Strengthening Accounting Information Systems Adoption and Internal Control Quality: Implications for MSME Financial Performance

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Abstract. The current situation regarding of the micro, small, medium, enterprises (MSMEs) business still remains a serious problem, and it is affected by the poor financial performance. This research exploring the influence of accounting information systems and internal control on financial performance of MSMEs in Bandung City. This investigation used a quantitative approach using verificative analysis to evaluate the association with the factors under study. 80 MSMEs owners in Bandung City were given questionnaires to complete in order to gather data. The sampling technique used was purposive sampling, focusing on MSMEs that have been actively operating and maintaining basic financial records. SEM-PLS was used to analyze the data in order to assess the relationships and test the suggested study hypotheses. These results highlight importance of adopting effective accounting systems and strengthening internal control practices in order to improve financial management. Furthermore, the findings provide practical implications for MSME owners and local governments to enhance record-keeping effectiveness, strengthen internal control systems, and support sustainability and competitiveness of MSMEs. Clear job separation, continuous financial activity monitoring, and periodical cash and inventory verification can all help implement internal control effectively and lower the risk of mistakes and fraudulent activity. This investigation highlights the establishment of internal control and a successful information system that positively increases MSMEs financial performance.

Keywords: Accounting system effectiveness, Internal control, financial performance.

1 Introduction

Micro, Small, and Medium Enterprises (MSMEs) perform a crucial part in the Indonesian economics according to absorb a large workforce and make a tangible contribution to national economic growth. The government positions MSMEs As an essential component of growth in the economy, particularly through activities in the trade, services,

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and home industry sectors, which cover various fields such as manufacturing, agriculture, culinary businesses, and the utilization of digital technology. More than 65 million business units are MSMEs in Indonesia, which not only support local economic growth but also drive regional economies, including in remote areas.

Despite their substantial economic contribution, MSMEs continue to suffer a number of operational challenges, including poor management human resources, limited technological mastery, and weak financial management practices [1]. Many MSMEs actors have not implemented structured financial record-keeping, making cash flow management challenging and make appropriate business decisions. This condition affects the low effectiveness of MSMEs' financial performance.

Adopting a system for accounting information (AIS) is essential for facilitating better decision-making by supplying fast, accurate, and pertinent financial data (Aditya & Wati, 2022) [2]. For the system to operate properly, components such as users, procedures, data, hardware, software, and internal controls must be integrated. In addition, adequate internal control is also an important factor in improving MSMEs' financial performance. A good internal control system can reduce the possibility of fraud and mistakes, and improve the accuracy of financial data [3].

However, AIS and internal control implementation in MSMEs at regional level still faces various constraints, as seen in Cicendo District, Bandung City, where the implementation of AIS has helped the transaction recording process because most inflows and outflows of goods are automatically recorded. Nevertheless, technical issues such as server disruptions or limited human resource capabilities in operating the system still cause some records to be made manually, which is prone to errors. In terms of internal control, cases of cash or inventory losses are still found due to weaknesses in record-keeping and unclear division of responsibilities, which are often still centralized with the owner. This situation affects the accuracy of financial reports, cash flow stability, and control over business assets.

The intention of this study is to find out how internal control and Accounting Information Systems (AIS) deployment improve MSMEs' financial performance in Bandung City's Cicendo District. It is anticipated that the study's findings will offer useful suggestions for MSME actors in improving financial management, as well as input for local governments to strengthen assistance and training programs for MSMEs in the digital era.

2 Literature Review

Accounting Information System (AIS) is a system that businesses use to gather, document, store, and handle financial data in order to produce useful information for decision-making [4]. Similarly, Puspitawati & Anggadini (2022:39) AIS designed to provide users with high-quality accounting and financial information to support decision-making [5]. AIS functions an organizational tool that assists in managing and controlling economic and financial activities within a company. Based on these views, AIS can be defined as a system used to transform financial data into information that managers may utilize to make decisions and financial management. According to Mirosea et al. (2024:13), confirming that: (1) suitability, (2) reliability, (3) relevance, (4) efficiency, and (5) security as an Indicators of AIS [6].

Assortment of company protocols focused at protect assets, guarantee information correctness, intensify operational efficiency, and compliance with established standards. Internal control as a set of procedures aimed at guarantee assets, producing reliable accounting information, intensify efficiency, and ensure compliance with company regulations. Therefore, internal control interpreted as a system implemented within an organization to secure assets, provide trustworthy financial information, increase operational efficiency, and ensure compliance with applicable policies. According to Suhayati (2021:177–194), the indicators used to measure internal control comprise the following: (1) monitoring; (2) risk assessment; (3) control actions; (4) information and communication; and (5) control environment [7].

Rahayu (2021:7) states that A company's financial success implies its capacity to deliver value for its capital owners in an effective and efficient manner [8]. Financial performance as the outcome achieved by a company in managing its financial resources to accomplish specific goals. Thus, financial performance can be interpreted as the level of effectiveness and efficiency in financial management to achieve organizational objectives. Chabacbib et al. (2020:20) indicate that a number of measures, including (1) sales growth, (2) profit growth, (3) market share growth, and (4) asset expansion, can be used to evaluate financial success [9].

Heru (2022:98) explains that accounting information systems (AIS) generate financial information that is reliable, relevant, and timely, allowing MSMEs to oversee their business operations and enhance operational efficiency [10]. AIS combines hardware, software, users, procedures, and data to produce accurate financial reports. Several previous studies have also demonstrated the positive influence of AIS on MSME performance. Research conducted by Saputri & Shiyammurti (2022), Winarsih & Istianah (2024), Regita et al. (2024), and Lubis & Lufriansyah (2024) consistently found that AIS has a favourable and substantial effect on MSME performance [11-14]. In addition, internal control systems support organizations in achieving their objectives efficiently, generating reliable financial reports, protecting assets, and ensuring compliance with applicable regulations. Segregation of duties within internal control may decrease the potential of scams, errors, and inefficiencies. Supporting this view, earlier research from Nguyen & Tuan (2021), Kaka et al. (2023), and Aneta & Podungge (2021) indicate that internal control has a favorable and substantial impact on the financial performance of organizations [15-17].

Based on the above framework, the following hypotheses can be formulated:

H1: MSMEs' financial performance is impacted by the implementation of accounting information systems.

H2: MSMEs' financial performance is impacted by internal control.

This study paradigm described in Fig. 1:

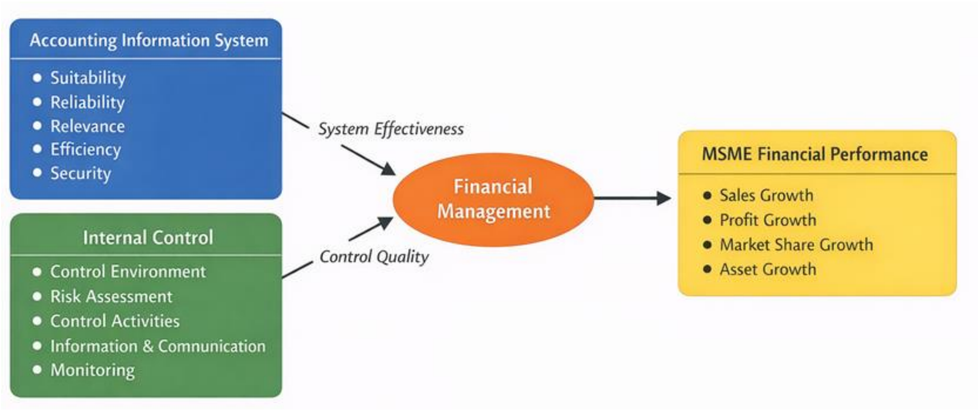

Fig. 1. Research paradigm.

3 Methodology

This study applies quantitative method. The variables in this study consist of Accounting Information Systems (X1), Internal Control (X2), and Financial Performance (Y). The data were collected from the field through the distribution of questionnaires to MSMEs in Bandung City. The questionnaire utilized a five-point Likert scale and supported by interviews, observations, and documentation. The population of this study comprised 394 registered MSMEs in the Cicendo District, covering various sectors including culinary, fashion, crafts, services, trade, and others. Eighty responders made up the sample size, which was determined using the Slovin formula with a 10% margin of error. To guarantee that every MSME had an equal chance of being chosen as a sample, a straightforward random sampling technique was used. SmartPLS version 4 was used for data analysis. Convergent validity, discriminant validity, and reliability tests were used to evaluate the measurement framework (outer model) as part of the verification process. Furthermore, the R-square value, effect size (f2), Goodness of Fit (GoF), and hypothesis testing at a 5% significance level were examined in order to assess the structural model (inner model).

4 Results

Outer Model Test includes convergent validity, discriminant validity, and reliability testing. A reflective measure of convergent validity is considered high if the factor loading is >0.60 and Average Variance Extracted (AVE) value for each construct is >0.5. Because it satisfied the predetermined criteria, the loading factor larger than 0.60 and the AVE above 0.5 in this study were deemed legitimate and appropriate for additional investigation.

Discriminant validity reflects how well a construct is empirically distinct from other constructs, it was evaluated using Cross-Loading and Fornell-Larcker criterion. The findings illustrate that each indication loads greater than the others on the corresponding construct, suggesting that the indicators effectively represent their intended variables. Therefore, all discriminant validity requirements have been satisfied. Reliability analysis was carried out to assess the measurement tool's consistency. Assuming a construct's Composite Reliability and Cronbach's Alpha scores are both (see Table 1).

Table 1. Reliability test result.

Variable	*Cronbach's alpha*	*Composite reliability*
Accounting Information System	0,852	0,893
Internal Control	0,834	0,879
Financial Performance	0,767	0,851

Based on the table above, all variables demonstrate acceptable dependability, as the Composite Reliability and Cronbach's Alpha values are both higher than the 0.70 cutoff. This indicates that the measurement instruments are consistent and suitable to further analysis.

Structural Model Test analysis forms part of hypothesis testing and evaluates The associations between latent variables that are endogenous and exogenous. R-square (R^2) value applied to estimate percentage of variability in endogenous variable explained by the exogenous variables. A model is considered strong if its R^2 value is greater than 0.67, moderate if it is about 0.33, and weak if it is roughly 0.19. Financial Performance (Y) in this study has a moderate R^2 value of 0.606. This suggests that internal control and accounting information systems together account for 60.6% of the variation in financial performance, with additional factors not covered in this study influencing the remaining 39.4% (see Table 2).

Table 2. Path coefficients.

Variable	Path Coefficients
Accounting Information System (X_1) ---Financial Performance (Y)	0,458
Internal Control (X_2) --- Financial Performance (Y)	0,439

The Accounting Information System has coefficient of 0.458, indicating moderate and positive influence on financial performance. This implies that improvements in accounting system are likely to enhance financial outcomes. Similarly, Internal Control coefficient 0.439, also indicating a moderate positive contribution to financial performance.

Effect size (f^2) performed to gauge how much each independent variable changes the dependent variable. The f^2 value for Accounting Information Systems is 0.396, while

Internal Control has a value of 0.364. Both values fall towards the "good" range, reflecting that these factors significantly contribute to improving Financial Performance. The Goodness of Fit (GoF) was calculated by multiplying the average AVE with the average R^2 value. A GoF value exceeding 0.38 indicates a well-fitting model. The result of 0.604 suggests the model demonstrates strong explanatory power and is appropriate for hypothesis testing.

4.1 Hypothesis Testing

Hypothesis testing was conducted using t-statistic threshold at 1.990 and a significance level at 0.05. Accepted hypothesis when t-statistic exceeds 1.990 and p-value less than or equal to 0.05 (see Table 3).

Table 3. Hypothesis testing through path coefficients with bootstrapping technique.

	Hypotesis	*Original Sample*	*T-Statistics*	*P-Value*	*Results*
H_1	MSMEs Financial Performance Impacted by Implementation of Accounting Information Systems.	0,458	5,339	0.000	Accepted
H_2	MSMEs Financial Performance Impacted by Internal Control.	0,439	5,564	0.000	Accepted

With an original sample value of 0.458, a t-statistic of 5.339 > 1.990, and a p-value of 0.000 < 0.05, the hypothesis testing results show that Accounting Information Systems have a positive and significant effect on Financial Performance. As a result, H_1 that Financial Performance positively and significantly impacted by Accounting Information Systems implementation is acknowledged. With an initial sample value of 0.439, a t-statistic of 5.564 > 1.990, and a p-value of 0.000 < 0.05, the findings of the hypothesis testing using path coefficients show that internal control has a positive and significant influence. As a result, H_2 that Internal Control significantly and favorably affects Financial Performance is acknowledged.

4.2 The Effect of Accounting Information System Implementation on the Financial Performance of MSMEs

The hypothesis testing results indicating that the implementation of Accounting Information System (AIS) has a positive and significant influence on MSMEs Financial Performance. The suggestions outlined that more effective implementation of AIS contributes to better financial performance. These findings support Heru (2022:98), who states that reliable, relevant, and timely accounting information effectively monitor and manage their business activities [10]. AIS requires the integration of several components—

such as hardware, software, users, procedures, and data—to generate accurate financial reports. However, the application of AIS among MSMEs in Cicendo District still encounters several obstacles, including server interruptions, system maintenance issues, and limited understanding of the system among human resources. These challenges often lead businesses to revert to manual record-keeping, which increases the risk of errors. The questionnaire results indicate that the reliability indicator was rated "fairly good" by 67.75% of respondents, suggesting that technical issues in AIS operations are still present. Meanwhile, the suitability indicator received a "fairly good" rating from 66.25% of respondents, indicating that the system has not yet fully aligned with business needs. These results are consistent with earlier research carried out by Saputri & Shiyammurti (2022), Regita et al. (2024), and Lubis & Lufriansyah (2024), which also concluded that MSMEs financial performance is positive significantly impacted by AIS [11, 13, 14].

4.3 The Effect of Internal Control on the Financial Performance of MSMEs

Considering the outcomes of the hypothesis test, H_2 was accepted, indicating MSMEs' financial performance is positively and significantly impacted by internal control. This suggests that improving financial performance can be achieved through more robust internal control implementation. These results corroborate the idea that effective internal control to asset protection, dependable financial reporting, operational effectiveness, and adherence to relevant legislation. Segregation of roles can lower the risk of mistakes and fraud. However, the implementation of internal control among MSMEs in Cicendo District is still relatively limited, as reflected by recording mistakes and management practices that are largely centralized under the business owners. The questionnaire results show that the risk assessment indicator received a "fairly good" rating from 67.75% of respondents, indicating that certain procedural weaknesses still exist and may potentially lead to financial losses. Meanwhile, the control environment indicator was rated "fairly good" by 66.00% of respondents, suggesting that the distribution of responsibilities and the application of internal control practices have not yet been fully optimized. These findings align with previous studies conducted: Nguyen & Tuan (2021), Kaka et al. (2023), and Aneta & Podungge (2021), which also concluded that internal control has a positive and significant effect on financial performance [15-17].

5 Conclusion and Recommendation

Financial performance of MSMEs in Bandung City's positive and significantly impacted accounting information systems (AIS) and internal control. The research results verify internal control explains 43.9% of the variation in financial performance, whereas AIS for 45.8%. This suggests that more effective utilization of AIS, combined with stronger internal control practices, leads to improved financial outcomes for MSMEs. These results emphasize how important internal control systems and accounting technology are to improving the accuracy of financial reporting, maintaining stable cash flow, and ensure proper asset management. In addition, the findings are consistent with theories and prior empirical studies, which indicate the integration of accounting information systems and internal control practices can significantly improve organizational performance. MSMEs are encouraged to optimize the implementation of AIS in their business operations to ensure that financial transaction recording becomes more systematic, precise, and supportive of managerial decision-making. Moreover, strengthening internal control systems is essential, particularly through the implementation of clear task segregation, continuous monitoring of financial activities, and routine verification of cash and inventory to minimize the possibility of mistakes and dishonest behavior. From the standpoint of regulations, local governments are expected to play an active role by providing training programs and continuous assistance to MSMEs, especially in adopting digital-based accounting systems and improving financial management capabilities. Such initiatives are important to ensure sustainable improvement in MSMEs financial performance. For future research, it is recommended to incorporate additional variables that may influence financial performance, in order to provide deeper empirical findings and a more thorough understanding of MSMEs development.

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