



Enhancing Fraud Prevention: The Impact of Whistleblowing, Internal Controls, Leadership, and Organizational Culture

Sugeng Riadi¹ and Febby Ardesti²

Batam State Polytechnic, Ahmad Yani St, Batam, Indonesia^{1,2}
sugeng@polibatam.ac.id

Abstract. This research aims to determine the influence of the whistleblowing system, internal controls, leadership, and organizational culture on fraud prevention at the Indonesian Financial Audit Agency, Riau Islands Representative. Data was collected through a questionnaire survey, and the analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Smart-PLS 4 software. The research population comprised all auditors, with a total of 54 respondents. The results reveal that the whistleblowing system, internal controls, leadership, and organizational Culture have a positive and significant effect on fraud prevention. However, while positively affecting fraud prevention, internal controls do so insignificantly. This finding aligns with the Theory of Planned Behavior and the Fraud Triangle Theory.

Keywords: fraud prevention, whistleblowing system, internal control, leadership, organizational culture.

1 Introduction

According to data from the Association of Certified Fraud Examiners (ACFE) in the Asia-Pacific Occupational Fraud 2022: A Report to the Nations, Indonesia ranks fourth in the number of fraud cases, with 23 reported incidents. Corruption is the most prevalent form of fraud in Indonesia, accounting for 67% of cases, followed by asset misappropriation in both public and private sectors, which accounts for 28.9%, and financial statement fraud at 6.7%¹. Nearly 95% of fraud cases are driven by financial pressures. The Audit Board of Indonesia has dealt with several major fraud cases, including a loss of 22.78 trillion rupiahs at Asabri Company, 16.81 trillion rupiahs at Jiwasraya Company, and the most recent case reported by the Financial Transaction Reports and Analysis Centre involving Indosurya Inti Finance, which caused customer losses of 106 trillion rupiahs. In the first half of 2023, the Audit Board identified potential state losses totaling 18.19 trillion rupiah. These findings highlight weak-

¹ Accessible: [Various "Fraud" Cases Endanger Indonesia's Economy](#)

nesses in internal control systems, non-compliance that led to losses, potential losses, revenue deficits, and inefficient and ineffective activities².

Organizational losses are caused by deliberate illegal actions for personal gain, known as fraud (ACFE Indonesia, 2020). The Audit Board of Indonesia has developed a whistleblowing system application that allows individuals with information to report suspected illegal activities occurring within the Audit Board³. Furthermore, minimizing fraud can be achieved by enhancing oversight and improving internal controls (Wardah, Carolina, & Wulandari, 2022). Leadership behavior significantly contributes to fraud, accounting for 27.6% of cases (ACFE Indonesia, 2020). Having an effective leader can significantly influence the ability to inspire and unite members toward achieving common goals (Setiawan & Riau, 2020). The impact of organizational culture on performance is substantial, as culture represents a shared value system that shapes the organization's overall functioning (Rahman, 2017). This cultural function helps members implement programs and fosters a sense of unity toward the institution's vision and mission.

This research adopts the findings of a study conducted by Wardah, Carolina and Wulandari, (2022), with a different population, namely auditors of the Audit Board of Indonesia Representative Office in the Riau Islands. Based on the formulated research problems, this study has four objectives. First, to examine whether there is an influence of the whistleblowing system on fraud prevention. Second, to determine whether internal control has an impact on fraud prevention. Third, to investigate whether leadership influences fraud prevention. Fourth, to assess whether organizational culture affects fraud prevention. This research aims to broaden perspectives and provide comprehensive insights into relevant literature on the factors influencing auditors in fraud prevention and to understand the broader relationships between these factors. Therefore, the researcher will examine the topic of Enhancing Fraud Prevention: The Impact of Whistleblowing, Internal Control, Leadership, and Organizational Culture.

2 Literature Review and Hypothesis Development

The Theory of Planned Behavior explains how the three factors that shape behavior are interconnected: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). The Fraud Triangle Theory, developed by Cressey (1950), posits that fraudulent behavior is driven by pressure, opportunity, and rationalization. In the audit process, auditors must identify and understand conditions that have the potential to lead to fraud. These two theories form the basis for auditors when conducting investigations to prevent fraud. Previous studies by Sailawati & Malini, (2021), Megawati & Reskino, (2023), Castellani & Nuralisa (2022), Kuncara (2022), and Dapit, Ghozali, and Achmad (2017) found that the whistleblowing system

² Accessible: [Audit Findings of the State Audit Board for the First Semester of 2023](#)

³ Accessible: [WBS BPK](#)

has a positive and significant effect on fraud prevention. Additionally, research by Wardah, Carolina & Wulandari, (2022), Wulandari & Nuryanto (2018), Yuniarti (2017), Sukmawati & Tarmizi (2022), Sailawati & Malini, (2021), Megawati & Reskino (2023), Rahman (2020), and Kuncara (2022) revealed that internal control has a positive and significant effect on fraud prevention. Relevant studies by Wardah, Carolina & Wulandari, (2022) and Setiawan & Riau (2020) found that leadership positively and significantly impacts fraud prevention. Research by Sailawati & Malini, (2021) and Setiawan & Riau (2020) also demonstrated a positive and significant effect on fraud prevention. Based on previous research findings, the following hypotheses are proposed:

H1: The whistleblowing system has a positive effect on fraud prevention.

H2: Internal control has a positive effect on fraud prevention.

H3: Leadership has a positive effect on fraud prevention.

H4: Organizational culture has a positive effect on fraud prevention.

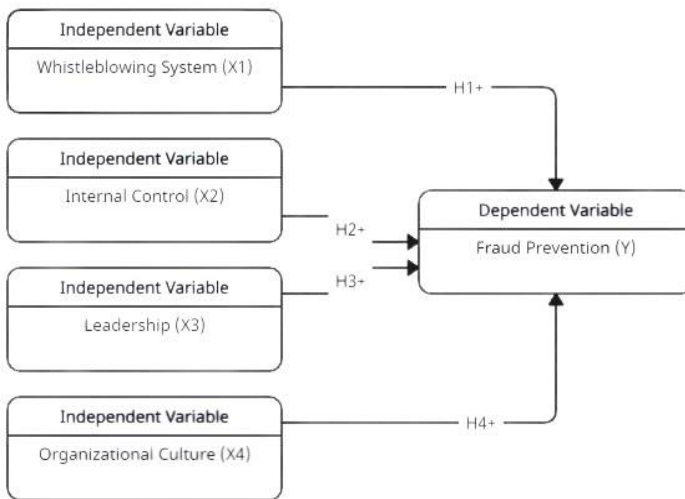


Fig. 1. Research Model

3 Research Methods

The researchers employed a quantitative approach, using government auditors from the Indonesian Financial Audit Agency Riau Islands Representative as the population. This location was chosen because it represents the government auditors within the Riau Islands Province, thus ensuring that the data would be representative of the research findings. Data were collected through a direct survey by distributing questionnaires to respondents. The data used in this study were collected from 54 respondents from the available population. This study consists of four independent variables: the whistleblowing system, internal Control, leadership, and organizational Culture, along

with one dependent variable: fraud prevention. The whistleblowing system is measured using structural, operational, and maintenance aspects (Wardah, Carolina, & Wulandari, 2022). Internal Control is measured by applying organizational structure, authority systems, and sound practices (Wardah, Carolina, & Wulandari, 2022). Leadership is assessed through ethical responsibility, role modeling, and actions against violations (Wardah, Carolina, & Wulandari, 2022). Organizational culture is evaluated using an ethical performance model, which includes ethical communication, ethical training, ethical action laws, and ethical protection mechanisms (Wardah, Carolina, & Wulandari, 2022). Fraud prevention is based on building a culture of honesty and high ethical standards, evaluating processes and anti-fraud controls, and developing accurate monitoring processes (Wardah, Carolina, & Wulandari, 2022).

The method used in this research is Partial Least Squares Structural Equation Modeling (PLS-SEM), using Smart-PLS 4 software. Respondents provided answers using a 4-point Likert scale, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). This study presents the statistical results by testing the hypotheses concerning the whistleblowing system, internal control, leadership, and organizational culture that affect fraud prevention. In descriptive analysis, data are typically presented in standard tables or frequency tables, graphs, bar charts, line charts, pie charts, central tendency measures, data dispersion, and so on (Wahyuni, 2020). These data were organized, processed, and analyzed using descriptive analysis methods to gain insights into the issues. The measurement model (Outer Model) was used to test the relationships between validity and reliability. Convergent validity was achieved when the loading factor for convergent validity was > 0.7 , and the AVE was valid when it exceeded 0.5 (Sailawati & Malini, 2021). Secondly, discriminant validity is attained when the manifest variables measuring a particular latent variable are not used to measure other latent variables. Discriminant validity means that the manifest variables measuring a specific latent variable are not used simultaneously to measure other latent variables. The Fornell-Larcker criterion can be used to test discriminant validity, where the square root of the AVE for each construct must be greater than the correlation between constructs. The reliability test uses composite reliability, considered valid with a value above 0.70 (Sailawati & Malini, 2021). The structural model (inner model) identifies the relationships between latent variables or test hypotheses. The R-square value measures the degree of variability in the independent variables relative to the dependent variable, with three criteria for the value: weak (0.25), moderate (0.50), and strong (0.75). The higher the R-square value, the greater the significance of the independent variables in explaining the variation in the dependent variable (Sailawati & Malini, 2021).

4 Result and Discussion

Before distributing the questionnaire, the researcher conducted a pilot test involving 30 student respondents. The results of the pilot test indicated that the questionnaire was valid. A total of 54 completed questionnaires were collected and deemed suitable

for analysis. The majority of respondents in this study were male auditors, totaling 25 individuals, while the remaining 29 were female auditors. Most respondents were junior auditors with less than 5 years of experience, comprising 33 individuals, while the remaining 21 were senior auditors with more than 5 years of experience. Most respondents had a bachelor's degree or equivalent, totaling 44 individuals. A large portion of respondents, 36 in total, had received specialized training in fraud prevention.

Table 1. Result of Descriptive Analysis

	N	Mean	Min	Max	Deviation Std.
Whistleblowing System	54	3,01	2	4	0,05
Internal Control	54	3,18	2	4	0,02
Leadership	54	3,18	2	4	0,03
Organizational Culture	54	3,10	1	4	0,06
Fraud Prevention	54	3,22	2	4	0,02

Table 1 shows that the average for each variable range between 3.01 and 3.18. This indicates that respondents tend to have a favorable perception of these variables. The low standard deviation, ranging from 0.02 to 0.06, suggests that the respondents' responses were relatively consistent. The high average score for fraud prevention, at 3.22, indicates that respondents generally have a favorable view of their ability in fraud prevention. Additionally, the minimum and maximum values, which range between 1 and 4 as expected, demonstrate consistency in respondents' answers for each variable studied.

Table 2. Results of Outer Loadings and Convergent Validity Tests

Variable	Indicator	Outer Loading	Result	AVE	Result
Whistleblowing System (WS)	WS1	0,867	Valid	0,629	Valid
	WS2	0,893	Valid		
	WS3	0,827	Valid		
	WS4	0,851	Valid		
	WS5	0,606	Valid		
	WS6	0,707	Valid		
	WS7	0,742	Valid		
	WS8	0,809	Valid		
	IC1	0,700	Valid	0,565	Valid
	IC2	0,785	Valid		
	IC3	0,777	Valid		
	IC4	0,847	Valid		

Internal Control (IC)	IC5	0,724	Valid			
	IC6	0,603	Valid			
	IC7	0,626	Valid			
	IC8	0,873	Valid			
	IC9	0,872	Valid			
	IC10	0,757	Valid			
	IC11	0,779	Valid			
	IC12	0,814	Valid			
	IC13	0,775	Valid			
	L1	0,844	Valid	0,768	Valid	
	L2	0,841	Valid			
	Leadership (L)	L3	0,828	Valid		
		L4	0,895	Valid		
L5		0,839	Valid			
L6		0,927	Valid			
L7		0,952	Valid			
Organization Culture (BO)		BO1	0,890	Valid	0,613	Valid
		BO2	0,797	Valid		
	BO3	0,631	Valid			
	BO4	0,745	Valid			
	BO5	0,828	Valid			
	FP1	0,816	Valid	0,650	Valid	
	Fraud Prevention (FP)	FP2	0,812	Valid		
FP3		0,853	Valid			
FP4		0,678	Valid			
FP5		0,890	Valid			
FP6		0,773	Valid			

Based on the results in Table 2, it can be concluded that the outer loading values for each variable meet the standard, with values above 0.60. Similarly, the AVE values for each variable also meet the established threshold, exceeding 0.50. All variables exhibit good convergence, with solid and consistent indicators measuring the same construct. Therefore, there is no need to eliminate any indicators, as all meet the required validity standards. Each question, both individually and collectively, effectively represents the latent variables.

Table 3. Results of the Discriminant Validity Test

	BO	FP	IC	L	WS
BO	0,783				

FP	0,728	0,806			
IC	0,773	0,715	0,752		
L	0,589	0,753	0,699	0,876	
WS	0,504	0,690	0,529	0,545	0,793

Table 3 presents the results of the discriminant validity test using the Fornell-Larcker criterion, showing the square root of the AVE for each construct: BO (0.783), FP (0.806), IC (0.752), L (0.876), and WS (0.793). All AVE construct values exceed the correlations with other latent variables. This indicates that each construct is distinguishable and does not have strong correlations with other constructs.

Table 4. Results of Reliability Test

Variable	Cronbach's alpha	Composite Reliability	Result
WS	0,914	0,930	Reliable
IC	0,935	0,944	Reliable
L	0,949	0,959	Reliable
BO	0,842	0,887	Reliable
FP	0,891	0,917	Reliable

Table 4 presents the reliability test results, showing that each questionnaire item has a composite reliability above 0.70, indicating a high level of reliability. The reliability tests for each variable, using both Cronbach’s Alpha and Composite Reliability methods, yielded satisfactory results. Based on the reliability tests, the variables are consistent in measuring their respective constructs.

Table 5. R-Square Test

R-square	
FP	0,752

Table 5 shows that the coefficient of determination (R-square) for the dependent variable, fraud prevention, is 0.752. This indicates that the independent variables can explain 75.2% of the variation in fraud prevention, while 24.8% may be influenced by other factors not included in the study. The high R-square value suggests that the model used successfully explains the phenomenon being studied, although other factors should be considered when analyzing fraud prevention.

Table 6. Hypothesis Result

	Original Sample	T-Statistic	P-value	Result
Whistleblowing System -> Fraud Prevention	0,303	3,897	0,000	Accepted
Internal Control -> Fraud Prevention	0,056	0,359	0,720	Accepted
Leadership -> Fraud Prevention	0,361	3,097	0,002	Accepted
Organizational Culture -> Fraud Prevention	0,318	2,558	0,011	Accepted

Table 6 presents the analysis results, indicating that the whistleblowing system variable positively and significantly affects fraud prevention, with a T-statistic value of 3.897 and a P-value of 0.000. Meanwhile, the internal control variable has a positive but insignificant effect on fraud prevention, with a parameter coefficient of 0.056, a T-statistic value of $0.359 < 1.96$, and a significance value of $0.720 > 0.05$. The leadership and organizational culture variables positively and significantly affect fraud prevention. The parameter coefficients are (L-FP = 0.361) and (BO-FP = 0.318), with significance values of 0.002 and 0.011, respectively, less than 0.05. The T-statistic values for both variables are also greater than 1.96. Therefore, H₁, H₂, H₃, and H₄ are accepted. The following figure illustrates the inner model test results, including the R-square and P-value values.

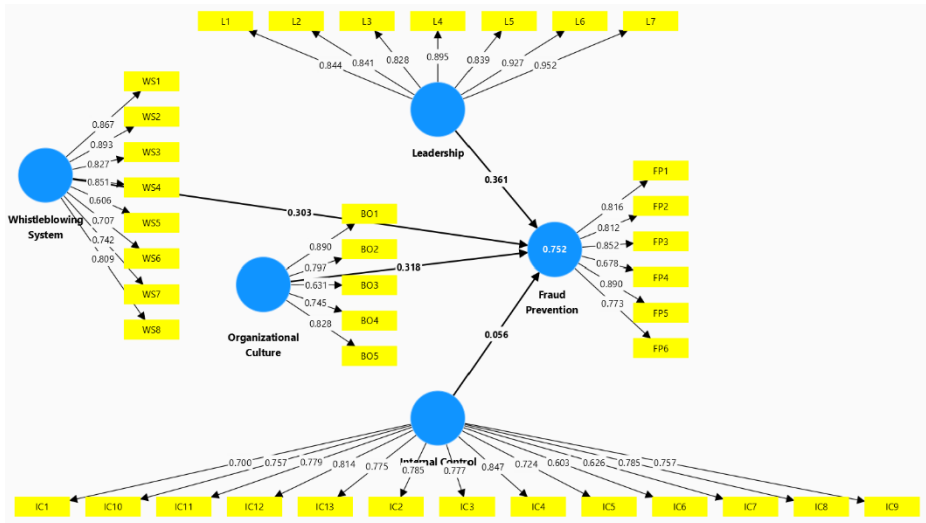


Fig. 2. Bootstrapping Result

Based on the research results, the whistleblowing system has a positive and significant effect on fraud prevention. This means that a higher level of fraud prevention is

achieved when the whistleblowing system is widely implemented, thereby minimizing fraud. These findings are consistent with previous studies by Megawati & Reskino (2023), Sailawati & Malini, (2021), Castellani & Nuralisa (2022), Kuncara (2022), and Pamungkas et al. (2017), which state that the implementation of a whistleblowing system enhances efforts to prevent fraud. However, they differ from the findings of Wardah, Carolina & Wulandari, (2022) and Dewi et al. (2022), who argued that the whistleblowing system does not significantly impact fraud prevention. Therefore, further research is needed to investigate these factors and their influence on fraud prevention capabilities. According to the Theory of Planned Behavior (TPB), auditors to undergo ethics training and anti-fraud programs to enhance their ability to identify fraudulent motives.

Internal control was found to have a positive but not significant effect on fraud prevention. This indicates that while enhanced internal control positively influences the fraud prevention process, other factors may have a more dominant or significant impact on fraud prevention. These results support previous findings that internal control improves fraud prevention (Wardah, Carolina, & Wulandari, 2022), (Wulandari & Nuryanto, 2018), (Yuniarti, 2017), (Sailawati & Malini, 2021), (Megawati & Reskino, 2023), (Rahman, 2020), (Kuncara, 2022). In line with the Fraud Triangle Theory, identifying and understanding conditions that could lead to fraud, coupled with improving internal control implementation, can reduce opportunities for fraud and enhance fraud prevention efforts. Leadership has been proven to positively and significantly impact fraud prevention. This means that good leadership reflects the success of an organization in preventing fraud. This finding aligns with previous studies by Wardah, Carolina & Wulandari, (2022) and Setiawan & Riau (2020), which suggest that members view leaders as role models who emphasize ethical behavior. According to the Fraud Triangle Theory, ethical behavior within an organization is key to its success in achieving its vision and mission. Thus, strong and effective leadership is necessary to prevent fraud.

Organizational culture also has a positive and significant effect on fraud prevention. Organizational culture can be enhanced to foster trust, ethics, and integrity, aligning with the organization's aspirations through its implementation. This is done to ensure that the desired organizational culture is well-executed, leading to the organization's goals and preventing fraud. These findings are consistent with Sailawati & Malini, (2021) and Setiawan & Riau (2020) research. Additionally, these results align with the Theory of Planned Behavior, which asserts that improving the application of an honest organizational culture reduces rationalization and prevents fraud. However, they differ from the findings of Wardah, Carolina & Wulandari, (2022) and Dewi et al. (2022), who concluded that organizational culture does not significantly impact fraud prevention. Therefore, further research is needed to investigate these factors and their effect on fraud prevention capabilities.

5 Conclusion, Limitations, and Recommendations

This research examines the influence of the whistleblowing system, internal control, leadership, and organizational Culture on fraud prevention at the Audit Board of the Republic of Indonesia in the Riau Islands Representative Office. The findings indicate that the whistleblowing system, leadership, and organizational culture positively and significantly affect fraud prevention. Meanwhile, internal control has a positive but insignificant effect on fraud prevention. Practically, these findings provide insight that while internal control has a positive effect on fraud prevention, it is not always a dominant factor. Theoretically, this study supports the Theory of Planned Behavior, which emphasizes behavior formation by considering internal and external factors. Additionally, these findings align with the Fraud Triangle Theory, which identifies pressure, opportunity, and rationalization as factors that can lead to fraudulent behavior. Therefore, this study contributes to understanding factors influencing fraud prevention based on these two theories.

A limitation of this study lies in the sampling, which only involves the Audit Board of the Republic of Indonesia in the Riau Islands Representative Office. As a result, the findings cannot be directly generalized to a broader population and should be interpreted cautiously. Future research is recommended to expand the sample scope by involving various other financial institutions, such as the Financial and Development Supervisory Agency and Financial Services Authority, as well as public accountants. The aim is to gain a more comprehensive understanding of the factors influencing fraud prevention. This would provide deeper insights into effectively enhancing fraud prevention capabilities through appropriate strategies and actions. Overall, the whistleblowing system, internal control, leadership, and organizational culture are essential in improving the effectiveness of fraud prevention.

References

1. ACFE. Report to the Nations on Occupational Fraud and Abuse: 2020 Global Fraud Study: <https://legacy.acfe.com/report-to-the-nations/2020/> (2020)
2. ACFE Indonesia. Survei Fraud Indonesia. ACFE Indonesia Chapter. <https://acfe-indonesia.or.id/wp-content/uploads/2021/02/SURVEI-FRAUD-INDONESIA-2019.pdf> (2019)
3. Ajzen, I. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2),179-211 (1991)
4. Anggoe, M., & Reskino, R. Pengaruh Pengendalian Internal, Whistleblowing System, Dan Komitmen Organisasi Terhadap Pencegahan Kecurangan Dengan Moralitas Individu Sebagai Variabel Moderasi. *Jurnal Akuntansi Trisakti*, 10(1),31–50. <https://doi.org/10.25105/jat.v10i1.15818> (2023)
5. Anggraeni, N. M., Sailawati, S., & Malini, N. E. L. Pengaruh Whistleblowing System, Sistem Pengendalian Internal, Budaya Organisasi, dan Keadilan Organisasi Terhadap Pencegahan Kecurangan. *Jurnal Akuntansi Keuangan Dan Bisnis*, 14(1),85–92. <https://doi.org/10.35143/jakb.v14i1.4613> (2021)

6. Association of Certified Fraud Examiners Indonesia. *Survei Fraud Indonesia 2019*. Indonesia Chapter #111, 53(9),1–76. <https://acfe-indonesia.or.id/survei-fraud-indonesia/> (2019)
7. Castellani, J., & Nuralisa, A. the Influence of Internal Audit and Whistleblowing System Effectiveness on Fraud Prevention. *Jurnal Riset Akuntansi Kontemporer*, 14(2). <https://doi.org/10.23969/jrak.v14i2.6011> (2022)
8. Cressey, D. R. The Criminal Violation of Financial Trust. *American Sociological Review*, 15(6), 738–743. <https://doi.org/10.2307/2086606> (1950)
9. Dewi, L. P., Sunaryo, K., & Yulianti, R. Pengaruh Kompetensi Aparatur, Moralitas Individu, Budaya Organisasi, Praktik Akuntabilitas, dan Whistleblowing Terhadap Pencegahan Fraud Dalam Pengelolaan Dana Desa (Studi Empiris Pada Desa di Kecamatan Prambanan, Klaten). *Jurnal akuntansi trisakti*, 9(2),323-340. <https://doi.org/10.25105/jat.v9i2.13870> (2022)
10. Kuncara, W. A. The influence of Whistleblowing System and internal control on fraud prevention at PT Pos Indonesia (Persero) Bandung City. *International Journal of Financial, Accounting, and Management*, 4(2),101-113. <https://doi.org/10.35912/ijfam.v4i2.250> (2022)
11. Laksmi, P. S. P., & Sujana, I. K. Pengaruh kompetensi SDM, moralitas dan sistem pengendalian internal terhadap pencegahan fraud dalam pengelolaan Keuangan Desa. *E-Jurnal Akuntansi Universitas Udayana*, 26(3), 2155-2182 (2019)
12. Novita Wulandari, D., Nuryatno, M., & Studi Akuntansi Universitas Trisakti Jakarta, P. F. the Effect of Internal Control, Anti-Fraud Awareness, Integrity, Independence, and Profesionalism To Fraud Prevention. *Jramb*, 4(2), 117 (2018)
13. Pamungkas, I. D., Ghozali, I., & Achmad, T. The effects of the whistleblowing system on financial statements fraud: Ethical behavior as the mediators. *International Journal of Civil Engineering and Technology*, 8(10),1592–1598. <http://http://www.iaeme.com/ijciet/issues.asp?JType=IJCIET&VType=8&IType=10>(2017)
14. Fauzie Rahman, dkk. *Perilaku Organisasi*, Yogyakarta: expert (2017)
15. Rahman, K. G. Sistem Pengendalian Internal Dan Peran Audit Internal Terhadap Pencegahan Kecurangan. *Bongaya Journal of Research in Accounting (BJRA)*, 3(1),20-27. <https://doi.org/10.37888/bjra.v3i1.207> (2020)
16. Setiawan, R. on the Prevention of Fraud : Effectiveness of Internal Control As a. 4(3)322–329 <https://www.ejournal.pelitaindonesia.ac.id/ojs32/index.php/BILANCIA/article/view/7> (2020)
17. Wahyuni. *Statistik Deskriptif Untuk Penelitian Oleh Data Manual dan SPSS Versi 25* (2020)
18. Wardah, Z., Carolina, A., & Wulandari, A. Pengaruh Whistleblowing System, Internal Control, Leadership dan Budaya Organisasi terhadap Fraud Prevention. *Nominal Barometer Riset Akuntansi Dan Manajemen*, 11(2), 233-247. DOI: 10.21831/nominal.v11i2.49346 (2022)
19. Yuniarti, R. D., & Ariandi, I. The effect of internal control and anti-fraud awareness on fraud prevention (A survey on inter-governmental organizations). *Journal of Economics, Business, and Accountancy Ventura*, 20(1), 113-124. DOI: 10.14414/jebav.v20i1.626 (2017)

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