

Digital Accounting: A Bibliometric Analysis of Research Trends and Thematic Evolution (2000–2026)

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ABSTRACT

This study aims to analyze the development, intellectual structure, and thematic evolution of digital accounting research from 2000 to 2026 using a bibliometric approach. Data were collected from the Scopus database and analyzed using VOSviewer to examine publication trends, keyword co-occurrence, and thematic progression over time. The results reveal a significant growth in digital accounting research, driven by the increasing integration of advanced technologies such as artificial intelligence, blockchain, big data, and machine learning into accounting practices. The co-occurrence analysis identifies several major research clusters, including digital transformation in accounting, emerging technologies, data analytics, and governance-related issues. Overlay visualization indicates a clear evolution from early themes of digitalization and accounting information systems toward more recent topics such as intelligent systems, predictive analytics, and sustainability. Furthermore, density analysis highlights digital storage, artificial intelligence, and digital transformation as the most central and influential themes within the field. These findings suggest that digital accounting has evolved into an interdisciplinary domain that integrates technology, data infrastructure, and strategic decision-making. This study contributes to the literature by providing a comprehensive mapping of the field and offering insights into emerging research directions, including AI ethics, blockchain-based reporting, and sustainability-oriented accounting systems.

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1. INTRODUCTION

The rapid development of digital technology has significantly transformed many professional fields, including accounting. Traditionally, accounting relied heavily on manual bookkeeping processes and periodic financial reporting. However, the emergence of digital technologies such as cloud computing, artificial intelligence, big data analytics, and blockchain has reshaped

how financial information is recorded, processed, and analyzed. These technologies enable organizations to automate routine accounting tasks, enhance accuracy, and generate real-time financial information that supports strategic decision-making. As businesses increasingly adopt digital solutions, the accounting profession has begun shifting toward a technology-driven environment often referred to as digital accounting [1], [2].

Digital accounting represents the integration of digital technologies into accounting systems and processes, allowing organizations to manage financial information more efficiently and transparently. This transformation aligns with broader global trends associated with the Fourth Industrial Revolution (Industry 4.0), where automation and intelligent technologies are redefining professional practices. In the accounting field, digitalization has introduced new tools for financial reporting, auditing, and management accounting, thereby expanding the role of accountants beyond traditional record-keeping functions. Accountants are now expected to possess technological competencies, including data analytics and information systems expertise, in order to remain relevant in an increasingly digital business environment [3], [4].

The growing importance of digital accounting has attracted considerable attention from academic researchers. Over the past two decades, scholars have examined various aspects of digital transformation in accounting, including the adoption of accounting information systems, the use of artificial intelligence in auditing, and the role of big data in financial analysis. These studies highlight how digital technologies enhance operational efficiency, improve financial transparency, and facilitate more accurate decision-making within organizations. Furthermore, digital transformation has been shown to influence multiple accounting subfields, including financial accounting, management accounting, and taxation, demonstrating the interdisciplinary nature of this evolving research area [5].

Despite the increasing number of studies on digital accounting, the literature remains fragmented and dispersed across different topics and academic disciplines. Some research focuses on technological innovations such as blockchain and artificial intelligence, while other studies emphasize the implications of digitalization for accounting education, professional competencies, or financial reporting practices. This diversity of research themes makes it

difficult to obtain a comprehensive understanding of the overall development of digital accounting research. As a result, scholars have emphasized the need for systematic mapping of the literature to identify influential studies, key themes, and emerging research directions within the field [6].

One effective approach for examining the evolution of a research field is bibliometric analysis, which applies quantitative methods to analyze patterns in academic publications. Bibliometric techniques allow researchers to identify trends in publication growth, collaboration networks, citation patterns, and thematic developments over time. Through visualization tools and citation analysis, bibliometric studies provide valuable insights into how knowledge structures evolve within a discipline. In the context of digital accounting, bibliometric analysis can help reveal how research topics have shifted over time, which technologies have received the most scholarly attention, and which countries, institutions, or authors contribute most significantly to the field. Such insights are important for guiding future research and for understanding the intellectual structure of digital accounting studies.

Although research on digital accounting has grown substantially in recent years, there is still limited comprehensive analysis that systematically maps the long-term evolution of research trends and thematic developments in this field. Existing studies often focus on specific technologies or short time periods, which limits the ability to understand how digital accounting research has progressed over time and how its key themes have evolved. Without a structured bibliometric overview, it becomes difficult for scholars to identify dominant research topics, emerging themes, influential publications, and potential gaps in the literature. Therefore, a comprehensive bibliometric analysis covering a broader time span is necessary to provide a clearer understanding of the intellectual landscape and development trajectory of digital accounting research. This study aims to analyze the development of digital accounting research through a

bibliometric approach covering the period from 2000 to 2026.

2. METHODS

This study employs a bibliometric analysis approach to examine the development of research on digital accounting from 2000 to 2026. Bibliometric analysis is a quantitative method used to evaluate patterns in academic publications, including publication trends, citation structures, and thematic development within a research field. This method allows researchers to systematically map the intellectual structure of a discipline and identify influential authors, journals, and research topics. By applying bibliometric techniques, this study provides an objective overview of how digital accounting research has evolved over time and highlights the major directions that have shaped the field. Bibliometric studies are widely used in academic research to explore scientific productivity, collaboration networks, and emerging themes within a specific domain.

The data used in this study were obtained from the Scopus database, which is recognized as one of the most comprehensive sources of peer-reviewed academic publications. Relevant documents were identified using keywords related to digital accounting, such as “digital accounting,” “accounting digitalization,” “accounting technology,” and “digital transformation in accounting.” The search was limited to publications between 2000 and 2026 to capture the long-term development of the research field. Only journal articles and conference papers written in English were included to ensure consistency and academic relevance. After the initial search, the collected records were screened to remove duplicates and irrelevant documents, resulting in a final dataset suitable for bibliometric analysis. Bibliographic information such as authors, titles, abstracts, keywords, citations, and publication sources was extracted for further analysis.

3. RESULTS AND DISCUSSION

3.1 Network Visualization

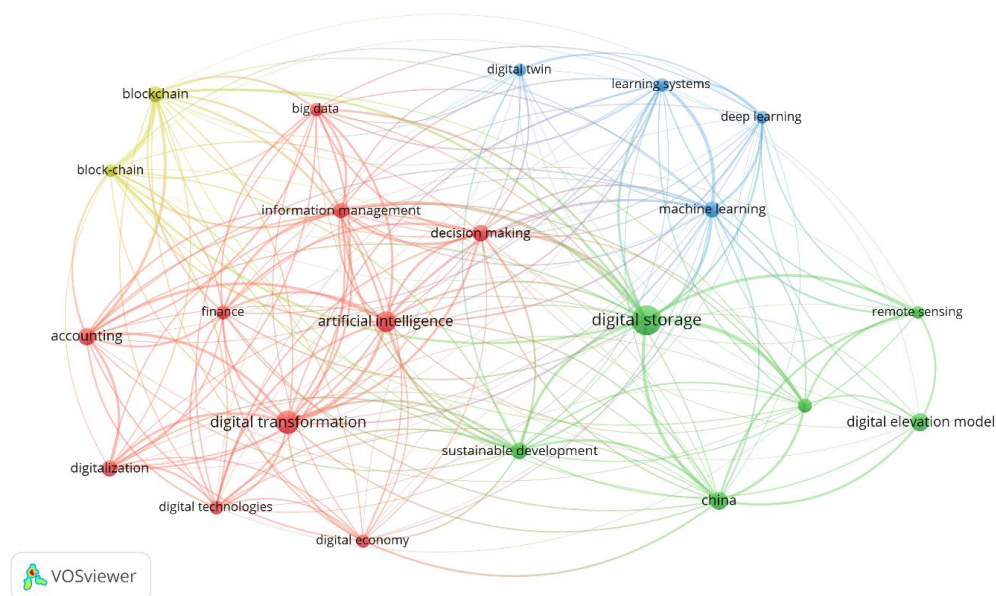


Figure 1. Network Visualization

Source: Data Analysis Result, 2026

Figure 1 reveals a structured intellectual landscape of digital accounting research characterized by several interconnected thematic clusters. The red

cluster appears to represent the core foundation of the field, centered around terms such as accounting, digital transformation, artificial intelligence, finance, and decision making. This indicates that the main body of

research is strongly anchored in the transformation of traditional accounting practices through digital technologies. The prominence and central positioning of these nodes suggest that digital accounting is primarily conceptualized as an evolution of accounting systems toward more intelligent, automated, and data-driven processes.

The blue cluster highlights the technological advancement dimension, with key terms such as machine learning, deep learning, learning systems, and digital twin. This cluster reflects the increasing integration of advanced computational techniques into accounting practices, particularly in areas such as predictive analytics, anomaly detection, and intelligent auditing. The linkage between this cluster and the core red cluster suggests that artificial intelligence is not a standalone topic but deeply embedded in enhancing accounting decision-making and analytical capabilities.

Meanwhile, the green cluster appears to focus on infrastructure, data management, and regional application contexts. Terms such

as digital storage, remote sensing, digital elevation model, and China indicate a strong orientation toward data ecosystems and technological implementation environments. The inclusion of sustainable development within this cluster suggests that digital accounting is increasingly being linked to broader sustainability agendas, where digital data infrastructures support environmental and governance reporting. The yellow cluster, centered around blockchain and big data, represents emerging and disruptive technologies within the digital accounting domain. Blockchain, in particular, is positioned as a transformative force with implications for transparency, auditability, and trust in financial reporting. Its connections with accounting and information management highlight its growing relevance in redefining how financial transactions are recorded and verified. Similarly, big data plays a critical role in enabling large-scale financial analysis and real-time reporting

Overlay Visualization

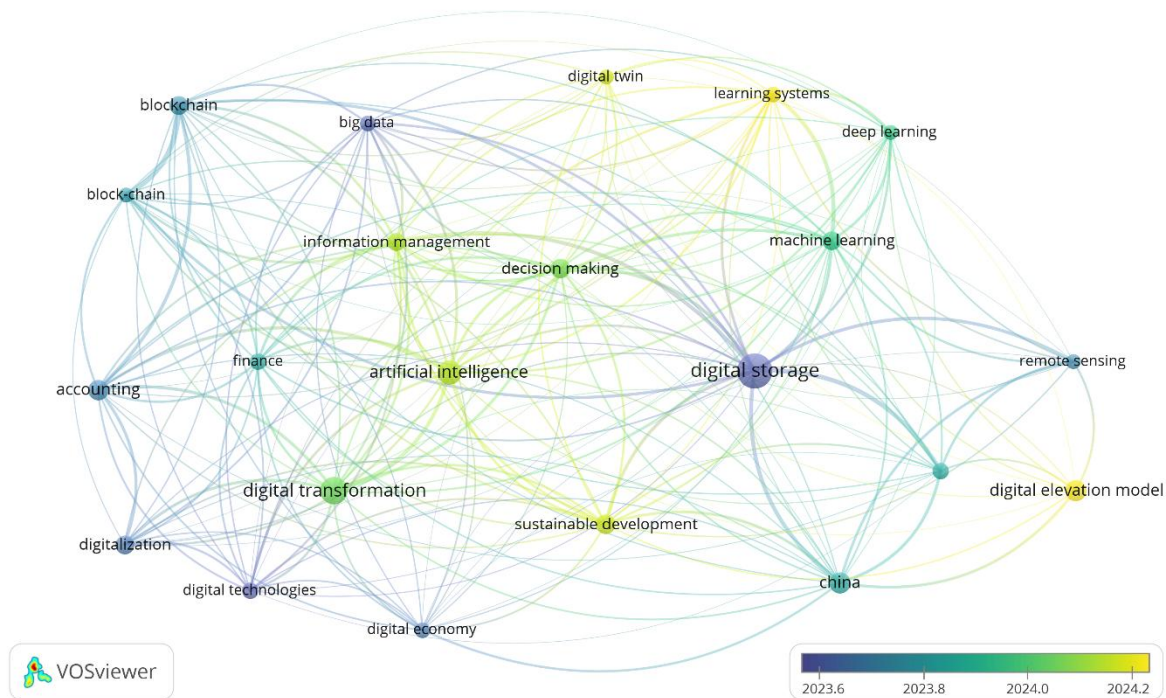


Figure 2. Overlay Visualization
 Source: Data Analysis Result, 2026

Figure 2 illustrates the temporal evolution of research themes in digital accounting, where colors transition from blue

(earlier studies) to yellow (more recent developments). Early-stage research, represented by blue tones, is concentrated

around foundational concepts such as accounting, digitalization, digital technologies, and blockchain. This indicates that initial scholarly attention focused on digitizing traditional accounting systems and exploring foundational technologies that enable secure and efficient financial data processing. These themes laid the groundwork for the broader digital transformation of accounting practices.

As the field progressed, the color shifts toward green, highlighting a transitional phase characterized by the integration of more advanced technologies and managerial perspectives. Topics such as artificial intelligence, information management, decision making, and digital transformation became more prominent during this period. This suggests that research began to move beyond basic digitization toward leveraging intelligent systems to enhance analytical capabilities, automate

processes, and support strategic decision-making in accounting. The increasing interconnectedness of these themes reflects the growing complexity and interdisciplinarity of digital accounting research.

In the most recent phase, represented by yellow tones, emerging topics such as deep learning, machine learning, learning systems, digital twin, and sustainable development have gained significant attention. This indicates a shift toward highly advanced, data-driven, and predictive approaches in accounting, as well as a growing emphasis on sustainability and real-time data environments. The appearance of terms like digital storage as a central and evolving node further underscores the importance of data infrastructure in supporting these innovations.

3.2 Citation Analysis

Table 1. Top Cited Research

Citations	Authors and year	Title	Source
4653	[7]	Understanding digital transformation: A review and a research agenda	Journal of Strategic Information Systems, 28(2), pp. 118–144
1995	[8]	The optical and near-infrared properties of galaxies. I. Luminosity and stellar mass functions	Astrophysical Journal Supplement Series, 149(2), pp. 289–312
1395	[9]	Rainfall–runoff modelling using Long Short-Term Memory (LSTM) networks	Hydrology and Earth System Sciences, 22(11), pp. 6005–6022
1322	[10]	First results from the IllustrisTNG simulations: The galaxy colour bimodality	Monthly Notices of the Royal Astronomical Society, 475(1), pp. 624–647
1315	[11]	Geostatistical approaches for incorporating elevation into the spatial interpolation of rainfall	Journal of Hydrology, 228(1–2), pp. 113–129
995	[12]	Accounting for uncertainty in DEMs from repeat topographic surveys: Improved sediment budgets	Earth Surface Processes and Landforms, 35(2), pp. 136–156
994	[13]	Topographic structure from motion: A new development in photogrammetric measurement	Earth Surface Processes and Landforms, 38(4), pp. 421–430
979	[14]	Gradations in digital inclusion: Children, young people and the digital divide	New Media and Society, 9(4), pp. 671–696
911	[15]	Comparison of digital mammography alone and digital mammography plus tomosynthesis in a population-based screening program	Radiology, 267(1), pp. 47–56

615	[16]	The role of digitalization on green economic growth: Does industrial structure optimization and green innovation matter?	Journal of Environmental Management, 325, 116504
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Source: Scopus, 2026

3.3 Density Visualization

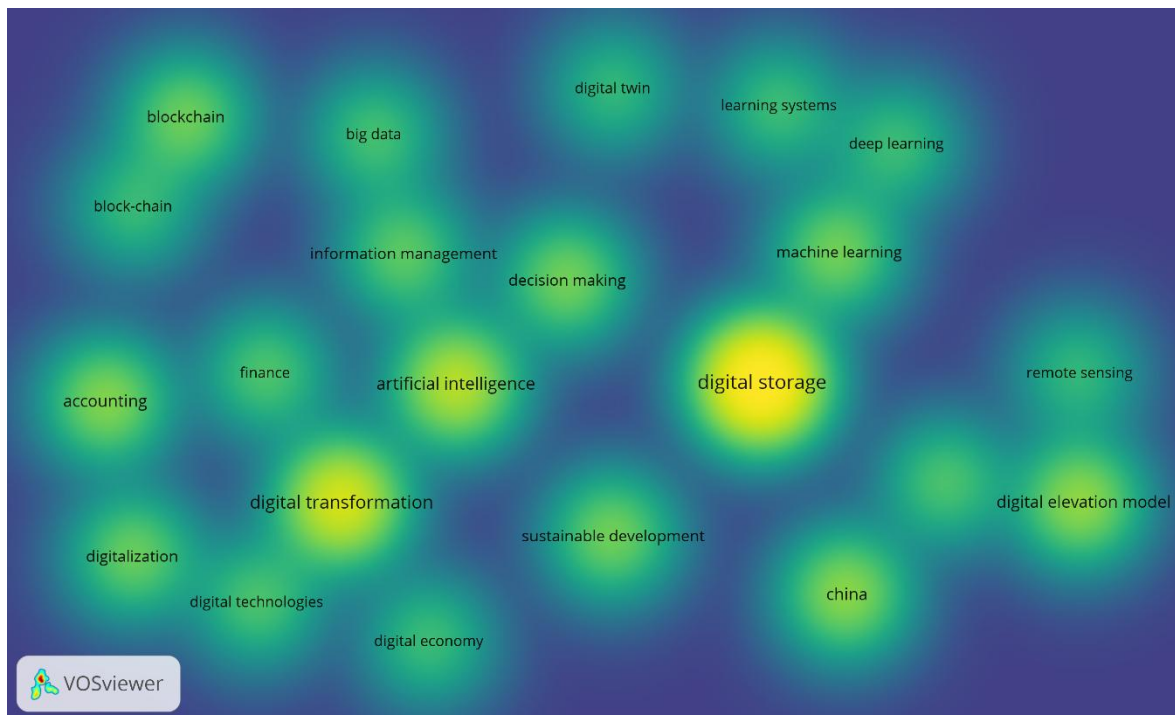


Figure 3. Density Visualization

Source: Data Analysis Result, 2026

Figure 3 highlights the concentration and intensity of research themes within the digital accounting domain. Areas shown in bright yellow, particularly digital storage, artificial intelligence, and digital transformation, indicate the most frequently studied and highly interconnected topics. Among these, digital storage emerges as the most dominant node, suggesting that data infrastructure plays a central role in supporting digital accounting systems. This reflects the growing importance of managing, storing, and processing large volumes of financial data in real time. Similarly, artificial intelligence and digital transformation are positioned as key drivers of innovation, reinforcing the shift toward automation, intelligent analytics, and strategic decision-making in accounting practices. In contrast, topics such as blockchain, big data, machine learning, deep learning, and sustainable development appear in moderately dense

(green) areas, indicating that while they are significant, they are still developing or not as centrally integrated as the core themes. Peripheral yet emerging topics like remote sensing and digital elevation model suggest niche or interdisciplinary extensions of digital accounting research.

Discussions

The findings of this bibliometric analysis reveal that digital accounting has evolved into a highly interdisciplinary and technology-driven field, where traditional accounting functions are increasingly integrated with advanced digital systems. The dominance of keywords such as digital transformation, artificial intelligence, and digital storage indicates that the core of contemporary research is no longer limited to automation but has expanded toward intelligent and data-centric accounting

ecosystems. This transformation aligns with the broader shift in the accounting profession, where the role of accountants is transitioning from routine data processing to strategic analysis and decision support. The strong interconnection among these themes suggests that digital accounting is being conceptualized as a holistic system that combines technology, data, and managerial insights.

The co-occurrence network further demonstrates that artificial intelligence plays a pivotal role in shaping the intellectual structure of the field. The integration of AI-related terms such as machine learning, deep learning, and learning systems reflects a growing emphasis on predictive analytics, anomaly detection, and automated auditing processes. This indicates that accounting research is increasingly adopting computational intelligence to enhance accuracy, efficiency, and real-time decision-making. Moreover, the close linkage between AI and decision-making highlights a shift toward more proactive and forward-looking accounting practices, where insights derived from data analytics are used to support organizational strategy and risk management.

In addition to AI, the presence of blockchain and big data as significant yet moderately dense themes suggests that these technologies are emerging as transformative forces within digital accounting. Blockchain, in particular, offers the potential to improve transparency, trust, and immutability in financial reporting, while big data enables the processing of large and complex datasets for more comprehensive financial analysis. However, their relatively lower density compared to core themes indicates that research in these areas is still developing and has not yet reached full maturity. This presents an opportunity for future studies to explore the practical implementation and

integration of these technologies within accounting systems.

The overlay visualization provides further insight into the temporal evolution of the field, showing a clear progression from foundational topics such as digitalization and accounting information systems toward more advanced themes like artificial intelligence, digital twin, and sustainable development. This evolution reflects a transition from efficiency-driven digitization to innovation-driven intelligence and sustainability. The emergence of sustainability-related themes suggests that digital accounting is increasingly being linked to environmental, social, and governance (ESG) reporting, where digital tools facilitate more transparent and accurate sustainability disclosures. This trend highlights the expanding role of accounting in addressing global challenges beyond financial performance.

The density visualization confirms that data infrastructure, particularly digital storage, serves as the backbone of the digital accounting ecosystem. The centrality of this theme underscores the importance of reliable, scalable, and secure data management systems in enabling advanced technologies such as AI and blockchain. Without robust data infrastructure, the effectiveness of digital transformation initiatives in accounting would be significantly limited. Overall, the findings suggest that digital accounting research is moving toward an integrated ecosystem that combines intelligent technologies, data management, and sustainability considerations. Future research should therefore focus on bridging technological innovation with practical implementation, as well as addressing emerging issues such as ethical implications, data security, and human–technology collaboration in the accounting profession.

4. CONCLUSION

This study concludes that digital accounting research has undergone a significant transformation from basic

digitization toward an integrated, intelligent, and data-driven ecosystem. The bibliometric findings highlight that core themes such as digital transformation, artificial intelligence, and digital storage dominate the field, indicating a strong shift toward automation, advanced analytics, and real-time financial decision-making. At the same time, emerging topics such as blockchain, machine learning, and sustainability demonstrate the expanding

scope of accounting beyond traditional financial reporting into areas of transparency, innovation, and ESG considerations. The evolution of research reflects a paradigm shift in the accounting discipline, where technology, data infrastructure, and strategic insight converge, positioning digital accounting as a critical enabler of organizational performance and future-oriented decision-making.

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