Business & Social Science
IJRBS

Research in Business & Social Science

IJRBS VOL 14 NO 6 (2025) ISSN: 2147-4478

Available online at www.ssbfnet.com
Journal homepage: https://www.ssbfnet.com/ojs/index.php/ijrbs

Understanding the use of cloud accounting among SMEs in Zimbabwe: An exploratory analysis

Banele Dlamini [(a)]* *Daniel P Schutte* [(b)]

[(a,b)] *School of Accounting Sciences, North-West University, Potchefstroom, Republic of South Africa.*

ARTICLE INFO

Article history:

Received 12 April 2025
Received in rev. form 19 May 2025
Accepted 28 May 2025

Keywords:

Cloud accounting; Exploratory analysis; SMEs; Zimbabwe

JEL Classification:
L86, M15, O33

ABSTRACT

This exploratory analysis investigated the use of cloud accounting within the SME sector in Zimbabwe. This study addresses a significant gap in the existing literature, as no prior research has specifically explored the utilization of cloud accounting within the SME sector in Zimbabwe. The study employed a qualitative research approach using purposive sampling. Data was collected from semi-structured interviews and was thematically analyzed. The study revealed a low utilization of cloud accounting among SMEs in Zimbabwe. The lack of awareness is particularly pronounced, hindering SMEs from recognizing the benefits and functionalities of cloud accounting systems. The study found that SMEs implementing cloud accounting experience many benefits that significantly enhance their financial management processes, operational efficiency, and overall business performance. The study emphasized the need for targeted awareness campaigns, comprehensive training programs, and robust policy support to bridge the knowledge gap and facilitate the widespread adoption of cloud accounting. The findings offer valuable insights for policymakers, educators, and technology vendors aiming to promote the digital transformation of the SME sector in Zimbabwe. Value This study provides valuable insights into the barriers and opportunities for adopting cloud accounting in Zimbabwe's SME sector, highlighting the need for awareness, training, and policy support to drive digital transformation and improve financial management, operational efficiency, and overall business performance.

Introduction

Technology is essential for improving productivity, accuracy, and overall performance in the rapidly evolving business environment (Akter et al., 2022; Mitran, 2020). One such technological advancement is cloud accounting, which has transformed traditional accounting practices by offering scalable, flexible, and cost-effective solutions (Atadoga et al., 2024). Cloud accounting facilitates real-time updates and collaboration by providing users with access to financial data from any location with an internet connection (Achanta, 2023). Yankah et al. (2023) posit that cloud accounting systems generate real-time financial reports, offering up-to-date insights into financial performance and aiding in timely decision-making. Moreover, cloud accounting facilitates remote work and flexibility, as employees and accountants can work from different locations without the need for physical presence (Verma & Kanrar, 2024). These cloud-based systems reduce the need for on-premises servers and IT maintenance costs, as the cloud service provider handles infrastructure and updates, and they automate repetitive tasks such as invoicing, payroll, and reconciliations, saving time and reducing errors (Atadoga et al., 2024).

Cloud accounting integrates with other business applications such as customer relations management systems and enterprise resource planning, streamlining workflows and improving overall business efficiency (Achanta, 2023). Cao and Iansiti (2023) assert that cloud-based systems scale with business growth, allowing SMEs to add or remove services as needed without significant investments in new hardware or software. According to Verma and Kanrar (2024), these systems promote financial transparency within the organization, as all relevant stakeholders have access to accurate and current financial information. The benefits make cloud

* *Corresponding author. ORCID ID: 0000-0003-2053-3915*

https://doi.org/10.20525/ijrbs.v14i6.4190

accounting an asset for SMEs, enabling them to manage their finances more effectively and compete more efficiently in the modern business landscape. This technological innovation is particularly beneficial for SMEs, which often operate with limited resources and require efficient financial management systems to thrive.

In Zimbabwe, SMEs are a crucial component of the economy, contributing significantly to employment and GDP (Chipambwa et al., 2023; RBZ, 2016). However, these enterprises face numerous challenges, including limited access to capital, inadequate infrastructure, and a lack of technological know-how (Dzingirai, Sikomwe & Tshuma, 2022; Dlamini, & Schutte, 2021) In this context, cloud accounting presents a promising opportunity for SMEs to streamline their financial operations, enhance transparency, and make informed business decisions. Despite the potential benefits obtained in the adoption and utilization of cloud accounting among SMEs, in Zimbabwean SMEs, the use of cloud accounting remains a relatively underexplored phenomenon. This exploratory analysis aimed to understand the current state of cloud accounting utilization among SMEs in Zimbabwe. This study sought to provide valuable insights into the role of cloud accounting in the growth and development of Zimbabwean SMEs.

The study findings not only contribute to the academic discourse on cloud accounting but also offer practical recommendations for SMEs, policymakers, and technology providers to foster a more supportive environment for digital transformation in the SME sector. Furthermore, the insights gained helped to better understand the potential of cloud accounting to drive economic growth and sustainability for SMEs in the region. The introduction section of this research paper sets the stage by outlining the relevance and objectives of the study. Following this, the literature review delves into existing research on cloud accounting adoption, highlighting key theories and previous findings relevant to SMEs in developing countries. The methodology section describes the research design, data collection methods, and analytical approaches employed in the study. In the results section, we present the findings from our data analysis, detailing the current levels of cloud accounting adoption, its role and challenges faced by SMEs in Zimbabwe. Finally, the conclusion summarizes the main insights of the research, discusses its limitations, and offers recommendations for policy, practice, and future research.

Literature Review

Cloud accounting is a form of online accounting that uses cloud computing technology to provide financial management and reporting services (Janaćković, Janaćković & Radiš, 2018). According to Ehioghiren and Ojeaga (2022), cloud accounting means accounting software and data are stored in the cloud, enabling real-time data access, processing, and storage over the Internet. However, there are several perspectives on understating cloud accounting, from a business perspective, cloud accounting involves using online platforms to handle all accounting functions, such as bookkeeping, invoicing, payroll, and financial reporting (Ma et al., 2021). This approach reduces the need for physical IT infrastructure and software maintenance, making it a cost-effective and scalable solution for businesses. From the functionality perspective, cloud accounting allows businesses to perform various accounting tasks such as tracking income and expenses, managing invoices, reconciling bank transactions, and generating financial reports through a web-based interface (Sannino, 2021; Moll & Yigitbasioglu, 2019). Groenewald and Kilag (2024) highlighted that this functionality is often complemented by automation features that streamline routine accounting processes. For users, cloud accounting means the ability to access and manage financial information securely from anywhere with an internet connection (Janaćković et al., 2018; Arsenie-Samoil, 2011). Ma (2015) posits that cloud accounting provides flexibility and convenience, enabling users to collaborate with accountants and other stakeholders in real-time, regardless of their physical location.

Cloud accounting has key characteristics such as remote access, real-time processing, automation, scalability, cost efficiency, and collaboration. Remote access is one of the primary advantages of cloud accounting, it allows users to access financial data from any location with an internet connection, facilitating flexibility and mobility (Boukerche & Robson, 2018). According to Abubakar (2016), this characteristic is particularly beneficial for SMEs, which often require accounting tasks to be performed outside traditional office settings. The ability to access financial data remotely supports remote work, which has become increasingly important in the wake of global pandemics such as the COVID-19 pandemic (Saad et al., 2022; Abubakar, 2016). According to Dimitriu and Matei (2015), real-time processing in cloud accounting enables businesses to have up-to-date financial information, which is crucial for informed decision-making. Gupta and Jain (2017), highlight that real-time data processing allows for immediate reflection of transactions and financial events, thereby improving the accuracy and timeliness of financial reporting. This capability enhances the ability of businesses to respond quickly to financial issues and opportunities (Janaćković et al., 2018).

Groenewald and Kilag (2024) highlighted that automation of routine accounting tasks is a significant feature of cloud accounting systems. Studies by various scholars have shown that automation reduces manual data entry, minimizes errors, and frees up time for accountants to focus on more strategic activities (Groenewald & Kilag, 2024; Eziefule et al., 2022; Endsley, 2018; Freudling et al., 2013). Automated processes in cloud accounting can include invoicing, expense tracking, payroll processing, and bank reconciliation. The reduction in manual workload leads to increased efficiency and productivity (Groenewald & Kilag, 2024). Furthermore, scalability is another critical characteristic of cloud accounting that allows businesses to adjust their accounting resources based on their needs (Moll & Yigitbasioglu, 2019). As business operations grow or change, cloud accounting systems can easily scale to accommodate increased data and transaction volumes and continue to manage their finances effectively as they expand (Achanta, 2023).

According to Ma, Fisher, and Nesbit (2021), cost efficiency is a major driver for the adoption of cloud accounting, particularly for SMEs. Cloud accounting eliminates the need for significant upfront investment in IT infrastructure and ongoing maintenance costs (Gade & Rao, 2022). Instead, businesses typically pay a subscription fee for cloud accounting services, which can be more manageable for their budgets (Ma et al., 2021). This pay-as-you-go model is attractive to small businesses with limited financial resources (Jäätmaa, 2010). Atadoga et al. (2024), cloud accounting platforms facilitate enhanced collaboration by allowing multiple users to access and work on the same financial data simultaneously. This characteristic improves communication and teamwork among accountants, business owners, and other stakeholders (Langmead & Nellore, 2018). Collaborative features in cloud accounting systems can include shared access to financial reports, real-time updates, and integrated communication tools (Baron & Halevi, 2019). Furthermore, Achar (2018) stated that data security is a crucial consideration in cloud accounting and implementing advanced security measures, such as encryption, multi-factor authentication, and regular backups, to protect sensitive financial data is essential. While concerns about data breaches persist, the security protocols employed by reputable cloud accounting services often exceed those of traditional on-premises systems (Musyaffi & Muna, 2021).

Cloud accounting offers numerous benefits, including cost efficiency, accessibility, real-time financial insights, enhanced collaboration, automation, scalability, and improved data security (Atadoga et al., 2024; Ma et al., 2021; Achar, 2018). These advantages make cloud accounting an attractive option for businesses, looking to streamline their financial operations and enhance their overall efficiency. As technology continues to evolve, the adoption of cloud accounting is likely to increase, further solidifying its role in modern financial management. Literature asserts that cloud accounting is an essential tool for modern businesses, particularly for SMEs (Saad et al., 2022; Baron & Halevi, 2019; Achar, 2018). From the review of the literature, few studies have examined the level of utilization of cloud accounting (Moniruzzaman & Rahman, 2023; Sastararuji et al., 2022; Carcary, Doherty & Conway, 2014; Tarmidi et al., 2014). Most of the studies have considered factors influencing adoption or the intention to adopt cloud accounting among SMEs (Nagahawatta et al., 2024; Tawfik et al., 2023; Saad et al., 2022; Skafi et al., 2020; Soni, Saluja & Vardia, 2018; Salum & Abd Rozan, 2016; Jordan, 2016). Table 1 shows studies that have been conducted on the utilization of cloud accounting among SMEs.

Table 1: Empirical evidence on cloud accounting adoption by SMEs

Author(s)	Year	Method	Country	Study Title	Findings of the study
Sastararuji, et al.	2022	Qualitative case study method	Thailand	"Cloud accounting adoption in Thai SMEs amid the COVID-19 pandemic: an explanatory case study"	The study found a low adoption rate of cloud accounting by SMEs in Thailand. Cloud accounting is a relatively new concept in Thailand.
Moniruzzaman & Rahman	2023	Semi-structured questionnaire	Bangladesh	"Cloud Accounting Practice in Small and Medium Enterprises (SMEs) of Bangladesh"	The findings show that about 50% of Bangladeshi SMEs have adopted cloud accounting practices. The owners are influenced to embrace the practice by perceived benefits, external influences, and organizational readiness.
Mazumdar	2018	Qualitative research methods	Bangladesh	"Adoption of Cloud Computing in the SMEs: An exploration of the issues and challenges for adoption of Cloud Computing by SMEs in Bangladesh in the context of Digital Bangladesh"	The study reported a low adoption rate for the utilization of cloud accounting among SMEs in Bangladesh.
Carcary et al.	2014	Quantitative research approach	Ireland	"The Adoption of Cloud Computing by Irish SMEs – an Exploratory Study"	The findings reveal that nearly half of Irish SMEs have not adopted cloud accounting.
Tarmidi et al.	2014	Self-administered survey questionnaires	Malaysia	"Cloud computing awareness and adoption among accounting practitioners in Malaysia"	The results of the study reveal that two-thirds of the participants do not possess knowledge about cloud computing. Only 7% of respondents say they are extremely informed about cloud computing, even though 30% of them say they are familiar with it.

Source: Own formulation

Research and Methodology

This study adopted an exploratory research design to uncover insights into the adoption and utilization of cloud accounting among SMEs in Zimbabwe. According to Swedberg (2020), exploratory research allows for a deeper understanding of the phenomenon and is particularly suitable for investigating relatively unexplored areas. A qualitative approach was employed to gather rich, detailed insights into the perceptions, experiences, and behaviors of SME owners, managers, and accountants regarding cloud accounting (Rafique et al., 2023). Qualitative methods such as semi-structured interviews are well-suited for exploring complex phenomena and

understanding contextual factors influencing adoption. The selection of an exploratory research design in a qualitative approach has been used by various scholars in cloud computing studies among SMEs (Correia & Martens, 2023; Fataftah & Isong, 2023; Warren, 2022), which supports our selection. The study conducted 12 semi-structured interviews with SME owners, managers, and accounting professionals in Zimbabwe. These interviews explored their experiences, perceptions, and challenges related to cloud accounting adoption. The study used open-ended questions, which allowed respondents to provide detailed accounts and insights. Purposeful sampling was used to select SMEs from various sectors to capture diverse perspectives and experiences.

Data was thematically analyzed using content analysis. The use of thematic analysis enhanced the identification of patterns, themes, and categories within the data. Coding was conducted systematically to uncover key themes related to cloud accounting utilization, benefits and challenges faced by SMEs. Data was triangulated to enhance credibility and validity by comparing findings from interviews with different stakeholders and contrasting with existing literature and case studies. The study required permission from the SMEs for access to the participants, and the approval of the management of the organization in allowing participants to partake in the study was obtained. The researcher informed the participants that their participation was voluntary and that they were free not to participate in the study. The researcher conducted ethical training at North-West University (NWU) and had no conflict of interest in this study. This study protocol was cleared by the ethical clearance committee at NWU (NWU-01934-24-A4).

Findings and Discussion

This section presents the findings obtained from the SMEs and accounting professionals who deal with SMEs in Zimbabwe. The analysis of the results revealed a low level of knowledge and awareness of cloud accounting among SMEs in Zimbabwe. This is a significant barrier to the utilization of cloud accounting. Many SMEs in Zimbabwe have limited or no knowledge of cloud accounting, which impedes their ability to consider and adopt such technologies. Some respondents had this to say:

“Honestly, I have not heard much about cloud accounting. It sounds interesting, but I am not sure how it would benefit our business.” [P3]

“Cloud accounting? I am not familiar with that term, and I have not explored it yet. Is it something new in accounting software? We are currently using traditional accounting methods, and we are not aware of the features of cloud accounting systems and how they could improve our financial management." [P7]

“I have heard the term 'cloud accounting' before, but I do not know what it entails. It has not been a topic of discussion within our organization.” [P1]

“Is this cloud accounting the same thing as AI? I have never heard of cloud accounting software; where do I access the system? We maintain our accounting books, and our external accountant prepares our financial statements.” [P4]

These quotations illustrate a lack of awareness or understanding among respondents regarding cloud accounting. This lack of awareness suggests a potential barrier to adoption, highlighting the need for education and information dissemination about the benefits and functionalities of cloud accounting among SMEs. These findings are like the results obtained by Soni, Saluja and Vardia (2018), who reported that lacking awareness of cloud accounting was the key reason for its low adoption level.

The study revealed that only two firms (16.67%) from the twelve interviewed SMEs are using cloud accounting. The analysis shows that SMEs that are using cloud accounting are medium-sized firms. The lack of awareness directly impacts the adoption rate of cloud accounting. Without understanding the benefits and functionalities of cloud accounting, SMEs are less likely to invest in or transition to these systems. The findings on the low adoption of cloud accounting among SMEs in Zimbabwe concur with the findings by Moniruzzaman & Rahman (2023), who revealed a low adoption of cloud accounting among SMEs in Bangladesh. This results in missed opportunities for improving financial management, operational efficiency, and competitiveness among Zimbabwean SMEs. Furthermore, it also suggests that there is a critical need for targeted awareness campaigns to educate SMEs about cloud accounting. The finding of low knowledge of cloud accounting among SMEs in Zimbabwe underscores a significant challenge that needs to be addressed to enhance the adoption of cloud-based financial management systems. Through targeted awareness campaigns, training programs, supportive government policies, and the active role of professional advisors, the knowledge gap can be bridged. These campaigns could be spearheaded by government agencies, industry associations, and cloud accounting service providers. The focus should be on the benefits, cost savings, and competitive advantages of adopting cloud accounting.

The analysis also observed that SMEs are facing numerous challenges that hinder the utilization of cloud accounting. From those SMEs which are aware of cloud accounting, the respondents had this to say on the challenges they face in utilizing the system:

“We recognize the benefits of cloud accounting, but the initial investment in technology and training is beyond our current budget. Without adequate resources, it is difficult to make the transition.” [P10]

“Our management is supportive of moving to cloud accounting, but we simply do not have the necessary infrastructure in place. Upgrading our systems and ensuring we have reliable internet access are significant barriers. Resource limitations are a significant barrier for us. Even though we have management support, the financial and technical resources required for cloud accounting are just not available.” [P12]

“Adopting cloud accounting would streamline our operations, but we are struggling to allocate funds for the required software and hardware upgrades. Resource constraints are a major challenge for us.” [P8]

“We are aware of the efficiency that cloud accounting could bring, but the cost of implementation, including employee training and system upgrades, is a huge hurdle. Our current resources are just not enough. Our biggest challenge with adopting cloud accounting is the lack of sufficient resources. We need both financial support and technical expertise, which we currently do not have.” [P5]

“We are using Pastel; I am not sure how secure our data will be if we use cloud accounting, and the other thing you will find is that these online systems might be cheaper, but by the time you sign in after some time when they are in full charge of your data, they might adjust upwards in cost. We would rather continue with our Sage Pastel." [P7]

The above quotations reveal that SMEs rely so heavily on desktop software and paperwork-based traditional methods. The study further revealed that resistance to change and a lack of trust in cloud accounting are the reasons for the low adoption of cloud accounting among SMEs. However, these quotations highlight the common theme of resource inadequacy among SMEs in Zimbabwe, emphasizing the need for financial, technical, and infrastructural support to facilitate the adoption of cloud accounting. The analysis further revealed that the lack of adequate resources hinders SMEs from facilitating training and education on modern accounting technologies. This is consistent with the findings of Papadopoulos, Baltas, and Balta (2020), who disclosed that lack of awareness and adequate resources was the main reason for the low utilization of cloud accounting. However, these findings are inconsistent with the literature which asserts that cloud accounting eliminates the need for significant upfront investment in IT infrastructure and ongoing maintenance costs (Gade & Rao, 2022).

The findings of the study also revealed that SMEs that have adopted cloud accounting experience a range of benefits that enhance their financial management processes, operational efficiency, and overall business performance. The analysis observed that cloud accounting allowed users to access financial data from any location with internet connectivity, providing flexibility and enabling remote work. These findings are like the results reported by several scholars (Saad et al., 2022; Sastararuji, et al., 2022; Carcary et al., 2014), who reported on the benefits obtained by SMEs in the utilization of cloud accounting. Moreover, it aids SMEs with budgeting, forecasting, and financial planning, leading to more informed business decisions, and it further reduces the need for paper by using digital records, contributing to more sustainable business practices. Hence, these findings concur with the literature on the benefits associated with the utilization of cloud accounting (Groenewald & Kilag, 2024; Eziefule et al., 2022; Saad et al., 2022; Abubakar, 2016; Freudling et al., 2013). Notwithstanding the current low utilization, the benefits experienced by adopting SMEs underscore the potential of cloud accounting to enhance financial management and operational efficiency.

Conclusion

The study investigated the utilization of cloud accounting within the SME sector in Zimbabwe. It further considered the challenges and benefits associated with the use of cloud accounting among Zimbabwean SMEs. The study revealed that the adoption of cloud accounting among Zimbabwean SMEs remains low, with a significant number of businesses yet to integrate these solutions into their financial management practices. A major barrier to adoption is a lack of awareness about cloud accounting. Many SMEs are not fully informed about the functionalities, benefits, and potential of cloud accounting technologies, leading to hesitation in adopting these solutions. A lack of trust in cloud accounting, particularly concerning data security and privacy, further exacerbates the resistance to adoption. Concerns about the safety of sensitive financial information stored in the cloud deter many SMEs from embracing these technologies.

However, despite the low adoption rates, SMEs implementing cloud accounting experience many benefits that significantly enhance their financial management processes, operational efficiency, and overall business performance. These benefits include real-time access to financial data, improved financial reporting and analysis, cost savings, scalability, and enhanced collaboration among stakeholders. The study recommends that cloud service providers should aggressively advertise cloud accounting solutions and be transparent about their data security measures, including encryption protocols, data backup procedures, and compliance with international data protection standards. Government and other stakeholders should increase awareness and understanding of cloud accounting among SMEs. This can be achieved through targeted educational programs, workshops, and marketing campaigns that highlight the benefits and functionalities of cloud accounting solutions. Furthermore, there is a need for the Ministry of SMEs in Zimbabwe to establish mentorship programs where experienced users of cloud accounting mentor and support new adopters.

Acknowledgement

Author Contributions: Both authors contributed equally.
Institutional Review Board Statement: Ethical review and approval were waived for this study, due to that the research does not deal with vulnerable groups or sensitive issues.
Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.
Conflicts of Interest: The authors declare no conflict of interest.

References

Abubakar, D. A. (2016). *Cloud computing adoption by SMEs in Sub-Saharan Africa* (PhD thesis). Robert Gordon University.

Achanta, K. (2023). Navigating the maze of data privacy and compliance in the cloud era. *International Journal of New Media Studies: International Peer Reviewed Scholarly Indexed Journal, 10*(2), 175-177.

Achar, S. (2018). Security of accounting data in cloud computing: A conceptual review. *Asian Accounting and Auditing Advancement, 9*(1), 60-72.

Akter, S., Michael, K., Uddin, M. R., McCarthy, G., & Rahman, M. (2022). Transforming business using digital innovations: The application of AI, blockchain, cloud, and data analytics. *Annals of Operations Research*, 1-33. https://doi.org/10.1007/s10462-022-10001-3

Arsenie-Samoil, M. D. (2011). Cloud accounting. *Ovidius University Annals, Economic Sciences Series, 2*, 782-787.

Atadoga, A., Umoga, U. J., Lottu, O. A., & Sodiya, E. O. (2024). Evaluating the impact of cloud computing on accounting firms: A review of efficiency, scalability, and data security. *Global Journal of Engineering and Technology Advances, 18*(2), 65-74.

Baron, L., & Halevi, T. (2019). Feasibility assessment of cloud SaaS enabled collaboration and information confidentiality for the public accounting industry. In *HCI International 2019–Late Breaking Papers: 21st HCI International Conference, HCII 2019, Orlando, FL, USA, July 26–31, 2019, Proceedings 21* (pp. 451-467). Springer International Publishing.

Boukerche, A., & Robson, E. (2018). Vehicular cloud computing: Architectures, applications, and mobility. *Computer Networks, 135*, 171-189. https://doi.org/10.1016/j.comnet.2018.02.006

Cao, S. R., & Iansiti, M. (2022). Organizational barriers to transforming large finance corporations: Cloud adoption and the importance of technological architecture. *CESifo Working Paper, No. 10142*. Center for Economic Studies and ifo Institute (CESifo).

Chipambwa, W., Moalosi, R., Rapitsenyane, Y., & Molwane, O. B. (2023). Sustainable design orientation in furniture-manufacturing SMEs in Zimbabwe. *Sustainability, 15*(9), 7515. https://doi.org/10.3390/su15097515

Correia, S. R. V., & Martens, C. D. P. (2023). Cloud computing projects: Critical success factors. *RAUSP Management Journal, 58*(1), 5-21.

Dimitriu, O., & Matei, M. (2015). Cloud accounting: A new business model in a challenging context. *Procedia Economics and Finance, 32*, 665-671. https://doi.org/10.1016/S2212-5671(15)01537-5

Dlamini, B., & Schutte, D. P. (2021). An exploratory study on the usage of management accounting practices among small and medium enterprises in Zimbabwe. *The Journal of Accounting and Management, 11*(2), 116-129.

Dzingirai, M., Sikomwe, S., & Tshuma, N. (2022). Corporate governance challenges for small and medium enterprises in the constrained Zimbabwean economy. *International Journal of Applied Management Sciences and Engineering (IJAMSE), 9*(1), 1-14.

Ehioghiren, E. E., & Ojeaga, J. O. (2022). Cloud-based accounting technologies: Preparing future-ready professional accountants. *International Journal of Innovative Science and Research Technology, 7*(2), 879-889.

Endsley, M. R. (2018). Automation and situation awareness. In *Automation and human performance* (pp. 163-181). CRC Press.

Eziefule, A. O., Adelakun, B. O., Okoye, I. N., & Attieku, J. S. (2022). The role of AI in automating routine accounting tasks: Efficiency gains and workforce implications. *European Journal of Accounting, Auditing and Finance Research, 10*(12), 109-134.

Fataftah, F., & Isong, B. (2023). Case study analysis of the use of cloud computing for assessing big data risks. *Journal of Information Systems and Informatics, 5*(2), 445-466.

Freudling, W., Romaniello, M., Bramich, D. M., Ballester, P., Forchi, V., García-Dabló, C. E., & Neeser, M. J. (2013). Automated data reduction workflows for astronomy—The ESO Reflex environment. *Astronomy & Astrophysics, 559*, A96. https://doi.org/10.1051/0004-6361/201322002

Gade, S., & Rao, K. M. (2022). Adoption of cloud computing to accounting: Benefits and challenges. In *2022 7th International Conference on Communication and Electronics Systems (ICCES)* (pp. 1652-1656). IEEE.

Groenewald, E., & Kilag, O. K. (2024). Automating finances: Balancing efficiency and job dynamics in accounting and auditing. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE), 1*(2), 14-20.

Gupta, D. E. E. P. A. K., & Jain, M. (2017). Impact of cloud accounting on business performance. *International Research Journal of Commerce, Arts and Science, 8*(12), 321-329.

Harash, E. (2017). Accounting performance of SMEs and effect of accounting information system: A conceptual model. *Global Journal of Management and Business Research, 17*(3), 21-26.

Jäätmaa, J. (2010). Financial aspects of cloud computing business models (Master's thesis). Aalto University.

Janaćković, T., Janaćković, M., & Radiš, D. (2018). Cloud accounting. *Management & Education/Upravlenie i Obrazovanie, 14*(1), 41-59.

Jordan, J. (2016). Interrelated factors influencing the adoption decision of AIS applications by SMEs in Jordan. *International Business Research, 9*(10), 46-62.

Langmead, B., & Nellore, A. (2018). Cloud computing for genomic data analysis and collaboration. *Nature Reviews Genetics, 19*(4), 208-219. https://doi.org/10.1038/s41576-018-0014-1

Ma, D., Fisher, R., & Nesbit, T. (2021). Cloud-based client accounting and small and medium accounting practices: Adoption and impact. *International Journal of Accounting Information Systems, 41*, 100513. https://doi.org/10.1016/j.accinf.2021.100513

Ma, X. (2015). The adoption of cloud computing for small and medium accounting firms (Master's thesis). University of Canterbury.

Mazumdar, A. (2018). Adoption of cloud computing in the SMEs: An exploration of the issues and challenges for adoption of cloud computing by SMEs in Bangladesh in the context of "Digital Bangladesh" (PhD thesis). University of Wales Trinity Saint David.

Mitran, D. (2020). Risks and benefits of adopting cloud accounting. *Internal Auditing & Risk Management, 60*(4), 22-32.

Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review, 51*(6), 100833. https://doi.org/10.1016/j.bar.2019.100833

Moniruzzaman, M., & Rahman, M. M. F. (2023). Cloud accounting practice in small and medium enterprises (SMEs) of Bangladesh. *Journal of International Business and Management, 6*(6), 01-15.

Musyaffi, A. M., & Muna, A. (2021). Critical factors of cloud accounting acceptance and security for prospective accountants: TAM extension. *JRAK, 13*(1), 1-6.

Nagahawatta, R., Warren, M., Salzman, S., & Lokuge, S. (2024). Towards an understanding of cloud computing adoption in SMEs: The role of security and privacy factors. *International Journal of Cyber Warfare and Terrorism (IJCWT), 14*(1), 1-13.

Rafique, T., Awan, M. U., Shafiq, M., & Mahmood, K. (2023). Exploring the role of ranking systems towards university performance improvement: A focus group-based study. *Heliyon, 9*(10), e12042. https://doi.org/10.1016/j.heliyon.2023.e12042

Sannino, R. (2021). The impact of cloud adoption on ICT financial management: How to address emerging challenges.

Sastararuji, D., Hoonsopon, D., Pitchayadol, P., & Chiwamit, P. (2022). Cloud accounting adoption in Thai SMEs amid the COVID-19 pandemic: An explanatory case study. *Journal of Innovation and Entrepreneurship, 11*(1), 43-62. https://doi.org/10.1186/s13731-022-00153-1

Soni, R., Saluja, R., & Vardia, S. (2018). Awareness and adoption of cloud accounting software: An empirical research. *IUP Journal of Accounting Research & Audit Practices, 17*(2).

Swedberg, R. (2020). Exploratory research. *The Production of Knowledge: Enhancing Progress in Social Science, 2*(1), 17-41.

Verma, G., & Kanrar, S. (2024). Secure document-sharing model based on blockchain technology and attribute-based encryption. *Multimedia Tools and Applications, 83*(6), 16377-16394. https://doi.org/10.1007/s11042-024-17949-0

Warren, D. (2022). A qualitative study of cloud computing security and data analytics adoption for application developers (Doctoral dissertation). Colorado Technical University.

Yankah, J. E., Adjei, K. O., Bonney, S. O., Kotey, S., & Tieru, C. K. (2023). Appraisal of mobile apps for communication and collaboration among construction project teams. *African Journal of Applied Research, 9*(2), 144-170.

Publisher's Note: SSBFNET stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.