

The Transformation of the Accounting Profession Driven by Blockchain Technology: A Bibliometric Analysis

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Abstract. *In recent years, amid the rapid development of digital technologies, the transformation of the accounting profession under the influence of blockchain technology has increasingly drawn the attention of researchers. Although research in the field has intensified, it remains fragmented, and a prevailing perspective on the thematic directions of research is still taking shape. Thus, this paper explores the relevant literature to highlight how current research presents the impact of blockchain technology on the accounting profession, as well as the areas requiring future development. By applying bibliometric analysis to the corpus of identified international scientific publications, this paper seeks to answer three research questions: the evolution of the specialized literature, the identification of the main thematic directions, and the establishment of future research directions. The methodology used includes the analysis of scientific output and citations, the examination of the publication lifecycle, and the analysis of thematic networks and concept maps. Following the analysis, it was found that the field under study is in its early stages but is developing rapidly. The literature focuses primarily on the relationship between blockchain technology, accounting, and auditing, while also addressing topics related to the adoption of digital technologies and their effects on organizations and accounting education. At the same time, the bibliometric analysis indicates both emerging research directions and theoretical and empirical gaps. Overall, this paper aims to provide a perspective on the transformation of the accounting profession under the influence of blockchain technology, offering useful reference points for the academic and professional communities.*

Keywords: blockchain, accounting profession, digital transformation, bibliometric analysis, research trends.

Introduction

Digitalization is bringing about many changes around the world, but especially in those fields where technology is indispensable (Stoica & Ionescu-Feleagă, 2022). Accounting is the field where automation and digitization have made the strongest inroads, and the accounting profession is in a sector where 97% of activities are suitable for digitization (Botea, 2018), which is why the accounting profession must adapt quickly to technological alternatives (Ionescu & Barna, 2021). Thus, there is growing interest in the field of accounting digitization, and researchers have turned their attention to several areas, such as big data and data analysis, cloud computing, blockchain, robotic process automation, and others. However, research in the field of accounting digitization is in its early stages and requires further development (Stoica & Ionescu-Feleagă, 2022).

Blockchain is one of the buzzwords on everyone's lips these days, and the disruptive impact of this technology on various fields is widely recognized, both in academic and business circles (Pugna & Duţescu, 2020). Blockchain technology is a public database of records, transactions, or

events that has been shared among participating parties, based on „blocks” and „chains”. In the same vein, each block is a set of recorded transactions, and every time a block is created, it is added to an existing chain of blocks (Sinha, 2019). Blockchain technology was first used with the emergence of the cryptocurrency Bitcoin in 2008 and is known as a public ledger that ensures the integrity of transaction data (Yli-Huumo et al., 2016).

The reason for the interest in blockchain lies in its core attributes, which provide security, anonymity, and data integrity without any third-party organization controlling transactions, thereby creating interesting areas of research, particularly from the perspective of technical challenges and limitations (Yli-Huumo et al., 2016). Consequently, numerous previous scientific studies have examined ways to apply blockchain technology across various sectors, with the field of accounting being one of the most discussed topics, given that it functions as a shared distributed ledger (Pedreño et al., 2021). At the same time, its implementation in the field of accounting could resolve trust issues with investors, prevent communication errors, or avoid problems related to asymmetric accounting information, which represent one of the most common errors in the synthesis and interpretation of an entity’s economic and financial information (Pedreño et al., 2021).

In recent decades, there have been numerous technological innovations that have influenced the field of accounting, but the traditional double-entry bookkeeping method has remained unchanged, with transactions still requiring third-party validation. Therefore, the third party can be replaced by a mechanism based on the mutual consent of all parties involved, that is, of all users of blockchain technology, which will enhance the security, transparency, and legality of transactions, providing stakeholders with a reliable accounting record and contributing to the transformation and development of the concept of triple-entry accounting (Grosu et al., 2022).

In recent years, blockchain technology has attracted increasing interest from researchers and practitioners, as it is one of the most disruptive and influential technologies (Lardo et al., 2022). However, the theoretical framework remains rudimentary and empirical evidence is almost negligible, focused on its technical aspects, and most blockchain applications are developed as isolated and specific solutions, with virtually no blockchain solutions at the entity level (Pugna & Duțescu, 2020). Although researchers are working on developing a theory to explain how blockchain will transform the field of accounting, and there are some proposals for using the technology, to date, none has gained widespread acceptance (Bellucci et al., 2022).

In light of the above, this paper aims to conduct a bibliometric analysis of the international scientific literature at the intersection of blockchain, the accounting profession, and its transformation in the context of the adoption of distributed ledger technology. Accordingly, the scientific approach is guided by the following research questions:

RQ1. How has scientific interest in the transformation of the accounting profession under the influence of blockchain technology evolved?

RQ2. What are the main themes and theoretical approaches regarding the impact of blockchain technology on the accounting profession?

RQ3. What aspects remain insufficiently explored in the existing literature, and in what directions can research on the transformation of the accounting profession under the influence of blockchain technology be expanded?

To address the research questions formulated, bibliometric analysis techniques were employed, which have proven to be an effective method for the quantitative analysis of academic publications using statistical techniques, consisting of citation and content analysis (Shi et al., 2020). The choice of research method is justified by the emerging and fragmented nature of

research on the impact of blockchain technology on the accounting profession, where scientific mapping techniques prove suitable for identifying trends, delineating conceptual clusters, and detecting emerging themes.

Literature review

Blockchain has been in the spotlight ever since its invention and has become one of the leading trends in the IT industry in recent years. Although blockchain technology was developed explicitly for cryptocurrencies, thanks to indispensable features such as confidentiality and immutability, it has become a favored choice in various fields (Sarwar et al., 2021). In the literature, blockchain is no longer viewed merely as a simple technological innovation but is treated as an information infrastructure capable of reshaping transaction validation and trust mechanisms in the economic environment.

In the field of accounting, traditional methods have long relied on centralized systems and manual processes for recording, reporting, and verifying financial transactions (Prokopenko et al., 2024). The key difference from traditional accounting systems lies in the fact that blockchain uses distributed ledgers, where the integrity and consistency of records are ensured through consensus mechanisms, cryptography, and the impossibility of easily altering transaction history. Thus, by leveraging the blockchain's decentralized and immutable ledger system, entities can enhance the efficiency, reliability, and transparency of financial reporting, ultimately leading to more informed decision-making and greater trust among stakeholders (Prokopenko et al., 2024). On this basis, the literature highlights that blockchain can shift trust-building mechanisms from traditional intermediaries to decentralized technological infrastructures (Tapscott & Tapscott, 2017). At the same time, it associates blockchain with a trusted digital infrastructure, and one of the major anticipated effects is the reduction of transaction costs and the automation of transaction execution and contractual provisions (Iansiti & Lakhani, 2017). It is worth noting that a direct consequence of an immutable historical record is that it generates trust in the system, and altering such a record becomes very difficult, which is why blockchain has been defined by The Economist as a „trust machine” (Aste et al., 2017).

In the same vein, the literature indicates that research on blockchain technology in the field of accounting is still in its early stages and that it has many technical shortcomings that hinder its widespread adoption (Alkhundary et al., 2020). From this perspective, blockchain is viewed as a technology with both advantages and disadvantages. Thus, its advantages include the elimination of intermediaries, users' direct control over their own information and transactions, high data quality, the technology's durability and reliability, process integrity, transparency, immutability, and speed of transactions, and reduced transaction costs (Niranjanamurthy et al., 2018). Also, the literature also highlights the technology's disadvantages, which include reduced performance compared to centralized systems, low level of technological maturity, regulatory uncertainties, high energy consumption, security and privacy risks, integration issues with existing systems, organizational and cultural adoption challenges, and high initial costs (Niranjanamurthy et al., 2018). Although blockchain holds a promising future for the field of accounting, it requires a balanced approach to address its limitations and integrate with existing systems (Akoh et al., 2024).

Scientific research on blockchain technology in the field of accounting reflects a growing interest in exploring its benefits, challenges, and implications for accounting practices (Prokopenko et al., 2024). These studies show that blockchain technology is not merely an emerging trend, but a paradigm shift in accounting that transcends traditional boundaries and embodies trust,

transparency, and transformative innovation (Akoh et al., 2024). Although blockchain offers numerous benefits in the field of accounting, it also presents certain challenges and barriers that must be addressed, including the dynamic nature of regulations and the need for accounting standards that align with this innovative technology (Suryanti et al., 2023). Blockchain technology introduces an advanced multi-level accounting framework, moving from the conventional double-entry system to a more comprehensive triple-entry system. This progression significantly strengthens the reliability and verifiability of financial records, thereby increasing the accuracy and credibility of financial reporting (Akoh et al., 2024). Furthermore, triple-entry accounting adds a level of clarity and transparency to accounting that double-entry accounting cannot provide (Faccia & Mosteanu, 2019).

A significant portion of the scientific literature agrees that blockchain does not eliminate the accounting profession, but rather helps to redefine roles and skill sets. The central argument is that, as certain repetitive activities are automated or reconfigured, the importance of value-added tasks increases—namely, the analysis and interpretation of economic and financial information, support for decision-making, and the strengthening of management and control mechanisms within organizations (Schmitz & Leoni, 2019, Pimentel & Boulianne, 2020). At the same time, the literature raises concerns about the profession's readiness for the transition to blockchain-based systems, which requires a shift in the skill set and mindset of accounting professionals, necessitating training and adaptation to the new technological environment (Akoh et al., 2024). This transition emphasizes the need for digital skills, an understanding of data governance, and the adaptation of initial and continuing education so that accounting professionals can assess technical risks and communicate effectively with interdisciplinary teams (Sinha, 2019).

Despite existing contributions, the scientific literature on the impact of blockchain technology on the accounting profession remains fragmented in terms of both subject matter and methodology. For this reason, bibliometric analysis serves as a useful integrative tool for synthesizing the existing literature, as it allows for highlighting the evolution of research, identifying the main thematic directions and relationships between concepts, as well as outlining under-researched areas, thereby providing guidance for future research development. Essentially, blockchain technology is still a new technology and is expected to evolve rapidly in the coming years; a challenge currently hindering the widespread adoption of blockchain is the lack of a uniform standard that blockchain system builders or operators should adhere to (Sinha, 2019).

Methodology

The research methodology was designed as an exploratory quantitative bibliometric approach that combines performance analysis (output, impact, collaboration) and scientific mapping to highlight the intellectual structure and dynamics of themes related to the impact of blockchain technology on the accounting profession. The sequence of steps (collection, selection, cleaning, analysis, and interpretation) is shown in Figure 1, illustrating the general structure of the methodological approach.

Bibliographic data were collected from the Web of Science (WoS) Core Collection database, and the search was conducted using the Advanced Search mode, with the Topic (TS) field. In WoS, TS searches Title, Abstract, Keyword, and Keywords Plus, which allows the analysis to extend beyond the terminology used in titles and enables the identification of semantic variations among authors. The analyzed period spans the years 2008-2025, with 2008 marking the introduction of blockchain technology into the scientific literature, coinciding with the emergence

of the cryptocurrency Bitcoin, and the analysis was limited to 2025 to avoid including an incomplete year at the time of data extraction. The search equation (TS) was formulated based on the key concepts that structure the research objective and is explicitly presented in Figure 1.

Bibliographic filters were applied to enhance relevance and comparability, such as document type, research fields, and language. Subsequently, an analysis of titles and abstracts was conducted to exclude works less relevant to the topic. Following the selection process, the final corpus included 54 scientific articles.

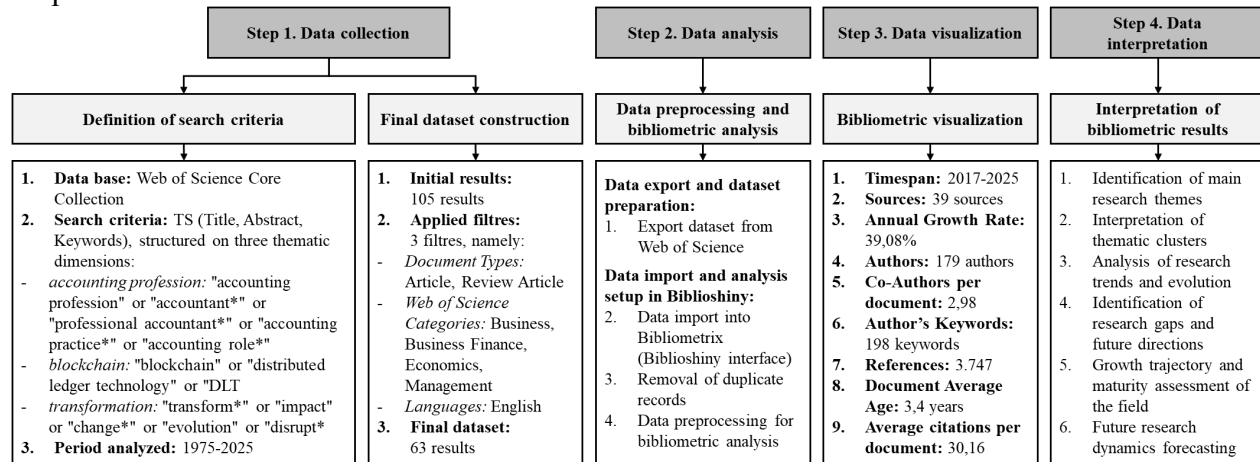


Figure 1. Stages of the bibliometric analysis of the accounting profession and blockchain technology

Source: developed by the authors.

The results were exported from WoS as a .txt file using the „Full Record and Cited References” option, which is recommended for network analyses (citation, co-citation, etc.), as these depend on the complete list of cited references. The dataset was imported into the R statistical software and analyzed using the Bibliometrix package via the Biblioshiny interface. The data cleaning process involved removing duplicates, normalizing author names, standardizing keywords, and verifying essential bibliographic information such as author, source, year, and DOI.

The analysis of academic productivity and impact involved evaluating relevant authors, journals, and institutions, as well as annual scientific output. At the same time, the analysis of relationships between publications utilized keyword co-occurrence and co-citation networks to identify the main thematic clusters. The analyses employed restrictive analytical parameters, such as the fields analyzed, the minimum threshold for occurrences, the normalization method, and the cluster detection algorithm. Thus, the concept of the „accounting profession” was approached through the lens of several subfields (audit, financial reporting, managerial accounting, taxation, governance, professional competencies, etc.), as these emerge from the structure of the identified thematic clusters.

Results and discussions

To ensure consistency between the aim, research questions, and results, this section presents the bibliometric findings in three steps: the evolution of scientific interest and the maturity of the field (RQ1, Figures 2 and 3), the profile of contributions and publication structure (RQ2, Figure 4, supplemented by observations on sources and authorship), as well as the conceptual architecture of the literature and thematic gaps (RQ3, Figures 5 and 6).

Trends in scientific output and citations

Although the analysis period was set for 2008-2025, the results of the database query indicate that the first relevant works on the intersection of blockchain technology and the accounting profession appeared in 2017. The absence of earlier records in the analyzed dataset confirms the emerging nature of the field and reflects the fact that academic interest became apparent as blockchain applications matured in organizational and financial contexts. In this context, the analysis of the evolution of scientific output (Figure 2) highlights the growing momentum and the gradual consolidation of research in this field.

Figure 2 was generated by analyzing the performance of annual scientific output and its impact based on citations, using the Bibliometrix package in the R environment, on a corpus extracted from Web of Science (WoS), according to the search equation (TS) presented in Figure 1. The time series highlights an emergence of the literature only in 2017-2018, followed by an acceleration after 2019 and consolidation after 2021, with steady growth between 2022 and 2025. The results indicate that scientific interest has grown as blockchain technology has increasingly been discussed in the context of accounting, which answers RQ1 and highlights the gradual evolution and maturation of the subject. The shift in focus toward the 2021-2025 period indicates an increase in practical relevance, as the literature no longer treats blockchain as an isolated technological artifact but as an infrastructure capable of changing how accounting records are generated, controlled, and managed. At the same time, the inverse relationship between the volume of publications and the average annual citations can be interpreted as a “rejuvenation” of the corpus and a fragmentation of academic attention in a rapidly expanding field, which justifies a cautious discussion of still-evolving consensus. In comparison, a bibliometric analysis published in 2025, which maps the evolution of scientific research on blockchain technology in accounting and auditing based on a corpus of 359 scientific articles, highlights a compound annual growth rate of 38% in publications between 2017 and 2024, indicating rapid growth in this field (Hassanein et al., 2025).

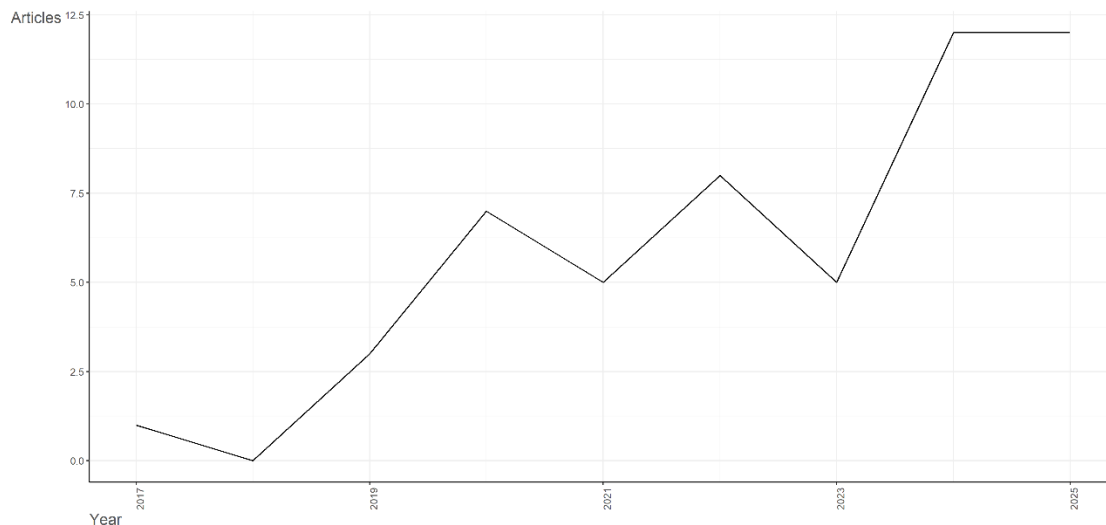


Figure 2. Annual trends in scientific output on blockchain within the accounting profession

Source: developed by authors based on data extracted from Web of Science, using the Bibliometrix package.

To assess the maturity of the field, the dynamics of the scientific output life cycle were modeled by fitting a logistic function to annual output, with the aim of estimating the degree of

proximity to theoretical saturation, the transition thresholds, and the midpoint; the results are illustrated in Figure 3. The trend indicates a rapidly growing field – 34.5% of the estimated saturation level reached by 2025, exceeding the 10% threshold around 2020, and an estimated peak in 2027 (15 publications/year), with a good fit ($R^2 = 0.926$) and a projection of cumulative growth until around 2035. From an analytical perspective, the interpretation for RQ1 is twofold: namely, the topic has passed the emergent phase but has not yet entered saturation. At the same time, there is a favorable window of opportunity for conceptual consolidation and for increasing the share of empirical and applied studies, before the agenda stabilizes around dominant subthemes.

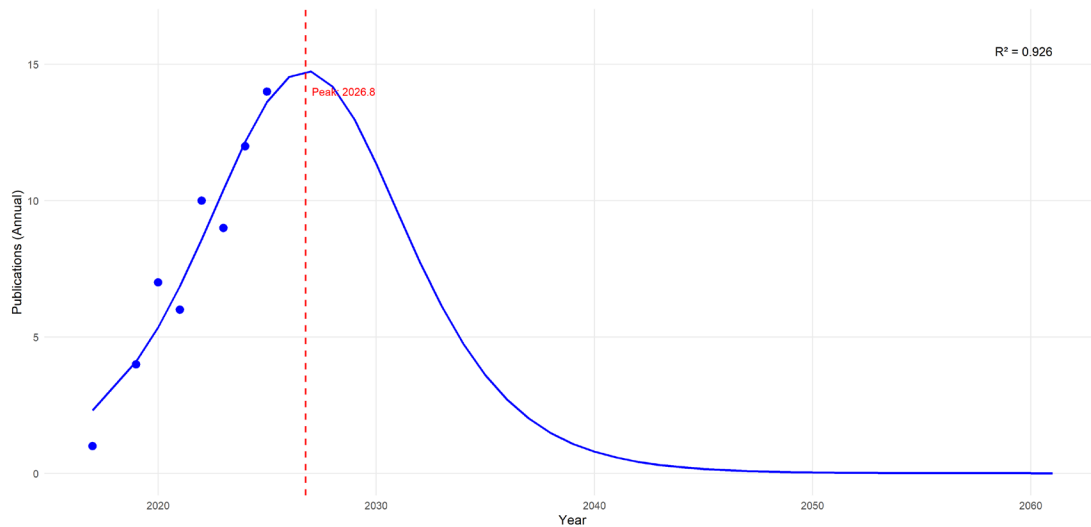


Figure 3. The life cycle of scientific output on blockchain in the accounting profession

Source: developed by authors based on data extracted from Web of Science, using the Bibliometrix package.

In the context of the accounting profession, this “premature” stage is the point at which the differences in impact across subfields (audit, financial reporting, education, governance, etc.) should be explored in greater depth, as the literature tends to become more specialized later on, and accounting standards and practices may crystallize under the influence of early conclusions. In comparative terms, a systematic review of the literature published in 2024 argues that the literature is still dominated by theoretical contributions and that more empirical studies are needed, recommending that future research focus on the following specific areas: competencies and education, governance, auditor independence, accounting standards and regulations, and the challenges facing the accounting profession due to the adoption of blockchain technology-areas consistent with a field logic that is still taking shape (Georgiou et al., 2024).

Main contributors and sources of publication

The geographical distribution of scientific output, illustrated in Figure 4, was determined through an analysis of output performance at the country level, based on metadata extracted from WoS; this discussion is supplemented by descriptive findings regarding publication sources and author structure within the analyzed corpus. The geographic distribution indicates a concentration of output in established ecosystems (the United States, Canada, the United Kingdom), with expansion into European and Anglo-Saxon countries (the Netherlands, Spain, Australia) and the emergence of significant interest in other jurisdictions as well (Germany, Italy, China). Interpretatively, this geography of scientific research suggests that knowledge about blockchain technology and the

accounting profession is produced primarily in academic systems with better access to research infrastructure and organizations undergoing digital transformation, which may influence the dominant themes (greater emphasis on adoption and organizational integration). At the same time, this distribution points to a clear direction for RQ3: more research is needed on different institutional contexts (emerging markets, distinct regulatory regimes, etc.), where adoption barriers and implications for the accounting profession may differ.

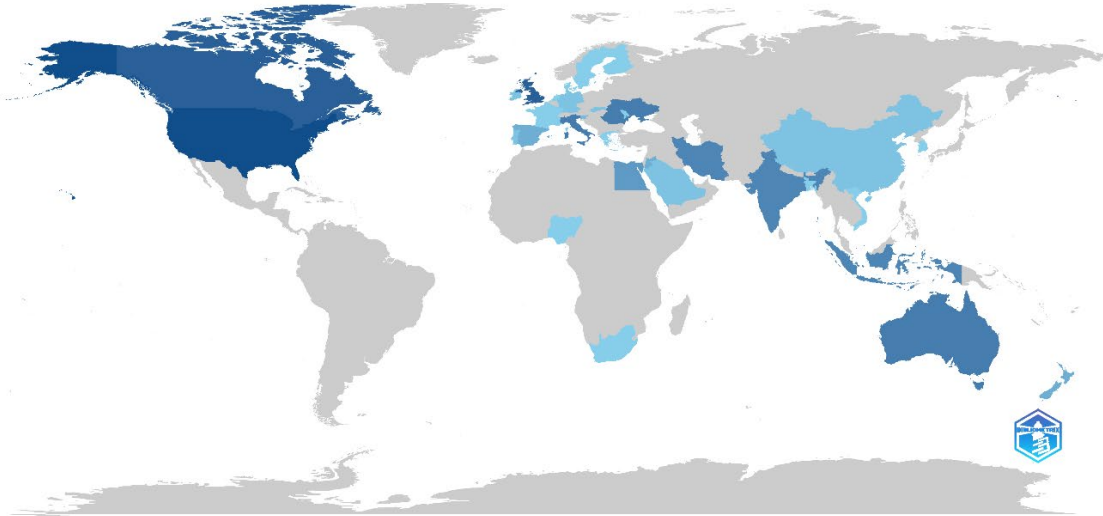


Figure 4. Geographic distribution of scientific output on blockchain in the accounting profession

Source: developed by authors based on data extracted from Web of Science, using the Bibliometrix package.

From the perspective of dissemination channels, the results of scientific research are published in journals focused on the digitization of accounting and emerging technologies, such as the *Journal of Emerging Technologies in Accounting*, as well as journals that address the transformation and organizational dynamics of the accounting profession, such as the *Journal of Accounting and Organizational Change*, which confirms that scientific interest is focused on the accounting dimension, rather than on technical developments specific to information technologies.

The authorship structure, characterized by diversity and the absence of dominant authors in the analyzed corpus, can be interpreted as a sign of a community still in the process of formation. At the same time, a bibliometric analysis published in 2025, which maps the evolution of scientific research on blockchain technology in accounting and auditing based on a corpus of 359 scientific articles, mentions the existence of the „Matthew Effect” and a disproportionate dominance of collaboration networks by a small group of influential authors who shape the direction of research, suggesting that as the field grows, centers of influence may also emerge (Hassanein et al., 2025).

Thematic structures and knowledge networks

The thematic structure of the literature on the impact of blockchain technology on the accounting profession is illustrated in Figure 5, which presents a conceptual network of keywords constructed through co-word analysis (co-occurrence of keywords) using the Bibliometrix package in the R environment. The analysis was performed based on all available keywords (Authors Keyword, Keywords Plus), applying the Association strength normalization method and the Louvain clustering algorithm to identify thematic clusters. To construct the network, the 40 most frequently used terms were selected, and terms without connections were removed. At the same time, only

links appearing at least twice were retained, so that the graphical representation remains legible and easy to interpret. The size of the nodes reflects the relative importance of the terms, and the edges indicate the intensity of the thematic interdependencies. The stability of the thematic structure was verified by varying the inclusion threshold (30–50 terms), with no significant changes in the cluster configuration.

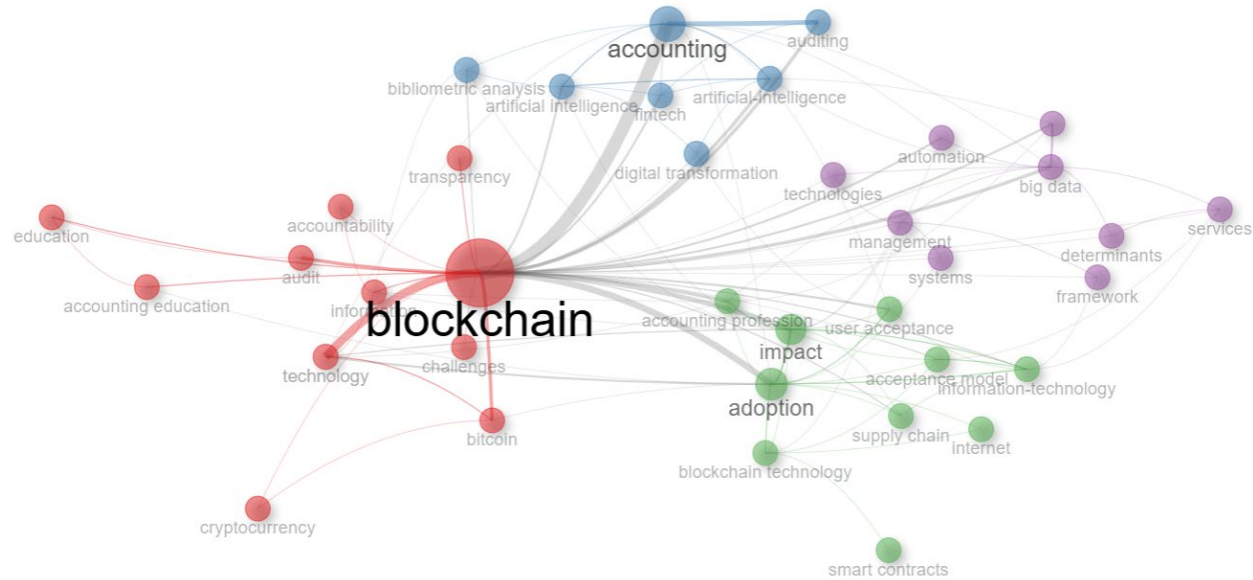


Figure 5. Co-occurrence network of keywords in the literature on blockchain in the accounting profession

Source: developed by authors based on data extracted from Web of Science, using the Bibliometrix package.

The network configuration shows a central „blockchain” core directly connected to terms related to the profession („accounting profession”, „audit”), instrumental mechanisms („automation”, „transparency”, „big data”), and contemporary topics („technologies”). This core is surrounded by three clearly defined directions: (1) blockchain integration into digital transformation processes in the accounting and auditing fields („artificial intelligence”, „fintech”, „digital transformation”); (2) organizational-behavioral, centered on the processes of adoption and acceptance of blockchain technology („adoption”, „impact”, „user acceptance”, „acceptance model”) with extensions to specific applications („smart contracts”, „supply chain”); and (3) institutional-regulatory, structured around the concepts of „accountability”, „transparency”, and „audit”, alongside topics regarding accounting education, the challenges of technology implementation, and the implications associated with the use of cryptocurrencies.

With regard to RQ2, the thematic analysis highlights the fact that the literature does not present a monolithic structure, but simultaneously constructs a discussion on the transformation of accounting functions (through automation and transparency), on the conditions for implementing (adoption and barriers) the technology, and on regulatory or organizational implications (governance, accountability).

The implication for the accounting profession is that the impact of blockchain technology cannot be analyzed solely from a technological perspective. Its relevance and effects depend on the degree of user acceptance, compatibility with the existing regulatory framework, and the profession’s ability to manage the associated risks and responsibilities. By comparison, a review of scientific progress regarding the exploitation of blockchain technology’s disruptive potential in

the field of accounting, accompanied by a bibliometric analysis published in 2025, identifies four thematic clusters at the intersection of blockchain and accounting (CryptoLedger Accounting Network, TransparentChain Trust Framework, IntelliLedger Accounting Tech, and DigiGov Ledger Insights) and emerging trends, including the growing relevance of smart contracts, the need for updated regulatory frameworks, etc. (Parra-Domínguez et al., 2025). These findings are consistent with the structure highlighted in the network analyzed in this paper, where the associated terms „artificial intelligence”, „fintech”, and „smart contracts” form distinct thematic directions.

To assess the maturity and relevance of the identified themes, Figure 6 presents a thematic map of the scientific literature, constructed based on a co-word analysis using the Bibliometrix package in the R environment. The representation is based on the relationship between centrality and density, where centrality reflects a theme’s relevance within the field’s overall structure, and density indicates its level of internal conceptual development. The analysis was performed using all available keywords (Authors Keyword, Keywords Plus), applying the Association Strength normalization method and the Louvain clustering algorithm. To filter out less relevant terms, a minimum frequency threshold of 10 per thousand documents was established, meaning at least two occurrences in the analyzed corpus. The stability of the thematic structure was verified by varying the inclusion threshold (5 and 10), with no significant changes in the positioning of the clusters.

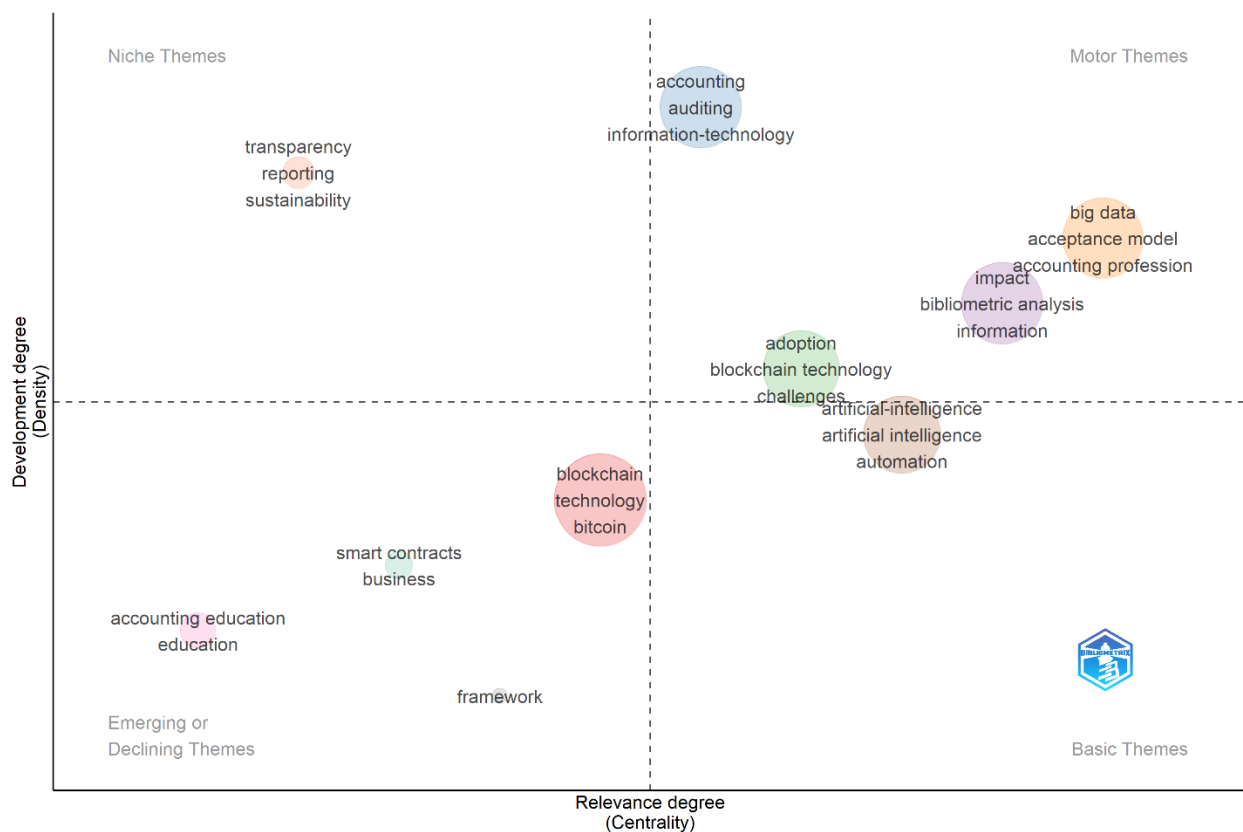


Figure 6. Thematic map of the literature on blockchain in the accounting profession

Source: developed by authors based on data extracted from Web of Science, using the Bibliometrix package.

The findings related to RQ3 suggest that the field continues to mature, although certain topics remain underdeveloped at the theoretical level. In particular, the relationship between

blockchain, artificial intelligence, and big data in the practice and professional training of accountants is frequently discussed but is not yet supported by a well-defined conceptual framework. On the other hand, emerging topics with high potential, such as smart contracts and cryptocurrencies, are taking shape; these are not yet fully integrated into the dominant accounting discourse and raise numerous questions regarding regulation, auditing, and associated governance mechanisms.

From a professional standpoint, these implications translate into increased demands for skills development, the revision of training programs, the adaptation of audit and assurance procedures, and the alignment of practices with applicable standards and regulations. By comparison, a systematic review of the literature published in 2024 highlights the need for further research on the implications of blockchain for skills and education, governance, the nature of jobs in accounting and auditing, auditor independence, and accounting standards (Georgiou et al., 2024).

Overall, the results point to the idea that the literature on the intersection between blockchain technology and the accounting profession is in a phase of gradual consolidation and specialization. An analysis of the evolution of publications over time (Figures 2 and 3) suggests that interest in this field is still growing and has not yet reached a stable level. At the same time, the conceptual structure illustrated by the network and thematic map (Figures 5, 6) highlights the emergence of several distinct thematic directions. These include the transformation of the accounting profession and process automation, integration with emerging technologies such as artificial intelligence and fintech, aspects related to organizational adoption and acceptance, as well as themes related to governance, accountability, and smart contracts. In this context, the future research agenda can be derived directly from the positioning of the themes in the thematic map. Essentially, there is a need to expand empirical studies across diverse institutional contexts, to integrate the educational dimension and professional competencies with converging technologies, to operationalize concepts of governance and accountability in blockchain-based systems, and to clarify the implications of smart contracts and cryptocurrencies for accounting and auditing. Thus, the results not only complete the answer to RQ3 regarding the field's maturity level but also provide a natural bridge to conclusions and practical implications for the profession.

Conclusions

This paper applied bibliometric methods to examine the relevant literature on the transformation of the accounting profession under the influence of blockchain technology. By analyzing scholarly output, citations, and the relationships between key concepts and themes, the research provides an overview of a field that is still in the process of theoretical consolidation.

The results for RQ1 indicate, as shown by the trends over time in Figures 2 and 3, a steady increase in scientific interest in this field. This trend suggests that the field is still in the process of consolidation, driven by technological developments and growing interest in issues such as standardization, auditing, and regulation. With regard to RQ2, the conceptual framework presented in Figure 5 highlights several major thematic areas. These focus on the transformation of accounting functions and process automation, the integration of blockchain with technologies such as artificial intelligence and fintech, as well as issues related to organizational adoption. At the same time, the analyzed literature reflects a growing interest in the institutional dimension of the technology, including governance, accountability, and the use of smart contracts. Overall, the literature does not focus on a single technological promise, but rather on a range of technical,

organizational, and regulatory aspects. With regard to RQ3, the analysis in Figure 6 suggests that the field continues to develop and specialize, although some research areas are in the process of consolidation. On the one hand, certain topics remain central but are still unevenly developed conceptually (the integration of artificial intelligence and big data technologies with blockchain in accounting education and practice). On the other hand, emerging research directions with high potential (smart contracts, cryptocurrencies, etc.) are emerging, which remain poorly integrated into the accounting discourse and require further methodological and normative development.

From a theoretical perspective, the main contribution of this paper lies in providing a coherent overview of a field that remains fragmented and highlighting the shift from discussions about the potential of technology to issues related to implementation, adoption, and governance. From a professional perspective, the results indicate the need to develop digital skills, adapt accounting education, and align accounting practices with new technologies. Thus, the impact of blockchain technology depends not only on technological development but also on organizational acceptance, regulatory compatibility, and the accounting profession's adaptation to new requirements.

The research findings have certain limitations that must be interpreted in light of the study's methodological constraints. First, the small number of scientific articles analyzed (54 publications) may influence the results, particularly regarding less-represented topics. Second, the analysis reflects only the publications identified based on the search criteria used, so it is possible that other relevant works were not included in the analysis. Third, the keyword-based analysis may be influenced by terminological variations in the specialized literature, thereby affecting the configuration of the thematic networks. Furthermore, the results of the bibliometric analysis reflect the literature at the time of data collection and do not include publications that appeared subsequently. Additionally, the research tracks the evolution and main directions of the specialized literature without evaluating the concrete application of blockchain technology within organizations.

The results presented in Figure 6 and the answer to RQ3 suggest several directions for future research. These include conducting empirical studies in different institutional contexts, analyzing the integration of blockchain technology with artificial intelligence and big data, and investigating the implications for accounting education and practice. At the same time, the literature can be expanded through research on governance and control in blockchain systems, as well as by clarifying the implications of smart contracts and crypto-assets in the field of accounting.

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