Published by Yayasan Amerta Insan Unggul

DOI: 10.65246

p-ISSN 3063-9840 | e-ISSN 3063-8194

GoodWill Journal of Economics, Management, and Accounting

journal homepage: https://jurnal.amertainstitute.com/index.php/GoodWill/index



Budget Preparation and Internal Supervision Effects on Operational Management Effectiveness at Sandi Karsa Hospital, Makassar

Andi Besse Syahira Basyar[1], Darmawati[2], Duryana[3]
Accounting Study Program, Sekolah Tinggi Ilmu Ekonomi Makassar Maju, Makassar, Indonesia
Email: asyahirabasyar@gmail.com; darma86mahardhika@gmail.com; duryana.ana21@gmail.com

ARTICLE INFO

Keywords:
Hospital Governance;
Financial Planning;
Control Environment;
Healthcare Performance

Publication History:
Publication History:
Received: 11 April 2026
Screening: 25 April 2026
Review: 9 May 2026
Revision requested: 18 July 2026
Revised: 13 August 2026
Accepted: 27 October 2026

ABSTRACT

Hospital operational effectiveness depends on sound financial planning and effective internal control to ensure efficient resource allocation and service delivery. However, weaknesses in budget preparation and internal supervision may hinder effective hospital operations. This study examined the effects of budget preparation and internal supervision on operational management effectiveness at Sandi Karsa Hospital in Makassar. A quantitative descriptive-verificative design was employed, involving a population of 274 employees and 46 respondents selected through purposive sampling based on their direct involvement in budgeting, internal supervision, or operational management. Data were collected using questionnaires and documentation and analyzed through validity and reliability testing, classical assumption testing, multiple linear regression, partial and simultaneous significance tests, and the coefficient of determination. The results showed that budget preparation had a positive and significant effect on operational management effectiveness ($\beta = 0.394$; $p = 0.010$), while internal supervision also had a positive and significant effect ($\beta = 0.818$; $p = 0.001$). Both variables jointly had a significant effect ($F = 73.906$; $p < 0.001$), explaining 77.5% of the variation in operational management effectiveness ($R^2 = 0.775$). These findings demonstrate that participatory, needs-based budgeting and consistent internal supervision contribute to more effective hospital operations. Hospital management should strengthen cross-unit budget participation, implement risk-based internal monitoring, and integrate management information systems to improve operational performance and resource accountability.

1. Introduction

Hospitals operate in an environment where service quality, clinical continuity, cost efficiency, and accountability must be maintained simultaneously. Contemporary hospital management therefore requires governance arrangements that connect planning, resource allocation, operational control, and accountability. Recent studies show that management quality, governance structures, and resource discipline are closely associated with hospital efficiency, financial sustainability, and service performance (Zhu et al., 2021; Dwi Yanti et al., 2024; Jalilvand et al., 2024).

At Sandi Karsa Hospital in Makassar, these pressures are relevant because the organization has operated since 2019 and must manage routine services while improving efficiency and organizational transparency. Budget preparation is central to this process because it translates service priorities into expected revenues, expenditures, and resource allocations. Current healthcare budgeting literature emphasizes that budgeting should support priority setting, cost control, resource allocation, and organizational resilience rather than function only as an annual accounting routine (Homauni et al., 2023; Turnip & Soewondo, 2022; Rafinda et al., 2025). Indonesian hospital evidence also shows the importance of adaptive cost reallocation, coordination, and financial planning when operating conditions change (Ningsih et al., 2025).

Budget preparation alone, however, does not guarantee effective implementation. Internal

DOI: 10.65246

supervision provides the control mechanism that helps management verify compliance with procedures, identify deviations, safeguard organizational resources, and maintain reliable information. Evidence from healthcare organizations indicates that internal control and financial accountability are positively associated with hospital financial performance, while effective internal audit supports stronger governance and service processes (Al Rahhaleh et al., 2023; Arso & Putro, 2022; Ervianawati & Diana, 2023). More recent Indonesian evidence also highlights the importance of internal-audit effectiveness, organizational culture, and management support in strengthening hospital control systems (Irawan et al., 2024; Yulianto & Mardiana, 2026).

The source thesis identifies a practical and empirical gap. Previous studies have discussed budgeting, internal control, governance, hospital financial performance, and operational efficiency, but these relationships are often examined separately or in institutional settings that differ from private foundation-based hospitals. Recent hospital-governance research demonstrates that accountability structures, governance mechanisms, and internal controls can influence financial and operational outcomes, yet the combined role of budget preparation and internal supervision remains underexplored in a single private-hospital model (Al Rahhaleh et al., 2023; Achiro et al., 2024; Jalilvand et al., 2024; Prayudi et al., 2025). Therefore, evidence from Sandi Karsa Hospital can extend the discussion of how planning and control functions operate together in a specific healthcare setting.

The study consequently addressed three questions: whether budget preparation affects operational management effectiveness; whether internal supervision affects operational management effectiveness; and whether the two variables jointly affect operational management effectiveness. The objective was to test these relationships empirically using employee responses and the hospital operational context. The study contributes theoretically by examining the integration of planning and control within a contingency-oriented management perspective and contributes practically by providing management with evidence for improving budget participation, supervision, and operational governance.

2. Literature Review

2.1. Conceptual and Theoretical Foundations

The source study adopts a contingency perspective as its grand theoretical foundation. In this perspective, no single management or control system is assumed to be universally appropriate; effectiveness depends on the fit between organizational arrangements and the conditions faced by the organization. For a hospital, this implies that budget planning and internal supervision should be designed to match service priorities, resource constraints, organizational complexity, and operational risks. Budget preparation represents the planning side of this fit, while internal supervision represents the control side.

Budget preparation is treated as a systematic financial planning process through which organizational objectives, expected resources, and allocations are translated into an operational plan. In the source instrument, the construct is reflected through unit participation in the budgeting process, clarity of budget objectives and priorities, and the timeliness of budget preparation and approval. These dimensions are consistent with contemporary healthcare budgeting literature that positions budgeting as a management mechanism for priority setting, resource allocation, coordination, cost control, and performance monitoring (Homauni et al., 2023; Kuntadi & Dian Rosdiana, 2022; Rafinda et al., 2025). Evidence outside the hospital context also indicates that responsibility accounting and budget-based control can support cost control when planning and accountability are linked (Bawang et al., 2023).

Internal supervision is defined as the set of control activities used to ensure that operations follow organizational policies and procedures, risks are identified, responsibilities are clear, and information is reliable. The study operationalizes the construct through the control environment, risk assessment, and control activities. This formulation is aligned with recent evidence showing that internal control, audit effectiveness, and financial accountability are important for reliable hospital processes, fraud prevention, and organizational performance (Al Rahhaleh et al., 2023; Arso & Putro, 2022; Irawan et al., 2024; Prayudi et al., 2025; Yulianto & Mardiana, 2026).

Operational management effectiveness refers to the extent to which hospital activities achieve planned service objectives efficiently, effectively, and

DOI: 10.65246

sustainably. The source document describes this outcome using operational hospital indicators such as Bed Occupancy Rate, Bed Turn Over, Turn Over Interval, Average Length of Stay, Gross Death Rate, and Net Death Rate, while other parts of the instrument discussion refer to employee perceptions of operational effectiveness. Because these descriptions are not fully identical, the article retains the reported statistical analysis without redefining the original measurement. Conceptually, recent hospital research treats operational effectiveness as a multidimensional outcome involving efficient resource use, service output, quality, financial performance, and managerial performance (Zhu et al., 2021; Piubello Orsini et al., 2021; Barra et al., 2022; Dubas-Jakóbczyk et al., 2022).

2.2. Review of Empirical Studies

Recent evidence shows that hospital governance, financial management, internal control, and operational performance are increasingly discussed as connected managerial issues. Homauni et al. (2023) identify budgeting as a core mechanism for allocating scarce healthcare resources, while Turnip and Soewondo (2022) emphasize the strategic importance of hospital budget management under changing operating conditions. Internal-audit studies in Indonesian hospitals highlight the need for stronger authority, competence, and organizational support for supervisory functions (Arso & Putro, 2022; Prayudi et al., 2025). At the same time, Al Rahhaleh et al. (2023) provide empirical evidence that internal control and financial accountability contribute to private-hospital financial performance. Governance studies likewise show that accountability structures and board-level mechanisms are relevant to hospital performance (Jalilvand et al., 2024; Achiro et al., 2024).

The recent literature therefore supports the importance of budgeting, internal control, financial governance, and managerial quality, but these mechanisms are not consistently tested together as an integrated model of hospital operational effectiveness. Some studies focus on budgeting and financial strategy (Homauni et al., 2023; Ningsih et al., 2025), others on internal audit and control (Arso & Putro, 2022; Irawan et al., 2024; Yulianto & Mardiana, 2026), and others on governance, efficiency, or financial performance (Dubas-Jakóbczyk et al., 2022; Jalilvand et al., 2024; Achiro et al., 2024). This fragmentation motivates a combined model in which budget preparation and internal supervision are assessed simultaneously.

2.3. Identification of the Research Gap

The research gap lies in the limited empirical evidence on the simultaneous effects of budget preparation and internal supervision on operational management effectiveness in a private foundation-based hospital in Makassar. Recent studies provide strong evidence on hospital budgeting, internal control, governance, and financial performance individually, but fewer studies integrate planning and supervision within one operational-effectiveness model in a private hospital setting (Al Rahhaleh et al., 2023; Homauni et al., 2023; Jalilvand et al., 2024; Prayudi et al., 2025). The study therefore tests the two governance mechanisms within one model and in one organizational setting, rather than treating them as isolated determinants.

2.4. Development of the Conceptual Framework

The conceptual model assumes that better budget preparation improves operational effectiveness by clarifying priorities, aligning resources with unit needs, and providing timely financial guidance. Internal supervision is expected to improve operational effectiveness by strengthening role clarity, procedural compliance, risk control, and monitoring. The two mechanisms are also expected to complement each other: planning establishes the intended direction of resource use, while supervision helps ensure that implementation remains consistent with that direction. This logic is supported by recent healthcare evidence linking budgeting and financial planning to resource efficiency, and internal control to accountability and hospital performance (Homauni et al., 2023; Al Rahhaleh et al., 2023; Evans et al., 2023; Rafinda et al., 2025).

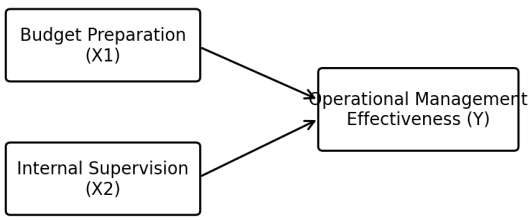


Fig. 1. Conceptual framework of the study.

2.5. Hypotheses or Research Propositions

DOI: 10.65246

a. H1: Budget preparation has a positive and significant effect on operational management effectiveness at Sandi Karsa Hospital, Makassar.
b. H2: Internal supervision has a positive and significant effect on operational management effectiveness at Sandi Karsa Hospital, Makassar.
c. H3: Budget preparation and internal supervision jointly have a positive and significant effect on operational management effectiveness at Sandi Karsa Hospital, Makassar.

3. Research Methods

3.1 Research Design

The research used a quantitative descriptive-verificative design. Quantitative data were analyzed statistically to describe the study variables and verify the hypothesized relationships between budget preparation (X1), internal supervision (X2), and operational management effectiveness (Y). The design is non-experimental; therefore, the term effect refers to the statistical relationship estimated in the regression model rather than to experimentally established causality.

3.2. Research Context and Setting

The study was conducted at Sandi Karsa Hospital, Jalan Abdullah Daeng Sirua No. 278, Makassar, South Sulawesi, Indonesia. Data collection was carried out from December 2025 to February 2026. The hospital was selected because the study focused on an organization that had implemented structured budgeting and internal supervision within its operational management system.

3.3. Population and Sample

The population comprised 274 hospital employees from healthcare, support, and administrative units. Purposive sampling was used because the analysis required respondents with direct knowledge of budgeting, internal supervision, or operational management. Eligibility criteria included direct involvement in budgeting or internal control, responsibility for operational or administrative management, and a minimum tenure of one year. A total of 46 employees met the criteria and completed the questionnaire.

Table 1. Distribution of the Research Sample

Unit / Function	n
Internal Audit Unit	1
Management	7
Finance and Accounting	3
Secretary / Medical Committee	1
Marketing, Public Relations, and Legal	4
Medical Services	6
Nursing	12
Medical Records and Casemix	6
Support Units	3
Administration and Admission	3
Total	46

Source: Author processed

3.4. Data Sources and Data Collection

Primary data were collected through a structured questionnaire distributed to eligible employees, while secondary data were obtained from hospital documents, reports, and relevant literature. The source methods chapter reports Likert-type responses for budgeting and internal supervision and operational hospital indicators for the effectiveness variable. Collected questionnaires were checked for completeness, coded, and tabulated before analysis.

3.5. Measurement of Variables and Research Instruments

Budget preparation was measured through three principal dimensions: unit participation, clarity of objectives and budget priorities, and timeliness of budget preparation and approval. Internal supervision was measured through control environment, risk assessment, and control activities. The source document describes operational effectiveness using BOR, BTO, TOI, ALOS, GDR, and NDR, categorized into levels of achievement. At the same time, its reliability output reports 12 items for Y. This article reports that discrepancy transparently and does not introduce an alternative measurement specification that is not supported by the source files.

DOI: 10.65246

3.6. Data Analysis Techniques

The analysis consisted of data-quality testing, classical assumption testing, multiple linear regression, partial significance testing, a simultaneous F test, and the coefficient of determination. The significance level was 5%. The results chapter identifies SPSS version 26 as the software used for the reported output, although the methods chapter mentions version 25; the numerical results in this article follow the version indicated in the results output. The regression model was specified as $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \varepsilon$.

3.7. Validity, Reliability, and Trustworthiness

All reported questionnaire items had correlation coefficients above 0.30 and significance values of 0.000, so the source study classified them as valid. Reliability was evaluated using Cronbach's alpha with a threshold of 0.70, consistent with commonly used contemporary quantitative-research guidance (Hair et al., 2022). The reported alpha values were 0.785 for budget preparation, 0.787 for internal supervision, and 0.791 for operational management effectiveness, indicating acceptable internal consistency.

Table 2. Reliability of the Research Variables

Variable	Items	Cronbach α
Budget preparation (X1)	9	0.785
Internal supervision (X2)	9	0.787
Operational effectiveness (Y)	12	0.791

Source: Author processed

3.8. Ethical Considerations

The source document does not report a formal ethical-clearance number. Respondents were limited to employees who met the study criteria and were willing to complete the questionnaire. Accordingly, this article does not attribute an ethics approval or consent procedure beyond what is explicitly supported by the source material.

3.9. Research Procedure

The research proceeded from proposal preparation and instrument preparation to respondent selection, questionnaire distribution, data checking, coding, tabulation, and statistical analysis. The final stage consisted of interpreting the regression results in relation to the research questions, theoretical framework, and hospital management context.

3.10. Methodological Limitations

Because the study used purposive sampling in a single hospital, the findings should be generalized cautiously. The non-experimental design also limits causal interpretation. In addition, the source document contains an inconsistency between the stated operational indicators for Y and the reported item-based reliability analysis for Y. These limitations do not alter the reported numerical results, but they should be considered when interpreting the strength and scope of the conclusions.

4. Results and Discussion

4.1. Research Results

4.1.1. Sample Description and Descriptive Statistics

The study obtained analyzable data from 46 respondents at Sandi Karsa Hospital, Makassar. The respondents represented several organizational functions, including internal audit, management, finance and accounting, medical and nursing services, medical records, support services, and administration. This cross-unit composition was intended to capture perspectives from employees directly involved in budget preparation, internal supervision, and operational management.

The descriptive findings provided an overview of respondents' perceptions of budgeting practices and internal supervision. Regarding budget preparation, 84.8% of respondents reported involvement in unit budgeting, while 80.4% indicated that budget priorities and allocations were aligned with service needs. Regarding internal supervision, 87.0% reported that duties and responsibilities were clearly defined, 82.6% indicated that operations followed established procedures, and 80.4% reported routine monitoring of compliance with standard operating procedures.

These descriptive findings indicate that most respondents reported positive practices in budgeting participation, alignment between budget allocations and service requirements, clarity of responsibilities, procedural compliance, and routine supervision. However, these percentages represent selected

DOI: 10.65246

descriptive indicators rather than a complete summary of all questionnaire items.

4.1.2. Data Quality and Preliminary Analysis

Preliminary analyses were conducted to assess the suitability of the data for multiple linear regression. The reliability tests indicated that all variables met the reported reliability threshold. The residual normality test produced an asymptotic significance value of 0.101, exceeding the 0.05 significance level. The multicollinearity assessment showed tolerance values of 0.362 and variance inflation factor values of 2.760 for the independent variables. These results indicated no reported multicollinearity problem. Furthermore, the Glejser test produced significance values of 0.450 for budget preparation (X1) and 0.360 for internal supervision (X2), both exceeding 0.05, indicating no evidence of heteroskedasticity based on the test results.

Table 3. Classical Assumption Test Results

Test	Indicator	Result	Decision
Normality	Asymp. Sig.	0.101	Normal residuals
Multicollinearity	Tolerance	0.362	Acceptable
Multicollinearity	VIF	2.760	Acceptable
Glejser X1	Sig.	0.450	No heteroskedasticity
Glejser X2	Sig.	0.360	No heteroskedasticity

Source: Author processed

4.1.3. Main Analytical Results

Multiple linear regression produced the equation Y = 5.541 + 0.394X1 + 0.818X2. The positive coefficient for budget preparation indicates that higher reported budgeting quality was associated with higher operational management effectiveness, holding internal supervision constant. The coefficient for internal supervision was also positive. Because the source output does not provide standardized beta coefficients in the text, the difference in unstandardized coefficients should not be interpreted as a definitive comparison of relative effect size.

Table 4. Regression and Hypothesis Test Summary

Test / Variable	Coefficient / F	Sig.	Conclusion
Constant	5.541	—	—
Budget preparation (X1)	B = 0.394	0.010	H1 supported
Internal supervision (X2)	B = 0.818	0.001	H2 supported
Simultaneous model	F = 73.906	<0.001	H3 supported
Coefficient of determination	R^2 = 0.775	Adj. R^2 = 0.764	77.5% explained

Source: Author processed

The coefficient of determination was R^2 = 0.775, meaning that 77.5% of the reported variation in operational management effectiveness was explained by budget preparation and internal supervision within the model. The adjusted R^2 was 0.764, while the remaining variation was attributed to factors outside the model. Descriptive findings also supported the direction of the regression results: 84.8% of respondents reported involvement in unit budgeting, and 80.4% reported that budget priorities and allocations aligned with service needs. For internal supervision, 87.0% reported clear duties and responsibilities, 82.6% reported that operations followed established procedures, and 80.4% reported routine monitoring of compliance with standard operating procedures.

4.1.4. Hypothesis Testing Results and Key Findings

The partial significance test showed that budget preparation had a positive and statistically significant effect on operational management effectiveness, with a regression coefficient of 0.394 and a significance value of 0.010. Therefore, H1 was supported. Internal supervision also had a positive and statistically significant effect on operational management effectiveness, with a regression coefficient of 0.818 and a significance value of 0.001. Accordingly, H2 was supported. The simultaneous significance test yielded an F-statistic of 73.906 with a significance value below 0.001. This result indicated that budget preparation and internal supervision jointly had a statistically significant effect on operational management effectiveness. Therefore,

DOI: 10.65246

H3 was supported.

Finally, the coefficient of determination of 0.775 indicated that the two independent variables explained 77.5% of the variation in operational management effectiveness, while the adjusted coefficient of determination was 0.764.

4.1.5. Visual Presentation of Results

Tables 3 and 4 provide the principal visual presentation of the empirical results. Table 3 summarizes the preliminary diagnostic tests, while Table 4 presents the regression estimates, hypothesis testing outcomes, and explanatory power of the model. The descriptive percentages reported in Section 4.1.1 complement these tables by illustrating respondents' reported experiences of budgeting and internal supervision.

Together, these presentations provide a structured overview of the sample characteristics, data quality assessments, regression results, and hypothesis testing outcomes without duplicating the numerical information in separate figures.

4.2. Research Discussion

4.2.1. Interpretation of Key Findings

Budget preparation had a positive and statistically significant relationship with operational management effectiveness (B = 0.394; p = 0.010). This finding is consistent with the managerial function of budgeting as a mechanism for translating objectives into resource allocations and operational priorities. Current healthcare literature emphasizes that structured budgeting, financial planning, and cost-management systems help hospitals align limited resources with service needs, monitor spending, and respond to operational uncertainty (Homauni et al., 2023; Turnip & Soewondo, 2022; Rafinda et al., 2025; Ningsih et al., 2025). The result is also compatible with broader evidence linking budget-based responsibility accounting and planning quality with improved control and accountability (Bawang et al., 2023; Kuntadi & Dian Rosdiana, 2022).

Internal supervision also had a positive and significant relationship with operational management effectiveness (B = 0.818; p = 0.001). The result indicates that clearer responsibilities, routine procedural monitoring, and structured control activities are associated with more orderly and effective operations. This is consistent with recent hospital evidence showing that internal control and financial accountability support organizational performance, while internal audit can strengthen compliance, service processes, fraud prevention, and control effectiveness when it has adequate authority and organizational support (Al Rahhaleh et al., 2023; Arso & Putro, 2022; Ervianawati & Diana, 2023; Irawan et al., 2024; Prayudi et al., 2025; Yulianto & Mardiana, 2026).

The simultaneous test provides the strongest support for the integrated model. Budget preparation and internal supervision jointly produced F = 73.906 with $p < 0.001$, and the model explained 77.5% of variation in the dependent variable. The result suggests that planning and control should not be treated as separate managerial activities. A budget provides direction and allocates resources, while internal supervision helps ensure that implementation follows the plan, procedures, and organizational responsibilities. This integrated interpretation is consistent with recent evidence linking hospital management quality, financial discipline, governance, and process improvement with efficiency and financial performance (Zhu et al., 2021; Dubas-Jakóbczyk et al., 2022; Evans et al., 2023; Jalilvand et al., 2024; Achiro et al., 2024).

From a theoretical perspective, the findings support the contingency-oriented premise adopted in the source thesis: organizational effectiveness depends on how well management systems are aligned with the operational environment. At Sandi Karsa Hospital, the combination of participatory financial planning and structured internal supervision appears to form a complementary governance arrangement. Recent hospital-governance research similarly emphasizes the importance of aligning governance structures, accountability mechanisms, and resource arrangements with organizational context (Jalilvand et al., 2024; Achiro et al., 2024). The study therefore extends the discussion from isolated budgeting or control mechanisms toward an integrated planning-control model in a private foundation-based hospital.

The practical implication is that hospital management should strengthen the quality of budgeting rather than focus only on formal budget completion. Cross-unit participation, realistic service-based priorities, and timely approval should be institutionalized. At the same time, the Internal Audit Unit and operational supervisors should apply regular, risk-oriented monitoring and enforce

DOI: 10.65246

standard operating procedures consistently. Recent studies recommend responsive cost-management strategies, stronger internal-audit mandates, and integrated financial information to improve hospital resilience, accountability, and efficiency (Meskarpour-Amiri et al., 2025; Ningsih et al., 2025; Prayudi et al., 2025; Rafinda et al., 2025). These actions translate the combined effects of planning and supervision into concrete governance practices.

4.2.2. Comparison with Previous Studies

The positive relationship between budget preparation and operational management effectiveness is consistent with healthcare literature emphasizing the importance of structured budgeting, financial planning, and cost-management systems. These practices help hospitals allocate limited resources according to service requirements, monitor expenditures, and respond to operational uncertainty (Homauni et al., 2023; Turnip & Soewondo, 2022; Rafinda et al., 2025; Ningsih et al., 2025). The present finding also aligns with evidence linking budget-based responsibility accounting and planning quality to improved control and accountability (Bawang et al., 2023; Kuntadi & Dian Rosdiana, 2022).

The present study extends this discussion by providing empirical evidence from Sandi Karsa Hospital, where budget preparation demonstrated a positive and statistically significant relationship with operational management effectiveness. The finding reinforces the relevance of budgeting as an operational management mechanism rather than merely an administrative requirement. However, the extent to which this relationship applies to other hospitals may depend on differences in organizational structure, resource availability, and budgeting practices.

The finding concerning internal supervision is also consistent with previous hospital research demonstrating the importance of internal control, financial accountability, and internal audit. Effective control arrangements can support organizational performance, compliance, service processes, fraud prevention, and operational discipline, particularly when internal audit has sufficient authority and organizational support (Al Rahhaleh et al., 2023; Arso & Putro, 2022; Ervianawati & Diana, 2023; Irawan et al., 2024; Prayudi et al., 2025; Yulianto & Mardiana, 2026).

The present study contributes to this body of literature by demonstrating a positive and statistically significant relationship between internal supervision and operational management effectiveness in a private foundation-based hospital. The findings indicate that supervision is relevant not only to compliance and financial accountability but also to the broader effectiveness of hospital operations.

Furthermore, the simultaneous significance of budget preparation and internal supervision is consistent with research associating hospital management quality, financial discipline, governance, and process improvement with organizational efficiency and financial performance (Zhu et al., 2021; Dubas-Jakóbczyk et al., 2022; Evans et al., 2023; Jalilvand et al., 2024; Achiro et al., 2024). The present results reinforce the importance of examining planning and control together, although the regression estimates do not independently establish the causal mechanisms underlying these relationships.

4.2.3. Theoretical Contributions

From a theoretical perspective, the findings support the contingency-oriented premise adopted in the source thesis, which emphasizes that organizational effectiveness depends partly on the alignment between management systems and the operational environment. At Sandi Karsa Hospital, budget preparation and internal supervision appear to represent complementary management mechanisms that support operational management effectiveness.

Budget preparation provides a framework for allocating resources according to organizational objectives and service priorities, while internal supervision supports the implementation of those allocations through procedural monitoring and accountability. The simultaneous significance of both variables suggests that the relationship between managerial planning and operational effectiveness should be considered alongside the control mechanisms governing implementation.

This interpretation is consistent with hospital-governance research emphasizing the importance of aligning governance structures, accountability mechanisms, and resource arrangements with organizational context (Jalilvand et al., 2024; Achiro et al., 2024).

The theoretical contribution of this study lies in extending the discussion beyond the separate roles of budgeting and internal supervision toward an integrated planning-and-control perspective. By

DOI: 10.65246

examining both variables within a single regression model, the study provides context-specific evidence of their individual and joint relationships with operational management effectiveness in a private foundation-based hospital. Nevertheless, the findings should be interpreted as supporting this theoretical perspective rather than as definitive validation of the entire contingency-theory framework.

4.2.4. Practical and Policy Implications

The findings suggest that hospital management should strengthen the substantive quality of budget preparation rather than focus exclusively on the formal completion of budget documents. Participatory planning across organizational units, realistic service-based priorities, and timely budget approval should be institutionalized to ensure that resource allocations reflect actual operational requirements.

In addition, the Internal Audit Unit and operational supervisors should implement regular, risk-oriented monitoring and consistently enforce standard operating procedures. Clear assignment of responsibilities, systematic documentation of supervisory findings, and timely corrective actions can help strengthen accountability and maintain alignment between approved budgets and operational implementation.

Hospital management should also consider integrating financial and operational information systems to facilitate timely budget monitoring, improve coordination across departments, and support evidence-based managerial decisions. These measures can help translate the complementary roles of budgeting and supervision into more consistent management practices.

These recommendations are consistent with studies emphasizing responsive cost-management strategies, stronger internal-audit mandates, and integrated financial information as mechanisms for improving hospital resilience, accountability, and efficiency (Meskarpour-Amiri et al., 2025; Ningsih et al., 2025; Prayudi et al., 2025; Rafinda et al., 2025).

From a policy perspective, hospital management should establish clear procedures for budget preparation, expenditure monitoring, and internal supervision. Periodic reviews of budget utilization and operational performance can help identify discrepancies between planned allocations and actual service requirements. The implementation of these measures should be adapted to the hospital's organizational structure, operational risks, and available resources.

4.2.5. Integration with the Research Gap

This study addresses the need for an integrated examination of budget preparation and internal supervision in relation to operational management effectiveness within a specific hospital context. Previous literature has discussed budgeting, financial accountability, internal control, and hospital governance as important aspects of organizational management. However, examining budget preparation and internal supervision together provides a more integrated perspective on how planning and control relate to operational effectiveness.

The findings demonstrate that both budget preparation and internal supervision have positive and statistically significant individual relationships with operational management effectiveness. Their joint significance further indicates that these managerial mechanisms are relevant when considered together within the operational management of Sandi Karsa Hospital.

By examining these variables simultaneously in a private foundation-based hospital in Makassar, the study contributes context-specific empirical evidence to the broader literature on healthcare financial management and governance (Homauni et al., 2023; Turnip & Soewondo, 2022; Al Rahhaleh et al., 2023; Jalilvand et al., 2024; Achiro et al., 2024).

The study's contribution therefore lies in connecting budgeting and supervision within a single empirical model and translating the results into practical recommendations for hospital governance. Although the findings address the identified need for an integrated perspective, further research across different hospital settings is necessary to establish the broader applicability of the observed relationships.

4.2.6. Acknowledgement of Study Limitations

The findings should be interpreted in light of the study's scope and organizational context. First, the research was conducted at a single hospital, meaning that the results may reflect institution-specific management practices, governance arrangements, and resource conditions. Consequently, the findings may not be directly generalizable to hospitals with different ownership

DOI: 10.65246

structures or operational environments. Second, the study focused on budget preparation and internal supervision as explanatory variables. Although the model explained 77.5% of the variation in operational management effectiveness, the remaining 22.5% was not explained by these variables. Other organizational factors may therefore contribute to operational effectiveness but were not captured in the estimated model. Third, the interpretation of the results is limited to the statistical relationships identified in the regression analysis. The positive and significant coefficients do not, by themselves, establish causal mechanisms or demonstrate that improvements in budgeting and supervision will produce equivalent outcomes in every hospital context.

Future research could address these limitations by examining multiple hospitals, incorporating additional organizational and managerial variables, and comparing results across different institutional settings. Combining employee perceptions with objective indicators of operational performance could also provide a more comprehensive assessment of how budgeting and internal supervision relate to hospital effectiveness.

5. Conclusion

5.1. Summary of Key Findings

The study found that budget preparation significantly affected operational management effectiveness at Sandi Karsa Hospital, Makassar, with a positive regression coefficient of 0.394 and $p = 0.010$. Internal supervision was also significant, with a positive coefficient of 0.818 and $p = 0.001$. Simultaneously, the two variables were significant at $F = 73.906$ and $p < 0.001$. The model explained 77.5% of the variation in operational management effectiveness. These findings answer the three research questions by showing that both planning and supervision are individually relevant and jointly important to hospital operations.

5.2. Theoretical Contributions

The main theoretical contribution is the integration of budgeting and internal supervision within one operational-effectiveness model in a private foundation-based hospital. The results support the source study's contingency-oriented logic that effective management depends on the alignment of planning and control systems with organizational needs. Rather than presenting budgeting and supervision as isolated administrative functions, the findings show their complementary role in operational governance.

5.3 Practical and Policy Implications

For Sandi Karsa Hospital, the evidence supports more participatory and needs-based budgeting, stronger risk-oriented internal supervision, routine compliance monitoring, and better integration of management information systems. For healthcare managers more broadly, financial planning should be connected directly with operational priorities and reinforced by control mechanisms capable of detecting deviations early. Recent research highlights that hospital financial sustainability depends on adaptive resource allocation, cost-management capability, governance quality, and effective control systems (Al Rahhaleh et al., 2023; Meskarpour-Amiri et al., 2025; Ningsih et al., 2025; Rafinda et al., 2025). This combination can support efficiency, service continuity, and organizational accountability.

5.4 Limitations of the Study

The study is limited to 46 purposively selected respondents in one hospital, so external generalization is limited. The design is non-experimental and therefore does not establish causal mechanisms in the strict experimental sense. The source files also contain a measurement-reporting inconsistency for the operational-effectiveness variable and a difference in the stated SPSS version between the methods and results chapters. These issues should be addressed in any subsequent manuscript revision or replication.

5.5 Directions for Future Research

Future studies should test the model in government hospitals, public service agencies, and other private hospitals to assess contextual differences. Additional predictors such as leadership, organizational culture, accounting information systems, digital maturity, and employee competence may help explain the portion of operational effectiveness not captured by the current model. Multi-hospital and mixed-method designs would also allow researchers to compare governance arrangements, financial strategies, and operational outcomes across settings (Zhu et al., 2021; Jalilvand et al., 2024; Achiro et al., 2024; Rorimpandey et al.,

DOI: 10.65246

2025).

6. References

Achiro, L. O., Tauringana, V., & Alta'any, M. (2024). Corporate governance and financial performance: The case of English NHS hospitals. International Journal of Public Sector Management, 37(7), 896-912. https://doi.org/10.1108/IJPSM-02-2024-0061

Al Rahhaleh, N., Al-khyal, T. A., Daghran Alahmari, A., & Al-Hanawi, M. K. (2023). The financial performance of private hospitals in Saudi Arabia: An investigation into the role of internal control and financial accountability. PLOS ONE, 18(5), e0285813. https://doi.org/10.1371/journal.pone.0285813

Arso, S. P., & Putro, A. S. (2022). The effectiveness of internal audit in regional public hospitals as regional public service agencies. Jurnal Manajemen Kesehatan Indonesia, 10(1), 65-72. https://doi.org/10.14710/jmki.10.1.2022.65-72

Barra, C., Lagravinese, R., & Zotti, R. (2022). Exploring hospital efficiency within and between Italian regions: New empirical evidence. Journal of Productivity Analysis, 57, 269-284. https://doi.org/10.1007/s11123-022-00633-4

Bawang, R. M., Herdi, H., & Rangga, Y. D. P. (2023). Analisis penerapan akuntansi pertanggungjawaban dengan anggaran sebagai alat pengendalian biaya pada Pintar Asia Swalayan Maumere. Populer: Jurnal Penelitian Mahasiswa, 2(3), 123-133.

Dubas-Jakobczyk, K., Kocot, E., Tambor, M., Szetela, P., Kostrzewska, O., Siegrist, R. B., Jr., & Quentin, W. (2022). The association between hospital financial performance and the quality of care: A scoping literature review. International Journal of Health Policy and Management, 11(12), 2816-2828. https://doi.org/10.34172/ijhpm.2022.6957

Dwi Yanti, S., Mayansara, A., Liadin, N. A., & Oktafiani, V. (2024). Literature review: Tantangan dan tren terkini dalam manajemen rumah sakit. Jurnal Riset Sains dan Kesehatan Indonesia, 1(1), 30-36. https://doi.org/10.69930/jrski.v1i1.14

Ervianawati, E., & Diana, A. L. (2023). The effect of operational audit and implementation of internal control on the effectiveness of health services in hospitals. Journal of Public Auditing and Financial Management, 3(2), 87-96. https://doi.org/10.36407/jpafm.v3i2.1615

Evans, J., Leggat, S. G., & Samson, D. (2023). A systematic review of the evidence of how hospitals capture financial benefits of process improvement and the impact on hospital financial performance. BMC Health Services Research, 23, 237. https://doi.org/10.1186/s12913-023-09258-1

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). Sage.

Homauni, A., Markazi-Moghaddam, N., Mosadeghkhah, A., Noori, M., Abbasiyan, K., & Zargar Balaye Jame, S. (2023). Budgeting in healthcare systems and organizations: A systematic review. Iranian Journal of Public Health, 52(9), 1889-1901. https://doi.org/10.18502/ijph.v52i9.13571

Irawan, N. F., Winarningsih, S., & Mubarrok, A. Z. (2024). The influence of the effectiveness of the internal audit function and organizational culture on the implementation of internal control and its impact on fraud prevention in regional general hospitals in the West Java region. JASa (Jurnal Akuntansi, Audit dan Sistem Informasi Akuntansi), 8(3), 514-528. https://doi.org/10.36555/jasa.v8i3.2555

Jalilvand, M. A., Raeisi, A. R., & Shaarbafchizadeh, N. (2024). Hospital governance accountability structure: A scoping review. BMC Health Services Research, 24, 47. https://doi.org/10.1186/s12913-023-10135-0

Kuntadi, C., & Dian Rosdiana. (2022). Faktor-faktor yang memengaruhi efektivitas penyerapan anggaran belanja pendidikan: Perencanaan anggaran, peraturan, koordinasi (literature review). Jurnal Ekonomi Manajemen Sistem Informasi, 4(2), 142-152. https://doi.org/10.31933/jemsi.v4i2.1201

Meskarpour-Amiri, M., Shokri, N., Aliyari, S., Bahadori, M., & Hosseini-Shokouh, S.-M. (2025). Strategies to reduce costs and increase revenue in hospitals: A mixed methods investigation in Iran. BMC Health Services Research, 25, 127. https://doi.org/10.1186/s12913-025-12295-7

Ningsih, S., Machin, A., Harymawan, I., Fitriani, N., & Ramadhany, P. (2025). Navigating financial uncertainty: Hospital cost strategies during the initial COVID-19 outbreak in Indonesia. Jati: Jurnal Akuntansi Terapan Indonesia, 8(2), 110-124. https://doi.org/10.18196/jati.v8i2.23871

Piubello Orsini, L., Leardini, C., Vernizzi, S., & Campedelli, B. (2021). Inefficiency of public hospitals: A multistage data envelopment analysis in an Italian region. BMC Health Services Research, 21, 1281. https://doi.org/10.1186/s12913-021-07276-5

DOI: 10.65246
Prayudi, M. A., Mursito, K., & Adnyana, I. D. G. A. J. (2025). Exploring the dynamics of government hospital internal audit: A transcendental phenomenological study. Public Accounting and Sustainability, 2(2), 102-115. https://doi.org/10.18196/pas.v2i2.54

Rafinda, A., Mubaroq, A. C., Purwaningtyas, P., Aljafa, H., & Igbeghe, C. B. (2025). Sustainable financial management for hospitals: A conceptual framework. Public Accounting and Sustainability, 2(1), 19-30. https://doi.org/10.18196/pas.v2i1.20

Rorimpandey, J., Siagian, H., & Malau, H. (2025). Financial performance of Jakarta hospitals before and after the COVID-19 pandemic: Analysis of profitability, liquidity, and leverage ratios. Ilomata International Journal of Tax and Accounting, 6(2), 1-12. https://doi.org/10.61194/ijtc.v6i2.1726

Turnip, H., & Soewondo, P. (2022). Analisis manajemen anggaran pada rumah sakit rujukan di masa pandemi COVID-19. Jurnal Ekonomi Kesehatan Indonesia, 7(2), 124. https://doi.org/10.7454/eki.v7i2.5993

Yulianto, A., & Mardiana, R. (2026). The impact of internal audits on the effectiveness of hospital internal control systems. Advances in Managerial Auditing Research, 4(2), 76-86. https://doi.org/10.60079/amar.v4i2.789

Zhu, Y., Zhao, Y., Dou, L., Guo, R., Gu, X., Gao, R., & Wu, Y. (2021). The hospital management practices in Chinese county hospitals and its association with quality of care, efficiency and finance. BMC Health Services Research, 21, 449. https://doi.org/10.1186/s12913-021-06472-7