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Forensic Accounting Growth: Bibliometric Analysis Perspective

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Abstract: This study employs a bibliometric analysis to identify influential publications and authors within the field of accounting, with a specific focus on forensic accounting research. The investigation utilized the SCOPUS database, conducting a search that yielded 193 documents published during the period 2000-2023. The retrieved documents were subjected to a comprehensive bibliometric analysis using VOSviewer software, examining keyword co-occurrence, coauthorship networks, and bibliometric coupling networks to gain a deeper understanding of the research landscape within forensic accounting. The analysis revealed a concentration of publications in the United States, Jordan, and Malaysia, with Nigeria emerging as the most prolific African country in terms of publication output. Prominent keywords included "forensic accounting," "fraud examination," "financial fraud," "fraud triangle," "criminal lawsuits," and "financial fraud," highlighting the primary areas of inquiry within forensic accounting research. The study also pinpointed high-ranking journals wielding significant influence within the field. The findings highlight forensic accounting's potential in deterring and uncovering fraudulent activities, money laundering schemes, and white-collar crimes. However, the authors acknowledge limitations within the study's design, such as the reliance on a single database (SCOPUS) and a focus primarily on highly cited publications. They advocate for the inclusion of multiple databases and a more comprehensive range of publications in future research. The scarcity of bibliometric studies in forensic accounting underscores the critical need for further research to cultivate a more comprehensive knowledge base. By fostering a deeper understanding of the current research landscape, this study paves the way for advancements in forensic accounting knowledge and its practical applications.

Keyword: Forensic Accounting Growth: Bibliometric Analysis Perspective.

I. INTRODUCTION

A crucial issue emerges regarding the entities responsible for equipping individuals with the requisite experience to bolster forensic accounting's role in fraud detection. As the National Institute of Justice (2007) aptly highlighted, forensic accounting expertise hinges on a foundation of accumulated experience. Dreyer (2014) further emphasizes the criticality of this experience accumulation in propelling forensic accounting to more advanced stages. Dreyer's work underscores the notion that continuous reporting and analysis of fraud incidents serves as the cornerstone for the continued evolution of forensic accounting practices. Furthermore, various scholars within the field, including Dreyer (2014), Krstić (2009), and Oseni (2017), unanimously emphasize the importance of collaborative partnerships between diverse stakeholders to advance the practice of forensic accounting.

The development of essential experience, particularly crucial in developing economies where educational systems hold significant weight, becomes a primary concern. Scholars such as Al-sharairi (2018), Khersiat (2018), and Tawfeeq &Alabdullah (2013) have emphasized the critical role educational systems play in these regions by fostering expertise in forensic accounting. Therefore, it is imperative to address the methods through which educational institutions, professional bodies, regulatory authorities, and industry organizations can collaborate to deliver the requisite training and experience needed to empower forensic accountants in effectively detecting and combating fraud. Such collaborative efforts can ensure that individuals entering the field possess the necessary skillset and knowledge base to navigate the complexities of financial investigations and contribute meaningfully to fraud prevention and detection endeavors.

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The term "fraud" carries significant practical weight within the realm of business operations, acting as a catalyst for the implementation of sound writing and record-keeping practices, as evidenced by the work of Basu & Waymire (2006) and Ezzamel (2012). This emphasis on fraud underscores the critical need for meticulous documentation and accurate reporting to effectively prevent, detect, and address fraudulent activities. By bringing fraud to the forefront, the importance of maintaining integrity in financial reporting is not only highlighted, but also the necessity for robust internal controls and comprehensive audit procedures to safeguard against such deceptive practices.

Fraud literature often commences by referencing historical accounting scandals and corporate wrongdoings. These well-known instances of malfeasance serve to capture public attention, demonstrably drawing interest from the broader populace (Cooper et al., 2013). The focus on fraud extends beyond its immediate impact, encompassing not only public confidence in stock markets but also the perceived trustworthiness of auditors, corporate executives, and governmental institutions as a whole. This emphasis underscores the multifaceted consequences of fraudulent activities on various stakeholders. By addressing fraud, such literature highlights the importance of maintaining trust and integrity within financial systems and institutions.

Research on fraudulent activities within the accounting and auditing field primarily concentrates on two distinct, yet interconnected, areas: individual criminal behavior and the impact of corporate fraud on capital market dynamics (Cooper et al., 2013).

A substantial body of fraud studies delves into the realm of individual wrongdoing, meticulously exploring the contributing factors, typologies of fraud, and detection methodologies (Albrecht et al., 2011; Brody et al., 2012). Researchers often delve into the psychological motivations of perpetrators, alongside the development and implementation of fraud detection and prevention strategies through robust audit procedures, which constitute essential components of this research field (Brazel et al., 2009).

Furthermore, accounting fraud studies also train their lens on analyzing the capital market's response to corporate fraud, utilizing both economic and agency theory perspectives (Cooper et al., 2013). This dual focus on individual criminal behavior and the broader market implications of corporate fraud underscores the comprehensive approach adopted within accounting and auditing fraud research. By meticulously examining these two key areas, researchers strive to enhance understanding, detection, and ultimately, prevention of fraudulent activities. These efforts contribute significantly to the overall integrity and transparency of financial systems.

As Cooper et al. (2013) aptly highlighted, accounting and auditing fraud research has traditionally concentrated on two primary areas: individual criminal behavior and the impact of corporate fraud on capital market dynamics. While these areas have been extensively explored, the present study seeks to offer a novel perspective and introduce fresh research questions that can illuminate the field of fraudulent activity from a different vantage point. By positing alternative angles and introducing new inquiries, this research endeavors to contribute to the advancement of knowledge within the realm of fraud research. This approach has the potential to unveil insights that may not have been previously considered within the existing body of literature, thus enriching the overall understanding of fraudulent activities.

Snider's (2000) assertion regarding the multifaceted impact of fraud activities is well-supported. Fraud extends beyond its immediate financial consequences, demonstrably influencing various aspects of economics, politics, social life, and adherence to regulations and legal frameworks. This highlights the far-reaching societal and regulatory implications of fraudulent practices. Furthermore, the inclusion of several bibliometric studies conducted within diverse disciplines,

including medicine (Bayram et al., 2016; Kolkailah et al., 2019; Liu et al., 2019), environmental science (Zhang et al., 2019), education (Hallinger & Kovačević, 2019), business (Fellnhofer, 2019), and management (Zupic&Čater, 2015), underscores the widespread applicability of bibliometric analysis across various fields of study. This methodology serves as a valuable tool for researchers to gain insights into research trends, productivity, and overall impact within their respective disciplines.

The study mentioned in the sources conducted a bibliometric analysis of Forensic Accounting Growth to explore financial fraud between 2000 and 2023. This analysis aimed to identify thematic clusters in the utilization of Forensic Accounting Growth. By examining the trends and patterns in forensic accounting research over this period, the study likely provided valuable insights into the evolution of forensic accounting practices, the detection of financial fraud, and the thematic areas that have garnered significant attention within the field. The present bibliometric analysis aims to address specific objectives related to Forensic Accounting Growth research. These objectives include:

Studying Publications and Citations Patterns: Analyzing the patterns of publications and citations of the 193 most-cited articles on Forensic Accounting Growth to understand the scholarly impact and dissemination of research in this field.

Identifying Publication Trends and Growth: Examining the trends and growth of research on Forensic Accounting Growth from 2000 to 2023 to track the evolution and development of this area over time.

Determining Influential Publications and Authors: Identifying the most influential publications and authors in Forensic Accounting Growth based on citation counts and other bibliometric indicators to recognize key contributors to the field.

Exploring Top Journals: Discovering the top journals that have published the 193 most-cited articles on Forensic Accounting Growth, examining their characteristics, and understanding their role in disseminating research in this domain.

Analyzing Keyword Occurrence and Co-occurrence Patterns: Investigating keyword occurrence and co-occurrence patterns to identify main research themes and areas of focus within Forensic Accounting Growth, providing insights into the key topics shaping scholarly discussions in this field.

2.1 Data Retrieval Approach and cleaning

This research leverages the technique of science mapping to provide a holistic overview of the current body of knowledge within the field of forensic accounting. Science mapping entails the analysis of scholarly literature and articles through the examination of their inherent bibliometric data (Morris & Van der Veer Martens, 2008). Bibliometric tools serve a critical role in research endeavors by facilitating the analysis of scientific activity across various entities such as researchers, institutions, regions, and countries. This analytical process enables the identification of prevailing research trends within a specific field (Morris & Van der Veer Martens, 2008). The credibility of any given study hinges upon the meticulous selection of an appropriate bibliometric database. This ensures that the chosen database adequately represents the subject area under investigation, as emphasized by Granda-Orive et al. (2013).

Science mapping facilitates the exploration of diverse connectional dimensions within a dataset by employing various units of analysis. Cobo et al. (2011) highlight that these units can encompass keywords, authors, publications, journals, institutions, and even countries. The typical science mapping process involves distinct stages: data gathering, preprocessing, network extraction, normalization, mapping, research, and ultimately, the visualization of findings. However, some of these steps can be streamlined for efficiency. Tools like VOSviewer exemplify this efficiency by swiftly executing multiple tasks once the parameters are set. Researchers such as Narong & Hollinger (2023) advocate for streamlining these steps into

three core stages: data identification, acquisition, and analysis. This streamlined approach fosters the effective and efficient structuring of the research process, ensuring a rigorous and comprehensive analysis of the bibliometric data.

2.2 Bibliometric Analysis

As Cobo et al. (2011) point out, researchers have the option to gather data for bibliometric analysis from a variety of online databases recognized as bibliographic sources. These sources include Google Scholar, SCOPUS, and the Institute for Scientific Information (ISI) Web of Science (WoS). For the present study, data retrieval was conducted from February 26 to 28, 2024, utilizing the SCOPUS database. While platforms like Google Scholar offer comprehensive coverage, they often employ less stringent indexing standards compared to SCOPUS and ISI Web of Science. This characteristic renders them less suitable as primary databases for the acquisition of bibliometric data, as the focus lies on accuracy and rigor in the analysis. Articles containing the phrase "Forensic * Accounting *" in both their title and abstract were extracted for analysis. The publication dates of these articles ranged from 2000 to recent years (up to 2023). The search query used was: (TITLE-ABS("Forensic * Accounting *")) AND DOCTYPE(ar) AND PUBYEAR > 2000 AND PUBYEAR < 2023 AND (LIMIT-TO(SRCTYPE, "j")). This query yielded 232 documents available in Scopus for further analysis.

A review of several sources on financial fraud detection literature review and bibliometric analysis offers valuable insights into the current state of research within these critical areas:

One study stands out for its extensive review of financial fraud detection literature spanning two decades. This research employed hierarchical clustering, a statistical technique, to identify 42 distinct topics within the field. This comprehensive approach provided a valuable overview of the research landscape, allowing researchers to understand the breadth and depth of inquiry in financial fraud detection. However, the study acknowledged limitations such as language bias and citation bias. These limitations suggest the need to broaden the scope of future research by including publications in languages beyond English and utilizing alternative measures to assess the quality and impact of cited works.

Another study focused on analyzing global trends, impact, and key actors in fraud detection research. By leveraging the SCOPUS database, a large bibliographic database, this research revealed an upward trend in fraud detection publications since 2005. This suggests a growing global focus on combating financial fraud. Interestingly, the study identified India as the most active country in this domain, highlighting the rise of research efforts in emerging economies. Additionally, the research pinpointed prevalent research themes, influential articles, and prominent institutions and authors within the field of fraud detection.

Separate studies employed bibliometric analysis, a statistical method for analyzing scholarly publications, to investigate different aspects of accounting research. One study focused on the growth of forensic accounting research, highlighting the most common areas of focus. These included data mining techniques, which involve extracting information from large datasets, and search approaches used in forensic accounting investigations. This analysis sheds light on the evolving methodologies employed in this field.

The other study analyzed publications in the field of accounting and auditing using traditional bibliometric methods. This analysis revealed a primary focus on economic performance, corporate governance, and accounting explanations. These findings provide a snapshot of the established research priorities within these areas.

3. Result and discussion

3.1 Publication and Year

An analysis of the provided sources, particularly graphs depicting the total number of publications for each year on Forensic Accounting Growth from 2000 to 2023, reveals a compelling trend. The data demonstrates a consistent and significant increase in the number of publications over this timeframe. This suggests a burgeoning field of research, with scholars actively contributing to the advancement of knowledge in forensic accounting. The subject matter explored in these publications encompasses various facets of forensic accounting, reflecting its multifaceted nature. The research delves into the development of forensic accounting practices, analyzes current trends within the field, and underscores the importance of a unified global approach. This breadth of investigation highlights the expanding role of forensic accounting in the financial and legal arenas.

Further examination of the publication trend reveals a steady rise in the number of publications, culminating in a notable peak of 24 publications in 2023. This is followed by a period of increased research output, with 2022, 2021, and 2015 recording 22, 20, and 20 publications respectively. This sustained growth in publications suggests a robust community of authors actively engaged in generating new research. The recent surge in output particularly emphasizes the heightened interest and growing significance of forensic accounting.

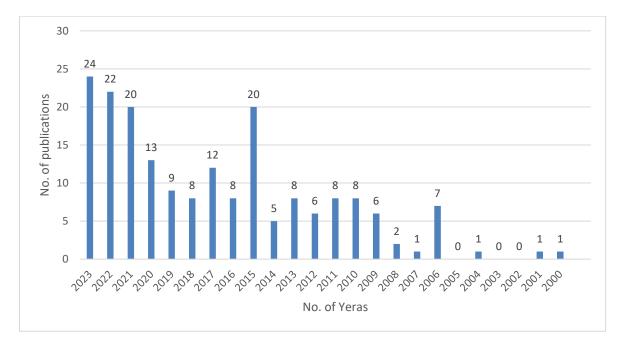


Figure 1: Publication and Year

3.2 Number of Citation and year

The total citation count generally displays an upward trend, reaching its peak in 2006 with 371 citations. This trend suggests that the authors' research has been influential and well-received within the academic community. However, in 2023, the citation counts notably decrease compared to previous years. Despite this, the graph indicates that the authors have been consistently active in publishing and producing research, with a growing impact over the years.

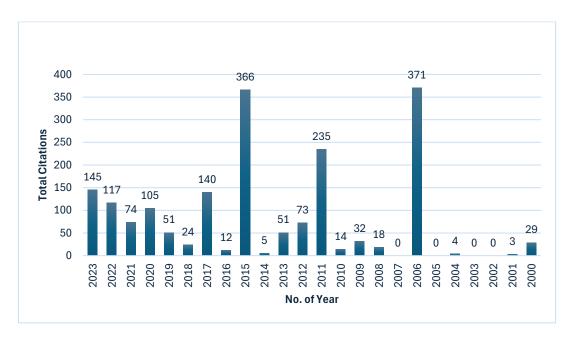


Figure 2: Number of Citation and year

3.3 Number of documents and countries

The provided graph, depicting the number of publications by country within the field of Forensic Accounting Growth, offers valuable insights into the geographic distribution of research activity. The ranking highlights the top 10 nations based on the quantity of publications. The United States emerges as a clear leader, contributing a substantial 74 highly cited pieces of literature. This signifies a robust research environment within the US, actively generating knowledge and influencing the field. Following closely behind is Jordan, with a noteworthy contribution of 21 publications. Malaysia and Australia demonstrate comparable research capabilities, each boasting 14 publications. Their inclusion in the top tier underscores their strong presence in academic research related to Forensic Accounting Growth. The remaining countries within the top 10 – Canada, India, Indonesia, the United Kingdom, Nigeria, and Saudi Arabia – showcase a diverse range of research interests and capabilities on a global scale. Their presence highlights the international scope of engagement within the field of Forensic Accounting Growth, indicating a collaborative spirit in advancing this crucial discipline.

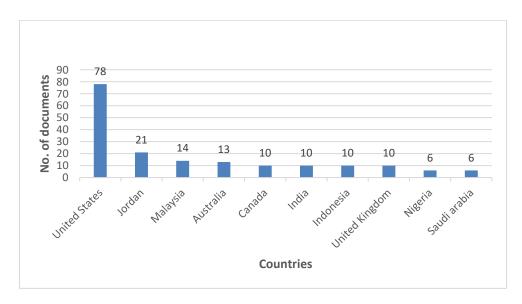


Figure 3: Number of documents and countries

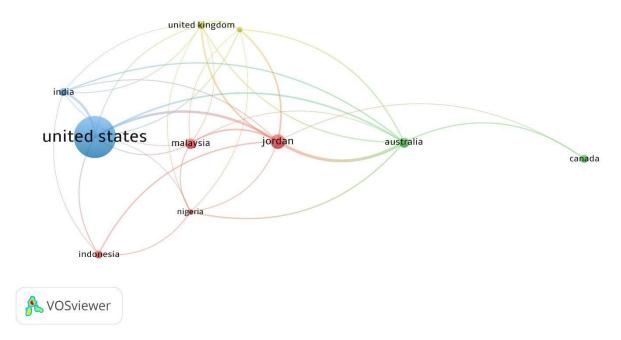


Figure.4: A network of cooperation among the countries

3.4 Key Journal

The scope of the study on Forensic Accounting growth was expanded to include the top 193 influential journals that disseminate research in this field. The researchers aimed to provide a comprehensive analysis by considering a diverse set of perspectives, methodologies, and findings. The study included the top ten influential journals among the 193, which publish studies on forensic accounting growth. The findings revealed a dispersed distribution of articles across various periodicals, with only 10 journals publishing two or more highly cited articles. Table I in the study details these 10 journals, ordered based on cumulative journal citations of included publications. The table includes information on journal names, publishers, total publications (TP), total citations (TC), citations per publication (CPP), Citescore, SNIP, and SJR. This data provides insights into scholarly publications in Forensic Accounting Growth.

No	Journal name	TP	TC	СРР	Cite score	SNIP	SJR	Publisher
1	issues in accounting education	21	150	7.14	1.7	1.328	0.525	American Accounting Association
2	journal of the international academy for case studies	16	3	0.19	0.000	0.000	0.101	Allied Academies
3	accounting research journal	7	93	13.29	3.2	0.967	0.409	Emerald Publishing
4	journal of accounting education	7	29	4.14	4.6	1.351	5.165	Elsevier

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5	journal of financial reporting and accounting	7	4	0.57	3.7	1.082	0.539	Emerald Publishing
6	journal of governance and regulation	6	22	3.67	0.9	0.279	0.156	Virtus Interpress
7	managerial auditing journal	6	204	34.00	4.2	1.323	0.606	Emerald Publishing
8	Canadian accounting perspectives	5	22	4.40	NA	NA	NA	Canadian Academic Accounting Association
9	academy of accounting and financial studies journal	4	15	3.75	1.4	0.363	0.200	Allied Academies
10	International business management	4	13	3.25	0.1	0.000	0.158	Emerald Publishing

The table provides valuable insights into prominent journals within the field of forensic accounting research. Metrics such as CiteScore (1.7), SNIP (1.328), and SJR (0.0525) are employed to assess the impact and influence of these journals. These metrics reveal that "Issues in Accounting Education" holds the highest rankings across all three categories, suggesting its significant influence within the field. The table also sheds light on the distribution of journals by publisher. Emerald Publishing appears to be the leading publisher, contributing four journals to the list. Allied Academies follows closely with two journals. The remaining publishers each contribute a single journal, suggesting a more dispersed publishing landscape beyond these two dominant entities. This information can prove particularly useful for researchers and academics interested in forensic accounting and seeking to identify leading journals for publication. The "Citations Per Publication" metric serves as a general indicator of a journal's impact, while CiteScore, SNIP, and SJR provide a more nuanced measure of influence and quality within the specific field of forensic accounting.

3.5 Keywords

The analysis on forensic accounting keywords revealed interesting insights into the most popular terms used in this field. Here are the key findings:

Keyword Analysis: The study identified 88 related keywords in forensic accounting, with 44 keywords used twice and 18 keywords used thrice. To ensure accuracy, synonymous single words and congeneric phrases were consolidated, resulting in 65 keywords meeting the mapping threshold in VOSviewer.

Popular Keywords: 'Forensic accounting' emerged as the most popular keyword among forensic researchers, with 88 occurrences and 104 links to other keywords. Additionally, terms like 'fraud' (37 occurrences, 59 links), 'auditing' (9 occurrences, 15 links), and 'Corporate governance' (8 occurrences, 10 links) were commonly employed.

Keyword Relationships: The analysis highlighted that forensic accounting is linked to various other keywords such as 'data cloning', 'risk management', and 'accounting curriculum', indicating the interconnected nature of topics within the field.

These findings provide valuable insights into the prevalent keywords and their relationships within the domain of forensic accounting, shedding light on the key areas of focus and research interest in this field.

The attributes frequently utilized by forensic accounting researchers include terms that represent forensic accounting and its associations with other fields. Here are the key findings:

Frequent Terms for Forensic Accounting: The term 'forensic accounting' was the most commonly used (4 occurrences), followed by 'financial fraud' (3 occurrences) and 'fraud examination' (4 occurrences). Additionally, forensic accounting was linked to other fields such as 'governance' (3), 'experiential learning' (3), and 'balance scorecard' (1).

Terms Related to Fraud: In the context of fraud, researchers commonly used terms like 'internal control' (3), 'fraud triangle' (8), 'criminal lawsuits' (1), and 'financial fraud' (5).

These findings shed light on the key terms and associations prevalent in forensic accounting research, emphasizing the focus on fraud-related concepts and the interdisciplinary nature of forensic accounting.

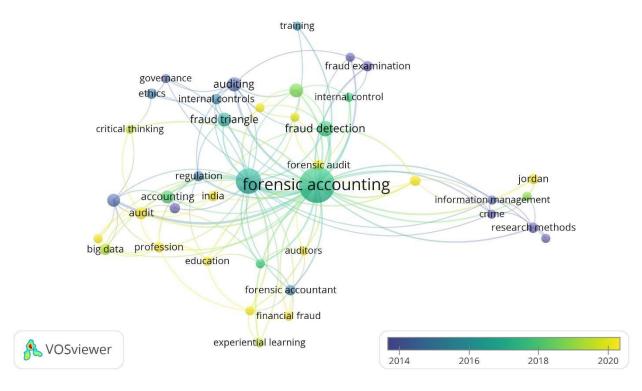


Figure.5: Co-occurrence network of the most frequent keyword

4. Limitations

This bibliometric analysis offers valuable insights, but certain limitations warrant consideration for future research endeavors. While the study acknowledges the existence of credible alternative databases, it primarily relied on SCOPUS due to its extensive coverage. However, the recognition is present that utilizing a combination of databases or a different primary source could yield somewhat divergent results.

Furthermore, the analysis focused solely on citation rates within a specific timeframe. However, other factors may also influence these rates, such as self-citations by journals and authors, or the accessibility of research materials to other

scholars. These considerations fell outside the scope of the present study. Additionally, the analysis was restricted to the 193 most cited publications, and employing a broader range of publications could potentially lead to distinct findings.

In light of these limitations, future studies are encouraged to incorporate expanded timeframes and leverage data from a wider array of databases or sources. This broader approach would enhance the comprehensiveness and generalizability of the research

5. Conclusion

This paper presents a bibliometric analysis investigating the growth of forensic accounting research. The analysis encompasses scholarly works published and cited between the year 2000 and the search date of March 2024. To gain deeper insights, a subsequent analysis focused on the 193 most-cited articles within this field. This facilitated the exploration of international contributions and collaborations, along with the identification of key journals publishing these influential works.

An analysis of the provided sources on forensic accounting growth and bibliometric analysis reveals several key points. Firstly, forensic accounting emerges as a multidisciplinary field, drawing upon various areas of study including business, management, accounting, economics, finance, social sciences, and even computer science. This multifaceted nature equips forensic accounting professionals to address complex financial issues. Secondly, the research highlights the main types of services offered within forensic accounting, encompassing litigation support consulting, expert witness services, and fraud investigation. These specialized services play a critical role in uncovering and mitigating financial wrongdoing. Thirdly, the analysis reveals a significant upward trend in publications related to forensic accounting over the years. This surge in research activity underscores the growing recognition of the field's importance in today's financial landscape. Interestingly, the sources recommend that authors publish their research in open-access journals to enhance citation rates and accessibility, fostering broader dissemination of knowledge within the field.

The study sheds light on the international landscape of forensic accounting research. It highlights a notable trend of active publication by institutions in the United States and Canada. These institutions are further distinguished by their strong international collaborations, which provide valuable opportunities for researchers from other countries to contribute to the field's advancement.

Within the realm of publication, the analysis identifies top productive journals such as Accounting Research Journal and Managerial Auditing Journal. While these journals may have a lower volume of publications, their articles demonstrate higher citation rates, suggesting a focus on high-quality research output. This underscores the importance of considering both quartile ranking and SNIP metrics when selecting a journal for publication, as these metrics offer insights into a journal's impact and influence within the field.

The research delves into the strengths and weaknesses of forensic accounting. On the positive side, forensic accounting offers significant benefits to students and professionals, fueled by the increasing demand for qualified practitioners and a growing range of career opportunities. Furthermore, it plays a critical role in fraud reduction.

However, the study identifies weaknesses that warrant attention. These include the lack of standardized regulations governing the profession, limited control over entry into the field, and a need for greater consensus on teaching methodologies. Additionally, a shortage of specialized research journals, highly qualified practitioners and educators, along with a lower level of public recognition all contribute to the field's underdeveloped state.

This research holds considerable significance for multiple stakeholders. The financial industry, regulatory authorities, law enforcement agencies, and the overall economy all stand to benefit from the advancements in forensic accounting. By addressing essential aspects of the field and emphasizing its importance in financial investigations and combating financial crimes, the study aims to provide valuable insights. By exploring the key components of forensic accounting and its role in improved investigative procedures, it seeks to illuminate the ways in which this specialized field can contribute to detecting, preventing, and prosecuting financial fraud.

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