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The Impact of Digital Transformation on the Development of Management Accounting Practices in Vietnamese Enterprises

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Abstract

This study was conducted to understand the impact of digital transformation on management accounting in Vietnamese enterprises. By qualitative research method, on the basis of studying documents and conducting interviews and focus group discussions with 20 management accounting experts, business managers and information technology experts from 12 enterprises of different industries in Vietnam. Our findings show that digital technologies, such as cloud computing, big data analytics, and artificial intelligence,

have significant potential to improve the efficiency, accuracy, and value of management accounting. However, Vietnamese enterprises also face significant challenges in adapting to the digital age. To overcome these challenges, Vietnamese enterprises have been applying various strategies. Based on the results of the study, a number of recommendations are made to stakeholders to successfully guide the digital transformation journey in management accounting.

Keywords: Digital Transformation, Digital Technology, Management Accounting, Vietnam

1. Introduction

In recent years, digital transformation has been seen as an important factor in shaping the worldwide business landscape. Digital transformation is the process of integrating digital technology into all areas of a business, changing the way it operates, and providing value to customers. The rapid advancement of technologies such as cloud computing, big data analytics, artificial intelligence, and the Internet of Things (IoT) has allowed businesses to streamline processes, improve efficiency, and gain competitive advantage (Bharadwaj *et al.*, 2013; Hess *et al.*, 2016)^[4, 18].

The impact of digital transformation on business is far-reaching. It has led to the creation of new business models, disruption of traditional industries, and the emergence of innovative products and services (Reis *et al.*, 2018)^[32]. A study by the mit Center for Digital Business and Capgemini Consulting found that digitally deep-rooted companies are 26% more profitable, generate 9% more revenue, and have 12% higher market value than less digitally deep-rooted companies (Westerman *et al.*, 2012)^[39].

Management accounting plays an important role in modern businesses by providing financial and non-financial information to support decision-making, planning, and control (Kaplan & Atkinson, 2015)^[24]. It allows managers to understand the financial implications of their decisions, monitor performance and allocate resources effectively (Drury, 2017)^[15]. In today's dynamic and competitive business environment, management accounting has evolved from a function of cost calculation and financial reporting to become a strategic partner in promoting business success (Bhimani & Bromwich, 2010)^[5].

The importance of management accounting in modern enterprises is underscored by its ability to provide insight into cost behavior, profitability, and performance metrics (Groot & Selto, 2013)^[17]. A study by the Institute of Management Accountants (IMA) found that companies with effective management accounting practices made better decisions, improved operational efficiency, and higher overall performance (IMA, 2019)^[22].

Although digital transformation has been widely acknowledged as an important factor in shaping the global business landscape (Vial, 2019)^[36], its specific influence on management accounting practices in Vietnam has not been clearly explored (Pham, 2022)^[29]. Vietnamese enterprises have adopted digital technology to various degrees, but the current state of digital transformation and its impact on domestic management accounting practices has not received proper research attention (Pham, 2023)^[30].

Given the important role of management accounting in modern enterprises (Kaplan & Atkinson, 2015)^[24] and the potential benefits of digital transformation on organizational performance (Westerman *et al.*, 2012)^[39], it is necessary to investigate how digital transformation affects the development of management accounting practices in Vietnamese enterprises, from the perspective of management accountants, chief financial officers and information technology professionals.

The research aims at the following specific objectives:

1. Understanding the current situation of applying and implementing digital transformation in Vietnamese enterprises.
2. To investigate the impact of digital transformation on management accounting practices in terms of data collection, processing, decision-making, efficiency, and accuracy.
3. To identify the challenges faced by Vietnamese enterprises in adapting to digital transformation and the strategies used to overcome these challenges.
4. Making recommendations for successful digital transformation in management accounting practices for Vietnamese enterprises.

By addressing these objectives, this study contributes to a growing body of knowledge on the intersection of digital transformation and management accounting, with a particular focus on Vietnam's business landscape.

2. Literature review

2.1 Potential impact of digital transformation on management accounting practices

Digital transformation has the potential to significantly impact management accounting practices by changing the way data is collected, processed, and analyzed. The adoption of digital technologies such as cloud computing, big data analytics and artificial intelligence can automate and streamline management accounting tasks, which improves efficiency and accuracy (Bhimani & Willcocks, 2014; Rikhardsson & Yigitbasioglu, 2018)^[6, 33]. For example, a cloud-based accounting system enables real-time data access and collaboration, while big data analytics can provide insights into cost drivers, customer behavior, and performance metrics (Warren *et al.*, 2015)^[38].

Moreover, digital transformation can enhance decision-making capabilities by providing management accounting with more comprehensive and timely information (Appelbaum *et al.*, 2017)^[3]. Predictive analytics and machine learning algorithms can help forecast future trends, identify potential risks, and optimize resource allocation (Cockcroft & Russell, 2018)^[11]. A Deloitte (2018)^[14] study found that organizations leveraging advanced analytics in the finance and accounting functions made better decisions, improved efficiency, and higher overall performance.

Digital transformation is also likely to redefine the role of management accountants, shifting their focus from traditional tasks such as data entry and reporting to more strategic and value-added activities (Bhimani & Bromwich, 2010; Pickard & Cokins, 2015)^[5, 31]. As digital technology automates routine tasks, management accountants can spend more time analyzing data, providing insights, and partnering with business leaders to drive strategic initiatives (Lawson, 2019)^[25].

2.2 Some research related to the topic

Research on the impact of digital transformation on management accounting practices has been conducted in various countries, providing insight into the opportunities and challenges associated with the topic. A study by Al-Htaybat & von Alberti-Alhtaybat (2017)^[2] explored the implications of big data and analytics for management accounting in Jordanian companies. These findings underscore the potential of these technologies to improve decision-making, performance measurement, and cost management.

In the United Kingdom, a survey by the Chartered Institute of Management Accountants (Cima, 2019)^[10] found that management accountants are increasingly embracing digital technologies to enhance their role and contribute to organizational success. The study highlights the importance of developing digital skills and adapting to new ways of working in the digital age.

A case study by Oesterreich & Teuteberg (2019)^[27] investigated the impact of Industry 4.0 technology on management and control accounting at a German manufacturing company. The authors found that the adoption of digital technology has led to increased automation, real-time data availability, and improved decision-making. However, they also note the challenges associated with implementing these technologies, such as the need for new skills and employees' ability to resist change.

Schäffer & Weber (2016)^[35] conducted a survey of German companies to investigate the effect of digitalization on management accounting. They found that digital technologies such as business intelligence and analytics are increasingly being adopted, resulting in improved data quality, faster reporting, and better decision-making. However, the study also highlights the challenges that management accounting faces in acquiring the skills needed to leverage these technologies effectively.

Dalla Via *et al.* (2019)^[13] explored the impact of digital transformation on management accounting in Australia's SMEs. The findings suggest that SMEs are gradually adopting digital technologies to streamline processes and deepen their understanding of data. However, the authors note that the lack of digital resources and skills are significant barriers to the successful implementation of these technologies.

Agostini & Nosella (2017)^[1] studied the relationship between big data analytics and management accounting at Italian manufacturing companies. Research shows that the application of big data analytics positively affects the effectiveness of management accounting practices, especially in terms of cost management and performance measurement. The authors emphasize the importance of aligning digital initiatives with the organization's strategy to realize the full potential of these technologies.

A survey by the Institute of Management Accountants (IMA, 2019)^[22] examined the impact of digital transformation on the role of management accounting in the United States. The findings suggest that management accounting is increasingly involved in strategic decision-making and value creation activities as a result of digital transformation. The study also highlights the need for continuous learning and skill development to keep up with

the evolving technological landscape.

Hu *et al.* (2020) ^[19] explored the adoption of cloud computing in management accounting among Chinese listed companies. The results indicate that cloud computing has significantly enhanced the effectiveness and efficiency of management accounting activities, especially in the areas of budgeting, forecasting and performance evaluation. The authors also note the importance of senior leadership support and organizational readiness to successfully deploy cloud computing.

The above studies provide evidence of the growing impact of digital transformation on management accounting practices in many different countries and industries. While specific challenges and opportunities may vary depending on the context, the general trend is that digital technologies are reshaping the role of management accounting and how they contribute to organizational success. Therefore, it is essential to understand the impact of digital transformation on the development of management accounting practices in the context of Vietnamese enterprises.

3. Research Method

3.1 Research design

Research approach

To understand the impact of digital transformation on management accounting practices in Vietnamese enterprises, this study uses qualitative research methods. Qualitative research is particularly relevant when the aim is to gain a deep understanding of a complex phenomenon, explore the experiences and perceptions of individuals, and explore the underlying processes and contextual factors that influence the topic under investigation (Creswell & Poth, 2018; Merriam & Tisdell, 2016) ^[12, 26].

By collecting data through in-depth interviews and document analysis, the study will capture the perspectives of management accountants, financial managers, and information technology professionals, as well as the organizational and environmental factors that shape the adoption and deployment of digital technology.

Case study

In the qualitative research model, this study will apply the multi-case research method. Case studies are an effective strategy for studying contemporary phenomena in their real-life context, especially when the boundaries between the phenomenon and its context are unclear (Yin, 2018) ^[37]. By examining multiple firms, the study can identify similarities and differences between firms, leading to findings that are more general and robust (Eisenhardt & Graebner, 2007) ^[16]. This study selects an intentional sample of 12 Vietnamese enterprises that have implemented or are implementing digital transformation initiatives (**Appendix 1**).

3.2 Data collection

Semi-structured interviews with management accountants, financial managers and information technology specialists

Semi-structured interviews will be the main data collection method for this study. This approach allows for a balance between structure and flexibility, allowing the researcher to explore predefined topics while also providing an opportunity for participants to share their unique experiences and insights (Brinkmann & Kvale, 2015) ^[9]. Semi-structured interviews are particularly suitable for investigating complex and nuanced issues, as they allow

probing and follow-up questions to clarify responses and explore deeper implications (Rubin & Rubin, 2012) ^[34].

In this study, semi-structured interviews will be conducted with 20 people from three groups: a group of management accountants, a group of financial managers and a group of IT professionals. These individuals were selected because they have direct involvement and understanding of the impact of digital transformation on management accounting in their respective organizations.

Management accountants will provide insights into how digital technology has affected their roles, responsibilities, and day-to-day operations. Financial managers will take a broader view of the strategic implications of digital transformation for financial management and decision making. IT professionals will contribute their technical expertise and understanding of the digital technologies being implemented in their organizations, the interview questions of the relevant subjects are shown in the **Appendix 2**. Each interview lasts from 30 to 45 minutes, either in person or by phone between March 2024 and the end of June 2024. The interview process will be recorded and transcribed verbatim to facilitate data analysis.

Analysis of documents

In addition to semi-structured interviews, this study also uses document analysis as an additional data collection method. Literature analysis involves systematic examination and interpretation of different types of literature relevant to the research topic (Bowen, 2009) ^[7]. This method provides a valuable source of data because it allows corroboration and contextualization of findings from interviews (O'Leary, 2014) ^[28].

In this study, the documents collected include, financial statements; information on the enterprise's website related to digital transformation initiatives, management accounting practices and their organizational culture; internal documents such as strategic plans, project reports, training materials and process diagrams related to digital transformation and management accounting.

3.3 Data analysis

In this study, the thematic analysis will follow a six-stage process guided by Braun & Clarke (2006) ^[8]. In addition to thematic analysis, this study also uses cross-case analysis to compare and contrast findings across multiple case studies. Cross-case analysis is a valuable technique for identifying patterns, similarities, and differences between cases, leading to more robust and generalized conclusions (Khan & VanWynsberghe, 2008; Yin, 2018) ^[23, 37].

4. Research results

4.1 The current situation of digital transformation in Vietnamese enterprises

Level of acceptance and implementation

The results of the cross-analysis show that the level of adoption and implementation of digital technology in Vietnamese enterprises varies widely. While some organizations have made significant strides in their digital transformation journey, others are still in the early stages of discovery and planning.

Case study companies that have successfully embraced digital transformation demonstrate clear strategic vision and commitment from senior leadership. These organizations have invested in the infrastructure, manpower, and resources needed to support the adoption of digital technology across a

variety of functions, including management accounting. They have also fostered a culture of innovation and continuous improvement, encouraging employees to experiment with new tools and approaches.

However, the study results also highlight that many Vietnamese enterprises, especially SMEs, face significant challenges in implementing digital transformation initiatives. These challenges include limited financial resources, a shortage of skilled personnel, inadequate information technology infrastructure, and resistance to change by employees and stakeholders. As a result, the level of digital adoption among these organizations remains relatively low, with many organizations still relying on traditional manual processes and legacy systems.

Cross-analysis shows that the level of digital adoption in management accounting practice is strongly correlated with the overall level of digital development of the organization. Companies that have successfully integrated digital technology across a variety of functions tend to have more advanced and streamlined management accounting processes, such as real-time financial reporting, predictive analytics, budgeting, and automated forecasting.

Key digital technologies used

The findings suggest that Vietnamese enterprises are gradually using a range of digital technologies to transform their management accounting practices. The most commonly adopted technologies include:

Cloud Computing: Many large organizations have migrated their data and financial systems to the cloud, enabling remote access, scalability, and cost savings. Cloud-based accounting software such as SAP Business One and Oracle NetSuite are gradually being applied in Vietnamese enterprises.

Big data analytics: Companies are leveraging big data analytics tools to process and analyze large amounts of structured and unstructured data from a variety of sources, such as financial transactions, customer interactions, and social networks. These tools allow management accountants to explore hidden patterns, trends, and insights to support strategic decision making.

Artificial intelligence (AI) and machine learning: AI-enabled solutions, such as smart financial assistants and fraud detection systems, are being adopted by some Vietnamese enterprises to automate routine tasks, improve accuracy and enhance risk management. Machine learning algorithms are also being used to predict future financial performance and optimize resource allocation.

Robotic Process Automation (RPA): RPA tools are being implemented to automate manual and repetitive accounting tasks, such as data entry, reconciliation, and report generation. It minimizes errors, improves efficiency, and frees up management accounting to focus on higher-value activities.

Mobile and digital payments: The widespread adoption of mobile devices and digital payment platforms, such as e-wallets and QR codes, has changed the way businesses collect and process financial transactions. These technologies have streamlined cash flow management and enabled real-time tracking of financial data.

Cross-analysis emphasizes that the selection and implementation of digital technology in management accounting is influenced by a variety of factors, such as the size and industry of the organization, the complexity of its financial operations, and the available resources and

expertise. Companies that successfully adopt these technologies often start with small-scale pilot projects and gradually scale up based on results and lessons learned.

Overall, the findings suggest that Vietnamese businesses are increasingly realizing the potential of digital technology in transforming their management accounting practices. However, the level of adoption and the specific technologies used vary significantly across organizations, depending on their digital maturity, strategic priorities, and available resources.

4.2 Impact of digital transformation on management accounting practice

Changes in data collection and processing

Findings from case studies show that digital transformation has dramatically changed the way management accountants collect and process financial and non-financial data. The adoption of digital technologies, such as cloud computing, big data analytics, and artificial intelligence, has enabled organizations to automate and streamline data collection and processing tasks.

In the past, management accounting relied heavily on manual data entry and spreadsheet-based analysis, which was time-consuming, error-prone, and limited in scope. With the implementation of cloud-based accounting systems and enterprise resource planning (ERP) software, financial data can now be automatically collected, stored and processed in real time. This has significantly reduced the administrative burden on management accounting and improved the timeliness and accuracy of financial reporting. Furthermore, the integration of data from a variety of sources, such as customer relationship management (CRM) systems, supply chain management (SCM) platforms, and social media channels, has provided management accountants with a more comprehensive view of organizational performance. Advanced analytics tools and data visualization techniques have enabled management accounting to quickly identify patterns, trends, and anomalies in data, facilitating more informed decision making.

However, these findings also highlight some of the challenges associated with changes in data collection and processing. Management accountants need to develop new skills and competencies to effectively use digital tools and interpret insights generated from data. There are also concerns around data security, privacy, and governance, as increasing reliance on digital technology exposes organizations to new risks and vulnerabilities.

Improve ability to make decision

Cross-sectional analysis shows that digital transformation has significantly enhanced the decision-making capabilities of management accounting. The real-time availability of accurate and comprehensive financial data, combined with the use of advanced simulation and analysis tools, has enabled management accountants to provide more timely and relevant insights to support strategic and operational decision making.

In the past, management accountants often relied on historical data and intuition to make decisions, which limited their ability to respond quickly to changing business conditions. With the application of predictive analysis and scenario planning tools, management accounting can now forecast future financial performance, identify potential risks and opportunities, and assess the impact of various strategies

and initiatives. For instance, several case study firms have used machine learning algorithms to predict customer demand, optimize inventory levels, and improve cash flow forecasts. Others have used data visualization dashboards to track key performance indicators (KPIs) in real time and make recommendations to decision-makers about potential issues or opportunities.

The findings also highlight that digital transformation has enabled management accounting to play a more strategic and proactive role in the decision-making process. By providing insights beyond traditional financial metrics, such as customer profitability, supply chain efficiency, and environmental sustainability, management accounting can help organizations make more informed and inclusive decisions that create long-term value for stakeholders.

Improve the efficiency and accuracy of management accounting work

Case studies show that digital transformation has significantly improved the efficiency and accuracy of various management accounting tasks. Automating routine and repetitive tasks such as data entry, reconciliation, and report generation has helped management accountants focus on higher-value activities such as data analysis, business collaboration, and strategic planning. Implementing robotic process automation (RPA), for example, has allowed some organizations to reduce the time and effort required for tasks such as invoice processing, accounts payable, and accounts receivable. This not only improves the speed and accuracy of these tasks but also reduces the risk of human error and fraud.

Similarly, the use of artificial intelligence (AI) and natural language processing (NLP) technology has enabled management accounting to automate the extraction and analysis of unstructured data from sources such as contracts, emails, and social media posts. This has provided organizations with new insights into customer psychology, market trends, and competitor performance that can inform strategic decision making.

The findings also show that digital transformation has improved the accuracy and reliability of compliance and financial reporting. The use of cloud-based accounting systems and blockchain technology has enabled organizations to maintain secure and tamper-proof records of financial transactions, reducing the risk of errors and fraud. The automation of compliance tasks, such as tax calculation and regulatory reporting, has also eased the burden on management accounting and minimized the risk of fines and reputational damage.

However, cross-analysis also highlights some of the challenges associated with improving the efficiency and accuracy of management accounting tasks. Increasing reliance on digital technology has created new risks around data security, privacy, and system failure. Management accountants need to work closely with IT professionals to ensure the integrity, security, and availability of financial data and systems.

Moreover, the automation of tasks has raised concerns about the potential impact on jobs and skills in the management accounting profession. While digital transformation has created new opportunities for management accounting to add value and take on more strategic roles, it has also highlighted the need to continually learn and upskill to remain relevant in the digital age.

4.3 Challenges faced by Vietnamese enterprises in adapting to digital transformation

Lack of technical skills and knowledge

One of the biggest challenges that Vietnamese businesses face in adapting to digital transformation is the lack of technical skills and knowledge of employees and management. Findings from case studies show that many organizations struggle to find and retain talent with the necessary digital capabilities, such as data analytics, cloud computing, and cybersecurity.

This skills gap is particularly evident in the managerial accounting function, where traditional accounting training and education programs often fail to adequately prepare professionals for the demands of the digital age. Management accountants need to develop new skills in areas such as data visualization, predictive analytics, and business collaboration, as well as a deeper understanding of digital technologies and their impact on business processes. Cross-sectional analysis shows that a lack of technical skills and knowledge can hinder the effective adoption and use of digital technology in management accounting. For example, some companies report that the implementation of new accounting software or analytics tools is delayed or abandoned because employees are unable to use them effectively. Others note that the insights generated by digital tools are underutilized due to the limited data literacy and analytical skills of management accounting.

Resist change from employees and management

Another significant challenge that Vietnamese businesses face in adapting to digital transformation is opposition to change from employees and management. Findings from case studies show that many organizations have difficulty overcoming cultural and behavioral barriers to digital adoption, such as fear of losing their jobs, lack of trust in technology, and attachment to traditional ways of working. In the managerial accounting function, resistance to change can manifest itself in various forms, such as reluctance to adopt new digital tools and processes, lack of collaboration and communication with other functions, and skepticism toward data-driven insights and suggestions. Some companies report that management accountants initially resisted the idea of automating routine tasks or sharing financial data with non-financial stakeholders, as they saw it as a threat to their role and expertise.

Cross-analysis shows that resistance to change can significantly slow or even derail digital transformation initiatives in management accounting. Organizations that fail to secure participation and support from employees and management may find it difficult to fully realize the benefits of digital technology, such as improved efficiency, accuracy, and decision-making capabilities.

Financing sources for technology investment are still limited

The third major challenge that Vietnamese enterprises face in adapting to digital transformation is the limited source of finance for technology investment. The findings from the studies show that many organizations, especially SMEs, have difficulty allocating sufficient budget for the acquisition, deployment and maintenance of digital technology.

In the management accounting function, the lack of financial resources can limit the application of advanced technologies such as artificial intelligence, blockchain, and real-time

analytics, which require significant upfront investment in hardware, software, and talent. Some case study companies report that they must prioritize investments in other areas, such as production or marketing, over management accounting technology due to budget constraints.

Cross-analysis shows that limited financing for technology investment can create a digital divide between large corporations and small and medium enterprises in Vietnam. While larger organizations may have the scale and resources to invest in cutting-edge technology and attract top digital talent, SMEs may struggle to keep up with the pace of digital transformation and risk falling behind in efficiency, innovation, and competitiveness.

In general, the challenges that Vietnamese enterprises face in adapting to the digital transformation in management accounting are great but not insurmountable. By investing in digital skills and knowledge, managing resistance to change, and developing strategic approaches to technology investment, organizations can overcome these barriers and realize the full potential of digital technology in driving efficiency, accuracy, and decision-making in management accounting.

4.4 Some strategies used by Vietnamese enterprises to overcome the challenges of digital transformation in the field of management accounting

Employee Training and Development Programs

To address the shortage of technical skills and knowledge of employees and management, Vietnamese enterprises are increasing investment in training and development programs. Case studies show that organizations are using a variety of methods to upskill their workforce, especially in the management accounting function, to meet the demands of the digital age.

One common strategy is to provide internal training sessions and seminars on specific digital tools and technologies used in management accounting. These sessions are usually conducted by in-house experts or external trainers and aim to provide hands-on experience and practical guidance on how to use and apply these technologies in everyday work. Some companies have also set up in-house learning platforms and online courses to enable continuous self-study and skill development.

Another strategy adopted by Vietnamese enterprises is to sponsor employees to participate in external training programs and certificate courses. For example, some organizations have partnered with professional bodies, such as the Association of Chartered Certified Accountants (ACCA) and the Institute of Chartered Management Accountants (Cima), to provide employees with access to globally recognized certificate programs in areas such as data analytics, digital finance, and strategic business leadership.

The findings also underscore the importance of consulting and coaching programs in supporting the enhancement of the digital skills of management accounting. Some companies have established formal consulting programs in which experienced digital managers and professionals provide guidance and support to junior employees in developing digital competencies and applying them in projects on a day-to-day basis.

Cross analysis shows that effective training and development programs are critical to bridging the skills gap and helping Vietnamese enterprises adapt to digital

transformation. By investing in the digital competence of management accounting, organizations can improve the adoption and use of digital technology, improve the quality and efficiency of the management accounting process, and foster a culture of continuous learning and innovation.

Partnering with technology providers and consultants

Another strategy adopted by Vietnamese enterprises to overcome the challenges of digital transformation is to cooperate with technology suppliers and consultants. The results of the study show that many organizations, especially those with limited internal digital capabilities, seek expertise and external support to navigate the complex landscape of digital technologies and implement them effectively in management accounting.

A common approach is to engage technology vendors to provide comprehensive solutions for management accounting processes, such as cloud-based accounting software, data analytics platforms, and robotic process automation tools. These providers typically provide a variety of services, including needs assessment, system design and configuration, data migration, user training, and ongoing maintenance and support.

The findings suggest a successful collaboration with technology providers based on a clear understanding of business requirements, a thorough evaluation of potential solutions, and a strong collaborative approach. Several companies reported that they worked closely with technology providers to customize and integrate digital solutions into their existing systems and processes, ensuring a smooth transition and minimizing disruption to business operations.

Another approach adopted by Vietnamese enterprises is to engage management consulting firms and digital transformation professionals to provide strategic advice and guidance on digital transformation initiatives. These consultants have extensive experience and best practices from a variety of industries, and can help organizations develop and implement a digital transformation roadmap, assess and mitigate risks, and measure and communicate the value of digital investment.

The interview results also highlighted the importance of selecting the right technology provider and consultant based on their industry expertise, track record, and cultural relevance. Organizations that are able to establish strong and trusted relationships with external partners will be better positioned to overcome the organizational and technical challenges of digital transformation and achieve desired outcomes.

Gradually deploying digital technology

The third strategy used by Vietnamese enterprises to overcome the challenges of digital transformation is to adopt a step-by-step and phased approach to deploying digital technology in management accounting. The research results show that many organizations, especially those with limited resources and high levels of digital adoption, choose to prioritize and sequence their digital initiatives based on the needs and readiness of the business.

A common approach is to start with small-scale pilot projects and proof of concept to test and validate the feasibility and value of specific digital technologies before scaling them up across the organization. For example, some companies reported that, for the first time, they implemented robotic process automation (RPA) in selected accounting processes, such as accounts payable and accounts

receivable, and gradually expanded the use of RPA based on results and lessons learned from the pilot phase.

Another approach is to adopt a modular and incremental approach to digital transformation, focusing on one area of management accounting at a time, such as financial planning and analysis, cost management, or performance reporting. This allows organizations to gradually build their digital and infrastructure capabilities, while minimizing the risks and disruptions associated with large-scale transformation.

The findings also underscore the importance of engaging key stakeholders, such as management accountants, information technology professionals, and business leaders in the planning and implementation of digital initiatives. By engaging these stakeholders early and incorporating their feedback and requests, organizations can ensure that digital technology aligns with business needs and is more likely to be adopted and adopted by users.

Cross analysis shows that a step-by-step and phased approach to digital implementation can help Vietnamese enterprises overcome the challenges of limited resources, skills gaps, and resistance to change. By starting small and scaling based on business priorities and lessons learned, organizations can mitigate the risks and costs of digital transformation while building a strong foundation for future digital growth and innovation in management accounting.

However, these findings also underscore the need for organizations to have a clear and compelling vision and roadmap for digital transformation in management accounting, even if implementation is gradual and phased. This vision should be aligned with the overall business strategy and should be communicated and stratified down all levels in the organization, ensuring that everyone understands the goals, benefits, and expectations of digital transformation.

Moreover, Vietnamese enterprises need to strike a balance between short-term and long-term digital investment in management accounting. While a phased and gradual approach can help organizations address immediate business needs and constraints, it does not compromise long-term strategic investments in digital capabilities and talent that are critical to maintaining a competitive advantage in the digital age.

In general, the strategies used by Vietnamese enterprises to overcome the challenges of digital transformation in the field of management accounting, including training and development programs, cooperation with suppliers and technology consultants as well as step by step implementation of digital technology, show the importance of a comprehensive approach and adaptation to digital technology. transformation. By combining these strategies and adapting them to specific contexts and needs, organizations can successfully navigate the complex journey of digital transformation and realize the full potential of digital technology in driving business value and innovation in management accounting.

5. Discussion

5.1 Discussing research results

The findings of this study contribute to supplementing the literature on digital transformation in management accounting, especially in the context of emerging economies such as Vietnam. These results are generally consistent with previous research, which highlights the significant impact of digital technology on management accounting practices, as

well as the challenges and opportunities faced by organizations in adapting to the digital age.

The study confirms the findings of previous research that digital transformation is changing the role and competencies of management accounting, from traditional financial reporting and control to more strategic and business-oriented activities (Bhimani & Willcocks, 2014; Rikhardsson & Yigitbasoglu, 2018) [6, 33]. Case studies demonstrate how digital technologies, such as cloud computing, big data analytics, and artificial intelligence, are enabling management accounting to provide more timely, accurate, and relevant insights to support decision-making and drive business value.

However, this study also extends previous research by highlighting specific challenges faced by Vietnamese enterprises in the adoption and implementation of digital technology in management accounting. The findings relate to a lack of technical skills and knowledge, resistance to change, and limited financial resources consistent with previous studies that have identified similar barriers to digital transformation in other contexts (Kruskopf *et al.*, 2020; Nguyen *et al.*, 2021).

Moreover, the study provides new insights into the strategies that Vietnamese enterprises use to overcome these challenges, such as training and development programs, cooperation with technology suppliers and consultants, and step-by-step implementation of digital technology. These findings contribute to the limited research on digital transformation strategies in emerging economies and can inform the development of successful digital transformation frameworks and best practices in management accounting.

5.2 Significance for enterprises and management accounting experts in Vietnam

The findings of this study have important implications for Vietnamese enterprises and management accounting professionals. *First*, the study highlights the need for organizations to develop clear and compelling visions and roadmaps for digital transformation in management accounting, consistent with overall business strategy. This requires strong leadership commitment and communication, as well as engagement and commitment from key stakeholders across the organization.

Second, the study emphasizes the importance of investing in digital skills and competencies for management accounting. Vietnamese enterprises need to provide training and development opportunities for their accountants to acquire the analytical and technical skills needed to effectively use and leverage digital technology. This may involve partnering with educational institutions, professional bodies, and technology providers to develop and deliver appropriate and up-to-date training programs.

Third, the study proposes that Vietnamese enterprises need to adopt a holistic and adaptive approach to digital transformation in management accounting, combining different strategies and initiatives based on their specific needs and limitations. This may involve starting with small-scale pilot projects, collaborating with external partners, and gradually scaling digital technology based on lessons learned and business priorities.

Fourth, the study highlights the need for management accounting professionals to embrace the changing nature of their roles and proactively develop the skills and competencies needed in the digital age. This includes not

only technical skills in data analysis and digital technology but also soft skills in communication, collaboration and strategic thinking. Management accountants need to position themselves as strategic business partners and value creators, leveraging digital technology to provide insights and support decision making throughout the organization.

5.3 Recommendations for successful digital transformation in management accounting

Based on the results of this study, the following recommendations are proposed for Vietnamese enterprises and management accounting professionals to successfully navigate the digital transformation journey:

Firstly, develop a clear and compelling vision and roadmap for digital transformation in management accounting, aligned with the overall business strategy and communicated to all stakeholders.

Second, invest in digital skills and competencies for management accounting through training and development programs, collaborations with educational institutions and professional bodies, and knowledge-sharing initiatives.

Third, adopt a holistic and adaptive approach to digital transformation, incorporating different strategies and initiatives based on business needs and constraints, such as small-scale pilot projects, collaboration with external partners, and gradual deployment of digital technologies.

Fourth, foster a culture of innovation and experimentation in management accounting, encourage employees to identify and test new digital solutions, and share lessons learned and best practices.

Fifth, establish strong governance and risk management frameworks to ensure the security, privacy, and integrity of data and the financial system in the digital age.

Sixth, collaborate with cross-functional teams, including information technology, operations, and business units to ensure alignment and integration of digital technologies across the organization.

Seventh, measure and communicate the value and benefits of digital transformation in management accounting, using both financial and non-financial metrics, while introducing success stories and best practices.

Eighth, constantly monitor and adapt to the development context of digital technology and business requirements, keeping up to date with the latest trends and improvements in management accounting.

5.4 Limitations of the study and suggestions for further studies

Although this study provides valuable insights into the impact of digital transformation on management accounting in Vietnamese enterprises, it still has some limitations that need to be acknowledged and addressed in future research.

Firstly, the study is based on a limited sample of Vietnamese firms and may not represent the whole range of firms in Vietnam. Future research can expand the sample size and include a more diverse range of industries and enterprise sizes to enhance the breadth of findings.

Second, the study relied primarily on qualitative data from interviews and focus groups, which may be influenced by social desirability biases and recall biases. Future research can reconcile findings with other data sources, such as surveys, financial reports, and performance metrics, to provide a more comprehensive and objective view of digital transformation in management accounting.

Third, the study focuses on the reality and challenges of digital transformation in management accounting, but has not fully explored the long-term outcomes and impacts of digital technology on business performance and competitiveness. Future research may conduct longitudinal studies to examine the evolving nature of digital transformation and its implications for management accounting over time.

Fourth, the study is set in the context of Vietnam, an emerging economy with specific cultural, institutional and economic characteristics. Future research can compare and contrast findings with other countries and regions to identify similarities and differences in digital transformation strategies and challenges in management accounting.

Overall, this study provides a foundation for future studies on digital transformation in management accounting, especially in the context of emerging economies such as Vietnam. By addressing the limitations and building on the findings of this study, future research can contribute to a more comprehensive and in-depth understanding of the opportunities, challenges, and strategies for a successful digital transformation in management accounting.

6. Conclusion

This study explored the impact of digital transformation on management accounting in Vietnamese enterprises, focusing on changes in management accounting practices, challenges faced by organizations, and strategies to overcome these challenges. These findings highlight the significant potential of digital technologies, such as cloud computing, big data analytics, and artificial intelligence, to improve the efficiency, accuracy, and value of management accounting.

However, the study also points to significant challenges faced by Vietnamese enterprises in adapting to the digital age, including a lack of technical skills and knowledge, resistance to change, and limited financial resources for technology investment. To overcome these challenges, Vietnamese enterprises are applying a variety of strategies, such as training and development programs for employees, cooperation with suppliers and technology consultants as well as gradually deploying digital technology.

While this study provides valuable insights, it also has limitations that need to be addressed in future research, such as expanding sample sizes, diversifying data sources, conducting longitudinal research, comparing results with other countries, and developing more detailed frameworks and guidelines for digital transformation in management accounting.

As Vietnamese enterprises continue to overcome the challenges and opportunities of the digital age, the findings of this study can serve as a foundation for further research and practice on digital transformation in management accounting. By leveraging the potential of digital technology and applying effective strategies and best practices, Vietnamese businesses and management accounting professionals can thrive in the digital age and drive sustainable growth and competitiveness.

7. References

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