Studi Ekonomi dan Kebijakan Publik (SEKP)
ISSN 2963-394X, Vol 3, No 1, 2024, 61-80 https://doi.org/10.35912/sekp.v3i1.5261

Analysis of the Basic Sector and the Contribution of Economic Sectors to Economic Growth in the City of Jayapura

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Article History
Received on 25 June 2025
1st Revision 1 July 2025
2nd Revision 9 July 2024
3rd Revision 15 July 2024
Accepted on 25 July 2024

Abstract

Purpose: Economic development is a structured effort to manage resources in order to improve community welfare. This study aims to: (1) analyze the contribution trends of each economic sector to Jayapura City's GRDP from 2019 to 2023; (2) identify the sector with the highest contribution during this period; and (3) determine which sectors serve as base (leading) sectors using Location Quotient (LQ) analysis.

Research methodology: The study applies descriptive analysis and the LQ method by comparing the share of each economic sector in Jayapura City to that in Papua Province. Secondary data from 2019 to 2023 was analyzed to assess sectoral performance and identify strategic sectors for regional development.

Results: The findings show that the top contributing sectors are Construction (24.39%), Wholesale and Retail Trade including Motor Vehicle and Motorcycle Repair (17.97%), and Government Administration, Defense, and Mandatory Social Security (10.87%). These three sectors together contribute more than 50% to Jayapura's total GRDP. Sectors with LQ > 1—such as Construction, Financial Services, and Information and Communication—are considered base sectors, indicating they produce beyond local needs and drive economic growth.

Conclusion: Jayapura City's economic structure is dominated by a few key sectors that play a central role in development planning and economic resilience.

Limitation: This research is limited to Jayapura City and does not analyze comparative or qualitative dimensions, such as employment quality or policy impact.

Contribution: The study supports regional planning by providing an empirical foundation to prioritize investments and policy in high-performing and base sectors.

Keywords: *Contribution, GRDP.*

How to cite: Tame, Y. S., Marlissa, E. R., & Ngutra, R. N. (2024). Analysis of the basic sector and the contribution of economic sectors to economic growth in the city of Jayapura. *Studi Ekonomi dan Kebijakan Publik*, 3(1), 61-80.

1. Introduction

Economic development is a planned and organized effort to manage all resources to improve the welfare of society. Generally, development plans include goals and principles of development policies, such as increasing income growth and job opportunities, promoting a more equitable income distribution, balancing development between regions, and changing the economic structure to avoid imbalances (Nisya, Wulansari, & Wartariyus, 2023). One important indicator to assess the condition of a region during a specific period is the Gross Regional Domestic Product (GRDP), both at current prices and constant prices (Kondo & Mutsvangwa, 2025; Rahma, Triono, & AT, 2023).

The Gross Regional Domestic Product (GRDP) is the total value produced by all business units in a

region over a specific period, or the total value of final goods and services produced by all economic units. The GRDP at current prices reflects the added value of goods and services calculated using current prices each year, while the GRDP at constant prices shows the added value of goods and services calculated using the prices of a specific year as a base year (Putri, Wulan, Fihartini, Ambarwati, & Pandjaitan, 2022).

The greater the contribution from each economic sector to the GRDP of a region, the better the economic growth it will experience. An increase in economic growth through GRDP indicators will also improve the welfare and prosperity of the community. The economic level of a region will change in line with the utilization of natural resources and production factors by business units or economic activities (Adula, Kant, & Birbirsa, 2022; Ichdan & Maryani, 2024).

Economic growth is one of the macro indicators used to assess the real economic performance of a region. The economic growth rate is calculated based on the change in GRDP at constant prices from the previous year. Based on 2010 constant prices, there was growth in the GRDP of Jayapura City in 2023. This growth was influenced by an increase in production across all sectors (free from the influence of inflation). The GRDP value of Jayapura City at constant prices was 24.78 trillion rupiahs, an increase compared to the 2022 value of 23.70 trillion rupiahs. This indicates that Jayapura's economy grew by 4.53% in 2023, up from 3.87% in the previous year. Data in Figure 1.1 shows that the increase in Jayapura's economic growth in 2023 was due to growth in several sectors, particularly in the Financial Services and Insurance sector. This sector experienced growth of 12.26%, after previously increasing by 4.84% (Putri et al., 2022).

The largest growth occurred in the financial intermediary services subcategory, with a growth rate of 15.82%. This was driven by increased investment in large-scale businesses such as supermarkets, hotels, restaurants, as well as investments made by SMEs and small businesses in Jayapura City (Salim, Jatnika, & Yudiana, 2023). Furthermore, the increase in financial intermediary services was supported by the promising monetary and economic outlook and the relatively well-maintained credit risk management. In the insurance and pension fund subcategory, the increase was due to a rise in fire incidents during 2023, which led to an increase in home insurance. Although the financial services and insurance sector had the highest growth, its contribution was only 5.51%. The sector with the highest contribution to the GRDP of Jayapura City in 2023 was the construction sector, at 24.39% (Dharma, Agustina, & Windah, 2021).

The second largest growth occurred in the transportation and warehousing sector (10.83%). The increase in this sector was due to rising activity in land, sea, river, lake, and ferry transport, as well as warehousing and transport support services, including postal and courier services. The increase in land transport activity was driven by the growing popularity of online transportation in Jayapura City. Growth in the sea transport sub-sector was reflected in the increased volume of goods and passengers year-over-year from 2022, which boosted warehousing, postal, and courier activities. Next, the sector with the largest subsequent growth was the corporate services sector, with a growth rate of 7.90%. This was due to increased activity leading up to the 2024 elections in Jayapura City (Yando, Panusunan, & Fauzan, 2023).

To understand the structure and development of a region's economy, the Gross Regional Domestic Product (GRDP) is the primary indicator that reflects the economic performance of Jayapura City. By analyzing the contributions of each sector (such as agriculture, industry, trade, services, and other sectors), we can identify the sectors that drive the economy, sectors with potential for development, and sectors that may need more attention from the regional government of Jayapura City. It also serves as a basis for formulating sustainable economic development policies based on the region's potential. Therefore, this study aims to conduct research titled "**Analysis of the Basis Sector and Contribution of Economic Sectors to Economic Growth in Jayapura City.".**

2. Literature review

2.1 Theoretical Overview

2.1.1 GRDP (Gross Regional Domestic Product)
According to Sukirno (2016), GRDP is the total gross added value generated by all sectors of the economy in a region or province. Gross added value is the production value (output) minus intermediate costs. The components of gross added value include income factors (wages and salaries, interest, rent, and profits), depreciation, and net indirect taxes. By calculating the gross added value of each sector and summing it up, we can derive the Gross Regional Domestic Product (GRDP). The result of this GRDP calculation is commonly referred to as GRDP by business sector and GRDP by usage (Tukur, Shehu, Mammadi, & Sulaiman, 2019; Yusuf & Resosudarmo, 2009).

GRDP by business sector is the total added value of all activities in a region over a specific period, while GRDP by usage is the total value of goods and services used for final consumption. GRDP is the total value of all final output produced by an economy at the regional level (both by local residents and those from other areas residing in the region). As previously outlined, the regional income figures over several years reflect the increase and decrease in income levels in the region (Utomo, Azizah, & Pangestu, 2022).

2.1.2 Factors Affecting Income Increase/Decrease
Real increase/decrease refers to changes in income not influenced by price changes. If there is a real increase in income, it means that the purchasing power of the population in the region has improved, for example, the ability to purchase the same quality goods in larger quantities (Dung, 2024).

Income increase/decrease caused by price changes. If income increases solely due to inflation (a decrease in the purchasing power of money), even though income rises, the number of goods that can be bought may not necessarily increase. It is important to see which increases more sharply, income level or price level. One indicator of the success of development implementation that can be used as a macro benchmark is economic growth. However, even if real income increases, it may have a positive impact on economic growth (Arsyad, 2015; Mitiku & Nega, 2021; Muhammad, Salleh, & Yusr, 2020).

2.1.3 Approaches Used in GRDP
The Gross Regional Domestic Product (GRDP) is a macroeconomic indicator that provides an overview of the economic situation of a region. The approaches used in calculating GRDP are:
1. GRDP based on the production approach.
This approach is also known as the value-added approach, where gross added value is calculated by subtracting the value of intermediate goods produced by all economic activities from the gross production value of each economic sector. This added value represents the value added to goods and services by production units as input factors. Production units in this approach are grouped into 17 business sectors, such as: Agriculture, Forestry, and Fisheries; Mining and Quarrying; Manufacturing Industry; Electricity and Gas Procurement; Water Supply, Waste Management, and Recycling; Construction; Wholesale and Retail Trade, Motor Vehicle and Motorcycle Repair; Transportation and Warehousing; Accommodation, Food, and Beverage Services; Information and Communication, Financial Services, and Insurance; Real Estate; Corporate Services; Government Administration, Defense, and Mandatory Social Security; Educational Services; Health Services and Social Activities and Other Services.

Production can be understood as activities to create goods or services that have added value. In this regard, the calculation of national income through the production approach involves summing up the added value from all production sectors in one year. This approach can be formulated as follows:

$$\mathbf{Y = \{(P1 \times Q1) + (P2 \times Q2) + \ldots + (Pn \times Qn)\}}$$

Explanation:
Y = national income
P1 = price of good 1
P2 = price of good 2
Pn = price of good n

Q1 = quantity of good 1
Q2 = quantity of good 2
Qn = quantity of good n

2.1.4 Economic Growth Theory
There are several economic growth theories related to the Gross Regional Domestic Product (GRDP), namely:
1. Regional Economic Growth Theory
Regional economic growth is the increase in income of the people within the region, meaning the increase in the total added value that occurs in that region. The increase in income is measured in real values, meaning it is expressed in constant prices. This also simultaneously represents the compensation for the production factors operating in the region (land, capital, labor, and technology), which roughly depicts the prosperity of the region. The prosperity of a region is determined not only by the amount of added value created in the region but also by how much transfer payment occurs, meaning the portion of income flowing out of the region or receiving funds from outside the region (Richardson, 1973).
Boediono (1985) stated that economic growth is the process of increasing output per capita in the long run, meaning the percentage increase in output must be higher than the percentage increase in population. There is a tendency in the long term for growth to continue. Some economists provide a stricter definition, stating that growth should originate from the internal processes of the economy. This is very important in regional economics because a region may experience growth, but if the growth is driven by financial aid or subsidies from the central government, the growth will cease when the subsidies stop. In such a case, it is difficult to say that the region's economy has genuinely grown. It is natural for a backward region to receive greater financial support compared to other regions, but after a certain period, the region should still be able to grow even without excessive allocations (Handayani, Rusmana, & Warsidi, 2023; Isard, 1966).

2. Adam Smith's Economic Growth Theory
Adam Smith argued that economic growth depends on two growth factors: total output and population growth. According to Smith, output growth is influenced by the following factors: 1) available natural resources, 2) population size, and 3) amount of capital. Smith believed that the level of output growth in a country would be determined by the natural resources it possesses. For high economic growth, natural resources must be utilized by specialized labor (Ferdian, 2024).

In this view, according to Adam Smith, the population is a passive factor in growth. The labor force will increase as needed if wages are paid above the subsistence level (wages just enough to survive). Growth stagnates when natural resources are exhausted, making growth no longer profitable and only enough to meet minimum needs.

3. Joseph Schumpeter's Economic Growth Theory
Joseph Schumpeter's Economic Growth Theory emphasizes the role of entrepreneurs. Entrepreneurs are always looking for breakthroughs and innovations to gain more profits and have an advantage over competitors. Schumpeter did not consider the limitations of natural resources and population growth as critical, as both of these factors were already known. According to him, the driving force behind economic growth is the innovation process carried out by entrepreneurs. Economic progress comes from the development carried out by entrepreneurs through innovation. This economic development process is not fixed but is random. Over time, various new innovations emerge that improve production both in terms of quantity and quality.

2.1.5 Gross Regional Domestic Product (GRDP) Calculation Methods
1. Direct Method
a. Production Approach
The production approach is intended to calculate the net value of goods and services produced by all economic sectors over the course of a year in all regions. The goods and services produced are valued at producer prices, which exclude transportation and marketing costs. Transportation costs are counted as income for the transportation sector, and marketing costs are counted as income for the trade sector..

b. Income Approach

GRDP is formulated by calculating the total compensation received by production factors (in the form of wages and salaries, interest, rent, and profits) involved in the production process in a region over a specific period, usually one year. Based on this definition, gross added value is the sum of wages and salaries, land rent, capital interest, and profits, all before income taxes and other direct taxes.

c. Expenditure Approach

GRDP is calculated by summing all components of final expenditure, including household consumption, non-profit private sector consumption, government consumption, gross fixed capital formation, and net exports (exports minus imports) within a region over a specific period, typically one year. This method calculates gross added value starting from the final use of the goods and services produced.

2. Indirect Method

Conceptually, estimating GRDP using the current price and constant price approaches provides different interpretations of the data (Kuncoro, 1997).

Current Price GRDP is the calculation of GRDP based on the prices of the current year, which includes the effect of inflation.

Constant Price GRDP is the calculation of GRDP based on fixed prices from a specific year, disregarding the effects of inflation. The purpose of constant price GRDP is to observe the development of GRDP or the economy in real terms, where its increase or growth is not affected by price changes (inflation or deflation) (Kuncoro, 1997; Sutama, Dewi, & Rahayu, 2024).

3. Research methodology

3.1 Research Location

This research was conducted in Jayapura City, using data collected from the Central Statistics Agency (BPS) of Jayapura City. The data collected includes the Gross Regional Domestic Product (GRDP) of Jayapura City for the years 2019–2023.

3.2 Type and Source of Data

This study is a descriptive quantitative study aimed at analyzing and describing the contribution of economic sectors to the GRDP of Jayapura City from 2019–2023. It uses a time series approach based on secondary data from government agencies, such as the BPS of Jayapura City and other relevant agencies. The data used in this research are secondary data obtained from the Central Statistics Agency (BPS) of Jayapura City and Papua Province..

3.3 Data Collection Methods

This research uses secondary data obtained from various official and relevant sources. The data collection techniques are:

1. *Documentation Study*

Documentation study is a data collection technique by examining and reviewing official documents published by relevant institutions or agencies. It involves reviewing annual reports of the GRDP of Jayapura City published by the BPS (Central Statistics Agency). Historical data is collected from sectoral statistical documents, such as GRDP by business sector reports, and development reports prepared by the city/provincial government..

2. *Literature Study*

Literature study is conducted by reading and reviewing theories, concepts, and previous research related to the topic of the contribution of economic sectors to GRDP. This involves reviewing national and international journals, theses, dissertations, and academic articles that are relevant. It refers to theories of economic development, sectoral growth, base/non-base theories, and the GRDP approach. Sources include academic portals such as Google Scholar, SINTA, Garuda, and university libraries.

3. *Downloading Official Documents from Relevant Agencies*

This technique involves accessing and downloading statistical data or reports from the official websites of government agencies, such as the BPS of Jayapura City and BPS Papua Province, including annualpublications like "GRDP of Jayapura City by Business Sector," "Papua in Figures," and

"Regional Statistics."

3.4 Analysis Method

This study uses the following analytical techniques:

a. Contribution Analysis.

This analysis is used to determine the contribution of each economic sector to the total GRDP using a formula provided by the Central Statistics Agency of Papua Province (2023):

$$Contribution\ of\ Sector = \left(\frac{Sector\ Value}{Total\ GRDP}\right) 100\%$$

Classification of Contribution Criteria

Percentage	Criteria
0,00 – 10	Very Poor
10,10 - 20	Poor
20,10 – 30	Moderate
30,10 – 40	Good Enough
40,10 – 50	Good

b. Trend Analysis of Contributions

Trend analysis is used to predict the contribution of economic sectors in the region to the total GRDP of Jayapura City. The variables used in this research are: Trend analysis is a statistical analysis method aimed at estimating or forecasting future periods. This involves calculating the trend of each economic sector against the total GRDP of the region.

$$\textbf{Index Number} = \frac{\text{Comparative Year}}{\text{Base Year}} x\ 100$$

c. Location Quotient (LQ) Analysis

According to the Central Statistics Agency (BPS) of Papua Province (2023), the Location Quotient (LQ) formula is calculated by comparing the proportion of an economic sector in a region to the total GRDP of the region, then comparing it to the same sector's proportion at the provincial level:

$$LQ = \frac{(PDRB\ sektor\ daerah / PDRB\ total\ daerah)}{(PDRB\ sektor\ provinsi / PDRB\ total\ provinsi)}$$

If LQ ≥ 1 → basis sector. This means that the sector is able to meet market demand within the region and is also exported outside the region.

If LQ < 1 → ***non-basis sector****. This means that the sector can only meet the demand within the region*

d. Operational Definitions

1. Gross Regional Domestic Product (GRDP): The total value of final goods and services produced by various production units in a region over a certain period (usually one year).
2. Gross Regional Domestic Product (GRDP): The total value of final goods and services produced by various production units in a region over a certain period (usually one year).
3. Sector Contribution: The percentage contribution of a specific economic sector to the total GRDP. Location Quotient (LQ): An index used to measure the comparative advantage or specialization of an economic sector in a specific region compared to a broader area (Province).

4. Results and discussions

4.1 Analysis Results

4. 1. 1. Development of Contributions from Each Economic Sector to GRDP

An analysis of the contribution developments shows that the construction sector is the largest contributor to the GRDP of Jayapura City. Therefore, in the economic development process, the

construction sector is prioritized, as it is expected to play an important role. The construction sector is considered the leading sector, meaning that its development will stimulate and elevate other sectors, such as industry and agriculture. Supported by abundant human resources, the construction sector is expected to absorb a significant amount of labor, thus expanding economic activities in Jayapura City, which can help reduce unemployment, as labor is one of the key components in a region's economy. Below is the analysis of the contributions of various economic sectors to the GRDP of Jayapura City from 2019 to 2023.

Table 1. Contribution of Economic Sectors to GRDP of Jayapura City from 2019-2023 (Percentage %)

No	Economic Sector	2019	2020	2021	2022	2023
1	Agriculture, Forestry, and Fisheries	5.80	5.90	5. 81	5.82	5.31
2	Mining and Quarrying	0.48	0.51	0.52	0.50	0.49
3	Manufacturing Industry	2.57	2.51	2.47	2.43	2.42
4	Electricity and Gas Procurement	0.05	0.05	0.05	0.06	0.06
5	Water Supply, Waste Management, and Recycling	0.12	0.12	0.11	0.11	0.11
6	Construction	24.14	25.17	25.71	25.06	24.39
7	Wholesale and Retail Trade, Motor Vehicle and Motorcycle Repair	16.23	16.50	16.67	17.49	17.97
8	Transportation and Warehousing	5.44	3.98	4.48	5.11	5.76
9	Accommodation and Food Services	2.04	1.64	1.71	1.72	1.71
10	Information and Communication	7.92	8.28	8.20	7.99	7.71
12	Financial Services	4.61	4.54	4.63	4.93	5.51
13	Real Estate	4.93	4.92	4.91	4.89	4.92
14	Business Services	3.39	3.33	3.31	3.31	3.66
15	Government Administration, Defense, and Mandatory Social Security	13.05	13.10	12.27	12.27	10.87
16	Educational Services	3.48	3.43	3.01	3.01	3.07
17	Health and Social Activities	3.67	3.94	4.07	4.07	4.02
18	Other Services	2.08	2.09	2.09	2.07	2.03

Source: Processed Data, 2025

As shown in Table 1, the contribution of each sector to Jayapura City's economy from 2019 to 2023 indicates that the construction sector consistently contributes the most. This is followed by the government administration, defense, and social security sector, the information and communication sector, the agriculture, forestry, and fisheries sector, and the financial services sector. Meanwhile, other sectors have contributions below 5 percent.

From 2019 to 2023, the agriculture, forestry, and fisheries sector contributed 5.31% to the GRDP in 2023, which was a decline compared to 2022. The contribution of the construction sector, which had previously increased, showed a decrease due to the growing contributions from other sectors, particularly trade, transportation and communication, and financial services.

This shift is evident with the increasing growth of modern trade businesses like Indomaret and Alfamidi, as well as hotels and restaurants. Additionally, the growing transport services, including land, sea, and air transport, indicate that Jayapura City is becoming a business and financial hub rather than an industrial city.

4.1.2 Trend Analysis of Economic Sector Contributions to GRDP of Jayapura City from 2019-2023.
The trend analysis of sector contributions from 2019 to 2023 shows a growth rate of 2.73% in 2023, a decline compared to 4.11% in 2022. Growth occurred in all subcategories of forestry and timber extraction, driven by support from local government and state-owned enterprises to improve agricultural productivity

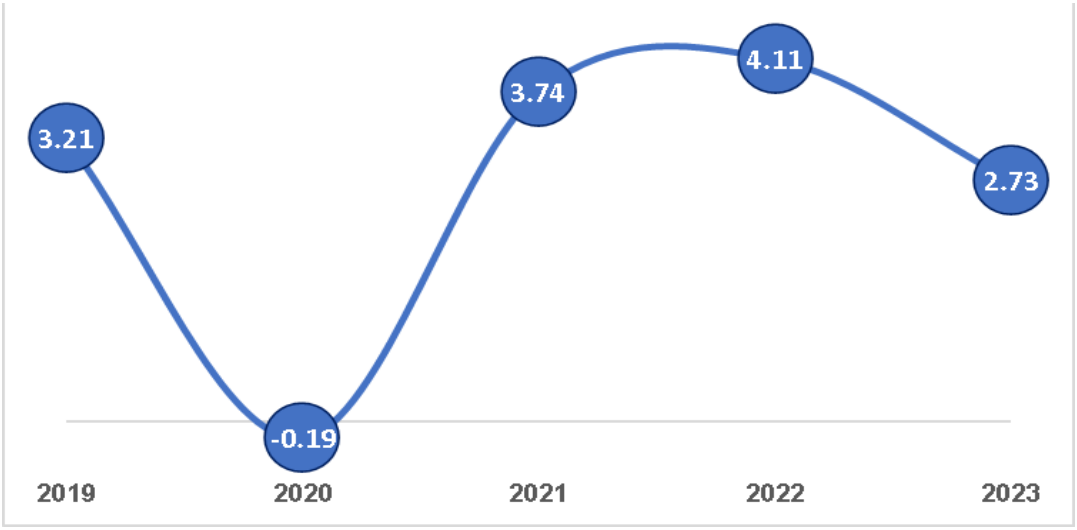

Figure 1. Growth Rate of Agriculture, Forestry, and Fisheries in Jayapura City from 2019-2023
Source: Processed Data, 2025.

However, the forestry and timber extraction sub-sector contracted due to a decline in the fulfillment of raw material needs for wood processing industries, government regulations limiting timber extraction, and the expanding conversion of land for housing and business purposes.

The mining and quarrying sector contributed 0.48% to the GRDP of Jayapura City in 2023, with an economic growth rate of 4.79%. This sector includes activities like gravel, river sand, limestone extraction, and others, supported by a special production balance survey in mining activities.

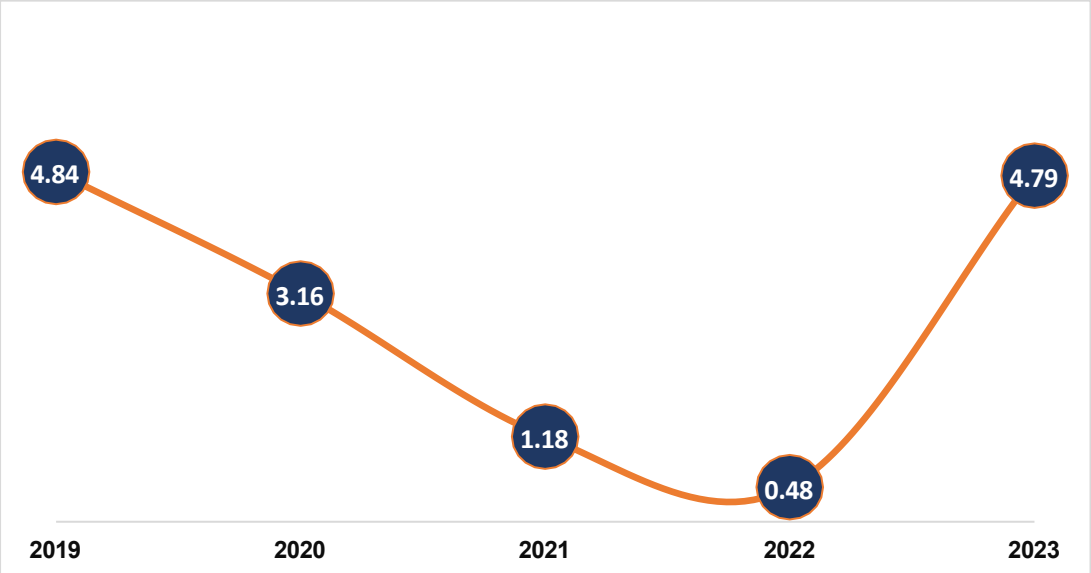

Figure 2. Growth Rate of Mining and Quarrying in Jayapura City from 2019-2023.
Source: Processed Data, 2025.

The contribution of the manufacturing industry sector to the GRDP of Jayapura City in 2023 was 2.24%,

slightly lower compared to its contribution in 2022, which was 2.43%. The growth rate of the manufacturing industry sector in 2023 was 1.61%, showing a contraction compared to the growth in 2022. Several industries have experienced difficulties, such as the textile and garment industry, the wood and cork industry, and products made from bamboo, rattan, and similar materials. Additionally, the paper and paper product industry, printing and reproduction of recorded media, chemical and pharmaceutical industries, and other manufacturing industries, along with repair and installation services for machinery and equipment, have also faced challenges.

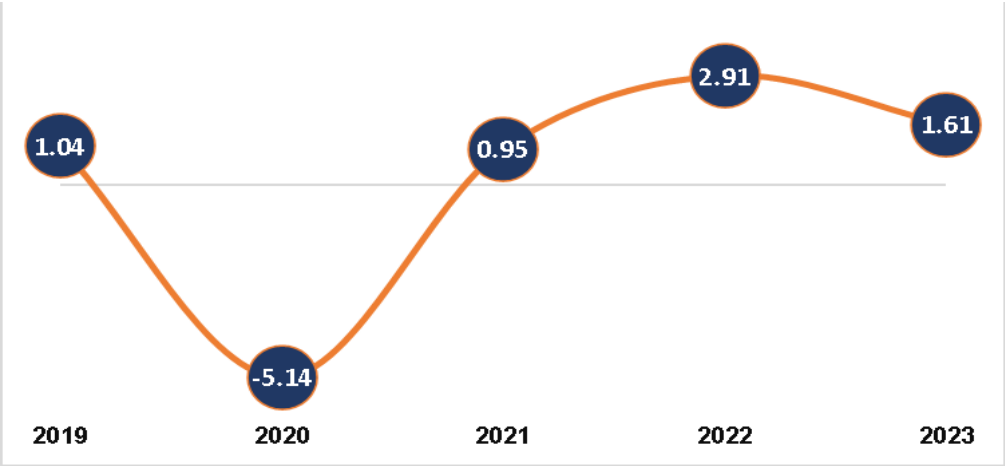

Figure 3. Growth Rate of the Manufacturing Industry in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

The contribution of the electricity and gas procurement sector to the GRDP of Jayapura City has remained steady over the past five years (2019–2023) at 0.06%. The growth rate for the electricity and gas procurement sector in 2023 was 5.52%, showing a contraction compared to the growth rate of 6.54% in 2022.

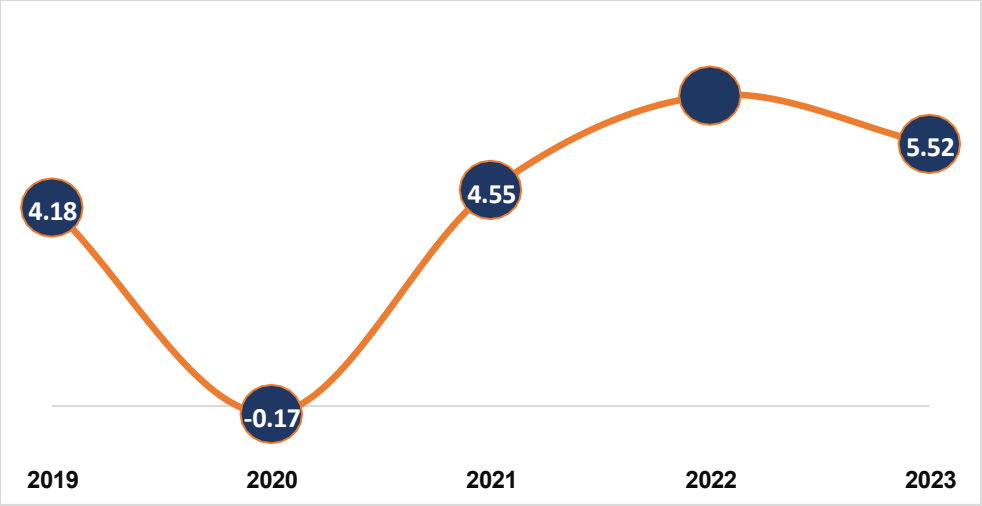

Figure 4. Growth Rate of Electricity and Gas Procurement in Jayapura City from 2019–2023
Source: Processed Data, 2025.

Furthermore, the growth of the electricity and gas procurement sector in Jayapura City has been fluctuating. In 2019, the growth was 4.18%, but in 2020, the sector experienced negative growth at -0.17%. This indicates that the growth of the electricity and gas procurement sector in 2020 was heavily influenced by the global COVID-19 pandemic.

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The contribution of the water supply, waste management, and recycling sector to the GRDP of Jayapura City in 2023 was 0.11%, with an economic growth rate of 4.22%. This shows a significant contrast with the years 2019–2021, where growth was below 1%.

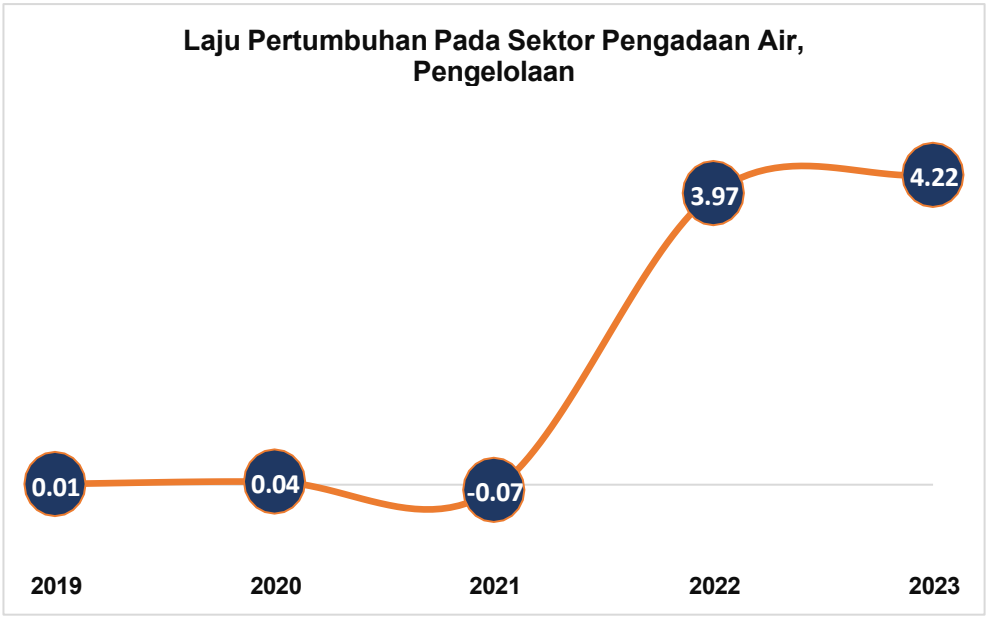

Figure 5. Growth Rate of Water Supply, Waste Management, and Recycling in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

The construction sector makes a significant contribution to the economy of Jayapura City. In 2023, this sector accounted for 24.39% of the GRDP over the last five years. The growth rate of the construction sector accelerated in 2023, with a growth rate of 2.84%, compared to 4.65% growth in 2021.

The construction sector showed good growth in 2019, with a value of 5.73%. However, in 2020, the sector experienced a downturn, with a growth rate of -1.12%. This decline was due to the global impact of COVID-19.

Figure 6. Growth Rate of Construction in Jayapura City from 2019 – 2023.
Source: Processed Data, 2025.

Over the last five years, the wholesale and retail trade, motor vehicle, and motorcycle repair sector has contributed more than 15% to the GRDP of Jayapura City. In 2023, the contribution of this sector reached 17.79%, with a growth rate of 6.12% in 2023. The growth rate slowed compared to the previous year, 2022. In 2020, the sector experienced negative growth of -2.09%, caused by the COVID-19 pandemic. However, in 2021, the economy in the wholesale and retail sector increased by 4.60%, showing that Jayapura City's economy was able to recover from the downturn caused by the COVID-19 pandemic.

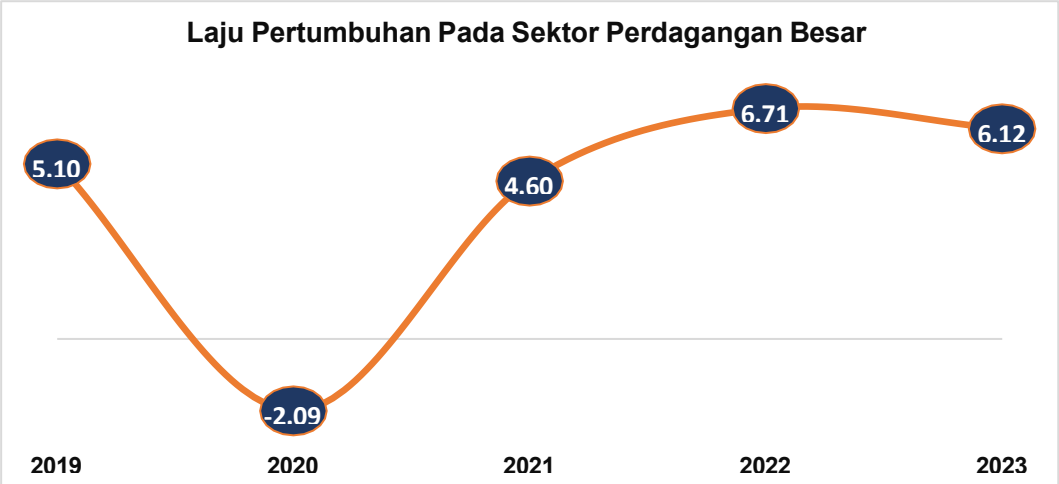

Figure 7. Growth Rate of Wholesale Trade in Jayapura City from 2019-2023.
Source: Processed Data, 2025.

In 2023, the accommodation and food services sector contributed 1.71% to the GRDP of Jayapura City. This represents a slight decrease compared to 2022. The growth rate for this sector was 2.31% in 2023, showing a contraction compared to 2022's growth rate of 4.25%.

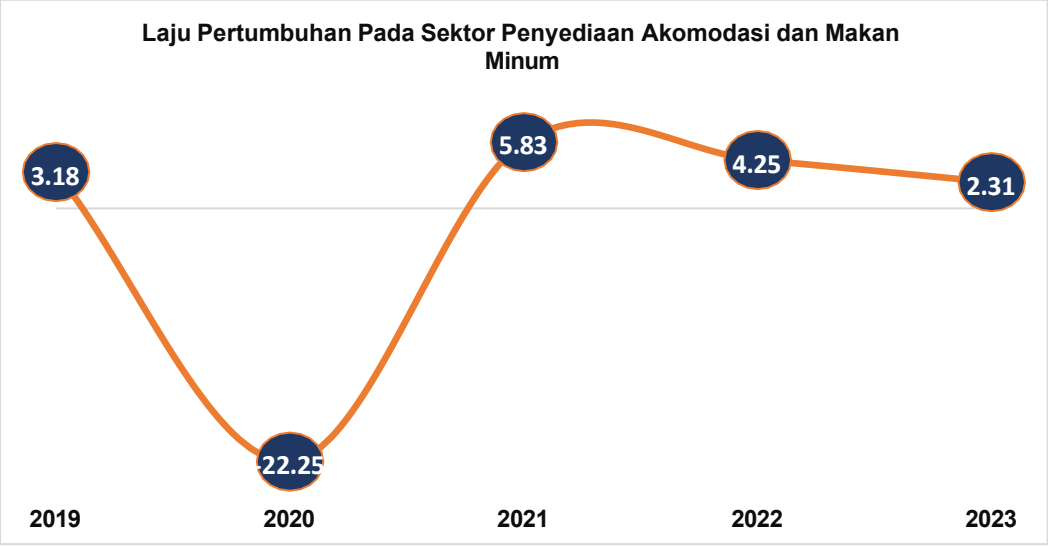

Figure 8. Growth Rate of Accommodation and Food Services in Jayapura City from 2019-2023.
Source: Processed Data, 2025.

Information and communication play an essential role in supporting activities across all economic sectors. Furthermore, information and communication are vital in the current era of globalization. They also serve as indicators of a region's progress. The contribution of the information and communication sector to the GRDP of Jayapura City from 2019 to 2023 has fluctuated, with growth reaching 1.54% in 2019. In 2020, growth increased to 4.36%..

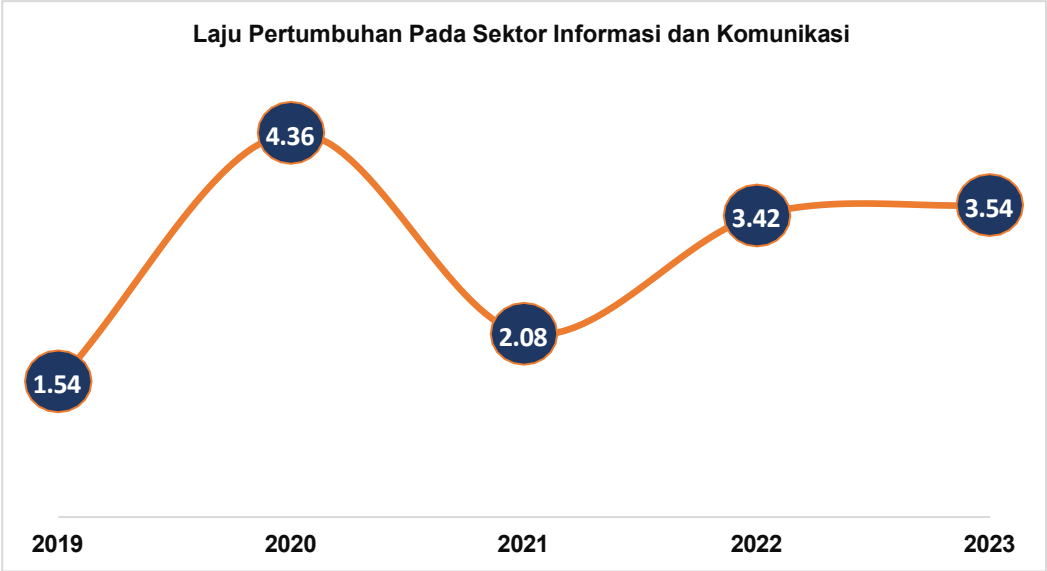

Figure 9. Growth Rate of Information and Communication in Jayapura City from 2019–2023
Source: Processed Data, 2025.

In 2023, the financial services and insurance sector contributed 5.51% to the GRDP of Jayapura City. The growth rate of this sector increased to 12.26% in 2023. This increase is attributed to the rising transactions in electronic money, dollar cards, and credit cards, which coincided with the growing economic activity of the community

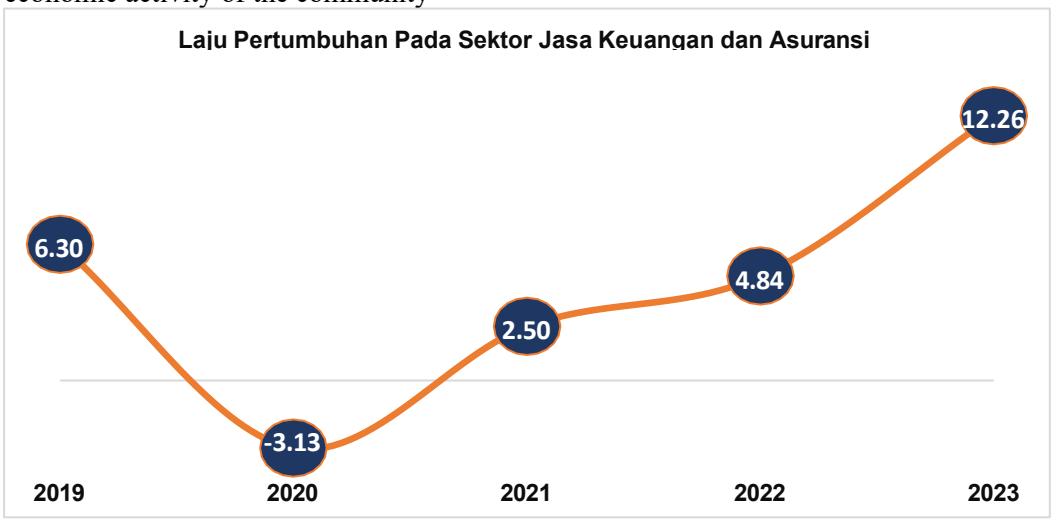

Figure 10. Growth Rate of Financial Services and Insurance in Jayapura City from 2019–2023. .
Source: Processed Data, 2025.

The contribution of the real estate sector to the economy of Jayapura City has shown stable figures. However, the growth rate of the real estate sector has shown a slowing trend over the last five years. In 2023, the growth rate for this sector was 4.92%, showing an acceleration compared to the growth rate of 2022, which increased by only 0.03%. Several factors contributing to the acceleration of the real estate sector's growth include the increasing infrastructure development.

Figure 11. Growth Rate of Real Estate in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

The business services sector covers a wide range of activities. It includes professional, scientific, and technical services, rental and leasing activities, employment services, travel agency support, and other business-related activities. The contribution of this sector to the GRDP of Jayapura City has remained stable at around 3%. The growth rate of this sector in 2023 was 7.90%, an increase compared to the growth in 2022, which had a negative growth rate of -5.24%.

Figure 12. Growth Rate of Business Services in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

In 2023, the government administration, defense, and mandatory social security sector contributed 10.87% to the total GRDP of Jayapura City. The contribution of this sector showed a slight decrease compared to 2022. The growth of this sector in 2023 was 1.08%, showing an increase compared to the previous year, where it had decreased by -1.70%.

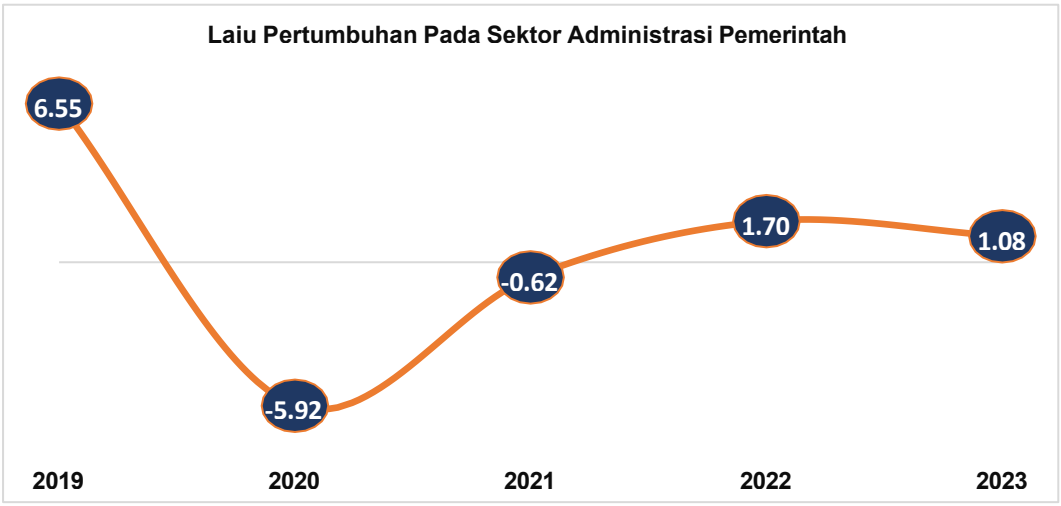

Figure 13. Growth Rate of Government Administration, Defense, and Mandatory Social Security in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

In 2023, the educational services sector contributed 3.07% to the total economy of Jayapura City. The contribution of this sector increased compared to previous years. However, the growth rate of this sector in 2023 was -3.58%, showing a decline compared to 2022, which had a growth rate of 2.65%.

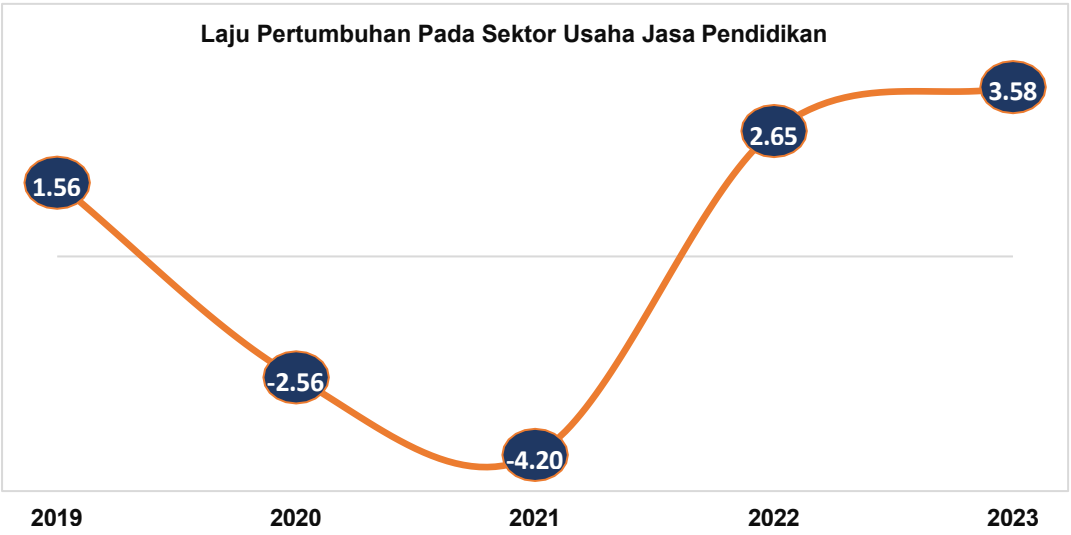

Figure 14. Growth Rate of Educational Services in Jayapura City from 2019–2023.
Source: Processed Data, 2025.

The health services and social activities sector has a wide range of activities. In 2023, its contribution to the GRDP of Jayapura City was 4.02%, with a growth rate of 4.58% over the period from 2019 to 2023. The growth rate of this sector has been relatively stable, although it has been highly fluctuating.

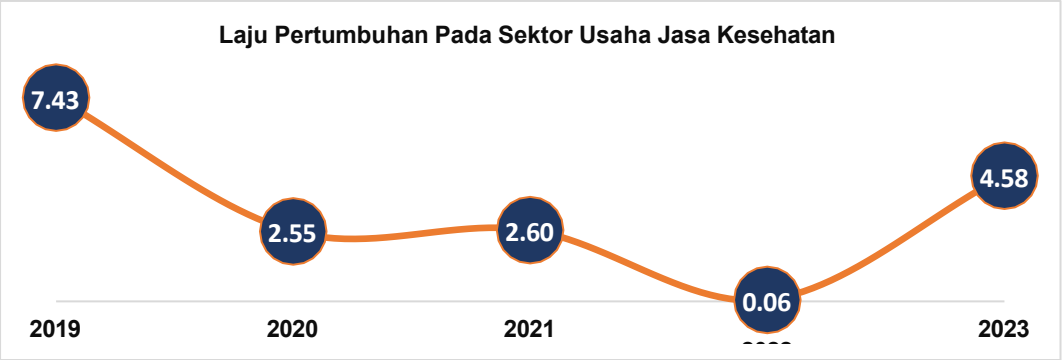

Figure 15. Growth Rate of Health Services and Social Activities in Jayapura City from 2019–2023. Source: Processed Data, 2025.

The other services sector includes activities such as arts, entertainment, recreation, and other services. In 2023, the contribution of the other services sector to the GRDP of Jayapura City was 2.03%, with a growth rate of 3.84% in 2023. This shows a slowdown compared to the previous year's growth rate, which was 4.55%.

Figure 16. Growth Rate of Other Services in Jayapura City from 2019–2023. Source: Processed Data, 2025.

5. 1. 3 Basis (Leading) Economic Sectors in Jayapura City.

Based on the LQ analysis, several economic sectors have a comparative advantage in Jayapura City compared to the average of Papua Province. These sectors are classified as basis sectors, meaning they have the potential for further development because they can produce more than local demand and have the opportunity to "export" to other regions. The basis sectors in Jayapura City include: Construction (LQ 1.20); Wholesale & Retail Trade (LQ 1.13); Information and Communication (LQ 1.26); Financial Services (LQ 1.47); Business Services (LQ 1.49); Educational Services (LQ 1.15); Health and Social Services (LQ 1.42); Electricity and Gas Procurement (LQ 1.50); Water Procurement and Waste Management (LQ 1.10); Accommodation and Food Services (LQ 1.34); Real Estate (LQ 1.05); Other

Services (LQ 1.12)
These sectors are the main drivers of the local economy and should be prioritized in economic development planning.

Tabel 2. Basis and Non-Basis Sectors in Jayapura City

No	Economic Sector	Jayapura	Papua Province	LQ	Status
1	Agriculture, Forestry, and Fisheries	5.31	14.46	0.37	Non Basis
2	Mining and Quarrying	0.49	0.83	0.59	Non Basis
3	Manufacturing Industry	2.42	2.93	0.83	Non Basis
4	Electricity and Gas Procurement	0.06	0.04	1.50	Basis
5	Water Supply, Waste Management, and Recycling	0.11	0.10	1.10	Basis
6	Construction	24.39	20.41	1.20	Basis
7	Wholesale & Retail Trade, Motor Vehicle and Motorcycle Repair	17.97	15.96	1.13	Basis
8	Transportation and Warehousing	5.76	8.05	0.72	Non Basis
9	Accommodation and Food Services	1.71	1. 27	1.34	Basis
10	Information and Communication	7.71	6.10	1.26	Basis
12	Financial Services	5.51	3.75	1.47	Basis
13	Real Estate	4.92	4.70	1.05	Basis
14	Business Services	3.66	2.46	1.49	Basis
15	Government Administration, Defense, and Mandatory Social Security	10.87	11.60	0.94	Non Basis
16	Educational Services	3.07	2.68	1.15	Basis
17	Health and Social Services	4.02	2.83	1.42	Basis
18	Other Services	2.03	1.81	1.12	Basis

Source: Processed Data, 2025

Sectors with LQ < 1 are considered non-basis sectors, meaning they lack a comparative advantage and primarily function to meet local demand. These include:
1. Agriculture, Forestry, and Fisheries (LQ 0.37)
2. Mining and Quarrying (LQ 0.59)
3. Manufacturing Industry (LQ 0.83)
4. Transportation and Warehousing (LQ 0.72)
5. Government Administration (LQ 0.94)

These sectors need to improve their efficiency or be redirected to more productive sectors aligned with local potential. The local government should prioritize the development of basis sectors, as they have growth potential and can absorb more labor. Economic diversification is still needed to avoid excessive dependence on one or two sectors. Further studies on non-basis sectors should be conducted to explore their development potential or economic transformation.

5. 2. Discussion
5. 2. 1. Development of Sector Contributions to the Economy
The Gross Regional Domestic Product (GRDP) is the main indicator that shows the economic growth level of a region. In Jayapura City, in 2023, the three main sectors contributing the most to the GRDP were Construction: 24.39%, Wholesale and Retail Trade, Motor Vehicle and Motorcycle Repair: 17.97%, and Government Administration, Defense, and Mandatory Social Security: 10.87%. These

three sectors together accounted for more than 50% of the total GRDP of Jayapura City, making their role in regional economic development crucial.

Previous research focused on identifying sectors such as agriculture and the impact of related sectors on a country's economic analysis. In previous research, it was mentioned that sectors have an impact on economic growth. Afandi & Soesatyo (2014) showed that the growth of GRDP is influenced by the manufacturing industry sector, which helps to drive economic growth in the Bangka Belitung Islands Province. Moreover, research analyzing the role of the manufacturing sector in the economy and labor absorption in North Sulawesi Province used elasticity of labor, Multiplier Share (MS), and Location Quotient (LQ) analysis methods. The analysis found that the economy in North Sulawesi Province was influenced by the role of the manufacturing sector, which was relatively stable annually, and that the manufacturing sector, including non-basis sectors, has not yet become the source of economic growth in the region.

Additionally, this research aligns with the study by Hasibuan (2024), which examined the manufacturing sector as one of the major contributors to the GRDP of Medan City, following the trade and banking sectors. The manufacturing sector is the largest absorber of labor, with a positive growth rate each year. The study aimed to analyze the contribution of the manufacturing sector to the GRDP of Medan City. The results showed that the manufacturing sector's production value in Medan has increased annually, although its contribution to the GRDP decreased, driven by the growing contributions of other sectors, especially trade and transportation.

Similarly, research by Saihani and Heldayani in 2019 in Tabalong District revealed that the contribution of each agricultural subsector to the total GRDP showed that the plantation subsector had the highest percentage compared to other subsectors, with a percentage of 47.87%. The horticulture subsector had the lowest percentage at 0.43%. This is because the horticulture subsector is not a primary source of livelihood for the people of Tabalong, resulting in a lower contribution compared to other subsectors.

Research by Risnawati (2016) in Jeneponto District indicated that the food crop subsector had the highest contribution, at 78.62%, while the forestry subsector had the lowest contribution, at 0.05%. This is consistent with Halim's (2010) statement that the size of the contribution from each agricultural subsector greatly influences its role in the economy of each district and helps improve the welfare of the community, particularly those working as farmers.

5. 2. 2. Analyzing Economic Sector Trends

The trend analysis related to the contribution of economic growth in Jayapura City shows that the Construction Sector contributed 24.39% to Jayapura's GRDP in 2023 and has an LQ of 1.20 (Basis Sector). The construction sector has become the largest contributor to the GRDP of Jayapura City. This is aligned with the high level of infrastructure development activities such as roads, bridges, housing, and government and commercial buildings. Jayapura's position as the capital of Papua Province further drives the acceleration of physical development. According to Regional Economic Growth Theory, sectors that develop rapidly in a region will drive the growth of other sectors through the multiplier effect. In the basis theory approach, the construction sector is categorized as a basis sector because its LQ > 1, meaning it can "export" services beyond the local area. Tarigan (2005) stated that infrastructure development significantly influences local economic growth, especially in attracting investments. Nurhayati & Haryanto (2020) also mentioned that improvements in the construction sector positively impact labor absorption and accelerate urbanization..

5. *Basis (Leading) Sectors in Jayapura City.*

According to Tarigan (2018), if LQ > 1, it means the sector is more prominent, whereas if LQ < 1, it is considered a non-basis sector. Sjafrizal (1985) states that non-basis sectors are sectors that lack competitive advantage and serve as supporting sectors for basis sectors or service industries. A study by Saihani and Heldayani in 2019 in Tabalong District found that the plantation subsector had the highest LQ value at 1.62, qualifying it as a basis sector, while other subsectors such as food crops, livestock, fisheries, and horticulture had LQs less than 1, indicating that they were non-basis sectors.

The Wholesale and Retail Trade, Motor Vehicle and Motorcycle Repair sector contributed 17.97% to the GRDP of Jayapura City with an LQ of 1.13 (Basis Sector). The trade sector plays a vital role in distributing goods and services to the community. High trade activity indicates strong purchasing power, growing MSMEs, and strong logistics connectivity between regions. As the economic center and distribution hub of Papua, Jayapura's trade sector drives the local economy. Central Place Theory (Berry, 1967) suggests that trade develops in centers of economic activity, serving surrounding areas. The Economic Base Theory states that sectors with LQs > 1 support both the local and regional economy through the export of goods/services. Saragih, Siburian, Harmain, and Purba (2021) mentioned that the trade sector significantly contributes to absorbing informal labor and supporting the economic resilience of the community:

Research by Saihani and Heldayani in 2019 in Tabalong District found that the contribution of each agricultural subsector to the total GRDP showed that the plantation subsector had the highest contribution, at 47.87%, while the food crops, horticulture, livestock, and fisheries subsectors were non-basis due to their LQ values being less than 1.

The Government Administration, Defense, and Mandatory Social Security sector contributed 10.87% to the GRDP of Jayapura City in 2023, with an LQ of 0.94 (Non-Basis). Despite having an LQ < 1, the government administration sector remains central to Jayapura's economy. As the provincial capital, public administration activities dominate in terms of employee spending, public budget management, and social services. Richardson (1973) categorized administration as a non-basis sector, but its importance lies in supporting the development of other sectors through policies, budgets, and planning. In endogenous growth models, government's role is crucial in providing infrastructure, education, and social protection, which are foundational for economic growth. Wibowo (2017) indicated that government spending impacts the growth of other service sectors, especially education and healthcare. Parasan, Opod, and Tooy (2023) stated that regions with a concentration of government activities tend to have higher GRDP due to increased government budget allocations and expenditures.

Sector	Contribution (%)	LQ	Role
Construction	24,39	1,20	Leading sector for physical and economic development
Trade	17,97	1,13	Distribution center for goods and consumption activities
Government	10,87	0,94	Main manager of services and economic stabilit

The three sectors with the largest contributions to the GRDP of Jayapura City in 2023 reflect the city's role as a center for development, trade, and government. These sectors should be the focus of local development policies, with strategies supporting collaboration between sectors, encouraging investments, and improving public service efficiency.

5. Conclusion

5.1 Conclusion

The contribution of economic sectors to the GRDP of Jayapura City shows that the largest contributors are: Construction: 24.39%, Wholesale and Retail Trade, Motor Vehicle and Motorcycle Repair: 17.97%, and Government Administration, Defense, and Mandatory Social Security: 10.87%. These three sectors together account for more than 50% of Jayapura's total GRDP, making their role in regional economic development vital.

1. The trend analysis of sector contributions from 2019 to 2023 shows that the growth rate of Jayapura City in 2023 was 2.73%, while the growth rate in 2022 was 4.11%.
2. The Basis (Leading) Sectors of Jayapura City, which have LQ > 1, are growing rapidly and are the main drivers of Jayapura's economy, including: Construction (LQ 1.20), Wholesale & Retail Trade (LQ 1.13), Information and Communication (LQ 1.26), Financial Services (LQ 1.47), Business

Services (LQ 1.49), Educational Services (LQ 1.15), Health and Social Services (LQ 1.42), Electricity and Gas Procurement (LQ 1.50), Water Procurement and Waste Management (LQ 1.10), Accommodation and Food Services (LQ 1.34), Real Estate (LQ 1.05), and Other Services (LQ 1.12). These sectors are the main drivers of the local economy and should be prioritized in economic development planning.

5.2 Suggestions

1. The local government should strengthen policy support and investments for the construction and trade sectors, as they are the main economic drivers. Budget optimization and public service management should be prioritized in the government administration sector to ensure efficiency and broad impact on the community. It is essential to integrate these three sectors into medium-term development planning (RPJMD) to maintain stability and sustained growth.
2. Local economic development should focus on basis sectors by providing supporting infrastructure, business incentives, and workforce training. The government can develop clusters of leading sectors (e.g., financial services or education) to increase economic value. Encouraging innovation and digital transformation, especially in the information and communication sector, is essential to enhance efficiency and competitiveness. Mapping the potential for further development and private sector partnerships in basis sectors is key to strengthening these sectors in sustainable development.

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