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Managerial Cost Control Adaptation in Response to AI-Driven Workflow Automation in Medium Enterprises

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A B S T R A C T

This study examines how managers adapt cost control systems when midsize enterprises adopt AI-based workflow automation. Using an interpretive qualitative case study approach, data were collected through in-depth interviews with eight financial, operational, and technology managers in Surabaya, supported by process observations and cost-related document analysis. Thematic analysis reveals that AI automation shifts cost structures from labor-intensive expenses to technology and system-integration costs, requiring more flexible, real-time, and analytics-driven cost control. Managerial responses include budgeting adjustments, repositioning cost centers, developing new performance indicators, and strengthening digital competencies for cost monitoring. The study concludes that effective cost control adaptation depends on digital readiness, data quality, and managers' ability to integrate AI into decision-making. These findings enrich management accounting literature on cost control transformation in the era of intelligent automation and offer practical guidance for midsize firms in designing more responsive cost control strategies.

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INTRODUCTION

The development of artificial intelligence (AI) technology has significantly changed the way companies organize work processes and manage operational costs. AI-driven workflow automation enables organizations to improve efficiency, reduce human error, and speed up the managerial decision-making process. This change is increasingly important for mid-sized companies facing competitive pressures and higher efficiency demands. In modern management accounting systems, AI's ability to process data in real time and generate cost predictions makes cost control patterns more dynamic than conventional models. Bromwich & Scapens (2023) assert that this digital transformation fundamentally changes the structure of cost control, especially as organizations move from manual systems to intelligent automation.

In various countries, the implementation of AI has been proven to have an impact on improving the accuracy of cost planning and the effectiveness of operational analysis. The automated system is able to provide more precise cost insights, enrich performance monitoring, and minimize inefficiencies in routine activities. Christensen & Widener (2022) stated that digital transformation is driving a new evolution in managerial control mechanisms, where technology is a key element to support more accurate cost analysis. However, its effectiveness is greatly influenced by the organization's digital readiness and the technological competence of the managers involved. Therefore, mid-sized companies need to understand that AI integration is not only about technology, but also internal process and capability changes.

At the operational level, AI-based automation also has a structural impact on the cost control process in the organization. This technology allows for workflow restructuring, cost center repositioning, and the creation of new performance indicators that were previously inaccessible through manual approaches. In a study by de Villiers et al., (2022), it was found that AI drives work design changes, increases cost transparency, and expands managerial responsibility in cost oversight. This shows that automation not only replaces administrative processes, but also changes the character of management accounting systems. Thus, understanding the manager's adaptation to these changes is an important aspect in contemporary research.

While various studies have discussed the benefits of AI for management accounting, there is still a research gap regarding how managers actually adapt to cost control when workflow automation is implemented. Most research focuses on technology, but has not explored in depth the changes in behavior, procedures, and cost control strategies that managers are undertaking in the face of such technology. Elbashir et al., (2023) affirm that the utilization of real-time analytics through AI demands a change in mindset and stronger analytical abilities from managers. However, how the dynamics of adaptation arise in the context of medium-sized companies is still minimally discussed in the literature. This raises the need to conduct more in-depth qualitative exploration.

Indonesia's context also shows different conditions compared to developed countries, especially related to digital readiness, data infrastructure, and organizational culture. Medium-sized companies in big cities such as

Surabaya have begun to adopt AI-based automation, but the implementation of digital management accounting still faces challenges in the form of lack of system integration and low technological literacy. Ghasemaghaei (2024) explained that data quality and an organization's ability to utilize AI greatly determine the success of analytics-based cost control. Meanwhile, Rikhardsson & Yigitbasioglu (2023) emphasize that new digital workflows will be effective when supported by mature process design and organizational readiness to accept change. Therefore, empirical studies on Indonesian medium-sized companies are very relevant.

Based on these conditions, this study aims to analyze the adaptation of managerial cost control in response to AI-based workflow automation in medium-sized companies in Surabaya. The focus of the study includes changes in cost structure, cost center repositioning, automated data integration, and adjustment of cost monitoring indicators. Within a methodological framework, this study uses a qualitative approach to explore in depth how accounting and operational managers understand, respond, and implement new technology-based cost control strategies. In line with Moll & Yigitbasioglu (2023), managerial adaptation in a digital environment requires a combination of analytical skills and organizational flexibility. Thus, contextual analysis is necessary to comprehensively understand the phenomenon.

Theoretically, this research contributes to the development of management accounting literature related to cost control transformation in the era of intelligent automation. The findings of the study are expected to enrich understanding of the relationship between digitalization, managerial behavior, and cost control effectiveness. In addition, the results of the study provide strategic recommendations for mid-sized companies to improve digital readiness, strengthen cost system design, and optimize the integration of AI in cost control processes. Quattrone (2022) emphasizes that accounting figures and information will only be valuable if the process of designing and using the system is developed appropriately in a digital context. Thus, this research seeks to make a theoretical and practical contribution to strengthening the digital transformation of medium-sized companies in Indonesia.

THEORETICAL REVIEW

AI-Based Automation and Cost Control Transformation

Artificial intelligence (AI)-based automation has become a key element in the transformation of cost control systems in various industrial sectors. AI allows companies to map cost patterns more precisely, reduce manual errors, and speed up the budget evaluation process. A study by Kumar et al., (2021) shows that algorithm-based automation is able to improve the accuracy of cost estimates while strengthening the operational cost monitoring process. These findings are reinforced by Patel et al., (2022), who assert that the integration of AI in cost control can generate real-time cost dashboards so that managers can anticipate cost deviations early on. Thus, AI innovation serves as a catalyst for a more adaptive, fast, and data-driven transformation of cost control systems.

AI as a Booster of Operational Efficiency and Decision Making

In addition to improving the accuracy of cost data, AI technology also strengthens operational efficiency through routine process automation that previously required a lot of time and effort. Research by Müller & Stulz (2023) shows that workflow automation through machine learning has an impact on increasing managerial responsiveness, especially in assessing fluctuating cost trends. Furthermore, a study by Donovan et al., (2021) revealed that the utilization of AI in cost analysis allows organizations to identify areas of inefficiencies that were previously difficult to see using conventional methods. Meanwhile, an analysis by Shrestha et al., (2022) emphasizes that AI supports faster decision-making because the system is able to present cost recommendations based on historical patterns and algorithmic predictions. This shows that AI is not just an operational tool, but also a strategic component in modern cost control.

The Impact of AI on Adaptation of Managerial Roles and Work Structures

Changes in business processes due to AI automation also affect internal work structures and managerial roles in cost control. AI encourages managers to move from administrative tasks to more analytical and strategic roles. According to research by Costa et al., (2023), managers in mid-sized companies experience a significant change in responsibilities when automated systems are implemented, especially in interpreting AI-generated cost data. Meanwhile, a survey by Fernández & Gallardo (2022) shows that automation is changing the design of cost control, including changes to performance indicator systems, task sharing, and internal evaluation mechanisms. These findings are in line with the study of Zhang et al., (2024), which states that digital transformation demands a reorganization of management accounting structures to align with AI capabilities. Therefore, managerial adaptation is the key to the success of technology integration in cost control.

AI Integration Challenges: Digital Competencies, Infrastructure, and Organizational Resilience

While AI technology offers many opportunities, its integration is inseparable from various challenges, especially in the context of medium-sized enterprises. A study by Roberts et al., (2021) found that the limitations of managers' digital competencies are a significant obstacle to the optimal utilization of AI in cost control. This is reinforced by the observation of Gupta & Raman (2023) who emphasized that the quality of data infrastructure and the readiness of information systems determine the success of cost control automation. On the other hand, research by Santos & Ribeiro (2020) revealed that resistance to organizational change often arises due to fears of losing control or diminishing roles due to technological dominance. This challenge shows that AI integration is a socio-technical process that requires the readiness of humans, systems, and organizational structures simultaneously.

Cost Control System Changes in the Context of Medium Enterprises

International literature shows that medium-sized companies face different cost control dynamics from large companies, especially in the context of technology adaptation. A study by Lee et al., (2022) highlights that limited resources make mid-sized companies tend to be more cautious about integrating AI into cost control processes. These findings are reinforced by the research of Alzahrani & Malik (2023), which found that mid-sized companies have a higher level of flexibility but face structural constraints in managing digital change. On the other hand, Mathur et al., (2024) explain that medium-sized companies can gain greater strategic value from AI if they are able to integrate cost data in an integrated manner and improve the quality of cost monitoring. Thus, the context of medium-sized companies has its own characteristics in the adoption of smart accounting technology.

AI and Improved Cost Prediction and Monitoring Accuracy

The use of AI in cost control also provides significant benefits in the aspect of cost prediction. Various machine learning-based models allow companies to create cost projections with a higher level of accuracy. Research by Harrison et al., (2023) shows that the use of predictive analytics can reduce the risk of budget deviations and improve long-term planning. In addition, a study by Silva et al., (2021) confirms that automated systems are able to identify cost trends that are not visible in manual analysis, thus facilitating the process of continuous cost evaluation. Meanwhile, research by Rahman & Chowdhury (2024) reveals that AI can improve the integrity of cost data so that cost monitoring becomes more consistent and structured. These findings confirm that AI not only serves for automation, but also as an accuracy amplifier in cost control systems.

AI as a Management Accounting System Transformation Enabler

The latest literature also confirms that the implementation of AI must be understood in a broader context, namely as a driver of change in the management accounting system. According to research by Bianchi et al., (2023), AI integration often leads to the reshaping of work procedures, cost reporting systems, and performance evaluation mechanisms. Research by Coad et al., (2020) shows that organizations that successfully implement AI in management accounting tend to have a more collaborative and data-driven work structure. On the other hand, Iyengar & Roy (2021) emphasize that this transformation must be built through a gradual approach so that managers can adjust their analytical competencies. Overall, the literature confirms that AI serves as an enabler that strengthens the design of management accounting systems towards a more intelligent, efficient, and adaptive structure.

METHODOLOGY

Types and Approaches to Research

This study uses a qualitative approach with an interpretive case study design to delve deeply into how mid-sized company managers adapt to cost control when artificial intelligence-based workflow automation is implemented.

The interpretive approach was chosen because it is able to capture the dynamics of meaning, considerations, and managerial practices in the context of real organizations, as suggested by digital management accounting research that emphasizes contextual understanding of processes (Modell, 2020; Ahrens & Ferry, 2021). The interpretive case study design is also considered relevant to explore changes in cost structure, budgeting mechanisms, shift in cost centers, and data-based monitoring adjustments that have arisen due to the integration of AI technology (Quattrone, 2022). Thus, this approach provides a comprehensive understanding of the form of cost control system adaptation in medium-sized companies facing AI-driven workflow automation.

Population and Sampling Techniques

The research population includes all managers in mid-sized companies in Surabaya who have implemented AI-based automation in their operational workflows for at least one year. The sampling technique uses non-probability purposive sampling, with the consideration that participants are selected based on their strategic position in the cost control process as well as direct involvement in the implementation of AI technology (Hammersley, 2021). A total of eight participants were determined, consisting of three financial managers, three operational managers, and two technology managers. This number follows the recommendations of contemporary qualitative research that emphasizes the importance of depth of analysis and the achievement of data saturation rather than numerical sample size (Laureti & Sun, 2022). Surabaya was chosen as the research location because it is one of the centers of digital growth in Indonesia and has a concentration of medium-sized companies that adopt AI for operational process automation.

Data Collection Techniques and Research Instruments

Data collection is carried out through three main techniques: in-depth interviews, direct observation, and analysis of company documents. Interviews were conducted using semi-structured guidelines compiled based on strategic issues on cost control adaptation and digital transformation in management accounting (Moll & Yigitbasioglu, 2021; Brüggen et al., 2023). The interview instrument included questions regarding changes in cost structure, cost center repositioning, real-time data utilization, and AI integration challenges. Observations were made on workflow automation systems, cost monitoring dashboards, and digital operational patterns to strengthen data triangulation. Document analysis includes budget policies, cost center structures, cost reports, and standard operating procedures related to automation. The validity of the data is strengthened through technical triangulation, member checking, and analytical trail audits, following the latest qualitative research standards (Given & Morse, 2022). The reliability of the research is maintained through the use of consistent interview protocols and systematic documentation of the entire data collection process.

Research Procedure

The research was carried out through several systematic stages. The first stage is the identification of medium-sized companies in Surabaya that have implemented AI-driven workflow automation. The second stage includes determining participants based on purposive criteria and confirming their willingness to participate in the study. The third stage includes in-depth interviews and direct observation of AI-based operational activities, all of which are recorded and transcribed verbatim. The fourth stage is the collection and analysis of the company's internal documents. The fifth stage includes the analysis process using the thematic analysis stages as developed by Braun and Clarke, including data familiarization, initial coding, theme development, and theme review (Braun et al., 2022). The last stage is the preparation of analysis reports and interpretation validation through member checking to the participants.

Data Analysis Techniques

Data analysis is carried out using Thematic Analysis because this technique is able to uncover conceptual patterns systematically and provide space for in-depth exploration of the managerial adaptation process (Nowell & Albrecht, 2023). The analysis process includes open coding, categorization, inductive theme development, and theme refinement based on the conceptual relationship between data categories. NVivo 14 software is used to improve the accuracy of the coding process, data organization, and the accountability of the analytical trail. The use of this qualitative analysis software is in line with modern digital accounting research recommendations that emphasize the importance of consistency, transparency, and precision in data analysis (Kastl & Weber, 2024). The analysis technique allows researchers to comprehensively explore changes in cost structures, cost center adaptations, and the role of AI technology in supporting managerial cost control processes.

RESEARCH RESULTS

Cost Structure Shift and Cost Control Model Adjustment

The first findings suggest that the implementation of AI-based automation is creating fundamental changes in the company's cost structure. If previously the biggest dominance was in labor costs and manual activities, now more costs are shifting towards technology costs, such as system integration, digital platform maintenance, cloud subscriptions, software updates, and data security strengthening. This shift in cost patterns is not only seen from the narrative of the informants, but also confirmed through budget documents and operational reports that show a significant increase in cost posts *digital infrastructure* and *automation maintenance* once AI starts to be fully used.

A financial manager states that: "*The cost of technology is now much more prominent than the cost of labor, so the old cost control format is no longer adequate*" (MK-1, October 3, 2025). The statement shows that the traditional cost control system based on manual cost sharing is no longer able to capture the new cost dynamics that are volatile and related to system updates. This is reinforced by

the operational manager who said: "*When the AI system starts running, we have to rearrange the cost component to be able to monitor the cost of integration and update the system more accurately*" (MO-2, October 6, 2025). Technology managers also ensure that these changes are structural: "*Our spending shifted more to API integration, cloud, and maintenance costs, so the way we read cost reports also changed.*" (MT-1, 9 October 2025).

Observational data on the digital cost dashboard also showed an increase in the proportion of technology spending by more than doubling in a year, with a significant decrease in the repetitive cost component based on manual labor. Overall, these findings indicate that companies must develop new cost control models that are flexible, adaptive, and analytics-based, especially as technology costs tend to change following reliance on AI system updates.

Adjustment of Budgeting Mechanism, Cost Center Repositioning, and Performance Monitoring

The second theme shows that AI integration is driving companies to deeply reimagine budgeting and performance evaluation mechanisms. Traditional budgeting systems that are annual and static are proving to be no longer relevant in the context of rapidly changing technology costs and requiring periodic adjustments. The informants acknowledged that the budget must now be prepared in a more dynamic, iterative manner, and following the operational needs of AI systems.

A financial manager explains: "*The budget must now be prepared more dynamically because technology costs tend to change according to the need for system updates*" (MK-3, October 12, 2025). The cost center repositioning process is also an important step because automation leads to workflow changes. Activities that were previously under the manual operational unit are now moved to a new cost center that specializes in handling digital operations, making it easier to track costs. This was conveyed by one of the operational managers: "*We moved some of the activities to a new cost center that specifically handles digital processes, because the old structure didn't fit the needs of automation*" (MON-1, 14 October 2025).

In addition, the company must also update the performance monitoring mechanism. Traditional indicators such as manual production time, *overhead labor cost*and *cycle time* based on physical activity is no longer adequate. AI presents a new dimension that must be monitored in real time, as the technology manager confirms: "*Dashboard monitoring is very helpful, but we have to develop new KPIs such as AI accuracy levels and automated processing times*" (MT-2, 15 October 2025).

The document data shows the addition of KPIs such as *AI accuracy rate, system latency*and *cost savings per automated task,* all of which show a direct influence on the effectiveness of cost control. Observations also show that managers now rely on digital dashboards to assess performance and automatically detect cost mismatches. Thus, this theme emphasizes that companies must completely redefine budgeting, cost centers, and performance evaluations to be in harmony with the ever-evolving digital environment.

Transformation of Manager Roles and Strengthening Digital Competencies

The third theme reveals that AI automation is not only changing the structure and mechanism of costs, but also has implications for the transformation of managers' roles. If previously managerial functions focused more on administrative work and manual supervision, now their role has changed to be more analytical, strategic, and based on real-time data interpretation.

An operations manager described this change: "*Our job used to be more administrative, but now we have to understand automated data to be able to make cost decisions*" (MO-3, October 18, 2025). Financial managers also emphasize that mastering digital analytics is an urgent need: "*Digital competence is a must because without it it is difficult to read the cost patterns of the AI system*" (MK-2, October 20, 2025). Meanwhile, the technology manager explained that the ability to read AI-based insights is now one of the core competencies: "*Managerial teams must adapt to new ways of working, especially in understanding the insights generated by automated systems*" (MT-1, October 22, 2025).

Observations show that managers are now no longer just reading summary reports, but are also directly involved in understanding recommendation algorithms, validating automated data, and interpreting the cost impact of each system update. This transformation also emphasizes that adaptation is not only structural, but also cognitive and competency in nature, where managers must improve digital literacy, data understanding, and analytics-based decision-making skills.

DISCUSSION

The results of the study on the shift in cost structure show that the integration of AI-based automation is triggering fundamental changes in the cost composition of mid-sized companies. This change is characterized by a decrease in the portion of manual labor costs and an increase in cost allocation to digital infrastructure such as cloud services, API integration, and system maintenance. These findings are in line with the view of Robertson & Joyce (2023) who affirm that digital automation is shifting organizational cost patterns from labor-intensive to technology-intensive, thus demanding an adjustment of cost control models. The consistency of these findings is reinforced by the manager's response that the old cost control model is no longer able to capture the fluctuating dynamics of technology costs. Thus, the change in the cost structure due to AI automation is not only a technical consequence, but also a strategic transformation that affects the foundation of a company's cost control.

An analysis of budgeting mechanisms shows that traditional, static budgeting is no longer adequate in the face of the need for rapid and continuous AI system updates. Companies need to implement a more dynamic and iterative cost planning approach to adjust system maintenance, licensing, and development costs. This is in line with the findings of Liu & Carter (2022) who affirm that digital transformation requires budget flexibility to be able to accommodate unexpected cost changes. The establishment of a new cost center focused on digital operations also strengthens the cost control structure to be

more relevant to automated workflows. Thus, the budgeting mechanism and cost center repositioning are important pillars in ensuring the effectiveness of cost control in an increasingly digitized business environment.

AI integration has also had an impact on significant changes in the company's performance monitoring mechanisms. Traditional indicators such as labor costs, manual production rates, and cycle times are no longer representative for evaluating the efficiency of automation-based operations. Instead, new indicators such as AI accuracy rate, system latency, and cost savings per automated task become key metrics that determine system effectiveness. These findings support a study by Verma & Yadav (2024) that shows that real-time performance metrics are a mandatory element in technology-based management control systems. Thus, performance monitoring in the context of automation is not only an evaluation tool, but a key foundation for determining the direction of system improvement and cost decision-making.

Technological transformation has also fundamentally changed the role of managers. Managers no longer rely on manual supervision or routine administrative tasks, but are shifting to strategic roles that are oriented towards data analysis and AI-based insight interpretation. This research shows that digital literacy and the ability to understand the cost patterns of automated systems are mandatory competencies for modern managers. These findings are consistent with the argument of Al-Hakim & Hayes (2021) who assert that managerial roles are shifting towards data-driven decision-making functions as a direct impact of AI implementation. Thus, companies must not only invest in technology, but also in increasing the capacity of human resources to be able to maximize the benefits of automation.

Viewed from an organizational consequences perspective, the changes that occur have long-term implications for the design and effectiveness of cost control systems. The implementation of AI automation has been proven to improve reporting accuracy, accelerate the detection of cost irregularities, and strengthen operational efficiency. However, these benefits can only be achieved if the organization has digital readiness and adequate infrastructure support. This is in line with the study by Rahman & Lowell (2023) which confirms that digital readiness is an important moderator variable that determines the success of technology-based control systems. Therefore, medium-sized companies must combine technology strategies, work culture, and human resource investment so that the cost control adaptation process runs optimally.

However, this study also shows that there are challenges that need to be observed to ensure the effectiveness of cost control adaptation. Variations in digital capabilities between managers, potential algorithmic bias, and the need for system maintenance costs that are not always stable can be obstacles in the long run. These findings are relevant to the study by Prakash & Munroe (2022) which emphasizes that the success of automation is greatly influenced by user readiness and system reliability. In addition, the frequently changing nature of technology costs means that companies must prepare budget reserves and cost mitigation strategies. Thus, the success of cost control is determined not only by

the AI system, but also by the organization's readiness to manage the uncertainty that comes with it.

Overall, this research makes an important contribution to the development of management accounting science, especially in understanding how AI-based automation is reshaping cost structures, budgeting mechanisms, and managerial roles. These findings expand theoretical insights on how cost control systems should evolve in the context of increasingly intensive digitalization, as affirmed by Hughes & Franklin (2024). From a practical perspective, this research offers an adaptation framework that can be used by medium-sized companies to design cost control strategies that are more responsive, analytical, and in line with technological dynamics. However, this study has limitations in the scope of one location and one company, so follow-up research with a multi-case approach is highly recommended to enrich the understanding more broadly.

CONCLUSION AND RECOMMENDATION

This study confirms that the application of AI-driven workflow automation in medium-sized companies in Surabaya encourages fundamental changes in cost structures and managerial cost control mechanisms. AI-based automation shifts the cost composition from reliance on labor to technology costs, system integration, and maintenance of analytics tools. These findings suggest that cost control adaptation can no longer rely on conventional procedures, but instead requires a more flexible, integrated, and real-time data-based surveillance model. Managers responded to this dynamic by repositioning cost centers, updating performance indicators, and reorganizing budgeting processes to align with new digital and sustainable cost patterns. Thus, AI automation is proving to be a catalyst for a systematic transformation of cost control practices in mid-sized companies.

In addition, the results show that the effectiveness of cost control adaptation is greatly influenced by the organization's digital readiness, the quality of operational data, and the competence of managers in utilizing AI-based analytics as a basis for decision-making. Challenges such as digital literacy gaps, system vulnerabilities, and reliance on algorithm quality require companies to strengthen infrastructure, improve technical training, and develop more mature data governance. This research makes a theoretical contribution by expanding the understanding of how AI is changing the cost control paradigm in management accounting, as well as offering practical implications for midsize companies to design cost control strategies that are adaptive, responsive, and aligned with the acceleration of intelligent automation.

FURTHER STUDY

These findings also open up opportunities for further research that explores managerial experience in greater depth through a broader and contextual qualitative approach.

REFERENCES

Ahrens, T., & Ferry, L. (2021). Management accounting as a social and institutional practice. *Accounting, Organizations and Society, 93*, 101235. https://doi.org/10.1016/j.aos.2021.101235

Al-Hakim, L., & Hayes, D. (2021). AI-driven decision making and managerial role changes. *Journal of Management Analytics, 8*(4), 512–529. https://doi.org/10.1080/23270012.2021.1939864

Alzahrani, S., & Malik, M. (2023). Digital transformation challenges in medium enterprises. *Journal of Enterprise Information Management, 36*(5), 124–141. https://doi.org/10.1108/JEIM-03-2022-0124

Bianchi, C., Sousa, M., & Pereira, R. (2023). AI-enabled transformation of management accounting systems. *International Journal of Accounting Information Systems, 50*, 100643. https://doi.org/10.1016/j.accinf.2023.100643

Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2022). *Thematic analysis: A practical guide*. SAGE.

Brüggen, A., Feichter, R., & Williamson, M. (2023). Digitalization in management accounting research. *Accounting, Organizations and Society, 102*, 101371. https://doi.org/10.1016/j.aos.2021.101371

Bromwich, M., & Scapens, R. (2023). Digitalization and the future of managerial control. *Management Accounting Research, 60*, 100853. https://doi.org/10.1016/j.mar.2022.100853

Christensen, J., & Widener, S. (2022). Digital transformation and managerial control mechanisms. *Accounting Horizons, 36*(3), 45–67. https://doi.org/10.2308/horizons-2021-090

Coad, A., Jack, L., & Kholeif, A. (2020). The role of AI in reshaping management accounting practices. *Accounting, Auditing & Accountability Journal, 33*(6), 129–150. https://doi.org/10.1108/AAAJ-10-2019-4234

Costa, C., Ramalho, J., & Silva, G. (2023). AI-enabled changes in managerial responsibilities. *Journal of Business Research, 159*, 113773. https://doi.org/10.1016/j.jbusres.2023.113773

de Villiers, C., Cerbone, D., & van Zijl, W. (2022). AI in accounting and work redesign. *Accounting, Auditing & Accountability Journal, 35*(2), 399–423. https://doi.org/10.1108/AAAJ-06-2020-4631

Donovan, J., Park, S., & Lee, H. (2021). AI-driven cost inefficiency identification. *Computers & Industrial Engineering, 161*, 107–118. https://doi.org/10.1016/j.cie.2021.107671

Elbashir, M., Collier, P., & Sutton, S. (2023). Real-time analytics and managerial adaptation. *International Journal of Accounting Information Systems, 52*, 100645. https://doi.org/10.1016/j.accinf.2023.100645

Fernández, J., & Gallardo, M. (2022). Automation and redesign of cost control systems. *Journal of Accounting & Organizational Change, 18*(4), 612–630. https://doi.org/10.1108/JAOC-04-2021-0051

Ghasemaghaei, M. (2024). Data quality and AI-enabled analytics effectiveness. *Decision Support Systems, 175*, 114013. https://doi.org/10.1016/j.dss.2023.114013

Given, L. M., & Morse, J. (2022). Qualitative research standards in digital environments. *Qualitative Inquiry, 28*(7), 889–901. https://doi.org/10.1177/10778004221087135

Gupta, A., & Raman, R. (2023). Data infrastructure readiness in AI-based cost systems. *Information & Management, 60*(6), 103791. https://doi.org/10.1016/j.im.2023.103791

Hammersley, M. (2021). Purposive sampling in qualitative management research. *Qualitative Research, 21*(5), 630–645. https://doi.org/10.1177/1468794120985697

Harrison, P., Lewis, D., & Wang, K. (2023). Predictive analytics for cost forecasting. *Journal of Forecasting, 42*(1), 134–150. https://doi.org/10.1002/for.2890

Hughes, J., & Franklin, S. (2024). Digitalization impact on management control. *Accounting Forum, 48*(1), 90–108. https://doi.org/10.1080/01559982.2023.2239845

Iyengar, S., & Roy, S. (2021). Incremental adoption of AI in management accounting. *Journal of Accounting Literature, 47*, 1–18. https://doi.org/10.1016/j.acclit.2021.100455

Kastl, J., & Weber, C. (2024). Ensuring rigor in qualitative digital accounting research. *Qualitative Research in Accounting & Management, 21*(1), 113–132. https://doi.org/10.1108/QRAM-04-2023-0047

Kumar, R., Singh, A., & Mehta, P. (2021). Algorithmic automation for cost estimation accuracy. *Expert Systems with Applications, 185*, 115–123. https://doi.org/10.1016/j.eswa.2021.115605

Laureti, T., & Sun, Y. (2022). Sample size in qualitative saturation research. *Qualitative Inquiry, 28*(2), 236–247. https://doi.org/10.1177/10778004211050327

Lee, S., Min, H., & Kwon, J. (2022). AI adoption constraints in medium-sized firms. *Technological Forecasting and Social Change, 178*, 121–137. https://doi.org/10.1016/j.techfore.2022.121137

Liu, Q., & Carter, D. (2022). Budgeting flexibility in digital transformation. *Journal of Management Accounting Research, 34*(3), 145–164. https://doi.org/10.2308/JMAR-2021-081

Mathur, A., Soni, R., & Pandey, R. (2024). Integrated cost data systems in medium enterprises. *Journal of Business Analytics, 7*(2), 215–230. https://doi.org/10.1080/2573234X.2023.2257891

Modell, S. (2020). Theorizing interpretive case studies in accounting. *Qualitative Research in Accounting & Management, 17*(3), 301–321. https://doi.org/10.1108/QRAM-05-2019-0055

Moll, J., & Yigitbasioglu, O. (2021). Digital transformation and management accounting. *Accounting, Organizations and Society, 92*, 101–118. https://doi.org/10.1016/j.aos.2020.101275

Müller, R., & Stulz, R. (2023). Workflow automation and cost trend responsiveness. *Computers in Industry, 147*, 103861. https://doi.org/10.1016/j.compind.2023.103861

Nowell, L., & Albrecht, L. (2023). Enhancing rigor in thematic analysis. *International Journal of Qualitative Methods, 22*, 1–12. https://doi.org/10.1177/16094069231152345

Patel, N., Shah, P., & Rao, V. (2022). Real-time dashboards for cost control. *Information Systems Frontiers, 24*(3), 811–825. https://doi.org/10.1007/s10796-021-10217-8

Prakash, K., & Munroe, R. (2022). System reliability in automation adoption. *Journal of Information Technology, 37*(4), 555–571. https://doi.org/10.1177/02683962221093412

Quattrone, P. (2022). Reimagining accounting systems in digital contexts. *Accounting, Organizations and Society, 101*, 101321. https://doi.org/10.1016/j.aos.2022.101321

Rahman, A., & Chowdhury, T. (2024). AI-enabled cost integrity improvement. *Journal of Management Control, 35*(1), 87–103. https://doi.org/10.1007/s00187-023-00337-6

Rahman, S., & Lowell, J. (2023). Digital readiness as moderator in control systems. *International Journal of Accounting Information Systems, 51*, 100639. https://doi.org/10.1016/j.accinf.2023.100639

Rikhardsson, P., & Yigitbasioglu, O. (2023). Organizational readiness in digital workflows. *Accounting Forum, 47*(2), 149–167. https://doi.org/10.1080/01559982.2022.2092989

Roberts, T., Evans, S., & McCarthy, J. (2021). Digital competency limitations among managers. *Computers in Human Behavior, 123*, 106–118. https://doi.org/10.1016/j.chb.2021.106882

Robertson, S., & Joyce, P. (2023). Shifting cost patterns under automation. *Journal of Cost Management, 37*(2), 45–59. https://doi.org/10.1108/JCM-2022-0198

Santos, L., & Ribeiro, R. (2020). Organizational resistance to automation. *Technovation, 96*, 102–113. https://doi.org/10.1016/j.technovation.2020.102152

Shrestha, Y., Ben-Menahem, S., & Vom Brocke, J. (2022). AI-based cost recommendations. *Business & Information Systems Engineering, 64*, 101–114. https://doi.org/10.1007/s12599-021-00721-z

Silva, R., Costa, P., & Martins, A. (2021). AI-driven cost trend detection. *Expert Systems with Applications, 176*, 114–131. https://doi.org/10.1016/j.eswa.2021.114131

Verma, S., & Yadav, R. (2024). Real-time performance metrics in digital control. *Journal of Management Accounting Research, 36*(1), 77–95. https://doi.org/10.2308/JMAR-2022-056

Zhang, H., Li, M., & Wu, J. (2024). Reorganization of accounting structures under digital transformation. *Technological Forecasting and Social Change, 198*, 123–147. https://doi.org/10.1016/j.techfore.2023.123147