The Role Management Accounting Information System, and Digital Competencies in Enhancing Managerial Performance

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ABSTRACT

The development of digital technology has resulted in substantial changes to the organization's management system, including management accounting. Through the use of digital competency moderation and mediation by the management accounting information system, this study seeks to investigate how managerial performance is affected by digital transformation. This work employs a quantitative methodology using the Structural Equation Modeling–Partial Least Squares (SEM–PLS) analysis technique. The 63 respondents in the sample were managers, proprietors, and organizational leaders of occupational work units, businesses, and MSMEs in Labuhanbatu. Data processing results demonstrate that managerial performance is positively and significantly impacted by digital transformation. An efficient information system increases the influence of digital transformation on enhancing management performance, according to the findings, which also indicate that the management accounting information system acts as a partial mediator in the relationship. Furthermore, it has been demonstrated that the relationship between digital transformation and management accounting information systems is moderated by digital competencies, with higher levels of digital capabilities enhancing the efficacy of system implementation. These findings have significant ramifications, as the preparedness of information systems and the digital capabilities of human resources play a major role in how well digital transformation improves managerial performance.

Keywords: *Digital Competence, Digital Transformation, Management Accounting Information Systems, Managerial Performance.*

ABSTRAK

Sistem manajemen organisasi, termasuk akuntansi manajemen, telah mengalami perubahan signifikan sebagai akibat dari pertumbuhan teknologi digital. Penelitian ini bertujuan untuk mengkaji pengaruh transformasi digital terhadap kinerja manajerial dengan peran mediasi sistem informasi akuntansi manajemen dan moderasi kompetensi digital. Penelitian ini menggunakan pendekatan kuantitatif dengan teknik analisis Structural Equation Modeling–Partial Least Squares (SEM–PLS). Sampel terdiri dari 63 responden, terdiri dari pimpinan organisasi, pemilik usaha, dan pengelola unit kerja okupasi/perusahaan/UMKM di Labuhanbatu. Hasil pengolahan data

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menunjukkan bahwa transformasi digital memiliki efek positif dan signifikan terhadap kinerja manajerial. Temuan ini juga menunjukkan bahwa sistem informasi akuntansi manajemen memainkan mediator parsial dalam hubungan, yang berarti sistem informasi yang efektif memperkuat dampak transformasi digital dalam meningkatkan kinerja manajemen. Selain itu, kompetensi digital telah terbukti memoderasi hubungan antara transformasi digital dan sistem informasi akuntansi manajemen, di mana tingkat kemampuan digital yang lebih tinggi memperkuat efektivitas implementasi sistem. Temuan ini memberikan implikasi penting bahwa keberhasilan transformasi digital dalam meningkatkan kinerja manajerial sangat ditentukan oleh kesiapan sistem informasi dan kemampuan digital sumber daya manusia.

***Kata kunci**: Kompetensi Digital, Transformasi Digital, Sistem Informasi Akuntansi Manajemen, Kinerja Manajemen.*

INTRODUCTION

The development of digital technology has brought fundamental changes in the organization's management system, including in the field of management accounting. Digital transformation is not just the application of new technologies, but also includes changes in processes, work culture, and decision-making patterns within organizations. In this competitive and fast-paced era, organizations are required to integrate digital technology into their strategies and operations in order to survive and thrive. In the managerial context, digital transformation is believed to have a significant impact on increasing the effectiveness and efficiency of decision-making (Peng & Tao, 2022). Managers can now access information more quickly, correctly, and pertinently thanks to technologies like cloud computing, big data analytics, and Enterprise Resource Planning (ERP) (Hong et al., 2024). However, information infrastructure and organizational capabilities in making the most use of it have an impact on how digital transformation affects managerial performance; this effect is not automatic.

One of the key elements in linking digital transformation with improved managerial performance is the Management Accounting Information System (MAIS) (Jatmiko, 2022). Provide the information necessary for the planning, control, and evaluation of performance within the organization (Massicotte & Henri, 2021). With the support of digitalization, this system is able to present information that is more flexible, real-time, and can be adjusted to managerial needs. Therefore, MAIS can act as a mediating variable that bridges the influence of digital transformation on managerial performance outcomes.

In addition, the success of organizations in utilizing digital transformation also depends heavily on the digital competence of managers. Digital competencies include the ability to understand, access, manage, and use technology effectively in the work process (Kraus et al., 2022). This variable is seen as relevant as a moderation factor that can strengthen or weaken the relationship between digital transformation and the effectiveness of the information systems used. In other words, organizations that have human resources with high digital competence tend to be more successful in implementing digital transformation strategically.

The advantages of digital transformation in several organizational contexts have been emphasized in earlier research. Digital transformation facilitates quicker, more precise, and more strategic financial decision-making, according to Nadiar et al. (2025). In a similar vein, Anwar and Warmen (2025) highlighted how digital competency mediates the connection between teacher effectiveness and transformative leadership. Efendi and Widiarto (2017) demonstrated that Management Accounting Systems (MAS) significantly enhance managerial and organizational performance under conditions of task and environmental uncertainty. Etim (2019) went on to say that sector performance is enhanced by the use of MAS that is adapted to perceived environmental risks. They also suggested a dependent approach in MAS design to guarantee accurate and pertinent data for product pricing and costing. Despite these insights, limited research has examined the combined effect of digital systems, digital competence, and managerial tools on

employee satisfaction and performance within the context of human resource management, particularly in state-owned enterprises undergoing digital transformation.

This study aims to examine the influence of digital transformation on managerial performance while taking into consideration the mediating role of management accounting information systems and the moderating role of digital capabilities. This study is expected to make both theoretical and practical contributions, specifically to the emerging body of knowledge on managerial accounting and strategic management in the digital age.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Digital Transformation of Managerial Performance

Implementing maintenance practices based on modern techniques promotes the training of mechanics, operators, and supervisors, enhancing the technical level of the workforce and increasing the value provided to customers. Sitorus et al. (2024) define digital transformation as the process of integrating digital technology into all aspects of an organization's operations to change how it functions and deliver greater value. Melo et al. (2023) describe digital transformation as the process of using technology to significantly improve an organization's performance or expand its reach. Digital technology encompasses not only the use of software and information systems but also changes in organizational culture, business models, and managerial skills, enabling adaptation to new technologies (Martínez-Caro et al., 2020).

Managerial performance is the ability of managers to carry out management functions effectively and efficiently, that have an impact on achieving organizational goals (Pedraza-Rodríguez et al., 2023). Managerial performance can be assessed through indicators such as planning, organizing, directing, and controlling, carried out by managers (Supriyadi et al., 2024). This performance is not only measured from the financial side, but also from non-financial aspects such as decision-making effectiveness, innovation, and process efficiency (Monteiro et al., 2022).

Digitizing work processes, such as the use of ERP (Enterprise Resource Planning) systems and data analytics, allows managers to make faster and data-driven decisions. This improves operational efficiency and accuracy in decision-making (AlMuhayfith & Shaiti, 2020). Digitalized managers tend to be more adaptive to market changes and are able to develop technology-based innovations to increase organizational competitiveness (Vial, 2021). Digital transformation is driving organizations to experiment with new business models and more flexible approaches. Digital systems support transparent and automated performance monitoring, allowing managers to conduct evaluations and controls more effectively (Kane et al., 2015). Some empirical research shows a positive correlation between digital transformation and managerial performance, such as the research by Guerra et al. (2023), Cheng (2025), and Przegalinska et al. (2025)

H1: Digital transformation has a positive effect on managerial performance.

Digital Transformation on the Effectiveness of MAIS

The Management Accounting Information System (MAIS) is a part of an accounting information system that focuses on providing financial and operational information to support managerial decision-making. The system includes planning, control, evaluation, and decision-making in various organizational functions (Horngren, 2009). Management accounting systems provide information to support planning, controlling, and decision-making by managers (Banerjee, 2021). The effectiveness of a system is measured by how well the system is able to provide relevant, accurate, timely, and reliable information to support managerial decisions (Pratiwi & Aisyah, 2023). Effectiveness also reflects the alignment between the manager's information needs and the output the system produces. The effectiveness of an accounting information system lies in its ability to produce timely and relevant information for decision-making (Gelinas et al., 2018).

Digital transformation enables real-time integration of data from various sources, improving the quality and accessibility of managerial information. Cloud computing and IoT, for example, allow data to be collected automatically, reducing manual input errors. Digital technologies improve data quality and accessibility, thus enhancing the performance of management accounting systems (Papiorek & Hiebl, 2024). The application of digital technologies enables the automation of accounting processes and the use of advanced analytics (e.g., machine learning), which speeds up and improves the accuracy of management reports. Automation and advanced analytics have transformed the role of management accountants into business partners who focus on predictive insights rather than historical reporting (Pavlovic et al., 2024). Digital transformation allows for adaptation more quickly to changing business environments through flexible and reconfigurable systems, as management needs. Digitalization enhances the adaptability of management information systems, allowing firms to respond rapidly to environmental changes (Ali et al., 2025). With the advent of digital platforms, management accounting has become more collaborative, as information can be shared and accessed simultaneously by various organizational units. Digital platforms facilitate cross-functional collaboration by making real-time data accessible across organizational boundaries (Quinn, 2014). The success of digital transformation in management accounting depends on organizational culture, technological infrastructure, and staff capabilities (Moll & Yigitbasioglu, 2019).

Increasing the efficacy of management accounting information systems is significantly impacted by digital transformation. It can offer more precise and pertinent information for strategic decision-making through enhanced data quality, process automation, system flexibility, and cross-functional cooperation. However, in order to maximize the outcomes of this digital transition, companies need to be prepared to meet the problems that come up.

H2: Digital transformation has a positive effect on the effectiveness of management accounting information system.

Managerial Accounting Information System on Managerial Performance

The Management Accounting Information System (MAIS) assists managers in providing relevant quantitative and qualitative information to support decision-making, improve the speed and accuracy of planning and control. The use of relevant and timely information provided by management accounting systems enhances managerial decision-making (Ramadanty & Putri, 2024). This system supports managers in budgeting, controlling budgets, and evaluating performance results. Information such as the variance report helps to objectively assess operational performance. Management accounting systems contribute significantly to the effectiveness of planning and control processes (Mukhlis & Tyas, 2024). Managers can analyze costs, contribution margins, break-even points, and more, which supports a more accurate evaluation of unit and individual performance. A well-designed management information system enhances the analytical capability of managers, thereby improving performance (Monteiro et al., 2024).

Performance information can be used as a basis for incentivizing or evaluating employees, thereby increasing accountability and managerial motivation. Accounting information systems can serve as control tools to improve accountability and motivation (Turner et al., 2020). The effectiveness of information systems depends not only on technical quality but also on behavioral and organizational factors (Monteiro et al., 2022). The Managerial Accounting Information System has a very significant role in improving managerial performance, especially through the provision of relevant, timely, and accurate information that supports decision-making, planning, control, and evaluation processes (Papiorek & Hiebl, 2024). However, its effectiveness is highly dependent on the quality of information, user competence, and technological and organizational support.

H3: Management accounting information system has a positive effect on managerial performance.

Digital Competence and Digital Transformation and MAIS

The capacity to use digital technology successfully and efficiently to accomplish tasks, solve problems, and adjust to quick changes in technology is known as digital competence. Knowledge, abilities, and attitudes about the use of digital devices, software, data, and digital communication are all included in this competency. According Hong et al. (2025), digital competence entails using information society technology with assurance and critical thinking for communication, work, leisure, and education.

Information and data literacy, digital interactions and cooperation, digital content production, digital security, and technology-based resolving issues are the key elements of digital competence, according to Ferrari and Punie (2013). In the words of Bharadwaj et al. (2013), digital transformation is not just technology; it also entails human acceptance, management, and strategic use of new technologies. According to Westerman et al. (2011), digital transformation is as much about people and capacity for growth as it is about technology. For digital transformation projects to be successful, employee digital competency is essential (Vial, 2021).

Managerial Accounting Information Systems (MAIS) require users who are able to operate, interpret, and utilize information from the system to the fullest, especially with the integration of digital technologies such as ERP, cloud accounting, and data analytics. Optimize the use of digital-based systems: Users with high technology literacy can be more productive in accessing and analyzing data from, improving reporting accuracy and efficiency, and improving capabilities in data-driven decision-making. The effectiveness of management accounting systems depends on the user's competence in using digital tools and interpreting the information produced (Granlund, 2011). Digital competence of accountants and managers is essential for leveraging modern information systems for planning, control, and decision making (Imjai et al., 2023).

Building agile and intelligent decision-making environments requires the interaction of digital transformation, digital competency, and accounting information systems (Moll & Yigitbasioglu, 2019). In order to maximize the usage of Management Accounting Information Systems (MAIS) and promote the achievement of digital transformation, digital competency is essential. Businesses will be better able to adopt new technologies, make strategic use of MAIS, and enhance managerial performance through data-driven decision-making if they develop and enhance the digital competencies of their workforce.

H4: Management accounting information system mediates the influence of digital transformation on managerial performance.
H5: Digital competence moderates the influence of digital transformation on the management accountability information system.

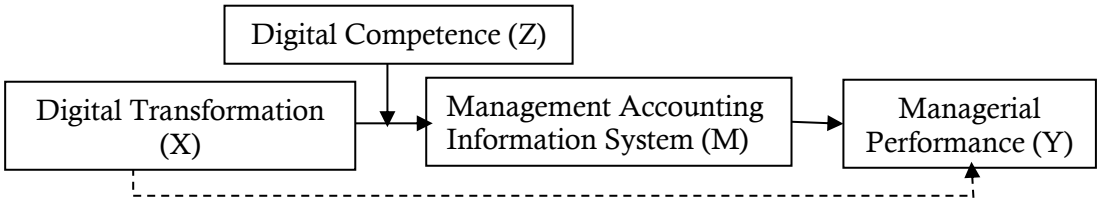

Figure 1. Conceptual Framework

Figure 1 outlines the study's conceptual framework, which is based on the literature review mentioned above. This study looks at the connections between management performance, digital competency, Management Accounting Information Systems (MAIS), and digital transformation. It is suggested that digital transformation directly improves management performance (H1) and MAIS efficacy (H2). After that, it is

anticipated that MAIS will have a beneficial impact on managerial performance (H3) and act as a mediating variable to explain how digital transformation influences managerial performance (H4). Furthermore, the link between digital transformation and MAIS is expected to be moderated by digital competence (H5), indicating that the influence of digital transformation on MAIS efficacy is greater when managers have higher levels of digital competence. To provide a comprehensive understanding of how digital transformation can enhance managerial performance by effectively utilizing management accounting systems, this paradigm encompasses direct, mediating, and moderating linkages.

RESEARCH METHODS

The study explores the relationship between managerial performance and digital transformation using a quantitative approach and an explanatory research methodology, as suggested by Hodge (2020). By focusing on these variables, the study aims to provide a comprehensive understanding of how management effectiveness and organizational decision-making are influenced by digital transformation initiatives. The research population includes managers of MSMEs in Labuhanbatu who have integrated digital technology into their operational processes, as well as managers and leaders of organizational work units.

Respondents who fulfilled certain requirements, such as actively participating in decision-making and using digital systems in their managerial duties, were chosen through the use of purposeful sampling. 63 respondents in all were chosen to take part in the research. An online survey with a 5-point Likert scale was used to collect data on managerial performance, digital competency, the efficacy of MAIS, and perceptions of digital transformation. To guarantee reliability and relevance in capturing the relevant constructs, the chosen measuring items were modified from validated sources.

Data analysis was performed using SmartPLS 4 software, following a two-step procedure. First, the measurement model was evaluated to assess the validity and reliability of the constructs. Subsequently, the structural model was tested to examine the hypothesized direct, mediating, and moderating relationships. Mediation effects were assessed using the bootstrapping method, while moderation was tested through an interaction effect approach. Hypotheses were evaluated based on t-statistical values and p-values to determine significance.

The goal of this study is to provide empirical evidence on how digital transformation initiatives can enhance managerial performance, both directly and indirectly. It also emphasizes the importance of digital competence in moderating the effectiveness of digital systems. The findings are expected to offer practical insights for managers and organizational leaders seeking to optimize digital technologies to improve decision-making, efficiency, and managerial performance.

RESULTS

PLS-SEM analysis results showing the relationship between latent variables (blue circles) and their indicators (yellow boxes). Each indicator is accompanied by a loading factor value and its significance, while the R-square value indicates the variable's contribution to explaining the endogenous construct.

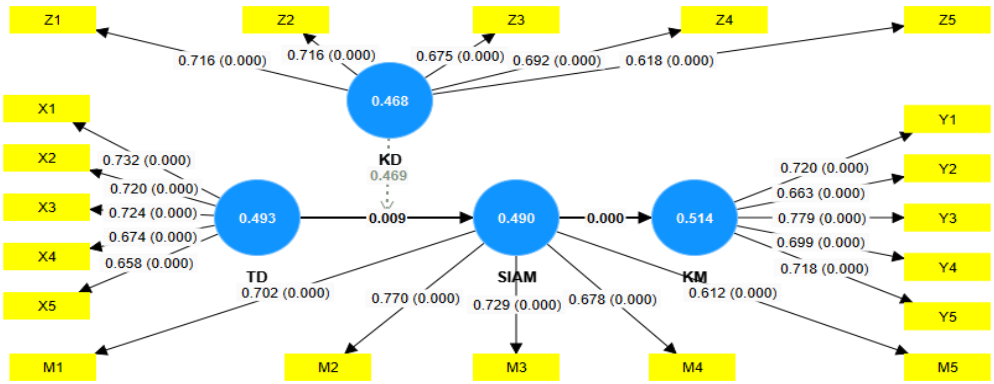

Figure 2. Inner and Outer Model

Figure 2 shows external model measurements were used to test convergent validity, discriminant validity, and construct reliability and validity obtained by testing the PLS Algorithm. Based on Table 1, it can be seen that each indicator in each variable in this study meets the convergent validity criteria with a value of > 0.7, so that the data can be said to be valid and meet the convergent validity criteria.

Table 1. Convergent Validity

Items	Management Accounting Information System	Digital Transformation	Managerial Performance	Digital Competency	Digital Competency x Digital Transformation
M1	0.702				
M2	0.770				
M3	0.729				
M4	0.778				
M5	0.712				
X1		0.732			
X2		0.720			
X3		0.724			
X4		0.774			
X5		0.758			
Y1			0.720		
Y2			0.763		
Y3			0.779		
Y4			0.799		
Y5			0.718		
Z1				0.716	
Z2				0.716	
Z3				0.775	
Z4				0.792	
Z5				0.718	
KD x TD					1.000

Table 2. Discriminant Validity

Variable	Digital Competency	Managerial Performance	Management Accounting Information System	Digital Transformation
Digital Competency (DC)	0.784			
Managerial Performance (MP)	0.252	0.717		
Management Accounting	0.524	0.521	0.700	

Variable	Digital Competency	Managerial Performance	Management Accounting Information System	Digital Transformation
Information System (MAIS)				
Digital Transformation (DT)	0.515	0.386	0.545	0.702

Table 3. Construct Reliability

Variable	Cronbach's Alpha	Composite Reliability (Rho_A)	Composite Reliability (Rho_C)	Average Variance Extracted (Ave)
Digital Competency (DC)	0.717	0.724	0.814	0,768
Managerial Performance (MP)	0.767	0.786	0.841	0,714
Management Accounting Information System (MAIS)	0.738	0.743	0.827	0,790
Digital Transformation (DT)	0.743	0.745	0.829	0,793

It is evident from Table 2 that the discriminant validity has satisfied the discriminant validity criterion since the root value of AVE is higher than other values. Based on Table 3, it can be seen that the Cronbach's Alpha and Composite reliability values are greater than 0.7, indicating that all instruments have met the criteria for construct reliability and validity.

The inner model is a test that can demonstrate the connection between independent and dependent latent variables. Another name for this structural model is an influence test or hypothesis test. The f-squared test and the R-squared test (coefficient of determination) provide an explanation of the inner model test in this study.

Table 4. Structural Model Test Results (Inner Model)

Testing	Variables	Test Results	Criterion
Coefficient of Determination (R-Square)	Digital Competency (DC)	0.671	Moderate
	Management Accounting Information System (MAIS)	0.784	Strong
Predictive Relevance (Q-Square)	Digital Competency (DC)	0.660	Moderate
	Management Accounting Information System (MAIS)	0.753	Strong

The degree to which independent variables impact dependent variables is measured using the R-Square test, often known as the determination coefficient. Table 4 shows that the digital competency variable has a 67.1% influence on managerial performance, with other characteristics not included in this research model accounting for the remaining 32.9%. The management accounting information variable then had a 78.4% influence on the managerial performance variable, with other factors not included in this research model accounting for the remaining 21.6%.

The degree of quality of observations derived from parameters and estimating models is assessed using the Q-Square or predictive relevance test. Table 4 shows that the management accounting information system variable had a Q-Square value of 0.753, and the digital competency variable had a Q-Square value of 0.660. Based on these findings, it can be concluded that the model and parameter aesthetics in this study are good since they are predictively relevant.

In order to determine the relationship between the influence of independent variables on dependent variables, the SmartPLS 4.0 application uses bootstrapping to carry out the criterion for accepting hypotheses. If the t-statistical value is more than the t-table (1.96)

and the P-value is less than 0.5, the hypothesis is considered valid and significant. The following are the outcomes of the hypothesis and path coefficient tests:

Table 5. Path Coefficient Results

Variable	Original Sample	Mean	St. Dev	T-Statistics	P-Values
DT -> MP	0.327	0.332	0.135	2.428	0.015
DT -> MAIS	0.373	0.383	0.143	2.602	0.009
MAIS -> MP	0.521	0.551	0.094	5.564	0.000
DC x DT -> MAIS	0.365	0.360	0.190	2.723	0.039

Based on Table 6, implementing maintenance strategies based on modern techniques promotes the training of mechanics, operators, and supervisors, enhancing the technical proficiency of the workforce and improving Managerial Performance (MP). The hypothesis is supported as the t-statistical value of 2.428 exceeds the t-table value of 1.97, indicating a statistically significant relationship between the variables. Furthermore, the significant effect of digital transformation on managerial performance is reinforced by a P-value of 0.015, which is below the significance level of 0.05. Thus, Hypothesis 1, which posits that digital transformation has a positive and significant impact on managerial performance, is accepted.

The objective of this research is to promote collective health through the relationship between the Digital Transformation variable (DT) and the Management Accounting Information System (MAIS). The path coefficient from the results of the Digital Transformation variable (DT) test on the Management Accounting Information System (MAIS) obtained a value of 0.373 or 37.3%, and the t-statistical result of 2.1602 is greater than the t-table value of 1.97. The P-value of 0.009 < 0.05 indicates that the Digital Transformation (DT) significantly affects the MAIS. Therefore, hypothesis 2, which states that Digital Transformation (DT) significantly and positively impacts the Management Accounting Information System (MAIS), is supported.

A t-statistical result of 5.564 > t-table (1.97) and a path coefficient result through the original sample column (O) in the test of the Management Accounting Information System (MAIS) variable on Managerial Performance (MP) were obtained with a value of 0.521 or 52.1%, indicating that the hypothesis is accepted and has a positive influence on the relationship between the MAIS variable and MP. The significance of the relationship between the Management Accounting Information System (MAIS) variable and Managerial Performance (MP) is demonstrated by the P-value in Table 5, which shows that the MAIS variable significantly affects MP with a P-value of 0.000 < 0.05. Therefore, hypothesis 3, which states that Managerial Performance (MP) is positively and significantly impacted by the management accounting information system (MAIS), is acceptable.

Table 6. Indirect Effect Result

Variable	Original Sample	Mean	St. Dev	T-Statistics	P-Values
DT -> MAIS -> MP	0.195	0.214	0.093	2.086	0.037
DT -> CP -> MAIS	0.170	0.182	0.079	2.149	0.032

Based on Table 6, modern maintenance techniques promote the training of mechanics, operators, and supervisors, enhancing the technical level of the workforce and generating a value of 0.195 or 19.5%. The t-statistical result of 2.086 is greater than the t-table value of 1.97, indicating the hypothesis is valid and has a positive impact on the relationship between the Digital Transformation variable (DT) and Managerial Performance MP), mediated by the Management Accounting Information System variable, with a P-value of 0.037 < 0.05. The Digital Transformation variable (DT) impacts Managerial Performance (KM) through the management accounting information system (MAIS). The Management Accounting Information System mediates the effect of digital transformation variables (DT) on managerial performance (MP), which is why hypothesis 4 is accepted.

Table 6 demonstrates that the Digital Transformation variable (DT) positively influences the Management Accounting Information System (MAIS) through the Digital Competency variable (DC) as a moderator, with a coefficient of 0.170, representing a 17.0% increase. The path coefficient is derived from the original sample column (O). The t-statistical result of 2.149 exceeds the t-table value of 1.97, indicating that the hypothesis is accepted and that there is a positive relationship between Digital Transformation (DT) and MAIS, moderated by Digital Competency (DC), with a p-value of 0.032, which is less than 0.05. Therefore, the Digital Competency variable (DC) moderates the effect of Digital Transformation (DT) on MAIS, confirming that hypothesis 5 is accepted, which posits that Digital Competence (DC) moderates the influence of digital transformation (DT) on the Management Accounting Information System (MAIS).

DISCUSSION

Digital transformation is crucial for enhancing organizational competitiveness, improving efficiency, service speed, and managerial decision-making. Success depends on both technology and organizational commitment, including digital tools and HR training (Annisa & Sutjipto, 2025). These changes increase flexibility, collaboration, and productivity, allowing managers to focus on strategy and innovation in a competitive business environment. According to the study's findings, digital transformation has a positive and significant impact on managerial work. In other words, the leaders of organizations, businesses, and MSME in Kabupaten Labuhanbatu benefit from using digital technology to improve productivity and reach their organization's goals. The results of this study are consistent with those of studies by Jardak and Hamad (2022) and Guo et al. (2023), which also indicate that digital transformation has a significant impact on managerial work. Because of this, it can be said that as digital integration and transformation improve, so does the managerial style of the organization's/business's/SMEs leaders in Labuhanbatu Regency.

Digital transformation changes how organizations operate through digital technologies, including Management Accounting Information Systems (MAIS). In Labuhanbatu Regency, awareness of digitalization is growing across government, private companies, and MSMEs. MAIS has evolved from manual to integrated technology-based systems, such as cloud accounting and ERP, enabling faster access to financial and non-financial information for managerial decision-making. Digital transformation has improved data processing, financial reporting, and strategic management through analytics and dashboards (Hariyati et al., 2022). However, its success depends on leadership competence, infrastructure readiness, and proper training. Digital transformation positively affects the effectiveness of MAIS in Labuhanbatu when supported by adequate technology and resources, consistent with the findings of Astuti and Augustine (2022) and Huy and Phuc (2024).

Leaders of organizations and business actors in Labuhanbatu Regency are aware of the importance of an accurate management accounting information system for good decision-making. The accuracy of cost and revenue information is the basis for assessing the feasibility of a business, designing a pricing strategy, and managing operational efficiency. A good management accounting information system helps to record and report costs and revenues in a timely manner, allowing managers to monitor financial positions and avoid policy errors. In addition to financial statements, management accounting information systems also present relevant non-financial data, such as customer satisfaction and production time efficiency. Regularly receiving managerial performance reports can improve leaders' responses to problems and evaluate target achievement. Several organizations/companies/MSMEs have used digital reporting systems for faster access. As stated by Ram and Desgourdes (2024) that information systems help in data-driven decision-making with structured analysis, improving managerial quality. Data access speed is also important in emergency situations, allowing for real-time access. The implementation of a good information system

Digital transformation is a crucial strategy for enhancing organizational efficiency and effectiveness in Labuhanbatu Regency. Local organizations, companies, and MSMEs are adapting through digitization of information systems, particularly Management Accounting Information Systems (MAIS), to support data-driven planning, control, and decision-making (Persada et al., 2025). MAIS transforms operational data into fast, accurate, and relevant managerial information, while technologies like cloud accounting and mobile applications improve reporting speed and data accuracy (Barba-Sánchez et al., 2024). The success of digital transformation depends on digital literacy, IT infrastructure, and organizational commitment, highlighting the need for investment in both MAIS and managerial digital capacity to achieve effective transformation at local and MSME levels (Krajčík et al., 2023).

Digital transformation is essential for organizations and businesses in Labuhanbatu Regency, including the adoption of management accounting information systems to support planning and decision-making. The effectiveness of MAIS depends largely on users' digital competence, especially among MSME leaders. While digital technologies, such as cloud-based and digital accounting applications, have improved financial recording and reporting, their benefits vary according to leaders' digital skills. Studies show that organizations with higher digital literacy use information systems more effectively, highlighting the importance of investing in human resource capacity. Digital competence plays a crucial moderating role, as greater skills enhance the positive impact of digital transformation on MAIS.

CONCLUSION

The study's findings demonstrate that management performance in businesses, organizations, and MSMEs is positively and significantly impacted by digital transformation. The utilization of data-based technology, information system integration, and business process digitization all improve management's ability to make decisions, maintain operational control, and accomplish strategic objectives. The relationship between digital transformation and managerial performance is strengthened by the mediation of management accounting information systems. The manager's level of digital competency affects the implementation's success. The impact of digital transformation on information systems and management performance increases with digital competency. In addition to technology, investments should be made in the development of human resources and responsive information systems.

This study has a number of limitations, despite showing that digital transformation significantly improves managerial performance, both directly and indirectly through the Management Accounting Information System (MAIS), and that digital competence fortifies the connection between digital transformation and MAIS. The study's geographical restriction to Labuhanbatu Regency and its somewhat small sample size of 63 respondents may limit the applicability of the findings to other areas or organizational contexts. Notwithstanding these drawbacks, the study has significant applications, showing that companies can improve managerial performance by spending money on integrated digital systems such as MAIS and training managers and staff to be digitally competent in order to optimize the advantages of digital transformation. To provide a more thorough understanding of how digital transformation affects managerial performance in various contexts, future research should increase the sample size, include more regions or sectors, and investigate additional moderating or mediating variables like organizational culture, leadership style, or technology readiness.

REFERENCES

[1] Ali, H., Sirat, A. H., & Nurhaida, I. (2025). Implementation of management information systems in monitoring creative economic development. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(1), 233–246.

[2] AlMuhayfith, S., & Shaiti, H. (2020). The impact of enterprise resource planning on business

performance: With the discussion on its relationship with open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(3), 87-100.

[3] Annisa, S., & Sutjipto, M. R. (2025). Technology, organization, environment, and digital transformation for sustainability. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(4), 2591–260.

[4] Anwar, C. (2025). The role of digital competence in mediating the influence of transformational leadership on teacher performance in the digital era. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan*, *4*(1), 1750-1757.

[5] Astuti, W. A., & Augustine, Y. (2022). The effect of digital technology and agility on company performance with management accounting system as mediation. *International Journal of Research and Applied Technology (INJURATECH)*, *2*(1), 11–29.

[6] Banerjee, B. (2021). *Cost accounting: Theory and practice*. Delhi: PHI Learning Pvt. Ltd.

[7] Barba-Sánchez, V., Meseguer-Martínez, A., Gouveia-Rodrigues, R., & Raposo, M. L. (2024). Effects of digital transformation on firm performance: The role of IT capabilities and digital orientation. *Heliyon*, *10*(6), 1-13.

[8] Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. v. (2013). Digital business strategy: toward a next generation of insights. *MIS Quarterly*, 471–482.

[9] Cheng, Z., Jin, X., & Kwak, W. J. (2025). Using the new positive aspect of digital leadership to improve organizational sustainability: Testing moderated mediation model. *Acta Psychologica*, *255*(1), 104-120.

[10] Efendi, D., & Widiarto, H. (2017). Peran management accounting system dalam ketidakpastian pada organisasi. *Jurnal akuntansi dan manajemen mutiara madani*, *5*(2), 89-101.

[11] Etim, E. O. (2019). Management accounting system, perceived environmental uncertainty, and corporate performance of the Nigerian breweries sector. *Archives of Business Research (ABR), 7*(7), 255-267.

[12] Ferrari, A., & Punie, Y. (2013, April). *DIGCOMP: A framework for developing and understanding digital competence in Europe*. Luxembourg: Publications Office of the European Union

[13] Gelinas, U. J., Dull, R. B., & Wheeler, P. (2018). *Accounting information systems*. Australia: Cengage AU.

[14] Granlund, M. (2011). Extending AIS research to management accounting and control issues: A research note. *International Journal of Accounting Information Systems*, *12*(1), 3–19.

[15] Guerra, J. M. M., Danvila-del-Valle, I., & Méndez-Suárez, M. (2023). The impact of digital transformation on talent management. *Technological Forecasting and Social Change*, *188*(1), 12-25.

[16] Guo, X., Li, M., Wang, Y., & Mardani, A. (2023). Does digital transformation improve the firm's performance? From the perspective of digitalization paradox and managerial myopia. *Journal of Business Research*, *163*(1), 113-130.

[17] Hariyati, H., Nuswantara, D. A., Hidayat, R. A., & Putikadea, I. (2023). Management accounting information system and intellectual capital: a way to increase SME's business performance. *Jurnal Siasat Bisnis*, 61-75.

[18] Hodge, S. R. (2020). Quantitative research. In *Routledge handbook of adapted physical education* (pp. 147–162). New York: Routledge.

[19] Hong, P. W., Dorasamy, M., Hong, L. J., & Malarvizhi, C. A. N. (2024). Exploring cloud enterprise resource planning and open innovation for small and medium enterprises: Insights from practitioners. *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(4), 100-112.

[20] Hong, T. V. T., Hieu Trung, N. V., & Kim Khanh, N. H. (2025). Digital competency dimensions and their influence on job performance: Evidence from Vietnamese SMEs. *International Journal of Innovative Science and Research Technology*, *10*(6), 434–442.

[21] Horngren, C. T. (2009). *Cost accounting: a managerial emphasis*. India: Pearson Education India.

[22] Huy, P. Q., & Phuc, V. K. (2024). Insight into the impact of digital accounting information system on sustainable innovation ecosystem. *Sustainable Futures*, *8*(1), 377-390.

[23] Imjai, N., Aujirapongpan, S., & Mahadi, N. (2023). The interplay of digital and management accounting competency to competitive performance in the open innovation era: A case of Thai micropreneurs. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(4), 167-180.

[24] Jardak, M. K., & Ben Hamad, S. (2022). The effect of digital transformation on firm performance: evidence from Swedish listed companies. *The Journal of Risk Finance*, *23*(4), 329–348.

[25] Jatmiko, U. (2022). Management accounting information systems, performance measurement methods and reward systems in influencing managerial performance. *International Journal on Social Science, Economics and Art*, *11*(4), 180–189.

[26] Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*, *3*(1), 13-26.

[27] Krajčík, V., Novotný, O., Civelek, M., & Zvolánková, S. S. (2023). Digital literacy and digital transformation activities of service and manufacturing SMEs. *Journal of Tourism and Services*, *14*(26), 242-262.

[28] Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, *63*(1), 102-115.

[29] Martínez-Caro, E., Cegarra-Navarro, J. G., & Alfonso-Ruiz, F. J. (2020). Digital technologies and

firm performance: The role of digital organisational culture. *Technological Forecasting and Social Change*, *154*(1), 119-133.

[30] Massicotte, S., & Henri, J.-F. (2021). The use of management accounting information by boards of directors to oversee strategy implementation. *The British Accounting Review*, *53*(3), 953-965.

[31] Melo, I. C., Queiroz, G. A., Junior, P. N. A., de Sousa, T. B., Yushimito, W. F., & Pereira, J. (2023). Sustainable digital transformation in small and medium enterprises (SMEs): A review on performance. *Heliyon*, *9*(3), 17-30.

[32] Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review*, *51*(6), 833-545.

[33] Monteiro, A. P., Vale, J., Leite, E., & Lis, M. (2024). Linking quality of accounting information system and financial reporting to non-financial performance: The role women managers. *International Journal of Accounting Information Systems*, *54*(1), 692-.

[34] Monteiro, A. P., Vale, J., Leite, E., Lis, M., & Kurowska-Pysz, J. (2022). The impact of information systems and non-financial information on company success. *International Journal of Accounting Information Systems*, *45*(1), 557-571.

[35] Mukhlis, M., & Tyas, A. A. W. P. (2024). The role of change management in improving organizational performance. *Jurnal Ilmiah Manajemen Kesatuan*, *12*(3), 773–782.

[36] Nadiar, R., Mutmainah, M., & Alfikri, R. (2025). Digital transformation and its impact on managerial accounting practices in Indonesian companies. *The Accounting Journal of Binaniaga*, *10*(01), 13-28.

[37] Papiorek, K. L., & Hiebl, M. R. W. (2024). Information systems quality in management accounting and management control effectiveness. *Journal of Accounting & Organizational Change*, *20*(3), 433–458.

[38] Pavlovic, M., Gligoric, C., Zdravkovic, F., & Pavlovic, D. (2024). Revolutionizing management accounting: the role of artificial intelligence in predictive analytics, automated reporting, and decision-making. *Business & Management Compass*, *68*(4), 23–42.

[39] Pedraza-Rodríguez, J. A., Ruiz-Vélez, A., Sánchez-Rodríguez, M. I., & Fernández-Esquinas, M. (2023). Management skills and organizational culture as sources of innovation for firms in peripheral regions. *Technological Forecasting and Social Change*, *191*(1), 122-135.

[40] Peng, Y., & Tao, C. (2022). Can digital transformation promote enterprise performance? From the perspective of public policy and innovation. *Journal of Innovation and Knowledge*, *7*(3), 198-211.

[41] Persada, A. R., Mulyadi, H., Mahri, A. J. W., & Furqon, C. (2025). Digital transformation and business incubation on SME Performance in Indonesia. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(4), 2183–2194.

[42] Pratiwi, A., & Aisyah, S. (2023). Analysis of the effectiveness of implementing accounting information systems at PT. Diamond Hevea Industry. *Jurnal Ilmiah Manajemen Kesatuan*, *11*(3), 719–728

[43] Przegalinska, A., Triantoro, T., Kovbasiuk, A., Ciechanowski, L., Freeman, R. B., & Sowa, K. (2025). Collaborative AI in the workplace: Enhancing organizational performance through resource-based and task-technology fit perspectives. *International Journal of Information Management, 81(2)*, 102-113.

[44] Quinn, M. (2014). Stability and change in management accounting over time: A century or so of evidence from Guinness. *Management Accounting Research*, *25*(1), 76–92.

[45] Ram, J., & Desgourdes, C. (2024). Using big data analytics (BDA) for improving decision-making performance in projects. *Journal of Engineering and Technology Management*, *74*(1), 101-115.

[46] Ramadanty, J., & Putri, M. (2024). Redefining Management Accounting Systems: A Systematic Review of Recent Advances and Future Directions. *Journal of Advances in Accounting, Economics, and Management*, *2*(2), 8-8.

[47] Sitorus, S. A., Simanjuntak, S. I. R., Sipayung, L. D., & Simarmata, C. A. (2024). Digital Transformation of small businesses in Medan: A quantitative exploration of the mediating role of partnerships in enhancing e-commerce effectiveness. *Jurnal Ilmiah Manajemen Kesatuan*, *12*(6), 2121–2130.

[48] Supriyadi, S. G., Antoro, E. W., & Astari, I. Y. (2024). The effect of accounting control and management control on managerial performance through participation in budget preparation as an intervening variable at PT. GARAM (Persero). *Airlangga Journal of Innovation Management*, *5*(4), 687-704.

[49] Turner, L., Weickgenannt, A. B., & Copeland, M. K. (2020). *Accounting information systems: controls and processes*. New Jersey: John Wiley & Sons.

[50] Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *Managing Digital Transformation*, 1(1), 13–66.

[51] Westerman, G., Calméjane, C., Bonnet, D., Ferraris, P., & McAfee, A. (2011). Digital transformation: A roadmap for billion-dollar organizations. *MIT Center for Digital Business and Capgemini Consulting*, *1*(2), 1–68.

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