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Identifying Economic Growth Engines in Malinau Regency: A Shift-Share Analysis

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ABSTRACT

Inclusive and sustainable economic development in Malinau Regency is faced with structural challenges, where aggregate economic growth has not been optimal in reducing unemployment and poverty rates. This study aims to identify sectors that drive economic growth and examine the structural patterns of economic growth in Malinau Regency. This research was conducted using a Shift-Share approach using data from the Central Statistics Agency for 2024-2025. The identification results show a shift in the sources of economic growth in Malinau Regency. The Construction sector emerged as the main leading sector (Category I) with positive proportional shift (IM) and differential shift (RS) values, and contributed the highest growth of 24.73%. On the other hand, the Mining and Quarrying sector, which is structurally the largest contributor to GDP, actually contracted by IDR 227.06 billion (Category IV). Meanwhile, the agriculture, processing industry, trade, and accommodation and food and beverage sectors are in Category II, which means that they have structural potential but their local competitiveness still needs to be strengthened. Local governments need to reorient their policies by gradually reducing dependence on the extractive sector and directing investment to value-added economic diversification, agricultural downstreaming, as well as strengthening the service sector and the quality of human resources.

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1. INTRODUCTION

Economic growth is one of the important instruments in realizing inclusive and sustainable development. This is in line with Sustainable Development Goal (SDG) 8, which emphasizes the importance of encouraging inclusive and sustainable economic growth, increasing productivity, and creating productive and decent employment opportunities for all people (BPS, 2024). In the context of regional development, the achievement of these goals is not only determined by the amount of economic growth in aggregate, but also by the ability of regions to identify and develop economic sectors that have the greatest contribution and impetus to economic growth. Therefore, an understanding of economic structure and sectors that drive economic growth is important as a basis for formulating development policies that are able to increase employment opportunities, reduce poverty, and strengthen regional economic competitiveness.

Malinau Regency is one of the regions in North Kalimantan Province that has economic, social, cultural, and geographical characteristics in the Border Area. The dynamics of economic development in this region cannot be separated from the social and cultural history of local communities that also shape the pattern of resource utilization and economic activities. One of the values of local wisdom that has developed in the Dayak community is Padan Liu' Burung, which has long been practiced as a guideline in building a common life, managing natural resources, and forming a work ethic based on moral responsibility and communal solidarity (Bijumes et al., 2024). The existence of these local values is a potential social capital to support regional economic development that is not only oriented towards increasing output, but also paying attention to the sustainability of resources and the welfare of local communities.

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According to BPS (2025), the growth of Malinau Regency's GDP on the basis of the prevailing price in 2025 was recorded at 3.56 percent**.** The contribution of Malinau Regency GDP to the total GDP of North Kalimantan Province reached 11.87 percent**,** but the contribution was still below Nunukan Regency, Bulungan Regency, and Tarakan City. This condition shows that although Malinau has large economic resources and potential, its contribution to the regional economy of North Kalimantan Province is still relatively limited. Thus, it is necessary to identify economic sectors that have greater ability to create added value and become a driver of regional economic growth.

The economic structure of Malinau Regency also shows characteristics dominated by the primary sector. Based on the distribution of GDP according to business sector groups, the primary sector contributes 62.36 percent**,** while the secondary and tertiary sectors contribute 18.94 percent and 18.72 percent**,** respectively. This structure indicates that Malinau's economic activities are still highly dependent on natural resource-based sectors. On the one hand, the dominance of the primary sector reflects the large potential of natural resources owned by the region. However, on the other hand, high dependence on the primary sector can be a challenge if it is not followed by economic diversification, increased productivity, processing industry development, and added value creation. Therefore, identifying sectors that have advantages and the ability to encourage other sectors is important to determine the direction of Malinau Regency's economic transformation.

Regional economic growth is basically expected not only to increase the value of production, but also to generate social benefits through job creation and poverty reduction. In 2025, the percentage of poor people in Malinau Regency will be recorded at 5.56 percent**,** or around 5.24 thousand people**,** while the open unemployment rate will reach 3.42 percent**,** or around 1,735 people (BPS, 2026). This figure shows that the increase in economic activity has not completely eliminated the problem of employment and poverty. Thus, the economic growth generated by a sector needs to be studied not only based on its contribution to GDP, but also on its potential to create employment opportunities and have a multiplier effect on other economic activities.

The relationship between sectoral economic growth and labor absorption is also strongly influenced by the quality of human resources. The growth of a sector does not automatically result in an increase in job opportunities if the competence of the local workforce is not in accordance with the needs of the sector. A mismatch between labor skills and labor market needs can lead to structural unemployment even though the economy is growing (Poláková et al., 2023; Dartanto et al., 2023). Therefore, the development of Malinau Regency's leading sectors needs to be followed by improving the quality of human resources through education, training, and competency development. Investment in education, training, and health can increase the productive capacity of the community while strengthening the region's ability to take advantage of available economic opportunities (Swanson, 2022; Chweu et al., 2023).

The existence of key sectors or leading sectors is very strategic. Sectors that have advantages and relatively high growth have the potential to increase demand for goods and services, expand economic activity, and increase labor demand. Increasing labor demand in these sectors can ultimately contribute to reducing unemployment and poverty. Ehrenberg et al. (2021) emphasize that labor demand is strongly linked to economic growth and investment in human capital. Thus, the development of leading sectors is not only a strategy to increase regional output, but can also be an instrument for expanding employment opportunities and improving people's welfare. Kurniawan et al. (2025) show that the decrease in unemployment is related to a decrease in morbidity, more broadly on the quality of human life.

Malinau Regency also has opportunities to develop the tertiary sector, especially culture-based tourism and local wisdom. The cultural wealth and social characteristics of the community are assets that can be developed as part of the regional economic diversification strategy. Priyana and Prihartanto (2025) show that Malinau Regency has great potential in the development of sustainable cultural tourism. However, optimizing this potential still requires increasing transportation accessibility, variety and quality of accommodation, information and promotion, and recreational and educational facilities. One of the cultural activities that has economic potential is Irau Malinau, which not only functions as a cultural preservation activity, but also creates economic activities through increased transactions of goods and services. Based on the Malinau Regency Diskominfo (2025), the economic turnover during the implementation of Irau Malinau in 2025 will reach around IDR 107 billion**.** The magnitude of these economic activities shows a potential multiplier effect on trade, services, tourism, and other economic sectors.

In addition to the development of the economic sector, improving the quality of human resources is an important prerequisite for the sustainability of Malinau Regency's economic growth. Structured education and training can increase professionalism, adaptability, productivity, and the contribution of labor to economic activities (Choi & Min, 2025; Bijumes & Kristanto, 2019). Improving the quality of human resources also allows local workers to adapt to changes in economic structure and technological developments. In the long term, the ability of the workforce to adapt becomes increasingly important because economic transformation can shift the needs of the workforce from natural resource-based activities to processing, services, trade, tourism, and knowledge-based economic sectors. Mazher et al. (2025) emphasized that the size of the workforce, capital accumulation, and the quality of human capital are important factors in maintaining and accelerating economic expansion. Therefore, the development strategy of Malinau Regency needs to integrate the development of leading sectors with policies to increase the competence of the local workforce.

The main problem that then arises is that Malinau Regency's economic growth still does not fully contribute optimally to reducing unemployment and poverty, while its economic structure is still dominated by the primary sector. This condition shows the importance of knowing which sectors really have advantages, which sectors have relatively high growth, and which sectors have the potential to be the main driving force of the regional economy. This information is needed so that development policies are not only directed at sectors that have a large contribution to GDP, but also consider the ability of a sector to generate growth, create economic linkages, and create job opportunities.

Based on these conditions, this study aims to identify the sectors that drive the economic growth engine of Malinau Regency and examine the structural pattern of regional

economic growth. The identification of these sectors is expected to provide an empirical basis for local governments in formulating more targeted development policies, especially in maintaining sectors that have become economic forces while encouraging diversification and development of potential sectors. The results of the research are also expected to provide strategic information for investors regarding sectors that have development prospects in Malinau Regency.

2. LITERATURE REVIEW

2.1 Agglomeration Theory

According to Kuncoro (2019), agglomeration theory explains the tendency of economic activities, population, and infrastructure to be concentrated in certain locations, especially urban areas. This concentration arises because of the economic benefits obtained from geographical proximity, including location cost savings, increased labor market efficiency, knowledge exchange, and easy access to various public facilities and services. The proximity between economic activities allows companies and communities to obtain collective benefits through increased productivity and efficiency. This concept can be explained through the economic approach of localization and urbanization in a neoclassical perspective as well as through the dynamic externality and new economic geography approach. Thus, the agglomeration theory emphasizes that the concentration of economic activity in areas that have certain advantages can create cumulative benefits and strengthen the competitiveness of the region.

Spatial agglomeration arises from the trade-off between increasing returns and transportation costs**.** The concentration of economic activity occurs because companies and labor benefit from adjacent locations, while land and transportation costs are limiting factors (Koster & Thisse, 2024). Economic agglomeration can increase productivity through the gains that arise from the concentration of economic activity within an area (Donovan et al., 2022). Proximity to locations between economic activities can strengthen the exchange of knowledge, labor, and production inputs (Guo et al., 2023).

2.2 Growth Pole Theory

According to Kuncoro (2019), the Growth Pole Theory is a regional development approach that places the concentration of economic activity in a certain location as a driver for the development of the surrounding region. Economic growth basically does not take place uniformly throughout the region, but tends to be concentrated in certain locations that have advantages in economic activity, investment, innovation, and productivity. These locations then function as poles of growth which can be cities, economic zones, or leading industrial sectors.

The Growth Pole Theory explains that economic growth does not occur evenly in all regions, but tends to appear in certain locations or sectors that have greater ability to encourage economic activity. This concept is rooted in François Perroux's thinking which emphasizes the existence of industries or propulsive industries that have a strong relationship with other economic activities. These industries can attract capital, labor, technology, and resources so that they form a concentration of economic activity which in turn influences the surrounding area (Hamnett et al., 2023).

In its development, the mechanism of the pole of growth can be explained through two main effects, namely the polarization effect and the dispersion effect. The polarization effect occurs when capital, labor, investment, and economic activity are concentrated in the growth center. Meanwhile, the dispersion effect occurs when increased economic activity in the center results in benefits for the surrounding region through increased demand for inputs, trade, job opportunities, investment, and intersectoral linkages (Frick & Rodríguez-Pose, 2025).

3. METHOD

This study uses a quantitative descriptive approach to analyze the sectoral structure and dynamics of the Malinau Regency economy. The focus of the research is directed at identifying sectors that act as engines of regional economic growth based on changes in sectoral performance. The analysis is carried out using the Shift-Share method**,** which allows the decomposition of changes in the economic value of a sector into several components so that it can be known whether sector growth in Malinau Regency is mainly influenced by regional economic growth, sectoral structure, or regional sectoral competitiveness (Montanía et al., 2023; Ruault & Schaeffer, 2020).

The data used are secondary data in the form of Gross Regional Domestic Product (GDP) of Malinau Regency and GDP of North Kalimantan Province based on applicable prices (ADHB) by business sector in 2024 and 2025. Secondary data was obtained from official publications of the Central Statistics Agency of Malinau Regency and BPS of North Kalimantan Province which can be accessed by the general public and there are no human subjects involved. Data can be accessed https://malinaukab.bps.go.id and https://kaltara.bps.go.id. The use of GDP data by business field allows the study to identify sectors that have experienced an increase in production value and have contributed to changes in the regional economic structure.

The Shift-Share method is used to identify the sources of changes in the sectoral economic performance of Malinau Regency by comparing the development of each sector at the district level to the economic development at the level of North Kalimantan Province. This approach is based on the assumption that changes in the GDP of a sector at the regional level are not only influenced by economic growth in general, but also by sectoral characteristics and regional competitive advantages. In general, changes in GDP of sector *i* in Malinau Regency during the period 2024–2025 can be formulated as follows.

$$\Delta Y_i = NS_i + PS_i + DS_i \quad (1)$$

$\Delta Y_i$is a change in the GDP sector i in Malinau Regency, (NS_iNational/Regional Share) is a component of regional growth, (PS_iProportional Shift) is a component of the structure or industrial mix, and (DS_iDifferential Shift) is a component of regional competitive advantage or competitiveness. The Regional Share component shows the change in the sector's GDP in Malinau Regency that occurs when the sector grows at the economic growth rate of North Kalimantan Province. This component describes the influence of regional economic growth on sector growth in Malinau Regency and is calculated by equation.

$$RS_i = Y_{i,2024} \times \left(\frac{Y_{R,2025}}{Y_{R,2024}} - 1\right) \quad (2)$$

Description:
$Y_{i,2024}$= Sector I GDP of Malinau Regency in 2024
$Y_{R,2024}$= total GDP of North Kalimantan Province in 2024
$Y_{R,2025}$= total GDP of North Kalimantan Province in 2025

A positive hospital value shows that the economic growth of North Kalimantan Province has a positive influence on the increase in the sector's GDP in Malinau Regency. The Proportional Shift component or industry mix is used to find out whether a certain sector in Malinau Regency is growing faster or slower than the total economic growth of North Kalimantan Province. This component is calculated as follows.

$$PS_i = Y_{i,2024} \times \left[\left(\frac{Y_{Ri,2025}}{Y_{Ri,2024}} - 1\right) - \left(\frac{Y_{R,2025}}{Y_{R,2024}} - 1\right)\right] \quad (3)$$

Description:
$Y_{Ri,2024}$= GDP sector *i* of North Kalimantan Province in 2024
$Y_{Ri,2025}$= GDP sector *i* of North Kalimantan Province in 2025
$Y_{R,2024}$= total GDP of North Kalimantan Province in 2024
$Y_{R,2025}$= total GDP of North Kalimantan Province in 2025

A positive PS value indicates that the sector is a sector that structurally has a higher growth rate than the total economic growth of North Kalimantan Province. On the other hand, a negative PS value indicates that the sector's growth is relatively lower than regional economic growth.

The Differential Shift component is used to identify the competitive advantage of a sector in Malinau Regency compared to the same sector in North Kalimantan Province. This component is formulated as follows.

$$DS_i = Y_{i,2024} \times \left[\left(\frac{Y_{i,2025}}{Y_{i,2024}} - 1\right) - \left(\frac{Y_{Ri,2025}}{Y_{Ri,2024}} - 1\right)\right] \quad (4)$$

Description:
$Y_{i,2024}$= Sector I GDP of Malinau Regency in 2024
$Y_{i,2025}$= GDP sector *i* of Malinau Regency in 2025
$Y_{Ri,2024}$= GDP sector *i* of North Kalimantan Province in 2024
$Y_{Ri,2025}$= GDP sector *i* of North Kalimantan Province in 2025

A positive DS value indicates that the sector has a competitive advantage because its growth in Malinau Regency is higher than the growth of the same sector in North Kalimantan Province. On the other hand, a negative DS value indicates that the sector has relatively lower competitiveness.

4. RESULTS

The following is the distribution of gross regional domestic product (GDP) based on applicable prices according to the business field of Malinau district. North Kalimantan's GDP growth in 2024–2025 based on the data used is around 6.29%, while the change in Malinau's GDP reaches around IDR 633.39 billion. Malinau's economic structure in 2024 is highly concentrated in mining and quarrying with a contribution of around 56.07%, followed by construction at 13.87% and agriculture, forestry, and fisheries at 9.26%. However, real growth in 2024 shows a different pattern: construction grew by 12.05%, accommodation and food and beverage by 11.93%, and trade by 9.57%, while mining grew only 0.45%.

Table 1. Malinau Regency Shift-Share Results 2024–2025

Business Field	PDRB 2024	PDRB 2025	Malinau Growth (%)	NS	IM	RS	Changes	Category
Agriculture, Forestry & Fisheries	1.685,99	1.764,98	4,68	106,08	13,96	-41,05	78,99	II
Mining & Quarrying	10.208,82	9.981,76	-2,22	642,32	-697,14	-172,24	-227,06	IV
Processing Industry	376,89	399,06	5,88	23,71	30,25	-31,8	22,17	II
Electricity & Gas Procurement	7,28	6,81	-6,49	0,46	-0,21	-0,72	-0,47	IV
Water, Garbage & Waste Procurement	12,75	12,53	-1,69	0,8	-0,56	-0,46	-0,22	IV
Construction	2.525,35	3.149,91	24,73	158,89	162,01	303,66	624,56	I
Trade & Repair	810,22	856,49	5,71	50,98	50,21	-54,92	46,27	II
Transportation & Warehousing	502,52	524,12	4,3	31,62	-5,85	-4,16	21,6	IV
Accommodation & Eating & Drink	369,61	415,85	12,51	23,25	25,24	-2,25	46,24	II
Information & Communication	65,55	69,45	5,96	4,12	-0,79	0,57	3,9	III
Financial Services & Insurance	47,34	49,91	5,43	2,98	-0,92	0,52	2,57	III
Real Estat	36,41	38,55	5,86	2,29	0,71	-0,87	2,14	II
Corporate Services	23,67	25,46	7,56	1,49	-0,05	0,35	1,79	III
Government Administration	950,42	948,21	-0,23	59,8	-96,27	34,26	-2,21	III
Educational Services	358,68	360,29	0,45	22,57	-3,05	-17,91	1,61	IV
Health & Social Services	213,03	223,42	4,88	13,4	3,47	-6,48	10,39	II
Other Services	14,57	15,68	7,65	0,92	0,43	-0,23	1,11	II
Total	**18.209**	**18.842,47**	–	**1.145,68**	**-518,57**	**6,27**	**633,39**	–

4.1 Dynamics of the Economic Structure of Malinau Regency

The results of the shift-share analysis for the 2024-2025 period show that Malinau Regency's economic growth has undergone significant structural changes. Based on GDP data on the basis of prevailing prices, Malinau Regency's GDP will increase from around IDR 18.21 trillion in 2024 to IDR 18.84 trillion in 2025. This increase resulted in a change in the value of GDP of around IDR 633.39 billion. However, this growth did not occur evenly in all business fields. Some sectors experienced relatively strong expansion, while other sectors actually declined.

The most important finding is the emergence of construction as the sector that most strongly encourages economic growth in Malinau Regency**.** The value of the construction sector's GDP increased from around IDR 2.53 trillion in 2024 to IDR 3.15 trillion in 2025, or grew by around

24.73%. Thus, construction generates an additional value of around IDR 624.56 billion. This value is almost equal to the entire increase in Malinau Regency's GDP in aggregate. This condition shows that Malinau economic expansion in that period was increasingly supported by physical development activities and infrastructure investment.

These findings are consistent with Malinau previous economic developments. By 2024, construction will be the business field with the highest real growth, which is 12.05%. At the same time, the mining sector, which is structurally the largest sector, only grew by 0.45%. This condition shows a shift in the source of growth from the extractive sector to sectors related to physical development and capital formation.

4.2 Construction as a Leading Sector Driving Growth

Based on the shift-share component, the construction sector is in Category I**,** namely sectors that have a positive industrial mix *(*IM) value and a positive regional shift (RS). The NS value of IDR 158.89 billion shows that North Kalimantan's general economic growth has a positive influence on the improvement of Malinau's construction sector. More importantly, the IM value of IDR 162.01 billion shows that the construction sector is in a relatively prospective economic structure because its growth at the provincial level is higher than aggregate economic growth. Meanwhile, the value of the hospital reaching IDR 303.66 billion is a strong indication that the Malinau construction sector has a local competitive advantage**.** In other words, the development of construction in Malinau not only follows the economic expansion of North Kalimantan, but also shows a stronger growth ability compared to the construction sector at the provincial level.

These findings provide a strong empirical basis to position construction as the leading sector driving economic growth in Malinau Regency**.** Strengthening this sector has the potential to create a multiplier effect through increasing demand for building materials, transportation, trade, corporate services, labor, and various other supporting economic activities. In the context of regional development, the construction position is increasingly strategic because infrastructure development can improve connectivity between regions, reduce logistics costs, expand market access, and increase investment attractiveness. Therefore, construction is not only seen as a sector that generates added value directly, but also as an enabler for the development of other productive sectors**.**

4.3 Mining: A Major Contributor but Not a Source of New Growth

In contrast to construction, the mining and quarrying sectors showed unfavorable shift-share results. This sector experienced a decrease in GDP from around IDR 10.21 trillion to IDR 9.98 trillion, resulting in a contraction of around IDR 227.06 billion. The value of NS mining is still very large, namely IDR 642.32 billion. This is due to the large economic base of the mining sector in Malinau Regency. This means that if the economy of North Kalimantan grows by its aggregate rate, the Malinau mining sector will theoretically provide a large additional value because the sector has a very large GDP base. However, the IM value of -IDR 697.14 billion and the RS of -IDR 172.24 billion show structural problems as well as competitiveness. A negative IM value indicates that the performance of the mining sector no longer provides structural benefits as the fast-growing sectors at the provincial level. A negative RS value also shows that the growth of the Malinau mining sector is weaker than the development of the mining sector at the North Kalimantan level.

These findings are important because they show that the sector with the largest contribution is not necessarily the sector that is most powerful in driving future growth. The dominance of mining in Malinau's economic structure is still very large, but its contraction in the analysis period shows the risk of dependence on the extractive sector. This condition is in line with North Kalimantan's economic development. In 2024, mining and quarrying will still be the largest sector with a contribution of 28.72 percent to the province's GDP, but the growth is only 0.28 percent. In contrast, construction grew by 11.95 percent and trade by 9.80 percent. BPS also showed that mining only contributed around 0.07 percent to North Kalimantan's economic growth in 2024. Thus, Malinau's development policy needs to start reducing dependence on mining as the main source of growth and direct some of the economic benefits of mining to build more sustainable productive sectors.

4.4 Agriculture, Forestry and Fisheries: Economic Bases That Need to Be Strengthened

The agriculture, forestry and fisheries sectors generated an additional GDP of around IDR 78.99 billion in the 2024–2025 period. Although it experienced positive growth of 4.68 percent, the growth was still below the growth of the same sector at the North Kalimantan level.

The IM value of this sector is still positive at IDR 13.96 billion, which shows that the agricultural sector has structural opportunities in the provincial economy. However, a negative hospital of IDR 41.05 billion shows that the competitiveness of the Malinau agricultural sector is still not strong enough compared to the agricultural sector at the provincial level.

These findings indicate that agriculture cannot be developed only through increasing production volumes. Development strategies need to be directed at increasing productivity, production technology, yield processing, market access, and strengthening the value chain. Thus, the agricultural sector can change from just a base sector that provides raw materials to a sector that produces higher added value. This position is becoming increasingly relevant because the agriculture, forestry and fisheries sectors are one of the main sectors in Malinau's economic structure. By 2024, these sectors will account for around 9.26 percent of Malinau's GDP and grow by 3.80 percent in real terms.

4.5 Processing and Trade Industries: Economic Diversification Potential

The processing industry increased from around IDR 376.89 billion to IDR 399.06 billion with a growth of 5.88 percent. A positive IM value of IDR 30.25 billion shows that this sector has a relatively favorable growth structure at the provincial level. However, the RSS of -IDR 31.80 billion shows that the competitiveness of the Malinau processing industry is still relatively weak. This condition shows that there is a gap between structural opportunities and local capacity**.** The processing industry has the prospect of becoming a source of economic diversification, but production capacity, technology, investment, market access, and linkages with the primary sector still need to be strengthened.

Trade shows a relatively similar pattern. The trade sector increased by around Rp46.27 billion, but the RS value was

negative by Rp54.92 billion. This shows that Malinau's trade expansion still follows the general economic growth more than reflects the local competitive advantage. The relevant strategy is to integrate trade with the local production sector. The increase in trade will have a greater economic impact if supported by increased agricultural production, forest products, fisheries, household industries, and local processing industries.

4.6 Accommodation and Dining as a New Growth Sector

The provision of accommodation and food and beverages showed relatively high growth, which was 12.51 percent. The GDP of this sector increased by around IDR 46.24 billion. A positive IM value of IDR 25.24 billion shows that the sector is in a group of sectors that are structurally developed at the provincial level. However, a negative RS2.25 billion shows that Malinau's growth is slightly lower than the growth of the same sector at the provincial level. Thus, this sector can be categorized as a prospective sector that does not yet fully have a local competitive advantage**.**

This development is important for Malinau's economic diversification because accommodation and food and beverages are closely related to tourism, trade, transportation, government activities, and community mobility. The growth of the sector can also expand business opportunities for MSMEs.

4.7 Service Sector: Positive Growth but Economies of Scale Still Limited

Several service sectors, such as information and communication, financial and insurance services, corporate services, and government administration, show positive RS values. This indicates a local competitive advantage**,** although the economic scale is still relatively small. Information and communication, for example, grew 5.96 percent with positive RS of Rp0.57 billion. Financial services and insurance grew 5.43 percent with RS 0.52 billion, while corporate services grew 7.56 percent with RS Rp0.35 billion. These results show that the service sector is starting to gain space in Malinau's economic structure. Although its absolute contribution is still small, these developments have strategic significance. The growth of the service sector can support economic transformation through digitalization, increased productivity, business financing, professional services, and the development of the investment ecosystem.

4.8 Typology of Leading Sectors of Malinau Regency

Overall, the results of the shift-share can be grouped into four typologies. First, the leading sector with structural and competitive advantages (Category I), namely construction. This sector is the most strategic sector because it has high growth, a supportive sectoral structure, and local competitive advantages. Second, the sector is growing but local competitiveness is still weak (Category II). This group includes agriculture, processing industry, trade, accommodation and food and beverage, real estate, health, and other services. These sectors grew positively, but negative RS values showed that the growth was not stronger than similar sectors in North Kalimantan.

Third, sectors with competitive advantages but less supportive growth structures (Category III). This group includes information and communication, financial services, corporate services, and government administration. These sectors have local competitiveness, but do not yet have a strong enough growth structure to become the main engine of the regional economy. Fourth, sectors that face structural and/or competitive pressures (Category IV). This group includes mining and quarrying, electricity and gas procurement, water procurement, transportation and warehousing, and educational services. Mining is the most important sector in this group because it has a very large economic contribution but has actually contracted.

5. CONCLUSION

The leading sector driving Malinau Regency's economic growth in the 2024–2025 period is the construction sector**.** Meanwhile, agriculture, the processing industry, trade, and accommodation and food and beverages can be seen as supporting sectors that have development prospects. On the other hand, the results of the analysis signal that dependence on mining needs to be gradually reduced because the sector shows a negative contribution to changes in GDP in the analysis period. Thus, the direction of economic development in Malinau Regency should not only maintain the sector with the largest GDP contribution, but must give priority to sectors that are able to generate high growth, competitive advantage, economic diversification, and increased added value**.** This approach will strengthen regional economic resilience while reducing vulnerability due to dependence on extractive commodities.

The results of the shift-share show that Malinau Regency's economic development strategy needs to undergo a reorientation from dependence on the extractive sector towards economic diversification based on productivity and added value**.** First, construction needs to be positioned as a growth driver by ensuring that development spending results in greater linkages with local industries, trade, transportation, and local labor. Second, agriculture, forestry, and fisheries need to be directed at downstreaming and increasing added value**,** not just increasing production volumes. The development of local commodity-based processing industries can strengthen the relationship between the primary and secondary sectors.

Third, the mining sector remains important in the short term because its contribution to GDP is huge, but its economic benefits need to be directed towards financing structural transformation. Thus, revenues from natural resources can be used as capital to build more diverse economic sectors. Fourth, the development of the service sector, especially information and communication, financial services, corporate services, as well as accommodation and food and beverages, needs to be strengthened to create new sources of growth. Fifth, the development of new growth centers in North Kalimantan needs to be supported through improving the quality of human resources, strengthening infrastructure, and simplifying regulations and licensing procedures to create a more conducive environment for the expansion and diversification of economic sectors. This study has limitations because it only uses data from 2024-2025 and one method, namely Shift-Share.

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