Comparative Analysis of Indonesia Cities Sector Competitiveness: Case Study of Cities in North Sulawesi Province 2017-2021

Ita P. F. Rorong[1*], Mauna T.B. Maramis[1], Honny Kansil[1], Sifra Sendow[1], Refinna C. Jacobus[1]

[1]Master of Economic Science, Department of Economic, Faculty of Economics and Business, Universitas Sam Ratulangi, Manado, Indonesia

A B S T R A C T

The main problem in regional development lies in human and natural resources and is seen from the potential that exists and is owned in an area to increase the number and type of job opportunities for the community in the area itself. Economic development is a process. The process in question is a process that includes the formation of new institutions, the development of alternative industries, improving the capacity of the existing workforce to produce better products and services, identifying new markets, transferring knowledge, and developing new companies. This study aims to compare the competitiveness of the economic sectors of 4 cities in North Sulawesi province. The data used in this study are secondary data obtained based on available data and sourced from reports from the Central Bureau of Statistics. The data included in this research is gross domestic, regional product (GRDP) data at constant prices for 2017-2021. The objects are Manado, Tomohon, Bitung and Kotamobagu. By using the location quotient analysis method, shift share, and Klassen typology. The findings of the research show that the sectors that have competitiveness in the economy of 4 cities in North Sulawesi province are the processing industry, electricity and gas procurement, water procurement, waste management, waste and recycling, construction, wholesale, and retail trade; car and motorcycle repair, transportation and warehousing, provision of accommodation and food and drink, information and communication, financial and insurance services, company services, government administration, defense and compulsory social security and education services and health services. In conclusion, Manado is the city with the highest sector development and growth values compared to Tomohon, Bitung, and Kotamobagu.

1. Introduction

The development of an area to achieve social welfare must be carried out by encouraging sustainable economic growth (Hilton, 2022). Investment activity is one of the efforts to accelerate economic growth (Hepburn, 2019) sustainably. Investment is a form of investment activity, both domestic investment and foreign investment, to do business in the territory of the Republic of Indonesia (Bodie et al., 2014). The level of competitiveness is one of the parameters that show the investment climate of a region in the concept of sustainable development. The higher the level of competitiveness of a region, the more conducive the investment climate is created, which will ultimately encourage sustainable development and increase people's welfare (Porter, 1990). A region will have a different reaction to reveal the impact of this globalization phenomenon so that it becomes a demand for each region in Indonesia to increase the competitiveness of each region

943

(Hasanudin et al., 2017), where there is high competitiveness between regions in North Sulawesi as a whole is a determinant for increasing national competitiveness amid high demands to be able to compete globally (Mintardjo et al., 2021).

Each region has its advantages depending on its region, natural resources, and human resources (GCI, 2021). Each region must determine business fields that are by the region's capabilities, namely by having business fields that have advantages and the potential to be developed. Superior business fields can be reflected by the basic business fields owned by each regency/city, where these business fields have an important role in export activities so that demand is unlimited and can be developed. This basic business field can be a mainstay in developing the region and be seen as the leading business field from each regency/city, which is expected to increase economic growth and absorption of labor business fields (Kawung et al., 2019). Based on data taken from the Central Bureau of Statistics for 2017-2021, the contribution of each economic sector can be seen in the GRDP value at constant prices. GRDP data used as a reference for sector competitiveness comparison in North Sulawesi are Manado, Bitung, Tomohon, and Kotamobagu. This study aims to compare the competitiveness of the economic sectors of 4 cities in North Sulawesi province.

2. Literature Review
Economic growth and development theory

Economic growth is a long-term macroeconomic problem and a benchmark for the success of development which is essential because it involves efforts to increase community production, which is put together with other goals, especially in income distribution (Aghion et al., 2014). Meanwhile, economic development refers to problems for underdeveloped countries, while growth is aimed at problems for developed countries (Todaro, 2006). According to Arsyad (2010), economic development is a process in which local governments and communities manage existing resources and form a pattern of partnership between local governments and the private sector to create new jobs and stimulate the development of economic activity (economic growth) in the region.

Economic basis theory

The base sector is a sector that is the backbone of a regional economy because it has high competitiveness. Meanwhile, the non-base sector is a sector that has less potential but functions as a support for the base sector or service industries (Thomas, 1964). The economic basis theory states that the economic growth rate in a region is determined by the magnitude of the increase in exports from that region (Conway, 2022). This basic theory is classified into two sectors: the base sector and the non-base sector.

The base sector is a sector or economic activity that serves both the market in the area and outside the region. Indirectly, regions can export goods and services produced by these sectors to other regions. The non-base sector is a sector that provides goods and services to the people within the boundaries of the economic area. Based on this theory, the base sector needs to be developed to spur regional economic growth. The essence of this theory is that the direction and growth of a region are determined by the region's exports (Malizia et al., 2020). According to Hakim (2014), the economic basis theory has two sectors of activity, namely the economic basis sector and the non-economic basis sector. The base sector is a sector that has great potential in determining overall development in the region, while the non-base sector supports this overall development.

Competitive advantage theory

This concept was first introduced by Porter (1998), who explains that competitive advantage is at the heart of company performance during increasingly

944

competitive competition and how companies practice it as a strategy to be more advanced. According to David (2019), if a company can do something or have something that competitors want, then the company represents a competitive advantage. This theory is known that for a company to be superior to other companies must have a specific strategy and pay attention to the company's performance to improve every day, month, and year. If this is achieved, then the company has a competitive advantage. According to Sudaryono (2018), competitive advantage is a benefit that exists when a company has and produces a product or service that, in terms of its target market, is better than its closest competitors. When a company can create superior value for its products compared to its competitors, it will automatically bring many benefits to the company, many benefits will be obtained such as a good image and consumer loyalty, and when it is able to increase sales, it will have a greater chance of obtaining greater profits as well. Competitive advantage is an essential thing in marketing. Building a competitive advantage means building a solid fortress in the market competition so that competitors will find it challenging to match markets and customers. Competitive advantage is an advantage over existing competition that cannot be carried out by competitors and can be applied for a long time (Cegliński, 2017). Competitive advantage will create good value for the company for a long time, and it will also increase revenue for the company.

Structural change theory

Structural change theory focuses on mechanisms that will enable underdeveloped countries to transform their domestic economic structure from a traditional subsistence agricultural economy that is only self-sufficient to an economy that is more modern, more urban-oriented, and more diverse, and has an industrial sector. Robust manufacturing and services (Todaro et al., 2006; Agbenyo, 2020). Kuznets argues that changes in economic structure, which are generally referred to as structural transformation, are a series of changes that are interrelated with one another in the composition of aggregate demand, foreign trade (exports and imports), aggregate supply (production and use of production factors needed to support the economic process). Sustainable development and economic growth (Baranzini et al., 2011).

3. Methods

This paper is a quantitative research method using secondary data from the Indonesian Central Bureau of Statistics. The data included in this study are the PDRB data for the City of Manado, Tomohon, Bitung, and Kotamobagu for 2017-2021 based on constant prices, as well as data on the PDRB of North Sulawesi province for 2017-2021 based on constant prices, accompanied by data other secondary relevant to the purpose of writing this research. Qualitative and quantitative methods are used to analyze the economic structure and identify the basis of the sector. Qualitative analysis will be presented descriptively, while quantitative data will be processed using three methods; location quotient (LQ), shift share (Ashby, 1968), and Klassen typology (Katti et al., 2019).

4. Results and Discussion

A comparison of the sectoral basis of cities in North Sulawesi Province shows that of the sectors including the sector, one of the leading sectors with the most significant average LQ value in Manado is the provision of accommodation and food and drink information and communication sector, and company services (Table 1). In Tomohon, the leading sectors with the highest average LQ values are water procurement, waste management, waste and recycling, and electricity and gas procurement (Table 2). In Bitung, the leading sector with the most significant average LQ values is the manufacturing industry (Table 3). In Kotamobagu, the leading sector with the highest average LQ score is the health

services and social activities, financial services and insurance, and electricity and gas procurement sectors (Table 4).

Table 1. Comparison of basic (leading) and non-basic (not leading) sectors in Manado based on LQ results.

GRDP business fields	Mean	Base/non-base
Agriculture, forestry, and fisheries	0.087303	
Mining and excavation	0.015196	
Processing industry	0.376514	
Procurement of electricity and gas	0.749126	
Water procurement, waste management, waste and recycling	0.706722	
Construction	0.873532	
Wholesale and retail trade; car and motorcycle repair	1.41703	Base
Transportation and warehousing	1.613055	Base
Provision of accommodation and food and drink	2.571415	Base
Information and communication	2.605512	Base
Financial services and insurance	2.077394	Base
Real estate	0.715515	
Company services	2.607971	Base
Government administration, defense, and compulsory social security	1.32821	Base
Education services	1.215804	Base
Health services and social activities	1.263963	Base
Other services	2.102177	Base
GRDP	1	

Table 2. Comparison of basic (leading) and non-basic (not leading) sectors in Tomohon based on LQ results.

GRDP business fields	Mean	Base/non-base
Agriculture, forestry and fisheries	0.67767859	
Mining and excavation	1.820227116	Base
Processing industry	0.640809024	
Procurement of electricity and gas	2.272737573	Base
Water procurement, waste management, waste and recycling	3.954614254	Base
Construction	1.719296528	Base
Wholesale and retail trade; car and motorcycle repair	0.844051112	
Transportation and warehousing	0.541087582	
Provision of accommodation and food and drink	0.952227222	
Information and communication	0.820517409	
Financial services and insurance	0.548950939	
Real estate	1.154760411	Base
Company services	0.530181163	
Government administration, defense and compulsory social security	0.868951813	
Education services	0.966919362	
Health services and social activities	1.938622927	Base
Other services	1.326323932	Base
GRDP	1	

Table 3. Comparison of basic (leading) and non-basic (not leading) sectors in Bitung based on LQ results.

GRDP business fields	Mean	Base/non-base
Agriculture, forestry and fisheries	0.810507886	
Mining and excavation	0.102106821	
Processing industry	3.492049126	Base
Procurement of electricity and gas	0.931411483	
Water procurement, waste management, waste and recycling	1.506344191	Base
Construction	0.814422157	
Wholesale and retail trade; car and motorcycle repair	0.740155637	
Transportation and warehousing	1.591098074	Base
Provision of accommodation and food and drink	0.391463419	
Information and communication	0.441232027	
Financial services and insurance	0.881762005	
Real estate	0.64691888	
Company services	0.265988819	
Government administration, defense and compulsory social security	0.278537896	
Education services	0.306991816	
Health services and social activities	0.557372329	
Other services	0.438774407	
GRDP	0.810507886	

Table 4. Comparison of basic (leading) and non-basic (not leading) sectors in Kotamobagu based on LQ results.

GRDP business fields	Mean	Base/non-base
Agriculture, forestry and fisheries	0.378862458	
Mining and excavation	0.591193156	
Processing industry	0.395128129	
Procurement of electricity and gas	2.287085267	Base
Water procurement, waste management, waste and recycling	1.137880159	Base
Construction	1.052669098	Base
Wholesale and retail trade; car and motorcycle repair	1.154515762	Base
Transportation and warehousing	0.512655136	
Provision of accommodation and food and drink	0.845235441	
Information and communication	0.568462569	
Financial services and insurance	2.447469103	Base
Real estate	0.883140713	
Company services	0.879060929	
Government administration, defense and compulsory social security	2.427099939	Base
Education services	1.711718788	Base
Health services and social activities	2.626200017	Base
Other services	1.250775133	Base
GRDP	1	

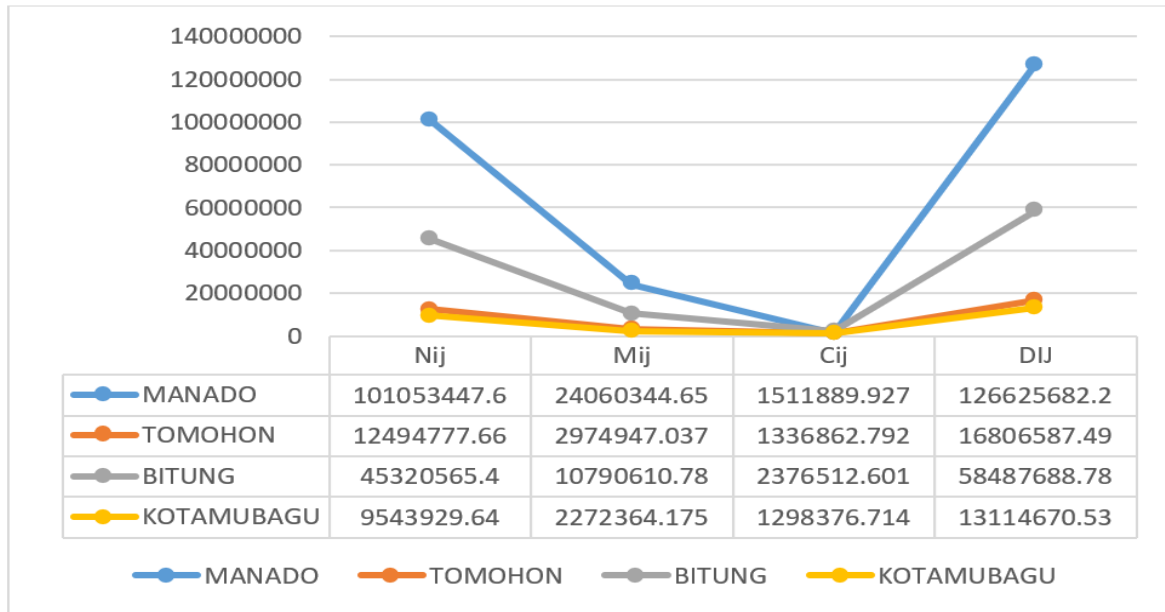|	Nij	Mij	Cij	DIJ
MANADO	101053447.6	24060344.65	1511889.927	126625682.2
TOMOHON	12494777.66	2974947.037	1336862.792	16806587.49
BITUNG	45320565.4	10790610.78	2376512.601	58487688.78
KOTAMUBAGU	9543929.64	2272364.175	1298376.714	13114670.53

Figure 1. Shift share analysis graph of 4 cities in North Sulawesi province.

Shift share analysis using the classical approach shows that overall the sectors in the four main cities in North Sulawesi Province have a positive value of the Nij component. This result illustrates that the Province's growth positively influences these sectors' growth. In this case, the general policies implemented by the government in terms of developing and increasing production and income have a positive effect on the growth of the development sector in North Sulawesi (Figure 1).

The results of the existing comparison can be seen that four cities in North Sulawesi province, namely Manado, Tomohon, Bitung, and Kotamobagu, show the value of each region varies, and for the total result of sector growth from Manado, the area is 1.01053448, while for Tomohon is 1.2494778, and Bitung is 4.5320565, and Kotamobagu is 9543930. Manado shows the highest number when compared to other cities. This shows that developments in Manado are increasing faster and have the competitiveness of the economic sector, which is better than other cities in North Sulawesi province. Meanwhile, for the industrial sector mix in 4 cities in North Sulawesi province, Manado is still the city with the highest score compared to Tomohon, Bitung, and Kotamobagu. Moreover, based on the results of Cij have positive results, which means the value of each city in North Sulawesi Province have a competitive advantage. From the results of changes in the regional sector, the shift from Manado has the most significant value, 126,625,682 rupiahs. Developments that have occurred very rapidly in Manado illustrate the success of the area in improving the existing economy and supporting more rapid economic growth, and this is also due to the development of infrastructure facilities, including the construction of toll roads which make it easier to access exports and imports of goods/services in Manado.

The economic conditions of each of the four cities in North Sulawesi Province, including Manado, Tomohon, Bitung, and Kotamobagu, vary based on input from each sector which is capable of supporting economic growth in each city and the highest economic growth rate is Manado. A general description of the regional economy of Manado is seen from several indicators, such as economic growth rates and gross regional domestic product and the advantages of specific economic sectors.

948

Specifically, regarding several leading sectors the Manado government is currently working on in the short term (about one year to 2 years to come), the regional economic structure will show a significant transformation from the primary sector to the secondary or service sector. The formation of Manado in the short term will likely lead to an increase in the rate of population growth, trade efficiency, and public services, as well as an increase in the flow of goods and services. Thus, in the medium term (3 to 5 years), it is predicted that there will be a significant shift in the role from the primary sector to the secondary sector, and according to the data shown, Manado economic growth will increase even higher than in other cities. To achieve the goals and objectives of encouraging economic growth in Tomohon, Bitung, Kotamobagu, the regional government must be more able to optimally utilize economic resources by looking at what sectors are the basis or potential in driving and increasing economic growth in the region. Tomohon is known for its abundant resources in water procurement, waste management, waste, and recycling which can still be developed. With this abundant potential of natural resources, it is hoped that the regional government will further optimize the existing potential with development planning programs that are more specific to the conditions in the area so that they can increase and encourage even better economic growth. The government should also take more initiative to manage potential sectors by building potential sectors that can provide a multiplier effect on other sectors so that the development of several other leading sectors will impact other sectors and impact economic growth.

The results of the Klassen typology analysis show that the sectors that are classified as developed and overgrowing in Manado are electricity and gas procurement, wholesale and retail trade, car and motorcycle repair, accommodation and food and drink provision, information and communication, financial services and insurance, corporate services, education

services, and health services. Tomohon, from the results of the class typology, shows that only the mining and quarrying, health services and social activities are multiplying, while Bitung, the advanced and developing sector are water procurement, waste management, recycling, transportation and warehousing, wholesale and retail trade, car and motorcycle repair, financial and insurance services, corporate services, education services, and health services.

5. Conclusion

The results of the Manado location quotient analysis show that the wholesale and retail trade, car and motorcycle repair, transportation and warehousing, accommodation and food and drink provision, information and communication, financial and insurance services, government administration, defense, and compulsory social security, education services, and financial services sector are the basic sectors. The results of the shift-share show Manado is a city with the highest sector development and growth values compared to Tomohon, Bitung, and Kotamobagu. The results of the Klassen typology analysis show that the sectors that are classified as developed and growing rapidly in Manado are electricity and gas procurement, the wholesale and retail trade, car and motorcycle repair, accommodation and food and drink provision, information and communication, financial services and insurance, corporate services, education services, and health services.

6. References

Agbenyo JS. 2020. The structural change theory – An analysis of success and failures of technology. IJRISS. IV: 1–5.

Aghion P, Durlauf S. 2014. Handbook of economic growth. North Holland Elsevier.

Arsyad L. 2010. Economics development. UPP STIM YKPN.

Ashby LD. 1968. The shift and share analysis: A Reply. Southern Economic Journal. 34(3): 423–25.

Baranzini M, Scazzieri R. 2011. The economic theory of structure and change. Cambridge University Press.

Bodie Z, Kane A, Marcus AJ. 2014. Investment (9th ed.). Salemba Empat.

Cegliński P. 2017. The Concept of competitive advantages logic, sources and durability. Journal of Positive Management. 7(3): 57–70.

Conway RS. 2022. Economic base theory empirical evidence. In R. S. Conway Jr. (Ed.), Empirical regional economics: economic base theory, models and applications Springer International Publishing. 23–45.

David F. 2019. Strategic management: A competitive advantage approach, concepts and cases (17th edition). Pearson.

GCI. 2021. Global competitiveness report 2020. World Economic Forum.

Hakim A. 2014. Economics development. Ekonesia.

Hasanuddin RB, Amri MM. 2017. The determinants of regional competitiveness in Indonesia. Scientific Research Journal (Scirj). 5(12): 48–55.

Hepburn C. 2019. Driving investments toward sustainable economic growth in the people's republic of China (China, People's Republic of). Asian Development Bank.

Hilton G. 2022. The role of economic growth in sustainable development. Review of Public Administration and Management, 10(2): 1–2.

Katti S, Pratiwi D, Setiahadi R. 2019. Klassen typology approach for analysis of the role of competitiveness agricultural sector. IOP Conf Ser Earth Environ Sci. 347: 1–12.

Kawung GMV, Mintardjo CMO, Rompas WI, Kojo C, Ogi IJ. 2019. Ease of doing business in the East Indonesian region: starting a business study in North Sulawesi Province SMEs. Advances in Economics, Business and Management Research.

73(1): 197–201.

Malizia E, Feser E, Rensky H, Drucker J. 2020. Economic base theory and related extensions | 5 | v2 | Understanding L. In Understanding Local Economic Development (2nd ed.). Routledge.

Mintardjo CMO, Sudiro A, Noermijati N, Ogi IWJ. 2021. Empowering startup and technopreneurship in East Indonesian Region: Case of North Sulawesi as Indonesian Hub in Asia Pacific Region. 7.

Porter ME. 1990. The competitive advantage of nations. Harvard Business Review.

Porter ME. 1998. Competitive advantage of nations (Illustrated edition). Free Press.

Sudaryono. 2018. Introduction to business: Theory & case examples. Penerbit ANDI.

Thomas MD. 1964. The export base and development stages theories of regional economic growth: An appraisal. land economics, 40(4): 421–32.

Todaro MP, Smith S. 2006. Economic development in the third world. Erlangga.