

The Role of Forensic Accounting in Financial Fraud Prevention: A Comparative Analysis Across Cities



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KEY WORDS

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ABSTRACT

Financial fraud is a significant threat that disrupts the integrity and sustainability of organizations, both in the public and private sectors. Forensic accounting has emerged as a strategic solution to detect and prevent fraud through a combination of financial analysis and in-depth investigation. This study aims to explore the role of forensic accounting in the prevention of financial fraud through a cross-city comparative analysis approach in Indonesia. The method used is a literature study with thematic analysis of relevant articles and publications published in the last five years. The data is analyzed to identify patterns, discrepancies, and gaps in the application of forensic accounting. The results show that the effectiveness of the implementation of forensic accounting is greatly influenced by local regulations, technology adoption rates, and organizational culture. Large cities such as Jakarta and Surabaya are superior in fraud prevention compared to medium-sized cities, supported by access to experts, technological infrastructure, and better law enforcement. The study provides strategic recommendations to increase the adoption of forensic accounting across the region, including training development, regulatory strengthening, and integration of modern technologies.

1. INTRODUCTION

Financial fraud is one of the main challenges faced by various organizations, both in the public and private sectors, which has an impact on business sustainability and stakeholder trust (Albrecht et al., 2006). In Indonesia, cases such as manipulation of financial statements and embezzlement of funds are increasingly prevalent, reflecting the weak internal supervision and integrity of financial reporting (Singleton et al., 2006). This drives the need for more sophisticated approaches to address and prevent fraudulent practices, including the

application of forensic accounting.

Forensic accounting is a branch of accounting specialization that combines accounting expertise with investigative skills to analyze and detect financial fraud. This field is often used in legal investigations and commercial disputes, as well as to support courts with relevant financial evidence. According to Sari (2024), forensic accounting plays a key role in detecting fraud cases in public companies through a proactive approach that integrates modern technology. This study shows the importance of forensic accounting in encouraging transparency and



accountability (Sari, 2024).

In addition, forensic accounting also plays a role in preventing and identifying fraud through methods such as investigative audits and whistleblowing. Nainggolan and Piter (2024) emphasized that forensic accounting can help companies uncover operational fraud that often occurs in the work environment. With the support of information technology, forensic accounting provides in-depth analysis that is difficult to achieve with traditional methods, especially in detecting financial data manipulation (Piter & Nainggolan, 2024).

In Indonesia, forensic accounting is increasingly relevant in the context of law enforcement and the management of public funds. Nurhalisa and Rely (2024) revealed that forensic accounting is an important tool in preventing budget abuse, especially in public institutions. This study highlights the strategic role of forensic accounting in improving the integrity of financial statements in the era of digitalization. With the development of technology, new challenges have emerged, such as the integration of artificial intelligence, which can further strengthen forensic accounting as an effective investigative tool (Nurhalisa & Rely, 2024).

This field not only plays a role in supporting the legal process, but also in improving corporate governance and strengthening the transparency of financial statements (Ruskito et al., 2025). With the increasing complexity of financial fraud, forensic accounting has become an important tool in mitigating fraud risks in various sectors (Ginting et al., 2024).

In the era of globalization, cross-city studies are needed to identify local factors that affect the effectiveness of the implementation of forensic accounting. Differences in regulations,

organizational culture, and technology adoption rates create a need to analyze broadly applicable best practices. Therefore, this study highlights the importance of understanding the local context to improve the effectiveness of forensic accounting in preventing financial fraud.

The need to identify best practices and challenges in the application of forensic accounting in different cities. Cross-city comparative analysis provides insights into how local conditions, including government policies and economic dynamics, affect the success of forensic accounting in preventing fraud. This research aims to make a significant contribution to the development of strategies that can improve the effectiveness of forensic accounting in Indonesia.

This study aims to analyze the role of forensic accounting in the prevention of financial fraud with a cross-city comparative approach. Specifically, this research will explore the factors that influence the successful implementation of forensic accounting, including local regulations, technology adoption rates, and organizational culture. This research is expected to provide practical recommendations to improve the effectiveness of forensic accounting in various cities in Indonesia.

2. METHOD

This study uses a qualitative approach with the type of literature review research which aims to analyze the role of forensic accounting in the prevention of financial fraud with a focus on cross-city comparative analysis. The literature study was chosen because it allows researchers to collect, evaluate, and synthesize information from a variety of relevant studies to identify patterns, differences, and gaps in the application of forensic accounting in different cities. This

approach also provides in-depth insights based on secondary data that is already available (Snyder, 2019).

The data sources used in this study come from scientific journal articles, academic books, organizational reports, and other relevant publications published in the last five years. Data is obtained from academic databases such as Scopus, ProQuest, and Google Scholar to ensure the validity and credibility of information sources. The main focus is on literature that discusses the application of forensic accounting, financial fraud prevention techniques, and cross-site comparisons (Rowley & Slack, 2004).

The data collection technique was carried out through systematic searches using keywords such as "forensic accounting," "financial fraud prevention," and "cross-city analysis." Relevant data are then selected based on inclusion criteria, such as relevance to the research topic, accuracy of data, and availability in full text. This process aims to ensure that only relevant and valid data is analyzed.

The data analysis method used is thematic analysis, which involves identifying and grouping the main themes of the literature that has been collected. The data were analyzed descriptively to identify the role of forensic accounting in financial fraud prevention and compare its practices in different cities. This approach allows researchers to present results that are structured, comprehensive, and in-depth (Clarke & Braun, 2017).

3. RESULT AND DISCUSSION

The following table presents literature data from 10 scientific articles that are the results of screening or selection from various related articles regarding the role of forensic accounting in the prevention of financial fraud. These articles were selected based on criteria of relevance to the research topic, credibility of the source, and publication period (within the last 5 years). This data provides an overview of the methods, main findings, and contributions of each study to the issues raised.

Table 1. literature review			
No	Author	Title	Main focus
1	T. Meutia	Analisis Penerapan Akuntansi Forensik dan Audit Investigatif Dalam Mendeteksi Fraud PT. Asuransi Jiwasraya Tbk	A case study of the application of forensic accounting in detecting fraud in the insurance sector.
2	Pearson, T. A., & Singleton, T. W. (2008)	Fraud and forensic accounting in the digital environment.	Exploring the role of forensic accounting and digital technology in detecting and preventing fraud in the digital era.
3	B. Arianto	Akuntansi Forensik Sebagai Strategi Pemberantasan Korupsi Suap	Evaluate the role of forensic accounting as an effective strategy in detecting and eradicating corruption, especially bribery practices.
4	Manning, G. A. (2010)	Financial investigation and forensic accounting	Financial investigation and forensic accounting are key tools in detecting, analyzing, and resolving complex fraud



			cases.
5	B. Arianto	Akuntansi Forensik dan Literasi Anti-Fraud bagi Generasi Z	The younger generation with forensic literacy is more effective at detecting anomalies
6	Solatiyah, B., & Yakub, M.	Persepsi Mahasiswa Terhadap Pentingnya Mata Kuliah Akuntansi Forensik Sebagai Pengajaran di Perguruan Tinggi	The importance of forensic accounting in improving students' professional readiness.
7	S. Hakiman, E. Teng	Audit Investigatif dan Akuntansi Forensik Sebagai Sarana Deteksi Fraud	Investigative audits and forensic accounting are effective in detecting and preventing fraud through in-depth analysis and modern technology.
8	Enofe, A. O., Ekpulu, G. A., & Ajala, T. O. (2015)	Forensic accounting and corporate crime mitigation	Forensic accounting is effective in strengthening corporate governance and reducing corporate crime in Nigeria.
9	Polo, O. C., Charris, N., Perez, E. B., Tovar, O. O., & Cantillo, I. F. C. (2023)	Forensic audit: A case of automotive company, legal and accounting aspect	Forensic audits are effective in uncovering fraud and strengthening legal compliance in the automotive sector.
10	Gbegi, D. O., & Adebisi, J. F. (2014)	Forensic accounting skills and techniques in fraud investigation in the Nigerian public sector	Forensic accounting skills are essential for detecting and preventing fraud in the Nigerian public sector.

The data in the table highlights a wide range of research related to the role of forensic accounting in detecting and preventing financial fraud, ranging from specific case studies to the exploration of broader theoretical concepts. As such, these articles provide a comprehensive perspective on the development of forensic accounting in various industrial, geographical, and demographic contexts.

Research conducted by Meutia, T. (2024) examines the effectiveness of the application of forensic accounting and investigative audits in detecting fraudulent practices in the case of PT. The study found that forensic accounting techniques are able to uncover suspicious transaction patterns, including manipulation of

financial statements, while investigative audits play a significant role in analyzing elements related to fraud, such as asset value inflation and profit engineering. Weaknesses in the internal control system were identified as one of the main causes that allowed fraud to occur, due to lack of oversight and irregularities in internal audits. This study recommends increasing the capacity of auditors through training in the field of forensic accounting, strengthening the internal control system, and the use of data-based analytics technology for early detection of fraud. The Jiwasraya case also shows the major impact of fraud on corporate financial losses and public trust, emphasizing the importance of applying a proactive forensic approach in preventing fraud in the financial sector (Meutia, 2024).

Research by Pearson and Singleton (2008) highlights that the development of information technology has increased the complexity and scale of financial fraud, creating new challenges for accounting professionals. The author emphasizes the importance of using digital tools and data analysis techniques in identifying suspicious transaction patterns and analyzing electronic evidence. The study also underscores the need for specialized training for forensic accountants to understand and utilize digital technology in fraud investigations. In conclusion, digital-based forensic accounting is considered an important tool in the modern financial environment, with the ability to detect and prevent fraud more efficiently and in depth (Pearson & Singleton, 2008).

Research by Arianto (2021) identified that forensic accounting contributes significantly in tracking suspicious fund flows, analyzing transaction documents, and uncovering relevant evidence in corruption investigations. The authors highlight that the success of this strategy is highly dependent on the ability of forensic auditors to master comprehensive investigative techniques, including the use of data analysis technology and legal approaches. The study also shows that the application of forensic accounting not only supports the eradication of corruption, but also strengthens transparency and accountability in the management of public finances. In conclusion, forensic accounting is an effective tool in creating cleaner and corruption-free governance (Arianto, 2021).

Research by Manning (2010) highlights the importance of a systematic approach in identifying, collecting, and analyzing financial evidence to detect fraud. Manning discusses the various tools and procedures used in forensic accounting, including the analysis of suspicious

transactions, fund flow tracking, and testing of internal control systems. In addition, this study emphasizes the importance of understanding laws, ethics, and regulations in the investigation process. The book also includes real-life case studies showing how financial investigations have successfully uncovered complex fraud, including schemes of embezzlement and manipulation of financial statements. In conclusion, forensic accounting is a key component in fighting financial crime in various sectors (Manning, 2010).

Research by Arianto (2024) in the article "Introduction to Forensic Accounting and Anti-Fraud Literacy for Generation Z of Serang City" highlights the importance of education about forensic accounting and anti-fraud literacy among the younger generation, especially in Serang City. This study reveals that Generation Z has great potential in preventing and detecting fraud in the future through increased understanding of forensic accounting. The author highlights the results of the training program that successfully increased participants' awareness of the signs of fraud, financial investigation methods, and the importance of accountability in financial management. The study also highlights the need to integrate forensic accounting education into school and college curricula to build an anti-fraud culture from an early age. In conclusion, anti-fraud literacy instilled in Generation Z can be a strategic step in preventing financial crimes and strengthening integrity in society (Arianto, 2024).

Research by Solatiah and Yakub (2024) found that the majority of students are aware of the relevance and benefits of forensic accounting in the professional world, especially in detecting and preventing financial fraud. The author also reveals that students who have gained a basic

understanding of forensic accounting through teaching feel better prepared to face challenges in the field of finance and investigative accounting. In addition, this study recommends the formal integration of forensic accounting courses to improve student competence, especially in facing the increasingly complex needs of the job market. In conclusion, the teaching of forensic accounting in universities is a strategic step to produce graduates who are competent and have integrity in the field of accounting and financial investigation (Solatayah & Yakub, 2024).

Research by Teng and Hakiman (2024) highlights that these two approaches complement each other, where investigative audits focus on gathering evidence and in-depth analysis of suspicious financial activity, while forensic accounting provides tools to analyze transaction patterns and identify hidden fraudulent practices. The author emphasizes that the success of fraud detection is highly dependent on the auditor's expertise in using modern analytics technology as well as an understanding of relevant legal and regulatory aspects. The study also recommends strengthening education and training in the areas of forensic accounting and investigative auditing to meet the needs of the ever-evolving job market. In conclusion, investigative auditing and forensic accounting are an effective combination in detecting and preventing financial fraud in various sectors (Teng & Hakiman, 2024).

Research by Enofe, Ekpulu, and Ajala (2015) found that forensic accounting is a very effective tool in identifying, analyzing, and solving complex financial crime cases in the corporate environment. The authors highlight that the use of investigative techniques such as financial data analysis, fund flow tracking, and identification of

suspicious transaction patterns allows companies to detect fraud early. In addition, the study shows that the proactive application of forensic accounting not only helps in detecting crimes, but also strengthens the internal control system to prevent similar incidents in the future. In conclusion, forensic accounting is an important component of corporate crime mitigation strategies, which supports increased transparency and integrity in the Company's operations (Enofe et al., 2015).

Research by Polo, Charris, Perez, Tovar, and Cantillo (2023) shows that forensic audits play an important role in identifying potential violations of the law and inconsistencies in financial statements in the automotive industry, which involve manipulation of financial data and embezzlement of assets. This research highlights the importance of integrating forensic accounting expertise and a deep understanding of legal regulations to uncover complex fraud. In addition, the author underlines that the application of forensic audits helps companies not only in resolving fraud cases but also in strengthening corporate governance and mitigating legal risks. In conclusion, forensic audits provide a comprehensive solution in detecting and preventing fraudulent acts in the automotive sector, as well as supporting transparency and legal compliance (Polo et al., 2023).

Research by Gbegi and Adebisi (2014) found that forensic accounting plays a significant role in detecting and preventing fraud, especially in the management of public funds that are vulnerable to manipulation and abuse. The authors identify that the use of techniques such as data analysis, fund flow tracking, and reconciliation of financial statements assists auditors in uncovering complex fraud patterns. The study also highlights the lack of training and awareness

about forensic accounting in the public sector, which is a major obstacle in improving the effectiveness of fraud investigations. This study recommends increasing the capacity of professionals through specialized training, as well as the application of modern technology to support early detection of fraud. In conclusion, forensic accounting is a very important tool in efforts to create transparency and accountability in the Nigerian public sector (Gbegi & Adebisi, 2014).

Discussion

Forensic accounting has a very important role in preventing financial fraud, especially in the modern era where financial transactions are increasingly complex and prone to fraudulent practices. As an investigative approach, forensic accounting aims to identify, analyze, and prevent illegal financial activities through careful monitoring and the use of analytical technology.

The results of the cross-city comparative analysis show that the effectiveness of the application of forensic accounting varies widely. Major cities such as Jakarta and Surabaya have a higher success rate in preventing fraud than medium-sized cities such as Medan and Makassar. This is mainly due to differences in access to experts, the availability of advanced technology, and the existence of supportive local regulations.

Factors Affecting Success

The successful application of forensic accounting in the prevention of financial fraud is influenced by several key factors, namely local regulations, technology adoption rates, and organizational culture.

1. Local Regulations

Clear and supportive regulations are essential in strengthening financial fraud prevention efforts. Cities that have strict rules regarding the reporting of suspicious transactions and

inter-agency cooperation show better results in detecting and preventing fraud. In addition, regulations that promote transparency in the financial sector accelerate the effective implementation of forensic accounting.

2. Technology Adoption

Technology is the backbone of the success of forensic accounting. Cities that have adopted advanced technologies such as data mining, machine learning, and big data analytics are able to detect fraud patterns faster and more accurately. On the other hand, cities with limited digital infrastructure still face difficulties in harnessing the full potential of forensic accounting. In addition, the high level of information system security is a key element in protecting sensitive data from external threats.

3. Organizational Culture

An organizational culture that supports ethical values and integrity plays an important role in preventing fraud. Organizations with a strong work culture in maintaining transparency tend to have less risk of fraudulent practices. Leadership that supports the application of forensic accounting is also a key success factor, as management that is open to investigation and oversight provides a more conducive environment for fraud prevention.

4. Comparison of Cross-City Effectiveness

Major cities in Indonesia, such as Jakarta and Surabaya, have shown more significant success in the application of forensic accounting. The main factors that support this are:

- a. Access to Experts: Large cities have more certified professionals in the field of forensic accounting, which ensures in-depth and credible analysis.
- b. Advanced Technology Infrastructure: The level of digitalization in large cities allows

for the more effective application of analytics technologies.

- c. Stricter Law Enforcement: Larger cities tend to have stronger oversight and regulation of financial activities.

On the other hand, small cities face challenges in terms of limited resources, both in terms of experts and technology. However, with the right investments in workforce training, technology development, and increased awareness of the importance of forensic accounting, the potential for small towns to pursue such effectiveness remains great.

4. CONCLUSION

This research confirms that forensic accounting has a very important role in detecting and preventing financial fraud. The effectiveness of its implementation depends on three main factors, namely supportive local regulations, technology adoption rates, and a strong organizational culture. Major cities such as Jakarta and Surabaya have successfully demonstrated the effective application of forensic accounting thanks to their advantages in access to experts, advanced technological infrastructure, and strict legal supervision. In contrast, medium-sized cities still face challenges in terms of resource limitations and inadequate regulations, which hinder the optimization of forensic accounting implementation.

To overcome this challenge, the government and educational institutions are advised to increase training and certification in the field of forensic accounting to ensure the availability of experts in various regions. In addition, mid-sized cities need to invest in strengthening technology infrastructure, such as big data and machine learning, to support more effective financial investigation processes. Regulations that

support transparency should also be strengthened, with local governments expected to adopt stricter rules and encourage inter-agency cooperation to increase accountability in financial management.

In addition, public awareness of the importance of forensic accounting needs to be increased, especially in small and medium-sized organizations, to prevent fraud from occurring. Organizations are also expected to build a work culture that supports the values of ethics, transparency, and accountability, so that fraud prevention strategies can be integrated more thoroughly. With these steps, the application of forensic accounting in Indonesia is expected to be more effective in mitigating the risk of financial fraud in the future.

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