

## ECONOMIC ANALYSIS, EFFECTIVENESS AND EFFICIENCY OF BUDGET USE IN INFRASTRUCTURE PROJECTS

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### A B S T R A C T

*This research aims to analyze and measure the economy, effectiveness and efficiency of budget use in infrastructure projects. The population in this research is budget realization reports. The sampling technique used in this research is the 2018-2022 Budget Realization Report. The research method is a quantitative descriptive type that uses primary data and secondary data. The data collection techniques used in this research are documentation and interview techniques. The data analysis technique uses ratio analysis. The economic level of use of the South Buton Regency Public Works and Spatial Planning Department's budget for 2018-2022 is included in the very economical category. This shows that the Public Works and Spatial Planning Department of South Buton Regency, in achieving budget realization, has used its budget well in the sense of being able to save costs. The level of effectiveness in using the South Buton Regency Public Works and Spatial Planning Department's budget for 2018-2022 is in the quite effective category. This shows that the Public Works and Spatial Planning Department of South Buton Regency, in achieving the realization of the expenditure budget, has achieved enough to realize it maximally from the budget that has been set to achieve the target or organization. The level of efficiency in using the South Buton Regency Public Works and Spatial Planning Department's budget for 2018-2022 is in the very efficient category. This shows that the Buton Regency Public Works and Spatial Planning Service*

## INTRODUCTION

Regional government financial measurements are carried out by accommodating the results that have been achieved during a period with the previous period, namely what financial trends have occurred. Several ratios used to reduce regional government financial performance based on financial data available in the APBD include economic, effectiveness and efficiency ratios. Financial performance measurement can provide an assessment of local government performance using cash flow report analysis as a medium (Nurhumaerah et al., 2023).

According to Soraida (2022), the regional expenditure and income budget (APBD) is a source of performance for government organizations which is a form of non-profit organization which aims to improve services to the general public, which can be in the form of improving the quality of education or improving the quality of other health services. In addition, this non-profit organization is an organization whose main orientation is not to make a profit. Compared with other organizations, government organizations have more distinctive characteristics as political organizations than economic organizations. However, like other forms of government organizations, government institutions also have the status of economic organizations.

Value for money is one of the four main components of a job evaluation system that is objective, comprehensive, representative, and application-focused. As such, it can be a tool for local governments to meet the needs of their constituents in order to achieve effective work evaluation, which relies on the existence of monitoring and evaluation tools. (Purnomo & Putrid, 2018). A similar thing was explained by (Rumagit et al., 2022) who said that value for money stated that value for money is the core of measuring the performance of public sector organizations because government performance is jointly assessed in terms of economy, efficiency and effectiveness.

Public sector organizations are one of the few government agencies that actively support the government in its efforts to improve public services to the general public. These services include public transportation, public education, health care, security, legal certainty and other related areas. In general, an organization in the public sector can be said to be successful if it can carry out its duties by fulfilling the objectives that have been set and implemented at an efficient, effective and economical level (Nurhumaerah, 2023).

Infrastructure development plays an important role in driving economic growth and improving people's quality of life. Adequate infrastructure can increase logistics efficiency, reduce transportation costs, and support the development of other sectors such as industry, trade and tourism (Suratno, 2020).

South Buton Regency is a new autonomous region resulting from the expansion of Buton Regency, Southeast Sulawesi Province, which was established in 2014. This regency consists of seven sub-districts with 60 villages. Even though it has abundant natural resource potential, such as mining, fisheries, agriculture and plantations, this potential is not yet fully supported by adequate basic infrastructure. For example, the condition of damaged roads in South Buton Regency covers 6.24 km and 64.4 km in the mainland area, and 16.08 km and 8.44 km in the island area, namely Siompu District and Kadatua District. Until 2020, the availability of clean water only reached 66.39%, with coverage in Clothing and Food Village, Sampolawa District, and Biwinapada Village, Siompu District. Meanwhile, the percentage of residential houses that have proper sanitation has only reached 15.50%, with coverage in Burangasi Village, Lapandewa District, and Jaya Bakti Village, Sampolawa District (Busel Pahomba, 2021).

According to the project outline to restructure the South Buton regional government in 2021, there are several existing problems, such as the general public's limited access to clean and safe drinking water and sanitation facilities. This condition is more closely related to more narrowly defined exclusive regional or village employment patterns. Suburban areas and sub-districts in South Buton Regency are still not fully integrated and stable. The regional central budget (APBD) has stated balanced regional planning, personnel spending, services and goods spending, other capital spending, as well as the fulfillment of strategic infrastructure. Apart from that, these two factors, income and expenditure budgets are not very good at meeting needs at the micro level. This is the result of significant differences between needs and budget allocations in the APBD.

The phenomenon that occurred in South Buton Regency can of course be a strong consideration, encouragement and challenge for regional and local village governments to further improve their duties and functions in community services. Appropriate strategies are needed in the form of implementing innovations that suit the needs of the people living in the region, as well as heterogeneous social characteristics.

Previous research related to economics, effectiveness and efficiency of budget use conducted by (Nurhumaerah et al., 2023) shows that the economic ratio in budget management is in the economic category, then the effectiveness ratio in budget management shows inefficient results, this is because due to realization of income. Then the effectiveness ratio in budget management shows results in the ineffective category, this is because the actual income is far below the income target. On the other hand, research conducted by Wakhid Yulianto (2023) shows the effectiveness of budget use for direct and indirect spending, on efficiency measures resulting in very efficient performance for direct spending but indirect spending is in the efficient category.

Based on the background that has been explained, the author is interested in conducting research with the title "Economic Analysis, Effectiveness and Efficiency of Budget Use in Infrastructure Projects in South Buton Regency (Empirical Study of the Public Works and Spatial Planning Service of South Buton Regency 2018-2022 ).

## **METHODOLOGY**

This type of research is quantitative research that uses primary and secondary data. This research collects information, facts and opinions to support the expected research results. This study examines the economical, effective and efficient use of budgets in infrastructure projects by analyzing the Realized Budget Report for the 2018–2022 fiscal year using ratio analysis tools, observations and interviews. Financial analysis used to analyze data includes economic ratios, effectiveness and efficiency.

## RESULTS AND DISCUSSION

The South Buton provincial government level is implemented by the Regional Finance and Assets Agency (BKAD) in accordance with Regional Provincial Law No. 10 of 2016 concerning Unification and Reform of Regional Apparatus in South Buton Province. According to Hasanah (2017), a reporting entity is a government unit consisting of one or more accounting entities which, in accordance with the provisions of Legislation, are required to disclose accountability reports, which are equivalent to general purpose financial reports.

The report on the realization of the South Buton Regency budget for the 2018-2022 fiscal year can be seen in table 4.1 below :

**Table 1.** Expenditure Budget Report and Realization of Expenditure Budget for South Buton Regency for 2018-2022

<b>Year</b>	<b>Budget</b>	<b>Realization of Shopping Budget</b>
2018	588.412.622.755,95	543.977.113.130,00
2019	642.795.648.918,15	504.196.612.316,00
2020	641.955.857.824,40	518.610.334.688,00
2021	620.106.537.812,00	573.034.795.848,00
2022	489.955.071.017,00	464.504.574.708,00

Source: South Buton Regency BKAD (data processed 2024)

In 2018 the expenditure budget was IDR 588,412,622,755.92 and the actual expenditure budget was IDR 543,977,133,130.00. Then in 2019 the expenditure budget increased by IDR 642,795,648,918.15 and there was a decrease in the actual amount of the expenditure budget by IDR 504,196,612,316.00. Then in 2020 the expenditure budget was IDR 641,955,857,824.40 and the actual expenditure budget was IDR 518,610,334,688.00. In 2021, the expenditure budget decreased by Rp. 620,106,537,812.00 and the actual expenditure budget was Rp. 537,034,795,848.00. And in 2022 the expenditure budget will experience a very large decrease of Rp. 489,955,071,017.00 and the actual expenditure budget will be Rp. 464,504,574,708.00.

**Table 2.** Direct Expenditure Budget Report and Realization of Direct Expenditure for South Buton Regency for 2018-2022

<b>Year</b>	<b>Direct Shopping</b>	<b>Direct Shopping Realization</b>
2018	154.851.381.473,25	146.567.085.954,00
2019	177.309.962.669,00	157.308.748.819,00
2020	263.274.145.852,00	157.354.216.167,00
2021	232.818.293.702,00	219.978.009.352,00
2022	112.187.979.437,00	109.602.776.187,00

Source: South Buton Regency BKAD (data processed 2024)

Based on table 4.2 above, it can be seen that from 2018-2022 the direct expenditure budget report and the realization of the direct expenditure budget for South Buton Regency, the largest percentage was in 2022 and the smallest percentage occurred in 2020. In 2018 the direct expenditure budget was IDR 154,851,381,473, 25 and actual direct expenditure amounted to IDR 146,567,085,954.00. Furthermore, in 2019 the direct expenditure budget increased by IDR 177,309,962,669.00 and actual direct expenditure amounted to IDR 157,308,748,819.00. Then in 2020 the direct expenditure budget increased by IDR 263,274,145,852.00 and the actual direct expenditure budget was IDR 157,354,216,167.00. Then in 2021 the direct expenditure budget is IDR 232,818,293,702.00 and the actual direct expenditure is IDR 219,978,009,352.00. And in 2022 the direct expenditure budget will decrease by 112,187,979,437.00 and actual direct expenditure will amount to Rp. 109,602,776,187.00.

## Economic Ratio

Economical means obtaining input of a certain quality at the lowest price (spending less). Economics is a comparison of input with input value, which means the comparison between agency expenditure and the set budget. In research on economic ratio measurements according to Mahsun (2016) it is carried out with the following calculations:

**Table 3.** Results of Economic Ratios for Use of Expenditure Budget in Public Works and Spatial Planning for South Buton Regency 2018-2022

Year	Budget	Realization of Shopping Budget	Presentation	Criteria
2018	588.412.622.755,95	543.977.113.130,00	92%	Economical
2019	642.795.648.918,15	504.196.612.316,00	78%	Economical Very
2020	641.955.857.824,40	518.610.334.688,00	81%	Economical Very
2021	620.106.537.812,00	573.034.795.848,00	92%	Economical
2022	489.955.071.017,00	464.504.574.708,00	95%	Economical
<b>Average</b>	<b>596.645.147.665,50</b>	<b>520.864.686.138,00</b>	<b>87,6%</b>	Economical Very

Source: South Buton Regency BKAD (data processed 2024)

Based on data analysis using economic ratios, the economic ratio for South Buton Regency for the last five years (2018–2022) is 87.6% with very strong economic criteria. 2018 saw the use of the budget for infrastructure projects, with 92% of them meeting economic criteria. However, there was a decline in 2019 with a percentage of 78% in the very economic category, followed by a decline in 2020 with a percentage of 81% in this category. In 2022, the percentage of respondents who meet economic criteria will reach 92%, while in 2021, there will be a significant decrease to 95%. The results show that between 2018 and 2022, the average real estate investment budget is based on excellent economic criteria. However, in 2018, 2021 and 2022 the expenditure budget is based on economic criteria.

Based on the results of interviews conducted with Mr. Muhammad Arif Muhas, ST as the assistant expenditure treasurer for the South Buton Regency Public Works and Spatial Planning Service stated that:

“Dinas Pekerjaan Umum dan Penataan Ruang telah melaksanakan program kinerjanya sesuai dengan prinsip ekonomis, yaitu setiap biaya untuk belanja program didasarkan pada standar satuan yang telah ditetapkan oleh pemerintah Kabupaten Buton Selatan, sehingga belanja program dikatakan ekonomis karena biaya yang dikeluarkan tidak melebihi atau di bawah standar yang telah ditetapkan. Hasil ekonomi dari program-program yang dilaksanakan oleh Dinas Pekerjaan Umum dan Penataan Ruang juga dapat dievaluasi dengan membandingkan expenses that have been incurred with the tasks that have been completed”.

The policy that is always carried out by the Public Works and Spatial Planning Service of South Buton Regency in maximizing the economic level in the procurement and allocation of financial resources as stated by Mr. Muhammad Arif Muhas, ST as assistant expenditure treasurer states that:

“In terms of currency, there are certain benchmarks such as Standard Unit Prices (SSH) and Standard General Costs (SBU) to determine the maximum budget amount. In addition, there are guidelines for the proportion of the budget to reach or exceed targets, which are usually 15%, 25% and 35% for a year, in accordance with applicable exchange regulations and strategies to avoid waste, that is, before strengthening our investments, we already have a target and can comfortably finance the investment, so we need to adjust the priority scale.”

## Effectiveness Ratio

According to Mahsun (2018) effectiveness is the relationship between effort and the goals or conclusions required. A program or activity can be considered effective if the process achieves its objectives and complies with the budget (spending prudently). Therefore, a study was conducted to determine the effective percentage for spending in the South Buton region during the 2018–2022 shopping period. The results show that the percentage has been met by expenditure realized simultaneously with subsequent expenditure:

**Table 4.** Results of Effectiveness Ratio for Use of Expenditure Budget in Public Works and Spatial Planning for South Buton Regency 2018-2022

Year	Budget	Realization of Shopping Budget	Presentation	Criteria
2018	588.412.622.755,95	543.977.113.130,00	92%	Effective
2019	642.795.648.918,15	504.196.612.316,00	78%	Less Effective
2020	641.955.857.824,40	518.610.334.688,00	81%	Quite Effective
2021	620.106.537.812,00	573.034.795.848,00	92%	Effective
2022	489.955.071.017,00	464.504.574.708,00	95%	Effective
<b>Average</b>	<b>596.645.147.665,50</b>	<b>520.864.686.138,00</b>	<b>87,6%</b>	<b>Quite Effective</b>

Source: South Buton Regency BKAD (data processed 2024)

The results of data analysis carried out using the effectiveness ratio at the South Buton Regency Public Works and Spatial Planning Service in the 2018-2022 budget year, effectiveness analysis was carried out to see whether a program or activity carried out had achieved the stated objectives by calculating the use of the expenditure budget, namely comparing realization expenditure budget with expenditure budget. The level of effectiveness in 2018 was 92% with effective criteria, in 2019 it was 78% with less effective criteria, then in 2020 it was 81% with quite effective criteria, then in 2021 it was 92% with effective criteria and in 2022 it will be 95% with effective criteria. From the results of the effectiveness ratio percentage for 2018-2022, the effectiveness level of the South Buton Regency Public Works and Spatial Planning Service has an average of 87.6% with the criteria being quite effective.

Based on the results of interviews conducted with Mr. Muhammad Arif Muhas, ST as assistant expenditure treasurer for the South Buton Regency Public Works and Spatial Planning Service, regarding the effectiveness in using the budget to implement the program, the South Buton Regency Public Works and Spatial Planning Service stated that:

"In the infrastructure development process, performance assessment measurements from previous times are carried out because the results of the previous year's labor force survey serve as labor force participation or as a warning to the South Buton Public Works and Spatial Planning Service regarding labor force participation plans for the coming year. In this way, existing problems and phenomena can be addressed and evaluated strategically as a means of achieving successful implementation of Regional Government Performance Units (SKPD) for the coming year. "In addition, in connection with the effective implementation of the APBD in the field of currency exchange, the South Buton Regency Manpower and Statistics Service has completed an evaluation of labor results based on labor force participation, or what is known as the Inspection of Hospitalization Results (PHO)."

Mr. Muhammad Arif Muhas, ST also believes that:

"The decline in effectiveness in 2019 can be attributed to internal and external factors. One of the internal factors that can hinder work performance is the possibility of administrative and non-structural errors. Problems with administration occur frequently every year, similar to problems in preparing documents for business trips. Furthermore, nomenclature errors occur during the writing process, similar to writing errors in RT numbers. Due to the reasons already

mentioned, the writing process can be hampered when preparing a budget, as this requires continuous revision of the document. In addition, there are other external factors that hinder a successful work life. These include obstacles that make it difficult to carry out work tasks, as well as concerns expressed by communities regarding construction projects in their neighborhoods, which make it impossible for the government to carry out work without the consent of the community.”

### Efficiency Ratio

Efficiency is related to operational methods; If a product or business results using daily and financial resources that are consistently high quality, then operational processes can be described as efficient. To reduce the level of efficiency, use a comparison between the output produced and the input. (Mahsun, 2018).

**Table 5.** Results of the Efficiency Ratio for Use of the Expenditure Budget at the Public Works and Spatial Planning Department of South Buton Regency 2018-2022

Year	Realization of Shopping Budget	Realization of Direct Expenditure Budget	Presentation	Criteria
2018	543.977.113.130,00	146.567.085.954,00	27%	Very Efficient
2019	504.196.612.316,00	157.308.748.819,00	31%	Very Efficient
2020	518.610.334.688,00	157.354.216.167,00	30%	Very Efficient
2021	573.034.795.848,00	219.978.009.352,00	38%	Very Efficient
2022	464.504.574.708,00	109.602.776.187,00	24%	Very Efficient
<b>Average</b>	<b>520.664.686.138,00</b>	<b>158.162.167.295,80</b>	<b>30%</b>	<b>Very Efficient</b>

Data Source: South Buton Regency BKAD 2024 (processed data)

The results of data analysis carried out using efficiency ratios at the South Buton Regency Public Works and Spatial Planning Service in the 2018-2022 budget year show that efficiency analysis was carried out to see the results of activities carried out using existing resources by calculating the use of the expenditure budget, namely comparing between realization of the expenditure budget directly with the realization of the expenditure budget. From the results of the efficiency ratio percentage for 2018-2022, the efficiency level of the Public Works Department and spatial planning for South Buton Regency is in the very efficient category every year with an average of 30%, the efficiency level in 2018 reached a percentage of 27% with very efficient criteria, then in 2019 it decreased by reaching a percentage of 31% in the very efficient criteria. Furthermore, in 2020 it will get a percentage of 30% with very efficient criteria. then in 2021 there was a very large decline with a percentage level of 38% in the very efficient criteria and in 2022 it increased again with a percentage of 24% in the very efficient criteria.

Based on the results of interviews conducted by Mr. Muhammad Arif Muhas, ST as assistant expenditure treasurer for the South Buton Regency Public Works and Spatial Planning Department stated that:

““Analyzing the efficiency of using the program budget means that, when building infrastructure for the South Buton Regency Public Works and Spatial Planning Service, they use the daily ratio optimally and adjust it to needs based on the requirements recorded as they appear in the DPA's annual report, and when implementing the Department's spending, they use the daily ratio according to the needs specified in the Regional Property Requirements

Plan (RKBMD). In addition, goods and services used for necessary maintenance are purchased in accordance with established benchmarks, namely unit prices (SSH).”

## CONCLUSION

The economic level of use of the South Buton Regency Public Works and Spatial Planning Department's budget for 2018-2022 is included in the very economical category. This shows that the Public Works and Spatial Planning Department of South Buton Regency, in achieving budget realization, has used its budget well in the sense of being able to save costs. The level of effectiveness in using the South Buton Regency Public Works and Spatial Planning Service budget in 2018-2022 is in the quite effective category. This shows that the Public Works and Spatial Planning Department of South Buton Regency, in achieving the realization of the expenditure budget, has achieved enough to realize it maximally from the budget that has been set to achieve the target or organization. The level of efficiency in using the South Buton Regency Public Works and Spatial Planning Service budget in 2018-2022 is in the very efficient category. This shows that the South Buton Regency Public Works and Spatial Planning Service has allocated and used existing resources well.

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