



ACCOUNTING IN THE ERA OF DIGITALIZATION IN MALAYSIA: THE CONCEPTUAL FRAMEWORK

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ABSTRACT

The digitalization of accounting practices presents both opportunities and challenges for businesses in Malaysia. This paper establishes a conceptual framework focusing on the implications of digitalization on the accounting practices encompassing forensic accounting, financial accounting, and management accounting, emphasizing the necessity for technology integration, digital competency, and regulatory adaptation. This research seeks to explore the impacts of advancements like big data analysis, artificial intelligence (AI) and blockchain technology on transforming accounting procedures to improve operational efficiency and effectiveness within organizations. By exploring the influence of digital technologies on accounting processes, this research contributes to the understanding of effective accounting practices in a rapidly evolving digital landscape. The paper proposes a paradigm for integrating new technologies into accounting profession and delineates the implications for practitioners, regulators, businesses, and educators in Malaysia.

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1. INTRODUCTION

The globalization and rapid advancement of technology have tremendously changed several areas, including accounting. In Malaysia, digitalization has revolutionized accounting practices, requiring new frameworks to meet the evolving demands of business and regulatory standards. Digitalization refers to the application of digital technologies to transform a business model, hence creating a new income streams and value-generating opportunities, in addition to the transition to a digital business (Savic & Pavlovic, 2023; Gartner, 2020). Consequently, it has impacted various company

activities, encompassing business models, supply chains, and support functions such as human resources and accounting.

Digitalization facilitates novel collaborative modalities among organizations, suppliers, customers, and employees, resulting in innovative product and service offerings (Verneeten & Heinen 2021). Simultaneously, digitalization creates a challenge for established organizations, necessitating a reassessment of their existing strategies and the exploration of emerging markets. The growth of digital transformation has initiated a new era marked by unparalleled technology advancements and paradigm transformations. Digital technologies are reshaping traditional business models, altering existing practices, and redefining organizational strategy across several industries (Savic & Pavlovic, 2023; Moller et. al., 2020).

This research is significant due to the pervasive impact of digital technology across businesses, requiring a reassessment of accounting practices. In the current competitive business environment, firms must implement digital strategies to simplify operations, enhance decision-making, and sustain relevance. Accounting, as an essential element of organizational strategy, must evolve in response to technological advancements to successfully facilitate managerial decision-making and promote sustainable growth. Apart from that, accountants must be highly proactive in facilitating the start and prompt execution of changes within organizations, enabling the business to effectively adjust to the dynamic environment and enhance its competitive standing (Boyle, 2021).

A significant transformation in the sector is the transition from manual to automated accounting systems (Arcega et al., 2015). The breadth of accountants' responsibilities is expanding, and consumer expectations are evolving. Technological innovation and digitalization facilitate implied upgrades and modifications in accounting.

Hence, understanding the implications of digital transformation in accounting is crucial for firms aiming to sustain a competitive edge in the digital era. This paper examines the implications of digital technology integration into accounting systems in Malaysia and formulates a conceptual framework to assist practitioners, stakeholders, and academicians during this transition.

2. LITERATURE REVIEW

2.1 Technology integration

The advancement of digital technology has transformed data collecting, storage, processing, and distribution among stakeholders (Nasiopoulos et al. 2014). This component includes the integration of digital tools in accounting operations. Businesses must evaluate the effects of cloud-based services, artificial intelligence, and automation to improve efficiency and precision. While the potential benefits of digital transformation in management accounting are immense, organizations also face a myriad of challenges in navigating this complex landscape. One of the primary challenges lies in effectively managing and integrating data from diverse sources to derive meaningful insights (Syamil et. al., 2023).

In the context of accounting, digital accounting refers to the practice of handling all financial transactions digitally, on a platform that allows for easy manipulation and transmission (Deshmukh, 2006). Consequently, future accounting professions are going to demand new ways of thinking, skills and figure out the best way to adapt

with the technology revolution. The dubious matter concerning these adjustments is to how accounting professionals should maintain resilience and remain proactive in cooperating with the automation and efficiency. Automates routine tasks such as data entry, invoice processing, and reconciliation, reducing human error and increasing efficiency which knowns as Robotics Process Automation.

Additionally, the Artificial Intelligence (AI) enhancing decision-making processes through predictive analytics and machine learning, providing deeper insights from financial data. Whereby, the big data enables accountants to analyse vast amounts of data from various sources, improving accuracy and financial forecasting and risk management. For the data analytics, tools like power BI and Tableau help in visualizing data trends and patterns, aiding strategic decision-making (Taib et. al., 2022; Moller et al., 2020).

Furthermore, blockchain provides a secure and transparent way to record transactions, reducing fraud and enhancing trust in financial reporting. Moller et. al., (2020) and supported by Taib et. al., (2023) indicating that smart contracts which automate and enforce contractual agreements, ensuring compliance and reducing the need for intermediaries. Cloud based accounting software allows real-time access to financial data from anywhere, facilitating remote work and collaboration. Business can scale their accounting operations without significant investments in IT infrastructure (Rosmala, 2024; Moller et. al., 2020). Digital reporting and compliance in the accounting for instance an E-reporting in accounting will be the digital tools streamline the reporting process, ensuring prompt and accurate submission of financial statements. Besides, the automated systems help in adhering to regulatory requirements, reducing the risk of non-compliance.

Therefore, accountants need to develop skills in data analytics, cybersecurity, and digital tools. Ongoing education and training are essential to keep up with technology advancements (Taib et. al, 2022; Moller et. al. 2020). Taib et al. (2022) indicated that the accounting profession is poised to enter a new era of digitalization, which will transform traditional accounting practices, encompassing record-keeping, reporting requirements, big data, data analytics, the internet of things, and blockchain. It clearly indicates that the better-prepared accountants are in utilizing technology, the more adept they will be at adapting to technological advancements in the sector. With the strategic role of accountants, automation overseeing routine tasks, accountants can focus more on strategic advisory roles, helping businesses navigate financial complexities.

The adoption of digital technology encourages greater collaboration and communication within organizations, eliminating isolation between departments and enabling cross-functional teams to work together to achieve common goals. Rosmala (2024) asserts that leveraging digital technology, the organizations can differentiate themselves from competitors, innovate more quickly, and respond to changing customer demands more effectively. In fact, accountants contribute to value creation by leveraging digital tools to provide insights that drive business growth (Taib et. al., 2022; Moller et. al., 2020). In response to this, accounting professions in the future are going to demand new skills and ways of thinking, to sustain with the changes in technology. The question that needs to be answered about these changes is how accountants should stay resilience and remain proactive in the future.

2.2 Digital competencies

In the past few years, the function of accountants in business has evolved into a computerized accounting system. According to Jasim and Raewf (2020), information technology has facilitated the accounting process for accountants for over a century. As part of their digital transition, many firms have begun integrating current cost and management accounting solutions, as stated by Berikol and Killi (2021). However, Wessel (2018) argued that accountants are incapable of performing their duties effectively without digital technology competencies. For accountants, assessing these competencies is essential.

Hence, in the context of accounting, digital literacy can be defined as is the awareness, attitude and ability of people to use digital tools and facilities appropriately to identify, access, manage, integrate, evaluate and synthesise digital resources, create new knowledge, communicate with others through media and express themselves in the context of specific life situations (Lestari & Santoso, 2019). In contrary, technology literacy means knowing how to use technology appropriately, whereby digital literacy means being able to communicate, understand, organize, and change digital information quickly and simply in order to be successful in the future. (Lestari & Santoso, 2019).

On the other hand, digital competence refers to essential life skills and abilities in the information society. Digital competence should be seen as a progression from instrumental skills to productive and strategic personal competences. Understanding basic tools and computer applications is only the first step towards developing advanced knowledge, skills and attitudes. According to Kongpradit et al. (2020), "digital competence" includes digital literacy, digital skills, electronic skills, internet skills and media literacy, among other 21st century skills. For the present study, four elements of digital competence were adopted, which include digital literacy, information literacy, ICT and internet literacy, and media literacy (Ala-Mutka, 2011). Moreno-Morilla et al. (2021) delineate the definitions of these four elements, which are utilized in the study as determinants of digitalization in accounting in Malaysia.

As digitalization reshapes accounting practices, continuous education and training are critical. In addition, accountants must develop skills in areas such as data analysis, cybersecurity, and technology management to remain competitive. Organizations should assess their current accounting capabilities and provide training programs on new technologies for their personnel. As one of the key players in the Malaysian economy, accountants are expected to equip themselves with the knowledge and skills needed for this move. However, a question remains on how ready they are to adapt and respond to the challenges inherent in the digital economy (Noor et. Al., 2022). The study aimed to assess the ability for dealing with challenges of technology integration in the digital economy within accounting practices.

2.3 Regulatory adaptation

The digitalization of accounting standards has triggered several regulatory challenges. (Coman et. al., 2022). As stated by Coman et al. (2022), an enormous number of countries remain with legal systems that struggle to function substantially with regard in mapping how cutting-edge new technology can be used in financial reports. In the same way that blockchain has been marketed as a useful tool for making financial reporting transparent, it is not always clear as to whether the law will comply with it (Karisma & Moslemzadeh, 2023). Presently, there are no definitive best practices or

legislative frameworks governing the application of technologies such as AI and machine learning in accounting, resulting in a somewhat haphazard process characterized by ambiguous regulations (Adeyelu et al. 2024). The accelerated advancement of technology complicates the ability of regulatory bodies to provide clear guidelines for its implementation. Unquestionably, the process of upgrading the frameworks within the IFRS and other international accounting standard-setting organizations can be sluggish and challenging on a global scale; nonetheless, the emerging realities facilitated by digital tools necessitate the continuation of these integration.

The digitalization of accounting undoubtedly raises contemporary concerns with compliance, accounting, and auditing. Regulatory authorities in Malaysia are required to modify current frameworks to provide norms that mitigate the risks connected with digital practices. The integration of accounting and digitalization has resulted in numerous enhancements in the efficiency of financial operations, with cloud computing, automated optimization, and artificial intelligence improving compliance frameworks and the precise and efficient reporting of financial data (Keith and Terry, 2024). Julius (2024) emphasizes that regulatory authorities ought to facilitate the establishment of harmonized standards for digital accounting while also ensuring that digital transformation remains economically affordable for organizations. Incorporated ethical monitoring and accountability into accounting practices. Therefore, the organization must comply with growing requirements concerning digital accounting processes while using industry best practices (Suraj et. al., 2024).

2.4 Digitalization in accounting

Digitalization refers to the application of digital technologies to enhance processes and practices. In accounting, this includes the use of accounting software, cloud computing, and emerging technologies such as artificial intelligence and block-chain. These innovations streamline operations, improve data accuracy, and enhance decision-making. Despite the practical relevance of digitalization, academic research in this area was limited.

Evidently exists a significant disparity between theory and practice, as academic literature scarcely addresses the implications of digitalization on the accounting practices, despite its prominence among practitioners. Numerous professionals have noted the substantial potential impact on accounting practices with various companies showing dedicated transformation departments such as in marketing, human resources, and finance to facilitate the digital transition.

Although several publications have been published in this field, including extensive literature evaluations by Moll and Yigitbasioglu (2019) and Rikhardsson and Yigitbasioglu (2018), it is apparent that digitalization is only starting to infiltrate academic discourse. Many of the publications are predominantly conceptual (e.g., Bhimani & Willcocks, 2014; Quattrone, 2016; Arnaboldi, Busco, & Cuganesan, 2017; Appelbaum et al., 2017), supplemented by a few case studies (Arnaboldi, Azzone, & Sidorova, 2017) and empirical analyses (Labro et al., 2019; Oesterreich et al., 2019). The domain continues to be predominantly influenced by consultants and industry trailblazers (e.g. McKinsey, 2018; Deloitte, 2020). Consequently, the topic deserves an in-depth insight as there are many digitalization topics that may have a different impact on the accounting function across different industries or sectors.

The accounting industry urgently requires a team of proficient accounting information systems (AIS) experts capable of addressing the intricate IT demands associated with accounting services and operations (Pan & Seow, 2016). Notarial and creative accountants will supplant accountants in the future, according to Slyozko and Zahorodnya (2016) and Yang (2012). Given its pivotal role in societal transformation, technological literacy is presently seen as a method for equipping professionals with essential abilities. Accountants must acquire and enhance many skills and competencies pertinent to their career, as they are required to execute a diverse array of activities. The shift to digitization demands accountants to develop new competencies. Conventional roles are evolving, requiring ability in data analytics and adeptness with digital tools.

In addition, incorporating technology changes the ethical environment and calls for clearer rules and regulations. The research by Leitner-Hanetseder et al. (2021) shows that professional accountants will still have "core" roles and responsibilities, but some of those roles and responsibilities will be done by AI-enabled technology instead of people. This will mean momentous changes in the roles and responsibilities of current professions in accounting over the next ten years. This implies that people ought to be smart about how they use digital technology and work with AI-based technology in some ways to fill "new" jobs. Fitriasari et al. (2020) say that digitalization has changed how accountants in Indonesia think about and do their jobs. This shows that most accountants are aware of both the pros and cons of going digital and are working hard to adapt to the changes in technology.

The global economy is facing rapid evolution. The accounting profession must guarantee that its members possess the requisite information, skills, and competencies to assist firms in sustaining economic growth and competitiveness both nationally and internationally. Consequently, professional accountants, together with their trainers and employers, must fulfil both present and future requirements to maintain their worth (ACCA, 2016).

3. CONCEPTUAL FRAMEWORK

Digitalization is transforming the field of accounting in profound ways. This is a conceptual framework delineating the primary domains affected by digitalization in accounting. This framework underscores the transformative impact of digitalization on the accounting practices, emphasizing the necessity for accountants to adapt and integrate new technology to maintain relevance and efficacy in their roles. This paper proposes a conceptual framework illustrated in Figure 1 demonstrating the technology integration, digital competency, and regulatory adaptation into accounting practices in Malaysia.

This study enhances the understanding of the technology integration of the digital era in accounting within this country. Researchers assert that the evolution of digitalization in forensic, financial, and management accounting required focus not alone on enterprises for effective decision-making, but also on the accounting profession, to guarantee through integration and remain resilience in the future. This problem arises due to the rapid progress of technology such as AI, and blockchain, required the necessity for digital proficiency, and the regulatory adaption in accounting. Therefore, the regulatory bodies, government, businesses and accountant need to investigate further on this integration of digitalization era to the accounting practices in Malaysia (Rosmala, 2024). The existence of this study will be a guide for

researchers and practitioner to identify critical keys to be paid attention to. In this study, several factors are suggested to be worthy of attention, namely, technology integration (Rosmala, 2024), digital competency (Moreno-Morilla et al., 2021), regulatory adaptation (Julius, 2024) and the accounting (forensic, financial and management accounting) which are the main pillars of this study (AlKhajeh and Khalid, 2018).

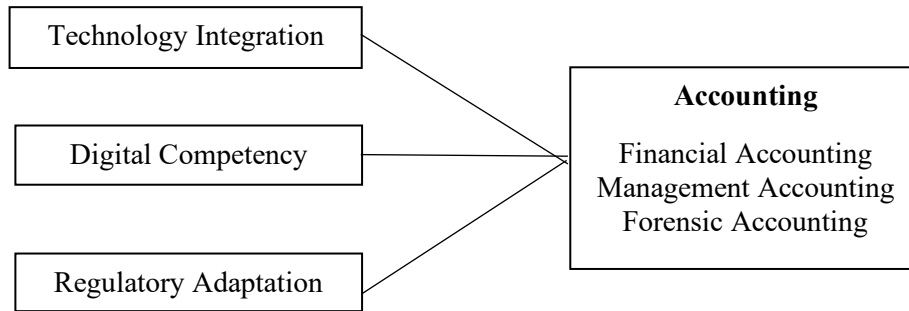


Figure 1. Conceptual framework

Table 1 presents the proposed measurement items and their origins for the study, drawing upon prior research sources such as Rosmala, 2024, Guzmán-Simón et al., 2017, and Julius, 2024. The proposed measurement items encompass important constructs, including technology integration, digital literacy, and regulatory adaptation. A five-point Likert scale, ranging from 1 = “Strongly disagree” to 5 = “strongly agree” is utilized for all variables.

Table 1. Proposed measurement items and source

Construct	Proposed Code and Dimensions	Source
Technology Integration (TI)	TI1: The integration of digital technology enables the automation of routine tasks (data entry, reconciliation, and reporting) TI2: Technology integration liberates significant time for accountants to concentrate on higher-value tasks. (strategic analysis and decision support) TI3: The adoption of digital technology encourages greater collaboration and communication within organizations (eliminating isolation between departments and enabling cross-functional teams to work together to achieve common goals) TI4: Leveraging digital technology (organizations can differentiate themselves from competitors, innovate more quickly, and respond to changing customer demands more effectively)	Rosmala, 2024

Digital Competency (DC)	DC1: The ability to search for, select, analyse, organize, and communicate information effectively (Information literacy) DC2: The ability to understand, interpret, recreate, and assess different media (Media literacy) DC3: The set of skills and knowledge related to the ICT industry (ICT literacy) DC4: The technical ability to use the computer and internet. (Digital literacy)	Moreno-Morilla et al., 2021; Guzmán-Simón et al., 2017
Regulatory Adaption (RA)	RA1: Regulatory authorities should contribute towards achieving harmonizing standards for digital accounting. RA2: Making digital transformation affordable RA3: Embedding ethical oversight and accountability	Julius, 2024
Accounting (A)	A1: Forensic accounting A2: Financial accounting A3: Management accounting	AlKhajeh and Khalid, 2018

4. CONCLUSION

This study seeks to close this gap by investigating the digitalization of accounting in Malaysia. By providing a comprehensive set of technology integration, digital competency, and regulatory adaptation, this study emphasizes the understanding of the digitalization in the accounting exclusive to the area of forensic accounting, financial accounting, and management accounting in Malaysia. Digitalization presents significant opportunities and challenges for accounting in Malaysia. By embracing technological advancements, accountants can enhance their effectiveness, improve fraud detection, and respond proactively to the evolving landscape. This study also presents a framework for digital competency among accountants in the context of digitalization. This study's findings will improve the effectiveness of the accounting profession, help businesses in the digital age, and guide the formulation of future interventions and initiatives for accountants. Hence, the conceptual framework serves as a roadmap for future research, it offers valuable insight for future studies to policymakers, regulators, educators and practitioners in Malaysia, aiming to navigate the future of accounting in the digital era and effectively address the changing landscape. However, the study's limitations, as primarily conceptual and lacking empirical validation, underscores the need for further research to confirm the relevance of these variables in predicting the digitalization of accounting in Malaysia. Future studies could explore additional factors and employ mixed method approaches to provide a more comprehensive understanding of the digitalization of accounting in Malaysia. Future studies should also consider other potential determinants that may influence digitalization and impact to the forensic, financial and management accounting in Malaysia to navigate the evolving landscape effectively.

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