

Chapter 19:

Challenges and Adoption Strategies for Cloud Accounting Information Systems Among SMEs: A Conceptual Perspective

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ABSTRACT

Small and medium enterprises (SMEs) account for 98.5% of all businesses in Malaysia. Cloud accounting information systems is a digital tool to streamline SMEs' operational business. Despite the advantages of cloud accounting information systems, SMEs have difficulty in leveraging the cloud system. Therefore, the objective of this conceptual study is to identify the challenges to the adoption of cloud accounting systems and propose strategies to enhance the effectiveness of the system to SMEs. The study found that low acceptance rates, limited technical expertise, financial constraints and data privacy and security are the barriers faced by SMEs in the adoption of cloud accounting information systems. To address these issues, continuous training and awareness programs, collaboration with professionals, government support, and protection of data security and privacy could alleviate the challenges of implementing cloud systems. The findings of this study could assist the SMEs owners and policy makers implementing strategies to achieve a smooth transition process towards cloud accounting information systems among SMEs.

Key words: Challenges, Cloud Accounting Information System, SMEs

1. INTRODUCTION

The increasing digitalization of accounting processes has transformed small and medium-sized enterprises (SMEs) in managing financial data and decision-making. The accounting information system is a crucial resource to every business in providing managers and stakeholders with accounting and financial data to support decision-making, which improves the company's performance and gains competitive advantages (Al-Hattami, 2022). Cloud accounting information systems are essential technology that enhances financial reporting, simplifies accounting processes and facilitates data-driven decision-making (AlBar & Hoque, 2019). Cloud computing acted as a gateway in delivering diverse services to SMEs or businesses such as storage, software, and data processing. It offers a smooth and modern approach to access, storing and how businesses interact with managing information and data. According to Nyamwesa (2024) cloud computing utilizes the internet to deliver computing resources instantly as needed.

SMEs are an important force for economic development in developing countries, and it accounts for 98.5% of all businesses in Malaysia (Hamid et al., 2022). SMEs have difficulty in leveraging the cloud accounting information system despite the advantages of this system. According to Abdul et al. (2023), cloud technology has gained popularity significantly, but the challenges including infrastructure, poor internet access, and power supply interruptions may prevent its smooth adoption. SMEs significantly contribute to the country's economy encountering challenges such as difficulties in adoption of technology and a lack of technical efficiency (Loo et al., 2023).

The objective of this conceptual study is to identify the challenges to the adoption of cloud accounting systems and propose strategies to enhance the effectiveness of the system to SMEs. Therefore, understanding these

barriers will assist a smooth transition process for the cloud accounting system among SMEs. This study could assist the SMEs owners and policy makers implementing strategies towards proper adoption of cloud accounting systems for SMEs. This study also intends to contribute to the body of knowledge on the adoption of cloud accounting information systems for SMEs.

2. LITERATURE REVIEW

Adoption of cloud accounting information systems among SMEs

Although digitalization offers SMEs new opportunities to access the global market, evidence indicates that they are still lagging behind large firms in terms of digital transition or technology adoption. Alshahrani (2021) found that the adoption of cloud computing by SMEs depends on environmental, technological, and organizational aspects. According to Skafi et al. (2020), cloud computing services are influenced by both technological and organizational factors. These results showed that SMEs need to overcome challenges in applying the system and boost technological development to challenge more established companies.

Empirical studies on the impact of cloud accounting information system adoption on performance.

Previous studies found that organization's performance and cloud accounting information system application had a favorable relationship. Cloud-based solutions, according to Van et al. (2024) enhance information and system quality and help SMEs run more effectively. These advantages directly improve the effectiveness of strategic decisions, therefore promoting the competitiveness and environmental performance of SMEs. Gangwar (2017) discovered a positive correlation between corporate performance and cloud computing use. Over the long and short terms, Chen et al. (2022) found that cloud computing notably and favorably influences the profitability and market value of listed enterprises. Thus, these studies documented that the adoption of cloud accounting information systems gives benefits to the performance of the company.

3. DISCUSSION

SMEs have a significant opportunity to enhance their operational efficiency and decision-making by adopting cloud accounting information systems. To effectively leverage the advantages, challenges such as low acceptance rates, limited technical expertise, financial constraints and data privacy and security concerns must be addressed by the SMEs.

Low adoption rate

SMEs exhibit inadequate levels of accounting information system adoption, although it has acknowledged advantages. Some businesses have implemented AIS but are unaware of the advantages of the system. A substantial number of SMEs depend on conventional accounting practices, which correspond with their operations and comprehension. These measures may hinder their development and reduce competitiveness in a broader market. The low adoption rate mostly results from SME management's insufficient comprehension of accounting information system components. Prior research demonstrates that the use of accounting information systems varies among organizations, however the implementation of computerized accounting information systems remains constrained (Ismail & Zin, 2009). It showed that uses of accounting information among the firms are varied, while uses of computerized systems are minimal. Only a very small percentage of firms that prepared accounting information internally moved from the conventional manual systems. Tarmidi et al. (2014) investigated the awareness and implementation of accounting practices among SMEs in Malaysia. The research revealed that two-thirds of participants are unaware of cloud computing; among those who have embraced it, the cloud services employed are limited to Google Apps Engine and Dropbox. Consequently, this resulted in the low adoption of recent technologies including cloud computing among SMEs.

Limited technical expertise

SMEs lack internal competence in cloud computing; their low technical knowledge and resources hinder the adoption of cloud computing technology. Alghamdi et al. (2019) assert that the slow adoption of cloud computing by SMEs is mostly attributed to infrastructure and cultural factors. To proficiently manage the system, SMEs require assistance and appropriate training (Murigi & Mutuku, 2022). The deficiency in cloud computing expertise constitutes a significant obstacle for SMEs in Saudi Arabia in embracing cloud infrastructure. SMEs lack the necessary experience and prior understanding of cloud computing to change their existing systems to cloud (Alsafi & Fan, 2020). Therefore, a deficiency in comprehension of cloud technology may hinder their use of cloud data services among SMEs.

Financial constraints

SMEs face challenges in adopting cloud computing due to financial limitations. Furthermore, the implementation of cloud computing encompasses not only infrastructure expenses but also costs associated with personnel training, system upgrades, and cybersecurity compliance (Abudaqqa, 2025). High expenses of cloud computing services inhibit Saudi SMEs from transitioning from their current systems (Alsafi & Fan, 2020). The hidden

expenses intensify financial strain and could deter SMEs from utilizing cloud technologies, notwithstanding their long-term advantages.

Data security and privacy concerns

The challenges of adopting cloud accounting information systems are data security and privacy of SMEs. Murugi and Mutuku (2022) identified cloud computing issues of SMEs related to security and privacy, in which the organizations are concerned with storing their data and applications on servers that are beyond their control. Moreover, the accessibility of cloud services through the internet presents a risk of cyberattacks by hackers. Rupra (2020) examined the obstacles to cloud computing security among Kenyan SMEs. The findings revealed that the security concerns encompass hacker manipulation, unreliable service providers, loss of control, data breaches, insufficient liability coverage, discrepancies between legislation and transnational laws, and inadequate confidentiality of company data.

4. RECOMMENDATION

SMEs apply cloud accounting information systems to improve their operational efficiency. Cloud computing gives benefits to SMEs; therefore, the organization should implement necessary solutions to mitigate the risk of cloud technology.

Training and awareness programs

SMEs should invest in continuous training and awareness programs for the employees (Nyamwesa, 2024). SMEs should educate employees on their responsibilities for maintaining regulatory compliance in cloud environments including disseminating information, best practices, and data protection in cloud environments. By using cloud accounting information systems effectively, SMEs are more competitive and improve their chances of success in the market (Abdullah et al., 2018). Therefore, it is important for SMEs to invest in ongoing training and awareness programs in fostering a culture of compliance risks and accountability.

Consulting IT professionals and industry experts

SMEs can benefit from consulting with IT professionals or industry experts who can offer valuable guidance on selecting and recommending the most suitable systems with the nature of business. According to Nyamwesa (2024) guidance from legal experts and regulatory authorities is essential for SMEs to navigate the complex regulatory of the use of cloud systems. Policymakers should consider collaborating with educational institutions to incorporate accounting information systems to ensure the SMEs are equipped with the necessary digital skills. (Edwin et al., 2024). Thus, the collaboration with professional and legal experts could give advice on the effective implementation of technology among SMEs.

Government supports

The transformation of digital SMEs requires large investment for information technology infrastructure. Government support is essential for SMEs due to lack of capital to make large investments in digital technologies (Doh & Kim, 2014). According to Ta and Li (2023), the government's role is crucial to develop strategies towards the digital transformation process. Government also may provide investment injection in information technology infrastructure and assist digital platforms for SMEs' activities. In addition, the government could support SMEs by providing tax breaks or grants to SMEs that invest in the accounting information system in promoting the adoption of SMEs' technology (Edwin et al., 2024). In another study, innovations lead to higher probability of survival, and government support enhances sustainability and growth of SMEs (Hansen et al., 2009). Therefore, government support could have an impact on the implementation of digital technology of SMEs that have financial constraints.

Protection of data security and privacy concerns

The decision to adopt cloud accounting information systems among SMEs influenced by security related factors such as legal and regulatory requirements, cloud security trust and threats. According to Nagahawatta et al. (2021) SMEs need to understand an organization's security requirements before adopting cloud computing to ensure a secure environment for cloud services. The providers must ensure the security of the data to reduce the reluctance of cloud computing adoption among SMEs (Abudaqqa, 2024). In addition, Alsmadi et al. (2022) suggest implementing a strategy plan to improve security, trust and service accessibility to encourage more SMEs to use cloud services. Therefore, security of data and privacy issues in implementing cloud accounting information systems should be scrutinized to influence the adoption of cloud systems of SMEs.

5. CONCLUSION

In conclusion, cloud accounting information systems are a vital technology in a competitive business landscape. SMEs could use a cloud accounting information system to improve business performance through digital

technology, allowing for efficient operational and competitive engagement through access to real-time financial data. Consequently, SMEs could streamline their processes and enhance decision-making capabilities and foster sustainable growth. Nonetheless, there are barriers and challenges related to the transition of cloud accounting information systems for SMEs. The study identified the barriers of low acceptance rates, limited technical expertise, financial constraints and data privacy and security concerns that must be addressed by the SMEs to achieve adoption of the cloud system. This study indicates that continuous training and awareness programs, collaboration with professional, government support and protection of data security and privacy could mitigate the challenges faced by SMEs in adopting cloud technologies. The finding of the study could assist the policymakers in developing more effective strategies in promoting cloud accounting information systems among SMEs.

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