

UTILIZATION OF WHISTLEBLOWING SYSTEM, AUDIT FINDINGS AND OPINIONS IN REVEALING CORRUPTION LEVELS TO SUPPORT SUSTAINABLE GOVERNANCE IN PROVINCES IN INDONESIA

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Abstract

This study aims to analyze the utilization of the whistleblowing system (X1), audit findings (X₂), and audit opinions (X3) in revealing corruption levels (Y) to support sustainable governance across provinces in Indonesia. Employing a quantitative panel data approach comprising 68 observations, the analytical framework incorporates descriptive statistics, model selection procedures (Chow, Hausman, and Lagrange Multiplier tests), classical assumption testing, and panel regression analysis executed via EViews. The diagnostic evaluation selected the Fixed Effect Model (FEM) as the optimal estimation model. Furthermore, classical assumption tests confirmed that the empirical model satisfies all statistical requirements, featuring normally distributed residuals ($p = 0.762367$), no multicollinearity issues (correlations < 0.80), and an absence of heteroscedasticity ($p = 0.187250$). The regression results reveal that the utilization of the whistleblowing system (X1) has a statistically significant negative impact on corruption levels (Y) ($\beta = -3.518266$, $p = 0.0181$). Conversely, audit findings (X2) ($\beta = 25.02458$, $p = 0.1204$) and audit opinions (X3) ($\beta = 67.93004$, $p = 0.5489$) exhibit positive relationships with corruption levels, though their individual effects are not statistically significant at the 5% level. Simultaneously, all independent variables jointly exert a significant combined effect on corruption levels ($F = 3.129075$, $p = 0.031686$). The Adjusted R² value of 0.087035 indicates that 8.70% of the variance in corruption levels is explained by the model, while 91.30% is driven by external factors beyond the scope of this study.

Keywords: Whistleblowing System, Audit Findings, Audit Opinions, Corruption Levels, Sustainable Governance

INTRODUCTION

This research supports three of the government's eight missions, known as Asta Cita (Indonesian Strategic Plans), namely: Asta Cita (Indonesian Strategic Plans) numbers 4, 6, and 7. One of Asta Cita (Indonesian Strategic Plans) number 4 is "Improving human resources, science, technology, education, and health through clean and accountable governance, which will support the quality of public services, including the education, health, and human resource empowerment sectors in the provinces." Meanwhile, one of Asta Cita (Indonesian Strategic Plans) number 6 is "Building from the village and from the bottom up by exposing corrupt practices in the village and regional sectors, thereby supporting more equitable and sustainable development." Asta Cita (Indonesian Strategic Plan) number 7 is "Political, legal, and bureaucratic reform through corruption eradication. The WBS (WBS) approach, audit findings, and audit opinions are highly relevant to legal, bureaucratic reform, and corruption prevention (1). The government has committed to achieving Target 6.1 of the Sustainable Development Goals (SDGs), which states, "By 2030, substantially reduce corruption and bribery in all its forms by leveraging digitalization."

The Indonesian government has attempted to eradicate corruption by means such as establishing the Corruption Eradication Commission (KPK), a law enforcement agency with the authority to conduct investigations and prosecutions (2). Transparency International's Corruption Perception Index (CPI) data for Indonesia has consistently shown a stagnant or even declining position in recent years, indicating that existing efforts have not been effective enough to eradicate the root of the problem (3). Overall, these findings illustrate the high scale of state losses and the magnitude of associated illegal activities, thus demonstrating the need for strong law enforcement and stricter oversight. In Indonesia, cases involving insiders who become aware of fraud or improper practices in their workplace and then decide to become whistleblowers are not easy (4).

The government and society need to work together to strengthen oversight and law enforcement against corruption, as well as to build an anti-corruption culture across all levels of society (5). Research from the Association of Certified Fraud Examiners (ACFE) consistently shows that whistleblower reports are one of the most effective ways to uncover fraud cases (6). In addition to the whistleblowing system, the Supreme Audit Agency (BPK) conducts financial audits and provides results in the form of audit opinions, with audit findings included in the Semester Audit Results Summary (IHPS). Urgency: The urgency of this research lies in the high level of corruption in local government, which requires effective control mechanisms. The need to strengthen accountability through a comprehensive WBS (Wise Management Report) and audits is crucial. This situation not only has the potential to threaten the financial stability of organizations or government agencies but can also erode public trust (7). Bureaucrats' capacity to comply with financial procedures is lacking (8). Previous research has been partial, failing to integrate the WBS, audit findings, and audit opinions. Linking corruption control with sustainability governance helps build sustainable governance, and its strategic relevance to the national agenda and the SDGs related to good governance. From an agency theory perspective, provincial governments act as agents managing public resources for their principals (the public), making them vulnerable to information asymmetry and opportunistic behavior. Whistleblowing systems (WBS) are a crucial internal mechanism for early detection of irregularities, but their effectiveness varies. Therefore, the role of the Supreme Audit Agency (BPK) audit and an integrated whistleblowing system must be optimized to increase the effectiveness of corruption prevention efforts in Indonesia.

LITERATURE REVIEW

Corruption is an act that causes financial loss to the State, a region, or another legal entity utilizing capital and/or other concessions derived from the public (9). A whistleblowing system (WBS) is an organizational governance mechanism that facilitates the reporting of violations, irregularities, or unethical conduct by employees or related parties, encompassing mechanisms for report intake, whistleblower protection, the investigation process, and follow-up actions. (10)

Audit findings are the results of an auditor's assessment or observation of collected audit evidence—taking the form of conclusions regarding conformity or non-conformity with audit criteria (policies, regulations, or standards)—and are typically accompanied by evidence, conclusions, and recommendations for improvement. (11). The auditor's opinion issued on the financial statements attests to their fairness.. (12).

Research regarding the utilization of whistleblowing systems, audit findings, and audit opinions to reveal corruption levels—thereby supporting sustainability governance within provincial governments—is generally grounded in several complementary theoretical frameworks. Agency Theory serves as the grand theory, explaining the information asymmetry between the public (as the principal) and the local government (as the agent); within this context, oversight mechanisms such as whistleblowing systems (WBS) and audits are essential to mitigate opportunities for opportunistic and corrupt behavior.

METHOD

This study uses quantitative data with secondary data types so that the data collection technique uses the documentation method obtained from related institutions and parties, namely the Supreme Court, the Supreme Audit Agency (BPK), and the websites of Provincial Governments in Indonesia. The data sources collected are court decisions originating from the Supreme Court's decision website (<https://putusan3.mahkamahagung.go.id>), the BPK Audit Results Summary attachment originating from the BPK website (<https://www.bpk.go.id/tlrhp>), the Provincial Government transparency document attachment originating from the website of each province and information on the WBS website of each Provincial Government.

The population in this study is all provinces in Indonesia, namely 34 provinces. The research data was processed using panel data regression analysis procedures. This method begins by selecting the most appropriate model to interpret the results among three regression models: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). This selection is carried out through three testing stages: The tests include the Chow test, the Hausman test, and the Lagrange multiplier test, respectively. The implementation uses the Econometric Views (EViews) program version 12 as a tool.

Measurements of each variable are presented more concisely in Table 1 below:

Table 1. Variable Measurement

Variable	Measurement	Data Source
Whistleblowing system (X1)	Maturity level/ effectiveness of Whistleblowing System implementation	Each province's website
Audit Findings (X2)	The nominal value of state losses or the accumulation of SPI findings and regulatory non-compliance.	https://www.bpk.go.id/tlrhp
Audit Opinion (X3)	BPK opinion dummy variable (1 = WTP, 0 = other than WTP).	Pemerintah Provinsi (BPK RI. https://www.bpk.go.id/tlrhp)
Corruption (Y)	The number of corruption cases prosecuted by law enforcement officials (KPK/ Prosecutor's Office/ National Police) or the achievement score of the KPK's Monitoring Center for Prevention (MCP) in the relevant province.	https://www.kpk.go.id/

This variable design is generally used to statistically test: Does the effectiveness of the Whistleblowing System (X1), the level of Audit Findings (X2), and the quality of Audit Opinions (X3) have a significant influence on reducing the level of Corruption (Y) within the Provincial Government in Indonesia.

Notation of written mathematical equations should be included at the end of the article before the Bibliography, and given the unit (SI)

The regression equation for this study is:

$$TK = \beta_1 WBS + \beta_2 TA + \beta_3 OA + \epsilon_1$$

Independent Variable (X)

X1: Whistleblowing System

X2: Audit Findings

X3: Audit Opinion

Dependent Variable (Y)

Y: Level of Corruption

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

This study employs descriptive statistical analysis to gain insight into the distribution of the data under examination. The descriptive statistical analysis in this study encompasses the mean, maximum value, minimum value, standard deviation, and the number of observations. The results of the descriptive statistics following the test can be seen in Table 1.

Table 1. Descriptive Statistical

Variabel	N	Minimum	Maximum	Mean	Std. Dev
X1	68	42.85714	85.71429	57.56303	13.28490
X2	68	19.89000	26.16000	23.48218	1.194476
X3	68	0.000000	1.000000	0.970588	0.170214
Y	68	70.71068	803.1200	378.9773	160.8547

Source: EViews 12 output, data processed by the author (2026)

Based on the descriptive statistical analysis of 68 observations, variable X1 has a minimum value of 42.85714 and a maximum of 85.71429, with a mean of 57.56303 and a standard deviation of 13.28490. Variable X2 has a minimum value of 19.89000 and a maximum of 26.16000, with a mean of 23.48218 and a standard deviation of 1.194476. Furthermore, variable X3 has a minimum value of 0 and a maximum of 1, with a mean of 0.970588

and a standard deviation of 0.170214. Meanwhile, variable Y has a minimum value of 70.71068 and a maximum of 803.1200, with a mean of 378.9773 and a standard deviation of 160.8547. Overall, the standard deviation values indicate the degree of data dispersion for each variable during the study period. Variable X3 has a mean close to the maximum value, indicating that the majority of observations have an X3 value of 1.

Model Selection

To obtain a suitable regression model, a model selection test must first be conducted. Model selection can be performed using tests such as the Chow test, Hausman test, and Lagrange Multiplier test. The following are the results of the tests conducted for model selection in this study:

Table 2. Summary of Regression Model Test Results

Pengujian	Probability	Model Terpilih
Uji Chow (CEM vs FEM)	0,0000 < 0,05	FEM
Uji Hausman (FEM vs REM)	0,0000 < 0,05	FEM
Uji Langrange Multiplier (REM vs CEM)	0,0000 < 0,05	FEM

The Chow test is conducted to determine the best model for use in the study's regression analysis. It is used to select the optimal model between the common effect model and the fixed effect model. If the probability value (cross-section F) is less than 0.05, the fixed effect model is accepted; conversely, if the probability value (cross-section F) is greater than 0.05, the common effect model is accepted. The results of the Chow test are as follows:

Table 2. Classical assumption test

Normalitas		Multikolinieritas				Heterokedastistas	
Prob.	0,762367		X1	X2	X3	Prob.Chi-Square (3)	0.187250
		X1	1.000000	-0.132924	0.194130		
		X2	-0.132924	1.000000	-0.092176		
		X3	0.194130	-0.092176	1.000000		

Based on the results of the normality test using a histogram graph and the Jarque-Bera test, the Jarque-Bera statistical value was obtained at 0.542655 with a Probability value of 0.762367. Because the probability value is greater than the significance level of 0.05 ($0.762367 > 0.05$), it can be concluded that the residual data in this study is normally distributed and the regression model has met the normality assumption.

Based on the results of the classical assumption test shown in the table, the regression model is declared to have met the requirements and is free from multicollinearity problems. This is indicated by the correlation matrix values between the independent variables (X1, X2, and X3) which are all below 0.80, with the highest correlation value of only 0.194130 (between variables X1 and X3). Thus, there is no strong linear relationship between the independent variables, so the regression model is valid and suitable for use for further analysis.

Based on the results of the heteroscedasticity test using the Glejser Test method, the F-statistic probability value was obtained at 0.187250. Because the probability value is greater than the significance level of 0.05 ($0.187250 > 0.05$) and all the p-values of the independent variables are above 0.05, it can be concluded that the regression model is free from heteroscedasticity problems

Table 2. Model Regresi Fixed Effect Model (FEM)

Variabel	Coefficient	t-Statistic	Prob.
C	-72.06440	-0.175713	0.8611
X1	-3.518266	-2.424875	0.0181
X2	25.02458	1.574112	0.1204
X3	67.93004	0.602667	0.5489
Adjusted R-squared	0.087035		
F-Statistic	3.129075		
Prob(F-Statistic)	0.031686		

Sumber: Data diolah, 2026

Based on the regression results using the Fixed Effect Model (FEM) shown in Table 2, the regression equation can be formulated as

$$Y = -72.06440 - 3.518266 X_1 + 25.02458 X_2 + 67.93004 X_3.$$

The constant value of -72.06440 indicates that if all independent variables (X_1 , X_2 , and X_3) are equal to zero, the value of the dependent variable (Y) is predicted to be -72.06440. Partially, variable X_1 has a negative and significant effect on Y , as indicated by a coefficient of -3.518266 with a probability value of 0.0181, which is lower than 0.05. Conversely, variables X_2 and X_3 show positive coefficients of 25.02458 and 67.93004, respectively, but do not have a statistically significant effect on Y since their probability values (0.1204 and 0.5489) exceed 0.05. Simultaneously, the regression model demonstrates a significant combined effect of all independent variables on Y , evidenced by an F-statistic value of 3.129075 with a probability value of 0.031686 ($\text{Prob} < 0.05$). Additionally, the Adjusted R-squared value of 0.087035 indicates that 8.70% of the variation in the dependent variable can be explained by X_1 , X_2 , and X_3 , while the remaining 91.30% is influenced by other variables outside the model.

CONCLUSION

This study evaluates the influence of independent variables (X_1 , X_2 , and X_3) on the dependent variable (Y) using a panel data approach. Based on the model selection tests (Chow, Hausman, and Lagrange Multiplier tests), the Fixed Effect Model (FEM) was determined to be the optimal estimation model. The classical assumption tests confirmed that the model is statistically sound, exhibiting normally distributed residuals ($p = 0.762367$), an absence of multicollinearity (all inter-variable correlations < 0.80), and no heteroscedasticity issues ($p = 0.187250$). Partially, variable X_1 demonstrates a statistically significant negative effect on Y ($\beta = -3.518266$, $p = 0.0181$), whereas variables X_2 ($\beta = 25.02458$, $p = 0.1204$) and X_3 ($\beta = 67.93004$, $p = 0.5489$) show positive relationships with Y that are not statistically significant at the 5% level. Simultaneously, all independent variables jointly exert a significant combined effect on Y , as evidenced by an F-statistic of 3.129075 ($p = 0.031686$). Lastly, the Adjusted R^2 value of 0.087035 indicates that 8.70% of the variance in Y is explained by the combination of X_1 , X_2 , and X_3 , with the remaining 91.30% influenced by external factors outside the scope of this study.

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