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Original Article

The Transformation of Economic Structure in Palu City

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Abstract

Sustainable economic growth requires structural transformation to enhance the competitiveness of leading sectors in a region. This research aims to analyze the structural transformation of Palu City's economy from 2019 to 2024 using Location Quotient (LQ) and Shift-Share Analysis (SSA) analytical tools. The research results show that sectors such as Construction, Wholesale and Retail Trade, and Information and Communication have LQ values greater than 1 and contribute significantly to Palu City's GRDP. Conversely, the Agriculture and Manufacturing sectors reflect challenges in maintaining competitiveness. Results from Shift-Share Analysis reveal that the Information and Communication, Trade and Construction sectors remain the main pillars in post-disaster economic recovery, despite decreases in some components. This research contributes to understanding Palu City's economic transformation and provides a foundation for more effective economic development policies.

Keywords: Economic Growth, Leading Sectors, Structural Transformation.

1. Introduction

Economic growth has resulted in changes to economic structure. Structural transformation is a process of economic structural change from the agricultural sector to industrial, trade, and service sectors, where each economy will experience different transformations (Guntara et al., 2017). Economic sectors will undergo changes during the development process. Some main components of structural change include gradual shifts from agricultural to non-agricultural sectors. This aligns with modern economic growth theory which states that structural changes in modern economic growth include transitions from agricultural to non-agricultural activities, from industry to services, changes in the scale of productive units, transitions from individual companies to corporate entities, and changes in worker employment status (Sulfaidah & Nurmilasari, 2021). Generally, the transformation occurring in developing countries is from agricultural to industrial sectors (Guntara, 2017).

Theoretically, economic development is characterized by the expansion of economic activities and structural economic changes that occur continuously (Tan, 2010). Effective economic transformation becomes the main foundation for achieving sustainable and inclusive economic development. Thus, this transformation process will determine the direction and quality of regional development, concretely reflected in the annual growth of Gross Regional Domestic Product (GRDP) (Cokro et al., 2025). Leading sectors relate to comparisons from regional, national, and even international scales. At the national level, a sector can be called a leading sector if the sector in that region can compete with the same sector in other regions (Saswono & Arisna, 2025).

Successful economic development can be seen from economic growth in a region, or how much each sector contributes to GRDP formation (Amri, 2017). The higher the added value of each sector in GRDP formation means the region's income is also greater. Increasing GRDP will cause increased economic growth in that region, so economic development in a region can achieve targets expected by the government (Dama et al., 2016). Economic growth can be measured using Gross Regional Domestic Product (GRDP). Therefore, regional governments and all community components must be able to manage existing resources and form partnership patterns to create new employment opportunities and stimulate economic activity development in the region. The goal is to enhance potentials within the region for development. If the government manages the economy improperly, it will cause problems for the region to mobilize the economy as the main driver to accelerate development in the region.

Palu City is the capital of Central Sulawesi Province, which has a significant influence on the Province's GRDP. Palu City has diverse natural resources such as land resources, water, and supporting resources in the form of abundant and quality human resources, as well as adequate infrastructure in each area. Palu City, as the largest city in Central Sulawesi Province located in mountainous and vast oceanic areas, has different geographical conditions and comparative advantage potentials from other regencies or cities. Therefore, regional development policies cannot directly adopt policies from other regions. Policies must match the potential, needs, and problems faced by the region itself.

Economic development in Palu City can be understood by looking at indicators that reflect all economic activities carried out through GRDP indicators described through GRDP growth and sectoral roles (Palu City Central Statistics Agency). The GRDP growth rate from various sector aggregates in Palu City tends to change annually, where Palu City's GRDP growth rate from 2019 to 2020 was approximately -4.43 percent. From 2021-2024, Palu City's GRDP showed consistent increasing trends, reflecting economic recovery and growth of main sectors such as construction, trade, and manufacturing. The development of Palu City's GRDP growth rate during 2019–2024 reflects the regional economy's adaptability to various challenges. After experiencing pressure due to natural disasters and the pandemic, Palu City successfully showed economic recovery and stabilization with support from strategic sectors.

This research aims to explore more deeply the various challenges faced by leading sectors in Palu City and provide data-based solutions that can help formulate more effective development policies. The main focus of this research is identifying leading sectors in Palu City using Location Quotient and Shift-Share Analysis approaches, and analyzing factors affecting the performance of each sector. Additionally, this research is intended to formulate policy recommendations to encourage priority sector growth and enhance regional economic competitiveness. Through comprehensive analysis, this research is expected to contribute meaningfully to sustainable economic policy development in Palu City.

2. Literature Review

2.1. Regional Economic Development Theory

Regional economic development is a process where regional governments and communities manage existing resources and form partnership patterns between regional governments and the private sector to create new employment opportunities and stimulate economic activity development (economic growth) in that region (Siwi, 2017). Essentially, regional development is carried out through self-efforts and technical assistance and other aid from the government. Economically, regional economic development means advancing agricultural production and agricultural enterprises as well as industries and others suitable

to the region and also means being a source of income and employment for residents (Guntara, 2017).

2.2. Economic Growth

Referring to Sukirno (2013), economic growth is the development of activities in the economy that causes goods produced in society to increase. So if economic growth is high, the goods produced will also increase (Ardiansyah, 2017). This will improve community welfare levels. According to Todaro (2003), economic growth is a stable process where production capacity of an economy increases over time to produce increasingly larger levels of national income (Ardiansyah, 2017).

Growth is measured from per capita income by showing Gross National Product or Gross Domestic Product (Gunawan, 2020). Gross Regional Domestic Product (GRDP) is an important factor for understanding economic conditions in a region during a certain period, both at current prices and at constant prices (Dama et al., 2016). GRDP at current prices describes added value of goods and services calculated using prices per current year, while GRDP at constant prices shows added value of goods and services calculated using prices prevailing in one year as the base year. GRDP growth is an indicator in determining development success and is a necessary condition for reducing poverty levels in Palu City. The sufficiency condition is that GRDP growth is effective in reducing poverty levels. This means GRDP growth must spread to every group, including poor population groups in Palu City. Therefore, GRDP growth in every business field sector is very important in reducing and overcoming poverty levels in Palu City.

2.3. Economic Base Theory

Citing Tarigan (2005), economic base theory bases its view that the rate of economic growth in a region is determined by the magnitude of export increases from that region. Economic activities are grouped into base activities and non-base activities. Only base activities can drive regional economic growth. Base sectors are economic activities that can not only provide for markets within the region but also for markets outside the region, so demand for goods and labor in this sector is exogenous. Non-base sectors are economic activities that can only provide for markets within the region so demand for goods, services, and labor for this sector is endogenous (Sandi, 2023).

2.4. Economic Structural Change Theory

Structural change theories focus attention on economic structural transformation from agricultural patterns to modern structures with strong manufacturing industrial sectors and service sectors. This structural approach is supported by W. Arthur Lewis and Hollis B. Chenery (Todaro & Smith, 2000).

Arthur Lewis's development theory basically discusses the development process occurring between villages and cities, including the development process between these two places. This theory discusses investment patterns occurring in modern sectors and wage-setting systems prevailing in modern sectors that ultimately greatly influence existing urbanization flows (Mudrajad, 2006).

According to Kuznets, economic structural change, also called structural transformation, is defined as a series of interrelated changes in aggregate demand composition, foreign trade (exports and imports), aggregate supply (production and use of production factors) caused by continuous development and economic growth processes (Todaro, 1976).

2.5. Previous Research

Based on Lesmana (2023), regarding Economic Growth Analysis and Potential Sector Development in Makassar City. The research method used is descriptive quantitative research with an econometric approach. The data used is time series data obtained from Makassar City's Central Statistics Agency in the form of Makassar City's GRDP data from 2008-2012 at constant prices analyzed using LQ analysis. The research results showed that from 9 sectors studied, LQ coefficient values >1 were obtained for the services sector with an average LQ value of 1.19, trade sector with an average LQ value of 1.13, and manufacturing sector with an average LQ value of 1.02. This means these three sectors have potential for development because they are leading sectors for economic growth in Makassar City.

Research by Wiwekananda (2016) on Economic Structural Transformation and Leading Sectors in Buleleng Regency Period 2008-2013. High levels of structural and sectoral change relate to economic growth processes. This research aims to analyze economic structure and economic growth in Buleleng Regency. Analytical tools used are LQ along with Shift Share and DLQ. This research uses secondary data obtained from the Central Statistics Agency (BPS). LQ calculation results show four sectors that are base sectors: agriculture, mining and quarrying, manufacturing, and services. Shift Share analysis results for employment absorption show that the services sector absorbs the most labor followed by construction, PHR sectors, while the agriculture sector shows decreased employment absorption. Shift-Share analysis results for GRDP contribution show that PHR sector analysis provides the largest contribution in Buleleng Regency followed by services and agriculture sectors.

Research by Saswono & Arisna (2025), regarding location quotient and shift-share analysis of agricultural sub-sectors on economic growth potential in west Aceh regency used secondary data, where researchers collect data indirectly through other media intermediaries. Data analysis techniques used are based on Location Quotient (LQ) and Shift-Share Analysis. It can be concluded that Location Quotient (LQ) values of agricultural sub-sectors in West Aceh Regency during 2019-2023 show that the highest value was achieved by forestry and logging sectors in 2019-2023 with Location Quotient (LQ) greater than one, indicating this sector is a base sector. Conversely, the lowest value is in Agriculture and Livestock sectors in 2019-2023 with Location Quotient (LQ) less than one, indicating non-base sectors. Agricultural sectors showing more moderate growth, with Shift-Share showing positive results, indicate that growth rates are lower than national averages, but this sector still contributes to regional economy where this sub-sector's advantages are the same as in other regions throughout Aceh Province.

3. Methods

3.1. Research Type

This research type is descriptive. Descriptive research is a method that functions to describe or provide an overview of the object studied through collected data or samples as they are, without conducting analysis and making general conclusions.

3.2. Data Sources

Data sources in this research are various sources obtained through secondary data in the form of Palu City GRDP data and Central Sulawesi Province GRDP data from 2019 to 2024. Data used in this research methodology is obtained from Palu City Central Statistics Agency (BPS) and Central Sulawesi Province Central Statistics Agency (BPS).

3.3. Location Quotient (LQ) Analysis

To determine potential sectors in Palu City, the Location Quotient (LQ) analysis method is used. This method compares the magnitude of a sector's role in a region to the magnitude of that sector's role at national or regional levels. This technique is used to identify internal potential owned by the region (Kuncoro, 2004).

Formula:

$$LQ = \frac{\frac{Si}{S}}{\frac{Ni}{N}}$$

Where:

Si : GRDP value of sector i at Palu City level
S : Total GRDP of all sectors at Palu City level
Ni : GRDP value of sector i at Central Sulawesi Province level
N : Total GRDP of all sectors at Central Sulawesi Province level

Based on the above formula, there are 3 possible LQ values found:

a. LQ value in sector i = 1; means sector i's contribution rate in Palu City equals sector i's contribution rate in Central Sulawesi Province.
b. LQ value in sector i > 1; means sector i's contribution rate in Palu City is greater than Central Sulawesi Province or base sector.
c. LQ value in sector i < 1; means sector i's contribution rate in Palu City is smaller than Central Sulawesi Province or non-base sector.

3.4. Shift Share Analysis

Shift Share Analysis is one approach to evaluate growth rates of various sectors in a region through shift division analysis. The isolation approach is used in analysis as factors causing changes in industrial structure of a region as it grows over time (Asyafina & Muljaningsih, 2022). Shift Share Analysis is a technique to describe the impact of variables driving growth in a region and how these variables relate to other regions called shifts (R. M. R. P. Tarigan, 2024). Equations used in shift share analysis are as follows:

a. Provincial growth influence of sector i in Palu City (national share)

$$N_{ij} = E_{ij} \times r_n$$

b. Industrial mix influence of sector i in Palu City (proportional shift)

$$M_{ij} = E_{ij} (r_{in} - r_n)$$

c. Locational component influence of sector i in Palu City (differential shift)

$$C_{ij} = E_{ij} (r_{ij} - r_{in})$$

d. Growth of sector i in Palu City

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

Where:

i = Economic sectors studied (17 sectors)
j = Palu City regional variable
n = Central Sulawesi Province regional variable
E_{ij} = GRDP in sector i Palu City
E_{in} = GRDP in sector i Central Sulawesi Province
r_{ij} = Growth of sector i in Palu City
r_{in} = Growth of sector i in Central Sulawesi Province
r_n = Economic growth of Central Sulawesi Province

4. Results and Discussion

4.1. Location Quotient (LQ) Calculation Results

Location Quotient (LQ) is an analytical tool used to measure relative concentration of a sector at regional level compared to national level. In the context of Palu City, Central Sulawesi Province, LQ provides clear picture of sectors having competitive advantages in this region.

Table 1. Location Quotient (LQ) Calculation Results for Palu City 2019-2024

No	Business Field Sector	2019	2020	2021	2022	2023	2024	Average (LQ)	Status
1	Agriculture, Forestry, and Fisheries	0,18	0,19	0,20	0,22	0,23	0,25	0,21	Non Base
2	Mining and Quarrying	0,46	0,36	0,37	0,36	0,40	0,45	0,40	Non Base
3	Manufacturing	0.31	0,27	0,24	0,22	0,19	0,17	0,23	Non Base
4	Electricity and Gas Supply	4,84	5,21	5,55	6,16	6,59	6,97	5,89	Base
5	Water Supply, Waste Management, and Recycling	2,87	3,09	3,28	3,63	3,86	4,06	3,47	Base
6	Construction	1,67	1,96	1,83	1,89	2,03	2,07	1,91	Base
7	Wholesale and Retail Trade; Vehicle Repair	1,36	1,49	1,58	1,71	1,83	1,93	1,65	Base
8	Transportation and Storage	2,73	2,87	3,09	3,12	3,42	3,62	3,14	Base
9	Accommodation and Food Services	2,25	2,39	2,58	2,81	2,99	3,13	2,69	Base
10	Information and Communication	3,11	3,40	3,51	3,87	4,09	4,29	3,71	Base
11	Financial and Insurance Services	3,17	3,40	3,56	3,96	4,29	4,49	3,81	Base
12	Real Estate	1,62	1,77	1,89	2,06	2,20	2,28	1,97	Base
13	Business Services	5,70	6,23	6,54	7,16	7,65	8,03	6,88	Base
14	Public Administration, Defense and Social Security	2,62	2,91	3,03	3,40	3,61	3,70	3,21	Base
15	Education Services	2,44	2,66	2,83	3,06	3,27	3,42	2,95	Base
16	Health and Social Services	2,64	2,94	3,15	3,52	3,76	3,92	3,32	Base
17	Other Services	1,50	1,62	1,71	1,87	2,00	2,10	1,80	Base

Based on Location Quotient (LQ) analysis results, several sectors with LQ > 1 include agriculture, forestry and fisheries, electricity and gas supply, construction, accommodation and food services, real estate, public administration, defense and mandatory social security, and education services. These sectors are base sectors with potential for development as economic drivers in Palu City.

Meanwhile, other sectors with LQ < 1 are sectors less potential for development as economic drivers in Palu City. Although non-base sectors, these sectors are very necessary to support base sector development. Thus, integration between base and non-base sectors is an important element in driving Palu City's economic growth in the future. The decline in LQ in the Manufacturing sector from year to year, for example, shows this sector may face challenges in maintaining competitiveness or needs further development to compete with other sectors.

Overall, higher average LQ values in several main sectors show these sectors become pillars in the local economy. Therefore, these sectors have potential for continued development, while non-base sectors may need more attention in terms of development and competitiveness enhancement to increase their contribution to regional economy.

4.2. Shift Share Calculation Results

The results of the Shift Share Analysis (SSA) provide an in-depth overview of the dynamics of economic sector changes in Palu City during the period from 2019 to 2024. This analysis breaks down the contribution of economic changes into three main components: National Share (Nij), Proportional Shift (Mij), and Differential Shift (Cij). The combination of these three components produces Dij, which reflects the total sector contribution to regional GRDP changes. The following are the SS results for Palu City.

Based on Table 2, the shift share analysis results show that the sector providing the largest contribution is the Information and Communication sector. This sector recorded a Dij value of 582.55, despite experiencing decreases in Proportional Shift and Differential Shift of (486.48) and (88.48) respectively. The quite high National Share value of 1,157.50 indicates that this sector continues to grow in line with the increasingly rapid development of information technology needed in the economic activities of Palu City residents.

The Wholesale and Retail Trade; Motor Vehicle and Motorcycle Repair sector also contributed positively at 462.46. Although its Proportional Shift and Differential Shift values show negative figures of (571.42) and (13.67), the National Share value reaching 1,047.55 indicates that this sector still has strength as a main supporting sector for regional economic activities. Trade remains a growing sector due to relatively stable community consumption needs.

Table 2. Shift Share Analysis Calculation Results for Palu City 2019-2024

No	Economic Sector	Nij (National Share)	Mij (Proportional Shift)	Cij (Differential Shift)	Dij (Nij+Mij+Cij)
1	Agriculture, Forestry, and Fisheries	441.79	-378.08	-16.62	47.09
2	Mining and Quarrying	769.35	126.07	-644.29	251.13
3	Manufacturing	758.04	1,394.27	-2,046.09	106.22
4	Electricity and Gas Supply	20.71	-9.99	0.29	11.02
5	Water Supply, Waste Management, and Recycling	32.31	-24.51	-0.51	7.28
6	Construction	1,790.16	-1,141.97	-454.09	194.1
7	Wholesale and Retail Trade; Vehicle Repair	1,047.55	-571.42	-13.67	462.46
8	Transportation and Storage	936.49	-938.36	-102.68	-104.55
9	Accommodation and Food Services	97.78	-48.82	-5.34	43.62
10	Information and Communication	1,157.50	-486.48	-88.48	582.55
11	Financial and Insurance Services	591.65	-276.00	-12.14	303.52
12	Real Estate	255.79	-155.10	-6.71	93.98
13	Business Services	124.38	-87.90	-3.64	32.83
14	Public Administration, Defense and Social Security	1,409.61	-1,113.04	-29.38	267.19
15	Education Services	792.09	-658.20	-29.30	104.59
16	Health and Social Services	339.22	-206.78	23.28	155.72
17	Other Services	103.09	-69.99	-3.37	29.72
	GRDP	**10,667.52**	**-4,646.30**	**-3,432.75**	**2588.47**

The Construction sector also contributed positively at 194.10. This value comes from a fairly large National Share of 1,790.16. However, this sector experienced pressure from Proportional Shift of (1,141.97) and Differential Shift of (454.09). This shows that although the construction sector remains an important sector in supporting regional physical development and infrastructure, there are challenges that must be overcome for this sector to remain competitive in the future.

In addition to these three main sectors, several other sectors also showed positive contributions to Palu City's GRDP changes, such as Financial and Insurance Services at 303.52, Public Administration, Defense and Mandatory Social Security at 267.19, Mining and Quarrying at 251.13, Health Services and Social Activities at 155.72, Manufacturing Industry at 106.22, Education Services at 104.59, Real Estate at 93.98, Business Services at 32.83, Agriculture, Forestry and Fisheries at 47.09, and Accommodation and Food Service Activities at 43.62. Other Services also contributed 29.72.

Meanwhile, several sectors experienced low or even negative Dij values, indicating declining contributions to regional economic growth. The Transportation and Storage sector recorded a negative Dij value of (104.55), caused by decreases in Proportional Shift of (938.36) and Differential Shift of (102.68). Although this sector has a fairly large National Share value of 936.49, locally it still faces obstacles in keeping pace with the growth of similar sectors in other regions. Similar situations occurred in the Electricity and Gas Supply sector and Water Supply, Waste Management, Waste and Recycling sector, which recorded Dij values of 11.02 and 7.28 respectively. The low contribution from these sectors indicates the need for improving service efficiency and basic infrastructure.

Overall, the Shift Share analysis results show that Palu City has several leading sectors capable of making positive contributions to regional economic growth, particularly the Information and Communication, Trade, and Construction sectors. On the other hand, sectors showing declining contributions need more attention in development policy formulation. Appropriate policy support, strengthening local competitiveness, and technology utilization are expected to improve the performance of lagging sectors so that Palu City's economic growth can proceed sustainably and equitably.

4.3. Analysis of Economic Sector Contributions to GRDP

Location Quotient (LQ) is a method for measuring the level of economic sector specialization in a region compared to the national average. An LQ value > 1 indicates a basic sector, which is a leading sector that contributes more to the regional economy and has comparative advantages. In Palu City, sectors such as Electricity and Gas Supply, Water Supply, Construction, Wholesale and Retail Trade, and Transportation and Storage are basic sectors that serve as main pillars of the regional economy. Conversely, an LQ value < 1 indicates non-basic sectors, such as Agriculture, Forestry, Fisheries, and Manufacturing Industry, whose contributions are still low and require further development to enhance competitiveness and economic role in the region.

The LQ analysis results for economic sectors in Palu City during the 2019-2024 period show that sectors such as Electricity and Gas Supply, Water Supply, Waste Management, Construction, Wholesale and Retail Trade, Transportation, and Information and Communication have average LQ values greater than 1. LQ values higher than 1 indicate that these sectors have greater competitive advantages compared to the same sectors at the national level, contribute significantly to Palu City's Gross Regional Domestic Product (GRDP), and have potential to drive sustainable economic growth (Kariawu et al., 2025). Conversely, sectors such as Agriculture, Forestry, and Manufacturing Industry have lower LQ

values, reflecting that these sectors function more as non-basic sectors serving local markets and are less competitive at the national level.

Research by Putra et al. (2022) shows that the Agriculture, Forestry, and Fisheries sector in Palu can be considered a basic sector, despite having lower LQ values, and has great potential to support regional economic growth. This aligns with Pratama et al. (2023) who noted that the agricultural sector in Central Sulawesi, including Palu, has great potential for further development, especially in improving post-disaster economic resilience. Additionally, Amra (2024) noted that the Construction and Wholesale and Retail Trade sectors became leading sectors post-2018 disaster, with major contributions to regional economic recovery. This finding aligns with findings in this research, where both sectors show high LQ values and contribute significantly to post-disaster economic recovery and stabilization.

Based on LQ results, the Construction and Trade sectors in Palu City have great potential to function as main pillars in sustainable economic development. These sectors need more intensive policy support, especially in infrastructure development and private sector capacity building to strengthen their contribution to the regional economy. Conversely, the Manufacturing Industry and Agriculture sectors, despite showing lower LQ values, still play important roles in regional economic resilience. The decline in Manufacturing Industry LQ values shows that this sector faces challenges in maintaining competitiveness, both locally and nationally. This indicates the need for policies supporting technological innovation, workforce skill development, and production efficiency improvement to strengthen this sector's competitiveness (Nasrullah et al., 2024).

In the Agriculture sector, despite showing low LQ values, there is potential to optimize this sector as part of post-disaster economic policy, considering the importance of this sector in providing local food and supporting other economic activities. Therefore, policies focusing on Agricultural Processing Industry development and providing broader market access will greatly help increase its contribution to Palu City's GRDP (Fironika et al., 2023). Thus, leading sectors in Palu City, especially those showing high LQ values, should receive more attention in regional development policies, while weaker sectors need adequate incentives and support to improve their competitiveness.

4.4. Structural Transformation and Identification of Potential Economic Sectors

The structural economic transformation of Palu City, triggered by the 2018 natural disaster, has affected regional economic dynamics. After the disaster, various economic sectors in Palu showed various important change patterns for further analysis. By integrating Location Quotient (LQ) and Shift-Share Analysis (SSA) results, we can obtain a more complete picture of sectors that are developing and those facing challenges in economic recovery. Based on LQ results, sectors such as Construction, Wholesale and Retail Trade, and Information and Communication show high LQ values, indicating that these sectors have competitive advantages at the local level and contribute significantly to Palu City's GRDP. Results from Shift-Share Analysis (SSA) also show that Information and Communication, Construction and Trade sectors remain main pillars in post-disaster economic recovery, despite decreases in some Proportional Shift and Differential Shift components.

LQ and SSA results reveal that Mining and Manufacturing Industry sectors with low LQ values and significant decreases in Differential Shift components require deeper policies to improve their competitiveness. These sectors, despite having limited contributions in post-disaster economic recovery, still have potential for further development with policies supporting innovation and strengthening local industrial capacity (Amra, 2024; Purnama et al., 2022). The decline in Manufacturing Industry and Mining sectors shows that

improvements in operational efficiency and technological innovation will be crucial in improving the competitiveness of these sectors (Fauzia & Nugraha, 2019).

Research by Pelealu et al. (2024) and Purnama et al. (2022) emphasizes that economic transformation in Palu has shown a shift from traditional agricultural sectors to industrial and service sectors. Purnama et al. (2022) adds that sectors such as Construction and Health Services play important roles in post-disaster regional economic stabilization, which is reflected in LQ and SSA analysis results. Additionally, Gamar & Haliadi-Sadi (2020) noted that the informal sector, which plays a major role in economic recovery, shows high adaptability to post-disaster economic changes, and can be an important part of sustainable economic development strategies in Palu City.

The presence of Palu Special Economic Zone (PSEZ), as explained by Purnama et al. (2022), is also a strategic effort to diversify the economy and attract investment. PSEZ is expected to create a more conducive business environment for leading sectors, particularly in Information and Communication, Construction, Trade, and Tourism sectors, which can contribute more to regional economic growth. This aligns with findings from Tjaija et al. (2022) showing that sustainable tourism can have positive impacts on the regional economy by creating new jobs and driving local sector growth.

Based on the integration results between LQ and SSA, it can be concluded that leading sectors such as Information and Communication, Construction and Trade have great potential to lead Palu City's economic recovery. However, sectors such as Manufacturing Industry and Mining that face major challenges require more focused policies, including infrastructure development, technology, and local industrial capacity improvement. With proper attention to these sectors, Palu City can achieve more inclusive and sustainable economic growth in the future (Andriansyah et al., 2023).

5. Conclusion

The transformation of economic structure in Palu City during the 2019-2024 period shows significant changes in the composition of economic sectors. This change is marked by a shift in dominance from traditional sectors, such as agriculture and manufacturing industry, toward modern sectors based on services and infrastructure. This transformation process reflects post-disaster recovery efforts and adaptation to regional development dynamics. The Construction, Wholesale and Retail Trade, and Information and Communication sectors emerge as leading sectors driving this transformation direction. These three sectors not only have high Location Quotient (LQ) values but also record positive contributions in Shift-Share Analysis (SSA) results, making them the main engines of Palu City's economic growth. Strengthening the role of these sectors reflects the tendency of economic structure increasingly relying on productive sectors with high added value. On the other hand, Agriculture and Manufacturing Industry sectors show stagnant or even declining trends, both in terms of comparative advantages and contributions to GRDP. Low LQ values and limited SSA results in these sectors indicate that structural transformation has not proceeded evenly, and policy intervention is still needed to boost the competitiveness of these sectors. Thus, it can be concluded that Palu City is undergoing an economic transformation process toward a more modern and competitive structure. However, for this process to proceed in a balanced and inclusive manner, development strategies are needed that not only focus on leading sectors but also strengthen lagging sectors. Appropriate policy support, technology utilization, and strengthening local resources are keys to success in building sustainable and adaptive economic structures for future challenges.

Based on this research results, there are several recommendations that can be considered to promote more sustainable economic recovery and development in Palu City. First, for leading sectors such as Construction, Trade, and Information and Communication, it is important to continue providing policy support that strengthens local industrial capacity, improves infrastructure, and facilitates technology enhancement that will expand competitiveness at regional and national levels. Second, sectors showing low LQ values, such as Agriculture and Manufacturing Industry, need more attention. Local governments can implement training programs to improve workforce skills and facilitate access to technology that can improve production efficiency and product quality. Policies focusing on developing industries based on local natural resources can help these sectors compete better in local and global markets. Additionally, there needs to be strengthening of the informal sector that plays a major role in post-disaster economic recovery. Support in the form of access to financing, entrepreneurship training, and market network facilitation will be very beneficial for increasing this sector's contribution to Palu City's economy. Further research can be conducted to explore more deeply the potential of informal sectors and ways to strengthen less competitive sectors, especially those related to technology and innovation in facing global challenges.

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