



Whistleblowing's effectiveness in preventing fraud through forensic audit and investigative audit

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Abstract

This research aims to analyze and examine the impact on the Forensic Audit of the efficiency of the Wistleblowing system. The role of Wistleblowing in Investigative Audit and preventing fraud. Results of the Fraud Prevention forensic audit. The Effects of Fraud Prevention Investigative Audits. Descriptive analysis and path analysis are the research data, with a total sample size of 135 respondents assisted by the AMOS program. The results showed that the effectiveness of the whistleblowing system had a substantial positive direct effect on the forensic audit. There is a significant positive immediate impact on investigative auditing at the point of the whistleblowing system. The significance of the system of whistleblowing has a positive and important effect on the prevention of fraud. The direct positive impact of forensic audits on fraud prevention is substantial. Investigative audits have a positive and substantial immediate effect on preventing fraud. The effectiveness of the whistleblowing system through forensic audits has a positive and important effect on fraud prevention. The point of the whistleblowing scheme has a positive and important direct effect through investigative auditing on fraud prevention.



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1. Introduction

A problem that often occurs in government and private organizations is the practice of fraud (Hajering et al., 2019; Muslim et al., 2019; Rahim et al., 2020). The high number of cases of fraud involving central and regional governments in Indonesia has led to the assumption that fraud has become a culture that continues to occur in various aspects of government today (Surjandari & Martaningtyas, 2015; Puspasari, 2015). Indonesia Corruption Watch noted that there were 22 DPR members involved in corruption cases between 2014 and 2019. (Sihombing, 2019). In fact, 41 members of the DPRD committed massive corruption in one province in Indonesia in connection with the approval of the Proposed Regional Regulation concerning amendments to the

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Regional Revenue and Expenditure Budget. Within the scope of provincial and local governments, the Corruption Eradication Commission has named 100 leaders as suspects (KPK). Of these, eighteen are governors, and the remainder are regents. 2,357 State Civil Servants (ASN) have been found guilty of corruption by the Corruption Eradication Commission. This resulted in 891 individuals being disrespectfully dismissed, while 1,466 or 62% did not.

Transparency International's Corruption Perception Index (CPI) data ranks Indonesia 96th out of 180 countries with 37 CPI points in 2017. These points have not been altered since 2016. In order to assess the index, the CPI uses a scale of 0-100. In every country, corruption. A value of 0 is the most corrupt and 100 is the cleanest one for crime (Detiknews, 2018). This index demonstrates that the score for Indonesia is still low. Indonesia can still not be declared a country free from corruption. Executive, legislative and judicial officials in Indonesia may commit corruption, but people can do it (Hamdani, Kumalahadi, & Urumsah, 2017). In the public sector, however, most cases of crime occur. In this case, for public sector institutions, the role of the forensic accountant is essential.

Fraud can occur when organizational employees take actions that are not in the interests of the company (Sayyid, 2014; Mappamiring, 2020). Manipulating financial statement records, deleting documents, and marking up profits, which can harm the finances or economy of the country, are some of the modes of fraud that are often carried out. One of the government's efforts to address and uncover fraud in government agencies or the public sector is therefore to conduct investigative audits and to apply forensic accounting in its examinations (Rahim et al., 2018). General audits or audits of financial statements cannot disclose fraud; a more specific approach, such as an investigative audit, is needed.

In the process of searching and proving the evidence collected, relevant and suitable sources are needed to obtain evidence that can be used in court. The information provided by whistleblowers is one of the most useful sources or instruments important in preventing and detecting fraud, corruption and other malpractice (Dye, 2007; Transparency International, 2010). Whistleblowing is a disclosure made to specific individuals or organizations by staff or employees of an organization for illegal, immoral, or illegal practices under the control of company leadership (Near & Miceli, 1985).

In fraud risk management in an organization, whistleblowing policies and a proper internal audit function are currently important considerations. Research (Adesina et al., 2020; Syahputra & Urumsah, 2019; Mamahit & Urumsah, 2018; Ihulhaq et al., 2019; Sihombing et al., 2019; Carolina, 2019; Lestari & Sukanto, 2019) have all found that forensic and investigative audits have an important influence and role in the disclosure of fraud on the object being studied. Ratu & Novita (2020) found in their research that the application of forensic accounting and investigative auditing had a major impact on the detection of fraudulent procurement of goods and services. In government systems, forensic auditors play an important role in investigating suspicious financial activity and tracking actual fraud (Salleh & Aziz, 2013). The results of Okoyo & Gbegi (2013) research concluded that forensic accounting has a significant effect on the reduction of cases of fraud. Rufus et al. (2015) stated that collecting evidence of suspected fraud is the purpose of a fraud investigation. Investigative audit or forensic accounting refers to accounting or auditing science in which an investigative or forensic discipline is involved (Sopian, 2017). This view is based on research conducted by Sayyid (2014), which states that a series of fraud review relationships are forensic accounting and investigative auditing.

An unqualified opinion that becomes a public accountant/external auditor's opinion means that the audited information is trustworthy and does not involve any doubts. The theory of Fraud Diamond explains that fraud is caused by four variables: incentives, opportunities, rationalization, and skills (Wolfe & Hermanson, 2004). Incentives refer to something that occurs in the personal life of a person and therefore create motivating opportunities for cheating (Wolfe & Hermanson, 2004). Fraud is categorized into three types by Albrecht & Zimbelman (2012): misuse of company assets, fraudulent financial statements and corruption. The use of office facilities for personal needs and financial accounts are examples of the misuse of company assets. Fraud can be in the form of financial statements being manipulated to track officials. Corruption, meanwhile, is an act by someone to enrich themselves or others with bribes, kickbacks, tender plots, and illicit gratuities. Crime can also be used to make personal use of the budget, such as criminal contract procedures, illegal purchases and illegal payments (Palmer, 2008).

Prosocial organizational behavior as behavior or actions by members of an organization against individuals,

groups, or organizations aimed at improving the welfare of individuals, groups, or organizations is the theory underlying the whistleblowing variable (Brief & Motowidlo, 1986). Prosocial behavior is also defined as any positive social behavior aimed at benefiting others or giving them benefits (Penner et al., 2005). Prosocial behavior can be motivated by a self-care motive and may also be acts of assistance performed purely without the desire to profit or ask for a response. Whistleblowing is mentioned as one of 13 forms of prosocial organizational behavior by Brief & Motowidlo (1986). Whistleblowing can be seen as prosocial behavior because other people and the whistleblower themselves benefit from this behavior. Prosocial behavior can be used to clarify individual ethical decision-making related to whistleblowing intentions (Dozier & Miceli) (1985). Miceli & Near (1991) suggest that whistleblowers report alleged violations to assist victims and provide the organization with benefits because they believe that these violations are not based on the values of the organization. A whistleblower is, in principle, a prosocial behavior that emphasizes helping other parties make a healthy organization or company.

Belief is linked to behavior by the psychological theory proposed by Ajzen (1991). This theory explains how it is possible to establish an interest in action and behavior. Behavior interest is defined as an indication of the readiness of an individual to perform a behavior, or it can be assumed as something that precedes action. Action can be interpreted as a visible reaction from the person to a given goal. In addition, Ajzen (1991) formulated three behavior shaping predictors:

1. The attitude towards action is the positive or negative evaluation of the performance of certain behaviors by an individual.
2. Subjective norms are individual perceptions of particular behaviors influenced by important judgments of other people.
3. Perceived behavioral control is the ease or difficulty of particular actions being performed.

The theory of ethical climate work is a theory established as a cognitive moral theory by Victor & Cullen (1988) and adopted by Lestari (2017). This theory has two dimensions, namely an ethical dimension of approach and an ethical dimension of reference. Three approaches consist of the first dimension of ethical climate work theory: egoism, benevolence, and principle. Organizational members tend to consider personal gain when faced with ethical dilemmas in organisations with selfish characteristics.

Whistleblowing is identical to the behavior of an individual who reports an act that in the organization where he works to have access to adequate information about the occurrence of indications of such corruption indicates a criminal act of corruption (Su'un et al., 2020). Whistleblowing records problems with crime and other scandals that violate the law and cause society harm/threat. The theory of prosocial behavior (prosocial behavior) justifies any positive social action to benefit others or to provide benefits (Penner et al., 2005). The substance of this theory is motivated by the motive of caring for the person, and it can also be an act of help that is performed purely without the desire to take advantage or request compensation.

Fraud can be detected by maximizing the application of the whistleblowing system (Arianto, 2020; Armando, 2018; Ariyanto & Bone, 2020; Lestari, Widaryanti & Sukanto, 2019). Jeon, (2017) reveals that whistleblowers play an important role in exposing the government's unethical behavior and making the government more transparent and responsible. The results of Somers & Casal (2011) show that fraud is not significantly affected by whistleblowing; even employees tend to be unwilling to whistleblow. Robinson et al., (2011) stated that compared to theft, employees tend to report fraudulent financial statements.

Fraud can be identified by maximizing the application of the whistleblowing system (Arianto, 2020; Armando, 2018; Ariyanto & Bone, 2020; Lestari, Widaryanti & Sukanto, 2019). Jeon, (2017) reveals that whistleblowers play a vital role in exposing the government's unethical behavior and making the government more transparent and responsible. The results of Somers & Casal (2011) show that fraud is not significantly affected by whistleblowing; even staff tend to be unwilling to whistleblow. Robinson et al., (2011) indicated that compared to theft, staff tend to report fraudulent financial statements.

H1 : Whistleblowing effectiveness has a positive and significant effect on forensic audit.

H2 : Whistleblowing effectiveness has a positive and significant effect on investigative audit.

H3 : The effectiveness of the whistleblowing system has a negative effect on fraud prevention.

H4 : Forensic audits have a positive and significant effect on fraud prevention.

H5 : Investigative audits have a positive and significant effect on fraud prevention.

2 Research Method

135 auditors at the office of the West Sulawesi Province Representative of the Financial and Development Supervisory Agency (BPKP) were involved in our study. This study data will be analyzed through several test phases, such as (validity, reliability, multicollinearity, autocorrelation, heteroscedasticity, normality test). The testing of the hypothesis is carried out by simultaneous testing, partial testing, analysis of the path and analysis of the coefficient of determination.

Table 1. Operational Definition and Measurement

Variable	Definition	Indicator	Measurement
Effectiveness of the Whistleblowing System	A means of communication that reveals events deemed harmful and dangerous to public institutions	1. Individual Availability 2. The existence of organizational support 3. Media or communication channels	Ordinal
Forensic audit	Expertise in auditing a fraud that has legal consequences.	1. Basic Knowledge of Forensics, 2. Independence and Objectivity, 3. Responsibilities, 4. Forensic Audit Evidence	Ordinal
Investigative Audit	Investigation and identification of a crime, using certain approaches, procedures and techniques.	1. Procedure 2. Technique 3. Goals	Ordinal
Fraud Prevention	Systematic methods are used to prevent harmful cheating	1. Creating and developing a culture of honesty and high ethical values. 2. Implement and evaluate anti-fraud control processes. 3. Development of a supervisory process (overright process).	Ordinal

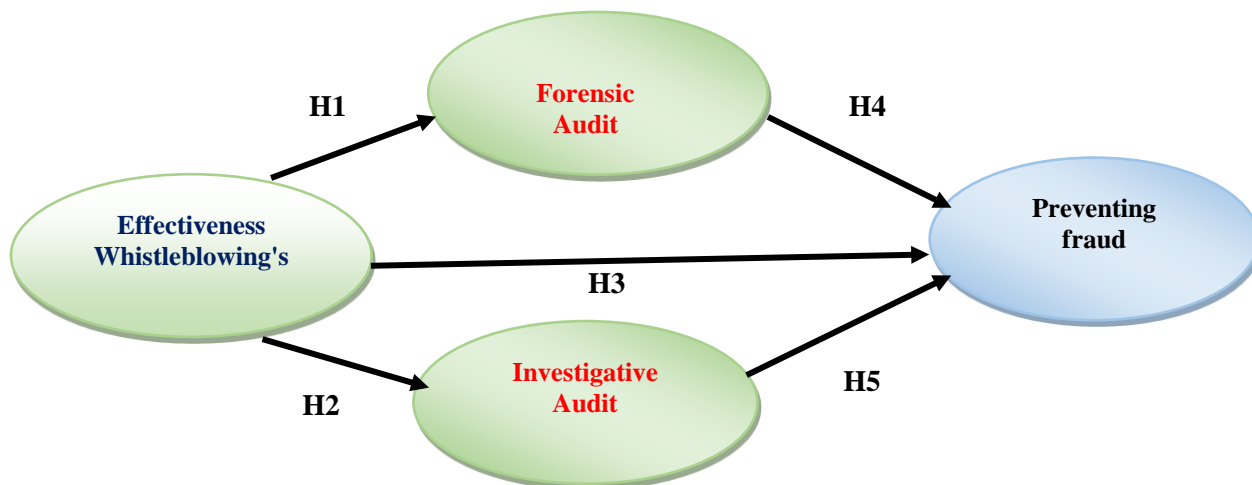


Figure 1. Research Model

3 Result and Discussion

Statistical Result

The description of the respondent describes the respondent's identity, such as circumstances, features, or unique features that can provide an overview of the respondent's situation. The characteristic data referred to includes gender, level of education, respondent age, and work duration of the respondent, where all respondents work at the BPKP Office of the West Sulawesi Representative.

Table 2. Composition of Respondents

No	Auditor Functional Position	Total	Return Questionnaire
1	Intermediate Auditor (Supervision Coordinator)	5	5
2	Intermediate Auditor (Technical Controller)	6	6
3	Young Auditor	5	5
4	First Auditor	32	32
5	Supervisory Auditor	1	1
6	Advanced Executive Auditor	20	20
7	Others	67	66
Total Auditors		136	135

Table 3 shows that the level of education that was the respondent in this study consisted of Masters, Bachelor and Diploma education. Based on the employment data, it is known that the BPKP Auditor for the West Sulawesi Representative Office, from the origin of formal education, consists of several educational institutions, namely STAN Official Education, and through the general route. In this route, BPKP Sulbar auditors come from several state universities such as UI, UGM, Unpad, IPB, Undip, Unibraw, Unhas, USU, Unes, Univ. March 11, Unsold, Univ. Mulawarman, and the best private universities such as UII, STT Bandung, Univ. Mercubuana, UMI Makassar, Telkom Univ. Bandung. It can be concluded that from the aspect of human resources and competencies, including being able to meet expectations as an Auditor profession.

Table 3. Respondents based on Education

No	Education	Total	%
1	S2/ Magister	8	6,0
2	D4/S1	77	57,0
3	Diploma III	50	37,0
Total		135	100

A valid tool means that the measuring device used to obtain the information is valid. Valid means that what should be measured can be measured using the tool. A reliable tool is an instrument which, when used several times to measure the same object, will produce the same data. Table 4 shows that there was a high validity level with a significance value of $P < 0.05$ for the 27 question items in this study. These results indicate that it is appropriate to use all questionnaire items as a material for further data analysis. If the Cronbach alpha value is greater than 0.60, the basis of reliability is that the research instrument is said to be reliable. Table 5 shows the results of the reliability calculation with a coefficient of Cronbach Alpha that is greater than 0.6. These results show that all variables have good results in terms of reliability and meet the requirements for accuracy and reliability.

Table 4. Validity Test Results

Variable	Item	r - count	Sig.	Info
Effectiveness Whistleblowing system	EWS1	.640**	0.00	Valid
	EWS2	.643**	0.00	Valid
	EWS3	.732**	.000	Valid
	EWS4	.680**	.000	Valid
	EWS5	.730**	.000	Valid
	EWS6	.565**	.000	Valid
	EWS7	.662**	.000	Valid
Forensic Audit	AF1	.639**	.000	Valid
	AF2	.681**	.000	Valid
	AF3	.765**	.000	Valid
	AF4	.743**	.000	Valid
	AF5	.609**	.000	Valid
	AF6	.725**	.000	Valid
	AF7	.650**	.000	Valid
	AF8	.569**	.000	Valid
Investigative Audit	AI1	.702**	.000	Valid
	AI2	.725**	.000	Valid
	AI3	.773**	.000	Valid
	AI4	.800**	.000	Valid
	AI5	.829**	.000	Valid
	AI6	.882**	.000	Valid
Fraud Prevention	PK1	.680**	.000	Valid
	PK2	.746**	.000	Valid
	PK3	.669**	.000	Valid
	PK4	.731**	.000	Valid
	PK5	.704**	.000	Valid
	PK6	.676**	.000	Valid

Table. 5 Reliability Test

Variable	Alpha Cronbach	Criteria	Info
Effectiveness Whistleblowing system	0,785	0,60	Reliable
Forensic Audit	0,828	0,60	Reliable
Investigative Audit	0,792	0,60	Reliable
Fraud Prevention	0,875	0,60	Reliable

Table 6. Multicollinearity Test

Variabel	VIF 1 (Forensic Audit) Variabel Dependen)	VIF 2 (Investigative Audit) Variabel Dependen)	VIF 3 (Fraud Prevention) Variable Dependen
Effectiveness Whistleblowing system	1,000	1,000	1,000

The multicollinearity test is carried out by calculating the variance inflation factor (VIF) value of each independent variable. VIF value <5 indicates a good regression model, and there is no multicollinearity between

the independent variables in the regression model. Table 6 shows the calculation of variance inflation factor (VIF) for each independent variable, which shows that none of the independent variables has a VIF value > 5. The first stage testing for the dependent variable forensic audit and the second stage testing for the dependent variable investigative audit. The third test for the inconsistent fraud prevention as the dependent variable has a value smaller than 5. So it can be concluded that there is no multicollinearity between the independent variables in the regression model.

The normality test is performed to determine if the data used is normal. You can find this by looking at the distribution of the points on the diagonal axis of the graph. If the themes follow the diagonal line of the graph, it can be said that the model fulfills the normality assumption.

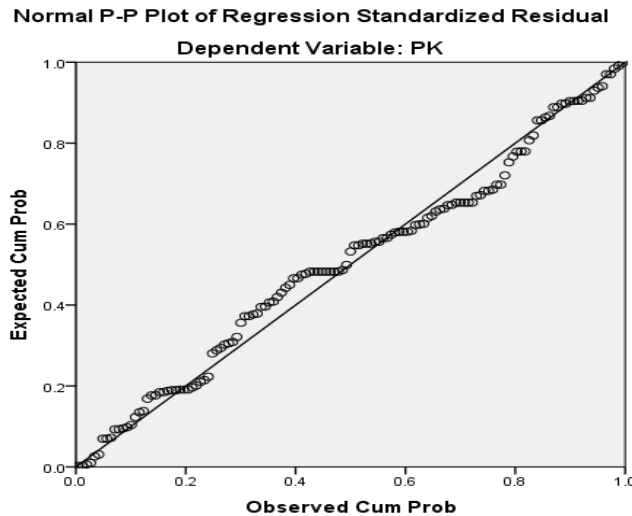


Figure 2. Data Normality

It can be seen from Figure 2 that the points on the chart follow the graph's diagonal lines. This also demonstrates that the data is generally distributed and fulfills the normality assumption. Information is obtained on the basis of the data processing results that all analyzed variables correlate with a requirement for further analysis. Data analysis using path analysis with the assistance of the Amos program was performed to determine the path coefficient.

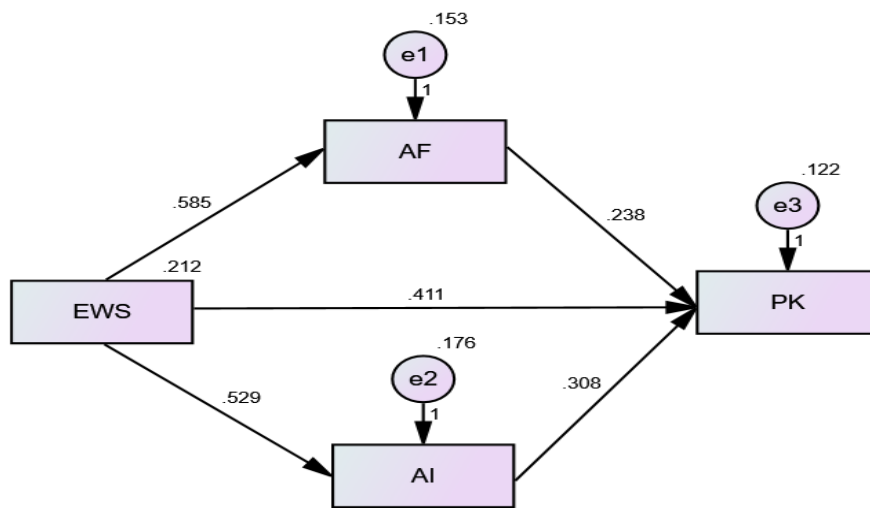


Figure 3. Variable Path Coefficient Model

By comparing the probability value at the 5 percent significance level, the path coefficient significance test is done.

Table 7. Significance of Standardized Path Coefficients

			Estimate	S.E.	C.R.	P	Info
AF	<---	EWS	0.585	0.074	7.960	***	Signifikan
AI	<---	EWS	0.529	0.079	6.732	***	Signifikan
PK	<---	EWS	0.411	0.088	4.663	***	Signifikan
PK	<---	AF	0.238	0.077	3.099	.002	Signifikan
PK	<---	AI	0.308	0.072	4.288	***	Signifikan

Table 8. Direct, Indirect and Total Influence of Research Variables

Path	Effect			p	Info
	Direct	Indirect	Total		
EWS --> AF	0,585	-	0,585	0.000	Support
EWS --> AI	0,529	-	0,529	0.000	Support
EWS-->PK	0,411	0,303	0,714	0.000	Support
AF -->PK	0,238	-	0,238	0.002	Support
AI -->PK	0,308	-	0,308	0.000	Support

Based on table 7, the overall path can be explained as follows:

1. The effective path of the whistleblowing system to the forensic audit has a coefficient of 0.585 and a p value <0.01 at the 5% significance level. Thus this pathway is significant because $p < 0.05$
2. The whistleblowing system effectiveness path to investigative audit has a coefficient of 0.529 with a p value <0.01 at the 5% significance level. Thus this pathway is significant because $p < 0.05$.
3. The effective path of whistleblowing system for fraud prevention has a coefficient of 0.411 and a p value <0.01 at the 5% significance level. Thus this pathway is significant because $p < 0.05$.
4. The fraud prevention forensic audit route has a coefficient of 0.238 and a p value <0.01 at the 5% significance level. Thus this pathway is significant because $p < 0.05$.
5. The investigative fraud prevention audit path has a coefficient of 0.308 and a p value <0.01 at the 5% significance level. Thus this pathway is significant because $p < 0.05$.

Discussion

Such findings show that the system of whistleblowing implemented to prevent fraud is working well. These findings show that whistleblowers play an important role in exposing unethical government behavior and making the government more transparent and accountable to the public. Government actions include implementing whistleblowing systems, conducting forensic audits and investigative audits to tackle fraud in the public sector. Anyone who has the opportunity, desire, and ability to do so can conduct fraud. It can therefore be explained that the implementation of an effective, transparent and responsible whistleblowing system will encourage and increase employee participation in the reporting of suspected fraud, with the results obtained from this study. This means that the more efficient the whistleblowing scheme, the more intensive the investigative audit will be. Forensic audits and investigative audits are carried out on key issues that have the strength of hypotheses and material legislation that will lead to legal disputes. Whistleblowing systems are also used to avoid losses suffered by the company, which can reduce the opportunity for individuals working in the organization to commit mistakes, violations, or fraud. The organization or company will bear a considerable price if fraudulent activity occurs in an organization or company; it can be financial, such as loss of assets and others, and can also be in the form of reputation costs, such as lawsuits. The existence of whistleblowing can therefore reduce the level of fraud occurring within an organization or company while avoiding losses resulting

from fraud at the same time (Near & Miceli, 2016). Whistleblowing systems, which are a means of reporting violations, will make reporting indications of fraud easier for whistleblowers. In order to monitor internal violations of institutions or businesses, whistleblowing systems are also created so that anyone can report crimes that have occurred. The implementation of whistleblowing systems will make it easier for whistleblowers to report breaches in order to receive more reports.

This research implies that it will be easier for whistle-blowers to report indications of fraud if whistleblowing systems are implemented. The greater the probability of fraud occurring, with more and more reports coming from whistle-blowers. Whistleblowing systems can be used to assist government auditors performing forensic audit activities, because words that enter whistleblowing systems are an early indication of an act of infringement or fraud. This report can be followed up by a forensic fraud detection audit, which is expected to reduce the risk of fraud to prevent losses resulting from fraud by an organization or company (Near & Miceli, 2016). Audit strategies that can prevent fraud are forensic audits that focus on the detection, analysis, evidence of financial events, and communication about underlying reporting and forensic audits. The findings of this research have shown that in the process of detecting deception, investigative audits have proven important. An investigative audit can be used as an effective method for detecting fraud because the investigative audit in the audit process is by the case being examined, and the evidence collected must be adequate and precise, particularly when this audit is used for the litigation process, which will require the auditor to find legal evidence.

4 Conclusion

Our study found that whistleblowing systems are a means of reporting violations that have occurred to whistleblowers. The violations reported are an early indication of fraud, followed by forensic audits and investigative audits. The process of gathering evidence to detect or disclose fraud in the work of forensic audits and investigative audits therefore requires support from resources with the ability and experience of different types of disciplines that not only master the fields of accounting or auditing through forensic audits and investigative audits. It requires a strong ability to use special investigative skills. This study suggests that rewards and legal protection can be given to whistleblowers who report indications of fraud to provide a sense of security for whistleblowers. If whistleblowers feel secure, through whistleblowing systems, more and more will report symptoms of fraud. An initial warning for the organization will be the more data that comes from complaints or reports from employee or insider reports and will encourage the organization to conduct forensic audits and investigative audits to detect fraud. Appropriate knowledge and technology equipment must be prepared for BPKP auditors because the effectiveness of the investigative audit is also very dependent on the resources or auditors performing the investigative audit.

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