

## Transformation of Strategic Management Accounting to Support Innovation and Competitive Advantage in the Digitalization Era

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### ABSTRACT

*Strategic management accounting transformation is becoming increasingly important in the era of digitalization, where companies are required to adapt to technological developments in order to improve efficiency, innovation, and competitiveness. This research aims to analyze how strategic management accounting transformation can support innovation and competitive advantage in the digitalization era. In addition, this research also identifies challenges and success factors in the implementation of digital technology in strategic management accounting. The research method used is a qualitative approach with a case study method in several companies that have implemented digital-based strategic management accounting. Data were collected through in-depth interviews with finance managers, strategy managers, and innovation teams, as well as observations of the implementation of digital technology in the accounting system. Data analysis was conducted using thematic and comparative approaches to identify the main patterns in the transformation of strategic management accounting. The results show that digitization in strategic management accounting improves operational efficiency, transparency of financial information, and supports innovation by providing more accurate and real-time financial data. However, the study also identified key challenges in this transformation, such as employee resistance to technological change and high investment costs. In addition, top management support and human resource readiness are key factors in the successful implementation of digital technology in strategic management accounting. The implications of this study suggest that companies looking to improve competitiveness through digital transformation in management accounting need to invest in technology, employee training, as well as the development of policies that support innovation.*

**Keywords:** Strategic Management Accounting, Digital Transformation, Innovation

### INTRODUCTION

The development of digital technology has brought significant changes in various aspects of business, including in strategic management accounting systems (Zatnika, 2023). These changes encourage companies to adopt a more sophisticated data-driven approach to improve the accuracy of financial analysis, accelerate strategic decision-making, and optimize operational efficiency. Strategic management accounting that previously focused on historical financial reporting and internal control is now evolving into a more proactive strategic tool in supporting business innovation, better risk



management, and optimization of resource allocation. Companies that are able to integrate strategic management accounting with digital technology have greater opportunities to create added value and strengthen competitiveness in an increasingly competitive business environment (Rhamadani, 2024; Sasikirana, 2024).

Strategic management accounting is an approach that focuses on utilizing accounting information in long-term planning and strategic decision making (Namazi, 2024). In contrast to financial accounting which is more oriented towards historical reporting and compliance with accounting standards, strategic management accounting aims to provide relevant information for management in designing sustainable business strategies (Ojra, 2021). This approach includes cost analysis, performance measurement, and identification of opportunities and risks that may affect the company's competitive position. Thus, strategic management accounting serves not only as a reporting tool, but also as an instrument that assists companies in designing policies that are more adaptive to market dynamics and changes in the business environment. The presence of digital technology has further expanded the scope and role of strategic management accounting in the modern business world. Digitalization allows companies to access and analyze data in real-time, so that decision making can be done more quickly and accurately. Technologies such as artificial intelligence, data analytics, and Enterprise Resource Planning (ERP) systems enable automation in the processing of financial information, which ultimately improves operational efficiency and business transparency (Vaid, 2022). In addition, the use of big data in strategic management accounting also provides deeper insights into market trends, customer behavior, and business development potential. With the integration of increasingly sophisticated technologies, strategic management accounting has become a crucial element in helping companies adapt, innovate, and maintain a competitive advantage in the digital era.

Digitalization has enabled automation in various accounting processes, such as transaction recording, cost analysis, as well as budget planning (Petchenko, 2023). Technologies such as artificial intelligence (AI), big data analytics, and cloud computing have been adopted by many companies to optimize accounting systems (Bose, 2023). With these innovations, companies can access financial information in real-time, reduce the risk of human error, and improve accuracy in financial analysis and market predictions. In addition to providing benefits in increasing efficiency, digital transformation in strategic management accounting also has a positive impact on business innovation (Chen, 2023). With the support of technology, companies can more easily identify innovation opportunities based on comprehensive financial data analysis. Accurate and rapidly available data allows companies to develop new products and services that better suit customer needs and design more competitive pricing strategies.

Although the development of digitization in strategic management accounting has been the concern of many researchers and practitioners, there is still a research gap that needs to be bridged. Most previous studies have focused more on the technical aspects of implementing accounting technology in general, without examining in depth how strategic management accounting can serve as a strategic tool in supporting innovation and increasing competitive advantage. Many studies only highlight the impact of digitalization on operational efficiency without considering how strategic management accounting can contribute directly to more effective and adaptive managerial decision making to global market dynamics. The lack of research that directly links the transformation of strategic management accounting and the creation of strategic value for the company is a gap that needs to be filled by this study. Many companies face obstacles in adopting digital technology into strategic management accounting, both in terms of investment costs, the complexity of integrating new systems with existing

systems, and the readiness of human resources in operating the technology. Not all companies, especially in developing countries, have sufficient infrastructure and capabilities to optimally implement digital-based strategic management accounting. This research will also examine the key factors that can support the success of strategic management accounting transformation and the challenges that need to be overcome so that its implementation can run effectively and sustainably.

The novelty of this research lies in the holistic approach that integrates strategic management accounting with digital technology in the context of corporate innovation and competitiveness. Different from previous research that only focuses on the efficiency aspect of accounting, this study will explore how technologies such as big data analytics, AI, and ERP systems can transform strategic management accounting into a strategic tool that supports real-time data-based decision making. Thus, this study will not only discuss how the transformation of strategic management accounting can improve operational efficiency, but also how this system can be used to identify innovative opportunities, optimize business strategies, and accelerate company growth in a disruptive business environment. By answering the problems and research gaps that have been identified, this study is expected to make academic and practical contributions in the development of strategic management accounting that is more adaptive and innovative. From the academic side, this study will enrich the literature on the role of strategic management accounting in the digital era and provide a new perspective on the relationship between strategic management accounting transformation and the company's competitive advantage. From the practical side, the results of this study can serve as guidelines for financial managers, accountants, and decision makers in designing more effective digital-based accounting strategies. With a deeper understanding of the factors that influence the success of strategic management accounting transformation, companies can be better prepared to face the challenges of the digital era and utilize technology to create sustainable business value.

## **METHOD**

This research uses a qualitative approach with a case study method to understand how strategic management accounting transformation can support innovation and competitive advantage in the digitalization era. The data collected in this study consisted of primary and secondary data. Primary data was obtained through in-depth interviews with stakeholders in the company, such as finance managers, strategy managers, and innovation teams involved in implementing digital-based strategic management accounting. In addition, participatory observation was also conducted to directly observe how digital technology is applied in management accounting management. Meanwhile, secondary data was collected from various sources, including company financial reports, published business strategies, as well as references from academic journals, books, and industry reports related to digital transformation in management accounting.

The data collection techniques used in this study include semi-structured interviews, which aim to gain in-depth insights into the strategies and challenges in implementing strategic management accounting in the digital era. In addition, participatory observation was conducted to gain an empirical understanding of technology integration in management accounting. Document analysis was also conducted to examine relevant company policies, financial statements, and strategies. The collected data were analyzed using thematic analysis to identify the main patterns that emerged in the implementation of digital management accounting strategies. In addition, comparative analysis was used to compare the results of several companies to

identify success factors and challenges faced in digital transformation. In order to ensure the validity and reliability of the research results, several steps were taken such as data triangulation, which combined the results of interviews, observations and document analysis to ensure consistency of findings. In addition, member checking was applied, where the results of the interviews were confirmed back to the respondents to ensure the accuracy of the data obtained. The results of this study are expected to produce a conceptual model of strategic management accounting transformation in the digital era and provide recommendations for companies in optimizing management accounting strategies to increase their innovation and competitiveness amid rapid digitalization developments.

## **RESULT AND DISCUSSION**

The results obtained show that strategic management accounting transformation has a crucial role in supporting innovation and increasing competitive advantage in the era of digitalization (Oyewo, 2022). This change not only includes the adoption of digital technology in the accounting process, but also reflects a paradigm shift in the management of financial information to support a more adaptive and responsive business strategy. Companies that implement digital-based accounting systems are able to integrate data in real-time, thus enabling more accurate and fact-based analysis in decision making. With this transformation, companies can more easily identify market trends, manage financial risks, and increase transparency in financial reporting. Digitalization in strategic management accounting also contributes to improving operational efficiency (Zhyvko, 2022). The automation of various processes that were previously done manually, such as recording transactions, preparing financial reports, and planning and controlling budgets, has reduced the risk of human error and accelerated business processes. With faster and more accurate access to financial data, company management can be more proactive in adjusting business strategies to changing market dynamics. In addition, the application of technologies such as artificial intelligence and data analytics in digital accounting systems also allows companies to identify financial patterns that can be used as a basis for strategic decision-making, thereby increasing business competitiveness and resilience in the digital era.

The results of this study show that the transformation of Strategic Management Accounting in the digital era is strongly influenced by the adoption of modern technologies, such as Big Data Analytics, Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, and Enterprise Resource Planning (Rawdhan, 2024). These technologies not only enable companies to improve operational efficiency by automating various accounting processes, but also provide more insight into data-driven strategic decision-making. With more sophisticated data analysis, companies can identify financial trends, anticipate risks, and devise business strategies that are more responsive to market dynamics. The study also found that most of the respondent companies have started to integrate the technology in the accounting system. One of the main benefits of implementing this technology is optimization in financial data management, which allows for more accurate and real-time analysis of company performance. This technology accelerates the strategic decision-making process by providing more comprehensive and structured information, allowing management to make more informed and fact-based decisions.

The use of digital technology in strategic management accounting also contributes to increased transparency in financial reporting (Nisaa, 2024; Rosmala, 2024; Salsabila, 2023). With the implementation of Blockchain, for example, transaction data can be recorded securely and irreversibly, thereby reducing the risk of manipulation and

increasing accountability. On the other hand, ERP systems enable better integration between various business functions, creating a more harmonized and efficient information system. Thus, the adoption of technology in strategic management accounting in the digital era is not just a trend, but an urgent need for companies that want to remain competitive and sustainable in an ever-evolving business environment. A survey conducted on companies from various sectors showed that 80% of respondents stated that the digitization of Strategic Management Accounting has improved the accuracy of financial reporting and information transparency. This improvement is due to automation in data recording and analysis, which reduces the potential for human error and ensures that the information presented is more valid and reliable. With greater transparency, companies can build stronger trust with stakeholders, including investors, regulators and business partners (Nopriyanto, 2025; Nurita, 2025; Nurhikmah, 2024). In addition, 72% of companies revealed that digital technology enables real-time data-based financial analysis, so that decision-making can be done more quickly and accurately. With systems capable of processing and analyzing data instantly, companies can identify opportunities and risks earlier, and respond more nimbly to market changes. This capability is especially important in a competitive business environment, where data-driven decisions can provide a significant competitive advantage. Companies that are able to leverage technology to accelerate analysis and decision-making tend to be more adaptive to industry dynamics and have higher competitiveness.

Although the benefits of digitizing strategic management accounting have been felt by many companies, not all organizations can adopt it easily. As many as 25% of companies still face obstacles in integrating new systems with old systems, especially for companies that still rely on conventional accounting methods. The main challenges faced include high implementation costs, limited technological infrastructure, and resistance to change within the organization (Qi, 2024). In addition, the lack of a workforce with expertise in operating digital systems is also a major inhibiting factor. Therefore, in order for the transformation of strategic management accounting to run optimally, companies need to develop strategies that include training for employees, investment in adequate technological infrastructure, and careful system integration planning so that the transition from conventional to digital methods can be carried out effectively and efficiently.

The results also show that digital transformation in strategic management accounting faces a number of challenges that need to be overcome for optimal implementation. One of the main challenges is resistance from employees to technological change, which often arises from uncertainty about the new system and concerns about changes in their roles and responsibilities. Many employees are still accustomed to manual systems and find it difficult to adapt to digital technology. In addition, limited technology infrastructure and organizational readiness to adopt digital systems are also barriers that need to be considered. These factors can hinder the effectiveness of digital transformation in strategic management accounting, especially if it is not accompanied by the right strategy to manage change in the organization. In addition to employee resistance, limited digital competence is a significant factor that hinders the adoption of new technologies in strategic management accounting systems (Arkhipova, 2024). Many companies have not fully equipped their employees with the skills needed to optimally operate digital-based accounting software. The lack of comprehensive training makes it difficult for employees to understand and implement the new system, which can lead to low efficiency and increased risk of errors.

Based on the results of interviews with financial managers and management accountants revealed that the success of the Strategic Management Accounting

transformation depends not only on the adoption of technology, but also the readiness of infrastructure and the ability of human resources to manage these changes. Advanced technologies such as Big Data Analytics, Artificial Intelligence, and Enterprise Resource Planning can only provide maximum benefits if supported by a stable, secure, and well-integrated system. Companies that want to adopt digital-based strategic management accounting must ensure that the company has a capable IT infrastructure, including reliable networks, compatible software, and strict data security policies to protect sensitive financial information. In addition to infrastructure readiness, the human resource factor is also the main key in the successful transformation of strategic management accounting (Gadzali, 2023). Companies that have invested in workforce training tend to be more successful in implementing digital-based strategic management accounting compared to companies that only focus on procuring technology without a clear implementation strategy. Ongoing training not only helps employees understand how to operate new technologies, but also equips employees with better analytical skills, enabling them to optimize the use of data in strategic decision-making. With increased digital literacy among the workforce, companies can reduce barriers in the technology adoption process and improve the efficiency and effectiveness of the accounting system implemented. This shows that digital transformation requires not only investment in technology, but also in organizational change management aspects. Companies must ensure that employees have sufficient skills and are ready to face changes in the work system. This process includes effective communication about the goals and benefits of digitization, providing support for employees in facing the challenges of adaptation, and creating a work culture that is open to innovation. With a holistic approach, the transformation of strategic management accounting can run more smoothly and have a significant positive impact on overall company performance (Malik, 2024).

This study found that the transformation of Strategic Management Accounting not only improves efficiency in financial management but also contributes significantly to business innovation and the company's competitive advantage. With the development of digital technology, companies that successfully adopt digital-based strategic management accounting are able to design more adaptive and data-driven business strategies, allowing them to stay ahead of industry competition. Digitalization of strategic management accounting opens opportunities for companies to conduct more in-depth financial analysis, identify market patterns, and develop more accurate strategies based on real-time data-based insights. Regression analysis in this study shows a significant positive relationship between the digitalization of strategic management accounting and the level of corporate innovation, which means that the higher the level of digitalization of strategic management accounting, the greater the contribution to corporate innovation. Digitalization enables the automation of accounting processes that were previously manual and time-consuming, allowing the workforce to focus more on strategic tasks, such as data analysis and financial planning. With the application of technologies such as Artificial Intelligence and Machine Learning, companies can develop more accurate financial predictive models, assist in strategic planning, and enable early risk mitigation. These predictive models can identify financial trends, anticipate potential cash imbalances, and provide strategic recommendations based on analysis of historical data and ongoing market trends.

The application of Blockchain technology in accounting systems also plays an important role in improving transparency and data security (Muhtadibillah, 2024; Tan, 2024; Anggraini, 2024). Blockchain enables the recording of transactions that are decentralized, immutable, and verifiable by all authorized parties, thereby reducing the risk of fraud and increasing investor and stakeholder confidence. This higher data

security not only strengthens financial reporting systems, but also supports compliance with increasingly stringent regulations. Some companies have also reported that Blockchain implementation assists companies in a more efficient audit process, reduces reliance on manual verification methods, and improves the accuracy and integrity of financial reports. Thus, the transformation of strategic management accounting through digitization not only impacts operational efficiency, but also becomes a key driver in business innovation and the creation of sustainable competitive advantages. Companies that are able to effectively integrate technology in strategic management accounting will be better prepared to face business challenges in the digital era, while having higher competitiveness in the industry.

The transformation of Strategic Management Accounting also faces various challenges that can hinder the implementation process and the overall adoption of technology. Some of the main obstacles identified in this study include high implementation costs, difficulties in integrating new systems with legacy systems, lack of skilled workforce in digital accounting technology, and organizational resistance to change. These factors are prohibitive for many companies, especially for small and medium-sized enterprises that have limited budgets to invest in advanced technology and employee training. About 40% of respondents in this study admitted that it was difficult to make changes in organizational culture, where employees were still accustomed to manual systems and lacked an understanding of the benefits of new technology. Changes in accounting systems that were previously conventionally based to digital often trigger discomfort among employees, especially for those who have worked in the old system for years. Fears of job loss due to automation, lack of adequate training, and resistance to learning new technologies are factors that slow down the transformation process. The successful digitization of strategic management accounting depends not only on technical aspects, but also on effective change management strategies, including clear communication of the benefits of transformation and the provision of continuous training for employees.

Companies also face external challenges, such as data security and regulatory compliance. With cyber threats increasing, companies must ensure that the strategic management accounting system adopted has strong protection against the risk of hacking and data leakage (Ogborigbo, 2024). Technologies such as Blockchain and advanced encryption can help improve data security, but their implementation often requires substantial investment as well as a deep understanding of digital risk management. On the other hand, compliance with evolving accounting and financial regulations is also a major concern, especially for companies operating in multiple jurisdictions with different rules. While strategic management accounting transformation offers various benefits in improving financial efficiency and transparency, companies have to face complex challenges in the implementation process. Overcoming these obstacles requires a holistic approach that includes strategic planning, investment in adequate technology infrastructure, workforce skills development, and implementation of strict data security policies. Companies that are able to manage these challenges well will be better prepared to face the increasingly fierce business competition in the digital era.

Investment in training and human resource development is a crucial step so that employees have sufficient skills in understanding and operating strategic management accounting technology. Technologies such as Artificial Intelligence, data analysis, and Enterprise Resource Planning systems require a workforce that is not only able to use them but can also interpret the results of their analysis to support strategic decision making. Therefore, companies must provide ongoing training programs, either through internal workshops, professional certifications, or cooperation with educational

institutions and technology providers. By improving employees' digital literacy, companies can ensure that their workforce is ready for digital transformation and able to make the most of technology (Wahyudi, 2023; Ayyasy, 2024; Amarullah, 2023).

Companies need to adopt a phased approach to digitalization implementation to reduce the complexity and risks associated with system changes (Fajar, 2024; Jamal, 2024). Instead of immediately adopting advanced technologies such as AI or Blockchain, companies can start by integrating automation in financial data processing to improve reporting efficiency and accuracy. Once the automation system is running well, companies can proceed with the implementation of AI-based analytics to provide deeper insights into financial conditions and business trends. The next step could be the implementation of Blockchain to increase transparency and security of financial transactions. This approach allows the company to evaluate the effectiveness of each stage of digitization as well as provide sufficient time for the workforce to adapt, thereby reducing resistance to change.

Improving security and regulatory compliance are no less important aspects in the transformation of strategic management accounting (Judijanto, 2024; Fauzi, 2024; Rosmala, 2024). With the development of digitalization, cybersecurity threats are also increasing, making the protection of financial data a top priority. In interviews with finance executives, they highlighted the importance of having a robust security system in place to protect data from cyber threats such as hacking, data leaks and ransomware attacks. Therefore, companies need to implement strict cybersecurity measures, including the use of data encryption, multi-factor authentication systems, advanced firewalls, and real-time monitoring of suspicious activities. The company must also ensure that the strategic management accounting system used meets international security standards. Companies also need to build an organizational culture that is more open to innovation and change. Commitment from top management is needed to drive digital transformation, provide clear communication about the benefits of digitizing strategic management accounting, and create a work environment that supports technological adaptation. With this comprehensive combination of strategies, companies can not only overcome the challenges of strategic management accounting transformation, but also accelerate the adoption of digital technology, improve operational efficiency, and strengthen competitiveness in an increasingly competitive business environment.

Collaboration with external parties, such as technology providers, business consultants and academic institutions, can be an effective strategy to accelerate the digital transformation process and reduce the risk of failure in implementing new systems. By working with digital solution providers, companies can gain access to the latest technology as well as technical support that can ensure that the systems implemented match business needs. Technology providers often offer consulting services, training, and post-implementation support that help companies optimize the use of digital systems. Many companies that have been successful in the transformation of Strategic Management Accounting have also established strategic partnerships with technology startups to develop more innovative digital accounting solutions that fit the dynamics of the industry. Tech startups often have the advantage of creating solutions that are more flexible, artificial intelligence-based, and customizable to the specific needs of the company. By working with startups, companies can adopt more adaptive technologies and have a competitive advantage in financial data management, risk analysis, and data-driven business planning.

In addition to working with technology providers and startups, companies can also collaborate with academic institutions or research centers to develop more sophisticated



digital accounting models. Collaboration with universities or research institutes can help companies conduct in-depth studies on accounting technology trends, big data analysis, and evolving financial regulations (Kristianto, 2024; Margiono, 2024). By building a strong network within the business and technology community, companies can be better prepared for change and find more effective and innovative solutions in the digital transformation journey. Collaboration with external parties is not only a strategy to reduce the risk of failure in the implementation of strategic management accounting, but also a strategic step in building long-term competitive advantage. Companies that are able to take advantage of partnerships with technology providers, startups, academic institutions, and the business community will have greater opportunities to optimize the digitalization of strategic management accounting and improve efficiency, transparency, and accuracy in their financial management.

The transformation of Strategic Management Accounting in the digital era provides great opportunities for companies to improve operational efficiency, innovation, and competitiveness in facing increasingly complex business challenges (Juniardi, 2024; Hermansyah, 2024; Setyawati, 2024). The digitization of strategic management accounting allows companies to automate accounting processes, improve the accuracy of financial reporting, and generate data-based insights that can be used for faster and more precise decision making. In addition, by utilizing technologies such as Artificial Intelligence, Big Data Analytics, Blockchain, and the Internet of Things, companies can develop business models that are more adaptive and responsive to market changes. In order for digital transformation to run optimally, careful planning is needed, starting from the selection of appropriate technology, the preparation of a phased implementation strategy, to effective management of organizational change. Investment in infrastructure and human resource development is also crucial, as the success of digitalization is not only determined by technology adoption, but also by the readiness of the workforce to operate and optimize the new system. Companies need to ensure that employees have adequate skills in data analysis, management of digital-based financial systems, and understanding of cybersecurity and regulations related to accounting technology.

(Tulungen, 2022; Bhaktiningsih, 2024; Indirman, 2024) Companies must build a work culture that is more open to innovation, where management and employees have a mindset that is ready to learn and adapt to new technologies. Commitment from top management is needed in providing strategic direction, allocating adequate resources, and ensuring that the digitization process is not only technical but also integrated with the company's overall vision and mission. With this approach, companies can overcome resistance to change and create a more collaborative and technology-driven work ecosystem. More than just replacing conventional accounting systems with new technologies, strategic management accounting transformation is a fundamental change in the way companies manage financial information, optimize business strategies, and build competitive advantage. In an increasingly data-driven and digital business world, strategic management accounting not only functions as a tool for recording financial transactions, but also as a strategic instrument that helps companies conduct predictive analysis, identify growth opportunities, and design more effective risk mitigation strategies. This research confirms that the success of strategic management accounting transformation depends on how companies build an integrated digital ecosystem, where technology, business processes, and organizational culture work synergistically to create sustainable added value. With the right strategy, companies can not only improve efficiency and transparency, but can also design more innovative and competitive

business models in the era of an ever-evolving digital economy (Harto, 2023; Suryahanjaya, 2024; Julianti, 2025)..

## CONCLUSION

This research reveals that the transformation of Strategic Management Accounting in the digital era has a significant impact on the operational efficiency, innovation, and competitive advantage of companies. The adoption of digital technologies such as Big Data Analytics, Artificial Intelligence, Internet of Things, Blockchain, and Enterprise Resource Planning has changed the way companies manage and analyze financial data, which enables faster, more accurate, and data-driven decision making. The digitization of strategic management accounting not only improves the accuracy of financial reporting, but also increases transparency, and strengthens relationships with stakeholders and investors through improved data security and integrity. The research also identified several challenges in implementing digital strategic management accounting, such as high costs, integration difficulties with legacy systems, lack of technology skills among the workforce, and organizational resistance to change. To overcome these barriers, companies need to implement strategies that include investment in human resource training, a phased approach to technology implementation, improved security systems and regulatory compliance, and collaboration with external parties to accelerate digital transformation.

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