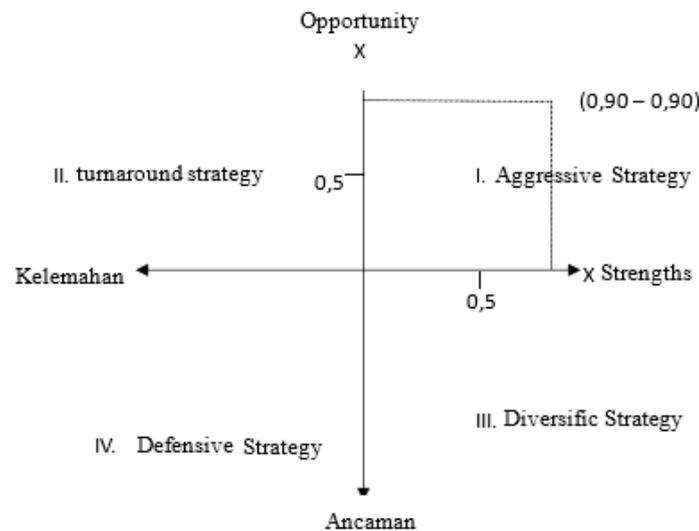
Figure 1. alternative strategy for Deli Serdang Regency in enhancing economic growth is positioned in Quadrant 1

Based on the image above, it can be seen that the alternative strategy for Deli Serdang Regency in enhancing economic growth is positioned in Quadrant 1, which is the Aggressive Strategy. This is because Deli Serdang has many strengths to leverage existing opportunities, which can consequently boost economic growth

5. Conclusions

1. Based on the analysis using the Location Quotient (LQ) index, the basis sectors—those with an LQ value greater than one—are as follows Transportation and Warehousing (the sector with the highest LQ value), Manufacturing Industry, Electricity and Gas Supply, Construction and Accommodation and Food Service Activities. Meanwhile, the other twelve sectors are classified as non-basis sectors, as their LQ values are less than one. These include Agriculture, Forestry, and Fisheries, Mining and Quarrying, Water Supply, Waste Management, and Recycling, Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles, Information and Communication, Financial Services and Insurance, Real Estate, Business Services, Public Administration, Defense, and Compulsory Social Security, Education Services, Health Services and Social Activities and Other Services. This classification highlights the sectors with a comparative advantage in the region and those requiring development to increase their contribution to the economy.
2. Research Results Based on Klassen Typology Analysis using the Klassen Matrix, the economic sectors in Deli Serdang Regency can be classified as follows Advanced and Rapidly Growing Sectors: Electricity and Gas Supply, Construction and Transportation and Warehousing. Relatively Underdeveloped Sectors: Agriculture, Forestry, and Fisheries, Water Supply, Waste Management, and Recycling, Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles and Financial Services and Insurance. Developing Sectors: Mining and Quarrying, Information and Communication, Business Services, Public Administration, Defense, and Compulsory Social Securityand Education Services. Advanced but Pressured Sectors: Manufacturing Industry, Accommodation and Food Service Activities This classification highlights the diverse levels of growth and development across sectors, providing insights into which areas require further support and which are already leading the economic progress in the region.
3. Overlay Analysis Results Based on the combined analysis of Location Quotient (LQ) and Klassen Typology, it was found that Electricity and Gas Supply and Construction are the leading sectors. These sectors meet both analytical criteria, as all indicators show positive values. This indicates that these two sectors have strong growth potential and significant contributions to the regional economy, making them key drivers for future development.
4. SWOT Analysis Results: Economic Development Strategy for Deli Serdang Regency based on the SWOT analysis, the economic development strategy for Deli Serdang Regency includes the following key actions: Leverage Foreign Investment and Tourism: Utilize foreign investment and the region's strategic location to manage natural resources (SDA) and attract

tourists. Optimize Foreign Investment and Strategic Location: Position human resources (SDM) effectively within the processing industry, taking advantage of the region's strategic location. Improve Human Resources and Infrastructure: Enhance the quality of human resources and infrastructure to attract more investors and manage untapped tourism resources effectively. Eliminate Sectoral Ego in Government: Foster collaboration within the government to encourage investment and reduce unemployment. Enhance Natural Resources and Location: Improve the quality of natural resources and utilize the region's location to meet public needs, ensuring competitiveness with other regions. Optimize Health Protocols in Industrial Areas: Implement strict health protocols in industrial zones to prevent a recurrence of the COVID-19 pandemic. Improve Facilities and Infrastructure: Enhance transportation and infrastructure systems to ensure fast and efficient distribution, meeting the needs of the community. Foster Cooperation between Government and External Partners: Strengthen partnerships between the government and foreign entities to maintain health protocols and support recovery post-pandemic. These strategies aim to optimize the region's potential, enhance competitiveness, and drive sustainable economic growth.

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