Presenting a Model for Evaluating the Accuracy and Stability of Various Methods in Predicting Auditors' Behavior in the Face of Fraud and Financial Misconduct

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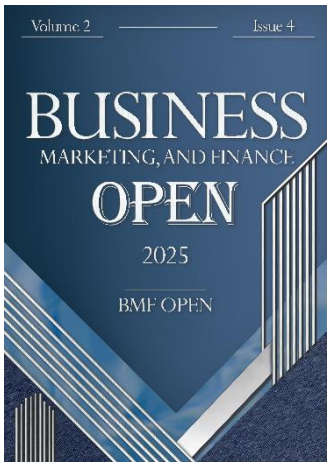

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Abstract: One of the significant topics in the research literature has been auditing issues related to fraud and fraud detection. The main objective of this study is to identify and predict auditors' behavior when encountering fraud and misconduct during the auditing process. Since fraud can have considerable negative impacts on the accuracy and credibility of financial reports, it is essential to predict and identify the factors influencing auditors' behavior in such situations. Using a qualitative approach and a meta-synthesis method, this study identifies and extracts patterns regarding factors affecting auditors' behavior as well as methods for predicting these behaviors. This study is exploratory in nature, and its data were extracted from reputable articles published in credible databases related to the topics of fraud and fraud detection in auditing. The sampling method employed was systematic elimination, meaning that articles scientifically and content-wise relevant to the research topic were selected and analyzed. In the end, 17 articles were used as the basis for data analysis and extraction. Data analysis and component extraction from the articles were performed using MAXQDA software, which facilitated the effective identification of relationships and various factors influencing the prediction of auditors' behavior. In this study, 12 factors influencing auditors' behavior and 10 methods for predicting these behaviors in the face of fraud were identified. These factors include auditors' individual characteristics, past experiences, training received, as well as environmental and organizational characteristics that affect how auditors make decisions and respond to fraud. Additionally, methods such as risk analysis, continuous assessment, and the use of new technologies for fraud detection were introduced as effective methods for predicting auditors' behavior. The results of this study can serve as a scientific and practical foundation for improving auditing processes and detecting fraud within organizations and financial institutions. Identifying influencing factors and prediction methods for auditors' behavior can enhance the accuracy and efficiency of auditors when dealing with fraud and misconduct, thereby increasing transparency and public trust in the auditing process. These results can also provide a basis for policymakers and auditing managers in developing guidelines and strategies for combating fraud within auditing processes.

Keywords: Fraud prediction, fraudulent behavior, influencing factors, auditor.

1. Introduction

Auditing in contemporary companies serves as an independent evaluation process to ensure the accuracy of financial statements and compliance with laws and regulations [1]. This process plays a vital role in ensuring the

accuracy and transparency of financial information, contributing to risk management, enhancing credibility, increasing public trust, and ensuring compliance with national and international accounting standards [2]. One of the most important topics related to auditors concerns their judgments and decision-making in workplace environments, which can significantly impact their activities [3].

Auditors in companies face challenges such as time constraints, conflicts of interest, the complexity of financial regulations, the need for technology, combating fraudulent certifications, and the necessity for a deep understanding of the industry. Managing these challenges is essential to improving audit quality and ensuring stakeholder trust [4, 5].

One of the major challenges auditors face within organizations relates to the type and quality of their confrontation with fraud and financial misconduct. In fact, a fundamental challenge that auditors encounter in organizations concerns the detection and confrontation with fraud and financial misconduct [6]. During the auditing process, there is a possibility of encountering false statements or financial misconduct, which can undermine confidence in audit results and the credibility of the company's financial statements. Therefore, auditors must be prepared to identify signs of fraud, employ new fraud detection methods, and establish stricter control mechanisms to prevent such issues. Managing this challenge requires auditors to possess the abilities and expertise necessary to confront financial fraud and maintain trust within the business community [7].

Among the subjects sporadically addressed in the research literature is auditors' behavior when facing fraud and financial misconduct, and the prediction of such behavior. In the literature, auditors' confrontation with fraud and misconduct, and the prediction and management of these behaviors, have been presented as significant issues [8]. Research in this area emphasizes that auditors must have the capabilities and skills necessary to identify signs of fraud and financial misconduct. Furthermore, the importance of training and raising auditors' awareness of new fraud detection methods and the use of modern technologies to enhance audit quality has been highlighted [9]. Additionally, improving internal control systems and strengthening effective interactions with managers and other stakeholders are considered critical for preventing financial fraud [10].

Recent research has extensively explored auditors' roles in fraud detection and behavioral prediction. Abbasi Estamal and Rastkar Rezaei (2023) investigated the impact of company performance on the relationship between auditors' professional judgment and their ability to detect fraud, finding a positive link between judgment and detection ability but a negative impact of financial performance on fraud detection [11]. Alikhani and Kordmanjiri (2023) emphasized auditors' responsibility in preventing collusion and fraud with accountants, highlighting the importance of the auditor's supervisory role [12]. Mousavi et al. (2022) assessed auditors' responsibilities regarding fraud risks, aligning with International Standard on Auditing (ISA) 240 [13], while Shams (2022) found that organizational skepticism positively moderates the relationship between fraud detection risk and auditors' professional skepticism [13]. Yazdani et al. (2022) identified that auditor tenure, industry specialization, and client size significantly influence financial fraud risk [14]. Hosseini et al. (2022) demonstrated that investor sentiment impacts financial misstatements and audit fees [15]. Ramezani et al. (2022) stressed the critical role of ethical values in auditor integrity and decision-making, warning of corruption risks when ethical standards are compromised [16]. Abdi et al. (2022) revealed that increased complexity in accounting information is associated with auditor rotation and financial statement fraud, using logistic and multivariate linear regression analysis [17]. Sahla et al. (2023) applied the Five-Factor Fraud Theory, finding that competence and pride significantly influence external auditors' perceptions of fraud, with ethical values moderating these effects [5]. Tian et al. (2021) introduced auditing protocols for verifying cloud-stored data authenticity without downloading data, enhancing auditor efficiency [18].

Riany et al. (2021) utilized artificial neural networks (ANN) for detecting fraudulent financial statements, demonstrating the model's effectiveness in aiding auditors [19]. Lastly, Mahsun (2022) highlighted the importance of forensic accounting education in enhancing auditors' fraud risk assessment (FRA) competence, especially within the Supreme Audit Board (SAB), emphasizing the need for specialized training to address time and budget constraints [20].

In summary, it must be stated that predicting auditors' behavior when confronting fraud and financial misconduct is of great importance, as fraud can have severe negative impacts on the accuracy and credibility of financial reports [21]. Various methods exist for identifying and predicting auditors' behavior in such situations, including risk analyses, the use of new technologies, or continuous evaluation of auditors' behavior in different environments [9]. Each of these methods may have specific strengths and weaknesses and may demonstrate different levels of accuracy and stability across various situations [10]. Therefore, evaluating the accuracy and stability of these methods becomes particularly important to ensure the use of the most optimal approaches for fraud detection. The accuracy and stability of prediction methods for auditors' behavior are two key criteria for evaluating these methods. Accuracy refers to how correctly a model can predict auditors' behavior, while stability refers to the model's ability to perform consistently and reliably over time and under different conditions. Specifically, in situations where the features of fraud or misconduct are evolving or where organizations require new auditing methods, the stability of prediction models can significantly impact audit outcomes. Therefore, reviewing and comparing the accuracy and stability of methods can assist in selecting appropriate approaches for practical applications. To evaluate the accuracy and stability of various methods for predicting auditors' behavior, it is necessary to gather valid data and conduct thorough analyses. The use of data analysis software such as MAXQDA can assist researchers in identifying the different components influencing auditors' behavior and analyzing them within predictive models. Furthermore, utilizing meta-synthesis methods to integrate and compare the findings of various studies can help researchers identify a more comprehensive model that improves the accuracy and stability of predictions. This process not only contributes to enhancing the quality of audit predictions but also improves auditors' performance when encountering financial fraud and misconduct.

Thus, it is necessary to first identify all available methods using integrated approaches such as meta-synthesis, and eventually, through appropriate data modeling, determine the best possible method for evaluating and predicting auditors' behavior to assist managers and reduce human errors. From this perspective, this study, with a qualitative approach, seeks to address one of the major challenges faced by the auditing community, which relates to fraudulent behaviors and inaccurate financial reporting.

2. Methodology

This study employed a qualitative approach. In this section, in order to identify influencing factors and prediction methods, all articles published from 2000 to 2024 related to the research keywords were identified as the target population. Additionally, systematic elimination sampling was used. After eliminating irrelevant articles, other available documents were included as the research sample. Data were collected from various sources including libraries, documents, articles, and dissertations published in reputable domestic and international scientific databases. For this purpose, a search was conducted focusing on keywords related to auditor behavior, such as "audit fraud," "audit fraud prediction," and "auditor fraud prediction methods," covering the period from 2000 to 2024. The search encompassed scientific journals and dissertations and was conducted simultaneously in both Persian and English languages. To assess the validity of the extracted codes, the CVR (Content Validity Ratio)

formula was used, and for reliability assessment, Cohen's Kappa coefficient was employed. These procedures are recognized and valid methods for evaluating accuracy and reliability in scientific research. The main variables of this study include auditors' behavior when encountering fraud and methods for predicting auditors' behavior, which were identified in detail as components and sub-components during the qualitative phase. In the qualitative section, meta-synthesis was employed to identify factors affecting the accuracy and stability of behavioral prediction methods for auditors as well as behavioral prediction methods themselves. MAXQDA software was used for coding in this section.

3. Findings and Results

This section is dedicated to data analysis and the implementation of the meta-synthesis method. Here, the operational stages of meta-synthesis described in the methodology section are sequentially presented, and the obtained data are analyzed.

To formulate the research question, the first step for researchers is to focus on what is being studied. In the present study, the main research question is "Identifying components affecting the accuracy and stability of various methods in predicting auditors' behavior, and identifying methods for predicting auditors' behavior when facing fraud," which was formulated based on the parameters outlined in Table 1.

Table 1. Research Question

Parameters	Formulation of the Question
What (Subject of Study)	What are the components affecting the accuracy and stability of various methods in predicting auditors' behavior? What methods are proposed for predicting auditors' behavior when facing fraud?
Who (Study Population)	In this study, several databases and different search engines were reviewed.
When (Time Limitation)	Initially, no time limit was considered for selecting articles related to the study topic. However, after the database searches, it was found that most useful articles according to the filters were published from 2000 onwards. Nevertheless, the final selected articles were chosen solely based on the research needs and objectives, and time limitation did not influence this selection.
How (Study Collection Method)	In this study, the "document analysis" method, analyzing secondary data, was used.

In this study, three databases—Scopus, Web of Science, and ProQuest—were searched to identify and collect various studies. Initially, the main focus was on the research topic and related objectives. The research topic was identifying components affecting the accuracy and stability in fraud detection. Therefore, the main keywords for this study were auditor behavior, auditor fraudulent behavior, behavior prediction methods, accuracy and stability, auditor, and fraud behavior prediction. Accordingly, each of the above keywords was examined separately, using the "AND" operator in the database searches. If any of the related keywords appeared in the title, abstract, or text of a study, that article was selected as an initial entry. In the second step, combined searches using the "OR" operator between keywords were performed. Additionally, combined methods were applied, along with search engine suggestions for more similar and relevant keywords.

Table 2. Searched Keywords

Search Number	Search Basis	Persian	English
1	AND	تقلب، مواجهه با تقلب، رفتار حسابرس، پیش‌بینی رفتار تقلب، حسابرس	Fraud, exposure to fraud, auditor behavior, prediction of fraud behavior, auditor

2	OR	تقلب، مواجهه با تقلب، رفتار حسابرس، پیش‌بینی رفتار تقلب، حسابرس	Fraud, exposure to fraud, auditor behavior, prediction of fraud behavior, auditor

Finally, based on the search results for each of the above terms and to expand the search, equivalent terms (such as using "fraudulent" instead of "fraud") were also examined. The raw initial search results are presented below:

Table 3. Initial Selected Articles Based on Database Searches

English	Web of Science	Scopus	ProQuest
Fraud, exposure to fraud, auditor behavior, prediction of fraud behavior, auditor	25	14	12

An important point to note is that after reviewing the articles and their internal references, additional new articles from other databases were also identified and included for final model evaluation. Accordingly, a total of 41 initial articles were selected for analysis. After thorough review and considering the relevance and content similarity across different sections of the articles, 17 articles were finally selected for detailed analysis and component extraction.

In this section, after summarizing and categorizing the articles, the results and contents of the articles were studied. Based on the main objectives, namely identifying the components and sub-components influencing auditors' behavior when facing fraud and the methods of confronting fraud, sentences containing related semantic expressions were extracted. For each semantic expression, an associated open code was introduced. These open codes were classified into two categories: methods for predicting auditors' behavior and factors influencing behavior when facing fraud. Some articles referred to several of these aspects. Also, certain concepts were repeated across different articles; therefore, to streamline the results, multiple sources for a single concept were avoided in this section. Consequently, in the first table of this section, for each concept, one sample article or content mentioning the concept has been presented:

Table 4. Extracted Factors Based on Study Content

Article	Initial Code	Final Code	Article	Initial Code	Final Code
Khaksar et al. (2022)	Auditors' professional work experience	Auditors' professional experience	Desort & Harrison (2018)	Evaluation of the effectiveness of the company's internal monitoring system	Effectiveness of internal monitoring system
Khaksar et al. (2022)	Commitment to auditing principles and ethics	Commitment to professional ethics	Omar et al. (2017)	Impact of organizational culture on auditor behavior	Impact of organizational culture on auditors
Desort & Harrison (2018)	Past records of fraud or misconduct in the company	Previous fraud history in the company	Boyle et al. (2015)	History of financial misconduct in the same industry or sector	Financial misconduct history in similar industries
Tang & Karim (2019)	Financial and economic pressures on the company	Financial pressures on the company	Desort & Harrison (2018)	Legal limitations in pursuing and combating fraud	Legal constraints in confronting fraud
Liu & Wang (2009)	Company's organizational structure and system	Company’s organizational structure	Bierstaker et al. (2006)	History of identifiable frauds within the company	History of detectable frauds within the company
Omar et al. (2017)	Auditor's experience in fraud detection and confrontation	Auditor's experience with fraud	Bollen (2011)	Auditor's ability to handle job-related pressures and stresses	Auditor's stress tolerance ability
Omar et al. (2017)	Company’s management policies and procedures	Corporate governance policies and procedures	Khaksar et al. (2022)	Risk analysis and identification of weaknesses	Risk assessment and identification of weaknesses
Skousen et al. (2009)	Company’s social values and objectives	Company’s social significance	Desort & Harrison (2018)	Use of modern and emerging technologies	Use of up-to-date technologies

Reffett (2010)	Company's internal communication methods and tools	Internal communication methods	Liu & Wang (2009)	Examination of information systems and internal controls	Review of information and control systems
Chang & Leo (2021)	Level of access to internal company information	Availability of internal company information	Hamersley (2011)	Use of visual methods and visualizations for explaining information	Use of visual and imaging methods
Marklewitz et al. (2013)	Company's managerial approaches and methods	Company's management practices	Liu & Wang (2009)	Analysis of financial trends and ratios	Financial trends and ratios analysis
Liu & Wang (2009)	Company's level of financial transparency	Financial transparency of the company	Khaksar et al. (2022)	Comparison and analysis of changes and differences with past data	Comparison with previous data and trend analysis
Khaksar et al. (2022)	International auditing obligations and standards	International auditor obligations	Mock & Turner (2005)	Use of analytical and statistical techniques to extract patterns and useful information	Use of analytical techniques
Wilks et al. (2004)	Auditor's roles and responsibilities in the reporting process	Auditor's role in the reporting process	Bierstaker et al. (2006)	Conducting interviews and consultations with managers and employees	Interviews and consultations with managers and staff
Hassan et al. (2023)	Relationships and communication between auditors and managers	Auditor-manager communications	Liu & Wang (2009)	Examination and analysis of financial and performance documentation	Examination of documents and evidence
Omar et al. (2017)	Auditor's attention to fraud risks and hazards	Auditor's focus on fraud risks	Omar et al. (2017)	In-depth analysis of financial and tax information	Deep financial data analysis
Khaksar et al. (2022)	Auditor's interactions with judicial authorities	Level of interaction with judicial bodies	Desort & Harrison (2018)	Auditor's commitment and sense of responsibility	Auditor's accountability
Desort & Harrison (2018)	Methods and tools for fraud risk assessment	Mechanisms for fraud risk evaluation	Bierstaker et al. (2006)	Knowledge and awareness of auditing profession developments	Awareness of auditing profession advancements
Omar et al. (2017)	Level of accuracy and correctness in auditor's financial information	Auditor's financial information accuracy	Roden et al. (2016)	Ability to detect anomalies in company performance	Anomaly detection ability
Desort & Harrison (2018)	Use of innovative approaches in auditing	Innovative approaches in auditing	Omar et al. (2017)	Level of research and information review by auditor	Research and review level by auditors
Omar et al. (2017)	Data analysis and inference skills	Data analysis and inference skills	Khaksar et al. (2022)	Auditor's interaction with legal and financial systems	Interaction with legal and financial systems
Khaksar et al. (2022)	Auditor's experience in fraud confrontation	Auditor's experience confronting fraud	Omar et al. (2017)	Auditor's financial incentives and motives	Auditor's financial motivations

Table 5. Categorization of Research Codes

Main Indicator	Subcomponents
Dimensions and Components Influencing Behavioral Prediction of Auditors	
Auditor's Professional Experience	Auditor's professional background; Auditor's experience in confronting fraud; Auditor's prior experience in similar industries
Commitment to Professional Ethics	Commitment to professional ethics; Auditor's sense of responsibility; Auditor's research and investigation skills
Experience and Pattern Recognition Ability	Auditor's experience in dealing with fraud; Auditor's experience in similar industries; Ability to detect unusual patterns
Managerial Approaches	Company's organizational structure; Management practices of the company; Effectiveness of the company's internal monitoring system
Financial Information and Transparency	Financial transparency of the company; Auditor's level of financial information; Availability of internal company information

Attention to Fraud Risks	Auditor's attention to fraud risks; Auditor's research and investigation efforts
Internal and Interpersonal Communications	Internal communication methods within the company; Communications between auditors and managers
Organizational Culture	Effectiveness of the internal monitoring system; Impact of organizational culture on auditors; Internal communication methods within the company
Laws and Regulations	Corporate governance policies and procedures; Legal constraints in confronting fraud
Interaction with Judicial Authorities	Interaction with the legal and financial system; Level of communication with judicial authorities
Data Analysis and Inference	Data analysis and inference skills; Auditor's prior experience in similar industries
Ability to Withstand Pressure and Stress	Auditor's ability to handle stress and pressure
Methods for Predicting Fraudulent Behavior	
Fraud Behavior Prediction Methods	Risk assessment and identification of weaknesses; Use of up-to-date technologies; Review of information and internal control systems; Use of visual and imaging methods; Analysis of trends and ratios; Comparison with previous data and analysis of changes; Use of analytical techniques; Interviews and consultations with managers and staff; Review of documents and evidence; Deep analysis of financial information

Answer to the Question: What Are the Components Influencing the Accuracy and Stability of Various Methods in Predicting Auditors' Behavior?

The results of the investigation into components influencing the accuracy and stability of various methods in predicting auditors' behavior reveal that multiple factors affect the prediction process, either enhancing or diminishing the accuracy and stability of the forecasts. The first and most crucial factor is the professional background and experience of the auditor. Practical experience and longer tenure in the auditing profession help auditors better identify issues and more accurately assess situations. More experienced auditors usually have a higher capability to detect irregularities and potential fraud, as they are familiar with different types of fraud and misconduct and can swiftly respond to similar situations. Therefore, auditors' professional history directly impacts the accuracy and reliability of predictions.

Another factor influencing the accuracy and stability of predicting auditors' behavior is commitment to professional ethics and attention to fraud risks. Auditors committed to ethical principles and professional standards are more likely to accurately identify fraud and financial misconduct. Such individuals possess greater ability to detect suspicious and fraudulent behavior and can effectively handle challenges they face. Conversely, those with weaker ethical commitment may produce less reliable predictions regarding fraudulent behaviors. Thus, adherence to ethical principles and awareness of fraud risks significantly impact the accuracy and stability of auditors' predictions.

In addition to individual factors, managerial approaches and organizational culture also influence the accuracy and stability of predictions. Organizations that prioritize financial transparency and accurate information create an environment where auditing activities are carried out with greater ease and trust. An organizational culture built on honesty, transparency, and compliance with laws and regulations enables auditors to collect accurate and reliable information and utilize more effective methods for predicting fraudulent behaviors. Such cultures not only facilitate the auditing process but also indirectly enhance the accuracy of predictions and the consistency of auditors' behavior when facing fraud and misconduct.

Furthermore, legal factors and regulations governing the auditing profession, along with interactions with judicial authorities, play a significant role in the accuracy and stability of predictions. Clear laws and regulations provide a legal framework for auditing activities, assisting auditors in conducting their processes in an orderly and

lawful manner. These frameworks enable auditors to respond appropriately to fraud and financial misconduct using methods compliant with legal standards. As a result, these factors contribute to increased prediction stability and accuracy.

Finally, the ability to analyze data, draw accurate inferences, and withstand pressure and stress are components that can enhance the accuracy and stability of auditing predictions. Auditors must be able to conduct detailed analyses of financial data and various pieces of evidence to correctly identify fraudulent behavior. Moreover, the ability to withstand pressure and stress arising from critical and complex work environments helps maintain the accuracy of predictions even under high-pressure conditions. Overall, the integration of these various factors leads to the development of a stable and accurate system for predicting auditors' behavior, facilitating timely detection of fraud and financial misconduct and improving audit quality.

Answer to the Question: What Methods Are Proposed for Predicting Auditors' Behavior When Facing Fraud?

Predicting auditors' behavior when facing fraud requires a comprehensive approach that considers all aspects of the organization and its processes. One of the first and most fundamental methods in this regard is risk assessment and identification of weaknesses. This method involves a thorough evaluation of the organization's financial and operational status to identify areas vulnerable to fraud. Risk assessment includes financial analysis, review of financial reports, and identification of weaknesses in internal control systems. Weaknesses in internal controls and auditing processes create opportunities for fraud. Therefore, identifying and addressing these weaknesses is one of the key tools for predicting auditors' behavior when facing fraud.

The use of modern technologies such as artificial intelligence and machine learning also serves as an effective tool for predicting auditors' behavior. These technologies can identify anomalies in data patterns and help auditors detect fraud more quickly. Particularly, the use of machine learning to analyze large and complex datasets can reveal unusual patterns and trends, enabling auditors to simulate fraud indicators even before fraud actually occurs. These technologies are particularly effective in detecting financial anomalies and predicting unexpected changes in data, thus facilitating fraud prevention.

The review of information systems and internal controls is also of critical importance. A robust information system and effective internal controls can thwart many attempts at fraud. Such systems ensure accurate recording and tracking of all transactions, enabling rapid detection of manipulation or fraud attempts. Moreover, using visual methods and imaging, analyzing trends and ratios, and comparing current data with historical data are effective techniques for identifying abnormal behaviors. These techniques assist auditors in identifying sudden or unusual changes and tracking them for further investigation.

In addition, the use of big data analytics and complex algorithms enables auditors to better detect financial trends and anomalies and effectively predict fraudulent behaviors. These tools can automatically analyze large volumes of data and provide alerts regarding potential fraud risks.

Interviews and consultations with managers and staff, review of documents and evidence, and deep analysis of financial information are also complementary methods for gaining more comprehensive and detailed insights when facing fraud. These methods help auditors gather additional information about the organizational environment and internal relationships, resulting in more accurate decision-making.

Overall, the combination of these methods can strengthen auditing processes and lead to more accurate prediction of auditors' behavior in confronting fraud and financial misconduct.

4. Discussion and Conclusion

This study explored the important role of auditing in contemporary companies. Auditing, as a key process in ensuring the accuracy of financial statements and compliance with financial laws and regulations, plays a fundamental role in risk management, enhancing credibility, and increasing public trust. This process helps companies align with national and international accounting standards and achieve transparency and accuracy in their financial reporting. Specifically, auditors, as supervisors of this process, are responsible for ensuring that financial information is reported correctly and reliably. Such oversight is crucial in today's complex financial world, where regulations and standards are constantly evolving, and companies must adhere to them meticulously.

One of the major challenges auditors face is managing conflicts of interest. Often, auditors may be subjected to pressures from management or other stakeholders, which can influence audit outcomes. Moreover, the complexities of financial regulations and the necessity of using advanced technologies for more precise and efficient audits represent additional challenges. The impact of technology in auditing is increasing daily, requiring auditors to leverage new tools for data identification and analysis to guarantee the accuracy and reliability of audit results. A greater challenge arises when auditors encounter fraud and financial misconduct. Detecting fraud and misconduct requires specific skills and knowledge of modern detection methods. In such conditions, auditors must effectively utilize new tools and technologies to identify and combat fraud.

In this regard, auditor training and awareness of the latest methods for detecting fraud and financial misconduct are particularly critical. The use of modern technologies, especially data analysis software and artificial intelligence systems, can assist auditors in identifying fraud threats and predicting fraudulent behaviors using more accurate data and advanced techniques. Furthermore, strengthening internal control systems and maintaining effective interactions with managers and other stakeholders is essential for preventing fraud and financial misconduct. This process can significantly enhance audit quality and prevent violations.

One of the major challenges for auditors is predicting their behavior when confronting fraud and financial misconduct. This prediction is especially important because the accuracy and stability of prediction methods can have a direct impact on audit outcomes. To accurately and optimally assess auditors' behavior in this area, using combined methods and data analysis is essential. In this study, to present a comprehensive model for evaluating the accuracy and stability of prediction methods, the meta-synthesis method was utilized. By reviewing reputable articles from recent years, 12 factors influencing auditors' behavior prediction and 10 effective methods for predicting fraudulent behavior were identified. These factors and methods were presented within a final model that can greatly assist auditors and researchers in improving auditing processes and predicting fraudulent behaviors. Ultimately, this model, as a practical tool, can contribute to enhancing audit quality and increasing public trust in auditing processes. By using advanced methods for predicting auditors' behavior when facing fraud, organizations will be able to manage financial risks more effectively and efficiently, thereby preventing fraud. These results can serve as a foundation for improving auditing practices in the future and directly impact the enhancement of financial transparency and the elevation of accounting standards.

In summary, it can be stated that the present study examined the components influencing the accuracy and stability of various methods in predicting auditors' behavior and the applicable methods for predicting auditors' behavior when confronting fraud. The results of this investigation indicate that multiple and diverse factors can impact the accuracy and stability of predictions in auditing. Among the most critical components influencing the accuracy and stability of various methods in predicting auditors' behavior are the professional background and

experience of the auditor [4, 22]. Auditors with greater experience and longer tenure in the auditing profession generally perform better in predictions due to their superior ability to accurately detect problems and deliver precise reports.

Commitment to professional ethics and attention to fraud risks are also considered key components [4]. Auditors who adhere to ethical principles and can identify fraud-related risks typically produce more reliable and credible results. Additionally, managerial approaches and organizational culture play significant roles in auditors' behavior. Organizations with strong cultures of financial transparency and precise information provide environments where auditors can work with greater confidence [22].

Moreover, laws and regulations governing the auditing profession and interaction with judicial authorities [4] establish a legal and structured framework for auditing activities that significantly contribute to the stability and accuracy of auditors' predictions. The ability to analyze data, draw accurate inferences, and withstand pressure and stress are also factors that can improve the accuracy and stability of predictions [23].

In response to the question regarding methods proposed for predicting auditors' behavior when facing fraud, risk assessment and identification of weaknesses can be considered the first and fundamental method. This method involves evaluating the organization's financial and operational status, identifying weaknesses in internal controls, and pinpointing high-risk areas [24]. The use of up-to-date technologies such as artificial intelligence and machine learning also helps auditors recognize anomalies in data and detect fraud earlier.

Reviewing information systems and internal controls is another effective method [25]. Robust information systems and effective internal controls can thwart many fraudulent attempts. Using visual and imaging methods, trend and ratio analysis, and comparison with previous data are also valuable tools in predicting auditors' behavior [26]. These techniques enable the identification of anomalies and unusual patterns.

Employing analytical techniques such as big data analysis and complex algorithms allows auditors to better detect financial trends and anomalies. Lastly, interviews and consultations with managers and employees [24], document and evidence review (Liu & Wang, 2009), and deep analysis of financial information [22] are complementary methods for gaining deeper and more comprehensive insights when dealing with fraud. These methods help auditors acquire more information about the organizational environment and internal relationships, thereby facilitating more accurate decision-making.

Overall, the integration of these factors and methods leads to the development of a stable and accurate system for predicting auditors' behavior, helping organizations prevent fraud and other financial irregularities. This conclusion underscores the importance of considering diverse components and utilizing advanced methods to improve auditing performance.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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References

[1] W. Wahidahwati and N. F. Asyik, "Determinants of auditor's ability in fraud detection," *Cogent Business & Management,* vol. 9, no. 1, 2022, doi: 10.1080/23311975.2022.2130165.

[2] N. Singh, K. H. Lai, M. Vejvar, and T. E. Cheng, "Data-driven auditing: A predictive modeling approach to fraud detection and classification," *Journal of Corporate Accounting & Finance,* vol. 30, no. 3, pp. 64-82, 2019, doi: 10.1002/jcaf.22389.

[3] Z. Ahmadi and Z. Pourzamani, ""The Role of Emotional, Organizational, and Spiritual Intelligence in Auditors' Judgment and Decision-Making in Auditing Firms"," *Nashriyeh Ghazavat va Tasmim-Giri dar Hesabdari (Journal of Judgment and Decision-Making in Accounting),* vol. 3, no. 9, 2024.

[4] J. Khaksar, M. Salehi, and M. Lari DashtBayaz, "The relationship between auditor characteristics and fraud detection," *Journal of Facilities Management,* vol. 20, no. 1, pp. 79-101, 2022, doi: 10.1108/JFM-02-2021-0024.

[5] W. A. Sahla and A. Ardianto, "Ethical values and auditors fraud tendency perception: testing of fraud pentagon theory," *Journal of Financial Crime,* vol. 30, no. 4, pp. 966-982, 2023, doi: 10.1108/JFC-04-2022-0086.

[6] K. Amin, J. D. Eshleman, and P. Guo, "Investor sentiment, misstatements, and auditor behavior," *Contemporary Accounting Research,* vol. 38, no. 1, pp. 483-517, 2021, doi: 10.1111/1911-3846.12616.

[7] F. Agustina, N. Nurkholis, and M. Rusydi, "Auditors' professional skepticism and fraud detection," *International Journal of Research in Business and Social Science (2147-4478),* vol. 10, no. 4, pp. 275-287, 2021, doi: 10.20525/ijrbs.v10i4.1214.

[8] R. Iskandar, M. S. Ramadhan, M. I. Mansyuri, and R. Ramadhan, "Determinants Of Auditor's Ability To Detect Fraud: Internal And External Factors," *International Journal of Science, Technology & Management,* vol. 3, no. 1, pp. 179-195, 2023, doi: 10.46729/ijstm.v3i1.452.

[9] F. T. A. Gilles, "Explanatory factors of the dysfunctional behavior of the collaborators of the auditor in Cameroon," *Journal of Accounting, Finance & Management Strategy,* vol. 18, no. 1, pp. 35-69, 2023.

[10] M. Kasper and J. Alm, "Audits, audit effectiveness, and post-audit tax compliance," *Journal of Economic Behavior & Organization,* vol. 195, pp. 87-102, 2022, doi: 10.1016/j.jebo.2022.01.003.

[11] M. R. Abbasi Estemal and H. Rastekar Rezaei, ""The Impact of Company Performance on the Relationship Between Professional Judgment and Auditor Fraud Detection"," 2023.

[12] R. Alikhani and M. Kordmanjiri, ""The Dangers of Collusion and Fraud by Accountants and Auditors and the Responsibility of Auditors in Relation to It"," 2023: Babol.

[13] A. Shams, ""The Role of Organizational Skepticism in the Relationship Between Fraud Detection Risk and Auditors' Professional Skepticism"," *Faslnameh-ye Ghazavat va Tasmim-Giri dar Hesabdari va Hesabrasi (Journal of Judgment and Decision-Making in Accounting and Auditing),* vol. 1, no. 2, 2022.

[14] S. S. Halbouni, "The role of auditors in preventing, detecting, and reporting fraud: The case of the U nited A rab E mirates (UAE)," *International Journal of Auditing,* vol. 19, no. 2, pp. 117-130, 2015, doi: 10.1111/ijau.12040.

[15] M. H. Hosseini Sarani, F. Ahmadi, and A. Jamali, ""Investor Sentiment, Financial Statement Misstatements, and Auditor Behavior"JO - Faslnameh-ye Pazhouhesh-ha-ye Mali va Raftari dar Hesabdari (Journal of Financial and Behavioral Research in Accounting)," vol. 2, no. 2, 2022.

[16] Z. Ramezani Asl and Y. Kamyabi, ""The Boundary Between Integrity and Compliance with the Code of Professional Conduct of Auditors in Financial Reporting"," 2022: Tehran.

[17] R. Abdi and F. Alipanahi, ""Examining the Relationship Between the Complexity of Accounting Information with Auditor Rotation and Fraud in Financial Statements"," 2022: Chabahar.

[18] J. Tian, H. Wang, and M. Wang, "Data integrity auditing for secure cloud storage using user behavior prediction," *Computers & Security,* vol. 105, 2021, doi: 10.1016/j.cose.2021.102245.

[19] M. Riany, C. Sukmadilaga, and D. Yunita, "Detecting Fraudulent Financial Reporting Using Artificial Neural Network," *Journal of Accounting Auditing and Business,* vol. 4, no. 2, 2021, doi: 10.24198/jaab.v4i2.34914.

[20] M. Mahsun, "Enhancing auditor's fraud risk assessment competency through forensic accounting training," Universiti Teknologi MARA (UiTM), 2022.

[21] M. H. Rifai and A. W. Mardijuwono, "Relationship between auditor integrity and organizational commitment to fraud prevention," *Asian Journal of Accounting Research,* vol. 5, no. 2, pp. 315-325, 2020, doi: 10.1108/AJAR-02-2020-0011.

[22] M. Umar, S. M. Sitorus, R. L. Surya, E. R. Shauki, and V. Diyanti, "Pressure, dysfunctional behavior, fraud detection and role of information technology in the audit process," *Australasian Accounting, Business and Finance Journal,* vol. 11, no. 4, pp. 102-115, 2017, doi: 10.14453/aabfj.v11i4.8.

[23] J. L. Bierstaker, R. G. Brody, and C. Pacini, "Accountants' perceptions regarding fraud detection and prevention methods," *Managerial Auditing Journal,* vol. 21, no. 5, pp. 520-535, 2006, doi: 10.1108/02686900610667283.

[24] F. T. DeZoort and P. D. Harrison, "Understanding auditors' sense of responsibility for detecting fraud within organizations," *Journal of Business Ethics,* vol. 149, pp. 857-874, 2018, doi: 10.1007/s10551-016-3064-3.

[25] C. J. Chang and Y. Luo, "Data visualization and cognitive biases in audits," *Managerial Auditing Journal,* vol. 36, no. 1, pp. 1-16, 2021, doi: 10.1108/MAJ-08-2017-1637.

[26] S. W. U. Hassan, S. Kiran, S. Gul, I. N. Khatatbeh, and B. Zainab, "The perception of accountants/auditors on the role of corporate governance and information technology in fraud detection and prevention," *Journal of Financial Reporting and Accounting,* 2023, doi: 10.1108/JFRA-05-2023-0235.