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## Research in forensic accounting and fraud detection: a systematic literature review

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### ***Abstract***

*This study employs a bibliometric analysis to map the intellectual structure and evolution of research in forensic accounting and fraud detection. Utilizing a search protocol in the Scopus database, a final corpus of 42 documents published between 1995 and 2025 was analyzed to identify publication trends, geographical distribution, and thematic clusters. Findings reveal a significant growth, particularly since 2017, driven by technological advancements and regulatory pressures. Geographically, research is clustered around a U.S.-influenced network and distinct regional hubs in the Middle East and Asia, reflecting a stratified evolution between developed and emerging economies. Thematic analysis uncovers three dominant clusters: the integration of technology and governance, foundational skills and macro-institutional influences, and pedagogical approaches. The review concludes by proposing future research agendas focused on the ethical governance of technology, empirical assessment of educational efficacy, cross-cultural studies, and the development of proactive, prescriptive forensic methodologies to address emerging financial crime vectors.*

**Keywords:** Forensic accounting; fraud detection; systematic literature review; bibliometric analysis.

**JEL Classification:** M41, K42, O33, I21

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### **1. Introduction**

The global financial ecosystem is perpetually vulnerable to the threat of fraud, a multifaceted problem that erodes organizational value, undermines stakeholder trust, and destabilizes markets. In response to increasingly sophisticated financial crimes, the field of forensic accounting has emerged as a critical discipline, moving beyond traditional auditing to proactively detect, investigate, and prevent fraudulent activities. Forensic accounting integrates accounting, auditing, investigative skills, and a deep understanding of legal frameworks to uncover irregularities and provide evidence suitable for judicial proceedings (Afriyie et al., 2023; Akinbowale et al., 2023). The escalating complexity of financial transactions, accelerated by digitalization and globalization, has further amplified the demand for robust forensic accounting capabilities, making it an indispensable tool for ensuring financial integrity and transparency.

The motivation for this study stems from the observed rapid evolution and growing academic interest in forensic accounting and fraud detection research. As noted by Ozili (2025) and Airout et al. (2024), while the body of literature is expanding, it remains fragmented and unevenly developed across different geographical regions. Numerous studies, such as those by Kaur et al. (2023) and Naz and Khan (2025), highlight a persistent gap between the theoretical potential of forensic accounting and its practical application, often citing challenges related to a lack of awareness, inadequate education, and the high cost of technological adoption. Furthermore, the convergence of forensic accounting with advanced technologies like artificial intelligence (AI), big data analytics, and blockchain presents a transformative shift, promising



enhanced detection capabilities but also introducing new complexities and ethical dilemmas (Akinbowale et al., 2023; Ali et al., 2024; Gabrielli et al., 2024). A systematic synthesis of this evolving landscape is therefore necessary to consolidate existing knowledge, identify core themes, and illuminate pathways for future research.

To provide a comprehensive overview of the scholarly discourse, this systematic literature review (SLR) aims to address the following research questions (RQ).

*RQ1. What are the trends in publication and citations in forensic accounting and fraud detection research?*

*RQ2. What is the geographical distribution of the extant literature?*

*RQ3. What is the thematic structure of the extant literature?*

This study contributes to the field in several significant ways. First, it provides a timely and systematic mapping of the literature, building upon earlier bibliometric analyses (e.g., Airout et al., 2024; Kumar et al., 2025) by employing a strict, focused search strategy to capture the core research at the intersection of forensic accounting and fraud detection. Second, by analyzing geographical trends, it addresses the call by Ozili (2025) to understand the global distribution of research efforts, highlighting contributions from both developed and emerging economies. Finally, by delineating the thematic structure, this review will synthesize key knowledge clusters, such as technological integration, human skills development, and governance frameworks, offering scholars and practitioners a clear framework of the field's intellectual boundaries and emerging frontiers. The findings are intended to guide academic inquiry, inform educational curriculum development, and aid policymakers and professionals in strengthening fraud prevention ecosystems worldwide.

The rest of the paper presents the data and methods (Section 2), trends in publication and citations (Section 3), geographical distribution (Section 4), thematic distribution (Section 5), future research agendas (Section 6), and concludes the study with key takeaways (Section 7).

## 2. Data and methods

This study employs a bibliometric-based SLR to map the intellectual landscape of research in forensic accounting and fraud detection. A bibliometric approach was preferred as it enables a quantitative, objective, and reproducible analysis of a large body of scholarly literature (Airout, 2024; Kumar et al., 2025). Unlike a traditional narrative review, bibliometrics can systematically identify publication trends, map collaborative networks, and delineate the thematic and conceptual structure of a field through the analysis of bibliographic data, thus minimizing researcher bias and providing a macro-level overview of the domain's evolution.

### 2.1. Data Source and Search Strategy

The Scopus database was selected as the primary data source for this review. Scopus is preferred over other databases due to its extensive coverage of high-quality, peer-reviewed journals across social sciences, its robust indexing and citation tracking capabilities, and its comprehensive inclusion of article metadata, which is essential for bibliometric analysis (Al-Raggad et al., 2025; Ozili, 2025).

The search strategy was designed to capture the core literature at the intersection of forensic accounting and fraud detection. The initial query, TITLE-ABS-KEY ("forensic accounting" AND "fraud detection"), returned 70 documents. To refine the results to the most relevant and academically robust literature, several filters were applied. The subject area is

limited to "Business, Management and Accounting" (BUSI), "Economics, Econometrics and Finance" (ECON), and "Social Sciences" (SOCI). The document type is limited to "Article" (ar) and "Review" (re). The source type is limited to "Journal" (j), and the language is limited to "English". The application of these filters resulted in a final corpus of 42 documents for in-depth analysis. The search was conducted in August 2025.

## 2.2. Data Analysis and Visualization

The bibliographic data of the 42 documents were exported from Scopus in CSV format. The analysis was conducted in two stages using specialized software. First, VOSviewer (van Eck & Waltman, 2010) was used for the initial bibliometric analysis, including the calculation of co-occurrence and bibliographic coupling matrices. Subsequently, Gephi (Bastian et al., 2009) was used for advanced network visualization and for calculating PageRank centrality to identify the most influential documents within the network based on their connection weights.

The RQs were addressed using specific techniques. RQ1 (Publication and Citation Trends) was addressed through a descriptive analysis of the extracted data. Trends were analyzed by plotting the annual number of publications and cumulative citations. RQ2 (Geographical Distribution) was analyzed using bibliographic coupling of countries. This method clusters countries based on the similarity of their cited reference lists, indicating shared intellectual bases. Of the 24 countries identified in the dataset, only 22 were connected in the network and were included in the analysis. RQ3 (Thematic Structure) was analyzed using bibliographic coupling of documents. This method groups publications that cite common references, revealing thematic clusters within the literature. Out of the 42 documents analyzed, a network of 26 connected items was formed and used to identify the main research themes. The PageRank algorithm in Gephi was applied to this network to identify the most seminal papers influencing the field's structure.

Table 1. Trends in publication and citations

| Year         | TP        | TC         | AC           |
|--------------|-----------|------------|--------------|
| 1995         | 1         | 0          | 0.00         |
| 1997         | 1         | 29         | 29.00        |
| 2001         | 1         | 19         | 19.00        |
| 2009         | 1         | 18         | 18.00        |
| 2010         | 2         | 22         | 11.00        |
| 2013         | 1         | 13         | 13.00        |
| 2015         | 1         | 7          | 7.00         |
| 2017         | 2         | 143        | 71.50        |
| 2018         | 2         | 69         | 34.50        |
| 2019         | 1         | 10         | 10.00        |
| 2020         | 2         | 38         | 19.00        |
| 2021         | 3         | 37         | 12.33        |
| 2022         | 2         | 13         | 6.50         |
| 2023         | 5         | 99         | 19.80        |
| 2024         | 10        | 20         | 2.00         |
| 2025         | 7         | 31         | 4.43         |
| <b>Total</b> | <b>42</b> | <b>568</b> | <b>13.52</b> |

Notes: This table presents the annual trend of publication and citations. TP = total publications, TC = total citations, and AC = average citations.

This multi-software, quantitative approach ensures a robust and comprehensive exploration of the publication trends, global collaboration patterns, and intellectual foundations of forensic accounting and fraud detection research.

### 3. Trends in publication and citation

The analysis of publication and citation trends reveals a field that has experienced significant growth, particularly in recent years, reflecting its rising academic and practical importance. As presented in Table 1 and Figure 1, the dataset spans from 1995 to 2025, encompassing 42 publications with a total of 568 citations and an average of 13.52 citations per document. The publication trajectory shows a clear pattern of maturation. The field was nascent for over a decade, with only sporadic publications between 1995 and 2015. A noticeable shift began in 2017, which, with 143 total citations (AC: 71.50), marks a pivotal year, likely driven by growing regulatory pressures and high-profile financial scandals that spurred academic interest. This upward trend culminated in a surge of publications in 2023 (TP:5) and 2024 (TP:10), accounting for over a third of the entire dataset. The seven publications already recorded for 2025 indicate that this growth trajectory is continuing strongly.

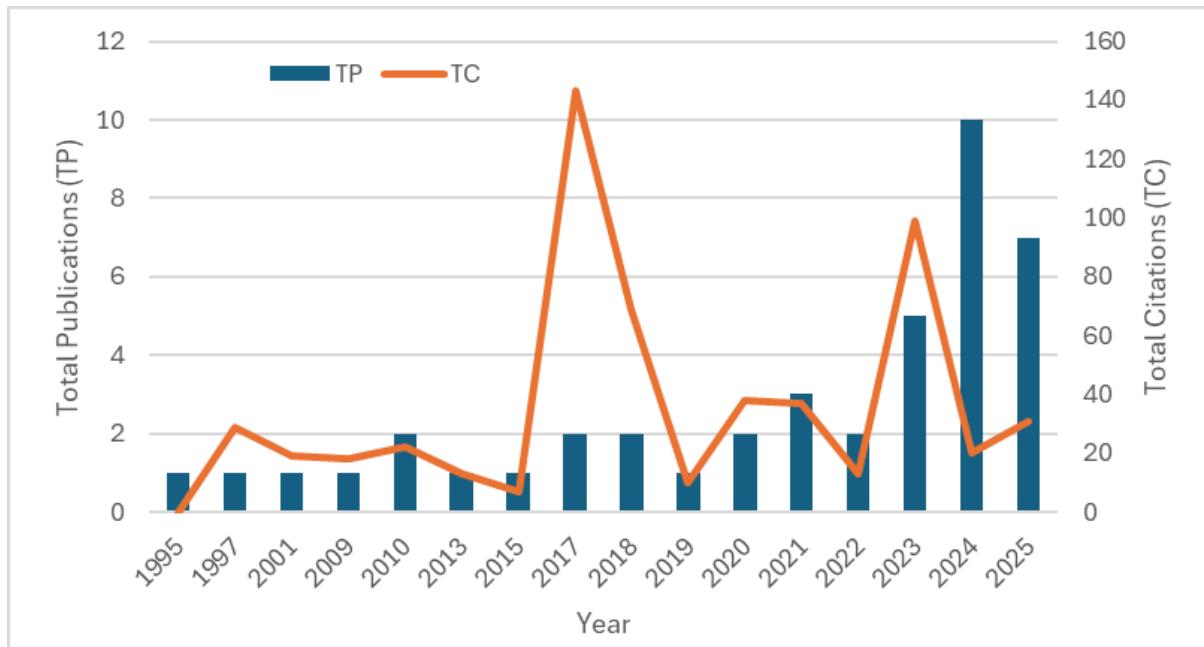


Figure 1. Trends in publication and citations

The citation analysis, however, presents a more nuanced picture. The high average citation counts for earlier publications, such as Rezaee and Burton (1997) (TC:29) and Carnes and Gierlasinski (2001) (TC:19), signify their foundational status as seminal works that have been built upon by subsequent research. The peak in total citations in 2017 is attributable to highly influential papers from that year that have had several years to accumulate citations.

A critical observation is the disparity between publication and citation rates for recent works. The 10 publications from 2024 have only garnered 20 citations collectively (AC: 2.00). This is not an indicator of low quality but rather a direct function of the citation time lag; newer articles have not yet had sufficient time to be read, applied, and cited by other researchers. This is a common bibliometric phenomenon. This can also be explained by two key bibliometric phenomena: the citation time lag and shifts in research relevance. The paper from 1995 (Rozekrans, 1995) has zero citations. This is likely because its content, potentially focused on foundational awareness surveys or specific case studies, has been superseded by more rigorous empirical and theoretical research. Its age may have rendered it obsolete for contemporary literature reviews, which instead cite more recent syntheses or the seminal studies that built upon its early ideas.

Conversely, the high citation counts for more recent papers, such as those from 2017 (AC: 71.50) and earlier works like Rezaee and Burton (1997) (TC:29), are driven by their enduring relevance and foundational nature. These highly cited works often share common traits: they provide novel theoretical frameworks that structure future research (e.g., Amani & Fadlalla, 2017), introduce methodological innovations (e.g., applying machine learning as in Akinbowale et al., 2023), or address timely, evolving themes like the integration of big data and AI (e.g., Gabrielli et al., 2024; Ali et al., 2024). Their focus on cutting-edge technology and its application to fraud detection makes them immediately relevant and frequently cited anchors for new studies. Therefore, while the 1995 paper represents an early exploration that the field has moved beyond, the highly cited recent papers are those that have successfully defined the current paradigms and technological frontiers of forensic accounting research.

Table 2. Geographical distribution of extant literature

| Label         | CL | TP | TC  | PGRK     |
|---------------|----|----|-----|----------|
| United States | 1  | 8  | 115 | 0.20801  |
| Saudi Arabia  | 1  | 4  | 14  | 0.076912 |
| India         | 1  | 3  | 69  | 0.021007 |
| Iraq          | 1  | 2  | 1   | 0.026637 |
| Nigeria       | 1  | 2  | 33  | 0.046958 |
| Ghana         | 1  | 1  | 23  | 0.019501 |
| Italy         | 1  | 1  | 2   | 0.024757 |
| Kuwait        | 1  | 1  | 1   | 0.030932 |
| Malta         | 1  | 1  | 51  | 0.044147 |
| South Africa  | 1  | 1  | 21  | 0.072587 |
| South Korea   | 1  | 1  | 18  | 0.019501 |
| Spain         | 1  | 1  | 0   | 0.103449 |
| Indonesia     | 2  | 5  | 30  | 0.031199 |
| Hungary       | 2  | 3  | 71  | 0.036071 |
| Colombia      | 2  | 1  | 11  | 0.019501 |
| Malaysia      | 2  | 1  | 7   | 0.029824 |
| Taiwan        | 2  | 1  | 0   | 0.028336 |
| Jordan        | 3  | 6  | 32  | 0.04174  |
| Pakistan      | 3  | 2  | 17  | 0.037432 |
| Egypt         | 3  | 1  | 11  | 0.019501 |
| Qatar         | 3  | 1  | 134 | 0.023046 |
| Thailand      | 3  | 1  | 2   | 0.038951 |

Notes: This table presents the bibliographic coupling of the country of affiliation of the contributing authors.

CL = cluster, TP = total publications, TC = total citations, and PGRK = PageRanks.

#### 4. Geographical distribution

The bibliographic coupling of countries, presented in Table 2 and Figure 2, reveals a distinct and meaningful clustering of research profiles, highlighting how the intellectual foundations of forensic accounting research differ between developed and emerging economies. The analysis identified three clusters among 22 connected countries. Cluster 1, led by the United States with the highest total link strength (54) and citation count (115), represents the most influential and well-established research hub. This cluster includes other developed nations like Italy and Spain, as well as emerging economies like India, Nigeria, and Saudi Arabia. Their grouping suggests that researchers in these emerging nations are building directly upon the seminal work and methodologies pioneered in the U.S.-led academic tradition, creating a central, dominant network.

In contrast, Cluster 3 is predominantly composed of emerging economies in Asia and the Middle East, such as Jordan, Pakistan, and Thailand. Jordan, with the highest number of documents (6) and total link strength (76) in its cluster, acts as a significant regional hub. This indicates the formation of a strong, distinct research community that, while connected to the

global discourse, cites a common body of literature that may be more focused on regional challenges, such as governance structures and public sector fraud specific to developing contexts.

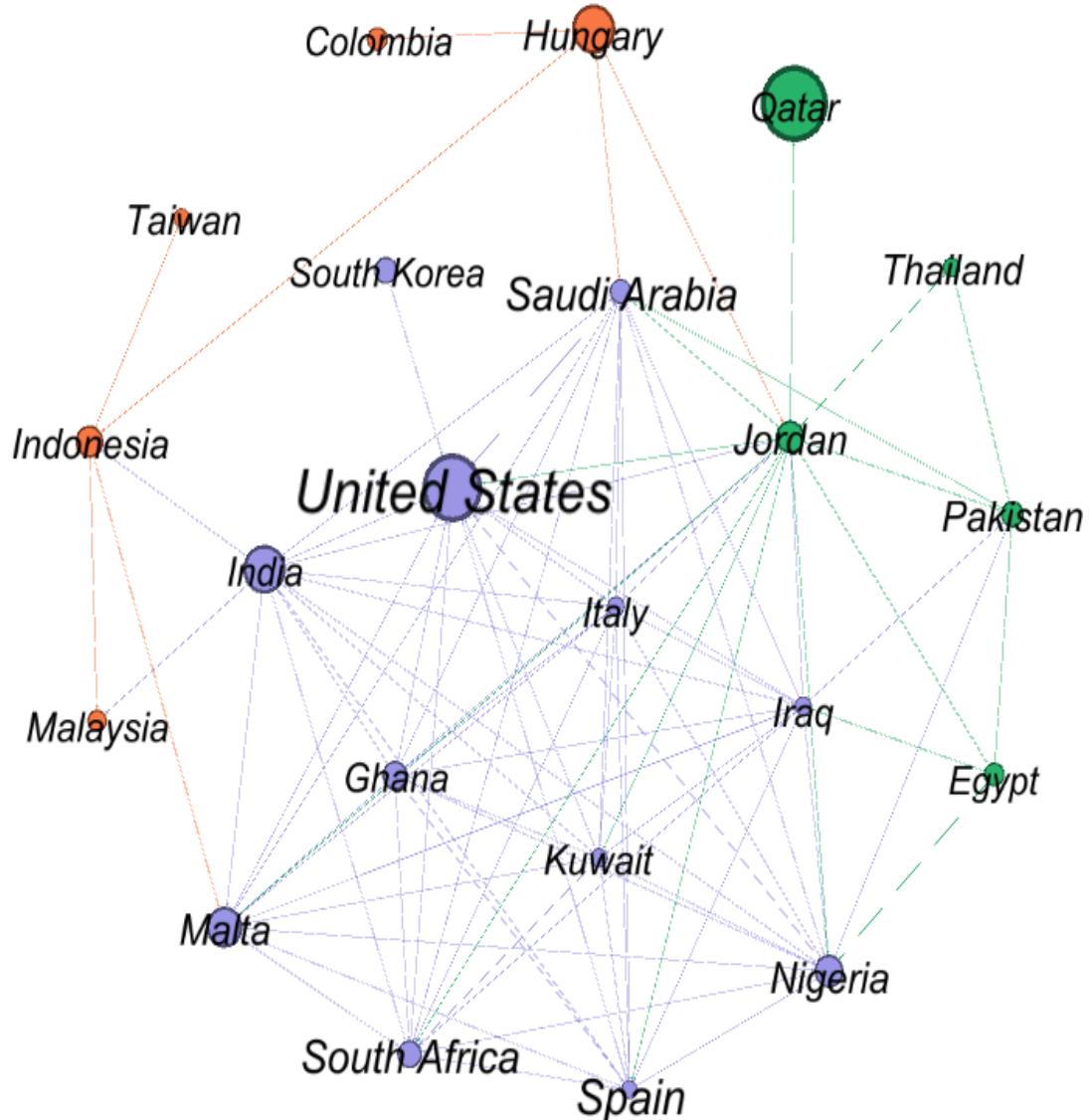


Figure 2. Geographical distribution. Notes: The node size indicates weight citation, and the label size indicates PageRank.

The evolution of research is clearly stratified. Developed nations like the U.S. have a long-standing research tradition, resulting in high citation counts and foundational influence. The high output from emerging economies reflects a reactive and urgent growth driven by acute local needs—combating corruption, strengthening weak institutions, and complying with global anti-fraud standards to attract investment. The disparity in research volume is directly linked to economic resources and institutional maturity. Countries with larger economies and more established academic and professional ecosystems (e.g., the U.S., India) naturally produce more research. Conversely, nations with limited funding for academia, fewer accounting programs, or a less developed auditing profession have lower output. The high citation count for a country like Qatar (134), despite only one document, stems from its provision of a seminal organizing framework for data mining in accounting, demonstrating that a single, conceptually foundational study from any country can achieve an outsized global impact and become a cornerstone for future research.

## 5. Thematic distribution

The thematic distribution of the extant literature on forensic accounting and fraud detection is determined by the bibliographic coupling of the documents. Out of 42, only 26 documents are intellectually connected. Table 3 and Figure 3 present the thematic distribution of the extant literature.

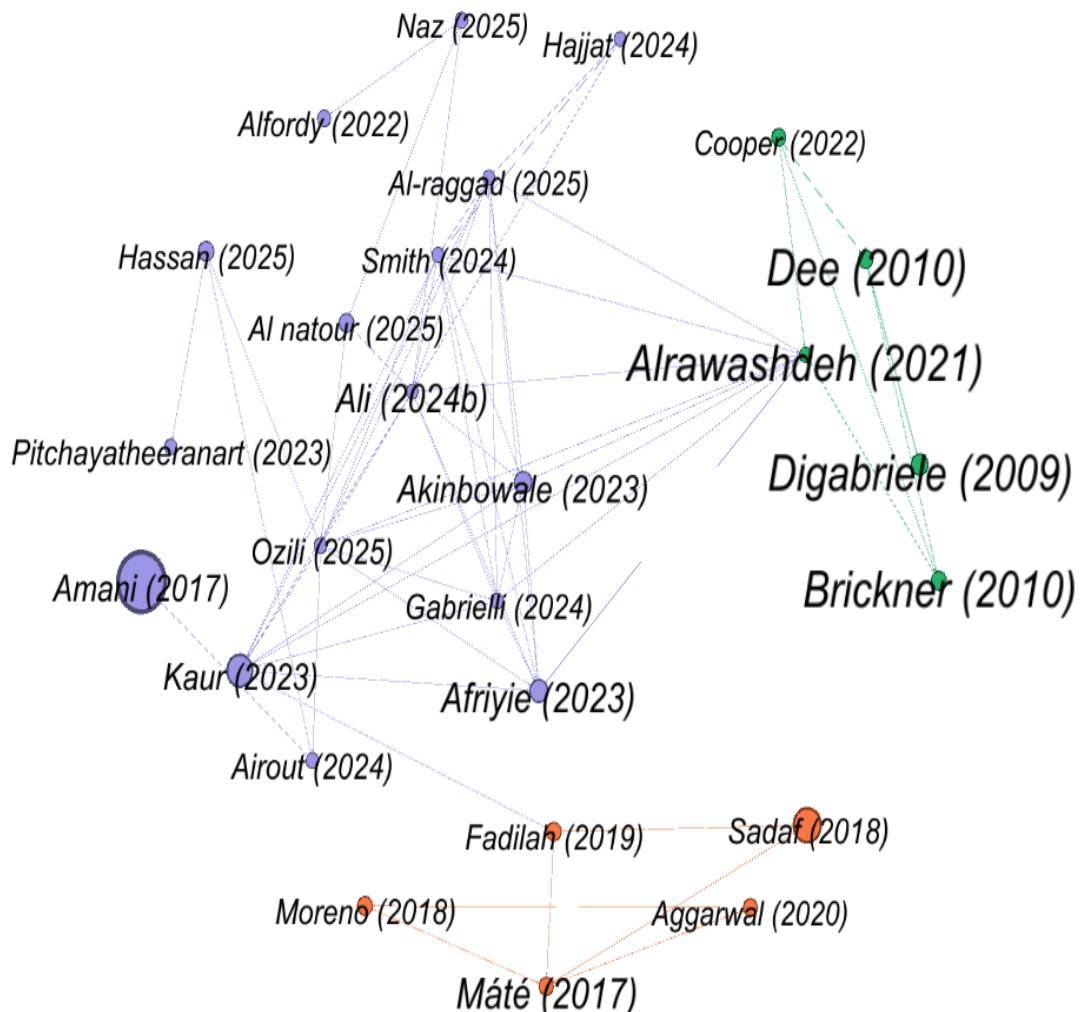


Figure 3. Thematic distribution. Notes: The node size indicates weight citation, and the label size indicates PageRank.

### 5.1. Cluster 1: The Evolving Integration of Forensic Accounting, Technology, and Governance

The bibliographic coupling of documents reveals that Cluster 1 represents the most contemporary and expansive research theme, focusing on the integration of forensic accounting with advanced technologies and robust corporate governance to combat modern financial fraud. This cluster is characterized by a strong emphasis on big data analytics, artificial intelligence (AI), and machine learning as transformative tools. Akinbowale et al. (2023) and Gabrielli et al. (2024) directly investigate how these technologies enhance fraud detection capabilities, with the former demonstrating a 95% accuracy rate in classifying internal bank fraud using neural networks. This technological pivot is further supported by Ali et al. (2024), whose regression analysis confirms the significant positive impact of AI ( $\beta=0.30$ ) and data analytics ( $\beta=0.35$ ) on fraud detection efficacy. Alongside technology, the cluster highlights the critical role of governance and skills. Hassan et al. (2025) and Al Natour et al. (2025) both emphasise that robust corporate governance frameworks and specialised forensic accounting skills, including effective communication and psychosocial skills, significantly enhance auditor

self-efficacy and fraud detection rates. The foundational need for awareness and education is a recurring sub-theme, identified by Kaur et al. (2023) and Naz and Khan (2025) as major barriers to adoption, leading to calls for forensic accounting to be incorporated into academic curricula. Furthermore, this cluster includes broader systematic reviews: Amani and Fadlalla (2017) provide a holistic organizing framework for data mining in accounting, while Airout et al. (2024) and Ozili (2025) conduct meta-analyses to map the field's literature, identify global research disparities, and suggest future directions, such as the role of digitalization and sustainable development. Papers like Al-Raggad et al. (2025) and Hajjat et al. (2024) extend the discussion to macro-level financial integrity and the specific challenges of public sector implementation, respectively. Overall, Cluster 1 paints a picture of a dynamic field rapidly evolving through technological adoption, strengthened by governance, and still grappling with implementation challenges related to skills, training, and global accessibility.

### *5.2. Cluster 2: Foundational Skills and Macro-Institutional Influences*

Cluster 2 centers on the core competencies required for effective forensic accounting and the broader institutional factors that influence fraud prevalence. The research here is less focused on cutting-edge technology and more on the fundamental skills of practitioners and the environmental context in which they operate. Fadilah et al. (2019) empirically identifies which specific forensic accounting skills—auditing, communication, psychological, and ICT-related skills—directly influence an external auditor's ability to detect fraud, while investigative and legal skills were found to be less directly impactful. Complementing this skills-based view, Sadaf et al. (2018) adopts a macro-institutional lens, using linear regression to argue that a country's level of corruption control and political stability can reduce the incidence of fraud cases. Interestingly, the study also suggests that more effective governance and freedom of expression may lead to a higher reporting of fraud, rather than an increase in fraud itself. Moreno et al. (2018) and Máté et al. (2017) contribute by reviewing specialized fraud detection techniques in finance, with the latter applying Benford's Law to test the conformity of financial data in Hungarian enterprises, finding it to be a useful but not infallible tool. This cluster establishes that effective forensic accounting is built on a foundation of specific practitioner skills and is significantly affected by the quality of a country's institutions.

### *5.3. Cluster 3: Pedagogical Approaches and Practical Skill Development*

Cluster 3 is distinctively oriented toward education and practical training, exploring how forensic accounting skills are effectively taught and applied in realistic scenarios. The papers serve as resources for developing the next generation of accountants and auditors. DiGabriele (2009) lays the groundwork for this theme, presenting survey results that show a strong consensus among academics and practitioners on the need for auditors to acquire foundational forensic skills to improve fraud detection. This call to action is answered by pedagogical innovations like the "Adrian Project" described by Brickner et al. (2010), an applied-learning exercise where students work with IRS special agents to solve hypothetical tax fraud cases, resulting in significant self-reported improvements in critical skills like evidence evaluation and interviewing. Similarly, Cooper and Kawada (2022) and Dee and Durtschi (2010) provide detailed teaching cases that immerse students in complex fraud investigations—a baseball team's finances and a supplier-customer litigation matter, respectively—requiring them to apply critical thinking, analysis, and professional communication to solve the case. Alrawashdeh et al. (2021) adds a crucial practical dimension by investigating the real-world limitations to adopting technology in forensic accounting, identifying cost and lack of training as key barriers. This cluster emphasizes that beyond theory, hands-on, experiential learning is vital for developing the practical forensic accounting competencies demanded by the profession.



Table 3. Cluster-wise documents

| Label                                                | Title                                                                                                                                    | CL | TC  | PGRK     |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-----|----------|
| (Amani & Fadlalla, 2017)                             | Data mining applications in accounting: A review of the literature and organizing framework                                              | 1  | 134 | 0.032925 |
| (Kaur et al., 2023)                                  | A systematic review on forensic accounting and its contribution towards fraud detection and prevention                                   | 1  | 51  | 0.032785 |
| (Afriyie et al., 2023)                               | Forensic Accounting: A Novel Paradigm and Relevant Knowledge in Fraud Detection and Prevention                                           | 1  | 23  | 0.056633 |
| (Akinbowale et al., 2023)                            | The integration of forensic accounting and big data technology frameworks for internal fraud mitigation in the banking industry          | 1  | 21  | 0.039749 |
| (Hassan et al., 2025)                                | The perception of accountants/auditors on the role of corporate governance and information technology in fraud detection and prevention  | 1  | 14  | 0.015852 |
| (Al Natour et al., 2025)                             | The role of forensic accounting skills in fraud detection and the moderating effect of CAATTs application: evidence from Egypt           | 1  | 11  | 0.017616 |
| (Alfordy, 2022)                                      | Effective detection and prevention of fraud: perceptions among public and private sectors accountants and auditors in Saudi Arabia       | 1  | 5   | 0.017616 |
| (Naz & Khan, 2025)                                   | Impact of forensic accounting on fraud detection and prevention: a case of firms in Pakistan                                             | 1  | 3   | 0.013726 |
| Ozili (2025)                                         | Forensic accounting research around the world                                                                                            | 1  | 3   | 0.02251  |
| (Airout et al., 2024)                                | Bibliometric insights into the intellectual dynamics of forensic accounting research                                                     | 1  | 3   | 0.022589 |
| (Gabrielli et al., 2024)                             | The power of big data affordances to reshape anti-fraud strategies                                                                       | 1  | 2   | 0.019231 |
| (Pitchayatheeranart & Phornlaphatratrachakorn, 2023) | Forensic Accounting and Corporate Productivity in Thailand: Roles of Fraud Detection, Risk Reduction and Digital Capability              | 1  | 2   | 0.020463 |
| (Smith & Smith, 2024)                                | Examining Documentation Tools for Audit and Forensic Accounting Investigations                                                           | 1  | 1   | 0.017148 |
| (Al-Raggad et al., 2025)                             | Unveiling financial crimes: advancing forensic accounting practices and ethical integrity through bibliometric insights                  | 1  | 0   | 0.013726 |
| (Hajjat et al., 2024)                                | The Role of Forensic Accounting in Enhancing Financial Transparency and Minimizing Fraud in Jordanian Institutions                       | 1  | 0   | 0.017105 |
| (Ali et al., 2024)                                   | Forensic Accounting and Fraud Detection Emerging Trends and Techniques                                                                   | 1  | 0   | 0.048418 |
| (Sadaf et al., 2018)                                 | An investigation of the influence of the worldwide governance and competitiveness on accounting fraud cases: A cross-country perspective | 2  | 58  | 0.022517 |
| (Moreno et al., 2018)                                | Fraud detection-oriented operators in a data warehouse based on forensic accounting techniques                                           | 2  | 11  | 0.019561 |
| (Fadilah et al., 2019)                               | Forensic accounting: Fraud detection skills for external auditors                                                                        | 2  | 10  | 0.02069  |
| (Máté et al., 2017)                                  | Fraud detection by testing the conformity to Benford's law in the case of wholesale enterprises                                          | 2  | 9   | 0.064119 |
| (Aggarwal & Dharni, 2020)                            | Deshelling the Shell Companies Using Benford's Law: An Emerging Market Study                                                             | 2  | 8   | 0.013726 |
| (DiGabriele, 2009)                                   | Implications of regulatory prescriptions and audit standards on the evolution of forensic accounting in the audit process                | 3  | 18  | 0.108098 |
| (Brickner et al., 2010)                              | Providing an applied-learning exercise in teaching fraud detection: A case of academic partnering with IRS criminal investigation        | 3  | 12  | 0.109877 |
| (Dee & Durtschi, 2010)                               | Return of the tallahassee bean counters: A case in forensic accounting                                                                   | 3  | 10  | 0.110967 |
| (Cooper & Kawada, 2022)                              | Balboa security v. M&M systems: Forensic accounting for determining commercial damages                                                   | 3  | 8   | 0.013726 |
| (Alrawashdeh et al., 2021)                           | The role of technology for activating the use of forensic accounting in financial fraud detection                                        | 3  | 1   | 0.108628 |

Notes: This table presents the bibliographic coupling of the documents. CL = cluster, TC = total citations, and PGRK = PageRanks.



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## 6. Future Research Agenda

The dynamic landscape of financial crime, accelerated by digitalization and global interconnectedness, demands a proactive and evolving research agenda for forensic accounting. The bibliographic coupling analysis reveals several mature areas of inquiry but, more importantly, highlights significant gaps and emerging frontiers. To build a more resilient financial ecosystem, future research must transcend traditional methods and embrace interdisciplinary, technologically advanced, and globally conscious approaches. The following four key research areas represent critical avenues for future investigation.

First, a paramount area for future research lies in the Development and Ethical Governance of Advanced Technological Integration. While studies by Akinbowale et al. (2023), Ali et al. (2024) Gabrielli et al. (2024) have established the positive impact of AI, machine learning, and big data analytics, the focus must now shift from proving efficacy to addressing the profound practical and ethical challenges of implementation. Research is urgently needed to create scalable, cost-effective technology frameworks suitable for small and medium-sized enterprises (SMEs) beyond the large banks and corporations that are the current focus. Furthermore, a critical blind spot exists regarding the ethical implications of algorithmic decision-making. Studies must investigate the potential for bias within AI models used for fraud prediction, questions of accountability for false positives/negatives, and the transparency of so-called "black box" algorithms. This research should aim to develop governance frameworks and auditing standards for forensic technology tools, ensuring they are not only effective but also fair, explainable, and compliant with evolving data privacy regulations like GDPR and CCPA.

Second, research must pursue a Holistic Assessment of Human Capital and Educational Efficacy. The consistent identification of a "skills gap" and lack of awareness by researchers like Kaur et al. (2023) and Naz and Khan (2025) indicates that proposed educational solutions remain inadequate. Future work must move beyond simply advocating for curriculum inclusion and instead empirically evaluate the effectiveness of different pedagogical methods. Comparative longitudinal studies are needed to assess whether new educational interventions—such as the immersive simulations championed in Cluster 3 (Brickner et al., 2010; Cooper & Kawada, 2022)—actually lead to better fraud detection outcomes in professional practice compared to traditional lecture-based learning. Additionally, research should define the precise blend of technical accounting skills, psychological acumen, IT proficiency, and ethical fortitude that constitutes an optimal skillset for a modern forensic accountant. This requires a multidisciplinary approach, integrating insights from psychology, criminology, and data science to build a comprehensive competency framework that can be standardized across global professional bodies.

Third, to address the glaring geographical disparities highlighted by Ozili (2025), there is a vital need for Context-Specific and Cross-Cultural Comparative Studies. The field is currently dominated by research from North America and developed economies, leaving a significant knowledge gap regarding the application of forensic accounting in emerging economies and diverse cultural contexts. Future research should investigate how forensic accounting techniques must be adapted to different legal systems, regulatory environments, and socio-cultural norms that influence fraudulent behavior. For instance, the findings of Sadaf et al. (2018) on institutional determinants suggest that anti-fraud strategies effective in Anglo-Saxon countries may not be directly transferable. Researchers should conduct cross-country comparisons to explore how factors such as power distance, individualism versus collectivism, and attitudes towards whistleblowing influence the effectiveness of various forensic accounting interventions. This area also includes exploring the role of religiosity and sustainable

development values, as suggested by Ozili (2025), as potential cultural variables that could influence fraud mitigation.

Finally, the agenda must embrace Proactive and Predictive Forensic Methodologies. The current paradigm, as framed by Amani and Fadlalla (2017), is heavily weighted towards retrospective-descriptive and predictive applications. The significant gap identified is in *prescriptive* applications—research that not only predicts fraud but also provides actionable strategies to prevent it. Future studies should focus on developing integrated early-warning systems that combine continuous monitoring of digital transactions with structured data from corporate governance (e.g., board composition, internal control quality) and unstructured data (e.g., employee sentiment analysis, news feeds) to create real-time risk scores. This prescriptive research should also explore the forensic accounting implications of emerging financial technologies and crime vectors, such as the metaverse, cryptocurrency fraud, and deepfakes in social engineering attacks. By shifting from a reactive, detection-based model to a proactive, prevention-focused one, forensic accounting research can ultimately reduce the economic and social costs of fraud, fulfilling its role in safeguarding financial integrity on a global scale.

## 7. Conclusion and key takeaways

This systematic literature review provides a comprehensive synthesis of the forensic accounting and fraud detection research landscape, revealing a dynamic and rapidly evolving field. The analysis yields several critical takeaways that contribute to both academic knowledge and professional practice. Firstly, the field has demonstrably matured from a niche concern to a mainstream academic discipline, with a notable acceleration in research output post-2017. This growth is intrinsically linked to the increasing sophistication of financial crime and the corresponding regulatory response, underscoring the field's practical relevance. The citation analysis further illuminates the intellectual foundation of the discipline, highlighting that impact is derived from pioneering early works on education and, more recently, from research that introduces novel technological frameworks and methodological innovations.

A second key takeaway is the pronounced geographical stratification of research. The existence of a central, influential cluster led by the United States, alongside strong regional hubs in Jordan and Indonesia, indicates that the field's intellectual foundations are not uniform. Research in developed nations often sets the global agenda with foundational theories and technological explorations, while studies from emerging economies are frequently motivated by acute, local needs such as combating public sector corruption and strengthening institutional governance. This disparity highlights a dependency on economic resources and institutional maturity, suggesting that international collaboration and funding are crucial for fostering a more equitable global research ecosystem.

Thirdly, the thematic structure, derived from bibliographic coupling, delineates the field's core intellectual conversations. The most prominent cluster revolves around the integration of advanced technologies like AI and big data with governance frameworks, representing the current frontier of research. A second cluster reaffirms that human skills and macro-institutional quality remain fundamental pillars, emphasizing that technology is an enabler rather than a replacement for skilled practitioners operating within a sound institutional context. The third cluster on pedagogical approaches serves as a critical bridge, focusing on how the necessary competencies are effectively taught and applied in real-world scenarios, ensuring the pipeline of future talent.

Based on these findings, the review proposes a clear and urgent agenda for future research. Scholars must move beyond proving technological efficacy to address the ethical

governance, explainability, and scalability of these tools, particularly for SMEs. There is a pressing need for empirical, longitudinal studies to assess which educational interventions truly translate into improved professional outcomes. Furthermore, the field must expand beyond its current geographical and cultural focus through cross-country comparative studies that explore how cultural, legal, and regulatory differences impact the effectiveness of forensic accounting techniques. Finally, the paradigm must shift from reactive detection to proactive and prescriptive prevention, developing integrated early-warning systems capable of mitigating emerging threats like cryptocurrency fraud and AI-powered deception. By addressing these priorities, the academic community can directly contribute to building a more resilient and trustworthy global financial ecosystem.

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