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The Effect of Digitalization on the Sustainability of Accounting Practices in the Financial Industry

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Abstract

This research aims to examine the effect of digitalization on the sustainability of accounting practices in the financial industry. Using a qualitative approach, this research conducted case studies on several leading companies in the financial sector. We collected data on the implementation of digital technologies in accounting practices through in-depth interviews, participatory observation, and document analysis. The research findings show that digitalization brings significant changes in accounting practices, especially with regard to improving efficiency, transparency, and data accuracy. Research has proven that the integration of technologies like cloud-based accounting information systems, big data, and artificial intelligence enhances the quality of financial decision-making. In addition, digitalization also has a positive impact on environmental sustainability through reduced paper usage and energy efficiency. However, the research also reveals challenges, such as the need to upskill accountants, data security issues, and adapt to regulatory changes. The findings provide important insights for practitioners and policymakers in responding to the dynamics brought about by digitalization in accounting. This research contributes to the literature relating to the interaction between technology and accounting practices by providing an in-depth understanding of how financial firms adapt and utilize technological innovations for their business sustainability. The practical implications of this research include recommendations for the development of policies that support the integration of technology in accounting as well as the development of appropriate human resources.

Keywords: digitalization, accounting practices, sustainability, the financial industry, financial technology.

INTRODUCTION

In today's digital era, technological transformation has changed many aspects of business, including in the finance and accounting sector. Digitalization has become a key factor in improving the efficiency and effectiveness of company operations. The implementation of technologies such as cloud-based accounting information systems, big data, and artificial intelligence has had a significant impact on the way companies manage their financial data and information (Alghafiqi & Munajat, 2022; Berisha et al., 2022; Budi Harto et al., 2023; Wahhab et al., 2024). This brings the impact of changes in the application of traditional accounting to bear and encourages companies to adapt to new methods. Sustainability in accounting practices is not only a necessity but also a challenge in the face of the digital revolution. The focus on environmental sustainability, such as reduced paper use and energy efficiency, has prompted companies to consider the ecological impact of their operations. Thus, digitalization is not only about improving business performance but also

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about contributing to environmental sustainability (Martínez-Peláez et al., 2023; Niehoff, 2022; Ordieres-Meré et al., 2020; Zhang & Jin, 2023).

Meanwhile, the integration of digital technology in accounting practices offers various benefits, such as increased data accuracy and transparency (Miaoquan et al., 2023; Yarmoliuk et al., 2024). This enables accountants and financial managers to make more informed decisions based on accurate and real-time data. Technologies such as advanced data analytics enable more in-depth analyses of financial trends and spending patterns, providing new insights into business strategies. Nonetheless, digitalization also brings challenges, especially in terms of the need for new skills and adaptation to changes in the business environment (Hendriarto, 2021; Rachinger et al., 2019; Wang et al., 2023). Accountants today must have a thorough understanding of information technology in addition to traditional accounting competencies. This raises the need for continuous training and skills development for professionals in this field.

Previous research suggests that digitalization can improve efficiency and effectiveness in accounting practices (Dinesh Kumar G. R., 2023; Pargmann et al., 2023; Rachinger et al., 2019; Savić & Pavlović, 2023). These studies generally focus on the technical aspects of new technology implementation and its impact on corporate finance. However, there is still room for research on how digitalization affects environmental and social sustainability in accounting practices. This research also contributes to the conversation about the difficulties encountered in integrating technology into accounting. However, this research often confines itself to specific contexts, failing to fully explore the dynamics between technological change, skills need, and data security in a broader context.

One of the main challenges faced in the digitization process is the increased need for technological skills for accountants (Fetzer et al., 2023; Gonçalves et al., 2022; Maulidya et al., 2023; Savić & Pavlović, 2023). This exposes a skills gap among professionals, where some accountants may not be fully prepared for this transition. This gap may impact the quality of financial decision-making and the effectiveness of new technology implementation. Data security issues are also a major concern in accounting digitalization. With the increasing use of cloud technology and big data, risks related to data security and privacy are higher. This calls for the development of stricter data security policies and preventive measures to avoid data breaches. Adaptation to regulatory changes is also a challenge. Technological developments constantly lead to changes in financial and accounting regulations (Kroon et al., 2021; Thursina, 2023), necessitating companies to continuously adapt and comply with the latest regulations, a process that can be complex and time-consuming.

The management of accounting and finance in companies has significantly changed, according to recent research in the field of accounting digitalization. The study by Guse et al. (2022) highlights how digital transformation has affected accounting practices in Romania, particularly in the context of accounting education. This marks an important development in the literature, given the role of education in preparing generations of accountants for future challenges. In Indonesia, research (Dwi Astuti et al., 2023) revealed that, although there is awareness about the importance of sustainability accounting in the industry, its implementation is still limited. This indicates a gap between theory and practice and an urgent need to improve education and understanding of sustainability accounting in the industry.

Pratama et al. (2023) delve into the disclosure of digitalization and its impact on the quality of accounting information. They point out that digitalization hasn't completely transformed the quality of accounting information, highlighting a neglected area in the literature, particularly when it comes to the specific impact of digitalized disclosures on financial management. Research (Pham & Vu, 2022) provides a unique perspective by focusing on the digitization of accounting information in small and medium-sized enterprises

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(SMEs). Their research highlights the importance of digitization in supporting sustainable innovation ecosystems, especially in developing countries. Similarly, Gnatiuk et al. (2023) underline the importance of considering cost, technical, professional, and managerial factors in the implementation and modernization of communication in accounting systems. This study emphasizes a comprehensive analysis of qualitative and quantitative parameters for the integration of automated accounting data processing, robotics, artificial intelligence, and blockchain. On the other hand, Kovalevska et al. (2022) discuss the issue of the digitalization of accounting in the context of the digitalization of business processes. The study includes an analysis of modern trends, advantages, and disadvantages of digitalization, as well as the formation of directions and problems of accounting digitalization.

Research by L.K. & O.R. (2023) demonstrates a direct impact of digitalization on accounting practices in Nigeria, specifically in the areas of audit efficiency, tax service performance, and financial advisory. Varaniūtė et al. (2022) explored the changing role of management accounting in product development, focusing on digitalization, sustainability, and circularity. The study used bibliometric analysis and systematic literature review to determine the main directions of change in management accounting. Blahušiaková et al. (2022) examined new challenges in accounting practice in the Slovak Republic related to digitalization. They highlighted the influence of automation, digitalization, and electronic communication on the work performance of accountants and auditors. In accounting, digitalization shows a shift in focus from mere technology implementation to broader impacts, including sustainability, information quality, and changes to accounting education. However, there is still ample room for further research, especially in the context of practical application and adaptation in various cultural and economic contexts (Ivanova, 2022).

This research is highly relevant and current, given the rapid development of technology and its far-reaching impact on the financial industry. Understanding how digitalization affects the sustainability of accounting practices will provide important insights for practitioners, academics, and policymakers in designing appropriate adaptation strategies and policies. We also conducted this research to enhance the existing literature by delving deeper into the effects of digitalization on accounting practices. Particularly, the emphasis on educating and preparing future generations of accountants represents a previously unexplored aspect. From the perspective of sustainability accounting practices, this research provides new insights into how companies in developing countries, particularly in Indonesia, adapt to sustainability accounting practices. Research on this gap between theory and practice is crucial. This research provides an understanding of how digitalization disclosures can affect the quality of accounting information. This is crucial for supporting government initiatives like "Building Indonesia 4.0," which emphasize the digitalization of companies.

METHOD

This research uses a qualitative approach to deeply understand the influence of digitalization on accounting practices. Researchers chose a qualitative approach (Aspers & Corte, 2019; Azungah, 2018) to delve deeper into the experiences, perceptions, and motivations of their research subjects. This enhances comprehension of the business and organizational environment where accounting digitalization takes place. Researchers can uncover nuances and complexities through this approach that quantitative methods fail to reveal (Hesse-Biber, 2010; Pilcher & Cortazzi, 2024; Sutton & Austin, 2015). Data sources in this research include in-depth interviews with accounting professionals, including accountants, auditors, and financial managers who have experience with the digitization process. In addition, the research will also utilize document analysis, such as financial statements, internal company policies, and records related to the implementation of digital

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technologies in accounting practices. We will collect data through face-to-face and online interviews, along with document collection from various companies.

We selected the research objects based on the selection, availability, and accessibility of the research subjects, as well as their relevance to the topic of digitalization in accounting. This research was conducted in several companies that have implemented digital technology in their accounting systems. We employ data analysis techniques to pinpoint patterns and themes that surface from the data. This analysis will enable the researcher to develop a broad understanding of how digitalization affects accounting practices and the challenges faced in the process.

RESULT AND DISCUSSION

The results show that digitalization has significantly encouraged and improved efficiency and accuracy in accounting data collection. Many companies have shown that digital accounting systems can speed up data processing and reduce errors that often occur when managing data manually. The use of technologies such as artificial intelligence and blockchain has also improved the security and transparency of accounting practices. However, this research highlights significant issues, particularly concerning the training and adaptation of accounting professionals to new technologies. One of the frequently encountered problems is the difficulty in integrating existing systems with the latest technologies.

Efficiency and Accuracy in Accounting Data Management

The results of this study suggest that the digitization of accounting systems has improved efficiency and accuracy. Respondents explained that the automation of their accounting systems has streamlined the time required to complete daily accounting tasks. For example, technology such as cloud-based accounting software enables real-time synchronization and faster data entry, which reduces the possibility of human error. Despite the obvious improvements, some of the people who responded had difficulty adapting to the new user interface. This shows how important it is to gain knowledge and habits when using new technology.

The results of this study also explain that digitalization in accounting has brought significant improvements in efficiency and accuracy, which is in line with the findings of Coman et al. (2022), Gnatiuk et al. (2023), Han et al. (2023), Sri Anjarwati et al. (2023), and Zhang et al. (2020). These studies have demonstrated the significant role of technologies like artificial intelligence and blockchain in enhancing accounting processes. These findings support the notion that digitalization not only transforms data management, but also enhances security and transparency in accounting practices.

Security and Transparency with the help of AI and Blockchain

The adoption of AI and blockchain in accounting practices has improved data security and transparency. For instance, artificial intelligence enables real-time monitoring of transactions and identification of unusual patterns that could indicate errors or fraud. However, blockchain technology enhances data integrity by establishing an immutable framework for transaction recording. An interesting finding is that some companies face difficulties in implementing blockchain technology, mainly due to a lack of understanding and adequate technical infrastructure support.

Based on the security and transparency perspective, the results of this study support previous studies (K et al., 2023; Kraus et al., 2021; L.K. & O.R., 2023; Saeed et al., 2023; Senna et al., 2022; Yoesoep Edhie Rachmad et al., 2024), which suggest that digitalization affects

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accounting practices in different countries and business sectors. As in those studies, it shows that the adoption of digital technologies in the global accounting sector has several challenges, especially in terms of training and data security, which require innovative and structured solutions.

Technology Integration

One unexpected finding from the research was the high degree of difficulty in integrating digital technologies with legacy systems. While many respondents anticipate seamless integration of new technologies into existing systems, they frequently encounter issues with system compatibility and stability. Differences in system architecture and coding standards between new technologies and legacy platforms can cause these problems. The results show how important it is to conduct a thorough technical evaluation before using a new technology solution and to conduct technical consultations during the adoption process.

While increased efficiency and accuracy are clear benefits of digitization, this research also highlights the challenges of technology adaptation and integration, as seen in various literacies. For example, research (Dafri & Al-Qaruty, 2023; Gupta & Nain, 2022; Kovalevska et al., 2022; Wiraputra & Noviaristanti, 2022) emphasizes the challenges of integrating digital technology within existing systems. This implies that despite technological advancements, we still need to address and find solutions for significant implementation barriers.

This study also shows that people need more training in order to use digital technology. This supports the results of Barboutidis & Stiakakis (2023), Budiasih (2024), Muniasamy & Alasiry (2020), Taib et al. (2022), Varaniūtė et al. (2022), Wanof (2023), and Wu (2024), all of which show how important it is to give workers the skills they need to make the switch to more digital methods. The similarity of these findings with other studies confirms that training is a critical component that will determine the speed and effectiveness of digitalization adoption in accounting.

CONCLUSION

This research successfully addresses the issue of how digitalization affects the efficiency, accuracy, and sustainability of accounting practices. The findings indicate that digitalization significantly enhances efficiency and accuracy in managing accounting data, but it also presents challenges in terms of technology integration and the need for more professional training. Through a qualitative approach, this research reveals the complex dynamics that occur in digital transformation in accounting. The key findings of this research emphasize that the adoption of digital technologies such as artificial intelligence and blockchain helps improve accounting processes by minimizing errors and increasing data transparency. However, the findings also underscore that infrastructure constraints and a significant need for user training often hinder the integration of these technologies. In this regard, digitalization is not only about implementing technology but also involves effective human resource management. The findings have important implications for theory and practice in accounting. Theoretically, this research enhances our understanding of the impact of digitalization on accounting practices by offering fresh perspectives on leveraging technology to enhance efficiency and accuracy. From a practical standpoint, the findings provide advice that firms should be able to consider a comprehensive training strategy and evaluation of technology infrastructure before adopting digital solutions, as well as ensuring a successful and effective transition. Although this research offers valuable insights, it is important to acknowledge its limitations. The qualitative methodology used may limit the generalizability of the findings, and the sample was limited to a few companies, which may not be representative of all accounting sectors. We recommend conducting a broader study with a more diverse sample and potentially using a quantitative approach to test these

findings in future research. Further research could also explore the impact of specific digital technologies, such as artificial intelligence, and their implications on certain types of accounting transactions.

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