

HOW MANAGEMENT ACCOUNTING INFORMATION SYSTEMS ENHANCE MANAGERIAL PERFORMANCE: EVIDENCE ON THE MODERATING EFFECT OF DECENTRALIZATION

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Abstract: *This study examines the influence of Management Accounting Information Systems (MAIS) on managerial performance, with decentralization tested as a moderating variable at PT Perkebunan Nusantara IV Regional I Medan. Using a quantitative, associative research design, data were collected from all 40 managerial-level employees via a structured questionnaire, using a saturated sampling approach. The analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS. Results show that MAIS has a significant positive effect on managerial performance, indicating that broad-scope, timely, aggregated, and integrated accounting information enhances managers' effectiveness in planning, coordinating, evaluating, and controlling organizational activities. However, decentralization does not moderate the relationship between MAIS and managerial performance. The findings suggest that although decentralization grants managers greater autonomy, it does not strengthen the impact of MAIS, possibly due to limited managerial capacity or insufficient alignment between authority distribution and information utilization. This study contributes to the literature by integrating MAIS and decentralization within a single analytical framework in the context of an Indonesian state-owned enterprise. Practical implications highlight the need for organizations to improve information system quality while ensuring managers possess the competencies required to utilize decentralized decision-making effectively.*

Keywords: *Management Accounting Information Systems; Managerial Performance; Decentralization*

Introduction

Managerial performance is increasingly recognized as a central determinant of organizational effectiveness, reflecting the extent to which managers successfully fulfill critical responsibilities, such as planning, coordinating, evaluating, supervising, negotiating, and representing their units. In a business landscape characterized by rapid digitalization, growing uncertainty, and heightened competition, organizations depend heavily on their managers' ability to make timely, accurate, and strategically aligned decisions. Recent research underscores the multidimensional nature of managerial performance, emphasizing its strategic value in ensuring that organizational resources are used efficiently, that operational processes remain responsive, and that long-term objectives are achieved sustainably (Awan & Ameen, 2020). High levels of managerial performance enhance not only internal operational efficiency but also external competitiveness, legitimacy, and stakeholder trust, which collectively shape an organization's overall success trajectory (Yan et al., 2022; Salam & Jahed, 2023). These developments

highlight the importance of understanding the factors that influence managerial performance in modern organizations.

One of the most important determinants of managerial performance is the quality and effectiveness of the management accounting information system (MAIS). As organizations become increasingly data-driven, managers must rely on high-quality information to evaluate operational outcomes and respond quickly to changing conditions. MAIS provides this crucial support for high by generating accurate, relevant, timely, aggregated, and integrated information necessary for planning, control, and strategic decision-making. Empirical findings demonstrate that high-quality accounting information systems contribute substantially to decision quality, primarily by reducing uncertainty and enabling managers to evaluate their organizational environment better (Hadianto & Djuminah, 2023). Moreover, the growing complexity of business models, alongside the rapid pace of technological advancements, has strengthened the strategic role of Management Accounting Information Systems (MAIS) in ensuring managers have access to comprehensive, reliable information aligned with organizational objectives. Studies indicate that MAIS characteristics, particularly timeliness, aggregation, integration, and broad-scope information, enhance managerial capability to coordinate activities, allocate resources optimally, and respond effectively to environmental turbulence. Recent empirical findings confirm that high-quality MAIS improves strategic decision-making efficiency and adaptability, thereby reinforcing organizational competitiveness in dynamic business environments (Hamdat et al., 2024; Pedroso et al., 2020).

However, the efficacy of Management Accounting Information Systems (MAIS) is not determined solely by its technical features. Organizational structural factors, particularly the degree of decentralization, play a crucial role in determining whether MAIS information can be effectively utilized. Decentralization involves delegating decision-making authority to lower-level managers, enabling quicker and more contextually informed responses to operational challenges. In dynamic environments, decentralization enhances responsiveness, agility, and innovation by empowering managers to make autonomous decisions based on real-time data. Research has shown that organizations with a balanced structure between decentralization and information systems are better equipped to achieve performance alignment and operational efficiency (Sari & Hasibuan, 2024; Irti et al., 2021; Firdausy et al., 2022; Hardika et al., 2020). Hence, the alignment between decentralization and MAIS becomes critical for ensuring that managers can interpret data accurately and make strategic decisions aligned with organizational objectives.

Despite these theoretical expectations, empirical findings on the interaction between decentralization, MAIS, and managerial performance remain inconsistent. Some studies provide strong evidence that decentralization enhances the positive effects of MAIS by empowering managers to utilize information autonomously and proactively (Chia, 1995). In such contexts, decentralization serves as a catalyst, strengthening managers' use of MAIS and leading to improved performance outcomes. However, other research presents contrasting results, indicating that decentralization does not always improve performance, particularly when managers lack the expertise, resources, or interpretive capacity to understand complex information (Abdel-Maksoud et al., 2015). This suggests that decentralization may generate adverse effects in organizations where managerial competencies are unevenly distributed or where information quality is insufficient. Such discrepancies underscore the need for more nuanced investigations into how decentralization operates as a moderating mechanism across diverse organizational contexts.

Another recurring challenge in MAIS research is the timeliness of information. Delays in reporting, whether due to technological constraints, communication inefficiencies, or inadequate

monitoring systems, can undermine managerial responsiveness and compromise decision quality. Timeliness is especially crucial in decentralized organizations, where autonomous decision-making depends heavily on real-time information. Studies show that untimely or delayed information disrupts coordination processes, reduces the effectiveness of managerial actions, and increases the likelihood of missed opportunities in addressing emerging operational issues (Elbashir et al., 2011). These challenges become more pronounced in fast-changing environments, reinforcing the need for organizations to develop information systems that prioritize timeliness and reliability.

Recent literature also highlights significant variations in managers' perceptions of MAIS usefulness across different cultural, structural, and economic contexts. Evidence from emerging markets suggests that managers tend to prioritize timeliness and integration over broad-scope information because rapid market changes require quick adjustments rather than extensive analytical detail (Rashid et al., 2020). Such findings indicate that contextual, cultural, and industry-specific factors strongly influence how MAIS contributes to managerial performance. Despite increasing scholarly interest in MAIS, relatively few studies examine the combined effects of MAIS characteristics and decentralization within a unified analytical framework. Additionally, much of the existing research relies heavily on data from developed economies. At the same time, studies of emerging markets remain limited, creating a gap in understanding how these dynamics operate across different institutional settings. Given these unresolved issues, there is a clear need for further empirical research that examines how MAIS and decentralization interact to influence managerial performance in contemporary organizational environments.

Literature Review

Managerial Performance

Managerial performance is a multidimensional construct that reflects managers' ability to fulfill essential responsibilities, such as planning, coordinating, supervising, evaluating, and decision-making, to achieve organizational goals. In modern organizational settings, managerial performance is considered a strategic asset because effective managerial behavior shapes operational efficiency, strategic alignment, and long-term organizational competitiveness (Awan & Ameen, 2020). High-quality managerial performance enables organizations to respond more effectively to dynamic market changes, improve productivity, and strengthen relationships with stakeholders. In environments characterized by digital transformation and global competition, strong managerial capabilities have become vital for enhancing organizational legitimacy, resilience, and strategic adaptability. Effective managers not only interpret dynamic digital contexts but also foster innovation and rapid adaptation to environmental shifts. Empirical research underscores that organizations with highly capable managers are better positioned to integrate digital technologies, develop resilient structures, and sustain competitive advantage in uncertain markets (Trieu et al., 2023; He et al., 2022). Consequently, understanding the determinants of managerial performance, including leadership, digital competence, and adaptive capability, remains central to management and accounting research in the digital era.

Management Accounting Information Systems (MAIS)

Management Accounting Information Systems (MAIS) encompass processes, procedures, and technologies that generate financial and non-financial data to support effective managerial decision-making. High-quality MAIS enables managers to minimize uncertainty, assess operational efficiency, optimize resource allocation, and enhance strategic planning. Recent research indicates that integrating digital technologies, such as artificial intelligence, cloud computing, and analytics, has transformed MAIS into a strategic tool for improving decision

quality and organizational performance (Balicka, 2023). Moreover, information system quality in management accounting significantly influences the effectiveness of management control and the reliability of decisions (Papiorek & Hiebl, 2023). Empirical evidence also shows that digital transformation strengthens data accuracy and efficiency in accounting and managerial systems (Abu-matar, 2025). Consequently, MAIS now serves not only as a financial reporting mechanism but also as a vital enabler of strategic agility and sustainable performance (Hung et al., 2023).

Decentralization

Decentralization refers to the distribution of decision-making authority from top management to middle and lower-level managers, enabling organizations to become more responsive and adaptive to changing conditions. In highly decentralized structures, decision-making becomes faster and more context-sensitive, which enhances innovation and organizational agility. Recent research highlights that decentralization fosters creativity and experimentation by empowering managers to act autonomously within clearly defined strategic boundaries (Kahl et al., 2023). This autonomy allows organizations to balance control with flexibility, a key driver of performance in turbulent environments (Ramasubbu & Bardhan, 2021). Moreover, decentralization promotes dynamic capability development and IT-enabled innovation when coupled with robust information systems (Mikalef et al., 2021). Thus, the synergy between decentralized decision-making and high-quality information systems strengthens responsiveness, coordination, and strategic alignment across business functions (Tang et al., 2025).

Hypothesis Development

The Effect of Management Accounting Information Systems on Managerial Performance

Management Accounting Information Systems (MAIS) play a vital role in equipping managers with high-quality information to execute planning, controlling, coordinating, and evaluating functions effectively. MAIS generates both internal and external data, including long-term forecasts, non-financial indicators, and integrated performance reports, providing a holistic view of organizational operations. Empirical evidence suggests that MAIS characteristics, broad scope, timeliness, aggregation, and integration, positively influence managerial performance by improving decision relevance and minimizing uncertainty (Ghasemi et al., 2016). As MAIS quality improves, managers gain enhanced visibility, control, and adaptability, resulting in better performance outcomes. Chowdhury (2023) found that integrating artificial intelligence (AI) into MAIS significantly enhances its predictive and analytical capabilities, enabling faster, more accurate managerial decisions. Similarly, Hutahayan (2020) demonstrated that MAIS supports the execution of innovation strategies and improves internal process performance by better aligning resources. In addition, Jusriadi (2022) highlighted the moderating role of leadership and control systems in amplifying MAIS's positive impact on managerial effectiveness. Collectively, these findings affirm that MAIS is a strategic enabler of managerial performance, enhancing coordination, responsiveness, and strategic alignment across all management levels.

H1: Management Accounting Information Systems have a positive effect on managerial performance.

The Effect of Decentralization on Managerial Performance

Decentralization enhances **organizational agility** by empowering lower-level managers with greater decision-making autonomy, minimizing bureaucratic bottlenecks, and fostering proactive responses to environmental changes. This empowerment promotes accountability,

innovation, and flexibility, key enablers of superior managerial performance. Recent studies highlight that decentralization not only improves responsiveness but also strengthens team creativity and adaptability, especially in turbulent business environments (Kahl et al., 2023; Tang et al., 2025). Furthermore, decentralized structures encourage autonomy-driven decision-making and stimulate innovation ambidexterity within organizational systems (Ceptureanu & Ceptureanu, 2021). However, successful decentralization depends on the competence of managers, supportive information infrastructures, and a culture that fosters collaboration and shared accountability (Adana et al., 2023). Jin (2023) found that administrative and operational decentralization significantly improved firm performance in Chinese county-level enterprises by promoting local accountability and innovation. Likewise, Alam & Alam (2020) emphasized that decentralization enhances resource allocation efficiency and budgetary control in public organizations, improving managerial effectiveness. Furthermore, Trisnaningsih & Ariadi (2022) confirmed that decentralization directly affects managerial performance by stimulating participative decision-making and fostering responsibility across management levels. These findings collectively affirm that decentralization, when aligned with organizational support and competence, creates a governance structure conducive to improved performance and adaptability in complex environments.

H2: Decentralization has a positive effect on managerial performance.

The Moderating Effect of Decentralization on the Relationship Between MAIS and Managerial Performance

According to contingency theory, managerial performance depends on the alignment between organizational structure and information systems. In decentralized organizations, authority is distributed among lower managerial levels, requiring access to timely, detailed, and integrated information for effective decision-making. Decentralization is thus theorized to strengthen the impact of Management Accounting Information Systems (MAIS) on managerial performance by promoting data-driven responsiveness. When managers are empowered with reliable information, they can identify opportunities, address challenges, and enhance performance outcomes (Hadianto & Djuminah, 2023). Empirical evidence supports this relationship, showing that MAIS characteristics, such as broad scope, timeliness, and aggregation, complement decentralized structures to improve managerial effectiveness (Firdausy et al., 2022). However, other studies caution that decentralization does not always enhance MAIS outcomes if managerial competence or institutional support is lacking (Nata & Wirakusuma, 2020). Irti et al. (2021) found that decentralization moderates the relationship between MAIS and performance, with stronger effects observed in firms possessing adaptive information systems. Similarly, Firdausy et al. (2022) demonstrated that environmental uncertainty interacts with decentralization and MAIS quality to influence managerial performance outcomes. Moreover, Oskou et al. (2023) proposed a model that confirms that decentralization enhances system performance when MAIS provides flexible, integrated information flows. Despite some mixed empirical evidence, contingency theory suggests that decentralization can amplify the benefits of MAIS by aligning decision authority with information accessibility, ultimately improving organizational responsiveness and managerial effectiveness.

H3: Decentralization strengthens the positive effect of Management Accounting Information Systems on managerial performance.

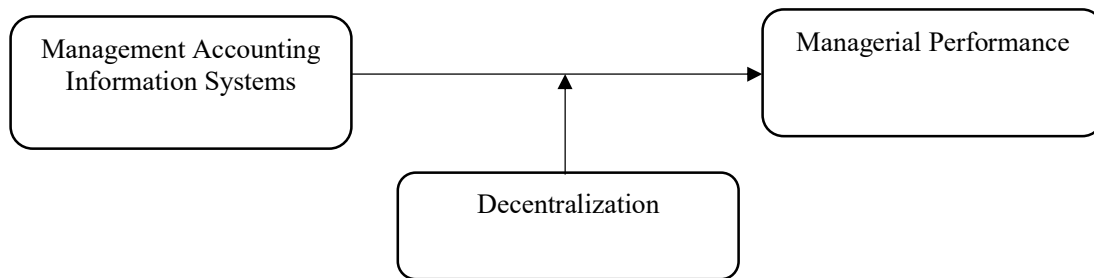


Figure 1. Research Model

Method

This study employs a quantitative, associative research design to examine causal relationships among variables. Associative designs are widely used to investigate whether changes in one construct influence changes in another within organizational settings (Creswell & Creswell, 2018). The quantitative approach is appropriate because the study relies on numerical data, statistical evaluation, and hypothesis testing to determine the influence of Management Accounting Information Systems (MAIS) and decentralization on managerial performance. Quantitative methods emphasize objectivity, structured measurement, and replicability, particularly when analyzing management-related variables using statistical tools (Queirós et al., 2017). The population of this research consists of 40 managerial-level employees at PT Perkebunan Nusantara IV Regional I Medan. Because the population is relatively small, the study uses a saturated sampling technique, which includes all population members in the sample. Saturated sampling is recommended when the population is fully accessible and capturing complete population data minimizes sampling error and enhances analytical accuracy (Etikan & Bala, 2017).

Three key variables are examined in this study: managerial performance, management accounting information systems (MAIS), and decentralization. Managerial performance reflects how effectively managers execute essential managerial functions such as planning, organizing, evaluating, and supervising, serving as a critical determinant of organizational success. Recent studies emphasize that managerial performance depends on managerial competencies and contextual organizational factors (Hadianto & Djuminah, 2023). MAIS provides broad-scope, timely, aggregated, and integrated information that enhances decision accuracy and improves strategic responsiveness (Firdausy et al., 2022). Similarly, research shows that decentralization, defined as the delegation of decision-making authority to lower-level managers, fosters agility, innovation, and accountability (Nuraliati & Nurani, 2022). The interaction between these variables is crucial for achieving organizational adaptability and performance in dynamic environments (Irti et al., 2021). All constructs in this study are measured using a Likert scale to quantify respondents' perceptions.

Data collection was conducted using a structured questionnaire, a common approach in quantitative research that allows consistent measurement across respondents and supports statistical analysis. Questionnaires are also suitable for assessing managerial perceptions and behavioral variables, as they capture standardized responses that can be analyzed systematically. Data analysis was performed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) through SmartPLS 4. PLS-SEM is an appropriate analytical technique for prediction-oriented research, studies with smaller sample sizes, and complex models involving latent

variables. It is widely recommended in management and behavioral science research due to its flexibility and fewer statistical assumptions than covariance-based SEM (J. F. Hair et al., 2021). The analysis consists of two phases: the measurement model (outer model) and the structural model (inner model). The outer model evaluation includes indicator reliability, internal consistency reliability, convergent validity, and discriminant validity to ensure that the measurement items accurately reflect their respective constructs. The inner model assessment evaluates R² values, path coefficients, effect sizes, predictive relevance, and model fit indices. Recent SEM literature highlights the importance of evaluating goodness-of-fit using indices such as the Standardized Root Mean Square Residual (SRMR) to determine model adequacy (Henseler et al., 2016). Hypothesis testing is conducted via bootstrapping with 5,000 subsamples, and statistical significance is established with t-values > 1.96 and p-values < 0.05.

Result and Discussion

Outer Model Analysis

Data processing techniques using Partial Least Squares Structural Equation Modeling (PLS-SEM) involve two main stages to assess model fit: the outer model and inner model analyses. The outer model evaluation ensures that measurement items are valid and reliable before hypothesis testing. This stage assesses convergent validity, discriminant validity, and composite reliability, which confirm construct consistency and measurement accuracy (Hair et al., 2020; Cheung et al., 2023; Rasoolimanesh, 2022).

Convergent Validity

Convergent validity in reflective measurement models is evaluated by examining the factor loadings obtained through Partial Least Squares Structural Equation Modeling (PLS-SEM). An indicator is considered valid if its loading exceeds 0.7, indicating that the construct explains more than half of the indicator's variance. High factor loadings indicate reliable measures that contribute to construct validity and internal consistency (Mohd Dzin & Lay, 2021).

Table 1. Outer Loading

Variable	Indicator	Outer Loading
Management Accounting Information System	X1	0.864
	X2	0.871
	X3	0.838
	X4	0.906
	X5	0.770
Managerial Performance	Y1	0.747
	Y1	0.713
	Y3	0.854
	Y4	0.748
	Y5	0.816
	Y6	0.834
Decentralization	Z1	0.774
	Z2	0.708
	Z3	0.755
	Z4	0.858
	Z5	0.852

Based on Table 1 regarding Outer Loading, it can be concluded briefly and clearly as follows: All indicators from the Management Accounting Information System (X), Managerial Performance (Y), and Decentralization (Z) variables have outer loading values above 0.70,

which indicates that each indicator is valid and has a strong contribution to its construct. The highest outer loading value is 0.906 (Z4), and the lowest is 0.708 (X2), but it is still above the minimum acceptable limit (0.70).

Discriminant Validity

Discriminant validity in reflective measurement models is evaluated to ensure that each construct is unique and measures what it is intended to measure. It is typically assessed using cross-loadings, in which each indicator should load higher on its associated construct than on other constructs, confirming the distinctiveness of the variables. In PLS-SEM, discriminant validity can also be established through advanced methods such as the Heterotrait-Monotrait (HTMT) criterion, which is considered more reliable than the traditional Fornell-Larcker criterion (Rasoolimanesh, 2022; Yusoff et al., 2020; Afthanorhan et al., 2021).

Table 2. Cross Loading

	Management Accounting Information System	Managerial Performance	Decentralization
X1	0.864	0.438	0.262
X2	0.871	0.600	0.195
X3	0.838	0.583	0.320
X4	0.906	0.676	0.255
X5	0.770	0.540	0.238
Y1	0.419	0.747	0.597
Y2	0.437	0.713	0.551
Y3	0.538	0.854	0.035
Y4	0.599	0.748	0.035
Y5	0.724	0.816	0.179
Y6	0.425	0.834	0.324
Z1	0.274	0.327	0.774
Z2	0.294	0.238	0.708
Z3	0.200	0.315	0.755
Z4	0.219	0.383	0.858
Z5	0.220	0.370	0.652

Based on the data presented in Table 2, each indicator in the research variable has the largest cross-loading within its own variable, compared to its cross-loadings in other variables. Based on these results, the indicators used in this study exhibit good discriminant validity across their respective variables.

In addition to evaluating cross-loadings, discriminant validity can also be assessed using the Average Variance Extracted (AVE), which measures the proportion of variance captured by a construct relative to measurement error. A valid model should have an AVE value greater than 0.5, indicating that the latent construct explains more than half of the variance in its indicators. This criterion strengthens both convergent and discriminant validity, ensuring measurement accuracy and construct reliability (Cheung et al., 2023; Haji-Othman & Yusuff, 2022).

Table 3. Average Variant Extracted (AVE)

Variable	Average Variant Extracted (AVE)
Management Accounting Information System	0.724
Managerial Performance	0.619
Decentralization	0.626

Based on the data presented in Table 3, the composite reliability of all research variables is > 0.6. These results indicate that each variable meets the composite reliability criteria, suggesting that all variables are highly reliable.

Composite Reliability

Composite reliability (CR) is an important indicator of construct internal consistency in Partial Least Squares Structural Equation Modeling (PLS-SEM). A construct achieves acceptable reliability when its CR value exceeds 0.6, signifying that the indicators used consistently represent the latent variable. This measure is considered superior to Cronbach’s Alpha because it does not assume equal indicator loadings and better captures the construct’s true reliability (Nasution et al., 2020).

Table 4. Composite Reliability

Variable	Composite Reliability
Management Accounting Information System	0.915
Managerial Performance	0.881
Decentralization	0.866

Based on the data presented in Table 4, the composite reliability of all research variables is > 0.6. These results indicate that each variable meets the composite reliability criteria, so it can be concluded that all variables have a high level of reliability.

Cronbach's Alpha

The reliability test using composite reliability can be reinforced by using Cronbach's alpha values. A variable can be considered reliable if the Cronbach's alpha value is > 0.7 (Ghozali, 2017). The following are the Cronbach's alpha values for each variable:

Table 5. Cronbach’s Alpha

Variable	Cronbach’s Alpha
Management Accounting Information System	0.904
Managerial Performance	0.876
Decentralization	0.851

Based on Table 5, the Cronbach's alphas for each research variable are > 0.7. Therefore, these results indicate that each research variable meets the criteria for high reliability.

Inner Model Analysis

After meeting the outer model criteria, the structural model (inner model) was tested. In this study, this will be explained through a goodness-of-fit test. Based on the data processing, the following R-Square values were obtained:

Table 6. Goodness of Fit Test

	R Square	Adjusted R-Square
Managerial Performance (Y)	0.513	0.472

In Table 6, the R-Square value of 0.513 indicates that 51.3% of the variation in Managerial Performance (Y) can be explained by the independent variables in the model (e.g., Management Accounting Information System, Decentralization, and moderating effects).

Hypothesis Testing

The results of the hypothesis testing for direct effects and moderating effects can be seen in the following table:

Table 7. Path Coefficient

Original	Sample	T	Statistic	P-Value
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			Sample (O)	Mean (M)	(O/STDEV)	
Management Information System ->	Accounting System		0.572	0.571	3.282	0.001
Moderating Effect ->	Managerial Performance		0.036	0.072	0.208	0.835

The effect of accounting information systems on managerial performance, moderated by decentralization, has a path coefficient of 0.036. This effect has a probability value (p-value) of $0.0835 > 0.05$, meaning that decentralization is unable to moderate the effect of accounting information systems on managerial performance.

Discussion

The findings in this study relate to the compatibility between the current research results and previous theories, opinions, and research results, and reflect the behavioral patterns that need to be applied to overcome existing problems. The analysis of these findings will be discussed in the main section as follows:

The Effect of Accounting Information Systems on Managerial Performance

The influence of accounting information systems (AIS) on managerial performance has been widely recognized as a determinant of effective organizational management. Empirical findings demonstrate that AIS has a significant positive impact on managerial performance, with a path coefficient of 0.572 and a p-value of 0.001, indicating a strong correlation between system quality and decision-making efficiency. AIS provides critical information on both internal and external factors, such as customer preferences, technological trends, and labor relations, enabling managers to make informed, strategic decisions that enhance overall performance. According to Jatmiko (2022), management accounting information systems significantly influence managerial performance by providing relevant, accurate, and timely data that guide policy formulation and operational control.

Modern organizations require AIS not only for financial data processing but also as an integrative mechanism that supports non-financial performance measurement and external information analysis. Irti et al. (2021) emphasize that high-quality management accounting systems reduce uncertainty and enhance managerial control, which contributes to achieving organizational goals. Likewise, Khalid & Kot (2021) found that AIS adoption in the banking sector improved transparency, efficiency, and the quality of managerial decisions. The integration of AIS into business processes allows managers to anticipate risks, allocate resources effectively, and align strategic objectives with operational realities.

Furthermore, Jusriadi (2022) highlighted the mediating role of management accounting information systems, demonstrating that AIS effectiveness is enhanced when complemented by strong leadership and control systems. Similarly, Delawi & Ramo (2020) noted that AIS supports managerial performance by improving data integration and enhancing monitoring capabilities. Collectively, these findings affirm that AIS plays a vital role in elevating managerial performance by ensuring data reliability, promoting accountability, and strengthening decision-making processes. As organizations increasingly face dynamic market conditions, the implementation of adaptive and high-quality AIS becomes essential for sustaining managerial excellence and organizational competitiveness.

The Effect of Accounting Information Systems on Managerial Performance Moderated by Decentralization

The moderating role of decentralization in the relationship between accounting information systems (AIS) and managerial performance remains a complex issue in management research. Although the present study found a negative moderating effect of decentralization, with a path coefficient of 0.036 and a p-value of 0.835 (> 0.05), suggesting insignificance, the broader literature indicates that decentralization's influence is highly context-dependent. AIS provides a framework for collecting, processing, and analyzing financial and non-financial information essential for managerial decision-making. However, when decision authority is distributed without adequate control mechanisms, the effectiveness of AIS in improving managerial performance may diminish. According to Irti et al. (2021), decentralization can weaken coordination and information flow, thereby reducing managerial performance in certain organizational structures.

In contrast, Nuraliati & Nurani (2022) argue that moderate levels of decentralization can strengthen managerial performance when supported by effective AIS implementation, as they promote autonomy and faster decision-making. Similarly, Oskou et al. (2023) found that decentralization moderates the relationship between AIS characteristics and system performance, but only when managers possess sufficient analytical capability to interpret accounting data effectively. This indicates that the success of AIS under decentralized conditions depends on the alignment between information quality and managerial competence.

Furthermore, Hadianto & Djuminah (2023) highlight that environmental uncertainty and technology integration mediate the AIS-performance relationship, suggesting that decentralized structures require adaptive systems capable of responding to dynamic information environments. In a related study, Firdausy et al. (2022) demonstrated that decentralization alone does not guarantee improved managerial performance unless accompanied by clear accountability and well-designed management accounting systems. These findings collectively imply that while decentralization can empower managers, it may also dilute control and coordination if not properly aligned with the organization's AIS structure. Therefore, companies should balance autonomy with centralized oversight to ensure that accounting information systems effectively contribute to improved managerial performance.

Conclusion

Based on the PLS analysis results and the discussion in the previous chapter, most results indicate an effect between the independent and dependent variables, as well as the moderating variables. The analysis concludes that the management accounting information system affects managerial performance at PT. Perkebunan Nusantara IV Regional 1 Medan. Decentralization is unable to moderate the influence of the management accounting information system on managerial performance at PT. Perkebunan Nusantara IV Regional 1 Medan.

Based on the conclusions obtained, the author would like to offer the following suggestions to interested parties: PT. Perkebunan Nusantara IV Regional 1 Medan is expected to use the results of this study to improve its management accounting information system regarding managerial performance, with decentralization as a moderating variable. This study is expected to contribute to the agency by identifying and understanding the indicators that influence the impact of the management accounting information system on managerial performance, with decentralization as a moderating variable. This understanding is important for accelerating managers' decision-making across PT's divisions. Perkebunan Nusantara IV Regional 1 Medan. Further research is expected to add additional indicators that may influence the relationship between management accounting information systems and managerial performance, with decentralization as a moderating variable. In addition, it is recommended to expand the research object and population, and to apply a wider range of data analysis techniques to ensure the results provide broader benefits for future research.

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