ANALYSIS OF ECONOMIC GROWTH AND LEADING SECTORS IN SLEMAN REGENCY

Prasasti Pribaditha Rengganis
Faculty of Economics and Business, Universitas Ahmad Dahlan, Indonesia
(prasasti1800010188@webmail.uad.ac.id)

Rifki Khoirudin
Faculty of Economics and Business, Universitas Ahmad Dahlan, Indonesia
(rifki.khoirudin@ep.uad.id)

ABSTRACT

Introduction: Analysis of Economic Growth and Leading Sectors in Sleman Regency. This research aims to determine the leading sectors in Sleman Regency and to find out which sectors contribute to economic growth in Sleman Regency. The Sleman Regency Government focuses on development in accordance with the leading sectors in the region so that it can attract investors to invest capital. With this capital investment, it is hoped that Sleman Regency can increase economic growth in Sleman Regency. This type of research is descriptive research. The data that will be processed is secondary data from the period 2016 to 2022. The data analysis techniques used are Location Quotient analysis and Shift-Share analysis, Dynamic Location Quotient analysis and Klassen typology mapping. Based on the results of the Location Quotient calculation, the economic growth sub-sectors are superior and not superior. The sectors that have the most influence on economic growth in Sleman Regency include the processing industry, real estate, corporate services and educational services sectors.

Keywords: Economic Growth, Leading Sectors, and Processing Industry

INTRODUCTION

The value of economic growth is a valuable aspect to estimate the achievement of economic development progress in a region. Economic growth itself is very important and integral to the achievement of economic development. According to Richardson 1973, the main determinant of economic growth in a region is directly related to the demand for goods and services from outside the region. In addition, economic growth in a region is influenced by cooperative advantages in the region, the economic potential of the region, and regional specialization. While in each region there are different characteristics so that the potential for regional development is also different from the general, be it in terms of human resources, natural resources, or geography. Different economic, social and cultural conditions in each region can affect the ability to grow and develop between regions to be unequal. Therefore, the processing, utilization, and development of all economic potential is a top priority that must be developed in a sustainable manner in regional economic development.

The difference between this research and previous research is the different research locations and in the current study using the calculation of LQ analysis, Shift Share and Klassen Typology with DLQ. Textbook understanding and the augmented Solow growth model have been studied to describe the consequences of labor and capital growth (Salim, et.al., 2024). As a multidimensional and complex phenomenon, poverty is not only related to income and consumption. (Khasanah & Kurniawan, 2024). (Wibowo & Khoirudin, 2019) One of the socio-economic benchmarks in assessing the success of development carried out by the government in an area is reducing the number of poor people.

Sleman Regency was chosen as the research area seen from a geographical perspective, Sleman Regency is one of the districts in the Special Region of Yogyakarta Province with an area proportion of 18% of the total area of DIY. This figure also provides the conclusion that Sleman Regency has a vital role in the economy of the DIY region. With a total area of 57,482 hectares, Sleman District has at least 17 sub-districts and is spread and ispread over 86 villages and 1212 hamlets. (Utami & Khoirudin, 2021)This continuous creation process causes ecological degradation as pollution of land, air and water.

Sleman Regency is an area that has the largest value of business field gross regional domestic product (GRDP) at current prices (ADHB) compared to the other 4 districts / cities in the Yogyakarta Special Region Province, which in 2020 amounted to IDR 45.83 trillion. The support of Sleman Regency is through the processing sector amounting to IDR 6.16 trillion and the construction sector which reached IDR 5.04 trillion of the total GRDP.

The Sleman Regency Government must focus on development in accordance with the sectors that are superior in the region so that it will attract investors to invest in Sleman Regency because it can provide

benefits for investors and this investment is expected to increase economic growth in Sleman Regency. This can be realized with the right government role in optimizing the advantages of the economic sector owned by the region concerned. This analysis of economic growth and leading sectors in Sleman Regency is to examine economic growth and leading sectors that can be relied on by Sleman Regency in increasing its economic growth. This research is expected to contribute more in-depth knowledge about economic growth in each region, and in addition it can also be a reference for further researchers.

The difference between this research and previous research is the research locations and in the current study using the calculation of LQ analysis, shift share and Klassen typology.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Research conducted by (Soeyatno, 2019) shows that the leading sector is the determining sector of how the economy moves. This means that economic growth is always influenced by the ability of regions to develop leading sectors or potential sectors. Research conducted by (Qubro et al., 2021) confirms that the existence of a leading sector owned by a particular region will be a booster for economic growth. Based on these two findings, it can be concluded that economic growth and the leading sector are two variables that have a relationship. The research conducted by (Azizi et al., 2019) where the research made Sleman Regency as a case study in 2019. By using LQ as an analytical tool, the research confirmed that the agricultural sector is the leading sector or base sector in Sleman Regency. The findings provide a general representation that most people in Sleman Regency have a profession as a farmer or informal. In the research, food commodities have the potential to grow and even be exported outside the Sleman Regency area. This empirical review can strengthen the findings of this study.

Research conducted by (Sharazati et al., 2021) in Sleman Regency, shows that the most superior or basic sector is the Accommodation and Drinking Food Provision sector. Research conducted by (Sitepu & Rahmawati, 2022) Sleman Regency is one of the regencies that can maintain the growth of leading sectors in the last five years. The results showed that Sleman Regency has the highest hinterland or interaction with Kulonprogo Regency. Research conducted by (Setiawan et al., 2022) confirmed that Yogyakarta City places the Information, Communication & Education Services Sector as the most superior sector. This is attributed to the large number of campuses and informal education institutions.The hypothesis of this study is that there is a superior or basic sector in Sleman Regency. The basic or leading sector affects economic growth in Sleman Regency. (Fahriza et al, 2022) Original Regional Income, namely income obtained from various sources in the region, is collected and managed by the regional government based on the applicable Constitution.

RESEARCH METHODOLOGY

This research is a descriptive type of research. Descriptive research can be described as research that emphasizes qualitative aspects in the interpretation of research results. According to (Sugiyono, 2013) descriptive refers to the preparation of a paragraph so that the sentence can be understood and accepted by interested parties. This research still uses statistical rules in data processing using LQ or location quotient analysis and Shift-Share analysis, Dynamic Location Quotient (DLQ) analysis and Klassen typology mapping. Microsoft Excel is used a data processing or machine learning tool. As for the description of each of these analysis tools as follows :

1. Location Quotient analysis (LQ)

   According to Jumiyanti (2018), LQ analysis is an analysis used to find out what sectors are the leading and non leading sectors. to find out what sectors are superior and non-prime sectors in an area. in an area. A leading sector means a sector that will not run out if used by the region. LQ calculates the ratio of a sector's output in a city or regency compared to the output of a sector in the province.

2. Shift-Share Analysis

   This analysis is intended to map the performance of certain economic sectors by comparing them with economic sectors in a broader regional scope. In the context of autonomy, this means comparing economic performance at the kabupaten level with that at the provincial level. Broadly speaking, this shift-share analysis aims to provide an overview of changes in economic structure at a particular regional level. In addition, through output shift-share, it can be assessed which sectors have the greatest determinant of economic growth in a region. According to (Prasetya, 2018), regions dominated by slow-growing sectors will be below the level of economic growth in the region above (Province).

3. Dyynamic Location Quotient (DLQ)

   This calculation illustrates how the sector growth rate in the regency compares with the sector growth rate at the provincial level. The formula used in the calculation of DLQ is as follows:

$$DLQ = \left(\frac{(1 + g_{in})/ (1 + g_n)}{(1 + g_t)/ (1 + g)} \right) t$$

   With the following notation:

   gin ; Sleman Regency sector growth rate

   gn ; average growth rate of Sleman Regency sector

   gt ; growth rate of DIY Province sector

   g ; average growth rate of DIY Province sector

   t; Difference between final year and initial year

The unit or number of objects studied in this study is one. Therefore, the unit of analysis in this research is an individual. The individual in question is the geographic area of Sleman Regency, Yogyakarta Special Region Province with a research focus on the leading sector and the non-leading sector in the area in question. The time or observation in this research is in 2016-2022 with the research location being Sleman Regency. The basis of this research is data from the Sleman Regency Statistics Agency in the form of GRDP data by business field which has approximately 17 sectors.

RESULT AND DISCUSSION

Location Quotient (LQ) Analysis

Table 1.1 LQ Calculation

Sektor	LQ							*AVG.*	*CONC.*
	2016	2017	2018	2019	2020	2021	2022		
Agriculture, Forestry and Fisheries	0,77	0,76	0,76	0,76	0,78	0,78	0,79	0,77	NB
Mining and Quarrying	0,72	0,70	0,69	0,71	0,72	0,70	0,70	0,71	NB
Processing Industry	0,99	0,99	1,00	1,00	1,02	1,02	1,02	1,01	B
Electricity and Gas Procurement	0,81	0,81	0,80	0,80	0,81	0,81	0,81	0,81	NB
Water Supply, Waste Management, Waste and Recycling	0,47	0,46	0,46	0,46	0,47	0,46	0,47	0,46	NB
Construction	1,17	1,17	1,17	1,15	1,15	1,16	1,17	1,16	B
Wholesale and Retail Trade; Repair of Cars and Motorcycles	0,92	0,91	0,91	0,91	0,91	0,91	0,09	0,79	NB
Transportation and Warehousing	1,19	1,20	1,21	1,15	0,97	0,89	0,81	1,06	B

Provision of Accommodation and Drinking Meals	1,04	1,03	1,03	1,04	1,03	1,03	1,04	1,03	B
Information and Communication	0,97	0,97	0,97	0,97	0,99	0,99	0,99	0,98	NB
Financial and Insurance Services	0,82	0,82	0,82	0,83	0,85	0,85	0,86	0,83	NB
Real Estate	1,14	1,14	1,13	1,13	1,15	1,15	1,16	1,14	B
Company Services	1,65	1,64	1,64	1,65	1,68	1,68	1,68	1,66	B
Government Administration, Defense and Compulsory Social Security	0,80	0,80	0,80	0,80	0,81	0,81	0,81	0,80	NB
Education Services	1,16	1,16	1,16	1,16	1,19	1,19	1,20	1,17	B
Health and Social Services	0,93	0,93	0,92	0,93	0,95	0,94	0,94	0,93	NB
Other services	0,86	0,86	0,85	0,84	0,86	0,86	0,91	0,86	NB

Source: Data processed

Based on the table above, it can be concluded that there are seven sectors categorized as basic (B) and there are ten sectors categorized as non-basic (NB). This finding also confirms that Sleman Regency has more unproductive sectors than productive sectors. The basic sectors include sector 3 (manufacturing industry), sector 6 (construction), sector 8 (transportation & warehousing), sector 9 (provision of accommodation, food & beverages), sector 12 (real estate), sector 13 (corporate services), and sector 15 (education services).

Analisis *Shift-Share* (SS)

Table 1.2 Shift-Share Calculation Results

SECTOR	*Growth Componen*				*CONC.*
	Nij	Mij	Cij	Dij	
1	141293	(84984)	3694	60004	TB & TBS
2	7938	(6569)	(2672)	(1303)	TB & TBS
3	276075	(175734)	2432	102772	TB & BS
4	2875	(1377)	294	1792	TB & BS

SECTOR	*Growth Componen*				*CONC.*
	Nij	Mij	Cij	Dij	
5	1032	(296)	295	1031	TB & BS
6	256019	(32029)	112483	336473	TB & BS
7	142339	(76440)	(337937)	(272038)	TB & TBS
8	116291	(72080)	(107649)	(63437)	TB & TBS
9	210549	(77513)	44275	177310	TB & BS
10	276940	144195	319474	740610	B & BS
11	66891	(27748)	18041	57184	TB & BS
12	183092	(85409)	25079	122762	TB & BS
13	41128	(21780)	3828	23175	TB & BS
14	127836	(88277)	(13588)	25971	TB & BS
15	233532	(64461)	89598	258669	TB & BS
16	60159	10247	47227	117633	B & BS
17	52752	0	38034	90786	B & BS
Total	**2196740**	**(660256)**	**242909**	**1779394**	-

Source: Data processed

According to the table above, most sectors in Sleman Regency during 2016-2022 did not develop (TB) but were competitive (BS). When viewed from the total value of Dij or net shift, there has been a shift with a positive value. This shows that all sectors tend to be progressive and there is a shift from the primary sector (agriculture) towards the secondary and tertiary sectors. This statement is shown by the net shift value of the agricultural sector (1) of Rp. 60,004,503,432 which is smaller than the manufacturing sector (3) of Rp. 102,772,488,880 and the information & communication sector (10) which reached Rp. 740,609,507,161. This finding also provides a statement that the agricultural sector in Sleman Regency is no longer the dominant sector or in other words, there is a process of industrialization or modernization and people tend to choose the formal sector and the non-agricultural informal sector.

Klassen Typology Analysis

Table 1.3 Klassen Typology Calculation

Sector	DIY Province		Sleman Regency		Q.	CONC.
	AVG. Laju	AVG. Kontribusi	AVG. Laju	AVG. Kontribusi		

1	2,6	8,3	2,79	6,4	Q3	Potential Sectors
2	1,1	0,5	0,41	0,4	Q4	Disadvantaged Sector
3	2,4	12,4	2,68	12,5	Q2	Advanced Sector
4	3,4	0,2	3,29	0,1	Q4	Disadvantaged Sector
5	4,7	0,1	4,50	0,0	Q4	Disadvantaged Sector
6	5,7	9,9	5,51	11,5	Q1	Forward Sector Under Pressure
7	3,0	8,2	-12,98	6,5	Q4	Disadvantaged Sector
8	2,5	4,9	-3,46	5,3	Q1	Forward Sector Under Pressure
9	4,2	9,2	4,00	9,5	Q1	Forward Sector Under Pressure
10	10,0	12,6	10,20	12,4	Q3	Potential Sectors
11	3,8	3,6	4,39	3,0	Q3	Potential Sectors
12	3,5	7,2	3,52	8,3	Q2	Advanced Sector
13	3,1	1,1	3,23	1,9	Q2	Advanced Sector
14	2,0	7,2	1,92	5,8	Q4	Disadvantaged Sector
15	4,8	9,0	5,14	10,5	Q2	Advanced Sector
16	7,7	2,9	7,78	2,7	Q3	Potential Sectors
17	6,6	2,7	7,36	2,4	Q4	Disadvantaged Sector
PDRB	**4,4**	**100,0**	**4,15**	**100,0**		

Source: Data processed

There are four sectors categorized as advanced in Sleman Regency, namely sector 3 (manufacturing industry), sector 12 (real estate), sector 13 (corporate services), and sector 15 (education services). There are three developed but depressed sectors in Sleman Regency, namely sector 6 (construction), sector 8 (transportation & warehousing), and sector 9 (provision of food & beverage accommodation). There are four potential sectors in Sleman Regency, namely sector 1 (agriculture), sector 10 (information & communication), sector 11 (financial services & insurance) and sector 16 (health services & social activities). There are six lagging sectors in Sleman Regency, namely sector 2 (mining & quarrying), sector 4 (electricity & gas supply), sector 5 (water supply, waste management, waste, recycling), sector 7 (trade), sector 14 (government administration, defense, social, social security), and sector 17 (other services). The calculation of Klassen's typology also concludes that in Sleman Regency the majority of sectors are maximized (developed, depressed developed, and potential sectors). As for the lagging sectors, there are six sectors, which accumulatively have more maximal sectors than lagging sectors. The average economic growth rate in DIY Province during 2016-2022 is 4.4% and the average economic growth rate in Sleman Regency is 4.15%. This means that the economic growth of DIY is higher than the economic growth of Sleman Regency.

Weighting Result

Table 1.4 Weighting

Sektor	LQ	*Shift-Share*	Tipologi Klassen	Overlay
1	NB	TB & TBS	Potential Sectors	+
2	NB	TB & TBS	Disadvantaged Sector	0
3	B	TB & BS	Advanced Sector	++++
4	NB	TB & BS	Disadvantaged Sector	+
5	NB	TB & BS	Disadvantaged Sector	+
6	B	TB & BS	Forward Sector Under Pressure	+++
7	NB	TB & TBS	Disadvantaged Sector	0
8	B	TB & TBS	Forward Sector Under Pressure	++
9	B	TB & BS	Forward Sector Under Pressure	+++
10	NB	B & BS	Potential Sectors	+++
11	NB	TB & BS	Potential Sectors	++
12	B	TB & BS	Advanced Sector	++++
13	B	TB & BS	Advanced Sector	++++
14	NB	TB & BS	Disadvantaged Sector	+
15	B	TB & BS	Advanced Sector	++++
16	NB	B & BS	Potential Sectors	+++
17	NB	B & BS	Disadvantaged Sector	++
Note : NB (0), B(+), TB (0), TBS (0), BS (+),Left behind (0), Potential (+),Forward Depressed (+),Forward (++).				

Source: Researcher

Based on the weighting results, there are four sectors that have the most influence on the economy in Sleman Regency, namely sector (3) manufacturing industry, sector (12) real estate, sector (13) corporate services, and sector (15) education services. The least influential sectors are mining & quarrying sector (2) and wholesale & retail trade sector (7).

The discussion of the results is as follows :

1. **Economic Growth of Sleman Regency**

   Based on the analysis and results of data processing, it is known that economic growth in Sleman Regency was corrected and grew negatively (-4%) in 2020. This happened due to the COVID-19 pandemic. Policies to limit social activities trigger economic turmoil such as disruption of the supply chain of goods, which triggers scarcity. According to (Sitepu & Rahmawati, 2022) sectoral

growth in DIY Province was also hampered and mostly decreased due to COVID-19. Large-scale social restrictions reduce demand from the consumer side, and decrease production (supply) from the producer side.

The following is a comparison between inflation at the reference region level (DIY Province) and the analysis region (Sleman Regency).

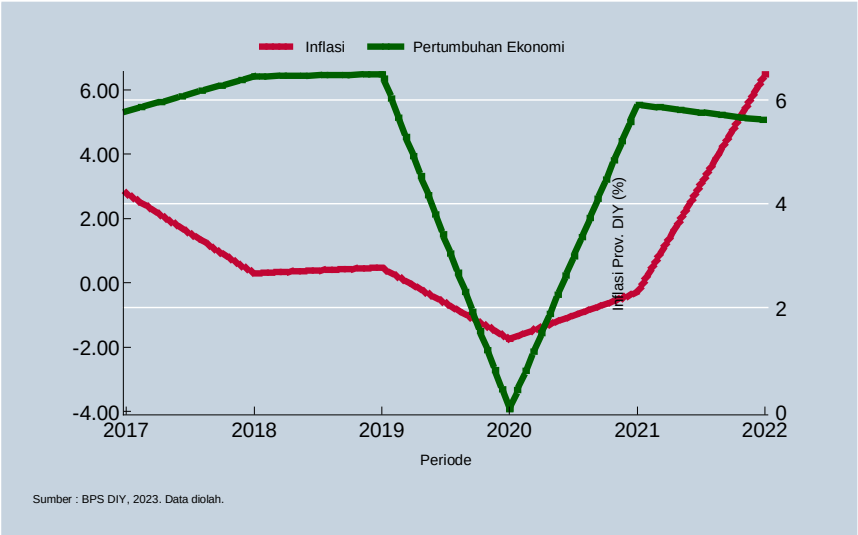

Figure Inflation and Economic Growth

Source: BPS DIY, 2023. Data processed.

This finding confirms that inflation during 2017-2020 tends to decline and has a peak decline in 2020. Low inflation illustrates the low level of market demand for goods and services. This certainly affects sectoral productivity, where when demand decreases, there is an adjustment in production in each sector. As a result, economic growth will also decline. This can be seen in 2020, where inflation and economic growth have the same graphical pattern. Inflation fell to its lowest level during the observation period, and economic growth also grew negatively. This collinearity interaction proves that inflation (representing purchasing power) affects sectoral growth (economic growth).

2. Leading Sector Analysis

1) Processing Industry Sector

Based on the LQ analysis test results, it is confirmed that the manufacturing industry is categorized as a basic sector. This means that this sector is not only able to meet the domestic needs of Sleman Regency, but also able to export its products to areas outside Sleman Regency. The processing industry is an industry engaged in the processing of raw materials into finished or near-finished goods (Mubyarto & Sohibien, 2020). This means that the processing industry is manufacturing.

2) Information & Communication Sector

In this study, the information and communication sector is categorized as a non-basic sector according to the LQ method with an LQ point of 0.98. This is close to 1 or close to base. However, the shift-share analysis (Dij) shows a positive net shift of Rp. 740 billion or almost touching the valuation of 1 trillion. This means that there is a very significant increase in productivity in the information and communication sector. Based on this research, the shift is the largest shift of all existing sectors. The calculation of Mij & Cij shows that the information and communication sector in Sleman Regency is developing and competitive.

3) Education Services Sector

Based on the results of data processing, the education services sector is categorized as a basic sector according to the LQ approach. This means that the provision of education services in Sleman Regency has reached the point of self-sufficiency or exceeds the existing needs or demand. The large number of education services, both formal and non-formal, both private and government-owned, certainly creates or absorbs jobs. For example, Ahmad Dahlan University has more than 1,000 lecturers and administrative staff. Millions of student entrants also provide a boost to economic circulation and increase consumption so that economic growth is boosted.

4) Real Estate Sector

This sector is the leading sector in Sleman Regency during 2016-2022. This is based on the LQ value which is more than one, so this sector is categorized as a basic sector. In addition, in the classification according to Klassen typology, the real estate sector is categorized as a developed sector. The shift-share calculation shows a positive net shift in this sector worth IDR 122 billion. The economic turnover generated from this sector reached IDR 2.7 Trillion over the last five years.

5) Corporate Services Sector

The LQ calculation shows that the corporate services sector is a basic sector in Sleman Regency, so that the output of these companies not only covers the domestic demand of Sleman Regency but supplies areas outside Sleman Regency. The corporate services sector is all companies engaged in services (Bunaya, 2019). Based on the shift-share calculation, this sector recorded a positive net shift of Rp. 23 billion. The figure is not much but because it is positive, it means that there is an increase in productivity in this sector. The Klassen typology calculation shows that this sector is a developed sector.

CONCLUSION

The Location Quotient test shows that there are seven sectors categorized as basic and ten sectors categorized as non-basic. The basic sectors include manufacturing, construction, transportation & warehousing, food accommodation, real estate, corporate services, education services. The shift-share test shows that the information and communication sector is the sector with the highest net shift than other sectors. This means that there is a reduction in productivity in other sectors shifting to the information and communication sector. The Klassen Typology test shows that Sleman Regency has four developed sectors, namely the manufacturing industry sector, real estate sector, corporate services sector, and education services sector. Based on the weighting results, the sectors that have the most influence on economic growth in Sleman Regency include manufacturing, real estate, corporate services, and education services. The least influential sectors include the mining/quarrying sector and the wholesale/retail sector.

IMPLICATION/LIMITATION AND SUGGESTIONS

The Sleman Regency Government needs to conduct a competitiveness study for sectors categorized as basic so that competitiveness can be improved in terms of price, quality, and innovation. The Sleman Regency Government needs to evaluate public policies for sectors categorized as underdeveloped sectors. The Sleman Regency Government should provide fiscal incentives or ease of regulation so that the lagging sectors can contribute better and more to economic growth in Sleman Regency.

ACKNOWLEDGMENT

The authors realize that the writing of this research is inseparable from advice, guidance and input from various parties. So with all humility, the author would like to express thousands of thanks to Mr. Rifki Khoirudin S.E., M.Ec.Dev., MAPPI (Cert.) as the supervisor who has helped the author, both moral support and learning infrastructure.

REFERENCES

Armelly, A., Rusdi, M., & Pasaribu, E. (2021). Analysis of leading sectors of the Indonesian economy: An input-output model. Sorot, 16(2), 119. https://doi.org/10.31258/sorot.16.2.119-134

Asyafina, D. R., & Muljaningsih, S. (2022). Leading Sector Analysis of Economic Growth in Madiun City. Journal of Development Economics STIE Muhammadiyah Palopo, 8(1), 11. https://doi.org/10.35906/jep.v8i1.990

Azizi, M., Kadarso, & Anggraeni, R. (2019). Study of Food Crop Leading Commodities as an Effort to Improve Food Independence in Sleman Regency. Journal of Agros Agriculture, 21(1), 91-99.

Bunaya, B. (2019). Analysis of Economic Sectors on Regional Revenue of Wajo Regency. JEKPEND: Journal of Economics and Education, 2(1), 51. https://doi.org/10.26858/jekpend.v2i1.9098

Fahriza, Y.N., Lubis, F.R.A., & Az zakiyyah, N.A. (2022). Analysis of Factors Affecting Regional Original Revenue In Nusa Tenggara Timur (2015-2020). *Eko-Regional: Jurnal Pembangunan Ekonomi Wilayah, 17*(2), 108-118, https://doi.org/10.32424/1.erjpe.2022.17.2.2970

Khasanah, D.U., & Kurniawan, M.L.A. (2024). Panel Seemingly Unrelated Regression on Employment in Tourism Sector: Evidence in Central Java Province. *Eko-Regional: Jurnal Pembangunan Ekonomi Wilayah, 19*(1), 11-19. https://doi.org/10.32424/1.erjpe.2024.19.1.3369

Mubyarto, M. M., & Sohibien, G. P. D. (2020). DETERMINANTS OF COMPETITIVITY OF THE LEADING MANUFACTURING SECTOR FOR MAKING INDONESIA 4.0 PROGRAM. 2019(1), 710-719. https://prosiding.stis.ac.id/index.php/semnasoffstat/article/view/56/79

Qubro, G., Muljaningsih, S., & Asmara, K. (2021). The Influence of Leading Sectors on Economic Growth in Banyuwangi Regency. Journal of Health Science, 2(8), 1444-1452. https://doi.org/10.46799/jsa.v2i8.298

Rahmawati, E. (2022). Analysis of Leading Economic Sectors and Their Development Strategies: Case Study in Lumajang Regency. Scientific Journal of Accounting and Finance, 5(2), 2-10.

Salim., Wen, J. Bello, A.U., Lubis, F.R.A, Khoirudin, R., Khasanah, U., Sukarniati, L., Nasir, M.S. (2024). Does Information And Communication Technology Improve Labor Productivity? Recent Evidence From The Southeast Asian Emerging Economies. Growth Change, 55(1), 1-17. https://doi.org/10.1111/grow.12708

Setiawan, H., Enardi, W., & Kamarni, N. (2022). Analysis of Leading and Potential Economic Sectors in the Special Region of Yogyakarta. Menara Ilmu, 16(2), 24-36. https://doi.org/10.31869/mi.v16i2.3320

Sharazati, K., Primandhana, W. P., & Wahed, M. (2021). Leading Sector Analysis in Sleman Regency and Gunungkidul Regency. Syintax Idea, 14(1), 1-13.

Sitepu, V. V., & Rahmawati, F. (2022). Analysis of Growth Centers and Economic Sectors in Reducing Income Inequality. 1(1), 1-12. https://doi.org/10.29264/jakt.v19i1.10710

Soeyatno, R. F. (2019). Analysis of Leading Sector Determination on the Regional Economy of Bogor City, West Java Province in 2012-2016. JOURNAL SeMaRaK, 1(3). https://doi.org/10.32493/smk.v1i3.2258

Solow, R. (1997). Perspectives on growth theory. A Macroeconomics Reader, 8(1), 45-54. https://doi.org/10.4324/9780203443965.ch27

Sukirno, S. (2006). Macroeconomics Third Edition (3rd ed.). PT. Grafindo Persada.

Utami, N.D.N., & Khoirudin, R. (2021). Tingkat Kesejahteraan Pelaku Usaha Batik Jumputan Di Yogyakarta. *Jurnal Ilmiah Maksitek 5(4), 85-95.*

Wibowo, R., & Khoirudin, R. 2019. Analysis Of Determinants Of Poor Population In Central Java 2008-2017. *EKUILIBRIUM : Jurnal Ilmiah Bidang Ilmu Ekonomi 14*(1), 1-15. 10.24269/ekuilibrium.v14i1.2019.pp1-15