

WHISTLEBLOWING SYSTEM AND FRAUD PREVENTION: A LITERATURE REVIEW

Bella Chenia Meitasir^{a*}, Agrianti Komalasari^a, Ratna Septiyanti^a

^a*Faculty of Economics and Business, Lampung University, Indonesia*

ABSTRACT

Aims: This study examines previous research literature on the effect of the whistleblowing system as a collaborative system on fraud prevention in a company or organization.

Study design: This study reviews the literature on fraud prevention available in various databases.

Place and Duration of Study: Samples were taken from 10 accredited journals in Indonesia, publication date of the last 10 years from 2012 to 2021.

Methodology: This study is a literature review study carried out in stages: determining the formulation of the problem and research questions using the PICO (Problem, Intervention, Comparison, Outcome) method, searching for articles/publications based on the inclusion and exclusion criteria that have been determined, perform analysis and synthesis of the articles that have been collected.

Conclusion: The results of this study indicate that a whistleblowing system is a form of reporting and supervision of an organization or company. There are 4 (four) essential elements in the Whistleblowing System, namely anonymity, independence, accessibility, and follow-up. Whistleblowing System is an effective mechanism for preventing fraud. Its implementation requires the company's commitment to protecting the whistleblower's data, a transparent and responsible reporting mechanism, and evaluating and improving the system. Therefore, companies are advised to implement an effective whistleblowing system to support fraud prevention.

Keywords: *Fraud; Prevention; Whistleblowing System*

1. INTRODUCTION

Fraud is a collection of actions that are not permitted and violate the law marked by an element of intentional fraud (Husnawati & Handajani, 2017). By knowing the various factors that can prevent fraud, the company can take preventive actions to reduce the risk of loss in the future due to the fraud. Actions that can be taken correctly understand an industry's business character, environment, and personnel.

Several essential elements that lead to fraud have been described in several previous studies (Aghghaleh et al., 2014; Holtfreter, 2008; Huang et al., 2016; Putri & Irwandi, 2016; Sudarmanto, 2020). The pentagon fraud theory explains that the elements that influence the occurrence of fraud are pressure, opportunity, rationalization, competence and arrogance (Mulya et al., 2019; Sawaka & Ramantha, 2020; Triyanto, 2019). Crowe presented this theory in 2011, better known as Crowe's Fraud Pentagon Theory.

31 Fraud has become a real threat to organizations in both small and large industries. The
32 Indonesian Fraud Survey (SFI) conducted by ACFE in 2019, which is based on the Report to
33 the Nation (RTTN), shows that the most frequent fraud and causes the most significant
34 losses in Indonesia is corruption (ACFE Indonesia Chapter, 2020). The survey found that
35 fraud in the form of corruption is the fraud that has the most significant loss impact (ACFE
36 Indonesia Chapter, 2020).

37 The 2019 Association of Certified Fraud Examiners (ACFE) survey shows that the
38 whistleblowing system (WBS) method is a fraud prevention tool that is widely considered to
39 be very effective as anti-fraud control with a percentage of 22.6% (ACFE Indonesia Chapter,
40 2020). WBS is a system that manages reporting on all actions or actions that are against the
41 law, regulations and ethics that are reported confidentially, anonymously and independently.
42 This system is used to optimize the participation of all company stakeholders in disclosing
43 violations that occur. WBS is an excellent collaborative system to increase the effectiveness
44 of control over the company.

45 The development of companies with increasingly complex problems will result in difficulties
46 in supervising the company's operational activities so that there is the potential for fraud to
47 occur. The incidence of fraud within the company indicates that there are problems with the
48 duties and functions of the company that are carried out not by existing regulations which
49 can have an impact on corporate governance. Therefore, it is essential to take fraud
50 prevention measures, one of which is through the whistleblowing system.

51 Previous research has shown that the whistleblowing system is one factor that influences
52 fraud. Various studies have shown that the whistleblowing system has a positive effect on
53 fraud prevention (Agusyani et al., 2016; Gaurina et al., 2017; Islamiyah et al., 2020; Jayanti
54 & Suardana, 2019; Maulida & Bayunitri, 2021; Puryati & Febriani, 2020; Sari et al., 2021;
55 Sujana et al., 2020; Wahyuni & Nova, 2018; Wardana et al., 2017). With implementing a
56 sound whistleblowing system in an organization, integrity and openness will be formed to
57 prevent fraud. However, other studies have shown that the whistleblowing system does not
58 affect fraud prevention because there is no data protection and the reporter's identity so it
59 affects employees reporting fraudulent acts (Sujana et al., 2020).

60 This study aims to determine the effect of the whistleblowing system on fraud prevention.
61 Publications related to the whistleblowing system and fraud prevention with case studies in
62 Indonesia are minimal. Therefore, this study will discuss the correlation of the two variables
63 with various case examples based on publications in Indonesia. This research is expected to
64 provide input to various organizations that the whistleblowing system can be an effective
65 fraud prevention tool to prevent future losses.

66
67 The Agency theory proposed by Jensen and Meckling (1976) states that an agency
68 relationship is a contract between shareholders as principals and management as agents
69 (Jensen & Meckling, 1976). In the agency theory, management is a party contracted by the
70 principal to work in the principal's interests. Agency theory focuses on determining the most
71 efficient contract that will form the basis of the relationship between the agent and the
72 principal.

73 The principal assesses the performance of agents based on their ability to generate
74 significant profits or profits which will directly affect the dividends received by the principal.
75 This advantage is the principal's hope to get a high return on the investment invested in the
76 company. The agent's performance appraisal is based on the profit generated, then the
77 agent may have a conflict of interest for management to be involved in fraud/manipulation to
78 maximize the compensation received (Omar et al., 2014).

79 The management authorized to manage the company's finances has a personal interest in
80 maximizing their profits by committing fraud. The most often used to commit fraud or
81 manipulation are fraud in recording fictitious income, hiding information related to liabilities or
82 expenses, and inflating reported assets (Omar et al., 2014). Fraudulent actions in financial
83 statements committed by agents, if left unnoticed by the principal, can adversely affect the
84 company's finances.

85 With an economical approach using agency theory, the occurrence of fraud determines
86 extrinsic motivation to minimize individuals not being involved in manipulative behavior (Shi
87 et al., 2017). The principal seeks to increase management awareness so that management
88 seeks to prevent fraud in financial statements. By incorporating an element of evaluation by
89 the principal through corporate control, the potential for fraud can be minimized (Shi et al.,
90 2017).

91 Signal theory was first developed by Spence (1973) to explain behavior in the labor market.
92 This theory explains the behavior of two parties when they access different information.
93 Signal theory explains the actions taken by the signaler to influence the behavior of the
94 signal receiver (Ghozali, 2020). Information obtained by individuals and companies is very
95 influential in the decision-making process for personal, business and government interests.

96 Donald R Cressey (1953) developed a model that influences the dimensions of the fraud
97 triangle by showing that in some situations it leads to a better risk assessment (Huang et al.,
98 2016). Fraud can be generated from pressure, opportunity, and rationalization. Furthermore,
99 the fraud triangle developed into a fraud diamond. Fraud diamond is the view put forward by
100 Wolfe and Hermanson (2004). Fraud diamond is developing the fraud triangle model by
101 adding one fraud driving factor, namely capability (Wolfe & Hermanson, 2004). There are six
102 capabilities is committing fraud in the fraud diamond: position, intelligence/smart, strong ego
103 and belief, coercion (coercion), lying effectively and consistently, and stress (Wolfe &
104 Hermanson, 2004).

105 Fraud diamond developed into a fraud pentagon. Crowe Horwath coined the Pentagon
106 Fraud Theory in 2011 which developed the fraud triangle model (Cressey, 1953). The
107 elements in the fraud pentagon consist of arrogance, competence or capability, pressure,
108 opportunity, and rationalization (Horwath, 2011). Perpetrators carry out at least 70% of fraud
109 by combining pressure with arrogance and greed. Arrogance is an attitude of superiority and
110 greed that must be directed and corrected. This trait can trigger fraud because individuals
111 believe that they will not be known if they commit fraud and believe that they will not get
112 sanctions if there are sanctions (Aprilia, 2017).

113 Fraud is an act of intentional deceit that can take the form of embezzlement of assets,
114 embezzlement of information, concealment of facts, or corruption (Wardana et al., 2017).
115 The types of fraud include corruption, misappropriation of assets and fraudulent reports
116 (ACFE Indonesia Chapter, 2016, 2020). In developing an effective fraud prevention strategy,
117 organizations must pay attention to several things, including 1) internal and external
118 environmental conditions, 2) the complexity of business activities, 3) the potential, types, and
119 risks of fraud, 4) the adequacy of the required resources (Sofia, 2016).

120 Whistleblowing attempts to disclose or report violations and fraud or unlawful actions in the
121 company/organization where the employee works (Nugroho, 2015). Whistleblowing can
122 occur because of a conflict between employee loyalty and the protection of public interests
123 (Wardana et al., 2017). A whistleblower discloses/reports violations and fraud from the
124 employee's organization (Nugroho, 2015). A whistleblowing system is not only a means of
125 reporting but also a form of administrative supervision (Jayanti & Suardana, 2019). There

are 4 (four) elements that make the whistleblowing system effective, namely: anonymity, independence, accessibility, and follow-up (Albrecht et al., 2012).

2. RESEARCH METHODS

This study is a literature review study carried out in stages: (1) determining the formulation of the problem and research questions using the PICO (Problem, Intervention, Comparison, Outcome) method, (2) searching for articles/publications based on the inclusion and exclusion criteria that have been determined, (3) perform analysis and synthesis of the articles that have been collected. This literature review is based on various published studies, which will be evaluated using electronic search strategies from different databases on the Web of Science, Scopus, and manual searches on Google Scholar.

Searching various databases using several keywords such as "fraud", "prevention", "fraud", "corruption", "Whistleblowing", Whistleblowing system", and "violation reporting system". Articles were included in this study if they met the following inclusion criteria: (1) reported as a publication or report and written in Indonesian or English, (2) previous research was qualitative or quantitative research or literature review, (3) focused on the process and factors related to fraud prevention, and (4) publication date of the last 10 years from 2012 to 2021. The study does not include pre-printed articles, opinions, and comments. The author analyzes the complete article from each article title in the next stage. The author tries to find full-text articles through various databases. However, if the full text cannot be found, the author tries to send a request for the full article to the correspondence author's email directly. Only studies that meet the inclusion and exclusion criteria and find the full text will be extracted and included.

Ten articles were selected after screening using inclusion and exclusion criteria. Data analysis was carried out by content analysis using a matrix table. The matrix is used to compare the research subjects, the place/location of the study, the outcomes used, and research results that show the relationship between the whistleblowing system and fraud.

3. RESULTS AND DISCUSSION

Ten articles were analyzed using the matrix presented in Table 1, which presents the variables studied in each article. All articles used a cross-sectional or cross-sectional study design and multiple regression methods to analyze the data. Of the 10 articles analyzed, five studies were conducted in Bali Province, two were conducted in West Java Province, and one was conducted in East Java, South Sulawesi, and Riau Provinces.

The content analysis results in this study show that out of 10 articles, nine articles show the positive influence of the whistleblowing system on fraud prevention. At the same time, only one article shows that the implementation of the whistleblowing system does not affect fraud prevention.

Previous studies have shown a relationship between the whistleblowing system and fraud prevention, as presented in Table 1 (Agusyani et al., 2016; Gaurina et al., 2017; Islamiyah et al., 2020; Jayanti & Suardana, 2019; Maulida & Bayunitri, 2021). ; Puryati & Febriani, 2020; Sari et al., 2021; Sujana et al., 2020; Wahyuni & Nova, 2018; Wardana et al., 2017). Whistleblowing attempts to disclose or report violations and fraud or unlawful actions in the company/organization where the employee works (Nugroho, 2015). Whistleblowing can occur because of a conflict between employee loyalty and the protection of public interests (Wardana et al., 2017). A whistleblower discloses/reports violations and fraud from the

employee's organization (Nugroho, 2015). The Whistleblowing System (WBS) is designed regarding the criteria for reported fraud, including 5W+1H, the follow-up to reports, rewards and protection for the whistleblower, and penalties/sanctions for the reported party (Nugroho, 2015). The Whistleblowing System is not only a means of reporting but also a form of administrative supervision (Jayanti & Suardana, 2019).

Table 1. Literature review on Fraud prevention and Whistleblowing System

Number	Author	Location and Respondents	Conclusion
1	Wahyuni & Nova (2018)	Bengkalis (33 respondents)	Whistleblowing system and apparatus competence affect fraud prevention. Organizational commitment related to the whistleblower's data protection policy, an evident and responsible reporting mechanism, and evaluation and follow-up are very influential in implementing the whistleblowing system to prevent fraud.
2	Wardana, Sujana & Wahyuni (2017)	Buleleng(69 respondents)	Whistleblowing system arises when there is a conflict between loyalty and protection of public interests. Internal control, whistleblowing system, and morality positively affect fraud prevention.
3	Gaurina, Purnamawati, Atmadja (2017)	Bali Cruises (72 respondents)	Employee perceptions of ethics and the whistleblowing system positively affect fraud prevention.
4	Islamiyah, Made, Sari (2020)	Malang (99 respondents)	Human Resource Competence, morality, internal control systems, and whistleblowing systems positively affect fraud prevention. Reporting through the whistleblowing system is very effective in minimizing or eliminating fraud committed by internal parties.
5	Maulida, Bayunitri (2021)	Bandung (30 respondents)	Whistleblowing system affects fraud prevention by 54.3%. The whistleblowing system is an essential medium for preventing fraud. An effective whistleblowing system will encourage employees and the public to be bolder in reporting fraudulent acts. A whistleblowing system can also change a "silent" culture into an "honest and open" culture. The study results indicate that more respondents' fraud results were detected through reporting or information from fellow employees than information from the auditor's findings.
6	Jayanti, Suardana (2019)	Denpasar City (108 respondents)	Human Resource Competence, sound morality, a whistleblowing system, and a robust internal control system positively affect fraud prevention.

7	Sari, Nurwanah (2021)	Makassar City (31 respondents)	Internal control, implementation of a whistleblowing system, and asymmetric information affect fraud prevention. The whistleblowing system works effectively because of organizational support.
8	Sujana, Suardikha, Laksmi (2020)	Denpasar City (97 respondents)	Human Resource Competence and the internal control system affect fraud prevention, but the implementation of the whistleblowing system does not affect fraud prevention. This may be due to the absence of an adequate whistleblowing system for the protection of whistleblowers related to fraud, thus affecting the security of the reporter and the reporter's concern about dealing with the law in reporting indications of fraud.
9	Puryati, Febriani (2020)	Bandung (62 respondents)	Fraud prevention can be done by building reliable internal controls and improving the whistleblowing system for all parties in the organization.
10	Agusyani, Sujana, Wahyuni (2016)	Buleleng Regency (90 respondents)	The application of the whistleblowing system and the competence of Human Resources in an organization affects fraud prevention.

A study showed different results that the whistleblowing system did not affect fraud prevention (Sujana et al., 2020). This has happened because the whistleblowing system has not been appropriately implemented. Hence, there is no protection for whistleblowers in reporting fraud or corruption, and public concerns about dealing with the law related to reporting fraud (Sujana et al., 2020).

4. CONCLUSION, LIMITATIONS, AND SUGGESTIONS

4.1 CONCLUSION

This literature review study shows that the Whistleblowing System positively affects fraud prevention. The Whistleblowing System is an effective mechanism for preventing fraud, which requires the company's commitment to protecting the whistleblower's data, a transparent and responsible reporting mechanism, and evaluating and improving the system.

4.2 LIMITATIONS

The limitation of this research is that the research location based on the previous article is limited to case studies in Indonesia, and the focus of business in this literature review is not specific. Therefore, to support fraud prevention, companies are advised to implement an effective whistleblowing system.

4.3 SUGGESTIONS

Suggestions for further research regarding the relationship between the whistleblowing system and fraud are expected to focus on the same line of business, for example in the banking sector, plantation sector, health sector and so on, as well as adding different data processing methods in order to add references for further research.

DISCLAIMER

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge.

COMPETING INTERESTS

The research was not funded by the producing company rather it was funded by personal efforts of the authors.

REFERENCES

1. ACFE Indonesia Chapter. (2016). Survei Fraud Indonesia 2016.
2. ACFE Indonesia Chapter. (2020). Survei Fraud Indonesia 2019.
3. In ACFE Indonesia Chapter. Aghghaleh, S. F., Iskandar, T. M., & Mohamed, Z. M. (2014). Fraud Risk Factors of Fraud Triangle and the Likelihood of Fraud Occurrence: Evidence from
4. Agusyani, N. K. S., Sujana, E., & Wahyuni, M. A. (2016). Pengaruh Whistleblowing System dan Kompetensi Sumber Daya Manusia terhadap Pencegahan Fraud pada Pengelolaan Keuangan Penerimaan Pendapatan Asli Daerah (Studi pada Dinas Pendapatan Daerah Kabupaten Buleleng). *Jurnal Akuntansi Program S1*, 6(3).
5. Albrecht, W. S., Albrecht, C. O., Albrecht, C. C., & Zimbelman, M. F. (2012). *Fraud Examination (Fourth Edi)*. Soth-Western Cengage Learning.
6. Aprilia. (2017). Analisis Pengaruh Fraud Pentagon Terhadap Kecurangan Laporan Keuangan Menggunakan Beneish Model Pada Perusahaan Yang Menerapkan Asean Corporate Governance Scorecard. *Jurnal ASET (Akuntansi Riset)*, 9(1), 101–132.
7. Badan Pengawas Keuangan dan Pembangunan. (2008). *Fraud Auditing*. Pusdiklatwas BPKB.
8. Gaurina, N. P. M., Purnamawati, G. A., & Atmadja, A. T. (2017). Pengaruh persepsi karyawan mengenai perilaku etis dan whistleblowing system terhadap pencegahan fraud (Studi Kasus Pada Bali Hai Cruises). *Jurusan Akuntansi Program S1*, 8(2).
9. Holtfreter, K. (2008). Determinants of Fraud Losses in Nonprofit Organizations. *Nonprofit Management and Leadership*, 19(1). <https://doi.org/10.1002/nml> Horwath, C. (2011).
10. 11. Why the Fraud Triangle Is No Longer Enough. Huang, S. Y., Lin, C. C., Chiu, A. A., & Yen, D. C. (2016). Fraud detection using fraud triangle risk factors. *Information Systems Frontiers*, 19(6).
11. Husnawati, N., & Handajani, L. (2017). Accounting Fraud: Determinant, Moderation of Internal Control System And The Implication To Financial Accountability. *E-Proceeding International Conference and Call for Papers*, 311–335.
12. Islamiyah, F., Made, A., & Sari, A. R. (2020). Pengaruh kompetensi aparatur desa, moralitas, sistem pengendalian internal, dan whistleblowing terhadap pencegahan fraud dalam pengelolaan dana desa di Kecamatan Wajak (Studi empiris pada Desa Sukoanyar, Desa Wajak, Desa Sukolilo, Desa Blayu dan Desa Patok. *Jurnal Riset Mahasiswa Akuntansi*, 8(1), 1–13.
13. Jayanti, L. S. I. D., & Suardana, K. A. (2019). Pengaruh Kompetensi SDM, Moralitas, Whistleblowing dan SPI Terhadap Pencegahan Fraud Dalam Pengelolaan Keuangan Desa. *E-Jurnal Akuntansi*, 29(3), 1117–1131.
14. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305–360.

- 262 15. 17. Maulida, W. Y., & Bayunitri, B. I. (2021). The influence of whistleblowing system
263 toward fraud prevention. *International Journal of Financial, Accounting, and*
264 *Management*, 2(4), 275–294. <https://doi.org/10.35912/ijfam.v2i4.177>
- 265 16. Mulya, A., Rahmatika, D. N., & Kartikasari, M. D. (2019). Pengaruh Fraud Pentagon
266 (Pressure, Opportunity, Rationalization, Competence, dan Arrogance) terhadap
267 Pendeteksian Fraudulent Financial Statement pada Perusahaan Property, Real Estate,
268 and Building Construction yang terdaftar di Bursa Efek Indonesia tahun . *Jurnal*
269 *Perpajakan Manajemen Dan Akuntansi*, 11(1), 11–25.
- 270 17. Nugroho, V. O. (2015). Pengaruh persepsi karyawan mengenai whistleblowing system
271 terhadap pencegahan fraud dengan perilaku etis sebagai variabel intervening pada PT
272 Pagilaran. Universitas Negeri Yogyakarta.
- 273 18. Omar, N., Rahman, R. A., Danbatta, B. L., & Sulaiman, S. (2014). Management
274 Disclosure and Earnings Management Practices in Reducing the Implication Risk.
275 *Procedia - Social and Behavioral Sciences*, 145, 88–96.
276 <https://doi.org/10.1016/j.sbspro.2014.06.014>
- 277 19. Puryati, D., & Febriani, S. (2020). The Consequence of Whistleblowing System and
278 Internal Control toward Fraud Prevention: A Study on Indonesian State Owned
279 Enterprise. *International Journal of Business and Technology Management*, 2(3), 35–
280 48.
- 281 20. Putri, P. A. A., & Irwandi, S. A. (2016). The determinants of accounting fraud tendency.
282 *The Indonesian Accounting Review*, 6(1). <https://doi.org/10.14414/tiar.v6i1.857>
- 283 21. Sari, R., Su'un, M., & Nurwanah, A. (2021). Effect of internal control , whistleblowing
284 role and data asymmetry against fraud prevention. *Point of View Research Accounting*
285 *and Auditing*, 2(1), 92–99.
- 286 22. Sawaka, I. G. N. H., & Ramantha, I. W. (2020). Fraud pentagon theory in detecting
287 financial perception of financial reporting with good corporate governance as moderator
288 variable. *International Research Journal of Management, IT and Social Sciences*, 7(1),
289 84–94. <https://doi.org/10.21744/irjmis.v7n1.824>
- 290 23. 25. Shi, W., Connelly, B. L., & Hoskisson, R. E. (2017). External Corporate Governance
291 and Financial Fraud: Cognitive Evaluation Theori Insight on Agency Theory
292 Prescriptions. *Strategic Management Journal*, 38, 1268–1286.
293 <https://doi.org/10.1002/smj>
- 294 24. Sofia, I. P. (2016). The Impact of Internal Control and Good Corporate Governance on
295 Fraud Prevention. 2nd International Seminar on Accounting Society, January, 251–257.
- 296 25. Sudarmanto, E. (2020). Manajemen Risiko: Deteksi Dini Upaya Pencegahan Fraud.
297 *Jurnal Ilmu Manajemen*, 9(2), 107–121. <https://doi.org/10.32502/jimn.v9i2.2506>
- 298 26. Sujana, I. K., Suardikha, I. M. S., & Laksmi, P. S. P. (2020). Whistleblowing System,
299 Competence, Morality, and Internal Control System Against Fraud Prevention on Village
300 Financial Management in Denpasar. *E-Jurnal Akuntansi*, 30(11),
301 2780. <https://doi.org/10.24843/eja.2020.v30.i11.p06>
- 302 27. Triyanto, D. N. (2019). Fraudulence Financial Statements Analysis using Pentagon
303 Fraud Approach. *Journal of Accounting Auditing and Business*, 2(2),
304 <https://doi.org/10.24198/jaab.v2i2.22641>
- 305 28. Wahyuni, E. S., & Nova, T. (2018). Analisis whistleblowing system dan kompetensi
306 aparaturnya terhadap pencegahan fraud (Studi empiris pada Satuan Organisasi Perangkat
307 Daerah Kabupaten Bengkalis). *Jurnal Inovasi Dan Bisnis*, 6, 189–194.
- 308 29. Wardana, I. G. A. K., Sujana, E., & Wahyuni, M. A. (2017). Pengaruh Pengendalian
309 Internal, Whistleblowing System Dan Moralitas Aparat Terhadap Pencegahan Fraud
310 Pada Dinas Pekerjaan Umum Kabupaten Buleleng. *Jurnal Akuntansi Program S1*, 8(2),
311 1–10.

312 30. 29. Wolfe, D. T., & Hermanson, D. R. (2004). The Fraud Diamond: Considering the
313 Four Elements of Fraud. The CPA Journal, 74(12), 38–42.