Analysis of Economic Growth Patterns and Regional Potential Sectors in Grobogan Regency Central Java in 2017–2021

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Abstract. Economic growth and economic development are strongly intertwined, and economic development can spur economic growth. This study aims to investigate economic growth patterns and potential sectors in Grobogan Regency between 2017 and 2021. The analytical methods used in this study were the location quotient analysis (LQ), shift share, and Klassen typology. The secondary data used are GDP estimates for 2017 through 2021 that were received from the Central Statistical Office (BPS). According to the LQ analysis, the fundamental industries from 2017 to 2021 will be wholesale and retail trade; vehicle and motorcycle maintenance; transportation and storage; accommodation; and food and beverage service; residential neighborhoods, government, military, and security organizations, as well as social, health care, and educational services; and services in finance and insurance. Two industries may have a competitive edge, according to the findings of the shift-share research: wholesale and retail as well as auto and motorcycle maintenance. Based on the class typology research results, the financial services and insurance sectors are regularly represented in the three quadrants referred to as Advanced and Fast Growing Sectors (Quadrant I). Manufacturing and mining are both part of the developed but fragile industry category (Quadrant II). When categorizing foreseeable or expanding sectors, the sector of education services is considered (Quadrant III).

Keywords: Economic Growth · LQ · Shift Share · Klassen Typology

1 Introduction

Since economic development can encourage economic growth, the two are intimately related. A country's economic growth is a crucial sign of how its economy has evolved through time. According to Sukirno's thesis, economic growth is the increase in economic activity that leads to a rise in the goods and services a society offers to improve its well-being [1].

To build national economic growth, support from various parties in a country is needed, especially in the regions. National economic development is inseparable from regional economic development. In Arsyad's theory, regional development means that, in addition to creating new jobs and promoting regional economic development, local

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governments and communities use existing resources; he describes it as a process of forming partnership patterns [2]. The regional economic growth rate can be used to assess the success of economic development in a certain area. Cooperation between the government and the community is required to fulfill the objectives of economic development in order for economic growth to reach a high level in a region.

Therefore, local governments must know which sectors—in this case, potential sectors—play a dominant role in the local economy. Potential sectors can drive the growth and development of other sectors and drive all sectors of the economy.

The government hopes to optimize the region's potential ownership sectors to boost the region's Gross Domestic Product (GDP). In order to know which sectors they own, regions must effectively and efficiently plan their regional economic development. Sector-based businesses have the potential to support the growth of other sectors and can contribute more local income. Therefore, to boost Grobogan County's economic growth, it is vital to identify the fundamental areas. The region's economic production increases by realizing its full potential.

Grobogan Regency has been designated the second-largest district in Central Java, following Cilacap Regency. It has an area of 2.023,85 km2 and a population of 1.488.947. With a relatively large population, Grobogan Regency can be said to have a fairly good GDP value, as evidenced by the yearly increase from 2017 to 2021.

It is asserted that the contribution of the regional economic sector has determined the effectiveness of regional development. Grobogan Regency is one of the Central Javan regions that provides the best agricultural products. The GDP value of the agricultural sector in Grobogan in 2017–2021 was the highest. Regency, then the manufacturing, construction, and wholesale trade sectors. This means that not only the agricultural sector has an important contribution to Grobogan Regency's GDP. The role of several other sectors should not be ignored, it deserves attention and needs to be analyzed further so that later it can be utilized for future development.

Many academics have conducted empirical studies and developed insights into the potential regional analysis. In Magetan County, between 2011 and 2015, the information and communications sector and other service industries were the most developed and rapidly increasing sectors, per Hanung's analysis (2017). This sector is continuously categorized as a service industry (Quadrant 1) [4]. According to Andik's (2017) findings, the agricultural industry is a specialized economic sector and one of the main competitive advantage-based industries [5].

Referring to this background, this study aims to determine the potential sectors in Grobogan Regency other than the agricultural sector, which has superior value in the region, through economic growth (GDP) analysis with an economic base approach. The economic base approach serves to identify other leading sectors in Grobogan Regency. If other leading sectors besides the agricultural sector are known, it can be easier for the government to focus on developing these sectors. So the growth of other sectors needs to be able to impact regional economic growth significantly.

2 Theoretical Background and Hypothesis Development

2.1 Economic Growth

Economic growth boosts the economy's capacity for production, which shows up as an increase in national revenue. Their economic growth indicates successful economic development. One of the indicators for judging the success or failure of economic development is the presence or absence of economic growth. Economic progress is reflected in regional economic growth in short-term changes in spending. Economic growth indicates the extent to which economic activity brings additional income to the community. Based on Zulkifli's theory, as the economy grows, the incomes of those who own the factors of production are also expected to increase [6].

2.2 Potential Sectors

According to Soeparmoko's idea, a region's economic potential is its capacity to be developed in order to produce income for the local community or help the region's economy grow as a whole [7].

2.3 Gross Domestic Product (GDP)

The region's GDP represents the value added by all business entities. The sectors that influence economic growth are depicted using GDP as a measure of economic growth rate. GDP is one of the most important metrics for examining a region's economic health over time, both on a current price basis and a constant price basis. According to Hatta's thesis, a region's GDP represents the total value added of the commodities and services it produces as a result of diverse economic activity during a given period [6].

3 Research Method

This study employed a descriptive study with a quantitative approach as its research methodology. In this situation, a literature review was performed to gather the secondary data for this study, which was obtained indirectly. The Central Statistics Agency is where the information is obtained (BPS).

There are several analytical techniques used in this study, namely:

3.1 Location Quotient (LQ)

Using the location quotient (LQ) survey method, it is possible to determine the industry that serves as a community's economic foundation [8]. Secondary data in the form of gross domestic product (GDP) at the district and national levels is used in the LQ. The following formula can be used to represent the location quotient (LQ) [9]:

$$\mathrm{LQ} = \frac{\frac{X_{ir}}{X\_r}}{\frac{X_{in}}{X_n}}$$

Description:
X_{ir} = Value of GDP sector i at Grobogan Regency level
X_{in} = Value of GDP sector i level of Central Java
X_r = Total value of GDP at Grobogan Regency level
X_n = Total value of GDP at Central Java level

If the LQ value is greater than 1, the sector is considered to be a base sector; if it is equal to 1, the sector is only adequate to meet regional needs; and if it is less than 1, the sector is considered to be a non-basic sector and is dependent on imported goods from other countries due to its potential for development.

In order to identify the base and non-base sectors, researchers Ely Kartikaningdyah (2012) [10], Bayu Kharisma & Fery Hadiyanto (2018) [11], and Suprih Handayani et al. (2022) [12] employed the Location Quotient (LQ) approach. The method essentially compares the capacity of the sector in the study area with the same sector in the larger region.

3.2 Shift Share

Shift-Share Analysis is usually used to analyze the role of a sector or the shift of a sector in an area towards the same sector in the national economy [13]. As in previous studies, Ni Luh Aprilia K. and I Made Suryana U. (2015) [14], Mahmud Basuki and Febri Nugroho (2017) [15], and Andi Kurniawan and Aning Kusuma (2020) [16] used shift-share analysis to see sectoral growth in districts with the same sectors at the national level.

In this study, the type of shift sharing used was classic shift sharing. The data used is secondary data in the form of GDP at the district and national levels. The shift-share formula is:

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

Description:
D_{ij} = Changes in the variable of employment in sector i in region j at a certain time
N_{ij} = National growth component of sector i in region j
M_{ij} = Industry in region j
C_{ij} = Competitive advantage of sector i in region j

The sector has relatively fast economic growth if the shift-share value is positive. Meanwhile, if the shift-share value is negative, economic growth in that sector is relatively slow.

3.3 Klassen Typology

This method determines the typology of the sectoral and regional economies. This method uses secondary data for regional GDP and its growth rate. Sjafrizal's theory reveals that Klassen's typology is an analytical tool used to discover how economic growth patterns depict regions [17].

Table 1. Klassen Typology

r \ y	$y_i > y$	$y_i < y$
$r_i > r$	Quadrant I Advanced and fast-growing sector	Quadrant II Advanced but depressed sector
$r_i < r$	Quadrant III Potential sector or still developing	Quadrant IV The sector is relatively lagging behind

Description:
r_i = Sector i growth rate at the Grobogan Regency level
y_i = Contribution of sector i to Grobogan Regency's GDP
r = The growth rate of sector i at the level of Central Java
y = Sector i contribution to Central Java's GDP
Division of the Klassen typology based on the sectoral approach, namely:
Quadrant I: This indicates that the sector is progressing and growing rapidly. It can also be interpreted as a leading sector because it has a higher economic growth and market share than the reference area.
Quadrant II: This shows the sector is advanced but depressed. This sector can also be said to be saturated.
Quadrant III: Indicates a sector that has potential or is still developing.
Quadrant IV: This indicates that the sector is relatively lagging [18].

4 Result

4.1 Location Quotient (LQ)

The analytical tool known as the Location Quotient (LQ) can be utilized again with different reference modifications and periods. In order to compare sectors at a high level of the economy, the Location Quotient compares the GDP of a specific sector to the overall value of the GDP of an area (Table 1). Based on Table 2, calculations utilizing LQ analysis reveal that 10 business fields—the majority of the business fields in Grobogan Regency from 2017 to 2021—are in the base sector, with the remaining 7 being non-base business fields. The wholesale and retail trade, automobile and motorcycle repair, transportation and storage, accommodation and catering, financial and insurance

services, housing, government, defense, security administration, education, health, and social activities are some of the basic sectors included in this list. The average score of these fundamental sectors is 2.11, with the lowest being the agricultural, forestry, and fishing sectors..

The agriculture, forestry, and fisheries sectors have the highest average LQ ratings compared to other sectors. This sector will be able to contribute to Grobogan Regency's growth significantly. Even though this sector upholds quality, all sides must continue to support it so that the consistency of this sector is maintained. For other sectors to make a bigger contribution to the economy of Grobogan Regency, it is clear that the industry, which currently does not have a greater advantage, needs to be developed.

Table 2. Location Quotient (LQ) Calculation Results for 2017–2021

GDP Sector	2017	2018	2019	2020	2021	Average LQ
A. Agriculture, forestry and fisheries	2.18	2.14	2.08	2.05	2.10	2.11
B. Mining and quarrying	0.47	0.49	0.51	0.52	0.54	0.51
C. Manufacturing	0.34	0.36	0.37	0.38	0.39	0.37
D. Gas power	0.93	0.92	0.93	0.95	0.93	0.93
E. Water, waste management, waste and recycling	0.66	0.65	0.66	0.65	0.63	0.65
F. Construction	0.54	0.53	0.53	0.50	0.50	0.52
G. Wholesale and retail trade, automobile and motorcycles repair	1.48	1.48	1.51	1.50	1.48	1.49
H. Transportation and storage	1.58	1.57	1.59	1.67	1.63	1.61
I. Accommodation and catering	1.43	1.42	1.44	1.52	1.47	1.46
J. Information and Communication	0.69	0.71	0.71	0.71	0.71	0.70
K. Financial Services and insurance	1.46	1.46	1.47	1.49	1.49	1.47
L. Real estate	1.27	1.26	1.27	1.26	1.24	1.26
M,N. Company service	0.70	0.69	0.69	0.69	0.67	0.69
O. Government administration, defense and security	1.27	1.25	1.25	1.24	1.21	1.24
P. Education services	1.20	1.18	1.18	1.15	1.15	1.17
Q. Health services and social activities	1.17	1.18	1.18	1.12	1.15	1.16
R,S,T,U. Other services	1.80	1.78	1.79	1.85	1.84	1.81

Source: Data Processing

4.2 Shift Share

Shift Share analysis is used to see the region's development over a wider area, for example, the development of a district against a province or a province against a national one. With Shift Share, a comparison of the economic level in a region can be seen (Table 4).

Based on Table 3, the results using Shift Share analysis show the following results:

The effect of Central Java's economic growth (national share) on the economy of Grobogan Regency shows a positive value for all economic sectors with a total output of Rp. 99,877,216.60. This means that the regional economy of Grobogan Regency is growing relatively faster than the average growth rate of Central Java Province. The sector with the fastest growth in Grobogan Regency compared to the average growth of Central Java Province is the agricultural sector, which has the highest number of all sectors in Grobogan Regency, which is Rp. 27,163,324.52.

Table 3. Shift Share Analysis Calculation Results for 2017–2021

GDP Sector	Nij (Average)	Mij (Average)	Cij (Average)	Dij
A. Agriculture, forestry, and fisheries	27,163,324.52	-13,723,550.03	-6,152,655.24	7,287,119.25
B. Mining and quarrying	1,105,844.51	-593,566.26	876,358.25	1,388,636.50
C. Manufacturing	12,371,429.08	-2,255,737.11	4,708,630.03	14,824,322.00
D. Gas power	103,088.95	1,270.65	-2,251.85	102,107.75
E. Water, waste management, waste, and recycling	46,286.89	-3,620.36	-8,536.53	34,130.00
F. Construction	5,451,647.39	796,899.08	-3,839,011.22	2,409,535.25
G. Wholesale and retail trade, automobile, and motorcycles repair	21,641,804.13	1,922,716.78	-7,807,539.91	15,756,981.00
H. Transportation and storage	5,071,180.01	2,152,928.93	-10,595,996.94	-3,371,888.00
I. Accommodation and catering	4,718,356.07	2,541,898.01	-3,060,689.83	4,199,564.25
J. Information and Communication	3,626,638.93	4,855,232.24	-141,812.17	8,340,059.00
K. Financial Services and Insurance	4,028,737.27	-1,307,121.06	114,897.54	2,836,513.75
L. Real estate	2,407,243.58	128,454.07	-1,177,998.16	1,357,699.50
M,N. Company service	266,359.94	210,535.85	-319,016.79	157,879.00
O. Government administration, defense, and security	3,207,634.18	-1,042,241.94	-1,851,118.74	314,273.50
P. Education services	4,592,765.45	2,132,061.83	-4,072,789.53	2,652,037.75
Q. Health services and social activities	1,038,375.13	686,684.02	-597,784.40	1,127,274.75
R,S,T,U. Other services	3,036,500.57	2,379,024.34	-3,424,789.41	1,990,735.50
GDP	**99,877,216.60**	**-1,118,130.96**	**-37,352,104.90**	**61,406,980.75**

Source: Data Processing

Proportional Shift. Overall, the entire regional economy of Grobogan Regency is classified as underdeveloped. This can be seen from the negative total PS value of -Rp 1,118,130.96. There are six sectors with negative values: mining, excavation, processing, water supply, waste management, waste and recycling, financial and insurance services, government administration, defense, and insurance. The other 3 sectors are agriculture, forestry, and fisheries. While there are 11 sectors with a positive value, they include, among other things: the industry that purchases electricity and gas; construction; wholesale and retail trade; automobile and motorcycle repair; transportation and warehousing; the provision of lodging, food, and beverages; information and communication; housing; company services; education; health; and social activities.

Differential Shift. Overall, the regional economy of Grobogan Regency has a low level of regional competitiveness or competitive advantage against the economy of Central Java. This is reflected in the total value of the differential shift, which is -Rp 37,352,104.90. By sector, it can be seen that almost all sectors have negative values,

Table 4. The Results of the Klassen Typology Analysis 2017–2021

Quadrant	2018	2019	2020	2021
I	- Wholesale and retail trade, automobile and motorcycles repair - Accommodation and catering - Financial service and insurance - Health services and social activities	- Wholesale and retail trade, automobile and motorcycles repair - Transportation and storage - Accommodation and catering - Financial service and insurance - Real estate - Government administration, defense, and security - Health services and social activities - Other services	- Wholesale and retail trade, automobile and motorcycles - Transportation and storage - Accommodation and catering - Financial services and insurance - Real estate - Government administration, defense, and security - Other services	- Agriculture, forestry, and fisheries - Financial services and insurance - Health services and social activities
II	- Mining and quarrying - Manufacturing - Information and communication	- Mining and quarrying - Manufacturing - Gas power - Construction - Water, waste management, waste, and recycling	- Mining and quarrying - Manufacturing - Gas power - Information and communication - Company services	- Mining and quarrying - Manufacturing - Construction - Information and communication

(*continued*)

Table 4. (*continued*)

Quadrant	2018	2019	2020	2021
III	- Agriculture, forestry, and fisheries - Transportation and storage - Real estate - Government administration, defense, and security - Education services - Other services	- Agriculture, forestry, and fisheries - Education services	- Agriculture, forestry, and fisheries - Education services - Health services and social activities	- Wholesale and retail trade, automobile and motorcycles repair - Transportation and storage - Accommodation and catering - Real estate - Government administration, defense, and security - Education Services - Other services
IV	- Gas power - Water, waste management, waste, and recycling - Construction - Company services	- Information and Communication - Company service	- Water, waste management, waste, and recycling - Construction	- Gas power - Water, waste management, waste, and recycling - Company services

Source: Data Processing

meaning that these economic sectors have weak competitiveness or low competitive advantages compared to the same sector in the Central Java economy. At the economic level of Central Java, only mining and quarrying, the manufacturing industry, as well as financial services and insurance, have strong competitiveness and a high competitive advantage over the same sector because they have a positive DS value.

Dij is a positive and negative value in one sector, namely transportation, and warehousing, meaning that during the 2017–2021 period, the regional economy of Grobogan Regency continued to experience an increase in absolute value or an increase in the regional economic performance of Rp. 61,406,980.75. Although there is one sector whose value is negative, it does not affect the economic growth that occurs.

4.3 Klassen Typology

The pattern and structure of regional economic growth by sector in Grobogan Regency in 2017–2021 can be divided into 4 quadrants based on the findings of the Klassen Typology research. Quadrant I denotes industries that are growing and developing quickly, Quadrant II denotes industries that are growing quickly, Quadrant III denotes industries

that are advanced but depressed. Quadrant IV denotes industries that are considerably lagging.

Financial services and insurance are two industries that will consistently be included in the advanced and fast-growing sector classification (Quadrant I) from 2017 to 2021. These three industries are categorized as developed but depressed sectors (Quadrant II): mining, quarrying, and manufacturing. At the same time, those in the sector with potential are still in the early stages.

5 Conclusion

The research findings show that the Location Quotient (LQ), Shift Share, and Klassen Typology techniques utilized in the prospective sector study in Grobogan Regency yielded different results. The 10 fundamental industries that Grobogan Regency can rely on to support the local economy are agriculture, forestry, and fishing, as well as wholesale and retail trade, auto and motorcycle repair, transportation and warehousing, the provision of lodging and food and drink, financial and insurance services, real estate, government administration, defense and security, education services, and health services.

According to the Shift Share research findings, manufacturing, financial services, and insurance will be the most competitive industries from 2017–2021, followed by the mining and quarrying sector. Compared to other industries, these three have a significant competitive edge. This indicates that the three industries are expanding quickly at the Central Java level, enabling them to contribute to greater regional growth and the further expansion of Grobogan Regency.

The pattern and structure of economic growth in Grobogan Regency are divided into four sectors based on an examination of Klassen's typology. However, the analysis findings show consistent sectors in three quadrants, with the financial and insurance services sector being one of the most developed and rapidly expanding sectors (Quadrant I). Mining, quarrying, and manufacturing businesses are classified as advanced but depressed sectors (Quadrant II). Education services fall under promising or still-evolving sectors (Quadrant III).

From the three previous findings, it can be seen that although the agriculture, forestry, and fisheries sectors have relatively high GDP values, this does not necessarily mean that they will be able to develop steadily. This demonstrates that many industries with low GDP values may maintain growth consistency and gain competitive advantages, enabling them to support regional growth and raise revenue in Grobogan Regency.

The mining and quarrying sector contributes very little to GDP creation. This is because of several challenges, including mining techniques, product processing techniques, and human resources. Because of this, the government has to focus more on promising industries. The mining and quarrying industry may compete with other well-established industries with proper management. Other weak sectors are the same.

6 Suggestion

With the help of this research, the Grobogan Regency administration is anticipated to improve facilities and infrastructure to support development in non-base industries. Since these industries are essential to the growth of Grobogan Regency's economy, it is crucial to pay attention to them. The government must implement human resources training in order to maximize economic growth. These resources must have exceptionally reliable talents since they act as a catalyst for economic expansion.

In order to study the sectors of the economy that have the potential to grow in a region, academics might re-examine utilizing other variables that are connected to this research.

Additionally, community involvement is required, particularly given that it serves as the primary driver of economic growth. In an attempt to keep up with the growth of other sectors, the community is urged to promote industries that are already superior in Grobogan Regency, take advantage of advanced technology, and seek extensive experience in managing those industries that are currently lagging.

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References

1. I. Masloman, J. E. Pembangunan, F. Ekonomi, and D. Bisnis, "ANALISIS PERTUMBUHAN EKONOMI SERTA SEKTOR YANG POTENSIAL DAN BARDAYA SAING DI KABUPATEN MINAHASA SELATAN," 2018.
2. Steeva Tumangkeng, "Analisis Potensi Ekonomi di Sektor dan Sub Sektor Pertanian, Kehutanan dan Perikanan Kota Tomohon," *Jurnal Berkala Ilmiah Efisiensi*, vol. 18, no. 01, pp. 127–138, 2018.
3. Badan Pusat Statistik, "PDRB Sektor Perekonomian Kabupaten Grobogan Tahun 2017–2021," *BPS Kabupaten Grobogan*, 2022.
4. Hanung Putri Juwita, "Analisis Pola Pertumbuhan Ekonomi Daerah dan Sektor Potensial Kabupaten Magetan Tahun 2011-2015," *Jurnal Ekonomi Pembangunan*, vol. 10, no. 2, pp. 23–36, 2017.

5. Andik Waloyo, "Analisis Potensi Ekonomi dan Sektor Unggulan Ekonomi di Kabupaten Grobogan Tahun 2010-2015," *Jurnal Ekonomi Pembangunan*, vol. 4, no. 2, pp. 37–48, 2018.
6. A. Maghfiroh, "Pola Pertumbuhan Perekonomian melalui Sektor Unggulan Daerah Kabupaten Jombang," *Journal of Economic, Management, Accounting and Technology*, vol. 4, no. 2, pp. 119–129, Aug. 2021, doi: https://doi.org/10.32500/jematech.v4i2.1560.
7. N. Komang, E. I. Nyoman, and M. Yasa, "ANALISIS POLA PERTUMBUHAN EKONOMI DAN SEKTOR POTENSIAL KABUPATEN KLUNGKUNG."
8. Gunawan, A. E. Cahyono, and A. Santoso, "Local superior commodities, regional specializations and regional economic contributions," *Journal of Distribution Science*, vol. 16, no. 9, pp. 35–41, Sep. 2018, doi: https://doi.org/10.15722/jds.16.9.201809.35.
9. A M Susan, A Cahyani, F N Ashidieq, and M A Risqa, "Location Quotient Analysis of the Agricultural Sector in Yogyakarta, Indonesia," *Atlantis Press*, vol. 19, pp. 5–9, 2021.
10. E. Kartikaningdyah, "Analisis Location Quotient dalam Penentuan Produk Unggulan pada Beberapa Sektor di Kabupaten Lingga Kepulauan Riau," *31 | Jurnal Integrasi |*, vol. 4, no. 1, 2012.
11. G. Ekonomi dan Bisnis Lt, U. H. Syarif Hidayatullah Jakarta Jl Ir Juanda No, T. Selatan, and J. Ekonomi accredited, "2019 edition Higher Education Republic of Indonesia No. 048a/KPT," 2017. [Online]. Available: http://journal.uinjkt.ac.id/index.php/etikonomi
12. S. Handayani, L. S. Badriah, S. Suharno, D. A. S. Wahyuni, and J. Sinurat, "Leading Sector in Banyumas Regency During The Covid-19 Pandemic Using Location Quotient and Shift-Share," *Jurnal Ekonomi Dan Statistik Indonesia*, vol. 2, no. 1, pp. 8–18, Apr. 2022, doi: https://doi.org/10.11594/jesi.02.01.02.
13. A. Nurfariswan, D. Ardi, W. Putra, and D. A. Permalink, "The Classification of Leading Sectors Utilized Weighting Technique Analysis," *Jejak*, vol. 15, no. 1, pp. 63–91, 2022, doi: https://doi.org/10.15294/jejak.v15i1.34767.
14. N. L. A. Kesuma and I. M. S. Utama, "Analisis Sektor Unggulan dan Pergeseran Pangsa Sektor-Sektor Ekonomi Kabupaten Klungkung," *Jurnal Ekonomi Kuantitatif Terapan*, vol. 8, no. 1, pp. 100–107, 2015.
15. M. Basuki, "Analisis Sektor Unggulan Kabupaten Sleman dengan Metode Shift Share dan Location Quotient," 2017. [Online]. Available: http://ejournal.uin-suska.ac.id/index.php/sitekin
16. A. K. K. Negara and A. K. Putri, "ANALISIS SEKTOR UNGGULAN KECAMATAN TOBOALI DENGAN METODE SHIFT SHARE DAN LOCATION QUOTIENT," *Equity: Jurnal Ekonomi*, vol. 8, no. 1, pp. 24–36, Jun. 2020, doi: https://doi.org/10.33019/equity.v8i1.11.
17. R. T. Pesurnay and J. M. Parera, "Analisis Tipologi Klassen dan Penentu Sektor Unggulan di Kota Ambon- Provinsi Maluku," *Open Journal System*, vol. 12, no. 1, pp. 51–71, Mar. 2018.
18. M. Ripner, A. T. Sompa, and A. Yunani, "Sectoral Analysis of The Economic Potential Development to Support Government Policy in Banjar District, South of Kalimantan," 2021.