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Utilizing Location Quotient (LQ) and Shift-Share (SS) Techniques to Analyze Key Industries in Yogyakarta City

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Abstract

The current era of regional autonomy has led to an increased complexity in regional development and heightened competition among regions. To achieve sustainable development in each regency and city, particularly in the Special Region of Yogyakarta, the Provincial Government of DIY has allocated special funds to improve the welfare of the community. Analyzing the leading industries in Yogyakarta is the objective of this research. Secondary data for this research were obtained through the official websites of the Central Statistics Agency (BPS) of DIY Province and BPS of Yogyakarta City. Using the shift share and location quotient analysis techniques, this research is of a quantitative descriptive nature. Based on the research findings, the leading sectors in Yogyakarta from 2018 to 2022 have been identified, comprising a total of 11 fields or sectors: (1) Manufacturing Industry; (2) Gas and Electricity Provision; (3) Water Supply; (4) Waste Processing; (5) Information and Communication; (6) Financial and Insurance Services; (7) Real Estate; (8) Corporate Services; (9) Government Administration; Defense and Mandatory Social Security; (10) Education Services; (11) Health and Social Activities. In the other hand, only the health and social activities sector is deemed most suitable (primary priority) for continuous sustenance and development.

INTRODUCTION

One of the provinces in Indonesia endowed with the authority to control and administer governance in accordance with prevailing laws and regulations is the Special Region of Yogyakarta (DIY). In support of the welfare and development of the DIY community, the central government allocates special funds to the provincial government of DIY. These funds can be utilized for various projects and programs, including local economic growth, infrastructure development, as well as initiatives related to health, education, and the preservation of local customs and culture. The special funds for DIY constitute one component of transfers to regions and village funds derived from the State Budget. They are designated to support special authorities. The Special Autonomy Fund for DIY is disbursed in accordance with Article 42 of Law Number 13 of 2012 concerning the Special Region of Yogyakarta [1].

With the implementation of regional autonomy, each region must be able to identify its potential as well as leading sectors or fundamental sectors, from the provincial level down to the village level. Unfortunately, many regions still face challenges in recognizing their potentials and leading sectors, despite the fact that knowledge about a region's leading sectors is crucial for effectively and efficiently driving regional development and economic growth [2].

As the capital city of DIY Province, Yogyakarta naturally receives a portion of the special funds earmarked to realize sustainable development. Beyond being the governmental center, Yogyakarta is also an educational hub, often referred to as the city of students. This designation provides an opportunity for the entire community to acquire knowledge in the city of Yogyakarta. In other words, Yogyakarta is an area with promising economic sector development, supported by the growth of the tourism sector in the region.

Sustainable economic growth stands as one of the most crucial aspects of regional economic development. A pivotal component in national growth is regional development. The focus should be directed towards the leading sectors or fundamental sectors when implementing development with limited resources. The regional economy will be affected by any shifts in the leading sectors [3].

The management of Yogyakarta's special autonomy fund will be more

effective and efficient if the local government can develop business fields or fundamental sectors within the region, thereby realizing sustainable economic growth. Based on the above description, a planning study is required that focuses on the leading or fundamental sectors, where a region's leading sectors can be analyzed using location quotient and shift share methods. Therefore, this research aims to analyze the fundamental sectors present in the city of Yogyakarta for the period 2018-2022.

THEORETICAL STUDY

Economic Growth Theory

Economic growth is a process of continuous change in the economic conditions of a country towards a perceived better state over a specific period. Economic growth theory elucidates the factors that influence or determine economic growth and its long-term processes, explaining how these factors interact with each other, giving rise to the growth process [4]. In another sense, economic growth is a long-term process aligned with economic productivity and population development manifested in per capita income output, both at the regional and national levels. The contribution of economic sectors plays a crucial role in the economic growth of a region, aiming to improve the standard of living for the local population [5]. The economic growth of a region or country can be analyzed using Regional Gross Domestic Product (GDP) and National Gross Domestic Product (NGDP). If the per capita income of the population in a region or country increases, it will result in sustainable economic growth.

Economic Development

According to [6], Economic Development is interpreted in the context of regional economic development as an integral part of the national developmentprocess. It involves the activities of both the community and the government as efforts to opportunities and business prospects, aiming to prosperity for the society. Economic development in each region is based on the potential strengths and comparative advantages of each area, with the expectation that it will have a sustained positive impact on the local community

Leading Sector

The leading sector is a field that holds a competitive advantage, capable of contributing significantly and making regional development more efficient. It accelerates economic growth based on the sector's capacity to contribute to the regional Gross Domestic Product (PDRB). The contribution capacity of a sector to the PDRB is indicated by commodity exports, employment absorption, and inter-sectoral involvement. Sectors with greater potential have a faster rate of development [7].

Location Quotient (LQ)

LQ is a comparison between the role of an economic sector in a region and the magnitude of the role of the same economic sector at the national level, or a comparison with a region that has a larger administrative scope [8].

The LQ analysis is employed to identify the leading or fundamental sectors present in a region, facilitating local leaders in enhancing regional development and economic growth effectively and efficiently.

Shift Share

The shift-share analysis is utilized to examine the role of a specific sector or the shifts in a sector in a region concerning the same sector in the national economy. This analysis compares the growth rate of a sector in a narrow region to that in a broader region. The shift-share analysis comprises three components:

1. National Share: This component assesses how the national economic growth influences the region. It is achieved by analyzing changes in aggregate employment sectorally compared to changes in the same sector in the reference economy.
2. Proportional Shift: This measures changes in growth or decline in the region compared to the larger reference economy. This measurement helps determine if the regional economy is concentrated in sectors that are growing faster than the reference economy.
3. Differential Shift: This component determines the competitiveness of a specific economic sector in the local area compared to the larger reference

economy [2].

RESEARCH METHODS

The type of research used by researchers is descritive quantitative research. According to [9], the quantitative research method can be interpreted as a research method based on the philosophy of positivism, used to research certain populations or samples, sampling techniques are generally carried out randomly, data collection uses research instruments, data analysis is quantitative/statistics, with the aim of testing the hypotheses that have been set. Therefore, this research involves the processing of Gross Regional Domestic Product (GRDP) data of Yogyakarta City and the GRDP of the Special Region of Yogyakarta (DIY Province) based on constant prices according to the field of business series 2010 for the period 2018-2022, utilizing the methods of location quotient and shift-share analysis.

Location Quotient (LQ) Analysis

The Location Quotient (LQ) analysis is a statistical method used to assess the concentration or specialization of a particular economic activity or industry in a specific region compared to its prevalence at the national or larger reference level. It is calculated by dividing the proportion of a specific sector's employment or output in a local area by the proportion of the same sector at the national level. LQ is a comparison between the role of an economic sector in a region and the magnitude of the role of the same economic sector at the national level, or a comparison with a region that has a larger administrative scope [8]. The method for calculating Location Quotient (LQ) is as follows:

$$LQ = \frac{Yij / Yj}{Yin / Yn}$$

Explanation

LQ : Location Quotient (LQ) value
Yij : Value of Gross Regional Domestic Product (GRDP) for Sector i in Yogyakarta City
Yj : Total GRDP of Yogyakarta City
Yin : Value of Gross Regional Domestic Product (GRDP) for Sector i in DIY Province
Yn : Total GRDP of DIY Province

The results of the LQ calculation can be interpreted as follows:

1. LQ > 1 indicates the export of products in that sector, suggesting exports are conducted due to a surplus. (The sector plays a larger role in the region compared to the national level).
2. LQ < 1 indicates that the sector needs to import because it is not yet capable of meeting the regional demand. (The sector's role is smaller in the region compared to the national level).
3. LQ = 1 indicates balanced productivity, meaning the sector is not yet suitable for exports. (The sector plays an equal role in both the region and nationally).

Shift Share Analisys

The shift-share method is based on the fundamental assumption that the economic growth or value-added of a region (Dij) is influenced by three main interconnected components, namely Regional Share (Nij), sectoral growth (Proportional Shift) Mij or PS, and regional competitive growth (Differential Shift) Cij or DS. The shift-share method begins by determining the growth rate of a region, in this case, Yogyakarta City, symbolized as rn, while for the broader benchmark region, in this case, it is the DIY Province. The formulation to measure the change in the Gross Regional Domestic Product (GRDP) of a sector i in a region can be expressed by the following formula [10].

$$Dij = Nij + Mij + Cij$$

Explanation:

Dij = Changes in the Gross Regional Domestic Product (GRDP) of sector i in the observed region (regency/city)

Nij = Changes in the GRDP of sector i in the observed region (regency/city) caused by the influence of economic growth in the reference region (province or national)

Mij = Changes in the GRDP of sector/subsector i in the observed region (regency/city) caused by the influence of sector i growth in the reference region (province or national)

Cij = Changes in the Gross Regional Domestic Product (GRDP) of sector i in the observed region (regency/city) caused by the competitive advantage of sector i in the observed region (regency).

The components of Nij, Mij, and Cij can be calculated using the following formulations:

$$Nij = Eij*rn$$
$$Mij = (rin-rn)*Eij$$
$$Cij = (rij-rin)*Eij$$

Where:

Eij = Gross Regional Domestic Product (GRDP) of sector i in the observed region (regency/city) at the beginning of the period

Ein = GRDP of sector i in the reference region (province or national) at the beginning of the analysis year

En = Total GRDP in the reference region (province or national) at the beginning of the analysis year

Eij, t= GRDP of sector/subsector i in the observed region (regency/city) at the end of the analysis period

Ein, t= GRDP of sector/subsector i in the reference region (province or national) at the end of the analysis period

En, t = Total GRDP in the reference region (province or national) at the end of the analysis period

RESULT AND DISCUSSION

1. Location Quotient Analysis

The LQ analysis method is employed to determine the sectors or industries classified as leading and non-leading in a particular region (in this case, Yogyakarta City). The calculation of LQ values involves analyzing the GRDP data of a region and comparing it with the GRDP data at a higher level (DIY Province GRDP). The following are the GRDP data for Yogyakarta City for the period 2018-2022 based on constant prices according to current price

Table 1.
[2010 Series] Gross Regional Domestic Product of Yogyakarta City by Annual Business Fields (Million Rupiah), 2018-2022

GRDP Categories	GRDP of Yogyakarta City				
	2018	2019	2020	2021	2022
Agriculture, Forestry, and Fishery	37271.88	38019.13	38591.70	38933.90	40498.40
Mining and Quarrying	886.56	895.51	829.36	793.54	807.20
Manufacturing Industry	3394676.56	3580912.02	3410982.60	3411646.40	3493799.30
Procurement of Electricity and Gas	62198.73	65684.50	64799.10	66360.40	70853.06
Water Supply, Waste Management, Waste, and Recycling	36154.65	39004.28	39161.20	41734.20	42750.50
Construction	1982260.92	2064286.48	1729234.50	1872604.70	1955813.60
Wholesalers and Retail, Automobile and Motorcycle Repairs	1845136.02	1937551.14	1820883.20	1847528.00	1895655.20
Transportation and Warehousing	987436.19	1050362.92	896351.90	945942.55	1101777.88
Provision of Accommodation and Drinking	3127938.79	3396160.52	2629879.20	2782280.20	3177642.40
Communication and Information	3704297.56	3959894.09	4737877.40	5358122.80	5561744.70
Financial Services and Insurance	1564443.22	1686578.70	1677562.70	1690901.40	1771825.53
Real Estate	2388465.93	2512666.15	2559815.10	2580532.90	2646846.90
Company Services	320469.47	338813.41	279764.70	302952.60	325005.50
Public Administration, Defense, and Compulsory Social Security	2328916.20	2400059.60	2344071.00	2376389.10	2459616.50
Eductional Services	2572770.81	2734512.80	2847448.20	2969713.20	3003600.60
Health Services and Social Activities	1035716.81	1096679.57	1303941.70	1368501.00	1431874.80
Other Services	738176.84	783205.63	635304.50	755076.50	883087.60
GRDP	**26127217.13**	**27685286.45**	**27016498.06**	**28410013.39**	**29863199.67**

Souce: Central Statistics Agency of Yogyakarta City, 2024

Table 2.
[2010 Series] Gross Regional Domestic Product of DIY Province by Annual Business Fields (Million Rupiah), 2018-2022

GRDP Categories	GRDP of DIY Province				
	2018	2019	2020	2021	2022
Agriculture, Forestry, and Fishery	8101233.30	8184189.43	8532140.34	8584394.59	9076681.91
Mining and Quarrying	541183.60	557653.48	508376.02	492583.23	501031.83
Manufacturing Industry	12486855.40	13200727.12	12624114.36	12670356.67	12893389.82
Procurement of Electricity and Gas	156706.50	165217.39	162929.80	166847.06	178219.97
Water Supply, Waste Management, Waste, and Recycling	94923.30	103372.62	103900.99	110988.37	114639.42
Construction	9984760.00	11420640.14	9636836.07	10679271.35	11193381.37
Wholesalers and Retail, Automobile and Motorcycle Repairs	8219289.30	8643437.94	8254025.18	8379070.18	8783026.07
Transportation and Warehousing	5304843.60	5493402.23	4383207.22	4467910.22	5287738.32
Provision of Accommodation and Drinking	9383603.30	10217176.87	8489705.74	9130594.72	10263112.08
Communication and Information	10884532.60	11694991.75	13994335.91	16329802.61	16907385.94
Financial Services and Insurance	3506587.60	3804310.94	3763916.07	3818583.14	4018731.06
Real Estate	7079839.30	7499627.37	7594529.53	7637701.21	7853187.57
Company Services	1146811.60	1224235.00	1041993.51	1126300.80	1206945.09
Public Administration, Defense, and Compulsory Social Security	7239151.90	7477921.47	7310589.96	7282364.57	7497262.32
Eductional Services	8583073.60	9146783.78	9555495.47	10033094.42	10131245.37
Health Services and Social Activities	2593233.40	2764571.41	3294799.12	3442202.15	3579579.58
Other Services	2717386.10	2887199.81	2432624.88	2956490.13	3412765.44
GRDP	**98024014.30**	**104485458.76**	**101683520.17**	**107308555.43**	**112898323.17**

Source: Central Statistics Agency of DIY Province, 2024

Table 3.
Results of Location Quotient (LQ) Analysis in the City of Yogyakarta for the Years 2018-2022.

GRDP Categories	LQ Value of Yogyakarta City					AVE-RAGE	CATE-GORY
	2018	2019	2020	2021	2022		
Agriculture, Forestry, and Fishery	0.017	0.018	0.017	0.017	0.017	0.017	**NON BASE**
Mining and Quarrying	0.006	0.006	0.006	0.006	0.006	0.006	**NON BASE**
Manufacturing Industry	1.020	1.024	1.017	1.017	1.024	1.020	BASE
Procurement of Electricity and Gas	1.489	1.500	1.497	1.502	1.503	1.498	BASE
Water Supply, Waste Management, Waste, and Recycling	1.429	1.424	1.419	1.420	1.410	1.420	BASE
Construction	0.745	0.682	0.675	0.662	0.661	0.685	**NON BASE**
Wholesalers and Retail, Automobile and Motorcycle Repairs	0.842	0.846	0.830	0.833	0.816	0.833	**NON BASE**
Transportation and Warehousing	0.698	0.722	0.770	0.800	0.788	0.755	**NON BASE**
Provision of Accommodation and Drinking	1.251	1.254	1.166	1.151	1.171	1.199	BASE
Communication and Information	1.277	1.278	1.274	1.239	1.244	1.262	BASE
Financial Services and Insurance	1.674	1.673	1.677	1.673	1.667	1.673	BASE
Real Estate	1.266	1.264	1.269	1.276	1.274	1.270	BASE
Company Services	1.048	1.044	1.011	1.016	1.018	1.027	BASE
Public Administration, Defense, and Compulsory Social Security	1.207	1.211	1.207	1.233	1.240	1.220	BASE
Eductional Services	1.125	1.128	1.122	1.118	1.121	1.123	BASE
Health Services and Social Activities	1.498	1.497	1.490	1.502	1.512	1.500	BASE
Other Services	1.019	1.024	0.983	0.965	0.978	0.994	**NON BASE**

Source: Data Processed (2024)

Sectors with LQ values bigger than one were categorized into base sectors, while sectors with values less than one were categorized into non-base sectors. According to the LQ results, the city of Yogyakarta had 11 (eleven) sectors that categorized as base or leading sectors from 2018-2022, namely (1) Manufacturing Industry; (2) Electricity and Gas Supply; (3) Water Supply, Waste Treatment, Waste and Recycling; (4) Accommodation and Food and Beverage Services; (5) Information and Communication; (6) Financial and Insurance Services; (7) Real Estate; (8) Corporate Services; (9) Government Administration, Defense, and Mandatory Social Security; (10) Education Services; (11) Health and Social Activities. Here

are the eleven base sectors in Yogyakarta with their average LQ values: 1.027, 1.220, 1.123, 1.500, 1.498; 1.420; 1.199; 1.262; 1.673; 1.270; and 1.020. Meanwhile, the sectors of (1) Agriculture, Forestry, and Fisheries, (2) Mining and Quarrying, (3) Construction, (4) Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles, (5) Transportation and Warehousing, and (6) Other Services are not considered as the base sectors of the city of Yogyakarta. The average LQ values for each of these non-leading sectors are 0.017; 0.006; 0.685; 0.833; 0.755; and 0.994. Out of the eleven base sectors in Yogyakarta, the financial and insurance services are the best sectors with an average LQ value of 1.673. This is not without reason; Yogyakarta, as the provincial capital, serves as the center for government, finance, and insurance.

Furthermore, this is supported by the fact that Yogyakarta is one of the cities or destinations favored by the community for enjoying retirement, making financial and insurance services essential to support the needs of the elderly. According to a study conducted by the Indonesian Association of Planners (IAP), Yogyakarta is identified as the most comfortable area to visit or reside in after Solo. The assessment indicators used by the IAP are based on several criteria, such as security, safety, cleanliness, transportation, public facilities, and environmental management. Meanwhile, the sector with the lowest average LQ value is the mining and quarrying sector, which stands at 0.006. This is also not without reason, as the geographical location of Yogyakarta is unsuitable for mining and quarrying activities, coupled with the scarcity of natural resources in the region.

2. Shift-Share Analysis

Like the LQ analysis, the shift-share analysis applies a method of comparing the growth of various sectors (industries) in the city of Yogyakarta with various sectors at the provincial level. However, what distinguishes these two analytical methods is that the results and interpretation of the shift-share analysis are more detailed. This is because it can provide an explanation or breakdown of the causes, indicating whether the industries in Yogyakarta fall into the category of rapidly developing industrial areas in the Special Region of Yogyakarta (DIY). Furthermore, it helps determine whether these industries are suitable for location in Yogyakarta. Table 4 details the results of the shift-share analysis as follows:

Tabel 4.
Results of Shift-Share Analysis of GRDP of Yogyakarta City (using constant price)
2018-2022

GRDP Categories	Nij	Mij	Category	Cij	Category	Dij	Net Shift (Mij + Cij)	Category
Agriculture, Forestry, and Fishery	5655.69	-1167.88	**Low**	-1261.29	**Not Competitive**	3226.52	-2429.17	**Regressive**
Mining and Quarrying	134.53	-200.30	**Low**	-13.58	**Not Competitive**	-79.36	-213.89	**Regressive**
Manufacturing Industry	515113.24	-404592.79	**Low**	-11397.71	**Not Competitive**	99122.74	-415990.50	**Regressive**
Procurement of Electricity and Gas	9438.13	-899.17	**Low**	115.37	Competitive	8654.33	-783.80	**Regressive**
Water Supply, Waste Management, Waste, and Recycling	5486.16	2023.37	Fast	-913.68	**Not Competitive**	6595.85	1109.69	Progressive
Construction	300791.20	-60845.23	**Low**	-266393.29	**Not Competitive**	-26447.32	-327238.52	**Regressive**
Wholesalers and Retail, Automobile and Motorcycle Repairs	279983.67	-153431.24	**Low**	-76033.25	**Not Competitive**	50519.18	-229464.49	**Regressive**
Transportation and Warehousing	149835.03	-153018.98	**Low**	117525.64	Competitive	114341.7	-35493.34	**Regressive**
Provision of Accommodation and Drinking	474638.06	-181461.81	**Low**	-243472.64	**Not Competitive**	49703.61	-424934.45	**Regressive**
Communication and Information	562095.59	1487642.49	Fast	-192290.94	**Not Competitive**	1857447	1295351.55	Progressive

Financial Services and Insurance	237390.93	-8901.17	**Low**	-21107.45	**Not Competitive**	207382.3	-30008.62	**Regressive**
Real Estate	362429.35	-101531.34	**Low**	-2517.04	**Not Competitive**	258381	-104048.38	**Regressive**
Company Services	48628.51	-31824.58	**Low**	-12267.91	**Not Competitive**	4536.03	-44092.48	**Regressive**
Public Administration, Defense, and Compulsory Social Security	353393.19	-270356.18	**Low**	47663.29	Competitive	130700.3	-222692.89	**Regressive**
Eductional Services	390396.05	73667.45	Fast	-33233.71	**Not Competitive**	430829.8	40433.74	Progressive
Health Services and Social Activities	157161.20	236777.63	Fast	2219.16	Competitive	396158	238996.79	Progressive
Other Services	112012.05	76887.47	Fast	-43988.76	**Not Competitive**	144910.8	32898.71	Progressive
GRDP	**3964582.56**	**508767.74**		**-737367.77**		**3735983**	**-228600.03**	

Source: Data Processed (2024)

Based on the results of the shift-share analysis above, it is evident that out of the 17 sectors analyzed for the calculation of Mij (Industrial Mix), 5 of them have positive values. This indicates that these sectors have experienced significant growth, contributing rapidly to the economy of Yogyakarta. The five sectors include Water Supply, Waste Management, Waste, and Recycling; Information and Communication; Educational Services; Health and Social Activities; and Other Services. As for the calculation of the Cij factor (Competitive Advantage/Competitiveness) in the shift-share analysis, it is revealed that 4 out of the 17 sectors have positive values. These sectors are Electricity and Gas Supply; Transportation and Warehousing; Government Administration, Defense, and Mandatory Social Security; and Health and Social Activities. This implies that these four positively valued sectors possess competitive advantages and can compete at the provincial/national level. The next step involves calculating Dij (Net Shift) to identify sectors in the Gross Regional Domestic Product (GRDP) that exhibit progressive and regressive characteristics (refer to Table 4 above). Dij is calculated by adding the values of the proportional growth component (Mij) with the competitive advantage component (Cij). The results indicate that 5 out of the 17 sectors have positive values, meaning these five sectors are progressive and worth sustaining. The table of business sectors organized based on the calculations of Mij and Cij demonstrates sectors in progressive positions, including: 1. Water Supply, Waste Management, Waste, and Recycling; 2. Information and Communication; 3. Educational Services; 4. Health and Social Activities; and 5. Other Services. On the other hand, out of the 5 GRDP sectors in the Dij calculation, only the health and social activities sector is deemed most suitable (primary priority) for continuous sustenance and development. This is because the health and social activities sector holds the potential for a rapidly evolving industrial mix, possesses competitive advantages at the regional level, and exhibits a progressive net shift. Therefore, if the government intends to develop an economic sector with a rapid industrial mix capable of competing at a higher level and demonstrating progressive characteristics, the health and social activities sector is the appropriate choice for continuous development in Yogyakarta.

CONCLUSION

Based on the results of the LQ and Shift-Share analysis of the GRDP data for the City of Yogyakarta and the DIY Province for the years 2018-2022, the following conclusions can be drawn:

1. The LQ analysis of the GRDP for the City of Yogyakarta indicates that there are 11 sectors or fields of business considered as base sectors (leading) from 2018 to 2022. These sectors include: (1) Manufacturing Industry; (2) Energy and Gas Supply; (3) Water Supply, Waste Treatment, and Recycling; (4) Accommodation and Food and Beverage Services; (5) Information and Communication; (6) Financial and Insurance Services; (7) Real Estate; (8) Corporate Services; (9) Government Administration, Defense, and Mandatory Social Security; (10) Education Services; (11) Health and Social Activities.
2. The results of the shift-share calculation reveal that there are 5 sectors in the calculation of proportional growth (Mij) showing positive values. This indicates that these sectors have experienced significant growth, positively impacting the economy of Yogyakarta. The five sectors, namely Water Supply, Waste Management, Waste, and Recycling; Information and Communication; Educational Services; Health and Social Activities; and Other Services, show significant progress in the Mij calculation. Additionally, there are 4 out of 17 sectors showing positive values in the calculation of the competitive component (Cij), indicating that these four sectors have a competitive advantage. The results of the Mij and Cij calculations depict sectors that are in a progressive position, including Water Supply, Waste Management, Waste, and Recycling; Information and Communication; Educational Services; Health and Social Activities; and Other Services. The business sectors with positive proportional growth, competitive values, and a progressive nature are the health and social activities sectors.

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