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Governance Mechanisms and Public Asset Integrity: The Role of E-Governance, SPIP, and Whistleblowing

Yuniati[A], Nunuy Nur Afiah[B], Poppy Sofia Koeswayo[C], Tettet Fitrijanti[D]

Abstract

This study aims to examine the influence of E-Governance, Government Internal Control System (SPIP), and Whistleblowing System implementation on asset management practices and their implications for asset fraud prevention in local governments. The research focuses on regency and city governments in West Java and East Java provinces, Indonesia. Employing a quantitative approach with a survey method, data were collected from 352 respondents across 65 local governments. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used for data analysis. The findings indicate that the implementation of E-Governance and SPIP significantly and positively influences asset management. Furthermore, E-Governance, SPIP, the Whistleblowing System, and asset management implementation significantly contribute to asset fraud prevention. This study highlights the critical role of governance mechanisms and digital public services in enhancing transparency, asset security, and fraud mitigation within decentralized governmental systems. These findings are expected to contribute to the advancement of public governance practices, particularly in developing countries.

Keywords: *E-Governance, SPIP, Whistleblowing System, Asset Management, Fraud Prevention.*

INTRODUCTION

Fraud involving asset management in public sector organizations has emerged as a critical global governance issue, threatening financial security, operational integrity, and public trust. According to the Association of Certified Fraud Examiners (ACFE, 2024), asset misappropriation accounts for 89% of occupational fraud cases reported globally, with an average loss per incident of USD 120,000. As a developing country with a decentralized governance system, Indonesia

[A]*Department of Accounting, Faculty of Economics and Business, Universitas Padjadjaran, Bandung, Indonesia, Email: yuniati15001@mail.unpad.ac.id*
[B]*Department of Accounting, Faculty of Economics and Business, Universitas Padjadjaran, Bandung, Indonesia*
[C]*Department of Accounting, Faculty of Economics and Business, Universitas Padjadjaran, Bandung, Indonesia*
[D]*Department of Public Sector Accounting, Universitas Padjadjaran, Bandung, Indonesia*

remains highly vulnerable. The 2022 Corruption Perceptions Index (Transparency International, 2022) scored Indonesia at 34/100, ranking 96th out of 180 countries—indicating persistently high levels of perceived public sector corruption. Specifically, Indonesia Corruption Watch (ICW, 2022) reported that asset management cases consistently ranked among the top corruption incidents in local governments.

A strategic approach to mitigating these risks involves the implementation of E-Governance, defined as the integration of Information and Communication Technology (ICT) into public service delivery and governance processes (Holmes, 2001). Despite increasing adoption, local governments in Indonesia still face challenges such as inadequate ICT infrastructure, limited digital literacy, and fragmented public service platforms (BPK, 2023). These limitations hinder the transparency and accessibility of public asset data, thereby creating opportunities for fraudulent activities.

Another critical mechanism is the Government Internal Control System (SPIP), mandated by Government Regulation No. 60/2008, which aims to safeguard assets and ensure operational efficiency in regional government administration (BPKP, 2021). However, recent audit findings by the Audit Board of Indonesia (BPK, 2022) reveal persistent weaknesses in internal controls, particularly in the areas of asset recording, valuation, and monitoring processes.

The Whistleblowing System, designed to allow employees and citizens to report fraud confidentially (Seifert et al., 2010; Atkinson et al., 2012), is another essential governance mechanism. In practice, whistleblowing systems in Indonesian local governments face several challenges, including weak legal protection, low public trust, and cultural resistance (Setiawan, 2020).

Concurrently, effective asset management implementation is essential for fraud prevention. Prior studies have highlighted issues such as incomplete asset inventories, asset misuse, and poor asset utilization control in local governments (Wahyuni, 2020; Raharja, 2019). Strengthening asset management practices directly contributes to reducing the risk of asset-related fraud.

While previous research has examined these governance mechanisms individually, studies that integrate them into a comprehensive model for asset fraud prevention within decentralized government systems remain limited—especially in developing countries like Indonesia. This study addresses that gap by analyzing the influence of E-Governance, SPIP, and Whistleblowing System implementation on asset management and asset fraud prevention across 65 regency and city governments in West Java and East Java provinces.

LITERATURE REVIEW

This study is grounded in Agency Theory (Jensen & Meckling, 1976), which posits that conflicts of interest may arise between principals (the public) and agents (government officials) in the management of public assets, necessitating effective control mechanisms.

Complementing this, Stewardship Theory (Puyvelde, 2011) provides a conceptual framework to understand the relationship between E-Governance, the Government Internal Control System (SPIP), and whistleblowing mechanisms with asset management implementation. This approach aims to reinforce preventive strategies against potential asset misappropriation. Additionally, New Public Management (NPM) theory advocates for efficiency, transparency, and accountability through modern managerial approaches, including the adoption of E-Governance (Hood, 1995).

E-Governance

E-Governance refers to the strategic application of ICT to improve public sector service delivery, transparency, citizen participation, and accountability (Holmes, 2001; Atta Ullah, 2021). According to Hooda and Singla (2021), the success and sustainability of E-Governance implementation depend on several key elements:

1. Core Competencies, including indicators such as Internal Service Quality, External Service Quality, Employee Engagement, Citizen Satisfaction, Leadership, Organizational Culture, Technological Infrastructure, and Process Management (Hooda & Singla, 2021; Crawford & Nahmias, 2010).
2. E-Openness, involving indicators such as accessibility to government information and two-way digital communication (Al Athmay, 2015).
3. E-Participation, which includes indicators of public trust in e-participation, satisfaction with e-features, and feedback mechanisms (Al Athmay, 2015).

Government Internal Control System (SPIP)

SPIP ensures operational effectiveness, reliability of financial reporting, and asset security (Moeller, 2011). The SPIP framework based on Regulation No. 5/2021 by the Financial and Development Supervisory Agency (BPKP) includes:

1. Goal Setting, with indicators such as the quality of strategic objectives and clarity of strategies.
2. Structure and Processes, with indicators reflecting the five components of SPIP: Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring (COSO in Moeller, 2011).
3. Goal Achievement Indicators, including operational effectiveness, financial reporting reliability, asset safeguarding, and legal compliance.

Whistleblowing System

The Whistleblowing System enables stakeholders to report violations confidentially (Seifert et al., 2010). Based on KNKG (2008) and Sitohang (2018), it comprises two main dimensions:

1. Structural Aspects
2. Operational Aspects

Asset Management Implementation

Asset management implementation in the public sector involves inventory, legal audit, valuation, optimization, and control processes (Siregar, 2004; Hastings, 2010). Ratifah (2017) operationalized this into one implementation stage with indicators such as inventory, legal audit, valuation, optimization, monitoring, and control (Wahyuni, 2020; Raharja, 2019).

Asset Fraud Preventation

Fraud prevention is a proactive strategy to reduce asset-related fraud risks (Albrecht, 2008; ACFE, 2022). Based on Purba (2015) and BPKP (2008), two dimensions are identified:

1. Fraud Prevention Strategy, which includes building a culture of honesty, reducing fraud opportunities, strengthening controls, promoting integrity, anti-fraud values, and anti-fraud education.
2. Types of Asset Misuse Indicators, which involve identification and typology of common asset misappropriation practices.

Research Gap

Although prior studies have examined E-Governance, SPIP, and whistleblowing independently, few have explored their combined effects on asset fraud prevention within Indonesia's decentralized local government system. This study addresses that gap by integrating these governance mechanisms into a comprehensive empirical model.

Hypothesis Development

Based on the theoretical framework and prior research findings, the study proposes the following hypotheses:

H1: E-Governance implementation positively influences asset management implementation.

H2: The Government Internal Control System (SPIP) positively influences asset management implementation.

H3: E-Governance implementation positively influences asset fraud prevention.

H4: The Government Internal Control System (SPIP) positively influences asset fraud prevention.

H5: The Whistleblowing System positively influences asset fraud prevention.

H6: Asset management implementation positively influences asset fraud prevention.

METHOD

This study adopts a quantitative research design with a survey method to empirically test the influence of E-Governance, SPIP, and the Whistleblowing System on asset management implementation and asset fraud prevention in local governments. The population includes all regency and city governments in West Java and East Java provinces, Indonesia. Based on regional government databases, a total of 65 local governments were surveyed. The sample consisted of 352 respondents from five regional working units (SKPD). The sampling technique followed a purposive approach. Primary data were collected using structured questionnaires distributed online and in person to respondents in each local government. To validate questionnaire responses, additional interviews were conducted with six targeted respondents representing selected cities/regencies. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM).

RESULTS AND DISCUSSION

A total of 352 valid responses were collected from five Regional Apparatus Work Units (SKPD) across 65 local governments in West Java and East Java provinces. The results of the PLS-SEM analysis indicate that the model meets acceptable fit criteria:

Table 1. R-Square Values

Variable	R-Square
(Y) Asset Management Implementation	0.625
(Z) Asset Fraud Prevention	0.706

Source: Data processing results, 2025

The R-square value for the asset management implementation variable is 0.625, indicating that E-Governance implementation, SPIP, and the Whistleblowing System explain 62.5% of the variance in asset management implementation. The remaining 37.5% is explained by other variables. The R-square value for the asset fraud prevention variable is 0.706, which means that E-Governance, SPIP, the Whistleblowing System, and asset management implementation collectively explain 70.6% of the variance in asset fraud prevention, with the remaining 29.4% attributed to other factors. The model demonstrates a good fit with the empirical data.

Table 2. Inner Weights (Path Coefficients)

Hypothesis	T-Statistic	p-Value	Conclusion
H1: E-Gov → Asset Management Implementation	4.958	0.000	Supported
H2: SPIP → Asset Management Implementation	4.910	0.000	Supported
H3: E-Gov → Asset Fraud Prevention	2.593	0.002	Supported
H4: SPIP → Asset Fraud Prevention	0.276	0.001	Supported
H5: WBS → Asset Fraud Prevention	0.321	0.000	Supported
H6: Asset Management → Fraud Prevention	0.413	0.000	Supported

Interpretation: All proposed hypotheses are statistically supported, indicating significant relationships between the studied variables.

The findings of this study affirm that the implementation of E-Governance has a positive influence on asset management

implementation in local governments. This is consistent with Quda (2015), who emphasized that effective governance contributes significantly to asset management efficiency. Quda also highlighted the need for an adequate accounting system and asset reporting mechanisms to support asset accountability and governance, which must be supported by information technology (Deepak Dahiya, 2016). Mardiasmo and Charles (2012) also demonstrated a correlation between E-Governance implementation and asset management performance.

Furthermore, the Government Internal Control System (SPIP) exhibits a significant positive effect on asset management implementation. This supports Japhet (2011), who argued that effective internal control systems are crucial for asset safeguarding in management activities. Otniel Safkaur (2021) also found that internal control influences asset management practices. Similar results were reported by Mainar et al. (2017), who confirmed that internal control is a key component of asset management implementation. These findings align with the Indonesian Supreme Audit Agency (BPK, 2022) audit results, which revealed that higher SPIP maturity levels are associated with improved asset management quality in local governments.

The implementation of E-Governance also significantly impacts asset fraud prevention. Shajahan (2011) observed that administrative modernization in Bangladesh through E-Governance played a critical role in fraud control. Similarly, Atta Ullah (2021) demonstrated that E-Governance contributes to minimizing fraud occurrences, based on case studies in China and Pakistan. Halbouni (2016) noted that greater IT adoption, as part of E-Governance, aids in fraud detection and prevention. Hooda and Singla (2021) further confirmed that ICT-based governance frameworks enhance accountability and reduce corruption.

Internal control systems also positively influence asset fraud prevention. This aligns with McLeod & Schell (2019), who stated that internal controls protect organizations from fraud risks. Onyefulu Deborah Iyinomen (2016) emphasized that internal control systems are effective in fraud prevention and detection. Rendon (2016) asserted that internal controls serve as both preventive and detective measures against fraud. These findings are corroborated by Ach Maulidi et al. (2022) and Irfan Alfiansyah et al. (2021), who found that SPIP positively affects fraud prevention in asset management. Primastiwi et al. (2020) also found similar results. Despite these findings, Indonesia still faces challenges in implementation, particularly in whistleblower protection and follow-up mechanisms.

The Whistleblowing System has a positive impact on asset fraud prevention. This supports Seifert et al. (2010), who found that the availability of whistleblowing systems improves fraud prevention. Atkinson et al. (2022) showed that whistleblowing systems enhance the likelihood of fraud detection and prevention. Pamungkas et al. (2020) and Khivayatul Akhyar et al. (2022) reported that whistleblowing is a strategic tool in fraud prevention. Similarly, Suriana AR Mahdi (2020) and I Made

Hangga Hariawan et al. (2020) also found that whistleblowing systems significantly affect fraud mitigation.

The implementation of asset management positively affects asset fraud prevention. Sri Wahyuni (2020) highlighted that asset management entails decisions related to asset safeguarding to achieve organizational goals, one of which is fraud risk mitigation. Mardiasmo (2002) stressed that asset supervision systems and techniques within asset management implementation stages must be strengthened to prevent misuse. Chance (2011) argued that understanding patterns and anomalies in asset returns is essential for fraud detection, as these patterns may indicate unethical or illegal behavior in asset handling.

Overall, these findings reinforce the theoretical framework combining Agency Theory (Jensen & Meckling, 1976) and Stewardship Theory (Puyvelde, 2011), suggesting that governance systems like E-Governance, SPIP, and Whistleblowing Systems align agent behavior with public interests and reduce asset fraud risks. The study also aligns with New Public Management theory (Hood, 1995), which promotes efficiency, transparency, and accountability through modern managerial practices such as E-Governance.

CONCLUSION

This study empirically confirms that the implementation of E-Governance, the Government Internal Control System (SPIP), and the Whistleblowing System has a significant positive influence on both asset management implementation and asset fraud prevention in local governments. Furthermore, effective asset management implementation significantly reduces the risk of asset-related fraud. The findings contribute to the public governance literature by integrating various control mechanisms into a single empirical model, particularly within the context of decentralized government systems in developing countries such as Indonesia. These results underscore the importance of modern ICT-based governance, institutionalized internal control systems, and transparent reporting channels in safeguarding public assets.

Local governments should accelerate the implementation of E-Governance, enhance the maturity of SPIP, and strengthen whistleblowing systems through legal protections, leadership commitment, and public trust building. These measures are essential for ensuring accountability, improving asset oversight, and minimizing fraud risks. Future research is encouraged to expand this model to other regions or sectors and explore qualitative perspectives on cultural and institutional barriers to fraud prevention. Further studies may also examine the long-term impact of integrated governance mechanisms on organizational performance and public trust.

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