

# Fraud Prevention: Exploring the Contributions of Forensic Accounting, Investigative Auditing, and Whistleblowing Effectiveness

Sugeng Riadi<sup>1</sup>, Puja Aprilian<sup>2</sup>

<sup>1,2</sup>. Management and Business, Batam State Polytechnic, Indonesia

Email: <sup>1</sup>sugeng@polibatam.ac.id, <sup>2</sup>aprilianpuja@gmail.com,

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## ABSTRACT

**Purpose** – This research is aimed at investigating whether fraud prevention is affected by factors such as forensic accounting, investigative audits, and the effectiveness of the whistleblowing system.

**Methodology/approach** – Data was collected through a questionnaire survey administered to all auditors employed by the State Development Audit Agency of Riau Islands. The gathered data underwent a series of assessments, including validity tests, reliability tests, and classical assumption tests. The research employed a quantitative approach, utilizing multiple linear regression analysis for data analysis.

**Findings** – The findings of this study reveal that forensic accounting significantly influences fraud prevention, whereas investigative audits and the effectiveness of the whistleblowing system do not exhibit a significant impact on fraud prevention.

**Novelty/value** – These diverse research findings underscore the complexity of the relationship between forensic accounting, investigative audits, the whistleblowing system, and their impact on fraud prevention.

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## INTRODUCTION

Based on data from the Corruption Eradication Commission, there have been 1,310 cases of fraud from 2004 to October 2022, with 79 of these cases occurring in 2022. The Transparency International report for 2021 reveals that Indonesia's Corruption Perception Index (CPI) scored 38, ranking the country 96th out of 180 countries. Additionally, a survey report conducted by the Association of Certified Fraud Examiners (ACFE) Indonesia in 2019 found that corruption was the most prevalent form of fraud in Indonesia, accounting for 64.4% of all surveyed cases, resulting in losses exceeding 373 billion rupiah.<sup>1</sup> According to Indonesia Corruption Watch's report, a total of 271 corruption cases were successfully prosecuted in 2019, resulting in state losses amounting to IDR 8.4 trillion. The analysis of fraud data in Indonesia has underscored the growing importance of the forensic accounting and investigative audit

<sup>1</sup> Accessible: <https://acfe-indonesia.or.id/wp-content/uploads/2021/02/SURVEI-FRAUD-INDONESIA-2019.pdf>

professions. This trend is further supported by the increasing number of Public Accounting Firms that have expanded their services to include forensic audit and investigation for their clients.<sup>2</sup>

Based on prior research conducted by various scholars, the influence of forensic accounting, investigative audits, and the whistleblowing system on fraud prevention has yielded mixed findings. In the context of forensic accounting, Lestari et al., (2019) ; Okoye et al., (2019) ; Oyebisi et al., (2018) ; reported that forensic accounting plays a crucial role in various company departments, significantly impacting fraud prevention. However, on the contrary, Alfari & Jaeni, (2022) found no significant effect of forensic accounting on fraud prevention. Conversely, Ihulhaq et al., (2019) discovered a positive influence of forensic accounting on fraud prevention.

Regarding investigative audits, Mulyadi & Nawawi, (2020) ; Ulimsyah et al., (2021) ; Ihulhaq et al., (2019) show that there is a positive influence of investigative audits on fraud prevention. The opposite results from other research by Lestari et al., (2019) ; Alfari & Jaeni, (2022) found that investigative audits and fraud prevention had no effect. In the case of the whistleblowing system, Lestari et al., (2019) ; Candra & Nyoman, (2020) ; Hamilah et al., (2022) found the influence of the whistleblowing system on fraud prevention. Research by Agus Sudarma et al., (2019) explains that a culture of employee honesty through reporting fraud using a whistleblowing system is effective in helping companies identify potential fraud early, thus having a positive and significant impact on fraud prevention. Different results were shown from research by Hutami Ningsih (et al., 2022) which found different results, that fraud prevention was not influenced by the whistleblowing system.

These diverse research findings underscore the complexity of the relationship between forensic accounting, investigative audits, the whistleblowing system, and their impact on fraud prevention. Further research is needed to gain a comprehensive understanding of these dynamics. Based on the previously outlined background, the research formulates a problem statement examining whether there is a reconfirmed influence of forensic accounting, investigative audits, and the whistleblowing effectiveness on fraud prevention. Based on the formulated research problems, there are three research objectives: firstly, to reexamine and determine the influence of forensic accounting; secondly, to reevaluate and ascertain the impact of investigative audits; and thirdly, to assess the influence of whistleblowing effectiveness on fraud prevention.

## LITERATURE REVIEW

To address this issue, this research is grounded in several grand theories that are relevant to the study, namely the fraud pentagon theory, agency theory, and the theory of planned behaviour. The fraud pentagon theory was initially introduced by (Horwath, 2011). This theory says there are five important steps that make someone commit fraud, namely pressure, opportunity, justification, arrogance and competence. In the process, audits are required to identify and understand conditions where actual fraud is likely to occur. The fraud pentagon theory is the basis for investigative auditors in finding evidence that fraud has occurred. Auditors must be qualified to detect suspected fraud.

Agency theory was originally proposed by Jensen & Meckling (1976) is a theory of differences in interests between the company or organization and the agent. Agency theory is a theory that arises when business activities are not always managed directly by the business owner. An agency relationship is a contract where a company asks an agent to perform services on behalf of the company so that they have the authority to make the best decisions for the company. (Jensen & Smith, 1984) . Agents are in a position to act to maximize personal profits, so they do not take sides with certain elements. In

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<sup>2</sup> Accessible: <https://onlinelearning.binus.ac.id/2022/08/08/mengenal-akuntansi-forensik-apa-saja-perannya/>

involvement with fraud prevention, an auditor (agent) is employed by an entity or organization for the purpose of investigating possible fraud within the entity or organization. Therefore, auditors must have experience, knowledge and professionalism when carrying out audits aimed at detecting fraud.

The theory of planned behaviour, initially proposed by Ajzen, (1991) elucidates the factors leading to the emergence of behavioural intentions. Behaviour is influenced by volitional factors that pertain to the decision of whether to engage in an action or abstain from it. During the deliberation process, the intention to execute a specific behaviour is shaped. Both internal and external factors within a company can also influence an individual's inclination and conviction regarding engaging in fraudulent activities (Wardah et al., 2022)

In their role, forensic accounting must stand alone, be responsible and competent in carrying out their duties. Forensic accounting is related to agency theory, where agency theory explains that business operations are not always managed directly by the business owner. An independent third party is needed to investigate irregularities within an organization or company. With forensic accounting, it is hoped that fraud can be prevented by detecting it as early as possible. Previous research by Lestari et al., (2019) ; Oyeibisi et al., (2018) ; Okoye et al., (2019) ; Ihulhaq et al., (2019) found that fraud prevention influenced by forensic accounting. Based on theory and previous research results, the first hypothesis is proposed, namely:

**H<sub>1</sub>:** Forensic accounting has an effect on fraud prevention

In its role, investigative audits track and investigate potential fraud in an organization or company. Fraud pentagon theory is related to investigative auditing, where the fraud pentagon theory model is used to explain the potential or possibility of fraud occurring in business. This theory explains that there are three stages that influence a person in committing fraud, namely pressure, opportunity, justification, arrogance and competence. Investigative audits play a role in systematically finding, searching and collecting evidence for the purpose of clarifying whether the behaviour occurred or not and who the perpetrators are in the hope of avoiding fraud in an organization or business. These results are strengthened by previous research by Mulyadi & Nawawi, (2020) ; Ulimsyah et al., (2021) ; Ihulhaq et al., (2019) found that fraud prevention was influenced by investigative audits. Based on theory and previous research results, a second hypothesis was created, namely:

**H<sub>2</sub>:** Investigative audit has an effect on fraud prevention

A whistleblowing system is a control in the form of a quiet, anonymous reporting channel when reporting fraud (Wardah et al., 2022) . Several whistleblowing reports highlight directly or indirectly the interaction between individual attention and the attention of others, which is related to the theory of planned behaviour, where this theory explains that we will think about the consequences of an activity before getting directly involved. Research conducted by Lestari et al., (2019) ; Candra & Nyoman, (2020) ; Agus et al., (2019) ; Hamilah et al., (2022) found that fraud prevention was influenced by the implementation of a whistleblowing system. Based on theory and previous research results, a third hypothesis is proposed, namely:

**H<sub>3</sub>:** The whistleblowing system effectiveness has an effect on fraud prevention

## **METHOD**

In this research, a quantitative approach was used with a population of all auditors in State Development Audit Agency, Riau Islands Province. This research will present the results of statistical tests by testing the hypothesis whether fraud prevention is influenced by forensic accounting, investigative audits, and the effectiveness of the whistleblowing system. The data obtained was then processed using SPSS 25 software with the help of Microsoft Excel. Next, the research data was analysed using multiple linear analysis. The t test is carried out to study the influence of each independent variable (X) on the

dependent variable (Y), and the coefficient of determination test ( $R^2$ ) is to test the independent variable which can influence and explain the dependent variable in the research.

In this study, the independent variables employed are forensic accounting, investigative audit and whistleblowing system. Firstly, forensic accounting is the application of accounting and auditing discipline to legal matters for legal resolution in or out of court (Tuanakotta, 2010). Forensic accounting variables are measured by indicators of basic forensic knowledge, special areas required, important traits and characteristics, main skills, and abilities that need to be improved (Lestari et al., 2019)

Secondly, investigative audit; An investigative audit is an effort to prove. Fraud investigation and examination are used interchangeably as synonyms (Tuanakotta, 2010). Investigative audit variables are measured by indicators of investigative audit procedures and investigative audit techniques (Lestari et al., 2019). Thirdly, Whistleblowing System; A whistleblowing system is a system for reporting fraud that can harm the organization or stakeholders (KNKG, 2008) The effectiveness of the whistleblowing system is measured by indicators (KNKG, 2008) namely the willingness to become a fraud reporter and the effectiveness of the whistleblowing system (Lestari et al., 2019). For the dependent variable in this study, it is fraud prevention; fraud is deception, concealment, and abuse of trust (Tuanakotta, 2010). The fraud prevention variable is measured by the COSO indicator (1992), namely studying the symptoms of fraud, knowledge about ethics and anti-fraud (Lestari et al., 2019).

## RESULT AND DISCUSSION

Based on the results of the validity test which includes 40 fraud prevention questions, all statements are declared valid. Apart from that, the results of the reliability test were declared reliable because the Cronbach Alpha was greater than 0.6 so that the results of the survey statements used were declared reliable. Furthermore, classical assumption tests have been conducted on the research data, and the results of these tests indicate that the data follows a normal distribution and is free from issues such as multicollinearity and heteroscedasticity.

Table 1. Validity & Reliability Test

No	Test	Tools	Sig.	Results
1	Validity	Product Moments	0.303*	Valid
2	Reliability	Cronbach's Alpha	0.747	Reliable

Source: Data Processed by Researcher, 2023

Table 2. Classical Assumption Test

No	Test	Tools	Sig.	Results
1	Normality	Kolmogorov-Smirnov	0.200	Data is normally distributed
2	Multicollinearity	Tolerance/VIF	>0.1/<10	Does not occur
3	Heteroscedasticity	Scatter Plots	Spread	Does not occur

Source: Data Processed by Researcher, 2023

This research comprises three independent variables (X) and one dependent variable (Y), and multiple linear analysis was conducted.

Table 3. Regression Equation Test

Coefficients
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Model	Unstandardized Coefficients	
	B	Std. Error
(Constant)	2,425	4,077
Accounting Forensic	0.237	0.116
Audit Investigative	0.103	0.112
Effectiveness of the Whistleblowing System	0.216	0.173

Source: Data Processed by Researcher, 2023

The multiple regression equation used in this research is as follows:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$

$$Y = 2.425 + 0.237X_1 + 0.103X_2 + 0.216X_3$$

Table 4. Partial T Test Results

Model	t	Sig	t table
(Constant)	0.595	0.556	
Forensic Accounting (X <sub>1</sub> )	2,044	0.048	2,028
Investigative Audit (X <sub>2</sub> )	0.917	0.365	2,028
Effectiveness of Whistleblowing System (X <sub>3</sub> )	1,250	0.219	2,028

Source: Data Processed by Researcher, 2023

The results of partial hypothesis testing can be analysed that in the first hypothesis the significance value is  $0.048 < 0.05$  and the calculated t value is greater than the table, namely  $2.044 > 2.028$ , which means fraud prevention (Y) significantly influenced by forensic accounting (X<sub>1</sub>). From these results, the first hypothesis of this research is accepted. Furthermore, the second hypothesis has a significance value of  $0.365 > 0.05$  and the calculated t value is smaller than the t table, namely  $0.917 < 2.028$ , with these results the investigative audit variable (X<sub>2</sub>) has no significant effect on fraud prevention (Y). Based on this analysis, the second hypothesis is rejected. whistleblowing system effectiveness variable (X<sub>3</sub>) has no significant effect on fraud prevention (Y). So, the third hypothesis is rejected.

Table 5. Determination Coefficient Test

Model Summary <sup>b</sup>		
Model	R	R Square
1	.690 <sup>a</sup>	0.438

Source: Data Processed by Researcher, 2023

In this study, researchers used the R square test to measure the level of linear relationship between the independent variables studied and the dependent variable. The results of the analysis show that only 43% of this variable is influenced, so it can be interpreted that 57% is influenced by other variables.

### **Forensic accounting has an effect on fraud prevention**

The statistical results of the t test can be analysed, namely that forensic accounting (X<sub>1</sub>) has a significant effect on fraud prevention. Proven by the significance of 0.048 where this value is smaller than 0.05, and the calculated t value is greater than the table, namely  $2.044 > 2.028$ . These results are supported by research from Lestari et al., (2019) ; Oyebisi et al., (2018) ; Okoye et al., (2019) ; Ihulhaq et al., (2019) stated that forensic accounting and fraud prevention have an influence.

The application of forensic accounting can help better prevent and detect fraud in public sector organizations. The occurrence of fraud causes public doubts about state institutions. Therefore, state institutions need an auditor who has forensic abilities with analytical skills, investigating evidence or cases through legal resolution at the court table. These results contradict the research of Alfia & Jaeni, (2022) . which states that forensic accounting and fraud prevention have no effect.

#### **Investigative audit has an influence on fraud prevention**

The significance value in the second hypothesis test is  $0.069 > 0.05$ , and the calculated t value is smaller than the t table, namely  $0.917 < 2.028$ . With this it can be analyzed that fraud prevention is not significantly influenced by investigative audits. These results are supported by research results Lestari et al., ( 2019) and (Alfia & Jaeni, 2022) that fraud prevention is not influenced by investigative audits. Fraudsters generally cover up their fraud in various clever ways, so that even experienced investigators can be fooled.

Investigative testing is basically not carried out immediately because the signs found are generally still temporary, so an in-depth study is needed to obtain evidence that is strong enough to continue a more in-depth investigation. This result is refuted by the research results of Mulyadi & Nawawi, (2020) ; Ulimsyah et al., (2021) ; and Ihulhaq et al., (2019) whose results show that fraud prevention is influenced by investigative audits.

#### **The effectiveness of the whistleblowing system influences fraud prevention**

Statistical data on the results of the hypothesis test shows a significance figure of  $0.307 > 0.05$ , and the calculated t value is smaller than the t table value, namely  $1.250 < 2.028$ . With this result, fraud prevention is not significantly influenced by the effectiveness of the whistleblowing system. This is confirmed by research by Ningsih et al., (2022) ; and (Wardah et al., 2022) which revealed that there was no influence of the whistleblowing system on fraud prevention.

The doubts faced by whistleblowers are a sense of confidence and consequences regarding the whistleblower system, especially regarding the guarantee of data security provided by the reporter. Whistleblowers hope that managers can guarantee the safety of whistleblowers so that they feel confident when reporting to the whistleblowing system (Wardah et al., 2022) . The results of this research contradict the research results of Lestari et al., (2019) ; Candra & Nyoman, (2020) ; Agus et al., (2019) ; and Hamilah et al., (2022) who stated that the whistleblowing system has an influence on fraud prevention.

### **CONCLUSION**

The results of hypothesis testing in this research yield the following conclusions: forensic accounting exerts a significant influence on fraud prevention, investigative audit lacks a significant impact on fraud prevention, and the effectiveness of the whistleblowing system does not significantly affect fraud prevention. Nevertheless, it is crucial to acknowledge several limitations of this study. Firstly, the research was conducted at a single location with a limited number of respondents, leading to less specific data outcomes. Additionally, the study exclusively focused on factors related to forensic accounting, investigative audits, and the effectiveness of the whistleblowing system for fraud prevention analysis.

Therefore, future research endeavours should consider conducting multi-location studies, expanding the sample size and population to comprehensively identify the primary factors influencing fraud prevention. Furthermore, it is advisable for future researchers to incorporate research instruments beyond questionnaires to enhance control over the alignment between respondents' answers and their actual circumstances.

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