

MAPPING GLOBAL RESEARCH ON DIGITAL ACCOUNTING SYSTEMS FOR SMALL AND MEDIUM ENTERPRISES: A BIBLIOMETRIC ANALYSIS

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Abstrak

Penelitian ini bertujuan untuk memetakan dan menganalisis tren penelitian global mengenai sistem akuntansi digital dalam konteks Usaha Kecil dan Menengah (UKM) dengan menggunakan pendekatan analisis bibliometrik. Data diperoleh dari basis data Scopus melalui serangkaian kueri yang menggabungkan istilah terkait sistem akuntansi digital dan UKM, dengan kriteria artikel berbahasa Inggris yang diterbitkan pada periode 2015–2025. Proses identifikasi dan penyaringan mengikuti protokol PRISMA dan diperoleh 129 artikel yang memenuhi kriteria inklusi. Data bibliografis yang dikumpulkan kemudian dianalisis menggunakan Biblioshiny untuk membangun peta jaringan *co-authorship*, *co-citation*, dan *co-occurrence* kata kunci. Hasil analisis menunjukkan peningkatan perhatian akademik terhadap topik sistem akuntansi digital untuk UKM, dengan beberapa kluster tema utama yang berkaitan dengan adopsi dan implementasi sistem akuntansi digital, dampak terhadap kinerja dan kualitas informasi keuangan, serta transformasi digital dan kesiapan teknologi UKM. Bidang ini berakar pada literatur akuntansi, sistem informasi, dan studi UKM, namun masih menyimpan celah riset pada konteks negara berkembang, integrasi teknologi baru, dan perilaku pengguna. Temuan ini memberikan dasar untuk menyusun agenda penelitian masa depan dan menawarkan panduan bagi pembuat kebijakan serta praktisi dalam mendorong adopsi sistem akuntansi digital yang lebih efektif di kalangan UKM.

Keywords:

Digital accounting information systems, Small and medium enterprises, Digital transformation, Bibliometric analysis, Accounting research trends

This study aims to map and analyze global research trends on digital accounting systems within the context of Small and Medium Enterprises (SMEs) using a bibliometric approach. Data were retrieved from the Scopus database through a series of queries that combined terms related to digital accounting systems and SMEs, with filters applied for English-language articles published between 2015 and 2025. The identification and screening process followed the PRISMA protocol, yielding 129 articles that met the inclusion criteria. The collected bibliographic data were then analyzed using Biblioshiny to construct network maps of co-authorship, co-citation, and keyword co-occurrence. The results indicate a growing academic interest in digital accounting systems for SMEs, with several major thematic clusters related to the adoption and implementation of such systems, their impact on performance and financial information quality, as well as digital transformation and technological readiness of SMEs. While the field is rooted in accounting, information systems, and SME literature, research gaps remain, particularly concerning developing country contexts, the integration of emerging technologies, and user behavior. These findings provide a foundation for creating a future research agenda and offer guidance for policymakers and practitioners on promoting the more effective adoption of digital accounting systems among SMEs.

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INTRODUCTION

The current digital acceleration is transforming how organizations, including Micro, Small, and Medium Enterprises (SMEs), conduct their business. The emergence of technologies such as cloud computing, artificial intelligence, big data analytics, and blockchain has brought about profound changes in the field of accounting (Al-Shahamani et al., 2025). These changes encompass various aspects, ranging from transaction recording to financial reporting and analysis. Accounting recording, historically dominated by manual systems, is gradually transitioning toward digital systems that operate in real-time (Yoon, 2020; Saed, 2020). This move shifts accounting from a historical recording role to an analytical one. The digital ecosystem presents unprecedented opportunities for efficiency, accuracy, enhanced accessibility, and strategic value for all business entities, including SMEs; however, it also establishes a novel environment that requires adaptation (Wiralestari et al., 2025; Saarikko et al., 2020; Anriva, Della Hilia, & Hamidah, 2024). Conversely, this alteration introduces numerous new challenges that scholars, practitioners, and policymakers must further discuss (Darmawati et al., 2025; Al-Shahamani et al., 2025).

SMEs are acknowledged as the foundation of social and economic progress in both developed and developing nations (A. E. A. Ibrahim, 2020; Al-hattami & Kabra, 2021). They are essential for reducing poverty, creating jobs, and advancing inclusive economic development (Manzoor et al., 2019; Al-Haddad et al., 2019; Nursini, 2020). However, in today's global market, SMEs cannot rely entirely on traditional techniques to survive. They must use information technology to adapt and thrive in the digital age. One essential strategy is to use digital accounting systems to manage financial data effectively (Handayani et al., 2023). Businesses can automate, integrate, and coordinate financial activities by implementing an Accounting Information System (AIS), which provides precise, timely, and dependable data for strategic decision-making (Duan, 2024). This integration not only boosts operating efficiency but also improves transparency, performance measurement, and control (Al-Hattami, 2024; Mohd Al-Hattami et al., 2021; Pham & Vu, 2024). Financial process digitization has improved strategic decision-making, increased organizational responsiveness, and changed conventional business models (Phornlaphatrachakorn & Kalasindhu, 2021; Rahmawati et al., 2021). Despite the various advantages of digital accounting systems, many SMEs are struggling to adopt them (Maryanto et al., 2025; Lutfi et al., 2022). This gap is due to several issues, including high adoption costs, data security concerns, a lack of digital skills and expertise among SMEs, and inadequate infrastructure (Iswari et al., 2025; Donbesuur et al., 2020). To fully realize the benefits of digitization, such systems must be specifically designed to meet the unique needs of SMES, including simplicity, ease of use, affordability, and the ability to fulfill their financial reporting requirements.

Understanding the history, nature, and scope of digital accounting systems in the context of SMEs is necessary to achieve alignment between system design and user needs. Traditional accounting information systems, which have evolved in response to technological advancements, form the conceptual foundation of digital accounting systems. An Accounting Information System (AIS) is an integrated set of people, procedures, and technology that collects, processes, and presents financial data for decision-making (F. Ibrahim et al., 2020). Digital accounting systems encompass not only transaction recording modules but also interaction with other corporate processes, automatic reconciliation, financial statement preparation, and data display (Ratmono et al., 2023). The term "digital accounting systems" in this study refers to a collection of infrastructure and information technology-based tools that SMEs use to record, process, and report financial transactions electronically, including web-based accounting platforms, mobile applications, and cloud-based accounting software. Studies reveal that the adoption of digital technology in SMEs is influenced by internal organizational factors, specifically technological readiness and management support (Iswari et al., 2025) (Huy & Phuc, 2024), and dominant external factors, including government regulations and the operating environment (Maryanto et al., 2025) (Huy & Phuc, 2024).

The commitment of SMEs to adopt this technology is not in vain, as it has proven beneficial. (Iswari et al., 2025) found that the use of cloud accounting has a significant impact on the performance of SMEs. (Huy & Phuc, 2024) found that the effective use of digital accounting information systems enhances the sustainability of SMEs' business model innovation. Another

study by Lestari et al. (2019) found that the use of information technology and its intensity significantly improve the quality of accounting information produced by SMEs. Ultimately, the use of digital information systems enhances the performance of SMEs (Lutfi, 2022). Parallel to these practical developments, academic literature on accounting digitalization has also experienced rapid growth. One widely used approach to mapping the knowledge landscape in this field is bibliometric analysis, which can systematically illustrate publication patterns, citation networks, and the evolution of research themes.

Academic attention to digital transformation in finance and accounting is indeed increasing; however, literature specifically on digital accounting systems in the SMEs context remains fragmented. This condition indicates the need for a comprehensive synthesis. Several studies have attempted to map digitalization topics in accounting and finance. For instance, (Darmawati et al., 2025) analyzed 280 Digital Financial Reporting (DFR) articles from 2013–2023, showing significant publication growth after 2016, peaking in 2023, with dominant themes such as financial reporting, IFRS, XBRL, and financial reporting quality shifting toward sustainability reporting, digital financial assets, and the digital economy. The study also highlighted that digitalization through technologies like XBRL, blockchain, artificial intelligence, and big data analytics plays a crucial role in enhancing the efficiency, accuracy, transparency, and accessibility of financial reporting. Furthermore, (Vysochan et al., 2023) conducted a bibliometric analysis of 156 Scopus publications from 2001–2021 focusing on taxonomy financial reporting, revealing that research in this area is dominated by themes of taxonomies, XBRL, and electronic financial reporting, with the most significant contributions coming from the United States and European countries, exhibiting a multidisciplinary character spanning accounting, management, and information technology. This study confirms that an XBRL-based financial reporting taxonomy is a crucial infrastructure in the digitalization of financial reporting, contributing to improved quality, enhanced data processing efficiency, and increased transparency of financial information for both regulators and market participants.

(Silva et al., 2025) Conducted a bibliometric analysis of 86 articles indexed in Web of Science and Scopus on the theme of digital accounting. The results indicate that digital accounting research is relatively nascent and fragmented into three main clusters: scientific mapping of digital accounting, digital records management, and digital skills. Based on these findings, the study highlights the need for further research in the area of digital competency for accountants, as well as the integration of emerging technologies, such as cloud computing, AI, and blockchain, into accounting practice. Another study by Ardianto & Anridho (2018), which examined 93 articles on digital accounting from 2001 to 2015, showed that digital accounting research remains concentrated on topics such as accounting information systems and financial reporting, with a dominant focus on survey and archival methods. Citation analysis also revealed that articles on internet financial reporting, XBRL, and e-government are the most influential, confirming the strong technological orientation in the development of digital accounting research in those journals.

Conversely, (Elnakeeb & Elawadly, 2025) conducted a bibliometric analysis of 343 articles on automation and artificial intelligence in accounting, finding high annual publication growth, especially since 2020, with thematic clusters focusing on leveraging AI and automation to enhance accounting and auditing practices, digitalization of management accounting, and the use of machine learning and advanced data analytics for fraud detection and real-time reporting. Other bibliometric studies in the FinTech field (Garg et al., 2023), (Brika, 2022), (Li & Xu, 2021) confirm that financial digitalization is multidisciplinary and evolving rapidly. However, most of these studies focus on large corporations, formal financial reporting systems, or general aspects of financial technology, rather than specifically on digital accounting systems used by SMEs. In summary, while existing bibliometric literature provides important insights into the digitalization of accounting and finance, no study has yet systematically mapped the thematic evolution, intellectual structure, and research trends related to Digital Accounting Systems (DAS) used by SMEs. Given the strategic role of SMEs and the unique challenges they face in adopting technology, such mapping is necessary to integrate fragmented findings and identify the most relevant research agenda for strengthening digital accounting practices in this sector.

To address the gap in the systematic mapping of research on Digital Accounting Systems for SMEs, this study aims to provide a comprehensive overview of the existing scholarly landscape. Based on this research gap, the study proposes the following three research questions:

RQ1: What is the intellectual structure of global research on digital accounting systems for SMEs as reflected in citation patterns, co-citation, and author collaboration networks?

RQ2: How have thematic developments and research trends regarding digital accounting systems for SMEs evolved across different regions and time periods?

RQ3: What emerging themes are apparent, and what are their implications for future research agendas to strengthen the theoretical and practical foundations of digital accounting for SMEs?

This study makes several contributions to the literature. Methodologically, it demonstrates how a bibliometric approach can be used to map the intellectual structure and developmental dynamics of research on SMEs' digital accounting systems through analysis of citations, co-citations, author collaboration networks, and keyword co-occurrence. Theoretically, it offers a comprehensive bibliometric mapping of global research on Digital Accounting Systems for SMEs, integrating fragmented streams of research encompassing accounting information systems, digital transformation, and SMEs management into a unified analytical framework. Practically, it provides valuable insights for policymakers, practitioners, and technology developers by highlighting the dominant themes, influential works, and emerging collaborations that are shaping the digital accounting ecosystem. These insights can inform evidence-based strategies to promote digital adoption among SMEs, strengthen accounting transparency, and enhance the sustainability of small businesses in the digital economy.

METHOD

Research Design and Approach

This study employs a bibliometric analysis approach to map and evaluate global research trends concerning digital accounting systems in the context of Small and Medium Enterprises (SMEs). In this study, the bibliometric procedure consists of two main components: performance analysis (e.g., annual scientific production, most productive authors, sources, and countries) and science mapping, which includes co-authorship networks, country collaboration networks, co-citation analysis, keyword co-occurrence, thematic mapping, and conceptual structure mapping. To ensure transparency and replicability in data collection and screening, this study adopts the PRISMA Framework as a procedural guide. All bibliometric analyses were conducted using Biblioshiny.

Data Sources and Search Strategy

Bibliometric data were retrieved from the Scopus database, which provides comprehensive and standardized publication metadata, particularly in the fields of accounting and finance research. The search strategy targeted the Title, Abstract, and Keywords (TITLE-ABS-KEY) fields using a combination of keywords representing digital accounting systems and SMEs. The results were then filtered according to the following criteria: a publication period from 2015 to 2025, document type limited to journal articles, and language restricted to English. This initial identification process yielded a total of 249 records.

Screening and Eligibility Procedure (PRISMA)

The identification and screening process adhered to the PRISMA protocol (see Figure 1). Initial identification from the Scopus database yielded 249 articles. Manual and automated duplicate checks were performed, resulting in no duplicates. The screening stage excluded records that were not journal articles, were published outside the 2015–2025 range, or were not written in English. This process resulted in 149 articles for eligibility assessment. During the eligibility assessment, titles and abstracts (and full texts where necessary) were screened against explicit relevance criteria. An article was deemed relevant if it: (1) was situated within the fields of accounting, finance, or economics; (2) substantively addressed digital accounting systems, accounting information systems, or technology-driven digital accounting practices as a primary focus; and (3) empirically or conceptually focused on Small and Medium-sized Enterprises (SMEs). Articles were excluded if digital accounting or AIS was only peripherally mentioned, if the core topic involved other information systems lacking an accounting component, or if the study centred on large firms rather than SMEs, even if the title or abstract contained relevant keywords.

The first author conducted this screening using the established protocol. Any uncertain cases were discussed with the second author until a consensus decision was reached. Through this process, eight articles were excluded for falling outside the scope of accounting, finance, or economics, and a further 12 were excluded for lacking a substantive focus on digital accounting. Consequently, 129 articles were retained for the subsequent bibliometric analysis.

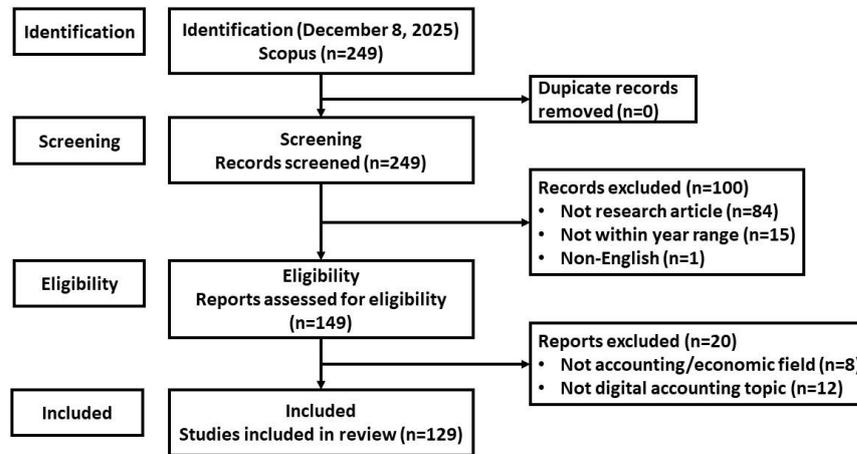


Figure 1. PRISMA Protocol

RESULT AND DISCUSSION

Descriptive Publication Performance

Analysis of the 129 articles using Biblioshiny reveals that from 2015 to 2018, the annual publication output remained stable, with a range of only 3 to 4 articles per year. However, a notable increase occurred in 2019, followed by a sharp rise after 2020, with the number of articles eventually quadrupling. These findings indicate that the topic of digital accounting systems has evolved into a prominent and widely researched area within the fields of accounting and accounting information systems.

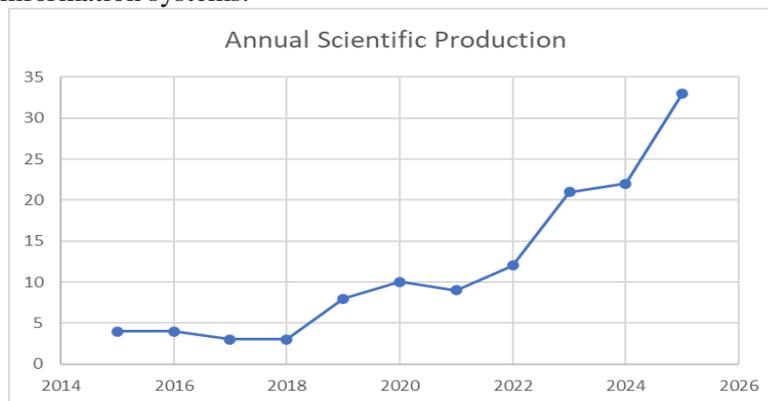


Figure 2. Annual Scientific Production

The increasing trend since 2020 aligns with the global COVID-19 pandemic. The pandemic has led many SMEs to adopt information technology to stay connected with their stakeholders. This has also driven the use of digital systems in the field of accounting, ultimately boosting the number of studies in this area. The adoption of digital technology in these organizations has been extensively researched, particularly through the application of theories such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), the Technology-Organization-Environment (TOE) framework, the Resource-Based View (RBV), and institutional theory.

Table 1. Most productive countries in digital accounting systems for SMEs

No	Country	Freq	No	Country	Freq
1	Indonesia	100	6	Oman	12

2	Jordan	63	7	New Zealand	8
3	Malaysia	49	8	Thailand	8
4	Saudi Arabia	44	9	Yemen	8
5	India	14	10	Iraq	7

From a geographical perspective, Table 1 lists the ten countries that produce the most research articles. Indonesia is the most productive country, with 100 articles published between 2015 and 2025. Second rank is Jordan with 63 articles, followed by Malaysia with 49 and Saudi Arabia with 44. Other countries, such as India, Oman, New Zealand, Thailand, Yemen, and Iraq, contributed significantly fewer articles. These findings highlight the crucial role of SMEs in developing countries, particularly in generating employment opportunities, alleviating poverty, and fostering economic growth. To maximize and strengthen this contribution, digitalization policies are being intensified as instruments to enhance transparency, efficiency, access to finance, and the competitiveness of SMEs.

Intellectual Structure of the Field

The intellectual structure of global research on digital accounting systems for SMEs can be examined through patterns of productivity, citation, co-citation, and collaboration. Together, these indicators reveal the core community of scholars and sources that shape the field.

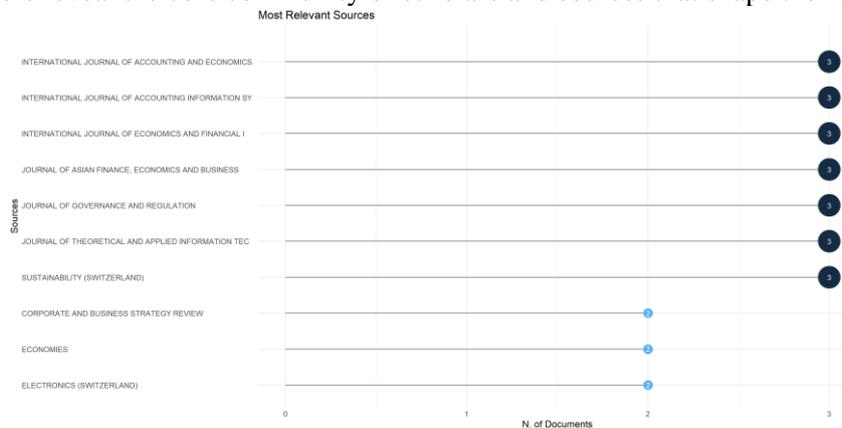


Figure 3. Most Productive Journals on Digital Accounting Systems for SMEs

The most productive outlets include interdisciplinary journals at the intersection of accounting, information systems, and business and economics. Each of these journals contributes only a small share of the total articles. This suggests that the topic is widely disseminated across a broad spectrum of journals, rather than being concentrated in a single, specialized outlet. This dispersion highlights the inherently hybrid nature of digital accounting systems, which intersect with fields such as accounting, management, information technology, economics, and SME studies.

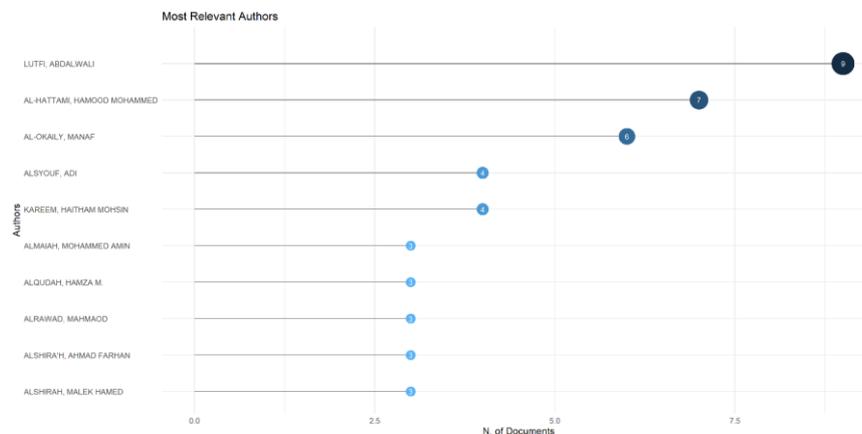


Figure 4. Most relevant authors in research on digital accounting systems for SMEs

At the level of individual researchers, a relatively compact core of highly productive authors emerges. Authors such as Abdalwali Lutfi, Hamood Mohammed Al-Hattami, and Manaf

Al-Okaily contribute multiple articles and are repeatedly present in the dataset. Together with collaborators including Adi Alsyouf, Haitham Mohsin Kareem, Mohammed Amin Almaiah, Hamza M. Alqudah, Mahmud Alrawad, Ahmad Farhan Alshira'h, and Malek Hamed Alshirah, they form a core group that drives much of the empirical and conceptual development of the field, particularly in Middle Eastern and Southeast Asian contexts.

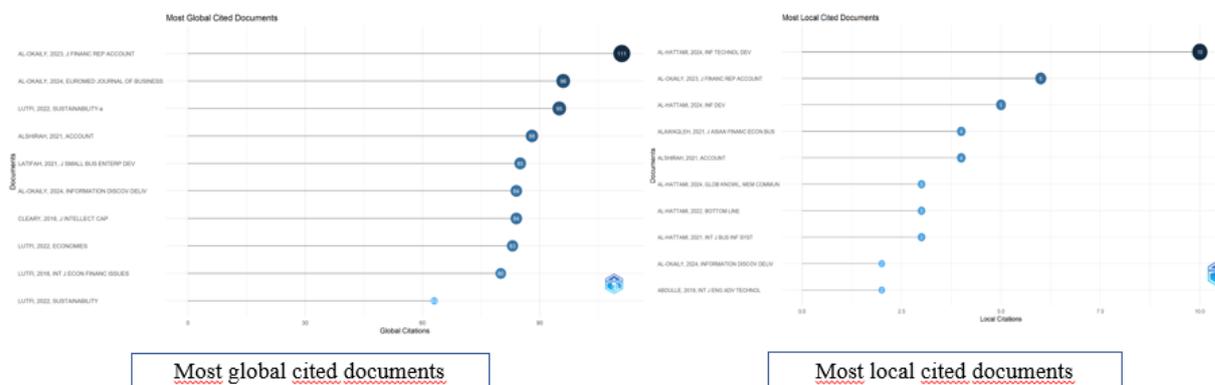


Figure 5. Most cited documents in research on digital accounting systems for SMEs

Citation and co-citation patterns further clarify which works and authors are most influential. Globally cited documents include empirical studies by Al-Okaily, Lutfi, and others that investigate the adoption and use of digital accounting systems and cloud accounting in SMEs using frameworks such as TOE, TAM, UTAUT, and RBV. These articles are frequently cited beyond the immediate SMEs community and therefore function as landmark contributions. Locally cited documents, those most frequently referenced within the 129-article corpus itself, are dominated by work by Al-Hattami and co-authors, along with key papers by Al-Okaily, Alawaqleh, Alshirah, and Abdulle. These studies constitute the internal canon of the field, which is repeatedly used to frame models, develop hypotheses, and interpret empirical findings.

Table 2. Co-citation network of authors in research on digital accounting systems for SMEs

Node	Cluster	Betweenness	Closeness	PageRank
alhattami	7	354.952	0.008	0.086
alokaily	2	260.381	0.007	0.084
ali	2	132.997	0.007	0.069
abdullah	7	7.572	0.006	0.052
alshirah	1	42.998	0.006	0.039
ajzen	3	30.000	0.003	0.037
aldebei	7	0,154166667	0.004	0.033
alhakimi	7	0,173611111	0.004	0.031
alshamaileh	6	30.000	0.005	0.029

Co-citation analysis was conducted to clarify the intellectual foundations of this field. Table 2 shows that Alhattami, Alokaily, and Ali occupy the most prominent positions, with high PageRank and very high betweenness centrality scores. This indicates that their works are not only frequently cited but also systematically co-cited with a wide range of other references. As a result, their articles act as conceptual bridges between several clusters of literature on digital accounting systems, cloud accounting, and SME performance. By contrast, authors with much lower betweenness centrality tend to play a more focused role within specific subtopics and do not function as key connectors across different research areas on digital accounting systems. Overall, the co-citation structure confirms that the intellectual base of research on digital accounting systems for SMEs is anchored in a small but influential set of empirical authors whose works bind together separate lines of research on technology adoption, information systems success, and organisational performance.

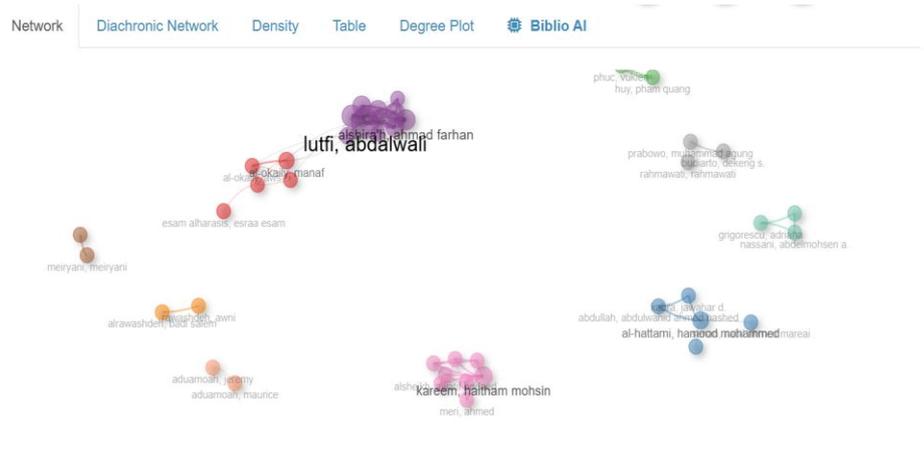


Figure 6. Co-authorship network of authors on digital accounting systems for SMEs

The co-authorship network reveals several tightly knit clusters. One central cluster is centred on Lutfi, and another cluster is formed around Al-Hattami and his collaborators. Manaf and Aws Al-Okaily guide a third cluster along with Alkhwalidi and others. Centrality measures indicate that authors such as Alqudah, Lutfi, Al-Hattami, Alkhwalidi, and Kareem play bridging roles between these clusters, suggesting that they shape the diffusion of ideas and methods across research groups.

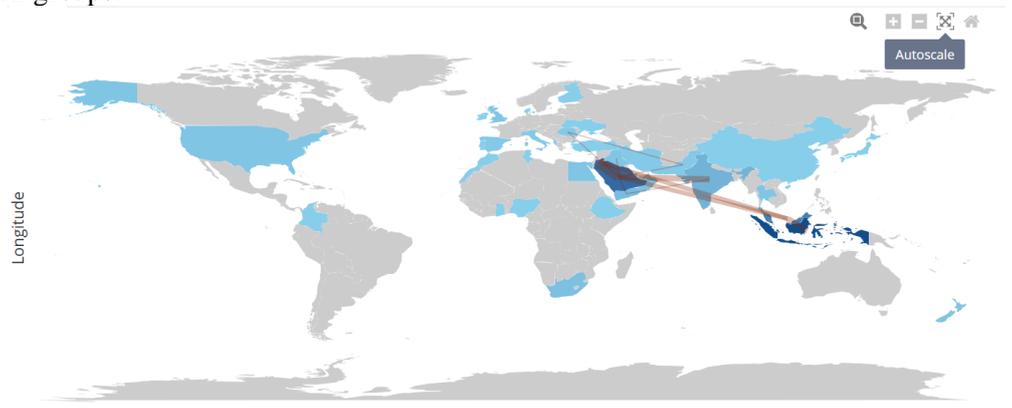


Figure 7. Collaboration world map for research on digital accounting systems for SMEs

The country collaboration map shows strong ties between Indonesia and Malaysia, Indonesia and China, Jordan and Malaysia, Jordan and Saudi Arabia, and Saudi Arabia and several other Asian and European countries. These patterns indicate that the intellectual structure of the field is organised around regional hubs in the Middle East and Southeast Asia, which function as centres of both productivity and collaboration. Taken together, these results answer RQ1 by showing that research on digital accounting systems for SMEs is supported by a network of interdisciplinary journals, a compact yet highly central group of authors, a shared set of landmark empirical studies and theories, and collaboration clusters that link Middle Eastern and Southeast Asian research communities with scholars from other regions.

Keyword Structure and Thematic Evolution

The thematic structure of the field can be traced through keyword co-occurrence and the evolution of themes over time.

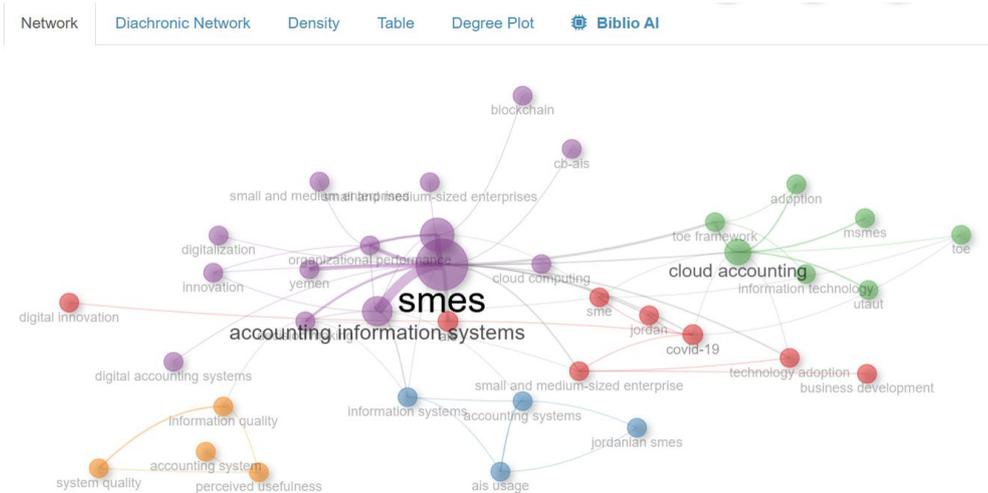


Figure 8. Co-occurrence network of keywords on digital accounting systems for SMEs

In this network, "SMEs" occupy the most central position, connecting tightly with "accounting information system(s)," "cloud accounting," "organizational performance," "decision making," and "digitalization." This indicates that the mainstream of research examines how AIS and cloud accounting are adopted and used by SMEs, and how they influence performance and decision quality. A second dense zone consists of adoption-theory terms such as "TOE framework," "technology adoption," "technology acceptance model," and "UTAUT," confirming that these frameworks are the dominant conceptual tools. A more specialized cluster groups "information quality," "system quality," "perceived usefulness," and "user satisfaction," indicating a parallel research stream that assesses the success of digital accounting systems using information systems success models. The thematic map derived from these co-occurrence patterns differentiates motor, basic, niche, and emerging themes.

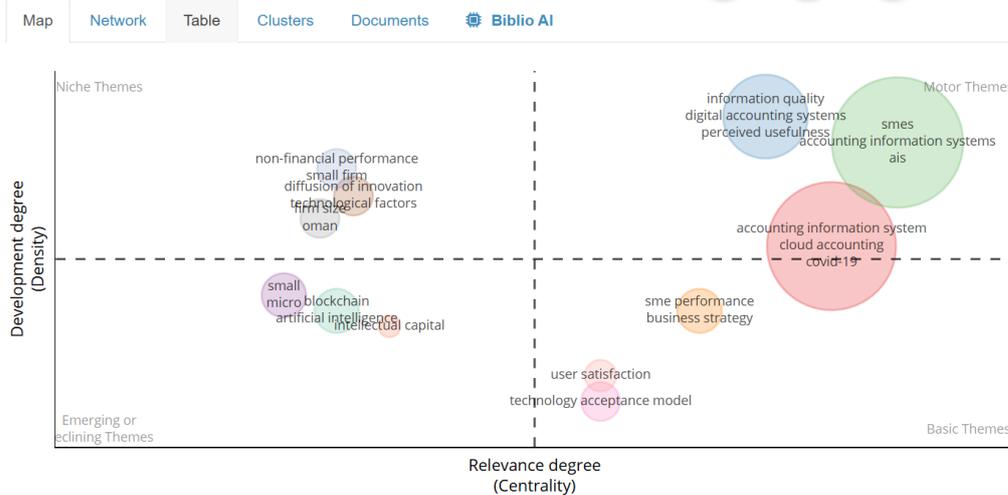


Figure 9. Thematic map of motor, basic, niche, and emerging themes

The thematic map positions the main research clusters into four groups. The motor themes in the upper-right quadrant are the clusters "SMEs–accounting information systems–AIS" and "information quality–digital accounting systems–perceived usefulness," which are closely connected to "cloud accounting." This configuration confirms that AIS and cloud accounting in SMEs constitute the main thematic backbone of the field. The basic themes in the lower-right quadrant include "SME performance–business strategy," "user satisfaction," and the "TAM framework," indicating fundamental topics that are widely used but still open to further development. The upper-left quadrant contains niche themes, particularly "non-financial performance," "diffusion of innovation," and "technological factors," which are relatively well developed but remain limited to specific contexts. Finally, the lower-left quadrant groups emerging themes such as "blockchain" and "artificial intelligence," which are conceptually promising for digital accounting in SMEs but have not yet been extensively investigated.

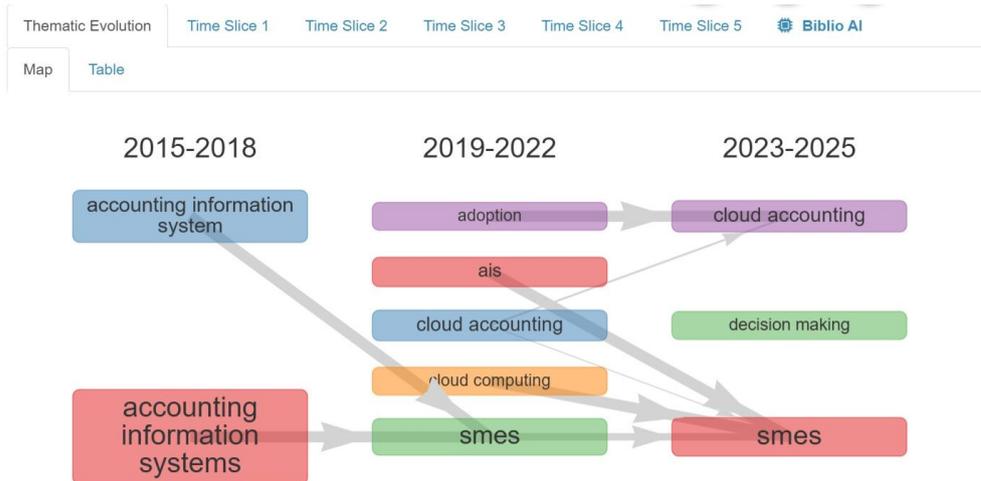


Figure 10. Thematic evolution of keywords on digital accounting systems for SMEs

The thematic evolution analysis traces how these themes change over time, revealing that during the 2015–2018 period, the emerging themes remained highly general, primarily revolving around “accounting information system” and “accounting information systems.” This indicates that in this initial phase, research was still focused on the role of AIS in SMEs and had not yet integrated it with more specific information technology dimensions. At this early stage, AIS served an infrastructural role, acting as the fundamental backbone for delivering financial information to SMEs. In the second period (2019–2022), the main themes branch into several more specific sub-themes, namely "AIS," "cloud accounting," "cloud computing," "SMEs," and "adoption." This branching indicates that research in this period has increasingly focused on the adoption of information technology, as reflected in the emergence of cloud accounting and cloud computing within accounting information systems. Technology adoption theories such as TOE, TAM, and UTAUT become key foundations for explaining why SMEs implement digital accounting systems. In the final period (2023–2025), the emerging themes centre on “cloud accounting,” “SMEs,” and “decision making.” From the second to the third periods, the thematic evolution diagram shows a directed and relatively thick arrow from “adoption” to “cloud accounting,” indicating that studies framed around technology adoption in 2019–2022 directly evolve into, and substantially underpin, the more recent research stream on cloud accounting in SMEs. The emergence of "decision making" as an outcome theme signifies a more mature stage of the field, in which research no longer focuses solely on adoption but increasingly examines how cloud accounting and AIS actually support managerial decisions and organizational performance in SMEs.

Conceptual Structure and Emerging Themes

The conceptual structure map, based on multiple correspondence analysis, provides a more comprehensive understanding of how the various themes relate to one another conceptually and identifies emerging research directions.

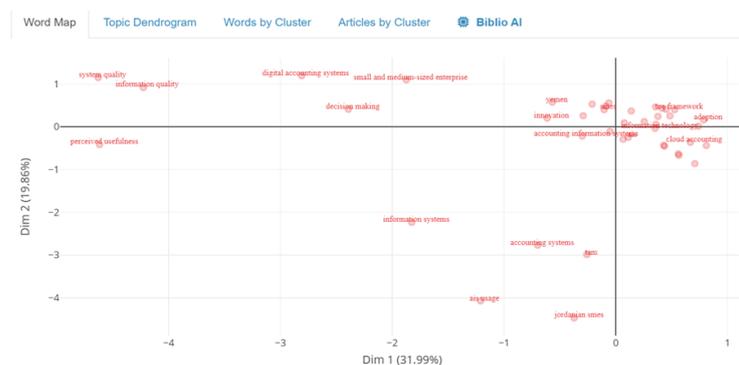


Figure 11. Thematic evolution of keywords on digital accounting systems for SMEs

Figure 11 presents the conceptual structure map of keywords generated using Biblioshiny. The map reveals three zones that represent the main dimensions of the research field. The first zone, located on the right-hand side, contains keywords such as “cloud accounting”, “digital accounting systems”, “TOE framework”, and “technology adoption”, which depict the technological architecture and IT adoption dimension. The second zone, in the upper-left area, includes “information quality”, “system quality”, “perceived usefulness”, and “decision making”, representing the information quality and decision-making dimension. The third zone, situated in the central-lower part of the map, is formed by “SMEs”, “accounting information system”, “accounting information systems”, and “AIS”. This zone functions as the conceptual core that connects the other two zones, reinforcing the view that accounting information systems in SMEs constitute the central focus that links information technology aspects with decision-making processes to improve organisational performance.

Research Implications and Future Research Directions

The combined results from the performance analysis, collaboration and co-citation networks, keyword co-occurrence, thematic maps, thematic evolution, and the conceptual structure map provide several implications and suggest directions for future research development on digital accounting systems for SMEs. First, the clear separation between the technology-adoption cluster (TOE, TAM, UTAUT) and the cluster related to system success and outcomes (e.g., “information quality”, “system quality”, “SME performance”, “non-financial performance”) indicates the need for more integrative models. Future studies could bridge these clusters by developing multi-stage frameworks that, for example, (1) model environmental and organisational antecedents, (2) explain how these factors shape adoption decisions, (3) capture AIS success in terms of information and system quality and user satisfaction, and (4) link these success dimensions to both financial and non-financial performance, in order to explain more comprehensively how digital accounting system create value for SMEs.

Second, empirical research on the intersection between digital accounting systems and emerging technologies remains limited. Future research could investigate how artificial intelligence, machine learning, and blockchain transform AIS in SMEs. This may include questions about dynamic accounting capabilities, data governance, integration with FinTech services, and the role of digital accounting systems in supporting sustainable and green entrepreneurship. Third, the presence of keywords such as “intellectual capital,” “knowledge management capabilities,” “innovation,” and “non-financial performance,” particularly in the niche and emerging clusters, indicates the importance of broadening the outcome space beyond short-term financial indicators. Longitudinal and mixed-methods designs would be especially valuable for examining how early investments in digital accounting systems contribute to learning processes, innovation capacity, resilience, and other intangible benefits for SMEs.

Fourth, the country productivity and collaboration analyses reveal an intense concentration of research in a handful of emerging economies, especially in the Middle East and Southeast Asia. This highlights the need for comparative cross-country research that systematically models differences in regulatory environments, digital infrastructure, cultural attitudes toward technology, and policy support for SMEs. Such work would strengthen the external validity of existing theories and provide more nuanced guidance for policymakers seeking to promote the adoption of digital accounting in diverse institutional settings. In summary, the conceptual and thematic evidence suggests that research on digital accounting systems for SMEs has reached a point of convergence, focusing on AIS, cloud accounting, adoption frameworks, and performance outcomes. However, significant gaps remain in the knowledge base regarding advanced technologies, non-financial effects, and institutional diversity. Addressing these gaps through integrative, context-sensitive, and methodologically diverse studies will enhance the theoretical and practical contribution of future research in this field.

CONCLUSION

The cumulative evidence from the performance analysis, collaboration and co-citation networks, keyword co-occurrence, thematic maps, thematic evolution, and the conceptual structure map yields multiple implications. It indicates potential directions for future research on digital

accounting systems for SMEs. This study mapped global research on digital accounting systems for SMEs using a bibliometric approach to 129 Scopus-indexed articles published between 2015 and 2025. The analysis addressed three research questions concerning the intellectual structure of the field, the evolution of themes and research trends, and the emerging topics that shape a future research agenda.

First, the results show that the intellectual structure of the field is organised around a compact but cohesive community of authors and journals. A small group of prolific scholars and a set of interdisciplinary outlets in accounting, information systems, and business act as the main hubs through which knowledge on digital accounting systems for SMEs is produced and disseminated. Co-citation patterns confirm that this work is theoretically grounded in established information systems and technology adoption frameworks, which are adapted to the specific characteristics of SMEs, especially in emerging economies. Second, the thematic analysis reveals a clear evolution over time. Early studies focused on generic accounting information systems in SMEs, whereas more recent work concentrates on digital and cloud-based accounting solutions and their role in decision-making and performance. The persistence of "SMEs" and "accounting information system(s)" across periods indicates continuity in the core object of analysis. However, the growing prominence of "cloud accounting", "digitalization" and formal adoption constructs demonstrates a shift towards more mature, theory-driven and technology-specific investigations.

Third, the conceptual mapping reveals that current research is structured around three interrelated dimensions: technological infrastructure (digital and cloud accounting systems), adoption and use (technology adoption models and user responses), and organisational outcomes (financial and non-financial performance, as well as information and system quality). At the margins, emerging themes related to advanced digital technologies, intellectual capital, and broader digital transformation point to promising directions for further work, especially when linked to the SME context. These findings have several implications. For theory, they suggest the importance of integrative models that connect determinants of adoption, system success, and performance outcomes rather than studying these elements in isolation. For policy and practice, the concentration of research in emerging economies highlights the strategic role of digital accounting systems in supporting SME transparency, access to finance, and competitiveness. Policies and products that reduce adoption barriers and enhance digital capabilities are, therefore, crucial.

This study is not without limitations. First, the analysis relies solely on Scopus-indexed, English-language journal articles and a specific set of search terms, which may underrepresent relevant work in other databases, local or non-English journals, and practitioner or policy documents, potentially introducing selection bias. Second, the bibliometric techniques used here are well-suited to reveal structural patterns in a large corpus. However, they do not evaluate the methodological rigour or theoretical depth of individual studies, meaning that highly central or frequently cited documents are not necessarily of higher quality. Third, the resulting maps and clusters depend on parameter choices in the software (such as citation and co-occurrence thresholds), so alternative settings could produce somewhat different configurations. Finally, citation-based indicators accumulate over time, so very recent publications may not yet appear as influential. The structures identified in this study represent a snapshot of a field that is still in the process of evolving.

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