



Operational Efficiency as Mediator of Budget Planning, Financial Control, and Financial Performance at RSUD Kotamobagu

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Received: 10 June 2026 | Revised: 11 July 2026 | Revised: 20 July 2026 | Published: 18 August 2026

Abstract

Purpose: This study aims to examine the effect of budget planning and financial control on financial performance, both directly and indirectly through operational efficiency as a mediating variable at RSUD Kotamobagu.

Research Methodology: A quantitative approach with a causal associative design was employed using path analysis. Data were collected through questionnaires from 50 respondents involved in budget planning, financial management, accounting, and operational supervision. Data analysis included validity and reliability tests, classical assumption tests, path analysis, and the Sobel test.

Results: The results indicate that budget planning significantly affects financial performance ($\beta=0.346$) and operational efficiency ($\beta=0.205$). Financial control also has a significant effect on financial performance ($\beta=0.620$) and operational efficiency ($\beta=0.355$). Operational efficiency significantly influences financial performance ($\beta=0.360$) and mediates the relationship between budget planning and financial control with financial performance. Financial control represents the most dominant factor influencing financial performance.

Conclusions: Effective budget planning and financial control improve financial performance by strengthening operational efficiency within RSUD Kotamobagu.

Limitations: This study is limited to one public hospital with a sample of 50 respondents, which may restrict the generalizability of the findings.

Contributions: This study contributes to public sector financial management literature by highlighting the mediating role of operational efficiency and providing practical insights for improving hospital financial governance and resource utilization.

Keywords: Budget Planning, Financial Control, Financial Performance, Operational Efficiency

How to Cite: Simbuang, F., Pinaraswati, S. O., & Hai, S. T. (2026). Operational Efficiency as Mediator of Budget Planning, Financial Control, and Financial Performance at RSUD Kotamobagu. *Corelytics: Insights into Business & Accounting Systems (Corelytics)*, 1(3), 141-154.

1. Introduction

Effective and accountable financial management is one of the key factors in the success of public sector organizations, including healthcare institutions. In the era of bureaucratic reform and demands for good governance, public organizations are not only required to be able to absorb budgets, but they must also ensure that the budget is planned and used efficiently, transparently, and

performance-oriented ([Sari & Muslim, 2023](#)). Budget planning and financial control serve as essential instruments in ensuring that limited resources can be utilized optimally to achieve organizational goals. Budget planning acts as a guide in establishing program and activity priorities, while financial control plays a role in ensuring that budget execution aligns with established plans ([Amos, Au-Yong, & Musa, 2021](#)).

In the context of the public sector, a budget is viewed not merely as a financial administration tool, but also as a management and performance control device. An appropriately structured budget helps an organization anticipate future needs, allocate resources rationally, and measure performance by comparing plans with actual realization ([Ho, 2018](#); [Steccolini, Saliterer, & Guthrie, 2020](#)). Conversely, weak budget planning can lead to inefficiency, budget waste, and low organizational performance achievement. Therefore, the quality of budget planning highly determines the success of a public organization's financial management ([Wartono, Riyanto, & Suhardjanto, 2025](#)).

Beyond budget planning, financial control holds a strategic role in improving an organization's financial performance. Financial control encompasses the monitoring, evaluation, and correction of budget implementation to keep it aligned with plans and applicable regulations ([Anačkov, 2024](#)). Effective control allows management to detect deviations early, take corrective actions, and ensure that the use of public funds can be fully accounted for. Empirical studies in recent years indicate that weak financial control is often the primary cause of operational inefficiencies and low financial performance across various public sector institutions ([Atobishi & Nosratabadi, 2024](#)).

Hospitals as public service organizations have more complex financial management characteristics compared to other public entities. Medical facilities are not only oriented toward financial performance achievement but also bear a social responsibility to provide quality healthcare services to the community. This complexity increases for regional public hospitals (*Rumah Sakit Umum Daerah/RSUD*) that implement the Regional Public Service Agency (*Badan Layanan Umum Daerah/BLUD*) financial management pattern. The BLUD status grants financial flexibility, yet it demands that the hospital operate independently, efficiently, and accountably to maintain long-term institutional sustainability ([Anjani, Fitrijanti, & Qadri, 2024](#); [Kristianto, Purba, Hazelinling, Saragih, & Girsang, 2024](#)).

In practice, many regional hospitals still face challenges in financial management. These include inaccuracies in budget planning, low control over operational costs, and sub-optimal resource utilization. Such conditions lead to low operational efficiency, which eventually harms financial performance. Empirical evidence reveals that hospital operational inefficiencies are often reflected in excessively high operational costs relative to the medical outputs generated ([Anjani et al., 2024](#)). Operational efficiency is a vital indicator for assessing a hospital's financial health, representing its ability to leverage funds, personnel, and medical facilities to produce optimal healthcare services at minimal cost ([Kawatu & Kewo, 2021](#)).

RSUD Kotamobagu, as a regional public hospital in North Sulawesi, plays a strategic role in providing reference healthcare services. Operating under the BLUD financial pattern since its transformation, it is demanded to manage its finances professionally and independently. The growth of healthcare demands has elevated operational burdens across medical costs, facility maintenance, and human resources. Without precise budget planning and strict financial control, imbalances between revenue and expenditure arise, undermining financial performance. Thus, this study comprehensively evaluates how budget planning and financial control influence financial performance at RSUD Kotamobagu, utilizing operational efficiency as an intervening variable to bridge these relationships.

2. Literature Review and Hypothesis/es Development

2.1 Public Sector Financial Management and BLUD Character

Public sector financial management represents a comprehensive system that includes financial planning, budgeting, implementation, control, reporting, and accountability processes to ensure that public resources are managed effectively and efficiently. Unlike private sector financial management, which primarily emphasizes profitability and shareholder value creation, public sector financial management focuses on transparency, accountability, service effectiveness, and the achievement of social objectives ([Mungai, Maina, & Kungu, 2021](#)). The management of public finances requires an integrated approach because financial decisions are closely related to organizational performance, resource utilization, and the quality of public services provided to society. According to [Kawatu and Kewo \(2021\)](#), effective public financial management requires synchronization between planning, budgeting, execution, supervision, and reporting mechanisms to prevent inefficiency and ensure organizational sustainability. Therefore, financial management in public organizations is not merely an administrative activity but also a strategic mechanism for improving institutional performance and achieving public accountability.

In the healthcare sector, public financial management has more complex characteristics because hospitals must achieve financial sustainability while simultaneously fulfilling their social responsibility to provide accessible and quality healthcare services. RSUD that operate under the BLUD framework receive greater flexibility in managing their financial resources, including the authority to utilize operational revenues for institutional needs ([Kristianto, Purba, Hazelinling, Saragih, & Girsang, 2024](#)). However, this flexibility is accompanied by greater accountability requirements because hospital management must ensure that financial resources are managed based on principles of efficiency, effectiveness, transparency, and responsibility. The BLUD framework encourages hospitals to adopt performance-oriented financial management practices rather than relying solely on administrative compliance. Consequently, effective financial planning and control mechanisms become essential factors in ensuring that financial flexibility contributes to improved operational efficiency and financial performance.

2.2 Theoretical Foundation

2.2.1 Agency Theory

Agency theory explains the relationship between principals and agents in which authority is delegated from the principal to the agent to perform specific tasks and manage organizational resources. [Ajaegbu and Mmayie \(2025\)](#) argue that differences in interests and information asymmetry between principals and agents may create potential agency problems that require effective monitoring mechanisms. In the context of public sector organizations, citizens and government institutions act as principals who provide resources and authority, while public organizations such as BLUD hospitals function as agents responsible for managing these resources. Since public organizations operate using community resources, they are required to demonstrate accountability, transparency, and responsible financial management practices. Therefore, control mechanisms are necessary to ensure that managerial decisions remain aligned with organizational objectives and public interests.

Within the BLUD hospital context, agency theory provides a relevant explanation of why financial control becomes an important determinant of organizational performance. Hospital managers possess operational authority and financial decision-making capabilities, but such authority must be balanced with appropriate monitoring and evaluation systems. Effective financial control reduces information asymmetry by providing accurate financial information and ensuring that resource utilization follows established plans and regulations ([Hamed, 2023](#)). Through monitoring, budget evaluation, and corrective actions, financial control helps prevent inefficient spending and improves organizational accountability. Thus, agency theory supports the argument that stronger financial control can contribute to better financial performance in public healthcare organizations.

2.2.2 Budget Theory and Performance-Based Budgeting

Budget theory views budgeting as more than a financial estimation process because it functions as a strategic management instrument for allocating resources and achieving organizational objectives. In public organizations, budgeting serves as a mechanism for translating strategic plans into operational programs by determining priorities, resource requirements, and expected outcomes. The development of performance-based budgeting has shifted the role of budgets from traditional expenditure control toward a more outcome-oriented approach. This approach emphasizes the relationship between allocated resources and measurable organizational achievements. Therefore, effective budgeting requires not only accurate financial calculations but also alignment between financial decisions and institutional performance targets ([Zhou, Liu, Traiwannakij, & Triatmanto, 2025](#)).

For healthcare organizations, performance-based budgeting is particularly important because hospitals face complex operational demands and limited resources that must be distributed effectively. Budget planning enables hospital managers to anticipate future needs, allocate resources according to priorities, and maintain balance between service quality and financial sustainability. In BLUD hospitals, appropriate budget planning supports efficient resource utilization by ensuring that expenditures are directed toward productive activities that generate organizational value ([Pourmohammadi, Hatam, Shojaei, & Bastani, 2018](#)). Conversely, weak budget planning may lead to inefficient allocation, excessive operational costs, and difficulties in achieving financial objectives. Therefore, budget theory provides a strong foundation for explaining how budget planning influences operational efficiency and financial performance.

2.3 Budget Planning and Financial Performance

Budget planning is a fundamental component of financial management because it determines how organizational resources are allocated and utilized to achieve predetermined objectives. In public sector organizations, budget planning functions as a strategic process that connects institutional goals with financial decisions, ensuring that available resources are directed toward priority programs and activities. Effective budget planning enables organizations to estimate future financial requirements, establish expenditure priorities, and develop realistic financial targets based on operational conditions. According to [Ramdhansyah, Dewi, and Mudjisusatyo \(2024\)](#), a well-designed budget should reflect organizational strategies and provide measurable indicators for evaluating performance achievement. Therefore, budget planning is not only an administrative process but also an important managerial instrument that influences organizational effectiveness and financial outcomes.

In the context of regional public hospitals, budget planning plays a critical role because healthcare institutions must manage various operational needs while maintaining financial sustainability. RSUDs operating under the BLUD framework require accurate budget planning to balance healthcare service demands, operational expenditures, and institutional development objectives. Appropriate budget allocation enables hospital management to optimize the use of financial resources, control unnecessary expenditures, and improve the achievement of financial targets ([Bhati, Deogade, & Kanyal, 2023](#)). Conversely, inadequate budget planning may result in inefficient resource distribution, budget deviations, and difficulties in maintaining financial stability. Therefore, effective budget planning is expected to contribute positively to financial performance by ensuring that financial resources are managed strategically and efficiently.

Based on the perspective of budget theory and previous theoretical arguments, budget planning provides the foundation for improving organizational financial outcomes through better resource allocation and performance monitoring. When budgets are prepared based on accurate operational needs and strategic priorities, organizations can minimize financial inefficiencies and improve their ability to achieve planned objectives ([Nguyen, 2024](#)). In public healthcare organizations, these conditions are particularly important because financial performance reflects not only revenue achievement but also the ability to manage public resources responsibly. Thus, stronger budget planning practices are expected to enhance the financial performance of RSUD Kotamobagu.

H₁: Budget planning has a significant effect on the financial performance of RSUD Kotamobagu.

2.4 Financial Control and Financial Performance

Financial control represents a systematic process used by management to ensure that financial activities are conducted according to organizational plans, policies, and applicable regulations. It includes monitoring financial transactions, evaluating budget realization, identifying deviations, conducting internal reviews, and implementing corrective actions to improve financial accountability ([Mulyadi, 2016](#)). In public sector organizations, financial control is an essential governance mechanism because it ensures that public resources are utilized effectively and responsibly. The implementation of internal control systems, including preventive and detective controls, helps organizations minimize financial risks and strengthen reporting reliability. Therefore, financial control plays a strategic role in maintaining organizational stability and improving financial performance ([Mungai, Maina, & Kungu, 2021](#)).

For BLUD hospitals, financial control becomes increasingly important because financial flexibility requires stronger accountability mechanisms. Although BLUD status provides greater authority in managing operational revenues and expenditures, hospital management remains responsible for ensuring that financial activities comply with institutional objectives and public accountability principles. Effective financial control allows managers to identify inefficient spending, monitor operational costs, and ensure that financial resources are directed toward productive activities. Through continuous supervision and evaluation, hospitals can reduce financial deviations and improve their capacity to achieve financial targets. Therefore, financial control is expected to become an important determinant of financial performance in public healthcare organizations ([Wartono, Riyanto, & Suhardjanto, 2025](#); [Verrel, & Setyawan, 2025](#)).

From the perspective of agency theory, financial control reduces potential conflicts between organizational managers and stakeholders by improving transparency and accountability in financial management. Strong control mechanisms provide assurance that managerial decisions are aligned with institutional objectives and public interests. Furthermore, effective financial control supports better decision-making by providing accurate financial information regarding resource utilization and organizational conditions. As a result, organizations with stronger financial control systems are expected to achieve better financial outcomes. Therefore, this study proposes that financial control has a significant relationship with financial performance.

H₂: Financial control has a significant effect on the financial performance of RSUD Kotamobagu.

2.5 Budget Planning and Operational Efficiency

Operational efficiency refers to the ability of an organization to achieve desired outputs by utilizing available resources optimally while maintaining service quality. In public organizations, efficiency is closely associated with effective resource allocation, cost management, and the ability to maximize organizational outcomes with limited resources. Budget planning contributes to operational efficiency because it determines how financial resources are distributed among organizational activities and priorities. A well-prepared budget enables managers to anticipate operational requirements, allocate resources appropriately, and prevent unnecessary expenditures. Therefore, budget planning becomes an important mechanism for improving organizational efficiency ([Anačkov, 2024](#); [Yunaniah, & Firmansyah, 2024](#)).

In healthcare organizations, effective budget planning supports operational efficiency by ensuring that financial resources are allocated according to actual service requirements. Hospitals must manage various operational components, including medical supplies, human resources, infrastructure maintenance, and service delivery costs. Without accurate planning, hospitals may experience resource shortages, excessive costs, or inefficient utilization of facilities. Conversely, appropriate

budget planning allows hospitals to coordinate activities more effectively and improve operational performance ([Alkhalidi & Abdallah, 2020](#)). Therefore, budget planning is expected to contribute positively to operational efficiency.

Furthermore, performance-oriented budget planning encourages organizations to evaluate whether financial allocations generate optimal operational results. By linking financial resources with measurable performance indicators, hospitals can identify areas requiring improvement and enhance resource productivity. In the BLUD context, efficient budget planning supports the transformation of financial flexibility into better operational outcomes. Therefore, this study assumes that effective budget planning contributes to improved operational efficiency at RSUD Kotamobagu.

H₃: Budget planning has a significant effect on operational efficiency of RSUD Kotamobagu.

2.6 Financial Control and Operational Efficiency

Financial control plays an important role in improving operational efficiency because it ensures that organizational resources are utilized according to established plans and standards. Through monitoring, evaluation, and corrective mechanisms, financial control helps organizations identify inefficient processes and reduce unnecessary resource consumption ([Aryadi, Ahadiat, & Ribhan, 2020](#)). Effective financial control enables managers to evaluate operational costs, improve expenditure discipline, and optimize the use of organizational assets. In this way, financial control contributes not only to financial accountability but also to operational improvement. Therefore, financial control represents an essential mechanism for achieving efficient organizational processes ([Amos, Au-Yong, & Musa, 2021](#); [Kawatu, & Kewo, 2021](#)).

In healthcare organizations, operational efficiency is highly dependent on the ability to control costs and utilize resources effectively. Hospitals face continuous pressure to maintain service quality while managing increasing operational demands and financial limitations. Strong financial control allows hospital managers to monitor expenditure patterns, prevent resource waste, and ensure that operational activities remain aligned with financial capabilities ([Anjani, Fitrijanti, & Qadri, 2024](#); [Perastia, & Purnama, 2026](#)). As a result, effective financial control can improve productivity and strengthen operational efficiency. This relationship is particularly relevant for BLUD hospitals that are required to maintain both service quality and financial sustainability.

Based on agency theory, financial control reduces information asymmetry and ensures that operational decisions are consistent with organizational objectives. By establishing clear monitoring procedures and accountability mechanisms, financial control encourages more efficient managerial behavior. Consequently, organizations with stronger financial control systems are more capable of achieving operational efficiency. Therefore, this study proposes that financial control significantly influences operational efficiency.

H₄: Financial control has a significant effect on operational efficiency of RSUD Kotamobagu.

2.7 Operational Efficiency and Financial Performance

Operational efficiency represents an organization's capability to maximize outputs while minimizing unnecessary resource utilization. According to [Drucker \(2002\)](#), efficiency focuses on achieving organizational objectives through the optimal use of available resources. In healthcare institutions, operational efficiency can be reflected through effective cost management, utilization of medical facilities, workflow improvement, and resource productivity. Efficient operations enable hospitals to provide quality services while maintaining financial sustainability. Therefore, operational efficiency becomes an important factor influencing financial performance.

Financial performance reflects the success of an organization in managing financial resources to achieve institutional objectives. In BLUD entities, financial performance can be evaluated through revenue achievement, expenditure efficiency, liquidity management, and compliance with accountability standards. Hospitals with strong operational efficiency are better positioned to control

costs, improve resource utilization, and maintain financial stability. Conversely, operational inefficiencies may increase costs and reduce the organization's ability to achieve financial targets. Therefore, operational efficiency is expected to have a positive influence on financial performance ([Usman, Iek, & Hafizriandra, 2025](#); [Heruddin, Suryaningsih, & Dewanto, 2025](#)).

The relationship between operational efficiency and financial performance indicates that effective resource utilization serves as a foundation for sustainable financial outcomes. When hospitals optimize operational processes, financial resources can generate greater value and support long-term institutional development. Thus, operational efficiency acts as a bridge between managerial practices and financial achievements. Based on this argument, operational efficiency is expected to significantly influence the financial performance of RSUD Kotamobagu.

H₅: Operational efficiency has a significant effect on financial performance of RSUD Kotamobagu.

2.8 Mediating Role of Operational Efficiency

Operational efficiency can be viewed as an important mechanism that explains how financial management practices influence financial performance. Budget planning determines the allocation of financial resources, while financial control ensures that these resources are implemented according to organizational objectives. However, effective financial management practices do not directly guarantee improved financial performance unless resources are transformed into efficient operational activities. Therefore, operational efficiency provides the pathway through which financial management practices generate improved organizational outcomes. This perspective highlights the importance of examining operational efficiency as a mediating variable ([Atobishi & Nosratabadi, 2024](#)).

The mediating role of operational efficiency is particularly relevant in BLUD hospitals because financial flexibility must be accompanied by efficient resource utilization. Effective budget planning allows hospitals to allocate resources appropriately, while strong financial control ensures that resources are managed responsibly. These conditions improve operational efficiency, which subsequently contributes to better financial performance. Therefore, operational efficiency explains the process through which financial management practices influence financial outcomes. This relationship provides a more comprehensive understanding of financial performance determinants in public healthcare organizations ([Denhere, Wadesango, & Sitsha, 2025](#)).

Based on the theoretical framework, this study proposes that operational efficiency mediates the relationship between budget planning, financial control, and financial performance. The mediation model suggests that financial management practices improve organizational outcomes not only through direct effects but also through their ability to enhance operational efficiency. Therefore, the following hypotheses are formulated:

H₆: Operational efficiency mediates the relationship between budget planning and financial performance of RSUD Kotamobagu.

H₇: Operational efficiency mediates the relationship between financial control and financial performance of RSUD Kotamobagu.

3. Research Methodology

This study employs a quantitative approach with a causal associative research design to examine the direct and indirect relationships among budget planning, financial control, operational efficiency, and financial performance. The quantitative approach was selected because this study aims to empirically test the proposed hypotheses and measure the relationships among research variables using statistical analysis. The research was conducted at Regional Public Hospital (RSUD) Kotamobagu, North Sulawesi Province, which operates under the Regional Public Service Agency (BLUD) financial management framework. The research population consisted of hospital employees who are directly

involved in financial management activities, including budget planning, accounting, financial administration, and operational supervision. These respondents were selected because they possess relevant knowledge and experience regarding the implementation of financial management practices within the hospital ([Sugiyono, 2022](#)).

The sampling technique used in this study was saturated sampling (census sampling), in which all members of the identified population were included as research respondents. The final sample consisted of 50 respondents, representing employees involved in financial and operational decision-making processes at RSUD Kotamobagu. The use of census sampling was considered appropriate because the population size was relatively limited and all identified respondents had relevant information regarding the research variables. This approach also minimizes sampling bias and ensures that the collected data represent the actual conditions of financial management practices within the hospital.

Primary data were collected through a structured questionnaire using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The research instrument consisted of 42 measurement items covering four variables, namely Budget Planning (X_1) with 10 items, Financial Control (X_2) with 10 items, Operational Efficiency (Z) with 10 items, and Financial Performance (Y) with 10 items. In addition to primary data, secondary data were obtained from relevant hospital documents, including financial statements, budget realization reports, and operational performance records such as bed utilization data. The combination of primary and secondary data was used to provide a more comprehensive understanding of the hospital's financial management practices and performance outcomes.

Data analysis was conducted using IBM SPSS through several statistical procedures. The analysis began with descriptive statistics to describe respondent characteristics and variable conditions. Instrument testing was performed through validity and reliability assessments to ensure that the measurement items accurately represented the research constructs. Classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, were conducted to ensure that the regression models met statistical requirements. Furthermore, path analysis was applied to examine direct and indirect relationships among variables, while the Sobel test was utilized to verify the mediating role of operational efficiency in the relationship between budget planning, financial control, and financial performance ([Ghozali, 2021](#)).

4. Results and Discussions

4.1 Respondent Characteristics

The demographic characteristics of respondents provide an overview of the background and professional composition of participants involved in this study. The results show that female respondents represent 60% of the total sample, while male respondents account for 40%, indicating a higher proportion of female employees among the surveyed hospital staff. Regarding age distribution, 40% of respondents are between 25 and 35 years old, 30% are between 36 and 45 years old, 20% are above 45 years old, and 10% are below 25 years old. This distribution indicates that most respondents are within the productive working-age category and are likely to have sufficient professional experience related to hospital operations and financial management activities.

In terms of occupational background, 40% of respondents are medical staff, 30% are paramedical staff, 20% are administrative employees, and 10% hold managerial positions. The composition of respondents represents various functional areas within the hospital, including service delivery, administration, and managerial activities. This diversity provides a broader perspective regarding the implementation of budget planning, financial control, operational efficiency, and financial performance within RSUD Kotamobagu. Therefore, the respondents are considered relevant sources of information because they are directly involved in hospital operational and financial processes.

4.2 Instrument Quality and Classical Assumption Tests

Before conducting hypothesis testing, the research instrument was evaluated through validity and reliability assessments to ensure the accuracy and consistency of the measurement items. The validity test was conducted using the Pearson Product Moment correlation method with a degree of freedom (*df*) of 48 ($n - 2$) at a significance level of 5%, resulting in an *r*-table value of 0.279. The results indicate that all 42 questionnaire items obtained correlation coefficients ranging from 0.732 to 0.951, which are higher than the required threshold. These findings confirm that all measurement items are valid and adequately represent the constructs examined in this study.

The reliability test was performed using Cronbach Alpha to assess the internal consistency of each research variable. The results show that all constructs achieved Cronbach Alpha values above the recommended threshold of 0.70, indicating a high level of reliability. Specifically, Budget Planning obtained a value of 0.951, Financial Control 0.956, Operational Efficiency 0.954, and Financial Performance 0.957. These results demonstrate that the questionnaire items consistently measure the intended constructs and are suitable for further statistical analysis.

Classical assumption tests were conducted to ensure that the regression models met the required statistical conditions. The normality test using the One-Sample Kolmogorov–Smirnov test produced an asymptotic significance value of 0.200, which is greater than 0.05, indicating that the residual data are normally distributed. This result was further supported by the Normal Probability Plot, where the observed data points followed the diagonal line pattern. The multicollinearity test showed that all Variance Inflation Factor (VIF) values were below 10 and tolerance values exceeded 0.10, indicating no multicollinearity problems among the independent variables. Furthermore, the heteroscedasticity test based on scatterplot analysis showed that residual points were randomly distributed above and below the zero line, suggesting that the regression models did not experience heteroscedasticity issues.

4.3 Path Analysis and Model Structures

The path analysis is divided into two distinct structural equations to map out the direct and indirect network of effects among the variables under study.

Table 1. Substructure I: regressing independent variables on financial performance (*Y*)

Model	Unstandardized B	Std. Error	Standardized Beta (P)	T-Statistic	Sig.
(Constant)	4.460	1.542	-	2.813	0.005
Budget Planning (X_1)	0.375	0.088	0.346	4.153	0.000
Financial Control (X_2)	0.513	0.065	0.620	7.720	0.000

Based on Table 1, the Model Summary reveals an R^2 of 0.945, meaning that 94.5% of the variance in Financial Performance is collectively explained by Budget Planning and Financial Control, with an error term of $\varepsilon_1 = \sqrt{(1 - 0.945)} = 0.055$. The ANOVA test yields an *F*-statistic of 2503.653 (Sig. = 0.000). Based on the path coefficient analysis, the structural equation for Substructure I is formulated as shown in Formula 1:

$$Y = 0.346X_1 + 0.620X_2 + 0.055\varepsilon_1 \quad (1)$$

Table 2. Substructure II: regressing variables on operational efficiency (*Z*)

Model	Unstandardized B	Std. Error	Standardized (p)	T-Statistic	Sig.
(Constant)	2.668	0.912	-	2.481	0.007
Budget Planning (X_1)	0.138	0.041	0.205	3.910	0.000
Financial Control (X_2)	0.253	0.057	0.355	4.387	0.000

Model	Unstandardized B	Std. Error	Standardized (p)	T-Statistic	Sig.
Financial Performance (Y)	0.327	0.079	0.360	3.171	0.000

Table 2 shows an R^2 of 0.975 for Substructure II, implying that 97.5% of the variance in Operational Efficiency is determined by Budget Planning, Financial Control, and Financial Performance, with an error term of $\varepsilon_2 = \sqrt{(1 - 0.975)} = 0.025$. The ANOVA test yields an F -statistic of 2784.459 (Sig.=0.000). Based on the path coefficient analysis, the structural equation for Substructure II is formulated as shown in Formula 2:

$$Z = 0.205X_1 + 0.355X_2 + 0.360Y + 0.025\varepsilon_2 \quad (2)$$

4.4 Mediation Analysis via Sobel Test

The Sobel Test evaluates the significance of the mediation path. For Budget Planning (X_1) affecting Operational Efficiency (Z) via Financial Performance (Y), with $a=0.375$, $Sa=0.088$, $b=0.327$, and $Sb=0.079$, the calculated standard error is $Sab=0.0423$. This results in a t -value of 2.898, exceeding the critical value of 1.96, thereby confirming that mediation is statistically significant.

For Financial Control (X_2) affecting Operational Efficiency (Z) via Financial Performance (Y), with $a=0.513$, $Sa=0.065$, $b=0.327$, and $Sb=0.079$, the standard error is calculated as $Sab=0.0460$. This yields a t -value of 3.646, which is greater than 1.96, validating the existence of an indirect mediation mechanism.

4.5 Discussion

The empirical findings demonstrate that budget planning has a positive and significant effect on financial performance ($\beta=0.346$, Sig.=0.000), indicating that effective financial planning contributes to improved financial outcomes at RSUD Kotamobagu. This finding supports the perspective of budget theory, which emphasizes that budgeting is not merely an administrative activity but also a strategic management instrument for allocating resources and achieving organizational objectives. When organizational goals are clearly defined and financial resources are allocated based on operational priorities, the possibility of budget deviations can be minimized and performance achievement can be improved. In the context of RSUD Kotamobagu as a BLUD institution, appropriate budget planning enables management to align financial allocation with healthcare service demands, operational requirements, and institutional development priorities. The result confirms that well-structured budget planning provides a foundation for improving financial discipline, controlling expenditures, and strengthening the hospital's ability to achieve sustainable financial performance.

Furthermore, the significant influence of budget planning on financial performance reflects the importance of performance-oriented budgeting practices within public healthcare organizations. Hospitals operate in an environment characterized by increasing operational complexity, limited resources, and continuous demand for quality healthcare services. Therefore, financial planning must consider not only the availability of funds but also the expected outcomes generated from each allocation decision. Effective budget planning allows hospital management to anticipate future financial needs, prioritize essential programs, and avoid inefficient resource distribution. These findings are consistent with the argument that organizations with stronger planning mechanisms are better able to transform financial resources into measurable organizational achievements. Thus, strengthening budget planning processes can become an important strategy for improving financial sustainability in BLUD hospitals.

Financial control demonstrates the strongest direct effect on financial performance ($\beta=0.620$, Sig.=0.000), indicating that control mechanisms represent the most dominant determinant among the examined variables. This finding supports agency theory, which highlights the importance of

monitoring mechanisms in reducing information asymmetry and ensuring that delegated authority is exercised responsibly. In public sector organizations, particularly BLUD hospitals, financial control is essential because greater financial flexibility must be accompanied by stronger accountability and governance systems. Effective control mechanisms, including budget monitoring, variance analysis, internal evaluation, and compliance procedures, enable management to identify deviations and implement corrective actions before they negatively affect organizational performance. Therefore, the results demonstrate that financial control is not only a preventive mechanism but also a strategic tool for improving financial effectiveness.

The dominant influence of financial control on financial performance also indicates that the ability of RSUD Kotamobagu to manage financial resources depends heavily on the quality of its supervision and accountability systems. Strong financial control helps prevent inefficient expenditures, ensures compliance with financial procedures, and supports accurate decision-making through reliable financial information. In the BLUD framework, where hospitals are expected to operate more independently, financial control becomes increasingly important to maintain a balance between operational flexibility and public accountability. The findings suggest that improving internal control systems, strengthening monitoring procedures, and enhancing financial evaluation practices can directly contribute to better financial outcomes. Therefore, financial control should be considered a priority area in improving financial governance within public hospitals.

The results further show that budget planning and financial control significantly influence operational efficiency. Effective budget planning contributes to efficiency by ensuring that resources are allocated according to actual operational requirements and strategic priorities. A well-developed budget enables hospitals to avoid resource shortages, reduce unnecessary expenditures, and improve coordination among clinical and administrative units. Similarly, financial control enhances operational efficiency by ensuring that financial resources are utilized appropriately and that operational activities remain aligned with established plans. These findings support the view that financial management practices influence organizational performance not only through direct financial outcomes but also through improvements in internal operational processes.

Operational efficiency also demonstrates a significant effect on financial performance ($\beta=0.360$, Sig.=0.000), confirming its important role in translating managerial practices into financial improvements. Efficient hospital operations enable better utilization of financial resources, reduction of avoidable costs, and improvement of service productivity. In healthcare settings, operational efficiency can be reflected through effective resource utilization, controlled operational costs, optimized service processes, and improved utilization of hospital facilities. The Bed Occupancy Rate (BOR) of 67.2% in 2023 illustrates the operational capacity of RSUD Kotamobagu in utilizing healthcare resources, although continuous evaluation remains necessary to achieve optimal efficiency levels. Therefore, operational efficiency represents an important pathway through which financial management practices generate improved financial performance.

The mediation analysis further confirms that operational efficiency functions as a significant mediating variable between budget planning, financial control, and financial performance. This finding indicates that financial management practices do not influence financial outcomes solely through direct mechanisms but also through their ability to improve operational processes. Budget planning establishes the direction for resource allocation, while financial control ensures that resources are implemented effectively. These two practices jointly enhance operational efficiency, which subsequently contributes to stronger financial performance. Therefore, the mediation role of operational efficiency provides a more comprehensive explanation of how financial management practices create value within BLUD hospitals.

Overall, this study highlights that improving financial performance in public hospitals requires an integrated approach involving effective planning, strong control mechanisms, and efficient operational management. The findings provide practical implications for RSUD Kotamobagu and similar BLUD institutions by emphasizing the importance of strengthening budgeting systems, improving financial

supervision, and optimizing operational processes. From a theoretical perspective, this study extends public sector financial management literature by demonstrating that operational efficiency serves as a critical mechanism linking financial management practices with organizational performance outcomes. Thus, financial performance improvement should not only focus on increasing financial resources but also on ensuring that these resources are strategically planned, effectively controlled, and efficiently utilized.

5. Conclusions

This study concludes that budget planning and financial control significantly improve both the financial performance and operational efficiency of RSUD Kotamobagu, both directly and through the mediating mechanism of operational efficiency. Financial control stands out as the most dominant determinant of financial performance. Operational efficiency successfully acts as a bridge, ensuring that rigid financial structures translate into maximized medical output, swift resource utilization, and cost containment, driving sustainable institutional growth under the BLUD framework.

Acknowledgement

The authors express their deepest gratitude to the Management and Staff of RSUD Kotamobagu for granting research permissions and providing structural support during data collection. Appreciation is also extended to the Faculty of Economics and Business at Universitas Dr. Soetomo, Surabaya, for academic guidance, and to all the respondents who participated in this research project.

Author Contributions

FS contributed to the conceptualization, research design, methodology development, data collection, data analysis, interpretation of results, and preparation of the original manuscript draft. SOP contributed to theoretical development, validation of the research framework, critical review, manuscript improvement, and supervision of the research process. STH contributed to methodological review, academic evaluation, refinement of the manuscript structure, and final revision of the article. All authors participated in reviewing and approving the final version of the manuscript and agreed to be accountable for all aspects of the research.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently, and no financial, institutional, or personal relationships influenced the research design, data collection, analysis, interpretation of findings, or preparation of the manuscript. All authors confirm that the study was conducted objectively and that the results are presented based on academic and scientific considerations.

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