

Empirical insights into ICT use and knowledge management in accounting: A PRISMA-guided literature review (2020–2025)

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ABSTRACT

This Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)-informed scoping review examines the integration of Information and Communication Technology (‘ICT’) use and knowledge management (KM) practices in accounting for the period 2020-2025. Guided by the Technology Acceptance Model (TAM) and Knowledge Management (KM) theory, based on 41 empirical studies, the review explores ICT practitioner tools that have been implemented in practice and provides an overview of barriers to implementation effectiveness as well as solutions for enhanced adoption against the empirical setting. Results reveal a widespread use of tools, such as the accounting software, cloud-based platforms, and digital reporting systems for efficiency and improvement in reporting quality. Knowledge creation, dissemination, and application are key KM practices that underlie decision-making and organizational learning. This is mainly due to lack of infrastructure, unskilled staff in ICT, and ineffective policies. Recommended recommendations focus on specific training, leadership engagement, and the adoption of KM models. The results of ICT-based KM are increased efficiency, transparency, and financial returns. Yet, notable gaps exist, particularly with respect to cohort studies and context-specific information in Africa. This paper highlights a gap in the literature and the importance of further research on how new technologies interplay with accounting practice, as well as structural and human-capacity constraints.

Keywords: Accounting, Barriers, ICT, Knowledge Management, PRISMA, Strategies

I. INTRODUCTION

Modern accounting profession has gone global with the central role of Information and Communication Technology (ICT) together with a knowledge-based practice. Information Communication Technology (ICT) tools such as accounting software, cloud computing systems and digital reporting platforms facilitate improved efficiency, accuracy and decision-making in organizations (Noordin et al., 2024; Thottoli, 2021; Jackson & Allen, 2024). Similarly, KM process contributes to the capturing, sharing and applying organizational knowledge to see that important financial perspective is well applied in driving performance (Paoloni et al., 2020; Bresciani et al., 2023; Al-Dmour et al., 2023).

Evidence reveals that the adoption of ICT has a positive effect on accounting output across different environments. For instance, cloud accounting enhances quality of financial information in the UAE firms (Noordin et al., 2024) and efficiency gains for SMEs in Nigeria Ghana is found from ICT- supported accounting practices (Osiloni et al., 2023; Adjei et al., 2021). Novel technologies (and particularly generational AI) are having an impact on accounting tasks and decision-making (Dalvi-Esfahani et al., 2025; Al-Okaily, 2025). Nonetheless, lack of adequate infrastructure, poor ICT literacy, resistance to technological change and low organizational support remain some of the challenges that can prevent effective adoption especially in developing countries (Hamad et al., 2021; Lubua, 2022; Thottoli & Ahmed, 2022).

Knowledge management is also added to ICT by documenting and sharing financial, organizational knowledge in a systematic process. Empirical research in African and Middle Eastern countries reveals that proper KM strategies improve transparency, accountability, and general performance (Krah & Mertens, 2023; Salem et al., 2021; Vendrell-Herrero et al., 2020). Furthermore, the integration of ICT and KM is important also for implementation of innovation, sustainability and strategic planning in accounting (Broccardo et al., 2025; Birt et al., 2023; Grossi et al., 2020). Despite the advantages, some gaps emerged such as lacking longitudinal samples, frameworks for ICT-KM integration that are underdeveloped and little focus upon emerging technologies in accounting practices (Dalvi-Esfahani et al., 2025; Värzaru, 2022; Lubua 2020).

The present review, done under the guidance of PRISMA method, synthesizes empirical studies that were published from 2020 to the year 2025 in order to report about the adoption of ICT and KM practices in accounting. It describes the principal inhibitors, approaches for successful realization and impact of ICT-based knowledge shared in both global and African contexts.

1.1 Statement of the Problem

Despite their recognised importance for accounting practice, Information and Communication Technology (ICT) and Knowledge Management (KM) have not been applied consistently as drivers of modern accounting practice; especially in developing countries”. While ICT resources are capable of improving the efficiency, accuracy of reporting, and decision-making process, their meaningful utilization is sometimes constrained by lack of infrastructure, low ICT literacy level among staff, negative organizational attitudes towards technology use (Hamad et al., 2021; Lubua, 2022; Thottoli & Ahmed 2022).

Similarly, KM practices—essential to capture, share and apply institutional knowledge—are not sufficiently incorporated in accounting systems. A culture of weak knowledge sharing, unsupportive institutional policies, and the misalignment between ICT systems and KM frameworks are still impeding on the complete potential benefits of KM within accounting (Krah & Mertens, 2023; Salem et al., 2021; Vendrell-Herrero et al., 2020). Although some evidences are found in the literature that contributes to requirement aspects of ICT or KM, it is arguable that there is a significant guidance on barriers, enablers and benefits of ICT-enabled knowledge management (KM) in accounting. Such synthesis is particularly required to facilitate progress in transparency, accountability and performance in accounting organisations such those located in the Global South. (Noordin; et al., 2024; Osaloni: et al., 2023; Adjei: et al., 2021).

1.2 Research Objectives

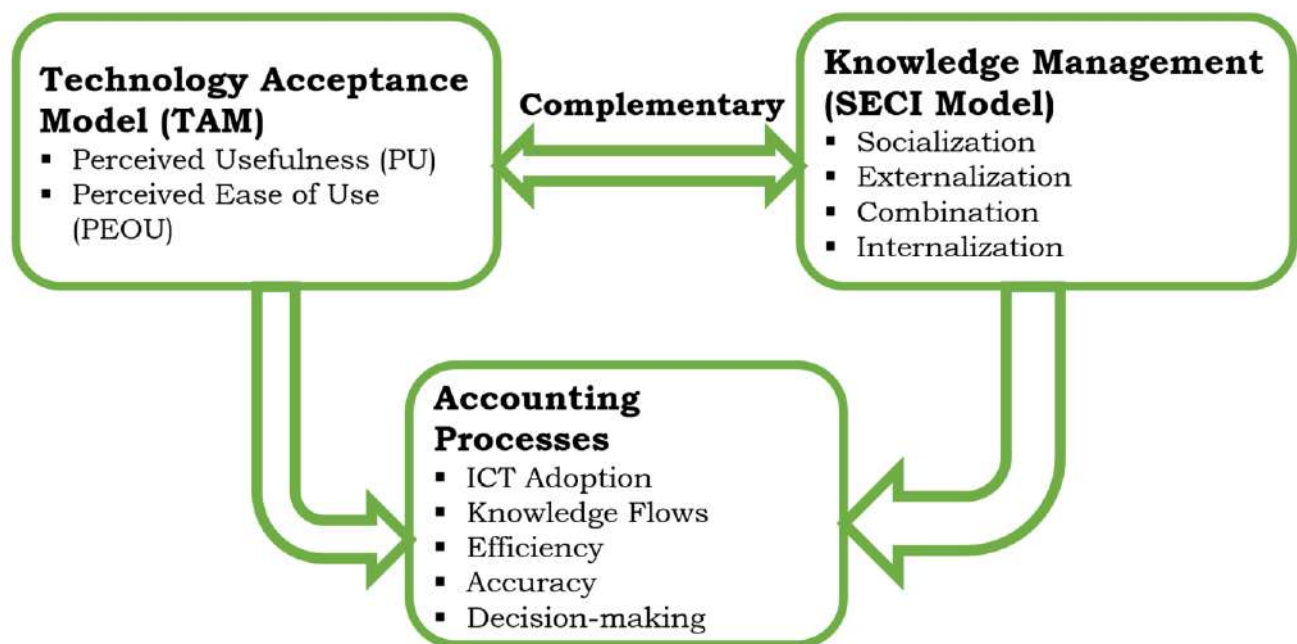
- i. To identify and evaluate real-life studies (2020-2025) conducted on ICT application and knowledge management in accounting.
- ii. To summarise the main barriers and strategies for effective ICT and KM implementation in Accountancy.
- iii. To highlight the outcomes and benefits associated with ICT-enabled KM practices in accounting.
- iv. To identify research gaps and propose directions for future studies, particularly in African contexts.

II. LITERATURE REVIEW

2.1 Theoretical Review

This review is informed by two complementary theoretical frameworks: the Technology Acceptance Model (TAM) and Knowledge Management (KM) theories, specifically, Nonaka and Takeuchi SECI model. Taken together, these models present an integrated understanding of how ICT adoption and KM practices interact to facilitate accounting tasks. The Technology Acceptance Model (TAM) proposed by Davis (1989) proposes that technology adoption and use are mostly driven by two perceptions: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In accounting environments, these opinions will shape the use of technologies including online accounting software, cloud applications and electronic reporting solutions. Technologies that are perceived as useful in terms of enhancing job performance and ease-of-use are more likely to be adopted. TAM therefore presents a useful theoretical framework for exploring ICT adoption behaviours in accounting contexts.

Aligning with TAM, the Knowledge Management (KM) theories, especially the SECI model proposed by Nonaka and Takeuchi (1995), also emphasize on complex dynamics of knowledge generation and use. SECI model describes four knowledge-converting activities: Socialization (sharing tacit knowledge through personal contacts), Externalization (articulating tacit knowledge into explicit concepts), Combination (systemizing and combining of converted concepts in a systematic manner) and Internalization (embedding converted concepts into routines). These activities are important in accounting, where both explicit (as documented procedures) and tacit (as professional judgment) knowledge is key. Through fusing TAM and the SECI model, this review uses a dual perspective to investigate how the use of technological tools and knowledge flows jointly affect accounting practices. Such integration helps to describe not only what leads or impedes the ICT and KM adoption, but also how such challenges are addressed and with what results. It underpins a conceptual discussion of obstacles, facilitators and benefits relating to the use of ICT in knowledge management in accounting.

**Figure 1**

Theoretical Framework integrating TAM and SECI Model

Source: Author's construct (2025).

Figure 1, depicts the conceptual framework underlying this review. The Technology Acceptance Model (TAM) has identified other conceptual drivers namely perceived usefulness and perceived ease of use to influence ICT adoption in accounting environments. Meanwhile, the process of knowledge creation and the conversion of knowledge is expounded by SECI model in Knowledge Management (KM) theory from four aspects: socialization, externalization, combination and internalization. The two-headed arrow between TAM and SECI reflects the complementary relationship between the technology appropriation and knowledge transfer. Both views intersect around accounting practices, and the role that ICT enhanced knowledge management plays in enhancing efficiency, precision and decision making of the profession.

2.2 Empirical Review

2.2.1 ICT Use and Knowledge Management in Accounting

Impact of adoption and use of ICT in accounting Empirical evidence Several empirical studies carried out from 2020 to 2025 investigated the acceptance and utilisation of ICT in accounting with respect to knowledge management system practices. For example, Noordin et al. (2024) also studied cloud accounting adoption in the UAE companies and they concluded that it significantly enhances financial information quality and hence reflects how ICT adoption practically influences the accounting practices. Likewise, Thottoli (2021) explored accounting software adoption in Oman showing that ICT literacy significantly influences adoption and highlighting human factors as essential to gauge a successful technology implementation. Jackson and Allen (2024) empirically examined the effect of staff perceptions and organisational contexts in accounting firms, finding that both personal characteristic and organisation atmosphere impact on technology adoption. In Nigeria, Osaloni et al. (2023) observed that ICT implementation improves business efficiency and decision-making, while Adjei et al. (2021) found that the institutions play an important role in cloud computing adoption by SMEs in Ghana. Future technology, e.g. generative AI: Virk et al., also analysed possible future technologies (such as transfer learning and grid search) alongside those included in their study. The personality characteristics of decision-makers would moderate their intention to innovate. Souza and Gasparetto (2020) explore how the organizational innovation dimensions affect the adoption of modern management accounting practices Taken together, these studies highlight that ICT utilization in the field of accounting is a result of a combination of technological, human, and organizational elements which are summarized in table 1.

Table 1*Summary of Reviewed Empirical Studies on ICT Use and Knowledge Management in Accounting (2020–2025)*

Author(s), Year	Study Focus	Methodology	Key Findings	Relevance to Objective 1
Noordin et al., 2024	Use of Cloud Accounting among UAE companies	Survey	Cloud accounting enhances the quality of financial information	Demonstrates ICT uptake improves efficiency of accounting.
Thottoli, 2021	Knowledge of the accounting and software also in Oman	Survey	ICT literacy affects adoption.	Foregrounds human factors in the adoption of ICT-KM.
Jackson & Allen, 2024	Technology adoption in accounting	Mixed-methods	Staff beliefs & environment shape uptake	Critical factors in ICT uptake: accounting industry
Osaroni et al., 2023	ICT adoption in Nigerian SMEs	Survey	ICT improves efficiency and decision-making	Provides African context evidence
Adjei et al., 2021	Cloud computing adoption in Ghana	Survey	Institutional factors shape adoption	African evidence for ICT-KM adoption
Dalvi-Esfahani et al., 2025	Adoption of AI Generative for entry jobs	Survey & modeling	Personality traits moderate technology adoption	Influence of ICT tools on the accounting function
Al-Okaily, 2025	Accounting analytics adoption	analytics adoption Survey	Positive attitudes improve ICT adoption	Shows impact of digital transformation
Thottoli & Ahmed, 2022	ICT and E-accounting in SMEs	Survey	IT adoption affected by several antecedents	Highlights technological and organizational factors
Ubesie & Erhimu, 2024	ICT impact on accounting standards in Nigeria	Empirical	ICT enhances accounting processes	African context evidence

2.2.2 Barriers, Challenges, and Strategies for ICT-KM Adoption

Some obstacles and opportunities exist to adoption of useful ICT and knowledge management in accounting. Lubua (2022) examined ICT uptake in African companies, and underscored infrastructure deficiency, policy gaps and manpower shortage as insurmountable impediments. Hamad et al. (2021), indicated that business owners do save operating costs with accounting software, but lack of training and experience with the digital tools impact their effectiveness. Also, Daff (2021) findings showed that employers do not consider graduates ICT competencies up to work requirements implying problems in human resource readiness. Adoption issues are also explained through the Technology Acceptance Model (TAM); see Qader et al. (2022), perceived usefulness and ease-of-use have a substantial impact on accounting software utilization. Adoption can also be constrained by contextual factors, such as rural–urban disparities, which was pointed out by Zheng and Ma (2022). Taken together, these studies highlight the various challenges faced by accounting firms, that will have to be managed through deliberate practices, as proposed in Table 2.

Table 2*Reported Barriers and Strategies for ICT-Enabled Knowledge Management Adoption in Accounting*

Author(s), Year	Study Focus	Methodology	Key Findings	Relevance to Objective 2
Lubua, 2022	Determination of drivers for ICT adoption in Africa	Literature review	Adoption is impacted by infrastructure, policy and human resource requirements	Highlights barriers to ICT-KM adoption
Hamad et al., 2021	Accounting software to minimize costs	Survey	Software reduces operational costs	Shows challenges in effective utilization
Daff, 2021	Employers' perspectives on accounting graduates	Survey	Work readiness ICT skills	Human resource gaps as barriers
Qader et al., 2022	TAM outcomes for accounting software	Empirical	perceived usefulness & ease-of-use	Technology adoption barriers explained
Zheng & Ma, 2022	Impact of ICT penetration to Chinese population	Empirical	Urban-rural differences affect adoption	Contextual barriers for ICT utilization

2.2.3 Outcomes and Benefits of ICT-enabled KM Practices

By reviewing available empirical evidence, this study also affirms the contribution of ICT-enabled KM activities in improving accounting efficiency, transparency and decision-making processes. ICT and KM adoption enhances the financial transparency and trust in sub-Saharan African local governments. Broccardo et al. (2025) have highlighted that the link between KM and management accounting is conducive to sustainability policies and eco-friendly practices, whereas Bresciani et al. (2023) found that integration of environmental management accounting with KM enhances organizational performance. Paoloni et al. (2020) emphasized that successful KM could facilitate innovation and intellectual capital making overall productivity betterment. Alvarenga et al. (2020), digital transformation as well as ICT-based KM led to performance enhancement in the public organisation. Additionally, Murthy et al. (2023) demonstrated that there are increasing returns to the industry product knowledge in the auditing market. Taken together, these results indicate that ICT-based KM delivers the good for accounting consequences, as summarised in Table 3.

Table 3

Summary of Reported Outcomes and Benefits of ICT-Enabled KM Practices in Accounting

Author(s), Year	Study Focus	Methodology	Key Findings	Relevance to Objective 3
Krah & Mertens, 2023	Financial transparency & accountability	Survey	ICT and KM enable transparency and trust	Shows KM improves accounting outcomes
Broccardo et al., 2025	KM and sustainability accounting in management	Review	KM enhances environmentally friendly practices	ICT-KM integration for strategic accounting
Bresciani et al., 2023	Environmental management accounting & KM	Survey	KM mediates performance outcomes	Shows KM processes enhance performance
Paoloni et al., 2020	KM, intellectual capital, entrepreneurship	Literature review	KM enhances innovation and knowledge propagation	Demonstrates benefits of KM practices
Alvarenga et al., 2020	Digital transformation & KM in government	Literature review	ICT-enabled KM improves organizational performance	ICT-KM benefits in public accounting
Murthy et al., 2023	Audit efficiency and system homogeneity	Empirical	Knowledge spillover improves audit efficiency	KM enhances accounting operations

2.2.4 Research Gaps and Directions for Future Studies

However, there are still some research nouns that could provide future contributions to our understanding of the impact of both ICT and KM in accounting. Indicating the scarcity of empirical research on MA and that there is need for regionally based studies in Africa (Ndemewah & Hiebl, 2022). Vendrell-Herrero et al. (2020): KM competence positively facilitates productivity, however robustness in the findings varies by circumstance and needs to be further inquired. Durst et al. (2024) found that there were knowledge gaps when it comes to SMEs and their uptake of the ICT-KM, as well as suggestions for further research. Vărzaru (2022) highlighted the AI application in managerial accounting to be unexplored, especially in developing countries. In addition, Rashid et al. (2021) also suggested longitudinal studies investigating the implementation of SAA and the influence of ICT-driven KM over time. Overall, these studies share opportunities for future research for the African accounting context in common.

Table 4

Identified Research Gaps and Suggested Future Research Directions in ICT and KM Studies (2020–2025)

Author(s), Year	Study Focus	Methodology	Key Findings	Relevance to Objective 4
Ndemewah & Hiebl, 2022	Management accounting research in Africa	Literature review	Limited empirical studies	Cons points out the gaps in African accounting contexts
Vendrell-Herrero et al., 2020	KM capabilities and productivity in Africa	Survey	KM enhances productivity though context dependent gaps prevail	Need for localized evidence
Durst et al., 2024	KM within SMEs: emerging trends and prospects	Systematic review	Future research Research to understand ICT-KM adoption	Identifies research opportunities
Vărzaru, 2022	AI acceptance in managerial accounting	Empirical	Accounting specific -AI adoption further research needed	Emerging ICT adoption gaps
Md. Mamunur Rashid et al., 2021	Strategic management accounting practices	Literature review	ICT-KM enhances decision-making; longitudinal gaps	What this paper adds Points to research in strategy

2.5 Discussion and Research Gaps

The findings of the reviewed studies show that ICT increases accounting efficiency, decision-making and reporting quality, while KM practices guarantee knowledge capture and sharing. Yet obstacles still exist especially in developing countries like weak infrastructure, training and policy gaps. There are also gaps reported in the literature, such as lack of few longitudinal studies, absence of enough use of emerging technology and rare evidence with context specificity evidence about Africa (Dalvi-Esfahani et al., 2025; Vărzaru, 2022; Lubua, 2022). Closing these gaps is critical to better leveraging ICT-supported KM adoption in accounting.

III. METHODOLOGY

3.1 Search Strategy and Study Selection

This PRISMA-related study was conducted following a systematic search in various academic databases such as Google Scholar, Scopus, and Web of Science to identify empirical studies from 2020 to 2025. Literature search was concentrated in the areas of ICT adoption, knowledge management (KM), and accounting practices. Search terms were “ICT adoption accounting,” “knowledge management accounting” and “ICT knowledge management accounting Africa.” The selection criteria were applied to retrieve empirical studies published in English on and after 2020 that are potentially of interest to accounting practice. Exclusion criteria were not empirical and opinion papers and studies outside the area of accounting.

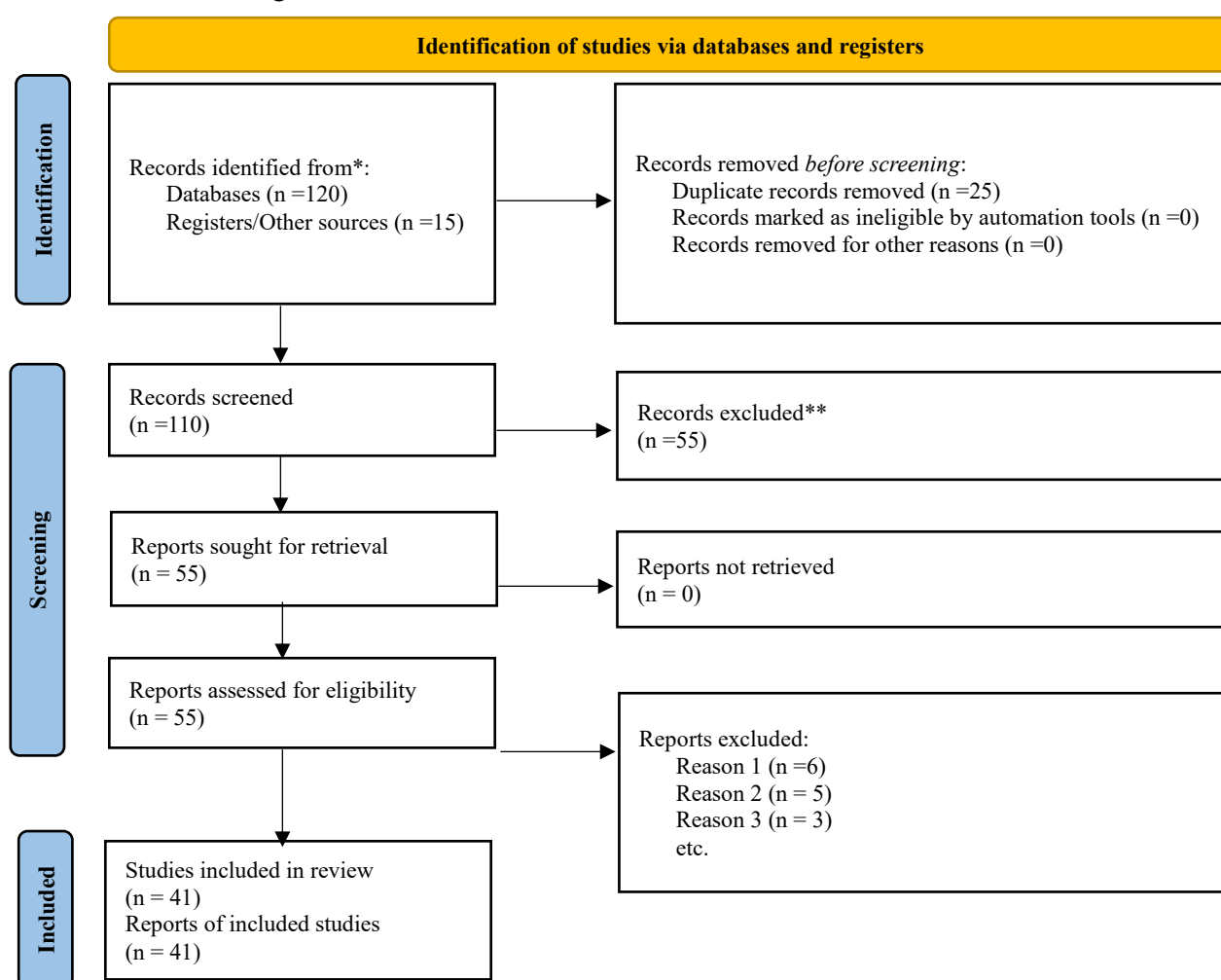


Figure 2

PRISMA 2020 flow diagram showing the selection process of empirical studies on ICT use and knowledge management in accounting (2020–2025). Numbers indicate records identified, screened, excluded, and included at each stage of the review.

Source: Page MJ, et al. BMJ 2021;372: n71. doi: 10.1136/bmj.n71.

3.2 Data Extraction and Synthesis

Information about all retrieved articles including first author, year of publication, county, methodology type, focus and main findings were extracted from each study reviewed as well as relevance to the review objectives. A

narrative synthesis method was employed to compile findings according to the four main objectives (empirical studies on ICT and KM in accounting, barriers for the adoption of ICT and KM, outcomes and benefits, remaining research gaps)

IV. FINDING & DISCUSSION

4.1 Empirical Studies on ICT Use and Knowledge Management in Accounting (2020–2025)

In total, 41 empirical studies were included in the review. Commonly documented ICT based tools like accounting software, cloud-based technologies and digitalized reporting systems obviously improve financial management and reporting efficiency (Thottoli & Ahmed, 2022; Osaloni et al., 2023; Jackson & Allen, 2024). The KM also serve to complement the ICT adoption through knowledge creation, sharing and application that supports decision making, auditing and organizational learning (Kareem et al., 2021; Broccardo et al., 2025; Bresciani et al., 2023).

Table 5

Frequency of ICT Tools and KM Practices Reported in Reviewed Accounting Studies (2020–2025)

ICT Tool / KM Practice	No. of Studies Reporting	References
Accounting software	12	Thottoli & Ahmed, 2022; Jackson & Allen, 2024; Murthy et al., 2023
Cloud-based platforms	10	Osaloni et al., 2023; Broccardo et al., 2025
Digital reporting systems	8	Jackson & Allen, 2024; Osaloni et al., 2023
Knowledge creation	15	Kareem et al., 2021; Broccardo et al., 2025
Knowledge sharing	12	Bresciani et al., 2023; Kareem et al., 2021
Knowledge application	10	Kareem et al., 2021; Broccardo et al., 2025

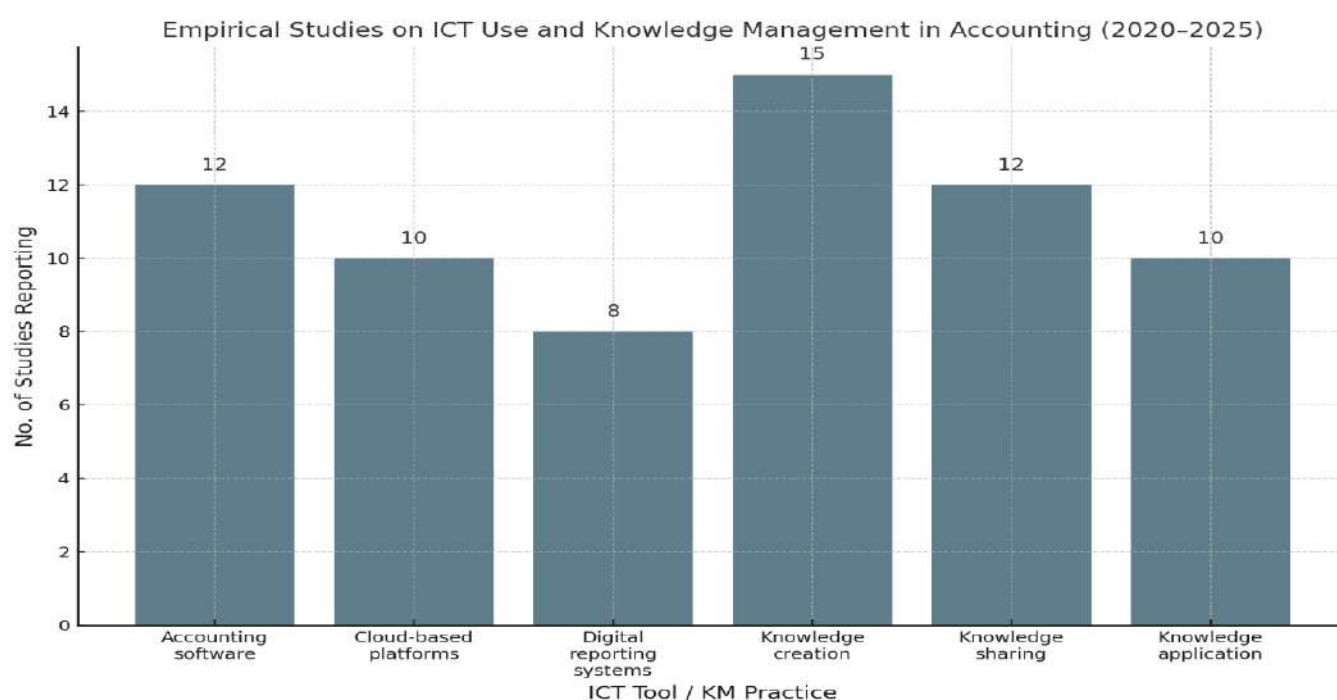


Figure 3

Bar Chart Showing Frequency of ICT Tools and KM Practices in Accounting Studies (2020–2025)

Figure 1 shows that knowledge creation (15 studies) and accounting software (12 studies) were the most frequently reported elements. The visual complements Table 5 by highlighting usage patterns across the reviewed literature.

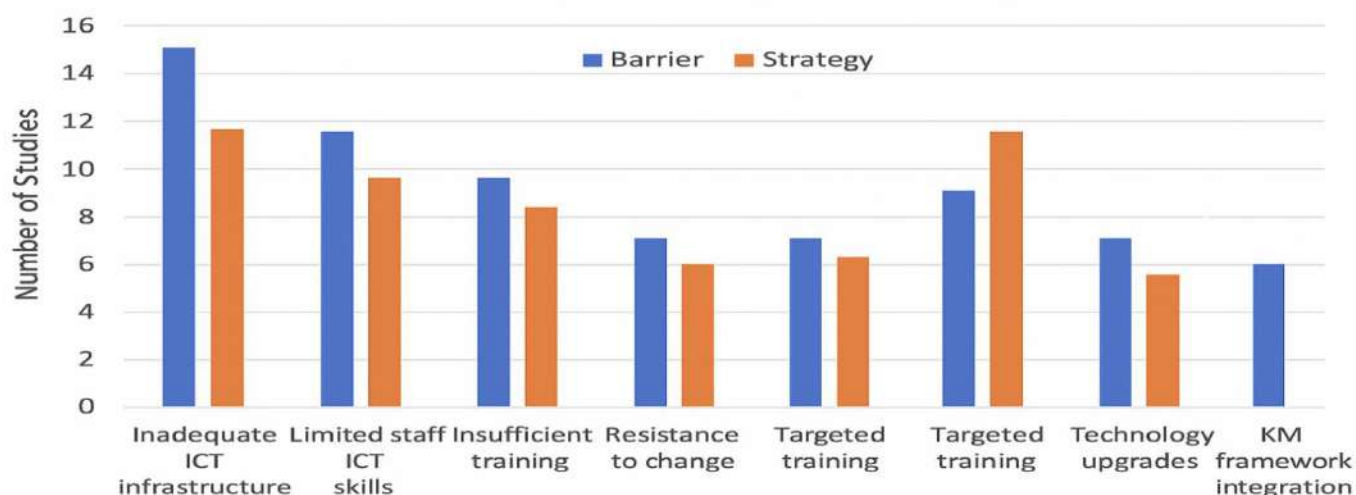
4.2 Barriers, Challenges, and Strategies

A number of obstacles to the adoption of ICT-enabled KM were cited, including a lack of ICT infrastructure, low professional staff ICT skills, inadequate training, change resistance and weak policy support (Lubua, 2022; Vărzaru, 2022). thottoli,2024; Kareem et al., 2021) Complete success Involve strategic training, commitment of leaderships to the service, improved technology and incorporate framework KM in accounting processr (Al-Okaily, 2025; Thottoli, 2024; Kareem et al., 2021).

Table 6*Summary of Barriers to ICT-Enabled KM Adoption and Strategies Suggested in Reviewed Studies*

Category	Specific Barrier / Strategy	No. of Studies Reporting	References
Barriers	Inadequate ICT infrastructure	12	Lubua, 2022
	Limited staff ICT skills	10	Värzaru, 2022; Thottoli, 2024
	Insufficient training	8	Al-Okaily, 2025; Kareem et al., 2021
	Resistance to change	7	Lubua, 2022
	Weak policy support	6	Värzaru, 2022; Al-Okaily, 2025
Strategies	Targeted training	11	Al-Okaily, 2025; Thottoli, 2024
	Leadership commitment	9	Kareem et al., 2021; Lubua, 2022
	Technology upgrades	8	Thottoli, 2024
	Integration of KM frameworks	7	Kareem et al., 2021; Värzaru, 2022

Frequency of Barriers and Strategies in ICT-related Accounting Studies (2020–2025)

**Figure 4***Bar Chart of Barriers and Strategies Reported in Reviewed Studies (2020–2025)*

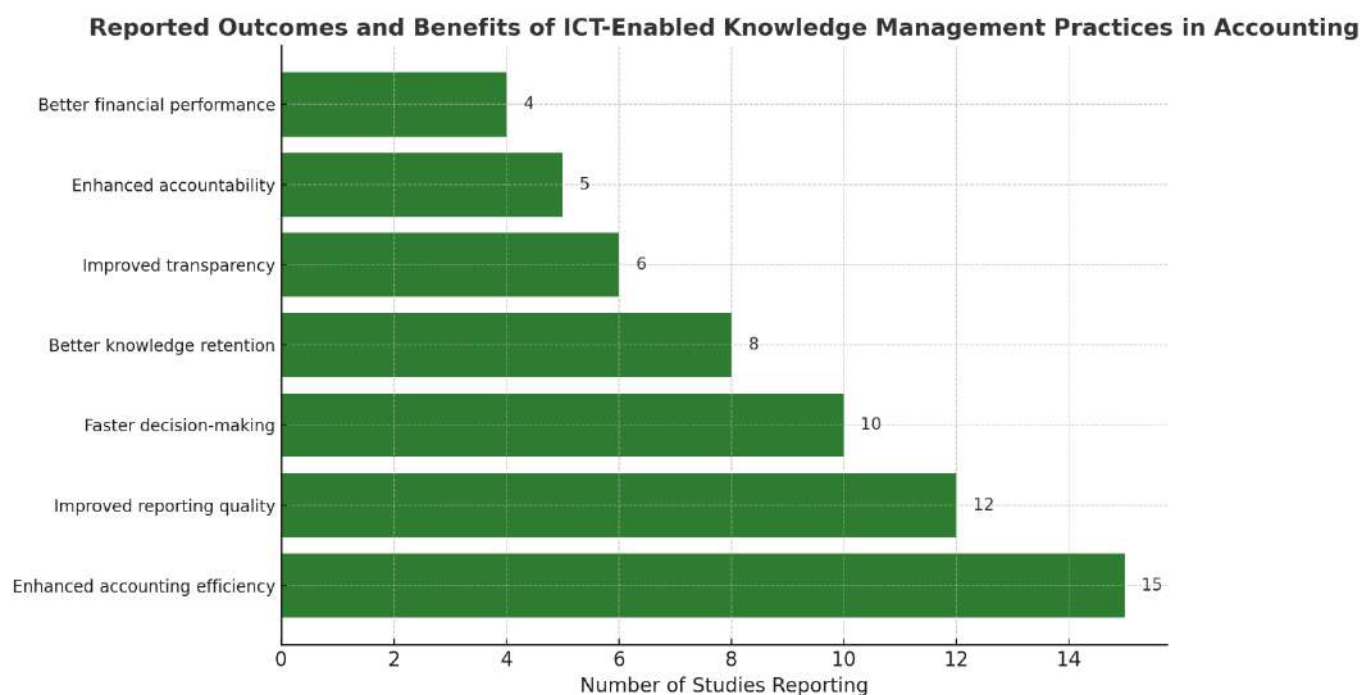
The number of studies that mentioned crucial barriers, such as lack of infrastructure and poor ICT skills and, by contrast most common strategies enabling for overcoming the same (e.g. training, support by leadership) is illustrated in Fig 2. Data match the entries summarized in Table 6.

4.3 Outcomes and Benefits of ICT-Enabled KM Practices

Integration of ICT-KM allows for a better accountability efficiency, reporting excellence, timely decision making as well as knowledge retention (Murthy et al., 2023; Paoloni et al., 2020; Aljarallah, 2020). Other advantages are enhanced transparency, accountability and financial performance (Mediaty et al., 2025).

Table 7*Reported Outcomes and Benefits of ICT-Enabled Knowledge Management Practices in Accounting*

Outcome / Benefit	No. of Studies Reporting	References
Enhanced accounting efficiency	15	Murthy et al., 2023; Paoloni et al., 2020
Improved reporting quality	12	Aljarallah, 2020; Murthy et al., 2023
Faster decision-making	10	Paoloni et al., 2020; Aljarallah, 2020
Better knowledge retention	8	Murthy et al., 2023; Paoloni et al., 2020
Improved transparency	6	Paoloni et al., 2023
Enhanced accountability	5	Mediaty et al., 2025
Better financial performance	4	Mediaty et al., 2025

**Figure 5**

Bar Chart of Reported Outcomes and Benefits of ICT-Enabled KM in Accounting (2020–2025)

positive impacts of ICT-KM integration are shown in Figure 3: improved accounting efficiency - reported by 15 studies, improved reporting quality and faster decision-making. These advantages highlight the role played by ICT in knowledge-based accounting system strategically.

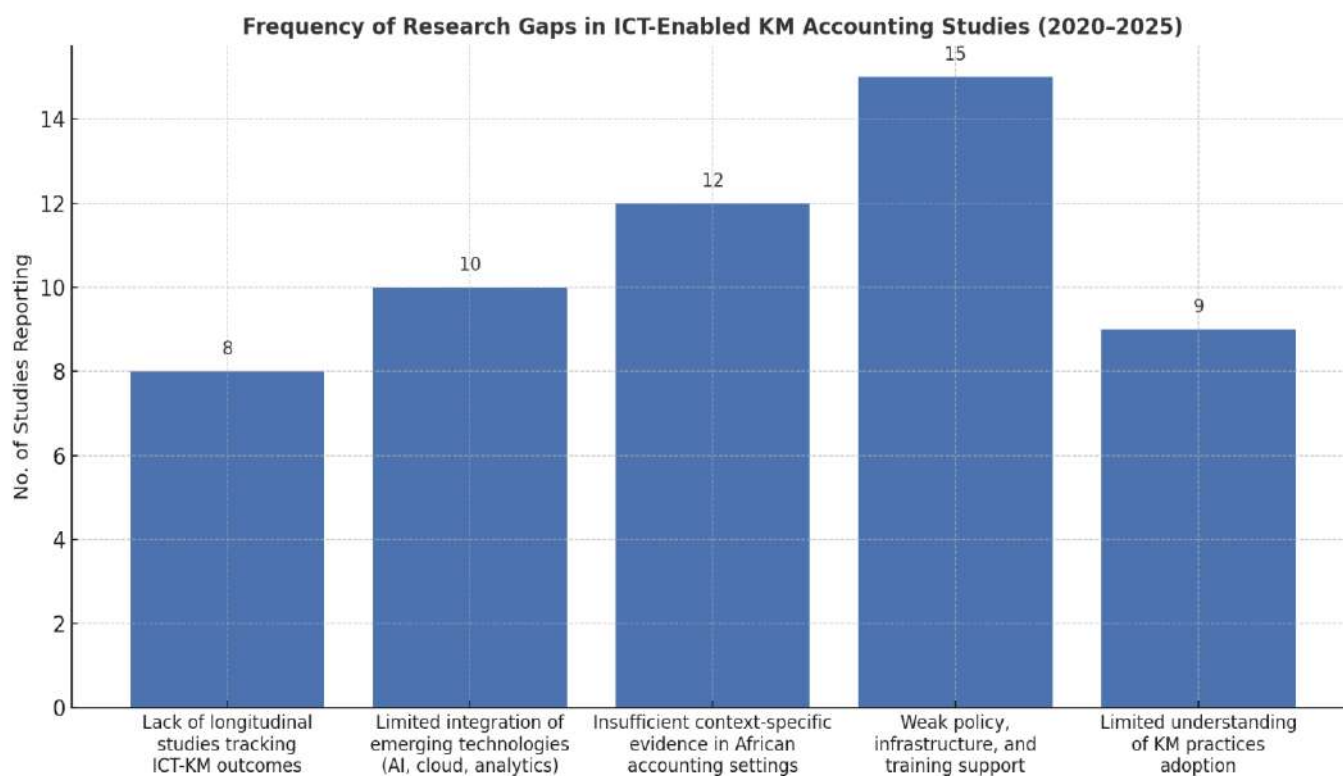
4.4 Research Gaps and Future Directions

Despite these benefits, gaps remain. There have been a few longitudinal studies track the long-term outcomes of ICT-KM adoption (Dalvi-Esfahani et al., 2025; Vu et al., 2020). While powerful technologies like AI, blockchain and analytics remain underdeveloped in accounting practices, the latter is not an exception even in Africa (Värzaru, 2022; Lubua, 2022; Cheng et al., 2021). Context-based research on the role of organisational, cultural and institutional factors in KM and ICT adoption decisions in accounting environments has become limited as well (Souza & Gasparetto, 2020). Filling these gaps will help guide policy, training and technology intervention strategies that are effective and culturally sensitive.

Table 8

Identified Research Gaps and Suggested Future Research Directions in ICT-KM Accounting Studies

Identified Research Gap	No. of Studies Reporting	References	Suggested Future Research Direction
Paucity of longitudinal studies on the ICT-KM impacts	8	Dalvi-Esfahani et al., 2025; Värzaru, 2022; Lubua, 2022; Vu et al., 2020	Evidence studies: Are there longer-term effects of ICT-KM?
Little is known about how firms adopt KM practices			
Poor incorporation of new technologies (AI, cloud and analytics)	10	Al-Okaily, 2025; Thottoli, 2024; Kareem et al., 2021; Cheng et al., 2021	Adoption and impact of AI, enhanced tools in accounting explored
Lack of context-specific evidence in African accounting environment	12	Lubua, 2022; Ndemewah & Hiebl, 2022; Pradhan et al., 2021	A similar study should be conducted among the African universities and public sector organizations
Weak policy, environment and training support	15	Lubua, 2022; Värzaru, 2022	Explore mechanisms to enhance policy, systems, and human capacity
Little is known about how firms adopt KM practices	9	Kareem et al., 2021; Broccardo et al., 2025	Investigate determinants of KM uptake in accounting firms

**Figure 6**

Bar Chart of Frequently Reported Research Gaps in ICT-KM Accounting Studies (2020–2025)

Studies identified prioritized research gaps, among which the need for context-specific data in Africa and for greater utilization of new technologies featured most prominently Fig. 6 provides back-up for the analysis in Table 8 and highlights recourse areas for future investigation.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This review focused on recent (2020s) empirical studies of ICT and KM adoption in accounting. The results verify that ICT adoption, including accounting software and cloud-based systems, is of significant importance to both accuracy and transparency of reporting as well as operational efficiency. When complemented with KMs practices such as knowledge sharing and internalization, these technologies enhance decision quality and financial performance. Nonetheless, numerous studies describe remaining obstacles, such as a lack of infrastructure and training, and low institutional readiness in particular in developing countries.

5.2 Recommendations

The response to these challenges should include stronger institutional policies, tailored capacity development and context-specific research. The investment in both ICT infrastructure and training programme can enhance the level of KM adoption, while integrating a KM framework within an accounting process would facilitate the flow of knowledge and stimulate innovation. Future research may be directed to the long-term effects, the role of emerging technologies such as AI (Artificial Intelligence) and data analytic and more in-depth understanding of the African accounting context. These steps are necessary to allow accounting systems that are more efficient and knowledge based.

REFERENCES

- Adjei, J. K., Adams, S., & Mamattah, L. (2021). Cloud computing adoption in Ghana: Accounting for institutional factors. *Technology in Society*, 65, 101583. <https://doi.org/10.1016/j.techsoc.2021.101583>
- Al-Dmour, A., Zaidan, H., & Al Natour, A. R. (2023). The impact knowledge management processes on business performance via the role of accounting information quality as a mediating factor. *VINE Journal of Information and Knowledge Management Systems*, 53(3), 523–543. <https://doi.org/10.1108/VJKMS-12-2020-0219>
- Aljarallah, M. K. (2020). Accounting information systems and knowledge management. *International Journal of Managing Public Sector Information and Communication Technologies*, 11(2/3), 1–9.

- Al-Okaily, M. (2025). Attitudes toward the adoption of accounting analytics technology in the digital transformation landscape. *Journal of Accounting & Organizational Change*, 21(3), 593–613. <https://doi.org/10.1108/JAOC-04-2024-0127>
- Alvarenga, A., Matos, F., Godina, R., & Matias, J. C. O. (2020). Digital transformation and knowledge management in the public sector. *Sustainability*, 12(14), 5824. <https://doi.org/10.3390/su12145824>
- Birt, J., Safari, M., & de Castro, V. B. (2023). Critical analysis of integration of ICT and data analytics into the accounting curriculum: A multidimensional perspective. *Accounting & Finance*, 63(4), 4037–4063. <https://doi.org/10.1111/acfi.13084>
- Bresciani, S., Rehman, S. U., Giovando, G., & Alam, G. M. (2023). The role of environmental management accounting and environmental knowledge management practices influence on environmental performance: Mediated-moderated model. *Journal of Knowledge Management*, 27(4), 896–918. <https://doi.org/10.1108/JKM-12-2021-0953>
- Broccardo, L., Giordino, D., Yaqub, M. Z., & Alshibani, S. M. (2025). Implementing sustainability: What role do knowledge management and management accounting play? Agenda for environmentally friendly businesses. *Corporate Social Responsibility and Environmental Management*, 32(1), 383–403. <https://doi.org/10.1002/csr.2936>
- Cheng, C. Y., Chien, M. S., & Lee, C. C. (2021). ICT diffusion, financial development, and economic growth: An international cross-country analysis. *Economic Modelling*, 94, 662–671. <https://doi.org/10.1016/j.econmod.2020.02.008>
- Daff, L. (2021). Employers' perspectives of accounting graduates and their world of work: Software use and ICT competencies. *Accounting Education*, 30(5), 495–524. <https://doi.org/10.1080/09639284.2021.1935282>
- Dalvi-Esfahani, M., Barati-Ahmadabadi, H., Ramayah, T., Turner, J. J., Iahad, N. A., & Azar, N. (2025). Stimulus-organism-response framework of decision-makers intention to adopt generative AI to replace entry-level jobs: The moderating impact of personality traits. *Technological Forecasting and Social Change*, 219, 124291. <https://doi.org/10.1016/j.techfore.2025.124291>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Durst, S., Foli, S., & Edvardsson, I. R. (2024). A systematic literature review on knowledge management in SMEs: Current trends and future directions. *Management Review Quarterly*, 74(1), 263–288. <https://doi.org/10.1007/s11301-022-00299-0>
- Grossi, G., Kallio, K. M., Sargiacomo, M., & Skoog, M. (2020). Accounting, performance management systems and accountability changes in knowledge-intensive public organizations: A literature review and research agenda. *Accounting, Auditing & Accountability Journal*, 33(1), 256–280. <https://doi.org/10.1108/AAAJ-02-2019-3869>
- Hamad, H. A., Hamza, P. A., Gardi, B., Saeed, K., Qader, D., & Anwar, G. (2021). The influence of accounting software in minimizing business costs. *International Journal of Engineering, Business and Management*, 5(5), 13–22. <https://doi.org/10.22161/ijebm.5.5.4>
- Jackson, D., & Allen, C. (2024). Technology adoption in accounting: The role of staff perceptions and organisational context. *Journal of Accounting & Organizational Change*, 20(2), 205–227. <https://doi.org/10.1108/JAOC-01-2023-0007>
- Kareem, H. M., Aziz, K. A., Maelah, R., Yunus, Y. M., Alsheikh, A., & Alsheikh, W. (2021). The influence of accounting information systems, knowledge management capabilities, and innovation on organizational performance in Iraqi SMEs. *International Journal of Knowledge Management*, 17(2), 1–32. <https://doi.org/10.4018/IJKM.2021040104>
- Kareem, H. M., Dauwed, M., Meri, A., Jarrar, M. T., Al-Bsheish, M., & Aldujaili, A. A. (2021). The role of accounting information system and knowledge management to enhancing organizational performance in Iraqi SMEs. *Sustainability*, 13(22), 12706. <https://doi.org/10.3390/su132212706>
- Krah, R., & Mertens, G. (2023). Financial transparency, trust and willingness to pay in local governments of sub-Saharan Africa. *Journal of Public Budgeting, Accounting & Financial Management*, 35(6), 100–120. <https://doi.org/10.1108/JPBAFM-06-2022-0110>
- Lubua, E. W. (2022). Factors affecting the adoption of information and communication technologies in Africa: Literature review. <https://digitalcommons.kennesaw.edu/acist/2022/presentations/1>
- Mediaty, M., Usman, A., Yusuf, M. S. K., & Sandy, K. N. (2025). Enhancing government accountability through responsibility accounting: A systematic literature review. *Journal of Management, Accounting, General Finance and International Economic Issues*, 4(4), 904–919. <https://doi.org/10.55047/marginal.v4i4.1790>
- Murthy, U. S., Park, J. C., Smith, T., & Whitworth, J. (2023). Audit efficiency and effectiveness consequences of accounting system homogeneity across audit clients: A new form of knowledge spillover? *The Accounting Review*, 98(2), 389–418. <https://doi.org/10.2308/TAR-2020-0609>



- Ndemewah, S. R., & Hiebl, M. R. (2022). Management accounting research on Africa. *European Accounting Review*, 31(4), 10291–1057. <https://doi.org/10.1080/09638180.2021.1897025>
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.
- Noordin, N. A., Hayek, A., Sejdini, M., Humaid, A., Sultan, N., Abdulla, B., & Yousif, M. (2024, January). Financial information quality: Analysis of cloud accounting adoption on UAE firms. In *International Conference on Business Analytics in Practice* (pp. 325–340). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-61589-4_25
- Osaloni, B. O., Akinadewo, I. S., Ogungbade, O. I., & Oluwadare, O. O. (2023). Adoption of ICT and efficiency in accounting practice in Nigeria. *International Journal of Research*, 10(04), 284–302. <https://doi.org/10.5281/zenodo.7838536>
- Paoloni, M., Coluccia, D., Fontana, S., & Solimene, S. (2020). Knowledge management, intellectual capital and entrepreneurship: A structured literature review. *Journal of Knowledge Management*, 24(8), 1797–1818. <https://doi.org/10.1108/JKM-01-2020-0052>
- Pradhan, R. P., Arvin, M. B., Nair, M. S., Hall, J. H., & Bennett, S. E. (2021). Sustainable economic development in India: The dynamics between financial inclusion, ICT development, and economic growth. *Technological Forecasting and Social Change*, 169, 120758. <https://doi.org/10.1016/j.techfore.2021.120758>
- Qader, K. S., Jamil, D. A., Sabah, K. K., Anwer, S. A., Mohammad, A. J., Gardi, B., & Abdulrahman, B. S. (2022). The impact of technological acceptance model (TAM) outcome on implementing accounting software. *International Journal of Engineering, Business and Management*, 6(6), 14–24. <https://doi.org/10.22161/ijebm.6.6.3>
- Rashid, M. M., Ali, M. M., & Hossain, D. M. (2021). Strategic management accounting practices: A literature review and opportunity for future research. *Asian Journal of Accounting Research*, 6(1), 109–132. <https://doi.org/10.1108/AJAR-06-2019-0051>
- Salem, R. I. A., Ezeani, E., Gerged, A. M., Usman, M., & Alqatamin, R. M. (2021). Does the quality of voluntary disclosure constrain earnings management in emerging economies? Evidence from Middle Eastern and North African banks. *International Journal of Accounting & Information Management*, 29(1), 91–126. <https://doi.org/10.1108/IJAIM-07-2020-0109>
- Souza, F. F., & Gasparetto, V. (2020). Innovative organization dimensions and the adoption of modern management accounting practices. *Revista Gestão & Tecnologia*, 20(3), 145–166. <https://doi.org/10.20397/2177-6652/2020.v20i3.1957>
- Thottoli, M. M. (2021). Knowledge and use of accounting software: Evidence from Oman. *Journal of Industry-University Collaboration*, 3(1), 2–14. <https://doi.org/10.1108/JIUC-04-2020-0005>
- Thottoli, M. M. (2024). Leveraging information communication technology (ICT) and artificial intelligence (AI) to enhance auditing practices. *Accounting Research Journal*, 37(2), 134–150. <https://doi.org/10.1108/ARJ-09-2023-0269>
- Thottoli, M. M., & Ahmed, E. R. (2022). Information technology and E-accounting: Some determinants among SMEs. *Journal of Money and Business*, 2(1), 1–15. <https://doi.org/10.1108/JMB-05-2021-0018>
- Ubesie, C., & Erhimu, D. (2024). Effect of Information & Communication Technology (ICT) on accounting practices in Nigeria using First Bank Plc Awka, Anambra State as an evidence of study. *Research Journal of Financial Sustainability Reporting*, 6(2), 130–142. <https://deptofaccy-esut.com.de/index.php/rjfsr/article/view/100>
- Värzaru, A. A. (2022). Assessing artificial intelligence technology acceptance in managerial accounting. *Electronics*, 11(14), 2256. <https://doi.org/10.3390/electronics11142256>
- Vendrell-Herrero, F., Darko, C. K., & Ghauri, P. (2020). Knowledge management competences, exporting and productivity: Uncovering African paradoxes. *Journal of Knowledge Management*, 24(1), 81–104. <https://doi.org/10.1108/JKM-07-2018-0433>
- Vu, K., Hanafizadeh, P., & Bohlin, E. (2020). ICT as a driver of economic growth: A survey of the literature and directions for future research. *Telecommunications Policy*, 44(2), 101922. <https://doi.org/10.1016/j.telpol.2020.101922>
- Zheng, H., & Ma, W. (2022). Impact of ICT adoption on cosmetic expenditure of Chinese residents: An exploration accounting for urban-rural differentials. *Applied Economics Letters*, 29(14), 1286–1291. <https://doi.org/10.1080/13504851.2021.1927953>