

Efficiency and Effectiveness of Regional Expenditure Management in Realizing Sustainable Development: an Empirical Study of the Jayapura City Government

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Abstract

This study aims to examine and analyze the efficiency and effectiveness of regional expenditure management in realizing sustainable development in the Jayapura City Government. The research approach used is descriptive quantitative, which aims to systematically describe the relationship between the variables of efficiency, effectiveness, and the achievement of sustainable development. The research sample consisted of data on the realization of the Jayapura City Government's Regional Revenue and Expenditure Budget (APBD) for the 2019–2024 period. The data was obtained through a documentary study of budget realization reports, local government financial reports, and data from the Jayapura City Central Statistics Agency (BPS) for the same period. Data analysis was conducted using triangulation techniques to improve the validity and reliability of the research results. The results show that the ratio of regional expenditure efficiency and effectiveness has a positive relationship with sustainable development achievements. Although the level of efficiency is not yet fully optimal, improvements in the Human Development Index (HDI), life expectancy, and per capita expenditure indicate that regional budget management is becoming more adaptive and productive. In the social dimension, the effectiveness of education and health expenditure has been proven to increase the average length of schooling (RLS), expected length of education (HLS), and life expectancy (AHH). However, there are still inequalities in access between regions. From the economic dimension, the increase in per capita expenditure and the stability of people's purchasing power indicate a more inclusive growth direction, despite the pressure caused by the post-pandemic impact. Meanwhile, in the environmental dimension, the government's consistent provision of drinking water services reflects the success of policy interventions in the basic infrastructure and public services sector. This study can contribute to strengthening the Value for Money theory in public financial management, emphasizing the importance of budget efficiency and effectiveness as key to achieving sustainable development. In addition, this study supports the principle of good governance as a prerequisite for fair public budget allocation and its impact on social welfare and environmental conservation. These findings can serve as a basis for local governments to evaluate fiscal policies and development planning, particularly to strengthen the integration of expenditure efficiency with the achievement of Sustainable Development Goals (SDGs) indicators at the city government level.

Keywords: Efficiency; Effectiveness; Regional Expenditure; Sustainable Development.

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INTRODUCTION

Since the 1998 reforms, changes in Indonesia's political, social, community, and economic systems have given rise to various demands for better governance. Leaders and managers, both at the regional and central levels, need to be aware of and meet these demands. Ultimately, this requires regional government management to allocate resources efficiently and effectively (Syafis & Irawan, 2014). One step in developing a region is to formulate a budget in accordance with the initial plan, thereby enhancing the efficiency and effectiveness of the regional economy. Based on Government Regulation No. 71 of 2010, expenditure is

defined as all expenditures made by the State Treasurer or Regional Treasurer that reduce the Budget Surplus in a given fiscal year and cannot be reclaimed by the government (Irsas & Mulyani, 2024).

Regional financial management is a crucial aspect of local government financial management, which includes planning, budget implementation, financial reporting, supervision, and financial accountability. Through this management, the government and the community can understand the capacity of the regional budget to finance various needs and ensure that public funds are used economically, efficiently, and effectively (Irsas & Mulyani, 2024). Efficient and effective regional expenditure management is a key element in achieving sustainable development. Efficiency in budget management refers to the ability of local governments to utilize resources, thereby reducing waste and improving results optimally (<https://djpb.kemenkeu.go.id>, 2024). Meanwhile, effectiveness relates to the extent to which public budget allocation is targeted and oriented towards achieving long-term development goals. (<https://siplawfirm.id>, 2024) .

In the context of sustainable development, sound local financial management is a crucial pillar for achieving effective, efficient, and people-centered governance. The application of the principles of transparency, accountability, efficiency, and reasonable control can optimize the potential of the budget for inclusive and sustainable development (<https://dprd.sumenepkab.go.id>, 2024). Research conducted by Jumaroh (2021) shows that the revenue budget at the North Sumatra Provincial Environment Agency is considered very effective and efficient in managing the expenditure budget, providing positive implications for sustainable development in the region. However, various challenges are still faced in regional expenditure management. For example, a study shows that the management of the Regional Revenue and Expenditure Budget (APBD) in Medan City is still ineffective, necessitating improvements in budget allocation and realization. (Rinaldi, *et al.*, 2024) . Additionally, the performance of regional spending in Bekasi City declined from 75% in 2019 to 42.41% in 2022, indicating an inability to achieve the established performance indicators (Irsas, & Mulyani, 2024) .

To overcome these problems, careful budget planning is an important step in optimizing the effectiveness of the APBD. Good planning is the basis for determining the appropriate budget allocation and desired development priorities. In planning the APBD, the government must consider economic, social, and political factors that may affect its implementation (<https://djpb.kemenkeu.go.id/kppn>, 2023). In addition, periodic evaluation of the implementation of the APBD in the field is necessary to improve the efficiency of budget management. This evaluation includes measuring the performance and impact of programs funded by the APBD. By understanding the performance and impact of these programs, the government can identify programs that are inefficient or do not provide significant benefits to the community (<https://djpb.kemenkeu.go.id/kppn>, 2023) .

According to the Regional Financial and Asset Management Agency (BPKAD) of Jayapura City, Papua, financial absorption as of 28 November 2024 had reached Rp1.2 trillion or 72 per cent of the total APBD of Rp1.7 trillion. It was also stated that budget absorption by the end of 2024 could be maximized, as there are still third parties billing for physical work that has been carried out (Antaranews.com, 2024). This achievement reflects the effectiveness and efficiency of regional expenditure management, an important factor in supporting sustainable development. The effectiveness of regional expenditure can be measured by the

extent to which the allocated budget achieves development targets, such as improving infrastructure, public services, and community welfare. Meanwhile, the efficiency of regional spending ensures that every pound spent provides maximum benefit by minimizing resource waste. However, high budget absorption must also be accompanied by strict oversight mechanisms to avoid potential inefficiencies and irregularities in budget implementation. Therefore, transparency in regional financial management and accountability in the use of public funds are essential aspects that must be strengthened.

In an effort to improve the efficiency and effectiveness of regional expenditure management, regional governments need to apply their principles. This includes careful planning, proper implementation, and continuous supervision and evaluation. Thus, regional financial management can be carried out economically, efficiently, and effectively, which ultimately supports sustainable development. The purpose of this study is to examine and analyze the efficiency and effectiveness of regional expenditure management in realizing sustainable development in the Jayapura City Government. The benefits of this research are not only to enrich scientific research on regional expenditure management for sustainable development in the Jayapura City Government, but also to serve as a reference for assessing the efficiency and effectiveness of its regional expenditure, enabling improvements or policy adjustments. Furthermore, it enables the community and other stakeholders to understand better how the regional budget is managed and to monitor its effectiveness and efficiency.

Agency Theory

Agency theory explains the relationship between two parties: the principal (*authority grantor*) and the agent (*authority recipient*). In the context of regional expenditure management, the community and central government act as principals, while the regional government acts as an agent that manages public resources to achieve the goal of sustainable development (Prayuda & Arifin, 2024). In this relationship, there is potential for conflicts of interest between principals and agents. Local governments may have interests or priorities that differ from those of the public or the central government, which can affect the efficiency and effectiveness of regional expenditure management. For example, agents may tend to allocate budgets to programs that enhance their political image, even if these programs are not in line with the needs of the community or sustainable development goals (Zelmiyanti, 2016).

Government Financial Reports

Local government financial reports are essential instruments that reflect the financial performance of a region, covering information on revenue, expenditure, assets, and liabilities. This information forms the basis for evaluating the efficiency and effectiveness of regional expenditure management in achieving sustainable development goals. With high transparency and accountability in financial reporting, local governments can ensure that budget allocation and use are in line with established development priorities (<https://djppr.kemenkeu.go.id>, 2024). The efficiency of regional expenditure management relates to the government's ability to utilize resources to produce maximum output optimally. Meanwhile, effectiveness measures the extent to which the results achieved are in line with the established objectives. Accurate and comprehensive financial reports enable stakeholders to assess these two aspects, thereby identifying areas that require improvement or policy adjustments to support sustainable development (Antasena *et al.*, 2023). In the context of sustainable development, efficient and effective regional financial management plays an

important role in improving the quality of life of the community without sacrificing the needs of future generations. Transparent and accountable financial reports not only increase public trust but also ensure that programs and projects funded by the regional budget truly support the achievement of sustainable development goals (Department of Economics and Business, Vocational School, 2024).

Local Government Financial Performance

According to Government Regulation No. 12 of 2019, regional finances encompass all rights and obligations of regional governments in fulfilling their administrative duties. Regional finances can be measured in monetary terms, encompassing all assets that may become the property of the region through the exercise of its rights and obligations. (Prayuda & Arifin, 2024). According to (Aladin *et al.*, 2021) Performance is the work achievement received in implementing a program within a specific period, while according to (Karlinda *et al.*, 2021) Regional financial performance is one of the measures that can be used to see the region's ability to implement regional autonomy. According to (Prayuda & Arifin, 2024) Efficiency can be used as an indicator to assess the financial performance of regional governments by comparing the inputs used and the outputs produced. The higher the efficiency, the more optimal the financial performance of the local government. The government's financial performance reflects the efforts made in financial management during an accounting period. The government's achievements include managing regional expenditure and revenue from taxes and levies paid by the community. The policies implemented by the regional government will affect the financial statements, which ultimately contribute to the quality of the government's financial performance.

Regional Expenditure

The 2019 Government Accounting Standards (SAP), compiled by the Government Accounting Standards Committee (KSAP), stipulate that Regional Expenditure includes all expenditures from the State or Regional General Cash Account that reduce the Budget Surplus Balance in the current fiscal year and cannot be returned to the government. In accordance with this standard, expenses are recorded in the financial statements when they occur. In this study, the definition of expenses used refers to the expenses listed in the Budget Realization Report (*LRA*) (Fadhila, *et al.*, 2025). Government Regulation No. 71 of 2010 defines the Budget Realization Report (*LRA*) as a document that summarises the financial resources managed by the central and regional governments. This report shows a comparison between the planned budget and its realization in a specific period. According to research by Mardianis *et al.* (2017) in (Fadhila *et al.*, 2025) High regional expenditure realization reflects an increase in infrastructure and facility development, which improves public services and regional performance. Optimal use of regional expenditure also accelerates development growth, reflecting the effectiveness of regional financial management. This aligns with the agency theory proposed by Jensen, where the regional government, as an agent, is accountable to the central government for managing the budget effectively to achieve public welfare (Fadhila, *et al.*, 2025).

Sustainable Development

Sustainable development at the local government level involves formulating and implementing public policies that consider three dimensions – economic, social, and environmental (triple bottom line) – with a long-term orientation, ensuring current needs are met without compromising the capabilities of future generations. Local governments act as planners, public service providers, regulators, partnership facilitators, and monitors of local program implementation (OECD, 2022).

RESEARCH METHODOLOGY

This research is quantitative, employing a *descriptive* approach to systematically describe the facts and relationships between the phenomena being studied. This research will be conducted on the Papua Provincial Government as the population. Meanwhile, the sample data pertains to the realization of the regional revenue and expenditure budget (APBD) in the Jayapura City Government for the 2019-2024 period. This data includes information on regional revenue, operational expenditure, capital expenditure, and other indicators relevant to regional financial management. The data collection method involves a documentation study, gathering secondary data from various official documents. These include budget realization reports and financial reports of the Jayapura City regional government for the 2019-2024 period, as well as data from the Jayapura City Central Statistics Agency (BPS) for the same period.

The data analysis technique used is triangulation data analysis to improve the validity and reliability of the research data. Triangulation involves the use of various data sources, methods, or theories to confirm the results of this study. Another analysis technique is to perform efficiency ratio and effectiveness ratio analyses. Trend analysis will also be used to observe patterns in financial and BPS data over several periods to identify significant changes in regional expenditure management and the direction of sustainable development. By analyzing trends, researchers can assess the development of regional financial management efficiency and effectiveness over time, helping to realize sustainable development achievements in Jayapura City.

RESULTS AND DISCUSSION

Efficiency Ratio

Efficiency is the ratio between output and input, or the realization of expenditure and the realization of regional revenue. (Handoko & Pratama, 2019). In other words, the efficiency of regional budget management is a ratio that shows how efficient the implementation of an activity is by comparing output and input (Listari *et al.*, 2022). The financial performance of local governments in collecting revenue is categorized as efficient if the ratio achieved is less than 1 (one) or below 100%. The smaller the efficiency ratio, the better the financial performance of the local government. For this reason, local governments need to carefully calculate the costs incurred to realize all the revenue they receive, allowing them to determine whether their revenue collection activities are efficient.

The local government expenditure efficiency ratio can be calculated using the formula:

$$\text{Efficiency Ratio} = \frac{\text{Realisation of Regional Expenditure}}{\text{Realisation of Regional Revenue}} \times 100\%$$

Table 1. Efficiency Ratio Assessment Criteria

Percentage of Efficiency Ratio	Efficiency Level
>100%	Inefficient
>90%-100%	Less Efficient
>80-90%	Fairly Efficient
>60%-80%	Efficient
<60%	Very Efficient

Source: (Utomo, 2015)

The results of the Regional Expenditure Efficiency Ratio calculation can be seen in the table below:

Table 2. Calculation of the Regional Expenditure Efficiency Ratio for Jayapura City Budget Year 2019-2024

Fiscal Year	Expenditure Realisation	Revenue Realisation	Efficiency Ratio	Criteria
2019	1,333,025,496,062.00	1,295,121,334,809.71	102.93	Inefficient
2020	1,149,853,769,818.00	1,273,345,946,561.80	90.30	Less Efficient
2021	1,324,953,787,983.56	1,277,234,638,791.46	103.74	Inefficient
2022	1,369,622,350,785.73	1,445,941,893,448.60	94.72	Less Efficient
2023	1,599,224,840,510.89	1,544,451,174,301.19	103.55	Inefficient
2024	1,715,843,516,928.00	1,664,495,832,924.52	103.08	Inefficient

Source: LKPD (processed)

Based on calculations using the Regional Expenditure Efficiency Ratio, it is known that the total revenue of Jayapura City from 2019 to 2024 has increased on average each year. In 2019, the regional revenue of Jayapura City was Rp. 1,295,121,334,809.71, which decreased to Rp. 1,273,345,946,561.80 in 2020. There was a slight increase again in 2021 to Rp. 1,277,234,638,791.46. Moreover, in 2022, there was a significant increase in regional revenue to Rp. 1,445,941,893,448.60. Furthermore, in 2023, regional revenue increased by IDR 1,544,451,174,301.19, and in 2024, it also increased to IDR 1,664,495,832,924.52. An increase in the realization of regional expenditure from year to year accompanied the increase in regional revenue. The total realization of regional expenditure in Jayapura City in 2019 amounted to Rp. 1,333,025,496,062.00, which decreased in 2020 to Rp. 1,149,853,769,818.00. In 2021, regional expenditure increased to IDR 1,324,953,787,983.56. In 2022, there was an increase to IDR 1,369,622,350,785.73. Regional expenditure then saw a significant rise in 2023 to IDR 1,599,224,840,510.89, and subsequently increased in 2024 to IDR 1,715,843,516,928.00.

Based on calculations of the Regional Expenditure Efficiency Ratio, it is also known that the average Regional Expenditure Efficiency of Jayapura City from 2019 to 2024 is 99.72%. This can be considered inefficient because its financial performance is still between 90% and 100%. In 2020, the expenditure efficiency ratio of the Jayapura City Government reached 90.30%, which can be considered inefficient. Expenditure was almost equal to the budget, indicating a lack of economy. Meanwhile, in 2022, the efficiency ratio of the Jayapura City Government's expenditure was 94.72%, indicating a lack of efficiency in managing regional expenditure. The expenditure value was almost equal to the budget, which also indicates a lack of savings in regional expenditure. Meanwhile, in 2019, 2021, 2023, and 2024, the efficiency ratio of Jayapura City's regional expenditure was inefficient, with the realization exceeding the budget (deficit). The costs incurred by the Jayapura City Government to obtain its revenue are still quite large. The performance of the Jayapura City Government in this regard remains poor because it has not been able to reduce regional spending. In the future, it is hoped that the Jayapura City Government can minimize its spending in line with its revenue. This will lead to an increase in regional spending efficiency in the future.

Effectiveness Ratio

The effectiveness ratio describes the ability of local governments to achieve planned expenditure compared to the targets set, depending on the type of regional expenditure. The higher the effectiveness ratio, the better the performance of the local government. Effectiveness involves utilizing resources, facilities, and infrastructure within a predetermined budget to produce various goods or services for the activities carried out. Measuring effectiveness is a performance indicator for implementing an activity, providing information on how well the target has been achieved. The ability to carry out tasks is considered adequate if the achieved ratio reaches 100%. However, the higher the effectiveness ratio, the better the ability to use costs (Suprayoga, *et al.*, 2020) .

The effectiveness ratio of regional expenditure can be calculated by comparing the realization of regional expenditure with the regional expenditure target as follows:

$$\text{Effectiveness Ratio} = \frac{\text{Actual Expenditure Budget}}{\text{Budget Expenditure Target}} \times 100\%$$

Table 3. Effectiveness Ratio Assessment Criteria

Percentage of Effectiveness Ratio	Effectiveness Level
>100%	Highly Effective
>90%-100%	Effective
>80-90%	Fairly Effective
>60%-80%	Less effective
<60%	Less effective

Source: (Utomo, 2015)

Table 4. Calculation of the Effectiveness Ratio of Regional Expenditure in Jayapura City, Fiscal Year 2019-2024

Fiscal Year	Expenditure Realisation	Budget/Expenditure Target	Effectiveness Ratio	Criteria
2019	1,333,025,496,062.00	1,260,474,272,186.40	105.76	Highly Effective
2020	1,149,853,769,818.00	1,312,249,680,922.00	87.62	Fairly Effective
2021	1,324,953,787,983.56	1,422,480,809,685.00	93.14	Effective
2022	1,369,622,350,785.73	1,510,085,386,208.83	90.70	Effective
2023	1,599,224,840,510.89	1,702,190,574,998.70	93.95	Effective
2024	1,715,843,516,928.00	1,800,442,439,641.00	95.30	Effective

Source: LKPD (processed)

Based on calculations using the Regional Expenditure Effectiveness Ratio, it is known that the total regional expenditure budget/target for Jayapura City from 2019 to 2024 has increased on average each year. In 2019, the regional expenditure target for Jayapura City was IDR 1,260,474,272,186.40, increasing to IDR 1,312,249,680,922.00 in 2020. Then, there was a significant increase in 2021 to Rp. 1,422,480,809,685.00. Moreover, in 2022, there was an increase in the regional expenditure target to Rp. 1,510,085,386,208.83. Furthermore, in 2023, the regional expenditure target rose to IDR 1,702,190,574,998.70, and in 2024, it increased to IDR 1,800,442,439,641.00. An increase in the realization of regional expenditure from year to year accompanied the increase in the regional expenditure target. The total regional expenditure for the City of Jayapura in 2019 was IDR 1,333,025,496,062.00, decreasing to IDR 1,149,853,769,818.00 in 2020. In 2021, regional expenditure increased to Rp. 1,324,953,787,983.56. In 2022, it also increased to Rp. 1,369,622,350,785.73, then regional expenditure experienced a significant increase in 2023 to Rp. 1,599,224,840,510.89, and subsequently a significant increase in 2024 to Rp. 1,715,843,516,928.00.

Based on calculations of the Regional Expenditure Effectiveness Ratio, the average Regional Expenditure Effectiveness of Jayapura City from 2019 to 2024 is 94.41%. This can be considered adequate because the expenditure targets have been almost entirely achieved. The lowest level of regional expenditure effectiveness, based on the ratio calculation, was in 2020 at 87.62%. This is considered reasonably adequate, meaning that the realization of the Regional Expenditure Effectiveness Ratio was close to the target but not fully achieved. Meanwhile, the highest value was in 2019 at 105.76%, which can be considered highly effective, as the realization exceeded the set target. Based on the effectiveness ratio calculations, the Jayapura City Government has successfully demonstrated performance in line with the established targets in implementing the expenditure budget. The performance measurement results show that the average criteria are effective or that the targets have been almost entirely achieved.

Sustainable Development

The measurement of sustainable development in this study is based on three leading indicators: the Human Development Index (HDI), the poverty rate—which includes the poverty line and the poverty depth index—and access to basic services such as education, health, sanitation, and clean water. The selection of these indicators reflects the three main dimensions of sustainable development – social, economic, and environmental – as emphasized in the sustainable development framework. Therefore, analyzing these variables is expected to provide a comprehensive picture of how regional spending efficiency and effectiveness contribute to realizing sustainable development.

Social Dimension

Human Development Index

Sustainable development and community welfare can be achieved through investment in human resources. As an indicator to measure the quality of human development, researchers use the Human Development Index (HDI), which summarises three dimensions: health, education, and decent living standards. Life expectancy is an indicator of health. The education dimension is assessed based on the average and expected length of schooling. A decent standard of living is measured by per capita consumption, based on the value of expenditure and the purchasing power of the community. The government recognizes efforts to enhance the quality of human resources through investments in education and health, particularly in developing knowledge and skills to boost work productivity, which will lead to increased community welfare. (Hafizhah, *et al.*, 2022).

Table 5. Human Development Index of Jayapura City 2019-2024

Year	HDI	Growth (%)	Category
2019	80.16	0.73	High
2020	79.94	(0.27)	High
2021	80.11	0.21	High
2022	80.61	0.62	High
2023	81.51	0.60	High
2024	81.98	0.58	High

Source: BPS (processed)

Based on the data in Table 5, the Human Development Index (HDI) shows a relatively stable upward trend from 2020 to 2024. In 2019, the HDI was recorded at 80.16 with a growth of 0.73 per cent, then experienced a slight decline in 2020 to 79.94 or a decrease of 0.27 per cent. This decline was likely influenced by the impact of the COVID-19 pandemic, which hampered social and economic activities. Entering 2021, the HDI rose again to 80.11 with a growth of 0.21

per cent, indicating economic recovery and improved access to basic services such as education and health. This positive trend continued in the following years, with the HDI rising to 80.61 in 2022, 81.51 in 2023, and 81.98 in 2024, with growth rates of 0.62 per cent, 0.60 per cent, and 0.58 per cent, respectively. During the 2019–2024 period, despite fluctuations in growth, the HDI category remained at a "High" level, indicating that the quality of human development in Jayapura City is relatively reasonable and consistent. The sustained increase after 2021 also indicates the effectiveness of regional development policies and increased efficiency in public spending, especially in sectors that enhance the community's quality of life.

Education

The analysis of access to education in this study uses secondary data in the form of the number of students at the primary/MI, junior high/MTs, and senior high/MA/vocational school levels, average length of schooling, and expected length of schooling in Jayapura City for the 2019–2024 period.

Table 6. Number of Students in Jayapura City 2019–2024

Year	Primary/Madrasah Ibtidaiyah	Junior High School/MTs	Senior High School/MA/Vocational School
2019	34,243	14,623	16,619
2020	34,243	14,623	16,092
2021	33,308	15,469	16,400
2022	30,533	15,471	16,400
2023	33,283	15,774	14,940
2024	33,524	15,764	15,383

Source: BPS (processed)

At the primary school/MI level, the number of students is relatively high, but has shown a downward trend over the past six years. From 34,243 students in 2019–2020, this number decreased to 33,308 in 2021, 30,533 in 2022, and increased slightly again to 33,524 in 2024. The significant decline in 2022 can be attributed to a decrease in school participation rates at the primary level due to demographic factors (a decline in the number of primary school-aged children) or the impact of the pandemic on educational participation. For junior high school/MTs level, the number of students actually shows a consistent upward trend. From 14,623 students in 2019–2020, it increased to 15,469 in 2021, 15,471 in 2022, and 15,774 in 2023, although it declined slightly to 15,764 in 2024. This increase indicates that access to lower secondary education is becoming more open and that community participation at this level is relatively stable. At the senior secondary school level, the number of students tends to fluctuate downward. From 16,619 students in 2019, the number of students decreased to 16,092 in 2020, rose slightly to 16,400 in 2021–2022, then fell again to 14,940 in 2023 and 15,383 in 2024. The decline in the 2022–2023 period may be due to earlier transition to the world of work or limited capacity in upper secondary education, especially in suburban areas.

Overall, the data in Table 7 shows that access to primary and secondary education in Jayapura City tends to be stable, with an upward trend at the lower secondary level (SMP/MTs). However, the decline in the number of students at the SD/MI and SMA/MA/SMK levels needs attention, as it may impact the future sustainability of human resource quality in Jayapura City.

Table 7. Summary of Trends and Access Categories for the Number of Students in Jayapura City 2019-2024

Level	Trend 2019-2024	Access Category
Primary School	Declining then Stable	Moderate
Secondary School/Madrasah Tsanawiyah	Increasing Stable	High
Senior High School/MA/Vocational High School	Fluctuating Declining	Moderate-Low

Source: BPS (processed)

Table 8. Average Length of Schooling in Jayapura City 2019-2024

Year	Average Length of Schooling	Trend	Access Category
2019	11.55	Early Period	High
2020	11.56	Stable	High
2021	11.57	Stable	High
2022	11.74	Increasing	High
2023	11.84	Rising Stable	High
2024	12.07	Significant Increase	High

Source: BPS (processed)

In contrast to the results presented in Table 7 above, the data in Table 8 show the development of the Average Length of Schooling (ALS) of the population during the 2019–2024 period, which illustrates the level of access to formal education. ALS measures the average number of years spent by residents aged 25 years and above in formal education – the higher the number, the better the level of participation and continuity of education in the region. In general, ALS has shown an upward trend each year. In 2019, the ALS was recorded at 11.55 years and continued to increase gradually to 11.56 years (2020), 11.57 years (2021), 11.74 years (2022), 11.84 years (2023), reaching 12.07 years in 2024. This increase indicates that public access to education is improving, as well as improvements in school participation rates and the continuity of education at the secondary and tertiary levels. The increase of 0.52 years over the last six years signifies consistent progress in the regional education sector.

This indicates a significant increase in access to and equity in education. This trend demonstrates the success of the Jayapura City government in managing the education budget efficiently and effectively, thereby directly impacting the improvement of human development and supporting sustainable development goals (SDG 4: Quality Education).

Table 9. Average Years of Schooling in Jayapura City 2019-2024

Year	Average Years of Schooling	Trend	Access Category
2019	15.0	Start of Period	High
2020	15.01	Stable increase	High
2021	15.02	Stable increase	High
2022	15.00	Stagnant	High
2023	15.26	Significantly increased	Very high
2024	15.27	Highly stable	Very high

Source: BPS (processed)

Expected Years of Schooling (EYS) describes the number of years that school-age children are expected to attend formal education in the future, if current education participation patterns continue. This indicator reflects future access to and education opportunities and is one of the main components of the human development index (HDI). BPS data related to Expected Years of Schooling (EYS), based on the data in Table 9, shows that EYS values during the 2019–2024 period show a relatively increasing trend, despite

experiencing stagnation in 2022. In general, EYS increased from 15.00 years in 2019 to 15.27 years in 2024, or an increase of 0.27 years in the last six years.

The increase in EYS indicates that public access to education is becoming more open and sustainable, in terms of the availability of educational facilities, regional policy support, and the efficiency of public spending in the education sector. This also reflects that the Efficiency and Effectiveness Ratio of Regional Expenditure, particularly in education, positively contributes to achieving the social dimension of sustainable development, especially by improving the quality of human resources. The increase in EYS also supports Sustainable Development Goal (SDG) 4: Quality Education, by indicating that children in Jayapura City have ample opportunities to pursue higher education.

Health

The analysis of health access in this study uses secondary data, specifically the number of villages/sub-districts in Jayapura City with health facilities. A total of 39 villages/sub-districts are included, such as hospitals, polyclinics, community health centers, auxiliary community health centers, and pharmacies. The data is measured based on the number of villages/sub-districts with these facilities and the access ratio (%), indicating the percentage of villages/sub-districts that can reach health facilities from the total area.

From the data in Table 10, the level of access to health facilities increases in line with simpler types of services. Advanced facilities such as hospitals and polyclinics have low access ratios (below 25%), indicating limitations in infrastructure and service distance. Basic service facilities such as community health centers and health posts have more exhaustive coverage, but still do not reach half of all villages/sub-districts (still <50%). Pharmacies are the type of facility with the highest access (64.10%), reflecting the ease of distribution of pharmaceutical services compared to institutional medical services. According to the calculation results, four out of five types of health facilities remain in the low category, while only pharmacies are in the medium category. This indicates that the distribution of health facilities at the local level is still low.

Table 10. Health Service Access Ratio in Jayapura City

Type of Health Facility	Number of Villages/Subdistricts with Facilities	Access Ratio (%)	Category
Hospital	8	20.51	Low
Outpatient Clinic	7	17.95	Low
Community Health Center	14	35.90	Low
Auxiliary Community Health Center	18	46.15	Low
Pharmacy	25	64.10	Medium

Source: BPS (processed)

However, when viewed from the Life Expectancy Rate (LER), an important indicator in assessing the level of health and welfare of the community, LER describes the average age a person is expected to reach from birth, based on the mortality conditions prevailing in that year. An increase in LER indicates improvements in the quality of life, nutrition, health services, and the living environment of the community – all of which are key components in the social dimension of sustainable development.

Table 11. Life Expectancy Figures in Jayapura City

Year	Life Expectancy	Trend	Access Category
2019	70.38	Start of period	Mid
2020	70.45	Stable increase	Moderate
2021	70.52	Stable increase	Moderate
2022	70.76	Increasing	Moderate
2023	71.76	Significantly increased	Moderate
2024	71.99	Highly stable	High

Source: BPS (processed)

During the period 2019–2024, LER showed a consistent upward trend from 70.38 years to 71.99 years. The increase of 1.61 years in the last six years indicates that the life expectancy of the population continues to improve. However, the most significant increase occurred in 2023, with a full-year jump compared to the previous year. This change reflects the success of local governments in improving access to health services, improving community nutrition, and managing infectious and non-infectious diseases in the aftermath of the COVID-19 pandemic. The increase in LER indicates that efforts to develop the health and social sectors have been effective and efficient. This can be attributed to increased efficiency and effectiveness of local government spending in the health sector, equitable distribution of basic health and pharmaceutical services, and increased public awareness of healthy lifestyles. In the context of sustainable development, the increase in LER directly contributes to achieving SDG 3: Good Health and Well-being and strengthens the social dimension of sustainable development, which focuses on human welfare.

Economic Dimension

Adjusted Per Capita Expenditure

Table 12. Adjusted Per Capita Expenditure (Thousand Rupiah) in Jayapura City

Year	Adjusted Per Capita Expenditure	Trend	Access Category
2019	15,176	Start of period	Mid
2020	14,763	Declining	Low
2021	14,937	Beginning to recover	Low
2022	15,189	Rising Steady	Currently
2023	15,272	Stable	Moderate
2024	15,408	Stable Increasing	Moderate-High

Source: BPS (processed)

Adjusted per capita expenditure reflects the purchasing power and welfare level of the population in a region. This indicator reflects the average value of goods and services consumed by the population, adjusted for regional price differences and inflation, thereby providing a more accurate picture of the real economic welfare of the population.

During the 2019–2024 period, adjusted per capita expenditure shows a slow but stable upward trend. The sharp decline in 2020 (-413) reflects the economic impact of the COVID-19 pandemic, which reduced people's purchasing power. Starting in 2021, there will be a gradual recovery in line with improving economic activity, productivity, and local trade. The years 2022–2024 show stabilized growth, indicating strengthened purchasing power and household spending efficiency. Overall, there was a net increase of 232 points (from 15,176 to 15,408) over six years, illustrating a positive trend towards greater economic prosperity.

Poverty

The analysis of poverty levels in this study uses the Poverty Depth Index (P1) indicator and the poverty line based on data from the Central Statistics Agency (BPS) for 2019–2024. The

measurement of increases or decreases is carried out through the P1 change ratio, which illustrates the extent to which the expenditure gap between the poor and the poverty line has improved or widened. The use of this indicator is considered important because it not only shows the number of poor people but also illustrates the severity of poverty experienced by the community.

Table 13. Analysis of Poverty Levels in Jayapura City 2019-2024

Year	Poverty Line (Rp/capita/month)	Change (%)	P1	Change (%)	Category P1
2019	992,610	5.10% ↑	2.27	-10.85%	Decreased
2020	1,021,759	2.94% ↑	1.98	-12.78%	Decreased
2021	1,051,297	2.88% ↑	2.53	27.78%	Increased
2022	1,099,019	4.54% ↑	2.51	-0.79%	Stagnant
2023	1,147,265	4.39% ↑	2.12	-15.54%	Significantly Decreased
2024	1,179,015	2.76% ↑	2.35	10.85%	Increased

Source: BPS (processed)

The poverty line indicates the minimum expenditure required for basic living needs (food and non-food). P1 (Poverty Depth Index) indicates how far the average expenditure of the poor is from the poverty line – the higher the value, the deeper the level of poverty in an area. These two indicators are important benchmarks for assessing the success of sustainable development in reducing poverty and social inequality.

In general, the poverty line in Table 13 above shows an increasing trend from 2019 to 2024. The highest increase occurred in 2022 (4.54%), which may reflect an increase in the price of necessities or the impact of post-pandemic economic recovery. A relatively stable increase (2–4%) in subsequent years indicates moderate inflation and a sustained increase in the cost of living.

The P1 value declined significantly in 2019–2020, meaning that the expenditure gap between the poor and the poverty line narrowed (improvement in poverty conditions). However, 2021 and 2024 showed an increase in P1, indicating a return to deeper poverty, with the poor's expenditure falling further behind the poverty line. The year 2023 was the best point, with a 15.54% decrease in P1, reflecting a real improvement in the welfare of people with low incomes.

Environmental Dimension

The analysis of access to safe drinking water in this study is based on secondary data, which shows the percentage of households with access to safe drinking water sources in Jayapura City during the 2019–2024 period.

Table 14. Access to Safe Drinking Water in Jayapura City from 2019 to 2024

Year	Percentage of Households with Access to Safe Drinking Water	Category
2019	33.20	Low
2020	22.88%	Low
2021	97.10%	High
2022	91.80%	High
2023	93.56%	High
2024	96.86%	High

Source: BPS (processed)

In 2019–2020, household access to clean drinking water was very low (only around 20–33%), indicating limited clean water infrastructure and disparities in basic services in several areas of Jayapura City. Starting in 2021, there was a drastic increase to 97.10 %, indicating

government policy and program interventions in expanding clean water networks, both through regional drinking water companies (PDAM) and non-piped drinking water sources (protected wells, refillable water, and rainwater harvesting). During the 2021–2024 period, the access percentage remained high (stable above 90%), indicating the consistency of the local government's performance in ensuring the availability and sustainability of adequate drinking water services.

Discussion

Local Government Expenditure Efficiency Ratio and Sustainable Development

Data on the realization of expenditure and revenue in Jayapura City shows fluctuations in the efficiency ratio between 2019 and 2024, with most years falling within the inefficient range (ratio > 100) or being less than/sufficiently efficient, for example, in 2020 and 2022. In parallel, Jayapura City's HDI shows an upward trend from 80.16 (2019) to 81.98 (2024). This indicates that even though fiscal efficiency, according to the ratio, has not consistently been in the "efficient" category, human development outcomes (HDI) have continued to improve. The HDI data used is recorded in Table 5 (HDI of Jayapura City 2019–2024). The phenomenon of HDI improvement despite the expenditure efficiency ratio not always being optimal can be explained by two mechanisms found in the literature. First, sectoral allocation and spending priorities (e.g., the proportion of spending on education, health, and sanitation) often have a greater impact on *human development* indicators than aggregate efficiency alone; large expenditures directed towards priority sectors can drive HDI increases even if efficiency ratios indicate overspending. Empirical studies in various countries and regions show that the effectiveness of public sector spending (not just the quantity) is strongly correlated with human development indicators (Onabote *et al.*, 2023).

The continued improvement in HDI is in line with local government efforts to increase the efficiency of public spending. Increased budget efficiency allows for more optimal allocation of resources to priority programs such as education, health, and social infrastructure, which are the main components of HDI. Although HDI growth declined in 2020, achievements in subsequent years demonstrate the Jayapura City government's ability to adjust fiscal policy and development planning to be more adaptive to crisis conditions. This performance indicates that the Regional Expenditure Efficiency Ratio positively correlates with sustainable development, as budget management efficiency supports the sustainable maintenance and improvement of the community's quality of life. Overall, the increase in HDI to 81.98 in 2024 illustrates that human development in the region is on track towards sustainability, with fiscal efficiency as one of the main drivers of this achievement.

A more detailed examination of the social aspects of sustainable development, as shown in the data in Table 7, indicates that access to primary and secondary education in Jayapura City is stable, with an upward trend at the lower secondary level (SMP/MTs). However, the decline in the number of students at the SD/MI and SMA/MA/SMK levels needs attention, as it could impact the sustainability of human resources in Jayapura City in the future. However, this data contradicts the Average Length of Schooling (ALS) and Expected Length of Schooling (ELS) data, which show an increase in the last six years. In relation to sustainable development, this condition indicates that the social dimension, particularly access to inclusive and quality education (SDG point 4), still requires optimization at the two extreme levels (primary and upper secondary). The efficiency of regional spending

in the education sector should focus on strengthening compulsory education programs, ensuring equal distribution of school facilities, and providing scholarships for students at risk of dropping out.

The results of the study (Widartha & Jasmina, 2025) A study conducted at the district/city level (2017-2019) shows that the allocation of education budgets in line with student access needs in junior high schools is greatly influenced by *good governance*. When budgets are planned and implemented correctly, access to junior high schools increases. Setyadi,(2022) Analyzed educational achievement disparities (including average length of schooling) and found that regional education spending plays a role in reducing disparities. However, infrastructure, socioeconomic background, and location (rural/urban) remain significant barriers.

In terms of access to health services, it is evident that pharmacies have the highest access (64.10%), reflecting the ease of distribution of pharmaceutical services compared to institutional medical services. From the calculations in Table 10, it is evident that four out of five types of health facilities remain in the low category, while only pharmacies are in the medium category. This indicates that the distribution of health facilities at the local level is still low. The availability of and access to health facilities are important indicators in the social dimension of sustainable development, particularly in achieving SDG 3: *Good Health and Well-being*. The low ratio of access to health facilities – especially hospitals and community health centers – indicates challenges in the equitable distribution of basic services and the community's dependence on health facilities in urban centers. This condition may be related to limited allocation and efficiency of regional spending in the health sector, a lack of medical personnel and supporting infrastructure in villages/sub-districts, and high operational and distribution costs for health services in remote areas. However, during the 2019–2024 period, life expectancy showed a consistent upward trend from 70.38 years to 71.99 years. An increase of 1.61 years in the last six years indicates that the life expectancy of the population continues to improve.

Meilanti *et al.*, (2022) Examined the capacity of pharmacists throughout Indonesia, their distribution across provinces, and the gap in access to pharmaceutical services. They found that pharmaceutical personnel (pharmacists) are unevenly distributed, affecting access to pharmaceutical services compared to larger, more centralized medical facilities. Fanda *et al.*,(2024) Examined the availability of essential medicines in community health centers (Puskesmas) in many regions of Indonesia, finding significant variability in availability at primary health centers. Medicine availability is a key component of access to healthcare services. If medicines are difficult to obtain at institutional medical facilities, the community may rely more on pharmacies. Another study conducted by Hashtarkhani *et al.*, (2024) developed a spatial analysis tool to assess geographical access to health services based on distance and travel time. It supports the notion that geographical distribution is an important factor in differences in access to health facilities (hospitals, community health centres) compared to pharmacies (which are smaller and more widely distributed). Other studies have also found that the availability of institutional doctors/medical personnel is positively correlated with life expectancy. This shows that even though access to pharmacies is high, the limitation of institutional medical facilities can be a barrier to the quality of health services, which impacts life expectancy (You & Donnelly, 2022). Hao, *et al.*, (2020) found that adequate access to healthcare services increases life expectancy by around 2–2.5 years, especially in the

elderly population. This supports the life expectancy data in Jayapura City, which shows that even though access to institutional medical facilities is still low, the increasing life expectancy trend can be sustained if healthcare access improves.

From an economic perspective, during the 2019–2024 period, adjusted per capita expenditure in Jayapura City showed a slow but steady upward trend. The increase in adjusted per capita expenditure reflects improvements in economic conditions and community welfare, which are directly related to the economic dimension of sustainable development. This indicator shows that regional economic growth is becoming inclusive. The community can increase basic consumption, regional spending efficiency, and social protection programs, contributing to the recovery of purchasing power and the gradual movement towards stability in post-pandemic economic development.

However, the increase in adjusted per capita expenditure in Jayapura City is inversely proportional to the poverty line data, which, as shown in Table 13 above, generally shows an increasing trend from 2019 to 2024. The highest increase occurred in 2022 (4.54%), which could reflect an increase in the prices of basic necessities or the impact of post-pandemic economic recovery. The results show that regions that are efficient in allocating *pro-growth + social protection* spending can maintain or restore people's purchasing power, despite economic pressures. Purwanti & Nurhidayati,(2025) , examined how regional spending (including spending on education and infrastructure) and village funds affect indicators of "*inclusive economic development*" (which involves aspects of income equality and poverty reduction). The results show that spending on education and infrastructure plays an important role in inclusive growth. Meanwhile, another study conducted by Qurrotu'aini and Purbadharmaja (2023) Examined how per capita expenditure and minimum wages affect poverty levels in regions in DIY; it found that an increase in per capita expenditure has a significant effect on poverty reduction. v finding that public spending on education, health, and social protection had a significant effect on reducing poverty and improving welfare variables.

From an environmental perspective, BPS data from 2019-2024 shows that the Jayapura City government has been consistent in ensuring the availability and sustainability of proper drinking water services. This indicates the existence of government policy and program interventions in expanding clean water networks, both through PDAM and non-piped drinking water sources (protected wells, refillable water, and proper rainwater harvesting). Kurniawan *et al.*,(2024) Conducted research that specifically discussed the condition of clean water distribution by PDAM Jayapura: analyzing needs, availability, distribution networks, and technical solutions such as real-time monitoring and *leakage* control. It shows that clean water service coverage has not yet reached national standards, but there are concrete efforts to expand and improve the distribution system. In addition, household survey data (IFLS) were used to examine the social and economic factors that influence household access to clean water and sanitation. It was found that although household income/expenditure is influential, geographical location, type of water source, and education are also significant. (Budiono & Purba, 2022) . Review of challenges in providing drinking water in Indonesian cities, including infrastructure, policies, regulations, operational costs, and investment. It was found that outdated infrastructure, limited capacity, and suboptimal regulations hinder the provision of adequate drinking water services. (Ihsan & Ilfan, 2025) .

Ratio of Local Government Expenditure Effectiveness to Sustainable Development

The data in Table 4 shows that the Regional Expenditure Effectiveness Ratio (REBD) of Jayapura City was in the effective to very effective category during the 2019–2024 period, with an average value above 90%. The highest value occurred in 2019 (105.76%), indicating that spending exceeded the budget target, while 2020 was the only period with a ratio below 90% (quite effective). Meanwhile, based on Human Development Index (HDI) data for the same period, there was a consistent increase from 80.16 (2019) to 81.98 (2024), remaining in the high category. This pattern illustrates that the effectiveness of regional expenditure management positively correlates with improvements in the community's quality of life, particularly through increased access to education, health, and purchasing power.

The increase in HDI in the context of regional spending effectiveness is in line with the findings of (Afriliani *et al.*, 2023), which concluded that effective and targeted regional spending in the public sector—especially education and health—significantly contributes to improving HDI components (education, health, and living standards). Imantria, B., & Kurnia,(2024) Emphasize that the effectiveness of public budgets determines the success of human development outcomes, not only in terms of the amount of spending, but also in terms of how optimally these funds produce quality public services.

Theoretically, these findings also support the concept of *Value for Money* in public financial management, where effectiveness is a key dimension alongside efficiency and economy (Mardiasmo, 2018). Expenditure effectiveness demonstrates the ability of local governments to achieve development outputs and outcomes in line with work plan targets (Renja and RKPD), including improvements in HDI. In the context of Jayapura City, spending effectiveness in the education sector—through increases in average and expected length of schooling—and the health sector—through increases in life expectancy—has contributed to stable HDI growth. Furthermore, Lewis (2013) Explains that regions with high fiscal effectiveness tend to have more inclusive human development, because local governments can convert public spending into real social services for the community. In other words, spending effectiveness not only reflects administrative performance, but also serves as a key indicator of local government capacity to achieve sustainable development (SDGs 1, 3, 4, and 8)—namely, reducing poverty, improving health, expanding quality education, and strengthening economic growth.

When viewed more deeply from the social dimension in the framework of sustainable development, the data in Table 7 shows that access to education at the primary to secondary levels in Jayapura City is relatively stable, with an upward trend at the lower secondary level (SMP/MTs). However, the decline in the number of students at the SD/MI and SMA/MA/SMK levels needs to be addressed, as this situation could impact the sustainability of human resources in the future. Interestingly, this trend is not in line with the increase in Average Length of Schooling (ALS) and Expected Length of Schooling (ELS) over the last six years, which actually shows an improvement in aggregate educational achievement. Suwandaru *et al.*,(2021) Summarise evidence that public expenditure on education is positively correlated with economic growth and welfare — useful for linking effective regional expenditure with increases in ALS/ELS and long-term economic impacts.

From the perspective of access to health services, it appears that pharmacies have the highest level of access (64.10%), reflecting the ease of distributing pharmaceutical services compared to institutional medical facilities. Based on the calculations in Table 10, four of the

five types of health facilities are still classified as low, while only pharmacies reach the medium category. This condition indicates that the distribution of health facilities at the local level remains limited. Nevertheless, during the 2019–2024 period, life expectancy increased consistently from 70.38 years to 71.99 years, or an increase of 1.61 years in the last six years, indicating continuous improvement in community welfare and health. Sari *et al.*, (2025) show that regional health expenditure has a positive effect on life expectancy in Indonesia. This study found that an increase in local per capita health expenditure is associated with an increase in life expectancy.

From an economic perspective, the data in Table 12 shows that during the 2019–2024 period, adjusted per capita expenditure in Jayapura City experienced a slow but consistent increase. This increase reflects an improvement in economic conditions and community welfare, which is closely related to the achievement of the economic dimension of sustainable development. This trend indicates that regional economic growth is becoming more inclusive, with the community demonstrating a greater ability to meet basic consumption needs. In addition, the efficiency of regional spending and social protection programs has played a role in restoring people's purchasing power and promoting post-pandemic economic recovery towards greater stability.

However, this increase in adjusted per capita expenditure is inversely proportional to the poverty line trend in Jayapura City, which shows a gradual increase from 2019 to 2024. The highest increase occurred in 2022 (4.54%), likely reflecting higher prices of necessities or the impact of the post-pandemic economic recovery, where inflation and cost-of-living pressures remain relatively high. The World Bank (2020) The statement emphasizes that the quality of public expenditure (effectiveness, efficiency) is crucial to closing development gaps and supporting inclusive growth. (2022) shows that government expenditure, especially in the health and education sectors, contributes to inclusive growth at the district/city level.

From an environmental perspective, BPS data for the period 2019–2024 show consistent performance by local governments in ensuring the availability and sustainability of adequate drinking water services. This condition indicates the existence of policy interventions and the implementation of government programs focused on expanding clean water networks. These networks are established through PDAM services and non-piped drinking water sources, such as protected wells, refillable water, and rainwater harvesting, all of which meet eligibility standards. Martino & Qibthiyyah, (2024) A study using data from Indonesian cities/districts (2019-2022) that examined the relationship between specific fiscal transfers, governance quality, and access to safe drinking water. They found that local governments receiving exceptional transfer support and good governance tended to have greater access to drinking water. A case study in rural Indonesia (West Java) on sustainable drinking water management: appropriate technology, local management, community participation, and how local governments respond to clean water infrastructure and non-piped water source needs (Fadjarenie *et al.*, 2025). Evaluation of drinking water development plans through regional transfer funds; found that budget support from the central government allocated through regional transfers plays an important role in the realization of regional drinking water supply plans, including in non-piped projects and basic infrastructure (Pambudi, 2024) .

Thus, the availability of safe drinking water plays a vital role in the social and environmental dimensions of sustainable development, particularly in improving public health and reducing the risk of waterborne diseases. It supports economic productivity, as

communities have access to safe water and more time for other activities. It demonstrates the effectiveness of local government spending in the basic infrastructure and public services sectors.

CONCLUSION

Overall, the analysis results indicate that the Efficiency and Effectiveness Ratio of Jayapura City Regional Expenditure is positively related to sustainable development achievements during the 2019–2024 period. Although the expenditure efficiency ratio has not always been in the optimal category, development outcome indicators such as HDI, Life Expectancy, and per capita expenditure continue to increase, indicating that regional budget management is becoming more adaptive and productive.

In the social dimension, the effectiveness of education and health spending has been proven to support increases in Average Length of Schooling (ALS), Expected Length of Schooling (ELS), and Life Expectancy (LE). However, there are still disparities in access to primary and secondary education and in the distribution of health facilities at the local level. From an economic perspective, the increase in per capita expenditure and stable purchasing power indicates a more inclusive economic growth trajectory, despite a temporary increase in the poverty line due to post-pandemic pressures. Meanwhile, from an environmental perspective, local governments have successfully maintained consistency in providing adequate drinking water services, reflecting the success of policy interventions in the basic infrastructure and public services sectors.

This study has several limitations, namely that it only uses secondary data from 2019–2024, so it does not fully cover long-term fluctuations and the dynamics of local fiscal policy before and after the pandemic. The analysis focused on the ratio of spending efficiency and effectiveness to sustainable human development indicators (HDI, LE, per capita expenditure, and access to proper drinking water), thus not including external factors such as governance, community participation, and fiscal capacity. This study emphasizes descriptive and correlational analysis without inferential statistical tests (e.g., panel regression or econometric models) that could strengthen the validity of the causal relationship between regional spending and sustainable development.

Meanwhile, the recommendation that can be given is that the Jayapura City Government needs to strengthen the efficiency and effectiveness of regional spending by focusing on sectoral allocations that have a direct impact on community welfare, especially in the sectors of primary to secondary education, primary health care, and basic infrastructure such as drinking water and sanitation. Local governments are advised to expand partnerships with the private sector, NGOs, and communities to support priority programs such as clean water supply, inclusive education, and public health, thereby strengthening the sustainability of development. Future research is advised to use inferential quantitative methods (e.g., panel regression or SEM-PLS) and expand sustainable development indicators to include governance dimensions (governance index), income inequality, and environmental quality to gain a more comprehensive understanding.

a. Theoretical Implications

The results of this study reinforce the *Value for Money* theory in public financial management, where budget efficiency and effectiveness are key to achieving sustainable human development. This study also supports the theory that good governance is a

prerequisite for ensuring public budget allocations that impact social and environmental welfare.

b. Practical Implications

Local governments can use the results of this study as a basis for evaluating fiscal policy and development planning, particularly in strengthening the integration between spending efficiency and the achievement of SDG indicators at the city government level.

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