

THE EFFECT OF INTERNAL CONTROL SYSTEM ON ORGANIZATIONAL PERFORMANCE THROUGH PERFORMANCE MEASUREMENT SYSTEM IN THE PUBLIC SECTOR

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ABSTRACT

This study examines the effect of the internal control system on organizational performance in public sector institutions by positioning the performance measurement system as a mediating mechanism. Using a quantitative approach, data were collected from 190 employees of the Samarinda City Health Office and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with WarpPLS version 8. The results indicate that the internal control system significantly influences organizational performance, both directly and indirectly through the performance measurement system. The mediation effect confirms that internal control contributes more effectively to performance improvement when supported by reliable and structured performance measurement mechanisms. This study extends public sector governance literature by empirically demonstrating the integrative role of performance measurement in translating internal control practices into organizational performance outcomes. The findings offer theoretical insight into governance-based performance models and provide practical implications for strengthening accountability and performance management in public sector organizations.

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INTRODUCTIONS

Internal control systems play a crucial role in ensuring that public sector organizations operate effectively, efficiently, and in compliance with established regulations. Government Regulation No. 60 of 2008 states that internal control must be implemented systematically to provide adequate assurance in achieving organizational objectives, safeguarding assets, ensuring reliable reporting, and maintaining adherence to laws and procedures. Weak internal

control practices such as inconsistent supervision, incomplete documentation, and unclear division of responsibilities can lead to inefficiencies, reporting inaccuracies, and diminished accountability within public institutions.

Performance measurement systems also serve as an important component in evaluating the success of organizational programs. According to Mahsun (2018), performance measurement enables organizations to assess efficiency, effectiveness, and service quality using structured indicators and reliable information. The accuracy of performance data heavily depends on how well internal control procedures are implemented, as effective control ensures that data collection, verification, and reporting processes run consistently and transparently. Yulianti and Puspitasari (2022) also emphasize that the quality of performance measurement is strongly influenced by the strength of internal control practices within the organization.

Empirical studies further support the relationship between internal control, performance measurement, and organizational performance. Hutabarat and Mustofa (2021) found that internal control has a significant positive effect on both performance measurement systems and organizational performance in public sector settings. Similarly, Sari and Indrawati (2023) concluded that stronger internal control improves the accuracy of performance indicators, which subsequently enhances overall organizational performance. Tran and Nguyen (2020) also noted that performance measurement can act as a mediating variable that strengthens the influence of internal control on organizational performance.

Based on these theoretical and empirical considerations, this study aims to analyze the influence of the internal control system on organizational performance and examine the mediating role of the performance measurement system at the Samarinda City Health Office. This research contributes to understanding how governance mechanisms can enhance organizational effectiveness and improve the quality of public service delivery.

Table 1 below illustrates the alignment between the ideal conditions of internal control in Indonesian public sector governance and the empirical issues observed within the Samarinda City Health Office.

Tabel 1. Comparison of Ideal Internal Control Conditions and Field Reality

Aspect	Ideal Internal Control Condition	Field Reality
Separation of Duties	Clear division of functions to minimize fraud risk	Overlapping duties among staff
Documentation	Complete and standardized documentation	Inconsistent documentation quality
Monitoring	Continuous evaluation of performance data	Monitoring conducted manually and irregular
Reporting	Accurate performance and financial reports	Misalignment between financial & performance
Risk Assessment	Structured identification and mitigation	Risk assessment not fully implemented

From the theoretical and empirical review, a clear gap emerges between expected governance standards and actual implementation. Therefore, this study aims to examine the influence of internal control systems on organizational performance, with performance measurement as a mediating variable.

METHOD

This study employed a quantitative explanatory research design to examine causal relationships among the internal control system, performance measurement system, and organizational performance. The research was conducted at the Samarinda City Health Office, with 190 respondents selected through purposive sampling based on their involvement in internal control, financial reporting, and performance measurement processes. Data were collected using a structured questionnaire measured on a five-point Likert scale. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with WarpPLS version 8, which is suitable for analyzing

complex models and mediation effects. The analysis included measurement model evaluation, structural model testing, and mediation analysis.

Table 1. Operational Definitions of Research Variables

Variable	Definition	Indicators
Internal Control System (X)	A continuous process involving leaders and employees to ensure effective operations, reliable reporting, asset safeguarding, and compliance with regulations.	Control environment, risk assessment, control activities, information & communication, monitoring.
Performance Measurement System (Y1)	A structured mechanism used to evaluate organizational performance through measurable, relevant, and reliable indicators.	Indicator accuracy, data reliability, relevance of targets, reporting quality.
Organizational Performance (Y2)	The organization's ability to achieve objectives effectively and efficiently in terms of service delivery, accountability, and resource utilization.	Effectiveness, efficiency, accountability, service quality.

Table 2 outlines the operational definitions and indicators used to measure each research variable. The internal control system consists of five components control environment, risk assessment, control activities, information and communication, and monitoring which collectively ensure that organizational processes run effectively and in compliance with regulations. The performance measurement system includes indicators related to data accuracy, relevance of performance indicators, suitability of targets, and reporting quality, reflecting the organization's ability to assess its program achievements. Meanwhile, organizational performance is measured through indicators of effectiveness, efficiency, accountability, and service quality, which represent standard dimensions used to evaluate public sector performance. These indicators were adapted directly from the thesis framework to ensure alignment between theory and measurement.

RESULTS AND DISCUSSION

RESULTS

Descriptive Statistics

A total of 190 valid responses were analyzed in this study. The descriptive statistics indicate that the mean scores of the internal control system, performance measurement system, and organizational performance variables fall within the moderate to high range, suggesting that respondents generally perceived these constructs positively. However, several indicators related to documentation completeness, monitoring consistency, and report alignment showed comparatively lower mean values, indicating areas requiring improvement within the organization.

Measurement Model (Outer Model)

The measurement model evaluation demonstrates that all indicators meet the criteria for convergent and discriminant validity. Factor loading values range from 0.712 to 0.894, exceeding the recommended threshold of 0.70. Reliability analysis shows that Cronbach's Alpha values range from 0.781 to 0.902, while Composite Reliability values range from 0.843 to 0.921, indicating strong internal consistency. Average Variance Extracted (AVE) values for all constructs exceed 0.50, confirming adequate convergent validity. Discriminant validity is also established based on the Fornell-Larcker criterion, indicating that each construct is empirically distinct.

Structural Model (Inner Model)

Tabel 3. Path Coefficients and Hypothesis Testing

Path	β	p-value	Result
ICS → PMS	Significant	<0.05	Supported
PMS → OP	Significant	<0.05	Supported
ICS → OP	Significant	<0.05	Supported
ICS → PMS → OP	Significant	<0.05	Supported

The structural model results indicate that the internal control system has a significant positive effect on the performance measurement system ($\beta = 0.462$; $p < 0.001$) and organizational performance ($\beta = 0.318$; $p < 0.001$). The performance measurement system also significantly influences organizational performance ($\beta = 0.347$; $p < 0.001$). Mediation testing confirms that the performance measurement system partially mediates the relationship between the internal control system and organizational performance ($\beta = 0.160$; $p < 0.01$). The R-square values indicate moderate explanatory power for the performance measurement system ($R^2 = 0.213$) and substantial explanatory power for organizational performance ($R^2 = 0.486$). Q-square values above zero confirm the predictive relevance of the model.

DISCUSSIONS

The findings confirm that the internal control system has a significant positive effect on the performance measurement system, indicating that effective control mechanisms enhance the reliability and accuracy of performance information. This result supports governance theory, which emphasizes that internal control serves as a foundational mechanism for accountability and transparency in public sector organizations (COSO, 2017; Bovens, Goodin, & Schillemans, 2021). In the context of public health institutions, structured control activities and consistent monitoring ensure that performance data accurately reflect organizational outcomes.

The results also demonstrate a direct and significant relationship between the internal control system and organizational performance. This finding aligns with public sector governance literature, which suggests that strong internal controls reduce operational risk, improve compliance, and enhance service delivery effectiveness (Mardiasmo, 2018; Burhanuddin et al., 2020). By minimizing inefficiencies and procedural errors, internal control contributes directly to improved organizational performance.

Furthermore, the performance measurement system is found to significantly influence organizational performance. This supports prior international studies indicating that performance measurement systems function as strategic management tools that guide decision-making and performance improvement (Bititci et al., 2018; Mura, Micheli, & Longo, 2021). Accurate and relevant performance indicators enable organizations to evaluate outcomes objectively and align activities with strategic goals.

Importantly, the mediation analysis reveals that the performance measurement system partially mediates the relationship between internal control and organizational performance. This indicates that internal control enhances performance not only directly but also indirectly by strengthening performance measurement mechanisms. This finding reinforces the argument that governance effectiveness depends on the integration of control systems and performance evaluation processes (Ebrahim, 2019; COSO, 2017).

The mediation effect highlights that internal control alone is insufficient to fully improve organizational performance unless supported by reliable performance measurement systems. This is particularly relevant in public organizations, where accountability demands require performance outcomes to be clearly measured and reported. Similar conclusions have been drawn in international public administration studies, which emphasize the complementary role of control and measurement systems in governance frameworks (Bovens et al., 2021; Mura et al., 2021).

Overall, this study extends public sector governance literature by empirically demonstrating how performance measurement systems translate internal control practices into measurable performance outcomes using a SEM-based

approach. The findings provide evidence that integrating internal control with performance measurement enhances accountability, efficiency, and effectiveness in public sector organizations, particularly in health service institutions.

CONCLUSION

This study concludes that internal control systems significantly influence organizational performance at the Samarinda City Health Office, both directly and indirectly through the performance measurement system. The mediation effect indicates that internal control becomes more effective when supported by reliable and well-structured performance measurement mechanisms.

The findings reinforce governance theory in the public sector by highlighting the strategic role of integrating control and measurement systems to enhance accountability, efficiency, and service quality. Future research is encouraged to apply comparative designs across institutions and incorporate longitudinal data to further strengthen causal inferences.

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