MAPPING OF LEADING AND COMPETITIVE SECTORS FOR SUSTAINABLE REGIONAL ECONOMIC DEVELOPMENT (SDGs) IN PALANGKA RAYA CITY

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Abstract. *This research aims to identify and map leading and competitive sectors in Palangka Raya City. This identification is crucial to supporting inclusive and sustainable regional economic development, in line with the Sustainable Development Goals (SDGs), particularly Goal 8 (Decent Work and Economic Growth) and Goal 9 (Industry, Innovation, and Infrastructure). [1] The methodology used in this study is a quantitative approach, utilizing secondary data in the form of Gross Regional Domestic Product (GRDP) of Palangka Raya City and Central Kalimantan Province for the period 2020 to 2024. To analyze the data, a combination of five tested regional economic analysis tools was used, namely Shift-Share, Location Quotient (LQ), Klassen Typology, Growth Ratio Model (MRP), and Overlay analysis. [1] The simultaneous use of these various methods provides higher validity and reliability to the findings, because consistent results from various analytical perspectives increase confidence in the identification of leading sectors. The results of the study indicate that the economy of Palangka Raya City experienced significant positive growth, with an increase in GRDP of IDR 2,742.25 billion in 2024. The main contributors to this growth are the wholesale and retail trade sector, car & motorcycle repair; the transportation and warehousing sector; and the construction sector. [1] Through an Overlay analysis, which comprehensively integrates the results of LQ, Klassen Typology, and MRP, 14 consistent and strong leading sectors were identified in Palangka Raya City. These sectors include electricity & gas procurement; water procurement; waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food and beverage provision; information and communication; financial services & insurance; real estate; corporate services; government administration, defense & mandatory social security; education services; health services & social activities; and other services. [1]*

Keywords: *Economic Growth; Growth Ratio Model; Klassen Typology; Leading Sectors; Location Quotient; Overlay; Palangka Raya City; Shift-Share; Sustainable Development Goals (SDGs).*

1. INTRODUCTION

Economic growth is a fundamental indicator of a region's progress and a significant phenomenon experienced by economies worldwide, including Indonesia. [1] It serves as a benchmark for the success of economic development, which aims to improve conditions in a region by increasing income, creating employment opportunities, and improving community prosperity. [1] However, developing countries like Indonesia still face significant challenges such as unemployment, unequal income distribution, and poverty. [1] These challenges underscore the importance of economic growth that is not only quantitative but also inclusive, ensuring that the benefits of development are widely shared and reducing social disparities.

To address these issues and promote better overall economic performance, one effective strategy is to prioritize leading or base economic sectors in development programs. [1] These sectors have the potential to become key drivers of economic growth and improve community welfare. [1] Local government play a crucial role in this process, as they must actively engage with communities and effectively assess and utilize the potential of local resources to stimulate regional economic growth. [1] This demonstrates that effective economic development requires collaboration between government and communities, as well as a deep understanding of local economic strengths. GRDP (Gross Regional Domestic Product) serves as the primary measure for assessing the extent of a region's economic growth, by analyzing the performance of 17 different economic sectors. [1] Based on GRDP data for districts/cities in Central Kalimantan Province (constant prices 2010, 2020-2024), Palangka Raya City's GRDP contribution is still relatively low, ranking fourth in the province at 6.57 percent. [1] This indicates that, despite being the provincial capital, Palangka Raya City still has room to increase its economic contribution. Over the past five years (2020-2024), Palangka Raya City's economy, despite its significant potential, has also faced fluctuations in growth, particularly a contraction in 2020 due to the COVID-19 pandemic, followed by recovery and growth in subsequent years. [1] However, a comprehensive understanding of the economic sectors with competitive and comparative advantages, as well as the largest contributions to economic growth, is essential. *sustainable development,* is still suboptimal. [1] This gap underscores the urgency of targeted research to identify sectors that not only drive growth but also contribute to long-term development aligned with the Sustainable Development Goals (SDGs). This lack of comprehensive understanding suggests that previous development efforts may have been suboptimal or not fully harnessed the unique economic strengths of cities for sustainable outcomes. Therefore, this research aims to fill this strategic gap, enabling more informed and impactful policy decisions for sustainable development. This research is designed to achieve three key interrelated objectives, which are directly relevant to the global framework of the Sustainable Development Goals (SDGs). [1] First, this study aims to analyze the patterns and changes in the rate of economic growth in Palangka Raya City. Second, this study seeks to identify economic sectors that make significant contributions to the overall economic performance of Palangka Raya City. [1] Third, and most importantly, this study aims to determine the region's leading economic sectors that have the highest potential for further development. [1]

2. LITERATURE REVIEW

[1.1] Economic growth is defined as the process of continuous change in a country's economic conditions towards a better state over a certain period, manifested in the form of an increase in national income due to increased production capacity. [1] The presence of economic growth is an indication of the success of economic development. [1] In the classical economic view, as expressed by Adam Smith, economic growth is influenced by two main factors: total output growth and population growth. [1] The rate of economic growth is highly dependent on the productivity of sectors in utilizing their production factors. This productivity can be increased through various means, including education, training, and better management. [1] This Classical Economic Growth Theory emphasizes the importance of efficiency in the use of resources to achieve growth.

[1.2] Furthermore, the Harrod-Domar Theory, developed by Sir Roy Harrod and Evsey Domar in the mid-20th century, highlights the central role of investment in economic growth. [1] This theory states that economic growth depends on the level of investment and savings. To achieve stable growth, a country must have an adequate level of investment to create jobs and increase production capacity. If investment is insufficient, economic growth will be hampered. [1] This theory also emphasizes the close relationship between savings, investment, and output growth, implicitly suggesting that sectors capable of attracting and managing investment will be key to growth. Neoclassical growth theory, developed by Solow and Swan (1956), enriches the understanding of growth by incorporating the interacting elements of population growth, capital accumulation, (exogenous) technological progress, and the size of output. [1] The Solow-Swan model suggests that growth rates originate from three main sources: capital accumulation, increased labor supply, and technological improvements. These technological improvements can be seen in the form of increased skills or technical progress, which in turn increases per capita productivity. [1]

[1.3] Leading sectors are defined as those that have the ability to drive the growth and development of other sectors, both as suppliers of inputs and as users of outputs. [1] These sectors are characterized by comparative and competitive advantages, generate substantial benefits, and have significant multiplier effects on the economy as a whole. [1] Identifying leading sectors is crucial for local governments in formulating development policies aimed at accelerating economic growth and improving community welfare. [1] This concept aligns with regional economic development theory, which emphasizes the utilization of local resources and the formation of partnerships between the government and the private sector to create jobs and stimulate economic activity. [1] The emphasis on local resource utilization and public-private partnerships demonstrates that identifying these sectors is a fundamental first step toward a collaborative, resource-efficient, and locally driven development strategy, underscoring the actionable nature of the research findings.

3. RESEARCH METHOD

This study uses a combination of five quantitative analysis tools to identify leading sectors in Palangka Raya City, each of which provides a unique perspective on regional economic performance. [1]

Shift-Share Analysis is used to measure changes in regional economic growth and identify sector contributions. [1] This method breaks down the total change in output (Dij) of a variable over a given period into three components: national growth (Nij), industrial mix (Mij), and regional competitive advantage (Cij). [1]

- The formula for calculating national economic growth (Nij) is: Nij=Eij×rn
- The formula for calculating the industrial mix (Mij) is: Mij=Eij(rin−rn)
- The formula for calculating competitive advantage (Cij) is: Cij=Eij(rij−rin)
- The formula for calculating the change in the output variable (Dij) is: Dij=Nij+Mij+Cij

Where:

Nij = national economic growth, Mij = industrial mix of sector I in the district, Cij = competitive advantage of sector I in the district, Dij = change in output variable of sector I in the district, Eij = sector I income in the district, rij = growth rate of sector I in the district, rin = growth rate of sector I in the province, rn = GRDP growth rate in Province 1

Location Quotient (LQ) analysis is applied to determine basic and non-basic sectors. [1] LQ is a comparison of the magnitude of the role of a sector within a particular region to the magnitude of the role of the same sector at the national or provincial level. [1] This analysis is a basic way to determine a region's capabilities in a particular sector and whether a region is balanced in certain activities or not. [1] The LQ figure indicates the following:

- LQ > 1: Sub-region has export potential in certain activities (base sectors).
- LQ < 1: Sub-regions tend to import from other regions (non-basic sectors).
- LQ = 1: The region is able to meet or balance certain activities (non-basic sectors).

The LQ formula with the variable added value or income level is: LQ=(Eij/Ej)/(Ein/En)1

Where:

LQ = Location Quotient of Palangka Raya City, Eij = GRDP of Palangka Raya City Province sector, Ej = Total Palangka Raya City GDP Ein = Central Kalimantan sector GDP,

En = Central Kalimantan Total GDP1

The Klassen typology is used to classify sectors based on their growth and contribution. [1] Syafrizal (1997) explains that this analysis provides an overview of the growth patterns and structures of a region's economic sectors, which can be used to estimate economic growth prospects. [1] This classification is divided into four quadrants:

- Quadrant I (Advanced and Fast-Growing Sectors): The rate of economic growth and per capita income is higher than the regional average.

- Quadrant II (Advanced but Depressed Sectors): Low growth rate but per capita income is higher than the regional average.
- Quadrant III (Fast Growing Sector): Growth rate is higher than the regional average but per capita income is lower than the regional average.
- Quadrant IV (Relatively Underdeveloped Sector): Low economic growth rate and per capita income. [1]

The Growth Ratio Model (MRP) compares sector growth rates at the local and regional levels. [1] Yusuf (1999) states that MRP is a modification of Shift-Share analysis to observe changes in the growth of an activity in a study area relative to the same activity in a reference area. [1]

Reference Area Growth Ratio (RPR): RPR=(ΔEiR/EiR(t))/(ΔER/ER(t))
Study Area Growth Ratio (RPS): RPS=(ΔEij/Eij(t))/(ΔEiR/EiR(t))
Classification of MRP analysis results:

- Classification 1 (RPR (+) and RPS (+)): Growth is prominent in both provinces and districts (dominant growth sectors).
- Classification 2 (RPR (+) and RPS (-)): Growth is prominent in the province, but not yet prominent in the district.
- Classification 3 (RPR (-) and RPS (+)): Growth is not prominent in the province, but prominent in the district.
- Classification 4 (RPR (-) and RPS (-)): Low growth in both provinces and districts. [1]

Overlay analysis integrates the results of the LQ, Klassen Typology, and MRP to conclude the leading sectors. [1] Hendra Perdana (2019) explains that overlay analysis plays a role in providing conclusions based on previous calculations. [1] A sector is considered leading if it shows positive (+) results from all three main analyses (LQ, Klassen Typology, and MRP). [1] The strategic combination of these five analytical methods provides a robust, multidimensional view of sector performance. Each method offers a unique lens: LQ identifies current specialization and export potential; Shift-Share analyzes sources of growth (national, industry mix, local competitiveness); Klassen's Typology categorizes overall growth trajectories and contributions; MRP compares growth performance relative to the larger regional context; and Overlay validates findings across methods, ensuring consistency. This comprehensive approach is a significant strength of the study, ensuring that "leading" sectors are not only large but also demonstrate consistent growth, competitiveness, and specialization. The explicit criteria for identifying "leading" sectors through Overlay analysis, which require positive results from LQ, Klassen, and MRP, set a high standard for sector identification. This methodological rigor implies that the 14 sectors ultimately identified are truly robust and reliable, making policy recommendations based on these sectors highly credible and actionable by local governments.

4. RESULTS AND DISCUSSION

Shift-Share Analysis, Shift-Share analysis provides a detailed understanding of regional economic change by breaking down the total change in a sector's output (Dij) into three components: the national growth effect (Nij), the industrial mix effect (Mij), and the regional competitive advantage effect (Cij). [1] This analysis helps identify the drivers of economic performance in Palangka Raya.

Table 1. Results of the Shift-Share Analysis Calculation for Palangka Raya City for 2020-2024

No	Sector	Nij = Eij*rn	Mij = Eij*(rin-rn)	Cij = Eij*(rij-rin)	Dij = Nij+Mij+Cij
1.	Agriculture, Forestry and Fisheries	53,8663	-17,8502	-2.0261	33,9900
2.	Mining & Quarrying	24,9420	0.8493	2,1787	27,9700
3.	Processing industry	201,0789	-37,2029	-60,8960	102.9800
4.	Electricity & Gas Procurement	8,8589	2.4417	-2.9607	8,3400
5.	Water Supply, Waste Management, Waste & Recycling	3,3036	0.5321	-0.9757	2,8600

6.	Construction	203,2467	96,0659	48,4074	347,7200
7.	Wholesale and Retail Trade, Car & Motorcycle Repair	414,6697	42,7933	86.6870	544,1500
8.	Transportation & Warehousing	162,5211	55,4581	208,4108	426,3900
9.	Accommodation & Food & Beverage Provision	92.2444	54,8302	66,4454	213,5200
10.	Information and Communication	49,8840	25,8185	0.1676	75,8700
11.	Financial Services & Insurance	173,4161	11,0889	21,8450	206,3500
12.	Real Estate	64,1525	-8,5804	32,3279	87,9000
13.	Corporate Services	1,4093	1.0464	0.5143	2,9700
14.	Government Administration, Defense & Mandatory Social Security	449,9777	-84.7525	-31,8852	333,3400
15.	Educational Services	130,7463	3,9046	49,1491	183,8000
16.	Health Services & Social Activities	55,0121	47,3163	7,9716	110,3000
17.	Other Services	21,5405	2,1287	10,1307	33,8000
Total		2110,8702	195,8877	435,4921	2742,2500

(Source: Processed Data, 2025[1])

The economy of Palangka Raya City showed substantial positive growth during the 2020-2024 period, with an increase in GRDP of IDR 2,742.25 billion. [1] The results of this Shift-Share analysis show that all sectors contributed positively to GRDP, as indicated by the positive Dij values for each sector. [1] This is an important trend indicating a healthy economic environment in Palangka Raya, where growth is not only concentrated in a few dominant sectors but is spread across the economy. This broad positive contribution is a good indicator of overall economic stability and the potential for inclusive growth. The sectors that have the largest contributions in influencing economic performance are the wholesale and retail trade sector, car & motorcycle repair (IDR 544.15 billion), transportation & warehousing sector (IDR 426.39 billion), and construction sector (IDR 347.72 billion). [1] Although the agriculture, forestry, and fisheries sector and water supply, waste management, waste & recycling sector showed lower growth, their contributions to GRDP remained positive. [1]

Location Quotient (LQ) Analysis

Location Quotient (LQ) analysis is a fundamental tool for identifying “base” (export-oriented) and “non-base” (serving local needs) sectors in a regional economy. [1] LQ compares the relative share of a particular sector in the local economy with its share in a larger reference economy (in this case, Central Kalimantan Province). [1]

Table 2. Results of Location Quotient (LQ) Calculation for Palangka Raya City, 2020-2025[1]

No	Sector	*Location Quotient* (LQ)					Average LQ	Note
		2020	2021	2022	2023	2024		
A	Agriculture, Forestry and Fisheries	0.12	0.12	0.12	0.12	0.11	0.12	Non-Basic
B	Mining & Quarrying	0.08	0.09	0.08	0.09	0.08	0.08	Non-Basic
C	Processing industry	0.61	0.58	0.54	0.52	0.55	0.56	Non-Basic
D	Electricity & Gas Procurement	4.05	3.97	3.91	3.77	3.65	3.87	Base
E	Water Supply, Waste Management, Waste & Recycling	1.82	1.83	1.85	1.82	1.65	1.80	Base
F	Construction	1.23	1.25	1.29	1.27	1.22	1.25	Base
G	Wholesale and Retail Trade, Car & Motorcycle Repair	1.63	1.64	1.66	1.62	1.61	1.63	Base
H	Transportation & Warehousing	1.22	1.28	1.37	1.39	1.39	1.33	Base

I	Accommodation & Food & Beverage Provision	2.63	2.68	2.87	2.80	2.78	2.75	Base
J	Information and Communication	1.74	1.75	1.77	1.72	1.66	1.73	Base
K	Financial Services & Insurance	2.35	2.33	2.37	2.31	2.29	2.33	Base
L	Real Estate	1.53	1.59	1.62	1.62	1.59	1.59	Base
M N	Corporate Services	2.05	2.06	2.10	2.08	2.06	2.07	Base
O	Government Administration, Defense & Mandatory Social Security	3.46	3.47	3.44	3.37	3.26	3.40	Base
P	Educational Services	1.34	1.38	1.39	1.37	1.36	1.37	Base
Q	Health Services & Social Activities	1.36	1.28	1.35	1.32	1.32	1.33	Base
R,S,T,U	Other Services	1.13	1.16	1.18	1.16	1.16	1.16	Base

(Source: Processed Data, 2025[1])

Of the 17 economic sectors in Palangka Raya City's GRDP, the LQ analysis identified that 14 sectors showed an average LQ > 1, classifying them as basic or leading (potential) sectors. [1] These sectors have a comparative advantage and are able to meet local needs and have the potential to be exported outside the region. These basic sectors include: electricity & gas procurement; water procurement; waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; financial services & insurance; real estate; corporate services; government administration, defense & compulsory social security; educational services; health services & social activities; and other services. [1] Identifying these base sectors is crucial because they demonstrate economic specialization and export potential, which are vital drivers of regional economic growth. These sectors not only serve the city's internal needs but also generate a tradable surplus, bringing external income into the local economy.

Class Typology Analysis

The Klassen typology, as explained by Syafrizal (1997), provides a clearer picture of the position of sectors in the context of economic growth over time, as well as the patterns and structures of economic sector growth in a region. [1] This analysis classifies sectors into four quadrants based on their growth rate and contribution.

Table 3. Results of the Classification Typology Analysis Calculation [1]

Sector	Central Kalimantan Province		Palangka Raya City		Quadrant
	Sectoral Growth	Sectoral Distribution	Sectoral Growth	Sectoral Distribution	
A. Agriculture, Forestry and Fisheries	0.026	0.211	0.034	0.025	III
B. Mining & Quarrying	0.025	0.144	0.033	0.012	III
C. Processing industry	0.031	0.155	0.015	0.088	IV
D. Electricity & Gas Procurement	0.084	0.001	0.036	0.004	II
E. Water Supply, Waste Management, Waste & Recycling	0.056	0.001	0.024	0.002	II
F. Construction	0.033	0.082	0.044	0.102	I
G. Wholesale and Retail Trade, Car & Motorcycle Repair	0.039	0.121	0.043	0.197	I
H. Transportation & Warehousing	0.042	0.065	0.057	0.086	I

I. Accommodation & Food & Beverage Provision	0.048	0.017	0.058	0.047	I
J. Information and Communication	0.079	0.015	0.082	0.025	I
K. Financial Services & Insurance	0.059	0.035	0.058	0.082	II
L. Real Estate	0.033	0.019	0.035	0.031	I
M.N. Corporate Services	0.035	0.0003	0.046	0.001	II
O. Government Administration, Defense & Mandatory Social Security	0.040	0.058	0.026	0.199	II
P. Educational Services	0.049	0.045	0.067	0.062	I
Q. Health Services & Social Activities	0.085	0.021	0.089	0.028	I
R,S,T,U. Other Services	0.024	0.009	0.015	0.010	II

(Source: Processed Data, 2025[1])

The results of the analysis can be seen in table 4.5 above, the construction sector, wholesale and retail trade sector, car & motorcycle repair, transportation & warehousing sector, accommodation & food and beverage provision sector, information and communication sector, real estate sector, education services sector, health services & social activities sector, are included in the classification of quadrant I or it can be said that these sectors are growing rapidly and progressing rapidly. This is because the average growth and average distribution of Palangka Raya City is greater than Central Kalimantan Province. The electricity & gas procurement, water procurement , waste management, waste & recycling, financial services & insurance, corporate services, government administration, defense & mandatory social security, other service. These are sectors that are included in quadrant II, namely the fast-growing but depressed sector, this category has a larger average contribution value but its average growth is smaller than Central Kalimantan Province. Furthermore, the agriculture, forestry, and fisheries sector, as well as the mining & quarrying sector are included in quadrant III (Fast-Developing Regions) which is called a potential sector or can still develop rapidly. This is because the average contribution of Palangka Raya City is smaller than that of Central Kalimantan Province, but its average growth is relatively higher than that of Central Kalimantan Province. Furthermore, there is one sector that falls into quadrant IV, meaning that this sector is classified as a non-potential and lagging sector. This sector is the processing industry sector. This sector in Palangka Raya City has a smaller growth rate and contribution to the total GRDP compared to Central Kalimantan Province.

Growth Ratio Model (MRP) Analysis

The Growth Ratio Model (RPM) compares the growth of an economic activity in the study area (Palangka Raya City) with the same activity in the reference area (Central Kalimantan Province), providing an overview of the increase or decrease in income from that activity. [1] The MRP results are presented in the form of coefficient numbers, where RPr or RPs values > 1 indicate positive growth (+), and conversely, values < 1 indicate negative growth (-). [1]

Table 4. Results of MRP Calculations for Central Kalimantan Province and Palangka Raya City, 2020-2024[1]

No	Business Field	Growth Ratio Model (MRP)				Information
		Rpr		Rps		
		Results	Sign	Results	Sign	
A	Agriculture, Forestry and Fisheries	0.67	-	0.09	-	Experiencing low growth in both cities and districts
B	Mining & Quarrying	1.03	+	0.07	-	Experiencing low growth in both cities and districts

C	Processing industry	0.81	-	0.30	-	Experiencing low growth in both cities and districts
D	Electricity & Gas Procurement	1.28	+	2.30	+	Experiencing significant growth in both cities and districts
E	Water Supply, Waste Management, Waste & Recycling	1.16	+	1.05	+	Experiencing significant growth in both cities and districts
F	Construction	1.47	+	1.10	+	Experiencing significant growth in both cities and districts
G	Wholesale and Retail Trade, Car & Motorcycle Repair	1.10	+	1.49	+	Experiencing significant growth in both cities and districts
H	Transportation & Warehousing	1.34	+	1.83	+	Experiencing significant growth in both cities and districts
I	Accommodation & Food & Beverage Provision	1.59	+	2.94	+	Experiencing significant growth in both cities and districts
J	Information and Communication	1.52	+	1.35	+	Experiencing significant growth in both cities and districts
K	Financial Services & Insurance	1.06	+	2.02	+	Experiencing significant growth in both cities and districts
L	Real Estate	0.87	-	1.87	+	Experiencing low growth in districts but prominent in cities
M N	Corporate Services	1.74	+	1.91	+	Experiencing significant growth in both cities and districts
O	Government Administration, Defense & Mandatory Social Security	0.81	-	2.43	+	Experiencing low growth in districts but prominent in cities
P	Educational Services	1.03	+	1.41	+	Experiencing significant growth in both cities and districts
Q	Health Services & Social Activities	1.86	+	1.13	+	Experiencing significant growth in both cities and districts
R,S,T,U	Other Services	1.10	+	1.25	+	Experiencing significant growth in both cities and districts

(Source: Processed Data, 2025[1])

Based on the results of the MRP calculations, the sectors that showed prominent growth at both the provincial and district levels (Rpr "+" and Rps "+") and were categorized as leading sectors (Fast Growing Sectors) included: electricity & gas procurement; water procurement, waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; financial & insurance services; corporate services; education services; health services & social activities; and other services. [1] These sectors showed strong and consistent growth performance at both levels, indicating significant potential for further development.

Several sectors exhibit distinct growth patterns. The real estate and government administration, defense & mandatory social security sectors, while experiencing low growth at the provincial level (Rpr "-"), show notable growth in Palangka Raya City (Rps "+"). [1] This suggests that these sectors possess unique local strengths that are not fully reflected in broader regional trends. The mining & quarrying sector, (Rpr "+" and Rps "-"). [1] This indicates This sector experienced growth in the reference area (Central Kalimantan Province) but in the study area (Palangka Raya City) it experienced poor growth. Or it could be said that this sector experienced slow growth in the city but was competitive in the province.

Overlay Analysis

Overlay analysis is the final synthesis step that integrates the results of the Location Quotient (LQ), Klassen Typology, and Growth Ratio Model (MRP) to definitively identify the leading sectors in Palangka Raya City. [1] A sector is considered leading if it consistently shows positive (+) results from all three analysis tools. [1]

Table 5. Results of Overlay Analysis [1]

No	Business Field	*Location Quotient* (LQ)	*Class Typology*	Growth Ratio Model (MRP)
A	Agriculture, Forestry and Fisheries	-	-	-
B	Mining & Quarrying	-	-	-
C	Processing industry	-	-	-
D	Electricity & Gas Procurement	+	+	+
E	Water Supply, Waste Management, Waste & Recycling	+	+	+
F	Construction	+	+	+
G	Wholesale and Retail Trade, Car & Motorcycle Repair	+	+	+
H	Transportation & Warehousing	+	+	+
I	Accommodation & Food & Beverage Provision	+	+	+
J	Information and Communication	+	+	+
K	Financial Services & Insurance	+	+	+
L	Real Estate	+	+	+
M N	Corporate Services	+	+	+
O	Government Administration, Defense & Mandatory Social Security	+	+	+
P	Educational Services	+	+	+
Q	Health Services & Social Activities	+	+	+
R,S,T,U	Other Services	+	+	+

(Source: Processed data, 2025)

Based on this combined (Overlay) analysis, 14 leading sectors in Palangka Raya City were identified that consistently showed positive (+) scores across all three analysis tools. [1] These sectors are: electricity & gas procurement; water procurement; waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; financial services & insurance; real estate; corporate services; government administration, defense & compulsory social security; education services; health services & social activities; and other services. [1] These sectors demonstrate comparative advantages and strong growth potential, meaning they are not only able to meet local needs but also have the capacity for export. [1]

CONCLUSION

Based on the results of comprehensive data analysis and research objectives, several key conclusions can be formulated regarding the mapping of superior and competitive sectors for sustainable regional economic development in Palangka Raya City. First, the Shift-Share analysis clearly shows that the Palangka Raya City economy experienced significant positive growth during the 2020-2024 period, with a total sector value reaching IDR 2,742.25 billion. [1] All sectors showed positive Dij values, indicating a broadly positive contribution to the city's GRDP. The sectors that made the largest contributions in influencing economic performance were wholesale and retail trade, car & motorcycle repair (IDR 544.15 billion), transportation and warehousing (IDR 426.39 billion), and construction (IDR 347.72 billion). [1]

Second, based on the Location Quotient (LQ) analysis, of the 17 economic sectors in the GRDP of Palangka Raya City, 14 sectors were identified as leading or potential sectors with an average LQ > 1. [1] These sectors are the economic base that can be further developed and have export potential. These sectors include: electricity & gas procurement; water procurement, waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; financial & insurance services; real estate; corporate services; government administration, defense & mandatory social security; education services; health services & social activities; and other services. [1] This identification confirms the economic specialization of Palangka Raya City which tends to be oriented towards the service and infrastructure sectors.

Third, the Klassen Typology analysis provides a dynamic overview of the position of these sectors. Eight sectors fall into Quadrant I (fast-growing and fast-developing): construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; real estate; educational services; and health services & social activities. [1] Six other sectors fall into Quadrant II (fast-developing but under pressure): electricity & gas supply; water supply, waste management, waste & recycling; financial services & insurance; corporate services; government administration, defense & compulsory social security; and other services. [1] These sectors in Quadrants I and II are considered superior due to their development potential. Meanwhile, the agriculture, forestry, and fisheries, and mining & quarrying sectors are in Quadrant III (fast-growing), indicating untapped potential. The manufacturing industry sector is in Quadrant IV (relatively lagging), indicating structural challenges that need to be addressed. [1]

Fourth, the results of the Growth Ratio Model (MRP) analysis show that 14 sectors exhibited dominant growth, both at the city and provincial levels, confirming their leading status.1 sectors demonstrated outstanding and consistent growth performance. Finally, the Overlay analysis, which combines the results of the three previous methods, definitively identified 14 leading sectors in Palangka Raya City. [1] These sectors are: electricity & gas supply; water supply; waste management, waste & recycling; construction; wholesale and retail trade, car & motorcycle repair; transportation & warehousing; accommodation & food & beverage provision; information and communication; financial services & insurance; real estate; corporate services; government administration, defense & compulsory social security; education services; health services & social activities; and other services. [1] The consistency of the findings from these various analytical methods provides high validity to the identification of these sectors as key drivers of the Palangka Raya City economy.

Identification of these leading sectors provides a strong strategic foundation for the local government in formulating targeted economic development policies. By focusing investments and programs on these sectors, Palangka Raya City can encourage more inclusive, competitive, and sustainable economic growth, which in turn will contribute to achieving the Sustainable Development Goals (SDGs), particularly in creating decent jobs and supporting innovation and infrastructure.

REFERENCES

Adi, Bramantyo Nugroho. 2017. “Analysis of the Determination of Leading Sectors. The Economy

of Kutai Kartanegara Regency in 2010-2014."
Ahmadjayadi, C. (2001). Profile of Superior Products of Purbalingga Regency.
Arsyad, Lincolin. (2002). Introduction to Development Planning Regional Economy . Yogyakarta: BPEE Yogyakarta.
Arsyad, L. (1999). Introduction to Regional Economic Development Planning. Yogyakarta: BPFE UGM.
Arsyad, L. (1999b). Regional Economic Development.
Central Statistics Agency (BPS). (2016). Regional Economic Statistics. Jakarta: BPS.
Central Statistics Agency of Gresik Regency, 2022. Statistics of Palangka Raya City 2022. Central Statistics Agency of Palangka Raya City.
Central Statistics Agency. (2023). Regional Economic Statistics 2023. Jakarta: Central Statistics Agency.
Central Statistics Agency of Central Kalimantan, 2022 Gross Regional Domestic Product of Central Kalimantan Province According to Field at Constant Prices 2019-2024. Central Statistics Agency of Central Kalimantan Province.
Badudu, Zain. (2001). General Dictionary of the Indonesian Language . Jakarta: Pustaka Sinar Harapan.
Bappeda. (2017). Regional Economic Development Report 2017. Jakarta: Regional Development Planning Agency.
BAPPEDA. 2017. Economic Development . (Accessed December 16, 2023).
Hendra Perdana, DANS (2019). OVERLAY ANALYSIS TO DETERMINE THE POTENTIAL OF LEADING ECONOMIC SECTORS IN REGIONAL DEVELOPMENT (Case Study with GRDP of Pontianak City). Bimaster: Scientific Bulletin of Mathematics, Statistics and Its Applications, 8(4). https://doi.org/10.26418/bbimst.v8i4.36746
Mankiw, N.G. (2014). Principles of Economics (7th ed.). Cengage Learning.
Nisak, Zuhrotun. 2013. "Swot Analysis to Determine Competitive Strategy". Journal of Economics 4.
Samuelson, P. A., & Nordhaus, W. D. (2010). Economics (19th ed.). McGraw-Hill.
Sirojuzilam. (2008). Economic Disparity and Regional Planning, Economic Inequality between the Western and Eastern Regions of North Sumatra Province . Medan: Pustaka Bangsa Press.
Sirojuzilam. (2010). Regional, Development, Planning and Economics . Medan: USU Press.
Sugirno. (2015). Leading Economic Sectors and Export Potential . Jakarta: ABC Publishers.
Sugiyono, (2017). Quantitative Research Methods, Quantitative, and R & D. Bandung: alfabeta.
Sugiyono. (2017). Quantitative, Qualitative, and R&D Research Methods. Bandung: Alfabeta.
Syafrizal. (1997). Klassen Typology in Economic Analysis.
Tarigan, J. (2005). Regional Economic Analysis.
Todaro, MP (2010). Economic Development in the Third World . Jakarta: JKL Publisher.
Warpani, B. (1980). Quantitative Data in Research.
Widodo, Tri. 2006. Development Planning: Computer Applications (Regional Autonomy Europe) . UPP STIM YKPN. Jakarta.
Yusuf, A. (1999). Growth Ratio Model (MRP)