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Tracing the Knowledge Landscape of Cloud-based Accounting: Trends, Themes, and Insights from Bibliometric Analysis

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Abstract

Purpose – The purpose of the study is to examine the bibliometric characteristics of previous literature on cloud-based accounting, which further aims to identify the most influential and productive contributors (documents, authors, sources, affiliations) and progression of research on cloud-based accounting.

Design/methodology/approach – The bibliographic data of 117 documents is extracted from Scopus by applying a systematic search strategy with a defined inclusion and exclusion criterion. R and VOS viewer software were used to analyse and visualise the bibliographic data to gain insights into the key authors, sources, affiliations, research clusters, and influential publications in this field. The study employs techniques such as descriptive analysis and network analysis. For clustering, co-occurrence of keyword analysis was used.

Findings – The study's findings show a rising trend in cloud accounting literature, reflecting the dynamic nature and evolving landscape of research in this particular domain. A thorough examination of the extracted papers reveals that co-occurrence of keyword analysis was heading towards three distinct mainstreams "Adoption of Cloud-based accounting in SMEs: Theoretical Models and Frameworks," "Integration of AI, blockchain, and big data within modern accounting information system frameworks for optimised accounting functions," and "Outcomes of deploying cloud-based accounting systems in organisations"

Originality – This study offers novelty by systematically mapping the intellectual landscape of cloud-based accounting using bibliometric techniques, an area with limited comprehensive reviews to date. Identifying thematic clusters through keyword co-occurrence analysis reveals evolving research trends and emerging themes.

Keywords – Cloud accounting, Cloud-based accounting, Bibliometric analysis, SCOPUS, VOS viewer, R software – Biblioshiny

1. Introduction

The extensive information technology (IT) infrastructure required for daily business operations is complex for many organisations to acquire and maintain. Organisations experience troubles mostly in acquiring, hosting, sustaining and supporting the required IT systems, applications and infrastructure necessary to align their IT objectives with their business objectives, leading to efficient business operations (Balakrishnan, 2011). These difficulties in the acquisition and maintenance pose a greater challenge, especially for small and medium enterprises, which prohibit them from exploiting the benefits of advanced computing power enjoyed by their counterparts in large organisations (Nguyen et al., 2015). The difficulty in acquiring and maintaining infrastructure leads to significant revenue losses for these organisations. Consequently, many organisations deploy cutting-edge new technologies, such as cloud computing, to process business information (Zulkifli & Abas, 2022).

"Cloud computing is an information technology-based business model, provided as a service over the Internet, where both hardware and software computing services are delivered on-demand to customers in a self-service fashion, independent of device and location within high levels of quality, in a dynamically scalable, rapidly provisioned, shared and virtualized way and with minimal service provider interaction." (Madhavaiah et al., 2012). Over the past ten years, the accounting profession has seen a rapid digital revolution, primarily due to the introduction of cloud technologies. Cloud accounting, also known as cloud-based accounting, web accounting, and real-time accounting, uses internet-based computing to provide accounting services, giving companies of all sizes the capacity to collaborate, access data in real-time, and scale (Trigo et al., 2014; Khanom, 2017).

Small and medium-sized businesses (SMEs) find cloud-based accounting solutions especially appealing since they provide greater flexibility, remote accessibility, automated software upgrades, and interaction with other digital tools, in contrast to traditional desktop accounting systems (Chandra & Gupta, 2022; Vagner et al., 2023). A wide range of studies have been prompted by the increasing significance of cloud accounting, emphasising adoption factors, technological advantages, hazards, data security issues, and effects on organisational performance (Bala et al., 2024; Rawashdeh & Rawashdeh, 2023; Hung et al., 2023). Numerous studies have examined the factors influencing the adoption and diffusion of cloud accounting systems using models like the Unified Theory of Acceptance and Use of Technology (UTAUT), the Technology-Organisation-Environment (TOE) framework, and the Technology Acceptance Model (TAM) (Musyaffi et al., 2025; Yaputri & Widuri, 2024; Kamal et al., 2023; Musa et al., 2019).

Despite the growing interest in this topic, few thorough studies summarise the state and development of cloud accounting (Vo Van et al., 2025; Chandra & Gupta, 2022; Egiyi & Udeh, 2020; Khanom, 2017), and the literature is still dispersed. Without providing a particular lens on the special characteristics and difficulties of cloud-based accounting, earlier research has frequently concentrated on cloud computing or accounting information systems in general (Achar, 2018). Thus, a comprehensive bibliometric analysis is necessary to map this field's intellectual structure, theme advances, and emerging trends.

In order to fill this gap, this study will comprehensively examine the body of existing literature on cloud-based accounting to locate influential authors, documents, sources, affiliations, networks of collaboration, and theme evolution over time. Doing this draws attention to topics for further study in cloud-based accounting and helps to clarify the current state of knowledge.

1.1 Research Objectives

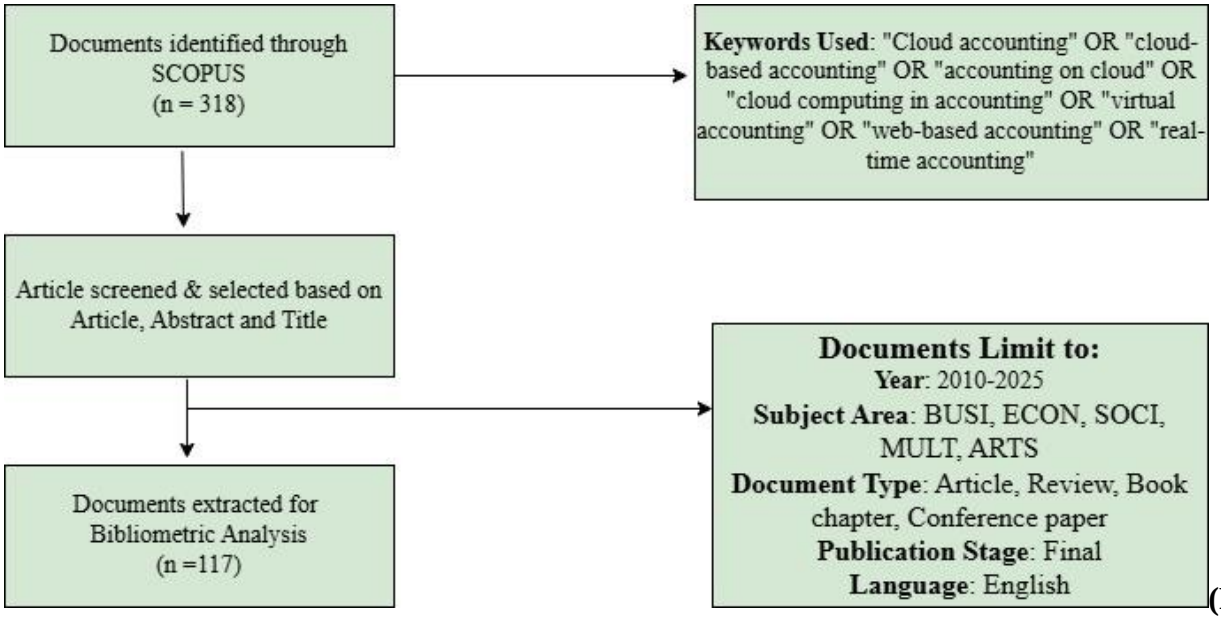
1. To elicit the trends of publications in the cloud-based accounting literature over a period of time.
2. To identify the key figures in terms of journals, authors, affiliations and documents within the cloud-based accounting literature.
3. To identify the prominent themes and areas of focus within the cloud-based accounting literature.

The subsequent part of the paper is structured as follows. Section 2 delineates the research methodology employed in the present study. Section 3 displays a descriptive and network analysis of the study. A summary of the review is provided in section 4. Section 5 elucidates the implications that can be inferred from the study and outlines the limitations and potential avenues for future research.

2. Research Methodology

A bibliometric analysis follows a systematic method for identifying, assessing and monitoring

published work. This study employed bibliometric analysis to investigate the latest developments in the research related to cloud accounting. Bibliometric analysis is a quantitative method that rigorously and objectively evaluates publications, ensuring transparency and reproducibility. Two key techniques within bibliometric analysis are content analysis and descriptive analysis. Descriptive analysis involves examining various publications and journal indices to assess the impact of authors and sources. On the other hand, content analysis delves into the intellectual frameworks of specific disciplines, often through the study of keywords and citations to uncover emerging themes, evolving trends, and research priorities (Ejaz et al., 2022).



(Figure 1: Flowchart of data extraction for bibliometric analysis)

2.1 Data Source

Figure 1 demonstrates that the initial stages of the data collection process involve selecting the data source. The Scopus database was chosen as the primary source for retrieving relevant research publications for this bibliometric analysis. SCOPUS is recognised as the largest repository of research publications, abstracts, and peer-reviewed literature (Dunakhe & Panse, 2022), offering a comprehensive collection of academic literature (Zainuldin & Lui, 2022), with extensive coverage in the social sciences, surpassing that of the Web of Science (WoS) database.

2.2 Keyword Selection

The data retrieval was performed on the 23rd April 2025, to retrieve the maximum number of publications and ensure the most up-to-date study possible. The most commonly used keywords were selected based on some review studies (Singerová, 2018; Khanom, 2017; Dimitriu & Matei, 2014, 2015; Sadighi, 2014). Using the Scopus database, 318 documents were found following a Boolean logic topic search as seen in Table 1. The logic applied was a combination of terms such as “Cloud accounting” OR “Cloud-based accounting” OR “Accounting on cloud” OR “Cloud computing in accounting” OR “virtual accounting” OR “real-time accounting” OR “web-based accounting.”

Table 1: Initial Extraction of Data

Database	Keyword used	Search Criteria	Documents extracted
Scopus	TITLE-ABS-KEY ("cloud accounting" OR "cloud-based accounting" OR "accounting on cloud" OR "cloud computing in accounting" OR "virtual accounting" OR "web-based accounting" OR "real-time accounting") AND PUBYEAR > 2009 AND PUBYEAR < 2026 AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "MULT") OR LIMIT-TO (SUBJAREA , "ARTS")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE , "English")) Search Date: 23 April, 2025	Article title, abstract or keyword	318

2.3 Acceptance and Rejection Criteria

After applying the inclusion and exclusion criteria to the initially extracted 318 documents, 117 documents were retained for further analysis, as displayed in Table 2.

Table 2: Screening of documents

Base	Acceptance	Rejection
Year	2010-2025 (283)	Before 2010 (35)
Subject Area	Business management and commerce, Economics, econometrics and finance, Social Sciences, Multidisciplinary, Arts and humanities (128)	Computer science, Decision sciences, Engineering, Mathematics, Environmental Science, Agricultural and biological sciences, Psychology, Medicine, Energy, Material sciences, Earth and planetary science, etc. (155)
Document Type	Article, Book Chapters, Review and Conference papers (125)	Book, Editorial, Retracted and Note (3)
Publication Stage	Final (118)	Article in Process (7)
Language	English (117)	Polish (1)

2.4 Tools used for analysis

VOSviewer (Visualisation of Similarities), a widely utilised free software for bibliometric analysis, was employed to analyse and visually represent the connections among authors, documents, countries, journals, affiliations/organisations and terms. Given the challenge of identifying clusters in maps and extracting themes from them, VOS viewer offers a user-friendly graphic interface that facilitates quickly examining these maps (Guleria & Kaur, 2021). Another free tool, Biblioshiny, is a web interface of R Studio. Biblioshiny programme processes and analyses bibliographic data, then extracts the results in tabular and graphical formats for in-depth discussion and further analysis (Moral-Muñoz et al., 2020; Ab Rashid, 2023). In this study, both software tools were utilised to construct field plots and compare the results for specific types of analysis available in both.

3. Results and Discussions

3.1 Descriptive Analysis

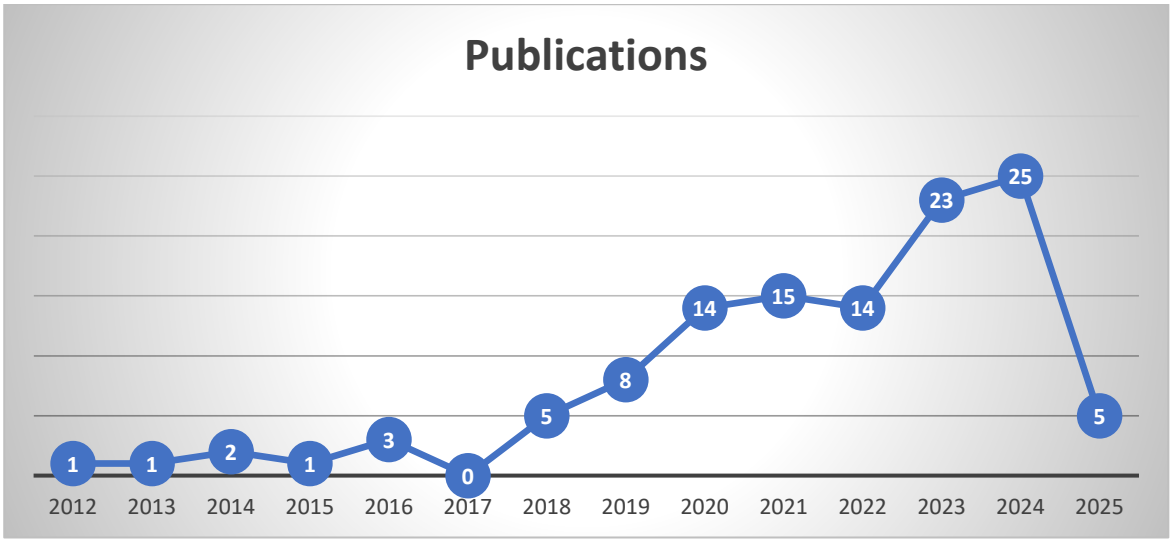
The descriptive analysis aims to illustrate the trend of publications, annual citations, most frequently cited documents, most productive authors, sources, and most relevant affiliations. The dataset extracted from Biblioshiny, which can be seen in Table 2 below, consists of 117 articles published by 91 sources. There were 4852 references cited, which showed the multidisciplinary nature of the research, consisting of various fields like Economics, econometrics and finance, Business management and accounting, social sciences and other related fields. A corpus of 320 authors had yielded this compendium of articles, wherein 20 papers had solitary authorship. The remaining articles are the product of collaborative efforts, culminating in an average of 2.95 authors per document.

Table 3: Main Information of bibliographic data

Description	**Results**
Timespan	2010:2025
Sources (Journals, Books, etc)	91
Documents	117
Annual Growth Rate %	13.18
Document Average Age	3.5
Average citations per doc	13.97
References	4852
Document Contents	
Keywords Plus (ID)	187
Author's Keywords (DE)	370
Authors	
Authors	320
Authors of single-authored docs	20
Authors Collaboration	
Single-authored docs	24
Co-Authors per Doc	2.95
International co-authorships %	17.95
Document Types	
article	87
book chapter	16
conference paper	13
review	1

3.1.1 Research Trends and Scientific Productivity

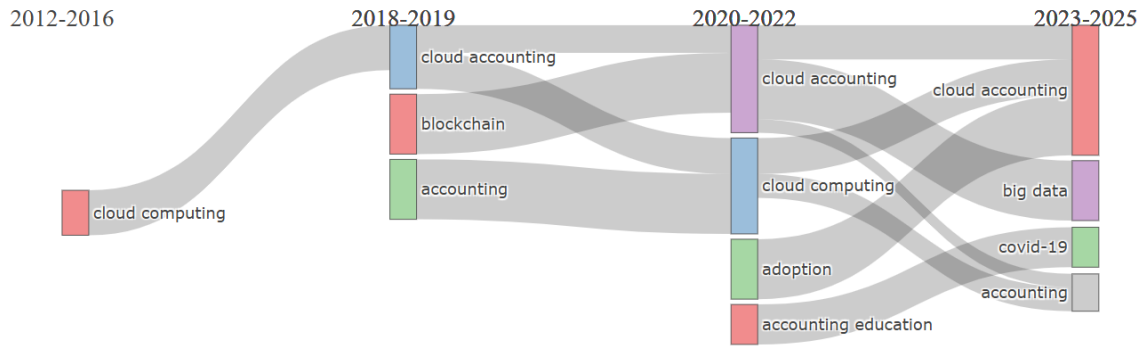
The publications trend of cloud accounting literature from 2012 to 2025 shows a steady but discernible rise in research interest over time. As this topic is still in its infancy, the number of



(Figure 2: Publication trend)

publications in the early years (2012–2016) were relatively low, ranging from one to three papers each year. Nonetheless, this discipline had consistent expansion starting in 2018, and the number of publications increased significantly in 2020 and 2021, reaching 14 and 15 documents, respectively. This increase was probably caused by the global digital transition accelerated by the COVID-19 pandemic. Even though 2025 is ongoing, five documents have already been recorded, indicating a consistent pace of research. There has been a notable and steady increase in scholarly interest in cloud-based accounting, especially in the last few years.

Figure 2 displays the thematic evolution map divided into distinct periods. The primary focus from 2012 to 2016 was "cloud computing," which reflected early interest in the technology's potential for use in commercial settings. During 2018 and 2019, the study's scope was broadened to include "accounting," "cloud accounting," and "blockchain," suggesting that



(Figure 3: Thematic Evolution Map)

digital technologies are increasingly being incorporated into accounting procedures. Along with a greater emphasis on "accounting education" and ongoing interest in "cloud accounting and computing," the focus changed towards the "adoption" of these technologies between 2020 and 2022, indicating a concentration on both implementation and skill development. Finally, in the 2023–2025 timeframe, the themes finally expanded to include "cloud accounting," "big data," "COVID-19," and "accounting," which reflected the impact of global disruptions and the growing significance of big data in changing accounting methods.

3.1.2 Most Influential Sources

The top 10 journals are listed in Table 4 according to their total publications. Ranking first in the list, "Studies in Systems, Decision and Control" contributed 6 of the 117 documents scrutinised in this analysis. "International Journal of Accounting Information Systems" is the second most influential source, contributing five publications to this review. Notably, when considering the top 10 journals collectively, they account for a substantial 27.35% of all articles analysed, underscoring their considerable contribution to the field. Regarding gauging influence and impact through citation metrics such as the h-index, g-index, and m-index, "International Journal of Accounting Information Systems" tops the table as the most influential source, demonstrating the highest level of influence, followed by "International Journal of Data and Network Science".

Table 4: Top 10 Most Influential Sources

Sr. No.	Source	h_index	g_index	m_index	TC	NP	PY_start
1	Studies In Systems, Decision and Control	1	1	0.33	3	6	2023
2	International Journal of Accounting Information Systems	5	5	0.63	507	5	2018
3	International Journal of Data and Network Science	2	4	0.67	26	4	2023
4	Accounting	3	3	0.6	92	3	2021
5	Analysis And Metaphysics	3	3	0.43	63	3	2019
6	Journal of Asian Finance, Economics and Business	3	3	0.5	54	3	2020
7	Accounting Education	2	2	1	21	2	2024
8	International Journal of Scientific and Technology Research	2	2	0.29	6	2	2019
9	Pacific Accounting Review	2	2	0.4	22	2	2021
10	TEM Journal	2	2	0.5	15	2	2022

3.1.3 The most prolific authors

Table 5 presents the authors who have significantly contributed to this field. Ionescu L. leads the list with four publications from 2019 to 2025, while Lutfi A., Tawfik OI, and Musyaffi AM secure the second position, having contributed three documents each in this particular domain. Regarding the influence of authors based on citations, Lutfi A emerges as the most influential with 133 citations, followed by Ionescu L, having 67 citations. Overall, this research identified that Ionescu L as the most impactful author in cloud-based accounting studies, boasting the highest h-index, g-index, and m-index (4, 4, and 0.57, respectively).

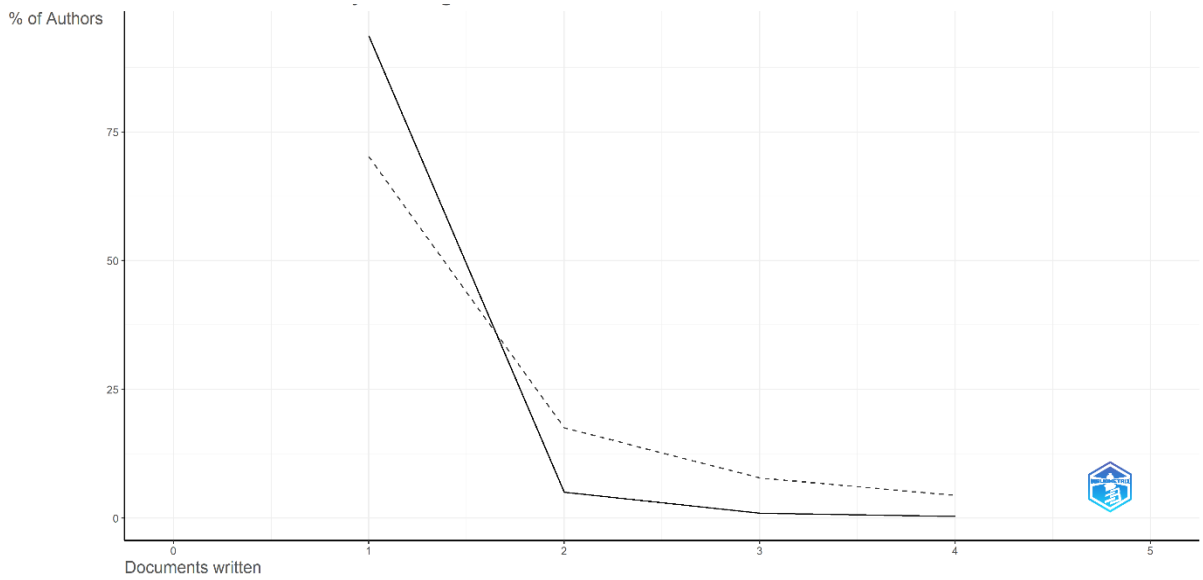
Table 5: Top 10 Most Prolific Authors

Author	h_index	g_index	m_index	TC	NP	PY_start
Ionescu L	4	4	0.57	67	4	2019
Lutfi A	2	3	0.4	133	3	2021
Tawfik OI	3	3	0.6	45	3	2021
Musyaffi AM	2	3	0.5	16	3	2022
Asatiani A	2	2	0.18	53	2	2015

Penttinen E	2	2	0.18	53	2	2015
Elmaasrawy HE	2	2	0.67	42	2	2023
Rawashdeh A	2	2	0.67	28	2	2023
Rawashdeh BS	2	2	0.67	28	2	2023
Dlamini B	1	1	1	1	2	2025

Table 6: Author's Productivity

Documents written	N. of Authors	Proportion of Authors
1	300	0.9375
2	16	0.05
3	3	0.009375
4	1	0.003125



(Figure 4: Author's Productivity through Lotka's Law)

The graph and table 6 illustrate author productivity through Lotka's Law, which describes the frequency distribution of scientific productivity among authors. The table shows that out of 320 authors, 93.75% (300 authors) have written only one document, 5% (16 authors) have written two, 0.94% (3 authors) have written three, and only 0.31% (1 author) has written four. Further, the graph visually supports this, with a steep decline after the first document. The graph's solid line represents the observed data, and the dotted line reflects the theoretical distribution. It shows that nearly 80% of authors have written just one document, and the percentage significantly drops for authors with two or more publications. The steep decline confirms the typical inverse-square relationship proposed by Lotka, highlighting that a few authors are responsible for most publications in the field.

3.1.4 Most influential articles and cited references

Table 7 contains the 10 most cited documents in the field of cloud-based accounting, along with total citations and publication year. The document occupying the foremost position in the list is Han et al. (2023) titled "Accounting and auditing with blockchain technology and artificial Intelligence: A literature review", which has accumulated 228 citations. This study assessed how blockchain technology can enhance transparency, trust and decision-making in accounting, specifically in AI-

enabled auditing. “Designing confidentiality-preserving Blockchain-based transaction processing systems” is the second most cited document by Wang & Kogan, (2018) with 179 citations, reflecting a blockchain-based transaction processing

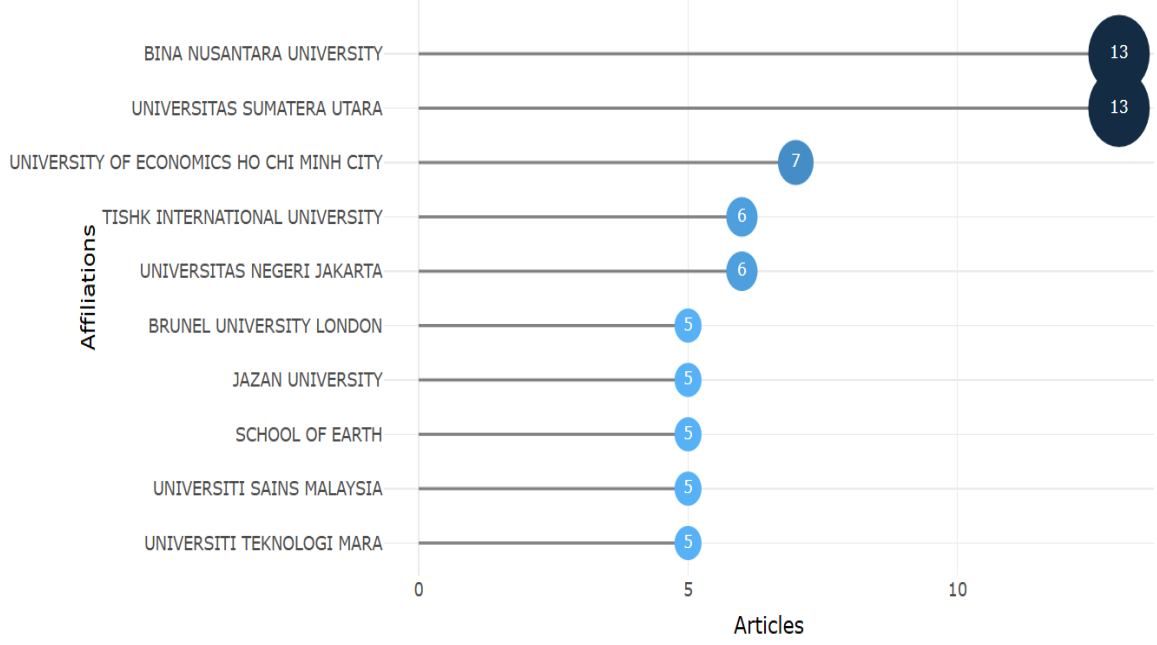
Table 7: Top 10 Most Cited Documents

Sr. No.	Title	Author(s)	Total Citations	Year of Publication
1	Accounting and auditing with blockchain technology and artificial Intelligence: A literature review	Han, H., Shiwakoti, R. K., Jarvis, R., Mordi, C., & Botchie, D	228	2023
2	Designing confidentiality-preserving Blockchain-based transaction processing systems	Wang, Y., & Kogan, A.	179	2018
3	Cloud-based accounting information systems usage and its impact on Jordanian SMEs’ performance: the post-COVID-19 perspective	Al-Okaily, M., Alkhwaldi, A. F., Abdulmuhsin, A. A., Alqudah, H., & Al-Okaily, A.	89	2023
4	Intellectual capital and business performance: An exploratory study of the impact of cloud-based accounting and finance infrastructure	Cleary, P., & Quinn, M.	84	2016
5	Influences of the environmental factors on the intention to adopt cloud based accounting information system among SMEs in Jordan	Alshirah, M., Lutfi, A., Alshirah, A., Saad, M., Ibrahim, N. M. E. S., & Mohammed, F.	80	2020
6	Cloud–Computing Based Accounting for Small to Medium Sized Business	Christauskas, C., & Miseviciene, R.	61	2012
7	Understanding the Intention to Adopt Cloud-based Accounting Information System in Jordanian SMEs	Lutfi, A.	52	2022
8	Cloud-based client accounting and small and medium accounting practices: Adoption and impact	Ma, D., Fisher, R., & Nesbit, T.	51	2021
9	Big Data, Blockchain, and Artificial Intelligence in Cloud-based Accounting Information Systems	Ionescu, L.	45	2019
10	Impact of accounting process characteristics on accounting outsourcing - Comparison of users and non-users of cloud-based accounting information systems	Asatiani, A., Apte, U., Penttinen, E., Rönkkö, M., & Saarinen, T.	44	2019

system that enhances real-time accounting, continuous monitoring, and fraud prevention, while addressing blockchain adoption challenges. Al-Okaily et al. (2023) titled "Cloud-based accounting information systems usage and its impact on Jordanian SMEs' performance: the post-COVID-19 perspective", which has received 89 citations, is the third most cited document. This study examined the factors that affect the usage of cloud-based accounting information systems during the COVID-19 pandemic.

3.1.5 Most Relevant Affiliations

Figure 6 highlights the affiliations that have significantly contributed to the growth of research in this particular domain. "Bina Nusantara University" and "Universitas Sumatera Utara",



(Figure 5: Top 10 most productive affiliations)

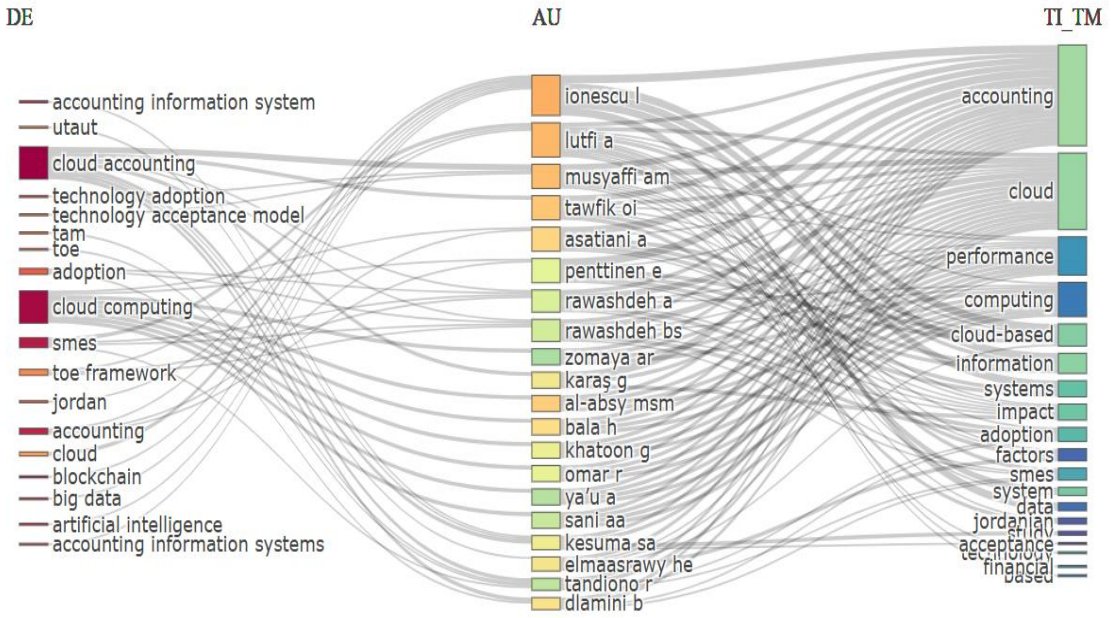
situated in Indonesia, are the most productive affiliations, producing 13 documents each on various aspects of cloud-based accounting. The following two most impactful affiliations identified within this particular area of research are "University of Economics Ho Chi Minh City", situated in Vietnam, which has contributed 7 documents, standing in second rank, followed by "Tishk International University", situated in Iraq, which has contributed six documents.

3.2 Network Analysis

Network analysis technique proves itself a valuable instrument by providing insights to understand how different keywords, authors, organisations, sources, etc., are related to one another and how they are interdependent (Khan et al., 2022). Furthermore, it facilitates the researchers in the visualisation of the intellectual framework and landscape (Wasiq et al., 2023).

3.2.1 Keyword, author and title Three-Field Plot Diagram

The three-field plot, also known as the Sanky plot, elucidated the interrelations among authors, their titles, and keywords of research documents based on financial dynamics literature (Figure 6). It delineates the interaction among the author keyword (on the left), the authors (in the middle) and the title (on the right), along with how they have evolved over time.



(**Figure 6: Three-Field Plot Diagram)**

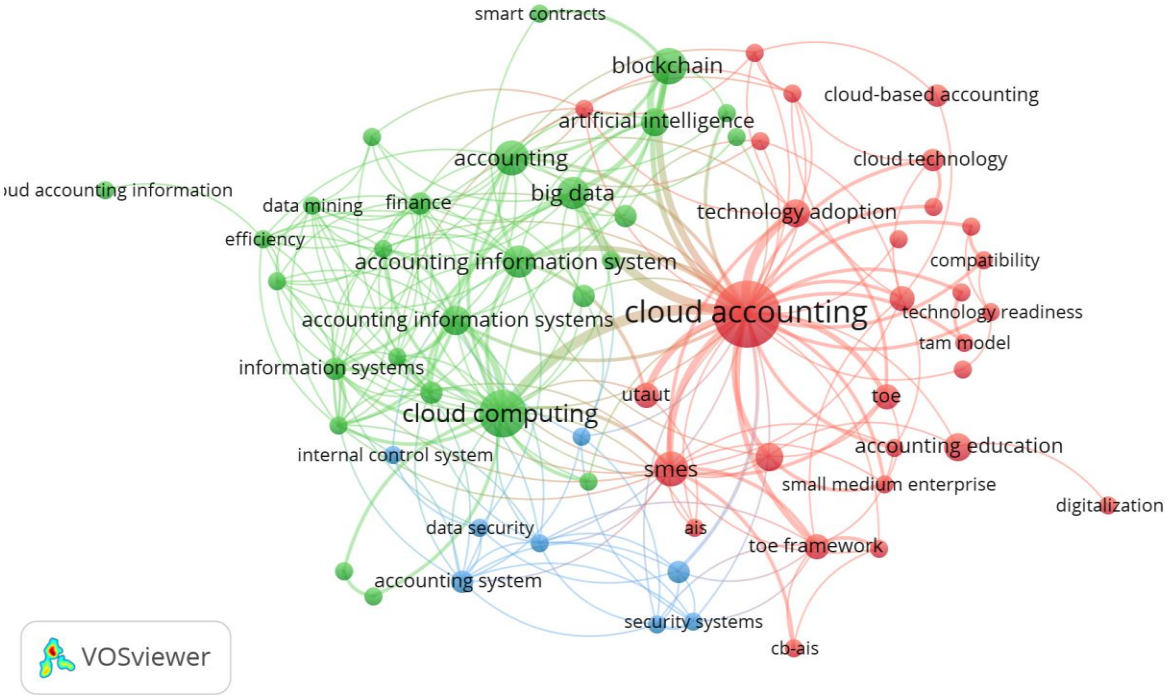
The authors' most prominent keywords are Cloud computing, Cloud accounting, Accounting, SMEs, Adoption, Accounting information system, etc. Rectangles of various colours were used to depict the relevant elements in the diagram, showing that the maximum height of the rectangle showed the relevance of a particular item. Through the thickness of connections, the diagram illustrated the significant information flow between various entities, including authors, the title of the document and keywords (Ejaz et al., 2022).

3.2.2 Co-Occurrence of Keyword Analysis

Co-occurrence of keywords refers to the frequency with which specific terms or keywords appear together in scholarly publications within a given field or research domain. Co-occurrence of keywords analysis involves using the keywords provided by authors to explore the connections between the main topics within the analysed domain (Ji et al., 2018; Corvo et al., 2021; Kumar et al., 2024). Table 7 presents the data revealing the interconnected fields in the domain of cloud accounting. Only keywords appearing at least five times are considered, and variations such as singular/plural forms and synonyms were processed correctly by hand. When the minimum number of occurrences of keywords was set at 2, out of 522 keywords, 81 keywords met the threshold.

(Figure 7: Word cloud of the most frequently used keywords)

Over time, the annual frequency of main terms steadily increased, with certain terms experiencing faster growth than others. Notably, “cloud accounting”, “Big Data”, “Finance”, “Accounting Information system”, “Cloud computing”, “Information systems” and “Data handling” exhibited the most substantial surge in occurrence, as depicted in Figure 7's word cloud.



(Figure 8: Co-Occurrence of Keyword Network)

Table 8: Thematic Clusters

Cluster	Keywords	Theme	Related Document

Red	Cloud accounting, Cloud technology, Cloud-based accounting, AIS, CB-AIS, Adoption, Intention to adopt, Compatibility, Relative advantage, Technology Acceptance Model, TAM framework, TOE model, UTAUT, SMEs, Small and medium enterprises	"Adoption of Cloud-based accounting in SMEs: Theoretical Models and Frameworks"	Musyaffi et al. (2025) Yaputri & Widuri (2024) Kamal et al. (2023) Musa et al. (2019)
Green	Accounting, Accounting information systems, Artificial intelligence, Big data, Blockchain, Cloud computing, Cloud-based, Cloud computing technology, Information technology, Digital accounting, data mining and data handling, financial management	"Integration of AI, blockchain, and big data within modern accounting information system frameworks for optimised accounting functions"	Han et al. (2023) Alramahi et al. (2024) Alkan (2022) Ionescu (2022 Ionescu (2019)
Blue	Accounting system, Software as a service, Software implementation, security system, information management, data security, internal control system	"Outcomes of deploying cloud-based accounting systems in organisations"	Bala et al. (2024) Cleary & Quinn (2016) Rawashdeh & Rawashdeh (2023) Hung et al. (2023)

Red Cluster

The red cluster is constituted by the following keywords: Cloud accounting, Cloud technology, Cloud-based accounting, AIS, CB-AIS, Adoption, Intention to adopt, Compatibility, Relative advantage, Technology Acceptance Model, TAM framework, TOE model, UTAUT, SMEs, Small and medium enterprises. These keywords indicate that the central focus of this cluster revolves around "Adoption of Cloud-based accounting in SMEs: Theoretical Models and Frameworks" The four most popular articles and brief summaries of their respective works within these thematic clusters are presented. Musyaffi et al. (2025) effectively implement the TAM model to determine the factors impacting MSMES' adoption of cloud accounting. The study's main findings are that compatibility and digital literacy significantly impact perceived usefulness and ease of use of cloud accounting technology. Yaputri & Widuri (2024) examined the Indonesian start-ups' adoption of cloud accounting by integrating the TAM and TOE frameworks. It draws attention to the fact that start-ups value perceived usefulness and ease of use over external demands, highlighting their adaptability. Kamal et al. (2023) investigate the factors influencing Malaysian SMES' intention to adopt cloud accounting by utilising the TOE framework. The findings revealed that that competitive pressure and top management support are essential motivators, while perceived usefulness is not a significant determinant. Musa et al. (2019) proposed a modified UTAUT model that adds perceived security to the original variables in order to examine the factors influencing Malaysian SMEs' inclination to embrace cloud accounting. It emphasised how crucial accounting assistance is to lowering SME failure rates and boosting economic expansion.

Green Cluster

The green cluster is formed by the following keywords: Accounting information system, Artificial intelligence, Big data, Blockchain, Cloud computing, Cloud-based accounting, Cloud computing technology, Data handling and data mining, Information system and Information technology, etc. These keywords suggest that the primary focus of the cluster could be "Integration of AI, blockchain, and big data within modern accounting information system frameworks for optimised accounting functions." Within the cluster, Ionescu (2019) empirically investigates the role of big data, blockchain, and artificial intelligence in cloud-based accounting systems. It offers insights into the characteristics, implications, advantages, issues of cloud accounting systems, and trends of cloud-based accounting software. Alkan (2022) examined how integrating blockchain and artificial intelligence (AI) into cloud-based accounting systems might improve efficiency, data security, decentralised intelligence, and real-time processing while overcoming the drawbacks of conventional centralised systems. The benefits of technology convergence for multi-stakeholder financial procedures are highlighted.

With its trustworthiness and immutability, Han et al. (2023) examined how blockchain technology can improve transparency, real-time reporting, and continuous auditing, thereby transforming accounting procedures and AI-enabled auditing. Alramahi et al. (2024) examined how artificial intelligence, in particular, expert systems, helps the Jordanian telecom businesses reduce the risks related to cloud accounting and concluded that AI has a statistically significant positive impact on risk reduction.

Blue Cluster

The blue cluster includes the following keywords: Accounting system, Data security, Enterprise resource planning, Information management, Internal control system, Security systems, Software as a service, and software implementation etc. These keywords suggest that the primary focus of this cluster revolves around the theme "Outcomes of deploying cloud-based accounting systems in organisations." Within the cluster, Bala et al. (2024) investigated the impact of cloud computing in accounting information systems on business performance in Erbil holding businesses and concluded that cloud accounting's utility, trustworthiness, and convenience to use have a favourable impact on business performance. Cleary & Quinn (2016) conducted an exploratory study to examine the effects of cloud-based accounting and finance infrastructure on SME's performance. The results revealed that human and relational capital have a significant and positive impact, whereas structural capital does not have a significant impact on performance. Rawashdeh & Rawashdeh (2023) examined how technological, organisational, and environmental (TOE) aspects affect the adoption of cloud accounting by using digital vision as a proxy for intention. According to the study findings, digital vision substantially influences cloud accounting adoption and the favourable impact of adoption on performance. With an emphasis on the moderating role of digital leadership, Hung et al. (2023) investigate how cloud-based accounting effectiveness (CBAE) and decision-making quality (DMQ) mediate the influence of digital transformation on firm performance in Vietnam. The results stated that CBAE is positively impacted by digital transformation, which in turn affects DMQ and performance. These effects are amplified by strong digital leadership.

4. Summary of Reviews and Conclusion

The growth of the scientific output on cloud-based accounting literature and associated topics reached its peak in 2024, marked by a substantial increase in the number of publications. Based on the tabulated statistics, the majority of the documents were co-authored, with a mere 20.5% being authored by a single individual, suggesting a substantial level of collaboration in this area of research. The three-field plot diagram, utilising three main metadata fields, i.e. authors, title of

documents and keywords, offers valuable insights into the interconnections among these, such as authors associating their work with specific keywords. At the forefront of this domain, Ionescu L has emerged as the leading author, holding the highest position with the most citations, followed by Lutfi A and Tawfik OI. The top two most productive affiliations contributing significantly to this research domain are "Bina Nusantara University" and "Universitas Sumatera Utara" in Indonesia. The majority of documents have been disseminated through the publication titled "Studies in Systems, Decision and Control" issued by Springer. Subsequently, the second-highest number of publications originated from the "International Journal of Accounting Information Systems" issued by Elsevier. Our study findings revealed the presence of three clusters headed towards- "Adoption of Cloud-based accounting in SMEs: Theoretical Models and Frameworks," "Integration of AI, blockchain, and big data within modern accounting information system frameworks for optimised accounting functions," and "Outcomes of deploying cloud-based accounting systems in organisations"

5. Implications, Limitations and Future Research Agendas

This bibliometric analysis helps researchers and policymakers keep track of new developments in their fields of interest and issues by identifying emerging research patterns in the literature. By analysing citation patterns and publication metrics, bibliometric analysis enables the evaluation of the impact and influence of certain research works, authors, or journals within this research field. Further, this study highlights the understudied regions or knowledge gaps. This information can then be used to prioritise future research projects and directions.

While this study offers a number of valuable insights, it's important to acknowledge certain limitations. Given the dynamic nature of research in this field, newly published works may have been inadvertently excluded from the analysis. Additionally, relying solely on data from the Scopus database may have resulted in overlooking significant documents available in other databases. Another limitation is the focus on journal-published articles in English, potentially excluding relevant research published in other languages. Finally, the analysis's restricted scope, which concentrated on titles, abstracts, and keywords rather than a comprehensive examination of the entire text, may have led to a partial understanding of crucial ideas and trends. Future research efforts could aim at broadening the scope of publications relevant to cloud-based accounting, exploring alternative methodologies and databases to capture a more diverse range of literature.

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