

Financial Statement Fraud Prevention Strategy: Fuzzy Analytical Hierarchy Process Method

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Abstract: The purpose of this study is to examine the factors that cause financial statement fraud. This study uses the Fuzzy Analytical Hierarchy Process (AHP) and determines the appropriate model strategy for preventing financial statement fraud at State-owned enterprises (SOEs) in Indonesia. The mixed method is applied in this work as this research also uses the descriptive analysis method to analyze the phenomena that occur. The informants in this study were members of the Indonesian Supreme Audit Institution (BPK) and State Development Audit Agency (BPKP), academics, and financial managers of enterprises SOEs in Indonesia. This study formulated the following fraud prevention strategies in the context of SOEs fraud: (1) Practicing honest culture and high ethics, (2) improving supervision and control systems, (3) formulating anti-fraud values, (4) implementing a firm-wide reward and punishment system, (5) introducing anti-fraud socialization for employees, and (6) establishing change agents.

Keywords: financial statement fraud, fuzzy analytical hierarchy, fraud.

财务报表舞弊预防策略：模糊层次分析法

摘要：本研究的目的是研究导致财务报表舞弊的因素。本研究使用模糊层次分析法（层次分析法）并确定了适当的模型策略，以防止印度尼西亚布姆公司的财务报表欺诈。由于本研究还使用描述性分析方法来分析发生的现象和研究结果，因此在本工作中采用了混合方法。这项研究的信息提供者是 BPKP 和 BPK 的成员，学者以及印度尼西亚国有企业的财务经理。本研究的目的是使用层次分析法制定财务管理中的欺诈预防策略。这项研究针对国有公司欺诈行为制定了以下欺诈预防策略：（1）践行诚实文化和高尚道德，（2）完善监督和控制系统，（3）制定反欺诈价值，（4）实施一个全公司范围的奖惩制度；（5）为员工引入反欺诈社会化；（6）建立变革推动者。

关键词：财务报表欺诈，模糊层次分析，欺诈。

1. Introduction

Fraud remains an important and wide-ranging issue. It is interesting to study this phenomenon, given the large number of cases that continue to come to light. According to the Association of Certified Fraud Examiners [2], fraud is classified into three types, namely fraud in financial reports, misuse of assets, and corruption. Fraud can be committed by anyone, including a person who is perceived as being of a good character or trustworthy. If the perpetrators of fraud are not immediately dealt with, the company's losses will rise even further, creating a poor image for its other employees. Fraud likely occurs with weak integrity,

poor control, loss of accountability, or great pressure in the work environment. There is no guarantee that everyone will practice honesty. However, organizations can preemptively attempt to create and encourage a work environment wherein the possibility of committing fraud is very low.

The last few years have witnessed an increase in the frequency of financial reporting fraud. These various cases prove that fraudulent financial statements are a serious problem in all parts of the world, including Indonesia. Various forms of fraud in Indonesia, such as the cases of fraud perpetrated by SOEs and discovered by the BPK in 2017, have tarnished the trust of users of

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financial statements. These frauds resulted in state losses amounting to IDR 88.9 billion, with indications for further state losses of IDR 692.2 billion. The BPK also stated that the examination of 37 companies revealed total of 493 cases valued at IDR 8.66 trillion, including indications of 702 fraud crimes in financial management [3]. Indonesia is known for a high level of corruption. Data compiled by Indonesian Corruption Watch [4] shows that 482 cases of corruption were recorded during 2016 alone, amounting to a total state loss of IDR 1.47 trillion. In its 2016 survey, Denmark & New Zealand are ranked first and second cleanest countries in the world with a score of 90. Somalia & South Sudan are in the lowest ranks with scores of 10 and 11 respectively. Transparency International ranked Indonesia as 90 out of 176 countries in terms of corruption. Indonesia scored 37 on this survey [5].

This finding is an indication that the management boards of Indonesian companies do not provide reliable financial information and are prone to fraud. Thus, more stringent and effective fraud prevention efforts are needed. Such efforts are more effective than repressive measures, and can help companies avoid greater losses and prevent damage to their reputations. Prevention is a part of the fraud control system and entails implementing steps to reduce the potential risk of fraud.

Furthermore, implementing prevention measures from the outset can be cheaper and more effective than detecting frauds after they have occurred. The Fuzzy AHP is an analytical tool used to help decision makers to identify and prioritize actions based on the objectives to be achieved, the knowledge they possess, and the experiences they have undergone for every issue [6]. The Fuzzy AHP model uses the perceptions of an expert as its main input. Thus, the strategy formulated can truly match the requirements of SOEs in Indonesia. Thus, as stated previously, the purpose of this study is to formulate a strategy to prevent fraud in the financial management of SOEs using the Fuzzy AHP method.

The primary problem in this research involves building the correct model or strategy to prevent the creation of fraudulent financial statements of SOEs in Indonesia. As per the abovementioned description, this research is urgent, given the extent of fraud being committed at SOEs in Indonesia and the fact that they will likely continue if not checked. To date, research on financial statement fraud prevention is very limited. Such cases cause huge losses and are highly detrimental to all parties. Therefore, it is important to identify the factors that cause financial statement fraud and define a strategy to model its prevention. Currently, efforts to ensure this are not as effective and optimal as they should be.

This study is novel as it uses the Fuzzy AHP method to test the possible strategies for the prevention of fraud

in the financial statements of SOEs. The purpose of this study is to formulate the causal factors relevant to fraud in SOEs financial statements and to model strategies to prevent such acts using the Fuzzy AHP method. Systematic and integrated efforts are needed to devise investigative and preventive strategies to overcome this issue. The investigative strategies would involve detecting, analyzing, and following up on the results of irregularity/fraud assessments. A preventive strategy is defined as a series of programs designed to prevent or at least control corruption. This strategy is concerned with controlling the driving factors for fraud by creating comfortable conditions for fraud detection [24].

2. Literature Review

2.1. Fuzzy Analytical Hierarchy Process

Fuzzy Analytical Hierarchy Process is an analysis tool used to help decision-makers identify and prioritize based on the objectives to be achieved, the knowledge they have, and their experiences for each of the problems they face [1]. The Analytical Hierarchy Process Model uses the perception of someone who is an expert as the primary input so that it is hoped that the formulated strategy can genuinely match what is needed by SOEs in Indonesia.

State of the art in this study originated from the Fraud Triangle Theory [7], Agency Theory [8], Fraud Diamond Theory [9], and Fraud Pentagon Theory [10]. Furthermore, Theory Analytic Hierarchy Process [6], Analytic Hierarchy Process Method [1]. According to [11], fuzzy AHP is an analysis method developed from AHP. A fuzzy AHP is considered better in describing decisions when compared to ordinary AHP Fuzzy calculations. In AHP, judgments made by decision-makers or experts are not deterministic but rather are linguistic perceptions. In Fuzzy AHP, the preferences of decision-makers that contain uncertainty properties are modeled using fuzzy logic. Information in fuzzy AHP and conventional fuzzy AHP is obtained in the form of a pairwise comparison matrix. The scale used ranges from just as important to absolute importance. The scale in the form of linguistic variables in the conventional AHP conducted by [6] is 1- 9, converted into the fuzzy form using the Triangular Fuzzy Number (TFN). In determining the weights of elementary arithmetic operations are used for TFN or can also use Trapezoidal Fuzzy Number.

The Analytic Hierarchy Process (AHP), first coined by Saaty [1], is a decision support model developed by Thomas L. Saaty, which is a tool in complex decision making, able to assist decision-makers in setting priorities and making the best and effective decisions. It is done by reducing complex decisions, which are then in the form of pairwise comparisons. The next process is to synthesize the results. AHP can combine

useful techniques to check the consistency of decision-makers' evaluation, thereby reducing bias in the decision-making process and helping to capture objective and subjective aspects of decisions. This decision support model will describe a complex multi-factor or multi-criteria problem into a hierarchy. According to Saaty [1], AHP represents a complex problem in a multi-level structure where the first level is the goal, followed by the factor level, criteria, then sub-criteria, to the last level of alternatives. With a hierarchy, a complex problem can be broken down into groups, which are then arranged into a hierarchical form so that the problem will appear more structured and systematic.

2.2. Fraud Prevention Objectives

How to prevent fraud, according to Tunggal [12], is as follows: Create a culture of honesty, openness, and mutual help. Research shows that the most effective way to prevent and deter fraud is to implement anti-fraud programs and controls, which are based on the company's values. Such values create an environment that supports acceptable behavior and expectations that employees can use to direct their actions. These values help to create a culture of honesty, openness, and mutual assistance among members of the organization/company. Openness between members of an organization is a very important characteristic that every company must have, and is useful for the development and behavior of competent human resources and effective professional management.

A business must have an honest recruitment process. To build a positive control environment, hiring is the beginning of an influx of people who are selected through a rigorous and effective process to reduce the likelihood of hiring and promoting people with low levels of honesty. Only people who can meet certain conditions are accepted. Such a policy may include background checks of persons considered to be hired or promoted to positions of responsibility. Background checks, verification of education, employment history, and personal references of prospective employees, including references to character and integrity, are all necessary. A company must conduct regular training for all employees regarding company values and rules of conduct, as well as regular performance reviews including evaluation of employee contributions in developing a positive work environment by company values. These must always be objective evaluations of compliance with company values and standards of conduct, and any violations must be dealt with promptly.

There has to be an assistance program for employees who have difficulties. Problems or difficulties will inevitably be experienced by every employee, so not a few of them will commit various kinds of fraud to get out of the problems they face in

financial problems due to existing economic pressure, including irregularities both intentional and unintentional. This form of attention and assistance should be given to employees to prevent fraud and misappropriation of company finances, as well as to provide support and solutions in dealing with economic problems and pressures that employees have, in order to minimize company losses to fraud.

You have to cultivate the impression that every act of cheating will be punished accordingly. The final fraud prevention strategy is to instill the impression that every act of cheating will get sanctions. The company, especially the management of the company, must instill sanctions, that is to make and implement regulations against any existing fraudulent acts so that deviant actions in the company can be minimized, and provide a deterrent effect on individuals who will or have committed fraudulent acts. Prevention of fraud is better than overcoming fraud, so therefore it is necessary to have good cooperation with every member of the company organization to make a company prosperous. If a company can develop and progress for the better, then all employees in the company will also be prosperous. And if all parts of the employee can carry out their duties as well as possible, then it can also train morals, ethics, and good intentions into the soul of every employee. Preventing fraud is all efforts to ward off potential actors, narrow the space for movement, and identify activities that are at high risk of fraud [13].

The steps to avoiding fraud are:

1. Prevention (preventing fraud)
2. Deterrence (warding off potential actors)
3. Description (complicating the steps of the cheater)
4. Recertification (identifying high-risk activities and weaknesses in internal control)
5. Civil action prosecution (charges against the perpetrator).

3. Method

This study will look at the factors that cause financial statement fraud based on the Fuzzy Analytical Hierarchy Process and determine the appropriate model strategy in preventing financial statement fraud at SOEs in Indonesia. Thus, the research method chosen is the Mix Method. The Mix Method is a combination of quantitative and qualitative methods and is used to review and identify the causal factors and strategies for the prevention model of financial report fraud. This research also uses the descriptive analysis method to analyze the phenomena that occur and the results of the research. The informants in this study were members of the BPKP, BPK, academics, and financial managers of SOEs in Indonesia. This study uses primary data gathered through structured interviews and by sending out AHP questionnaires to respondents who are

considered experts and competent in financial management. The data collection technique begins with a questionnaire and is followed by conducting interviews with informants. This study uses a semi-structured interview technique with flexible questions, which aims to collect information on the causes and strategies for preventing financial statement fraud. The results of the questionnaire and interview will be analyzed and concluded according to the informants' answers. This research is to formulate a strategy using the Fuzzy Analytical Hierarchy Process with the help of Expert Choice 11 application in processing data. Secondary data in this study is information from data that has been processed by other parties, such as company profiles and other documents that can support the analysis of strategies for preventing financial reporting fraud at SOEs in Indonesia.

The Analytical Hierarchy Process method was chosen to formulate a financial statement fraud prevention strategy because it is easy to use to explain the decision-making process and can be illustrated graphically. The research format is a case study with a focus on causal factors and strategies for the prevention of financial statement fraud at SOEs in Indonesia. A strong reason why the SOEs was chosen is because it is a company that is prone to fraud and there have often been cases of fraudulent financial statements. The role of SOEs is as the biggest economic actor in Indonesia. A company that is expected to be dominant as a driving force for economic development which increases state revenue has a significant potential for fraud. This would have a very detrimental impact on State finances, even though the government has issued a law regulating the establishment of an internal supervisory unit for each SOEs. The way to collect this research data is as follows: First, identify planning patterns and concepts in preventing financial statement fraud. Furthermore, empirically analyzing the model strategy's implementation in preventing financial statement fraud at SOEs in Indonesia using the Fuzzy Analytical Hierarchy Process. Third, evaluate and strengthen model strategies to prevent fraudulent financial statements at SOEs companies in Indonesia using the Fuzzy Analytical Hierarchy Process method. This method supports decision-making with several criteria by determining the weight, rate, and score on each aspect of the financial statement fraud prevention model's strategy. The data validity test used in this research is source triangulation to test the data's credibility, namely by checking the data obtained through several sources. The data are then described, categorized to produce a conclusion. The AHP method measures the level of importance in the pairwise comparison questionnaire using a scale of 1 to 9, as in Table 1.

of Interest		
1	Just as Important	The two criteria contribute equally to the goal
3	A little more important	Experience and assessment do little to support one criterion over another
5	More important	Experience and assessment strongly support the criteria above other criteria
6	Very important	One criterion is very strong over another; its dominance is shown in practice
9	Absolute importance	Evidence supporting one criterion over another is in the highest order of affirmation possible
2, 4, 6, 8	For consideration between the above values	For consideration of the above values

The AHP (Analytical Hierarchy Process) method is a quantitative method for ranking various alternatives and selecting one or more best results based on specified criteria. This method uses a comparison of several options with predetermined criteria. The AHP method was chosen because it is a form of decision support model where the leading equipment is a functional hierarchy with the primary input being human perception. Saaty first introduced the fuzzy AHP (Analytical Hierarchy Process) method in 1980. The AHP method is first to determine alternatives and criteria, then arrange a hierarchy based on these alternatives and criteria. The next step is to create a pairwise comparison matrix and determine the criteria' vector weight, calculating the degree of consistency. After calculating the degree of consistency, the priority value of the alternatives is obtained. If the consistency ratio results are <0.1 , the pairwise comparison is valid [1].

The difference between the AHP fuzzy method and the AHP method is in the assessment between criteria in the pairwise comparison matrix. In the AHP fuzzy method, the value of each criterion is represented by variables (a, b, c) or lower, medium, upper (l, m, u), or what is called the triangular fuzzy number [14]. The lower or l variable is the lowest value, m is the median or middle value, and u is the upper or harmonized value. AHP scale, which is 'crisp' or firm value, is considered less able to handle uncertainty. Therefore, the triangular fuzzy number approach is used. Fuzzy logic or fuzzy logic is the logic between two values that have a fuzzy ness value. For obtaining more accurate results, the triangular fuzzy number approach is used to the AHP scale to reduce uncertainty [25]. Data analysis with fuzzy AHP will help managers overcome human subjectivity in analyzing risk [15]. Fuzzy AHP is a development of the AHP method using biased logic theory, predominantly triangular fuzzy. The stages of problem-solving in the fuzzy AHP method with the

Table 1 Pairwise comparison scale [1]

Intensity	Definition	Explanation
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AHP method are almost the same. The difference is only in the AHP fuzzy method. There are steps of converting the AHP scale into a fuzzy triangular scale so that the level of importance is known [16]. In the AHP method, use a scale of 1 to 9 for pairwise comparisons.

The research results' scope is SOEs in Indonesia through weighting using the Analytical Hierarchy Process (AHP) method, the research subjects in the model strategy in preventing fraud in the financial statements of SOEs in Indonesia.

4. Result and Discussion

4.1. Result of Analysis with Analytical Hierarchy Process

In Indonesia, the analytical hierarchy process (AHP) method is used for the formulation of an appropriate model strategy to prevent fraudulent financial statements at SOEs to ensure that the resulting priorities. The AHP structure used in this study consists of five levels, namely focus, factors, actors, constraints, and strategies. Factors used in hierarchical development are those that influence fraud in the management of financial statements –an organization's ethical culture, the effectiveness of internal control systems, and individual morality. The actors used in hierarchical development are those who possess the authority to control the factors that drive fraud, which are financial managers, internal auditors, and external auditors. Constraints that become priority scales in hierarchical development are those that are considered to influence actors in efforts to prevent fraud. These constraints are individual aspects, organizational aspects, and regulatory aspects. The final level in strategy formulation is the strategy alternatives selected to prevent fraud in financial management SOEs in Indonesia. The results of strategy formulation using AHP are in terms of hierarchy and priority order of each level: The extent of the role of the factors in fraud prevention in the financial management of Indonesian state-owned enterprises based on the results of the AHP method, a comparison between the elements of the "factors" of the fraud prevention strategy in the financial management of Indonesian SOEs, namely prioritizing honest culture and high ethics with a value of 0.618."The most effective way to prevent and deter fraud is to implement anti-fraud programs and controls. These values create an environment that supports acceptable behavior and expectations that employees can use to direct their actions. These values help create a culture of honesty and ethics that forms the basis for employees' job responsibilities. Creating a culture of honesty and high ethics includes several elements, namely, Setting a Tone at the Top. The top's tone is the statement, expression, speech, and will that come from upper management. Honesty and integrity of

management will strengthen the integrity and honesty of employees or employees throughout the organization. A Tone at the Top, based on honesty and integrity, will form the basis for a more detailed code of conduct, which can be developed to provide more specific guidelines regarding acceptable behavior.

The internal control system is considered the second priority. An effective system will eliminate employees' opportunities to commit fraud, build an excellent internal control structure, a reasonable control structure by establishing correct information and communication through identifying, capturing, and exchanging information in the form of time, allowing people to carry out their responsibilities. The information system includes an accounting system consisting of methods and records developed to record, process, summarize, and report entity transactions and maintain accountability for assets, debt, and equity. Meanwhile, communication includes providing an understanding of individual roles and responsibilities about internal control over financial reporting. Also, information and communication can be carried out by monitoring, which determines the quality of internal control performance at all times. Monitoring includes determining the design and operation of the controls promptly and taking corrective action. If the internal control system's quality is low, this could be an opportunity for employees to commit fraud. The more effective internal controls are in Indonesia's SOEs, the lower the fraud level [17].

The next priority is the ethical culture of the organization, with a value of 0.431. Organizational culture is the values developed within the organization as behavior guidelines. Organizational culture can prevent fraudulent behavior in organizations [18] and has a significant role in shaping the organization members' character. An organization that has a high ethical culture will pressure its members not to commit deviant actions. Improving organizational culture can be done by implementing Good Corporate Governance (GCG) principles to encourage the performance of the company's resources to work efficiently, producing long-term sustainable economic value for shareholders and the surrounding community as a whole based on principles of Justice, Transparency, Accountability, Responsibility, Morality, Reliability, Commitment.

The last priority is individual morality, with a value of 0.198. One of the causes of cheating is a personality that undermines a person's integrity. Kakati [19] states that the root problem of fraud is the state apparatus's lack of integrity, where integrity contains moral qualities and an honest, wise, fair attitude to do the right thing in all situations. The higher the moral level of an individual, the more he tries to avoid committing fraud, which can harm many parties [20]. Therefore, to prevent fraud in an organization, it is necessary to encourage individual moral strengthening.

Level of Role of Actors in Fraud Prevention in Financial Management of SOEs in Indonesia from the results of processing using the AHP method, comparisons between elements of "Actor" Fraud Prevention Strategy in Financial Management of SOEs in Indonesia, namely the priority of financial managers with a value of 0.570. Finance managers are considered to have the most significant opportunities and priorities because, directly, every activity within the scope of SOEs in Indonesia results from policies and decisions taken by financial managers. Also, the financial manager has an essential role in determining the organization's ethical environment by showing a proper role model so that it can become a role model for employees under him. Management must also provide a mechanism for employees to report unethical behavior, fraud, and irregularities with ethical policies or rules of conduct in the organization. Internal auditor actors are prioritized in second place with a value of 0.314. The Ministry of SOEs carries out internal supervision activities at SOEs companies in Indonesia. Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform Number 19 of 2009 concerning Guidelines for Quality Control of internal supervisory officers, defines internal control as the entire process of auditing, reviewing, evaluating, monitoring, and other supervisory activities on the implementation of organizational duties and functions to provide reliable assurance. The activities have been carried out by the established benchmarks effectively and efficiently for the leadership's interests in realizing good corporate governance.

Making the internal audit function more effective, the internal audit function can assist management in carrying out its responsibilities by providing analysis, assessment, suggestions, and comments on the activities it examines. Internal audit must have an independent position and be responsible for or report its activities to top management. Internal audit must have a written job description so that each auditor knows clearly what the duties, authorities, and responsibilities are. Internal audits must have an internal audit manual that is useful for preventing irregularities in the implementation of tasks, determining standards that are useful for measuring and improving performance, and assurance that the final results of internal audits are by reality. There must be strong support from top management to the internal audit department. Internal audits must have professional, capable, objective, and have high integrity and loyalty resources. Internal auditors must be able to:

- work with public accountants;
- creating a proper recitation structure;
- hold rotations and an obligation for employees to take leave rights;

- give strict sanctions to those who commit fraud and give awards to those who excel;
- create assistance programs for employees who have difficulties both in financial and non-financial terms.

Establishing company policies against outside gifts must be informed and explained to people deemed necessary so that it is clear which ones are gifts and which are bribes and which are legal. Specific sources should be provided to detect fraud because fraud is difficult to find in a simple inspection. Providing a conduit for reporting fraud should be known to the staff to be processed on the right track.

The last priority is an external auditor with a value of 0.121. The Supreme Audit Agency (BPK) plays a role in the external oversight of the government. Based on Article 6 of Law no. 15 of 2006, BPK has the task of examining the management and accountability of state finances carried out by the Central Government, Regional Governments, other State Institutions, Bank Indonesia, SOEs, Public Service Bodies, Regional-Owned Enterprises, and other institutions or entities managing state finances.

Level of Role of Constraints in Fraud Prevention in Financial Management of SOEs in Indonesia for Comparison between "Constraints" elements which rank first, namely individual aspects with a value of 0.489. Individual aspect constraints come from within or under the individual's control, e.g., limited human resources (lack of competence, the rules' incomprehension), indifference, thinking that fraudulent actions are commonplace, or not reporting behavior and incidents of cheating occurring in his/her work environment. The second priority, according to respondents, is the regulatory aspect with a value of 0.298. Regulatory constraints include inadequate regulatory quality, the imposition of sanctions that are too light, inconsistent, indiscriminate application of sanctions, and weak areas of evaluation and regulatory revision. The last priority, according to respondents, is the organizational aspect with a value of 0.267. Its constraints are the absence of role models and commitment from the leadership. The leadership has not become a good role model for the employees under them to prevent fraud.

Level of Role of Strategy in Fraud Prevention in Financial Management of SOEs. Comparison between the elements of "Strategy" occupies the priority to prevent fraud in financial management, improving the supervision and control system with a value of 0.245. The second priority is to improve organizational culture with a value of 0.154. The third priority is the formulation of anti-fraud values (0.149) and implementing a strict reward and punishment system (0.138). The next priority is the socialization of anti-fraud for employees (0.135) and finally, the formation of agents of change/change agents (0.122).

Respondents considered that the strategy that needed to be a top priority was improving the supervision and control system. With a sound system implemented in the scope of SOEs in Indonesia, it will minimize and eliminate employee motivation and opportunities to commit fraud.

Fraud prevention is an effort that can suppress fraud factors, minimizing opportunities to commit fraud, reducing pressure on employees so that they can meet their needs, and also eliminating reasons for making justifications/rationalizations for acts of fraud committed. Kurniasari et al. [17] stated that there are several fraud prevention strategies in financial management: improving the supervision and control system, improving organizational culture, formulating anti-fraud values, implementing a firm reward and punishment system, socialization, or anti-fraud education for employees, and Forming change agents.

5. Discussion

5.1. Improvement of Internal Supervision and Control Systems

The concept of improving organizational control, according to [26], is related to the division of roles and responsibilities for implementing risk management and internal control into three lines in the organization. Operational management becomes the first line of defense, which is fully responsible for carrying out all organizational policies by performing continuous internal control of all stages of activities. The second line of defense is tasked with monitoring and maintaining compliance with the implementation of internal control and providing input to the first line. The third line of defense is the internal supervisory apparatus or internal auditor, whose task is to provide an assessment and perform objective monitoring of several internal controls.

The first of these internal control activities done by operational management is through embedded supervision, namely monitoring of activities performed by superiors towards staff in the work environment. This inherent supervision includes, among other things, the implementation of risk management, the use of a management information system for all activities, sampling tests for the purchase of goods/services, and reconciliation between the financial verifier and activity implementer. The second activity is forming an internal control unit to assist operational management, serving as the closest unit to monitor the implementation of internal control. This monitoring encourages faster and more open problem-solving. The internal control unit also acts as an ethics officer to help employees resolve ethical dilemmas faced, and to report suspected fraud involving management. Finally, the optimization of internal auditors can be done by

optimizing their roles related to the activities of developing the internal control system, together with the BPKP. Internal auditors also perform a coaching role by being involved in coaching activities to raise employee awareness of fraud through socialization, as well as education and training.

5.2. Organizational Culture Improvement

An improved organizational culture that is in line with anti-fraud programs can be executed within the scope of SOEs in Indonesia. Parts of this culture include demonstrating examples of good leadership; subordinates' behavior is a reflection of the behavior of their leaders, as subordinates will imitate a leader's behavior, whether good or bad. Leadership commitment is needed as an effort to prevent fraud. Commitment to an anti-fraud culture can be expressed by support for the provision of adequate resources, human resources, funds, facilities and infrastructure [21].

5.3. Creating a Positive Work Environment

A person will tend to adjust to what has become a habit in his work environment. A good work environment will increase creativity, ethical behavior and performance, which will become a barrier to fraud [17]. Efforts to create a positive work environment include realistic budget absorption targets, clear division of authority and responsibility, good communication between employees and superiors, and simple, clear behavioral expectations.

5.4. Formulation of Anti-Fraud Value in the Organization

This value system is manifested in a code of conduct that reflects the central values of the organization. The rules of conduct provide guidelines for employees regarding their roles and responsibilities and make the right decisions regarding ethical dilemmas experienced in their work. One of the values that can be used as a guide to preventing fraud is the value of integrity. According to Wahyudi, Achmad, & Pamungkas [22], integrity plays an essential role in preventing fraud in Indonesia's bureaucracy. Integrity contains moral qualities and a good attitude to do the right thing in all situations. Therefore, strengthening integrity needs to be continuously encouraged within the scope of SOEs in Indonesia by signing an integrity pact for all employees every year, which contains integrity value indicators.

5.5. Implementing a Firm Reward and Punishment System

Both reward and punishment imposition systems are needed to stimulate employees to improve their work quality. Rewards are applied to motivate employees to work optimally in carrying out their responsibilities.

Simultaneously, punishment is imposed on employees who make mistakes and violations so that they are motivated to stop deviant behavior and lead to positive behavior. In addition to rewards in the form of performance allowances, rewards that can be given to employees provide opportunities to improve their abilities according to their areas of expertise through training, promotion, and continuing education.

5.6. Anti-Fraud Socialization/Education

Employee socialization and anti-fraud education aim to strengthen each individual so they make ethical decisions with integrity and create a culture of zero tolerance for fraud. Anti-fraud socialization for employees is not only done in the form of education and training but also through exemplary leadership [21]. Education and training related to fraud can be carried out upon acceptance of a new employee for induction training and must be performed periodically after the subject becomes an employee. Ethical seminars and training are used to reinforce values, guide the organization, explain permissible and unacceptable practices, and address ethical dilemmas that may arise. Ethical training is a tool to understand and deepen the meaning of ethos, values, norms, ethics, integrity, and standards of behavior set out in the code of conduct of the organization. Anti-fraud education through anti-fraud promotion can be carried out continuously to increase awareness of the risk of fraud. Anti-fraud education can be done through print or electronic media in the office environment. Apart from indirect communication, anti-fraud education can also be carried out through anti-fraud calls at every opportunity to all employees, for example, in meetings and ceremonies.

5.7. Forming the Agent of Change

The prevention of fraud requires efforts from both the leadership and individuals of an organization. This can be achieved by having several individuals who act as the main drivers of change, becoming role models for other employees by conducting themselves according to the values held by the organization. Through these role models, it is hoped that the integrity of all individuals within the organization will improve, enabling the realization of a fraud-free government administration.

Several fraud prevention strategies are carried out by SOEs companies in Indonesia to control corruption: prevention by detecting fraud early through a series of activities such as the whistleblowing system, fraud early warning system; investigation to identify ongoing incidents of fraud and to collect information surrounding the incident, allowing follow-ups according to the provisions in place; and education to work with individuals inside and outside the organization to encourage participation in fighting

fraud. According to Albrecht and Albrecht [23], fraud prevention is classified into two groups as follows:

1. Work culture and soft control: successful fraud prevention must involve soft controls, namely the creation of an environment that can prevent the seeds of fraud by creating a culture that is healthy, honest, open, and mutually helpful. The four important factors that must be considered to achieve this are:

- a. Compiling and communicating a code of conduct that is easy to understand and respect, which, in turn, monitors the efficacy of the implementation of the code of ethics, and enforcement of the rules if someone violates them.

- b. Selection or employment of honest people through the screening of background behavior and whether they have a history of financial irregularities, and educating employees about the dangers of fraud and anti-fraud programs in the company.

- c. Providing programs that help employees with financial, psychological, or social problems.

- d. Creating a positive work environment.

2. Internal control and governance:

- a. Implementation of good internal controls to prevent and detect fraud.

- b. Prevention of collusion.

- c. Encourage third parties to comply with company policies, including those related to business relationships that are free of corruption, collusion, and nepotism.

- d. Monitor and get to know employees, intervening in response to deviant behaviors to allow early re-education.

- e. A fraud reporting or complaints system, using either a hotline or whistleblower system.

- f. Punishment: the fear of clear and firm punishments prevents dishonesty and fraud.

6. Conclusion

The results of this study suggest that the best strategy to prevent financial statement fraud is to implement an honest culture and high ethical standards. These are included in our recommendations on fraud prevention strategies for SOEs, which include: (1) an honest work culture and high ethical standards, (2) improvement of supervision and leadership systems, (3) formulating anti-fraud values, (4) implementing a firm reward and punishment system, (5) anti-fraud education for employees, and (6) establishing individuals within organizations to implement these recommendations.

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