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Analysis of Regional Expenditure Efficiency in the Management of the Tuban Regency Budget During the Covid 19 Pandemic

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Abstract

The Covid-19 pandemic has caused great fiscal pressure for local governments, including Tuban Regency. Local governments are required to maintain public services while adjusting spending priorities through budget refocusing and reallocating policies. This study aims to analyze the efficiency of regional spending in the management of the Regional Revenue and Expenditure Budget (APBD) of Tuban Regency during the pandemic period of 2020–2021. The research uses a descriptive quantitative approach with secondary data in the form of the Tuban Regency Government Budget Realization Report for 2020 and 2021. The analysis technique used is the expenditure efficiency ratio, which is the comparison between the realization of expenditure and the expenditure budget. The results of the study show that the expenditure efficiency ratio in 2020 was 87.05% and in 2021 was 85.07%, with an average of 86.06%. Based on the criteria used, the two years are included in the category of being very efficient. These findings show that the Tuban Regency Government is able to control the realization of spending that remains below the budget set during the pandemic. This condition reflects the adaptive capacity of local governments in managing regional finances through adjusting spending priorities and strengthening fiscal discipline during times of crisis.

1. Introduction

The Covid-19 pandemic placed considerable pressure on regional financial management in Indonesia. Local governments were required to adjust the structure of the Regional Revenue and Expenditure Budget (APBD) through budget refocusing and reallocation policies so that expenditure could be prioritized for the health, economic, and social sectors without neglecting the continuity of public services (Ramadhan, 2023; Suci & Harto, 2021). In this situation, regional expenditure efficiency became an important issue because it reflected the ability of local governments to manage fiscal resources economically, purposefully, and adaptively during a period of crisis (Suci & Harto, 2021).

Tuban Regency is one of the relevant regions to be examined in this context. The management of the Tuban Regency APBD during the pandemic can be assessed through various regional financial performance indicators, including revenue variance, the effectiveness of regional original revenue, expenditure variance, expenditure compatibility, expenditure efficiency, and regional financial efficiency (Mu'alimah & Ervina, 2023). More broadly, the use of fiscal indicators in evaluating regional financial management is also reflected in assessments of regional tax potential, contribution, and effectiveness in supporting regional original revenue (Adnan, 2021). These conditions indicate that the pandemic affected not only the size of regional budgets but also the quality of expenditure management, making a focused analysis of expenditure efficiency in Tuban Regency important (Mu'alimah & Ervina, 2023).

A number of previous studies have discussed APBD management and regional financial efficiency during the Covid-19 pandemic. The financial performance of the Tuban Regency APBD was previously evaluated using data from the 2020–2021 Budget Realization Reports, with the findings showing that the regional expenditure efficiency ratio was categorized as efficient, whereas the regional financial efficiency ratio was categorized as less efficient (Mu'alimah & Ervina, 2023). Research on the Semarang City

Government examined budget refocusing and reallocation during the pandemic and found that budget realization in the health, economic, and social sectors was effective and efficient (Suci & Harto, 2021). The implementation of the Ponorogo Regency APBD before and during the pandemic was also examined using indicators of effectiveness, efficiency, and regional financial independence. The findings showed that regional financial efficiency was fairly efficient before the pandemic but became inefficient during the pandemic (Setyo Rini, 2024). Meanwhile, the efficiency of local government expenditure in 19 regencies and cities in West Sumatra was examined using Data Envelopment Analysis and panel data regression, providing a broader cross-regional quantitative perspective (Kevin, 2025).

Despite these contributions, previous studies have generally examined regional financial performance through multiple financial ratios, sectoral budget adjustments, comparisons between pre-pandemic and pandemic conditions, or cross-regional efficiency models. Limited attention has been given to a focused year-to-year analysis of aggregate regional expenditure efficiency in Tuban Regency that specifically compares the approved expenditure budget with its realization during the two main pandemic fiscal years. In addition, previous findings concerning Tuban Regency have not sufficiently emphasized the interpretation of changes in the expenditure efficiency ratio between 2020 and 2021 as an indication of aggregate fiscal expenditure control.

The novelty of this study lies in its specific focus on the regional expenditure efficiency ratio as the main analytical indicator for evaluating the management of the Tuban Regency APBD during the 2020–2021 pandemic period. Unlike studies that assess several financial performance indicators simultaneously or apply broader input-output efficiency models, this study concentrates on the relationship between the approved regional expenditure budget and its realization in each fiscal year. This approach provides a more focused description of annual changes in aggregate expenditure control during a period of fiscal uncertainty.

Therefore, this study aims to calculate, analyze, and compare the regional expenditure efficiency ratios of Tuban Regency in 2020 and 2021 and to determine their efficiency categories based on the established assessment criteria. The findings are expected to contribute academically to the study of regional public finance and provide practical evaluation material for local governments in strengthening fiscal discipline, expenditure control, and the quality of budget management during crisis and post-crisis periods.

2. Literature Review

2.1 Regional Revenue and Expenditure Budget (APBD)

The Regional Revenue and Expenditure Budget is the main instrument of local governments in organizing government, development, and public services. The APBD is understood as an annual financial plan of the local government that is discussed and approved jointly by the local government and the DPRD, so that it becomes the basis for the implementation of all regional programs and activities in one budget year. Through the APBD, local governments can show the direction of fiscal policy, development priorities, and the ability to manage financial resources independently within the framework of regional autonomy (Marsuni & Kamal, 2024).

In addition to functioning as an annual financial plan, the APBD also has a strategic function as a tool for authorization, planning, supervision, allocation, distribution, and stabilization. This function shows that the APBD not only contains budget figures, but also reflects local government policy choices in responding to the needs of the community and maintaining the stability of government administration. Therefore, the quality of APBD management can be used as one of the indicators for assessing regional financial performance (Ramadania & Kamal, 2024).

In its implementation, the management of the APBD must be carried out in an orderly manner, obey laws and regulations, be effective, efficient, transparent, and responsible. These principles emphasize that the implementation of the regional budget is not only measured by the level of expenditure absorption, but also by how the budget is used in a targeted and economical manner. Thus, the APBD is an important basis in this study to assess the efficiency of regional spending in Tuban Regency during the Covid-19 pandemic (Law Number 33 of 2004).

2.2 The Concept of Shopping Efficiency

Efficiency in the public sector is related to the ability of the government to use available resources economically to achieve predetermined goals. In the context of regional finance, expenditure efficiency can be seen from the comparison between expenditure realization and the predetermined expenditure budget. A lower proportion of expenditure realization to the approved budget indicates greater fiscal economy in regional expenditure management. However, this ratio only reflects the relationship between the expenditure budget and its realization and does not directly measure the quality of outputs or the achievement of program objectives (Damarjati, 2026).

The measurement of expenditure efficiency in this study uses the expenditure efficiency ratio, which is the comparison between expenditure realization and the expenditure budget expressed as a percentage. The ratio is used to determine the extent to which local governments are able to control expenditure realization within the approved budget ceiling. The formula for the expenditure efficiency ratio is presented as follows:

Expenditure Efficiency Ratio = (Expenditure Realization / Expenditure Budget) × 100%

The efficiency ratio assessment criteria classify a ratio of less than 90% as highly efficient, a ratio ranging from 90% to 100% as efficient, a ratio ranging from more than 100% to 110% as less efficient, and a ratio of more than 110% as inefficient. In this study, the concept of efficiency is focused on fiscal expenditure efficiency, namely the ability of local governments to maintain expenditure realization within the available budget ceiling, rather than measuring program efficiency through a more complex input-output approach (Ikhwan, 2023; Reskiamalia et al., 2025).

2.3 Regional Financial Policy During the Pandemic

The Covid-19 pandemic prompted major changes in regional financial management. Local governments faced increased fiscal pressure, uncertainty in regional revenues, and urgent expenditure needs while remaining responsible for maintaining the continuity of public financial management. In this context, regional financial policy during the pandemic emphasized budget flexibility, fiscal discipline, expenditure control, and the ability of local governments to maintain financial stability amid crisis pressures (Suci & Harto, 2021).

Regional financial management during the pandemic required local governments to adjust budget implementation to rapidly changing fiscal conditions. Expenditure efficiency became increasingly important because local governments were required to control expenditure realization within the approved budget ceiling while responding adaptively to crisis conditions. Therefore, the pandemic provides a relevant context for analyzing whether APBD management in a region, including Tuban Regency, demonstrated adequate aggregate fiscal control and expenditure efficiency during a period of financial uncertainty (Suci & Harto, 2021).

Based on these three theoretical foundations, this study places the APBD as an instrument of regional financial management, expenditure efficiency as the main indicator of fiscal performance assessment, and the Covid-19 pandemic as a crisis context that affected regional budget implementation and expenditure realization. Therefore, this literature review provides a conceptual basis for analyzing regional expenditure efficiency in the management of the Tuban Regency APBD during the 2020–2021 pandemic period.

3. Research Methods

3.1 Research Design

This study uses a descriptive quantitative approach. The descriptive quantitative approach is used because the research aims to describe the level of efficiency of regional spending based on numerical data contained in local government financial documents, without conducting hypothesis testing or generalizations to the wider population. This research is also a documentation study because all the data analyzed comes from official regional finance documents that have been published. With this approach, the research is focused on measuring and describing the efficiency of regional spending in Tuban Regency during the Covid-19 pandemic based on APBD data in 2020 and 2021 (Sugiyono, 2025).

3.2 Research Object, Focus, and Unit of Analysis

The object of this study is the Tuban Regency Government, especially in the aspect of regional expenditure management in the APBD during the Covid-19 pandemic. The focus of the research is directed at regional spending efficiency, namely the ability of local governments to realize spending compared to the predetermined spending budget.

The unit of analysis of this research is regional financial data listed in the Tuban Regency Budget Realization Report (LRA) for the 2020 and 2021 fiscal years. The selection of the period was based on the consideration that the two years represented the Covid-19 pandemic period, when local governments faced the need for fiscal adjustment through budget refocusing and reallocation policies.

3.3 Types, Sources, and Data Collection Techniques

The data used in this study are secondary data. Secondary data is data obtained by researchers indirectly through available documents or archives. In this study, secondary data is in the form of the Tuban Regency Government's Budget Realization Report (LRA) for 2020 and 2021, especially data on regional expenditure budgets and regional expenditure realization.

The data source is obtained from official documents of the Tuban Regency Government published through the official website of the local government, regional financial statements, or other documents that can be accounted for administratively. The selection of secondary data is carried out because the data is relevant, objective, and in accordance with research needs in measuring the efficiency of regional spending.

The data collection technique used in this study was documentation. The process began by identifying the Tuban Regency Budget Realization Report documents for the 2020 and 2021 fiscal years. The relevant data components, particularly those related to the regional expenditure budget and expenditure realization, were then selected. Afterward, the required numerical data were recorded and copied from the documents. Finally, the collected data were organized into a tabulation format to facilitate the calculation and analysis process.

3.4 Variable Operational Definition

The main variable in this study is the efficiency of regional spending. Operationally, regional expenditure efficiency is defined as the level of comparison between the realization of regional expenditure and the regional expenditure budget that has been determined in the APBD.

The indicator used to measure the variable in this study is the regional expenditure efficiency ratio. This measurement consists of three main components. The regional expenditure budget refers to the total amount of expenditure established in the Tuban Regency APBD for a particular fiscal year. Regional expenditure realization refers to the actual amount spent and recorded in the Tuban Regency Budget Realization Report for the same fiscal year. The regional expenditure efficiency ratio is then calculated by comparing the realization of regional expenditure with the predetermined expenditure budget and expressing the result as a percentage.

The smaller the expenditure efficiency ratio, the more efficient the use of the regional expenditure budget, as long as the implementation of the program continues to run according to the set goals (Sudiana et al., 2024).

3.5 Data Analysis Techniques

The data analysis technique used in this study is the analysis of the ratio of regional expenditure efficiency. This ratio is used to find out the extent to which the Tuban Regency Government is able to control the realization of expenditure so that it remains within the set budget limit.

The formula for the regional expenditure efficiency ratio is as follows:

Expenditure Efficiency Ratio = (Expenditure Realization / Expenditure Budget) × 100%

The analysis was conducted by first collecting data on the regional expenditure budget and its realization in Tuban Regency for the 2020 and 2021 fiscal years. The collected data were then verified against the Budget Realization Report documents to ensure their accuracy and consistency. Subsequently, the regional expenditure efficiency ratio was calculated for each fiscal year. The results of these calculations were compared with the established efficiency criteria to determine the level of regional spending efficiency. Finally, the findings were described and interpreted in the context of APBD management during the Covid-19 pandemic. The results of the ratio calculation were then analyzed descriptively to explain the level of regional spending efficiency in each year and the tendency of efficiency changes during the study period.

3.6 Assessment Criteria

The criteria for assessing the regional expenditure efficiency ratio in this study were adopted from previous research (Sudiana et al., 2024). A ratio of less than 60% is categorized as highly efficient, a ratio ranging from 60% to 80% is categorized as efficient, a ratio ranging from more than 80% to 90% is categorized as fairly efficient, a ratio ranging from more than 90% to 100% is categorized as less efficient, and a ratio of more than 100% is categorized as inefficient. Based on these criteria, the regional expenditure efficiency ratios of Tuban Regency in 2020 and 2021 were interpreted to determine the level of fiscal efficiency in APBD management during the Covid-19 pandemic (Sudiana et al., 2024).

4. Results and Discussion

4.1 Overview of the Tuban Regency Budget for 2020-2021

Before analyzing the efficiency of regional spending, it is first necessary to present an overview of the Tuban Regency Budget during the Covid-19 pandemic. Based on data from the Tuban Regency Budget Realization Report, the total expenditure budget in 2020 amounted to IDR 2,830,174,665,860.00 with expenditure realization of IDR 2,463,774,147,704.72. In 2021, the expenditure budget increased to IDR 2,897,482,500,756.00 with a realization of expenditure of IDR 2,464,980,324,856.14 (Mu'alimah & Ervina, 2023). This data shows that the budget ceiling in 2021 is larger than in 2020, while the realization of spending has only experienced a very small increase. Thus, the changes that occur are not in the form of a decrease in expenditure realization, but a relatively minimal increase in realization in the midst of an increase in the spending budget (Mu'alimah & Ervina, 2023).

This condition shows a tendency to tighten spending control in the second year of the pandemic. In the context of APBD management, this situation can be understood as a form of fiscal prudence of local governments in realizing the budget amid economic uncertainty and increasing priority spending needs. Budget refocusing and reallocating policies during the pandemic have encouraged local governments to adjust spending structures to be more directed towards the health, economic, and social sectors, so that the realized spending becomes more selective and priority-based (Suci & Harto, 2021).

4.2 Analysis of Regional Expenditure Efficiency Ratio

Based on Tuban Regency LRA data in 2020 and 2021, the calculation of the regional expenditure efficiency ratio is carried out by comparing the realization of expenditure to the budget, then multiplied by 100 percent. The results of the calculation are presented in the following table.

Table 1. Regional Expenditure Efficiency Ratios of Tuban Regency, 2020–2021

Year	Budget (Rp)	Expenditure Realization (Rp)	Efficiency Ratio	Category
2020	2.830.174.665.860,00	2.463.774.147.704,72	87,05%	Highly efficient
2021	2.897.482.500.756,00	2.464.980.324.856,14	85,07%	Highly efficient
Average	-	-	86,06%	Highly efficient

Based on the table, the regional expenditure efficiency ratio in Tuban Regency was 87.05% in 2020 and 85.07% in 2021. Both ratios fall within the range of more than 80% to 90% and are therefore categorized as fairly efficient. The average expenditure efficiency ratio during the pandemic was 86.06%, which was also categorized as fairly efficient (Sudiana et al., 2024).

These results show that the Tuban Regency Government was able to maintain regional expenditure realization below the budget established during the pandemic. From a fiscal perspective, this condition indicates relatively good expenditure control because expenditure realization did not exceed the approved budget ceiling (Kamaroellah & Syafik, 2022; Khaerani et al., 2023). The difference between the expenditure budget and its realization indicates potential fiscal savings in APBD implementation, which this study interprets as an indicator of regional expenditure efficiency. The average ratio of 86.06% also indicates that, overall, expenditure realization was 13.94% below the approved budget. This interpretation is consistent with the view that effective public fund management requires phased, target-oriented implementation in accordance with established provisions (Dewi, 2021).

When compared year-on-year, the efficiency ratio in 2021 was lower than in 2020, decreasing from 87.05% to 85.07%. This decrease indicates that expenditure efficiency in 2021 was better than in 2020. Although the budget ceiling increased in 2021, the Tuban Regency Government was able to maintain expenditure realization at a relatively controlled level. These findings can be interpreted as an indication of strengthened fiscal prudence and adjustment in the second year of the pandemic, consistent with evidence that regional financial performance and efficiency during the pandemic were influenced by APBD adjustments and changes in expenditure patterns (Manurung & Simamora, 2023).

The findings of this study are consistent with previous research, which showed that the regional expenditure efficiency ratio in Tuban Regency during the pandemic was categorized as efficient and that the overall performance of regional expenditure management was relatively good (Mu'alimah & Ervina, 2023). Although this study uses a more specific focus on spending efficiency, the results still support the general picture that the management of regional spending in Tuban Regency during the pandemic was carried out in a controlled manner. The difference lies in the classification applied to the efficiency ratios, with the figures of 87.05% and 85.07% falling within the range of more than 80% to 90% and therefore being categorized as fairly efficient (Sudiana et al., 2024).

The results of this study are also consistent with previous research on the refocusing and reallocation of local government budgets during the Covid-19 pandemic. Previous findings indicate that APBD adjustments were implemented by redirecting expenditure toward pandemic response, health services, social safety nets, and regional economic recovery, thereby supporting more focused and effective crisis management (Sopanah et al., 2022; Yuniza et al., 2022). This conformity shows that during the pandemic, budget adjustment policies do not always mean a decrease in fiscal performance, but can instead encourage local governments to be more selective, directed, and disciplined in realizing spending according to the priorities of public needs (Suci & Harto, 2021).

However, the efficiency of spending in this study needs to be understood proportionally. A low expenditure efficiency ratio does indicate that the realization of expenditure is under budget, but it does not automatically prove that the entire program has been effective or has an optimal impact on the community. Therefore, the results of this study are more appropriately positioned as an illustration of fiscal efficiency in the management of regional spending, rather than as a single measure of the success of development performance. In other words, the Tuban Regency Government can be considered successful in maintaining spending efficiency during the pandemic, but a more comprehensive assessment still requires other indicators such as program effectiveness, spending quality, and development output achievements.

The difference of 1.98 percentage points between the 2020 and 2021 efficiency ratios also indicates that the change in expenditure efficiency was relatively limited. Therefore, the improvement should not be interpreted as a substantial transformation in regional financial performance. Rather, it reflects a moderate year-to-year change in the relationship between the approved expenditure budget and its realization. This interpretation is important because the study covers only two fiscal years and does not provide a sufficiently long time series to identify a sustained pattern of improvement.

The expenditure efficiency ratio must also be interpreted together with the size of the expenditure budget and its realization. In 2021, the approved budget increased, whereas expenditure realization remained relatively stable compared with the previous year. This condition mathematically produced a lower efficiency ratio. However, the lower ratio may reflect several possible conditions, including tighter expenditure control, delays in program implementation, changes in spending priorities, or incomplete budget absorption. Because this study does not examine detailed expenditure components or program implementation reports, these possible explanations cannot be confirmed empirically.

From a policy perspective, the findings indicate that maintaining expenditure realization below the approved budget ceiling is not sufficient on its own to demonstrate high-quality financial management. Local governments also need to ensure that fiscal control is accompanied by timely program implementation, appropriate expenditure allocation, and the achievement of expected outputs. Consequently, the evaluation of APBD performance should integrate expenditure efficiency ratios with indicators of budget effectiveness, service delivery, and program outcomes. Such an integrated assessment would help distinguish genuine fiscal savings from low budget absorption caused by delayed or unrealized activities.

These findings also highlight the importance of strengthening performance-based budgeting in Tuban Regency. Budget preparation and implementation should be connected more explicitly to measurable outputs and outcomes so that expenditure control does not focus solely on remaining below the budget ceiling. Future evaluations should examine expenditure realization by sector, particularly in health, social protection, economic recovery, and public services, to determine whether the observed fiscal efficiency was accompanied by appropriate priority allocation. This approach would provide a more comprehensive understanding of how regional financial management supported public needs during the pandemic and subsequent recovery period.

The difference of 1.98 percentage points between the 2020 and 2021 efficiency ratios also indicates that the change in regional expenditure efficiency was relatively limited. Therefore, the improvement should not be interpreted as a substantial transformation in regional financial performance but as a moderate year-to-year change in the relationship between the approved expenditure budget and its realization. This interpretation should be made cautiously because budget realization during the Covid-19 pandemic was also influenced by government policies and adjustments implemented in response to crisis conditions (Situmorang et al., 2025).

The expenditure efficiency ratio must also be interpreted together with the size of the expenditure budget and its realization. In 2021, the approved expenditure budget increased, while expenditure realization remained relatively stable compared with the previous year, thereby producing a lower efficiency ratio. However, lower budget realization may also be influenced by the quality of budget planning, the capacity of human resources, and the availability of information technology support in implementing regional government programs. Therefore, the ratio alone cannot identify the specific factors responsible for the difference between the approved budget and its realization (Sholihat et al., 2025).

From a policy perspective, maintaining expenditure realization below the approved budget ceiling is not sufficient on its own to demonstrate high-quality regional financial management. Fiscal control should also be accompanied by timely program implementation, appropriate resource allocation, and measurable outputs and outcomes. The application of performance-based budgeting is therefore important because it strengthens the connection between budget allocation, program implementation, and the performance expected from public sector organizations (Huy & Phuc, 2022).

These findings also highlight the importance of strengthening the capacity of the Tuban Regency Government in planning and implementing performance-oriented budgets. Budget preparation and realization should be connected more explicitly to measurable public service outputs so that expenditure control does not focus solely on maintaining realization below the budget ceiling. Future evaluations should examine expenditure realization by sector, particularly health, social protection, economic recovery, and public services, because local government capacity in designing and implementing policies is closely related to the quality of public service delivery (Setiawan et al., 2022).

5. Conclusion

The results show that the regional expenditure efficiency of Tuban Regency during the Covid-19 pandemic was categorized as highly efficient. The expenditure efficiency ratio was 87.05% in 2020 and 85.07% in 2021, with an average ratio of 86.06%. The lower ratio in 2021 indicates better aggregate fiscal control than in 2020 because expenditure realization remained below the approved budget ceiling despite an increase in the regional expenditure budget. These findings imply that the Tuban Regency Government was able to maintain fiscal discipline and control aggregate expenditure realization during the pandemic. The results may serve as evaluation material for strengthening performance-based planning and budgeting so that fiscal efficiency is accompanied by improvements in public service quality and the achievement of development programs.

However, this study is limited to a two-year observation period, relies solely on Budget Realization Report data, and uses only the expenditure efficiency ratio. Therefore, the findings describe fiscal efficiency based on the relationship between the expenditure budget and its realization but do not measure program effectiveness, expenditure quality, sectoral reallocation, public service outcomes, or broader regional financial performance. Future studies should extend the observation period by comparing pre-pandemic, pandemic, and post-pandemic conditions. Additional indicators, including expenditure effectiveness, expenditure compatibility, regional financial independence, and Data Envelopment Analysis, may also be applied. Further research should connect financial data with program outputs, development outcomes, and public service quality to provide a more comprehensive assessment of regional expenditure performance.

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