

Institutional Synergy in Fraud Prevention: The Interplay of Governance, Integrity, Technology, and Organisational Culture in Indonesia's Public Sector

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Abstract: *This study examines the institutional dynamics underpinning fraud prevention within Indonesia's public sector, emphasising the interplay between governance mechanisms, information technology, personnel integrity, and organisational culture. Anchored in governance theory and institutional perspectives on organisational culture, the research adopts a quantitative approach using survey data from 238 respondents across 19 Inspectorates General. Employing Smart-PLS and multiple linear regression, the findings reveal that public sector governance and information technology significantly enhance fraud prevention efforts. Notably, organisational culture plays a dual role: it reinforces the influence of governance, yet paradoxically weakens the effects of both technology and individual integrity. These results highlight the complex nature of institutional interactions and suggest that cultural reform is critical for sustaining anti-fraud initiatives. The study offers practical implications for the Financial and Development Supervisory Agency (BPKP) in refining institutional frameworks and technological infrastructures to bolster integrity systems. Furthermore, it introduces seven novel indicators of fraud prevention, contributing to a more comprehensive institutional framework for analyzing anti-fraud strategies in emerging economies.*

Keywords: Employee integrity; Public sector governance; Information technology; Organisation culture; Fraud prevention

JEL Classification: H83, M42, O33

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1. Introduction

Indonesia's economic growth has fluctuated in recent years, particularly impacted by the COVID-19 pandemic (Thorbecke, 2023). These conditions underline the urgency of improving public sector governance to ensure effective and transparent resource allocation. To strengthen Indonesia's economic fundamentals and development performance, it is crucial that all stakeholders, particularly the government and its affiliated institutions, fulfill their mandated responsibilities in accordance with existing laws.

Institutional synergy between actors such as the Ministry of Finance, the Financial and Development Supervisory Agency (BPKP), and the Inspectorate General is crucial for creating strong governance interactions at every stage of the budgeting process, thereby minimising the potential for fraud. Building integrity in every individual and unit within the bureaucracy is fundamental to counteracting various potential distorted interests, ultimately supporting the creation of an anti-corruption organisational culture. Government actions are closely linked to the budgeting process, which involves multiple bureaucratic actors and interests. Every stage, from planning and execution to monitoring and reporting, is vulnerable to fraud, creating inefficiencies. To address this, the government has issued various laws and regulations to promote effective, efficient, transparent, and accountable public financial management. However, despite these measures, fraud continues to occur.

Transparency International's Corruption Perceptions Index (CPI) illustrates Indonesia's ongoing struggle with corruption. Indonesia's CPI score dropped from 40 in 2019 to 37 in 2020, ranking it 102nd globally, and only slightly improved to 38 in 2021. These scores reflect the continued prevalence of fraud in the public sector, demonstrated by high-profile corruption cases such as Jiwasraya, Asabri, and Krakatau Steel.

The persistence of fraud, despite regulatory efforts, underscores the need for more effective prevention strategies. Research on village fund management in Indonesia emphasises the importance of investing in resources that support efficient and effective fraud prevention (Hamid & Nasih, 2021). According to agency theory, public officials (agents) may exploit their authority to pursue personal or group interests, underscoring the need for robust fraud prevention mechanisms (Syalwa et al., 2023).

Internal organisational factors, including personnel integrity, technological development, governance management, and internal control systems, play a crucial role in fraud prevention (Abdullah et al., 2020; Sow et al., 2018). Integrity, in particular, is the moral resistance to violating ethical standards and is associated with honesty, reliability, and loyalty (Schlenker, 2008). High levels of integrity among internal auditors and government employees are correlated with better audit quality and reduced asset misuse (Rosmi & Syamsir, 2020).

Good governance also supports fraud prevention. Empirical studies demonstrate that sound governance promotes accountability and transparency, which deters fraudulent behaviors (Wahyuni-TD et al., 2021; Wardhani & Purnamasari, 2021). However, the impact of governance may be limited if not supported by a strong organisational culture. Research by Pangaribuan (2019) shows that when governance is coupled with a positive culture, fraud prevention efforts are more effective.

Information technology (IT) is another critical factor. However, its effectiveness depends on organisational support and the presence of a culture that embraces integrity and accountability. Utami et al. (2020) and Asrin et al. (2021) show mixed results on IT's standalone impact, suggesting that it works best when integrated with governance and cultural values.

Organisational culture acts as a key moderating variable. A culture that promotes ethical behavior, honesty, and strong values helps deter fraudulent acts (Sara et al., 2023; Ferina et al., 2021). Conversely, weak cultures allow fraudsters to exploit system vulnerabilities. An ethical culture amplifies the effects of integrity, governance, and IT on fraud prevention (Putri et al., 2022). These seven new indicators represent a concrete manifestation of the research's innovation, as they integrate the four elements of governance, integrity, technology, and organisational culture into a previously unavailable measurable framework. Thus, this comprehensive institutional framework is not only novel but also specifically designed to address the gap in anti-fraud strategy analysis in developing countries like Indonesia.

In summary, although numerous efforts have been made to combat fraud in Indonesia's public sector, challenges remain. This study addresses a gap in existing research by exploring how organisational culture moderates the relationships between governance, integrity, information technology, and fraud prevention. It aims to offer a comprehensive model for strengthening anti-fraud strategies through the synergistic interaction of these elements.

The objectives of this study are: 1) How does employee integrity influence the effectiveness of fraud prevention in the public sector? 2) To what extent does public sector governance influence fraud prevention efforts? 3) What is the role of information technology in supporting fraud prevention strategies? 4) How does organisational culture moderate the influence of employee integrity on fraud prevention? 5) How does organisational culture moderate the influence of public sector governance on fraud prevention? 6) How does organisational culture moderate the influence of information technology on fraud prevention?

This study provides a significant theoretical contribution by proposing and testing an integrative model that directly and moderates the relationship between governance, integrity, technology, and organisational culture variables in the context of fraud prevention, thereby filling a gap in the literature by strengthening a more comprehensive institutional framework, particularly for the public sector in developing countries. Practically, the findings of this study serve as operational guidance for managers and auditors in government agencies to identify the most strategic intervention points, whether by strengthening internal control systems (governance), integrity development programmes, technology implementation, or work culture transformation, in order to create effective institutional synergy in preventing fraud. For policymakers, the results of this study are expected to serve as evidence-based policy recommendations for formulating more holistic regulations or guidelines for fraud prevention, for example, by encouraging policies that not only focus on compliance but also systematically integrate aspects of strengthening ethical culture and the use of technology throughout the budgeting process.

2. Literature Review

2.1 Agency theory and fraud prevention in the public sector

Jensen and Meckling (1976) explain Agency Theory as the relationship between principals, who delegate authority, and agents, who are expected to act in the principals' best interests. Although widely used in corporate contexts, the theory is also relevant to fraud prevention in the public sector. In this setting, public officials serve as agents entrusted by the public, the principal and holder of sovereignty (Tarmidi et al., 2021). Agency

Theory focuses on the relationship between the principal (in this case, the community/central government) and the agent (bureaucrat/budget implementing official), where there is asymmetric information and conflict of interest that triggers the agent to act deviantly (such as budget setting) for personal or unit interests, which then ends in inefficiency and ineffectiveness.

Public sector agents, however, may possess more information about government operations than the public or other stakeholders. This informational asymmetry can lead to opportunistic behavior, where agents might hide or manipulate information to serve personal or group interests, increasing the risk of fraud (Tarmidi et al., 2021). The relationship between the principal and agent in the public sector highlights the critical role of transparency, accountability, and integrity in ensuring that public servants uphold their duties and prevent fraud.

2.2 Governance and integrity in fraud prevention

Effective public sector governance is crucial for reducing fraud by ensuring officials act within legal and ethical boundaries. Governance encompasses the structures, processes, and regulations that guide decision-making and accountability. When grounded in transparency, strong governance limits opportunities for misuse of authority (Wahyuni-TD et al., 2021) and aligns with research showing that weak institutions foster corruption, while strong institutional quality curbs financial misconduct (Chebab et al., 2022). However, governance alone is insufficient; it must be supported by a strong culture of integrity among government employees.

Integrity within the public sector refers to the adherence to ethical principles and the reluctance to act against public interests, even in the face of temptations or external pressures (Schlenker, 2008). High levels of personal integrity among public officials are critical in fostering an environment where fraud is less likely to occur. Research has shown that fostering integrity through training, supervision, and ethical leadership can significantly reduce the occurrence of fraud (Hamid & Nasih, 2021; Asrin et al., 2021). However, in the absence of strong internal controls and governance, even high integrity among individual employees may not be sufficient to prevent fraud (Abdullah et al., 2020).

2.3 The role of information technology in fraud prevention

Information technology (IT) has increasingly become a critical tool in preventing fraud within the public sector. IT systems enable more efficient and transparent management of public funds, making it easier to detect irregularities or discrepancies in financial transactions. Automated monitoring systems, data analytics, and e-governance tools can improve public sector operations by reducing human error and providing more accurate, real-time data for decision-making (Juhandi et al., 2020).

Studies have highlighted that the use of IT systems can effectively prevent fraud by providing tools for monitoring, reporting, and auditing public sector operations (Ferina et al., 2021). However, the mere implementation of IT systems does not guarantee success in fraud prevention. Effective IT governance, which aligns technology with public sector objectives and regulatory requirements, is essential to maximise its potential in reducing fraud (Utami et al., 2020). Without proper governance, IT systems can be vulnerable to exploitation, which could undermine efforts to prevent fraud.

2.4 The moderating role of organisational culture

Organisational culture plays a critical role in supporting the effectiveness of governance, integrity, and IT in preventing fraud. A strong organisational culture based on ethical values, accountability, and transparency can strengthen the impact of governance mechanisms by encouraging employees to act in accordance with the public interest. Culture, therefore, acts as a moderator that enhances or undermines the effect of governance structures, integrity, and technology in preventing fraud (Putri et al., 2022).

Research suggests that organisations with a strong ethical culture are better equipped to reduce the likelihood of fraud. Employees in such organisations are more likely to follow rules, report misconduct, and hold themselves accountable for their actions (Sara et al., 2023). Conversely, a weak organisational culture can allow fraudulent behavior to flourish by failing to reinforce ethical standards and accountability. Therefore, fostering a positive organisational culture that aligns with the values of governance and integrity is essential for ensuring effective fraud prevention.

2.5 Research goals and objectives

This study aims to explore the relationship between several factors—integrity, public sector governance, information technology, and organisational culture—in preventing fraud in the public sector. Specifically, the research will address the following objectives:

- a. To examine the effect of employee integrity on fraud prevention.
- b. To investigate how public sector governance influences fraud prevention.
- c. To analyse the role of information technology in preventing fraud.
- d. To explore how organisational culture moderates the effect of employee integrity on fraud prevention.
- e. To clarify how organisational culture moderates the influence of public sector governance on fraud prevention.
- f. To describe how organisational culture moderates the effect of information technology on fraud prevention.

Integrity, as defined by the State Financial Audit Standard Number 1 of 2017 (SPKN No. 1 of 2017), refers to the quality, character, or condition that embodies honesty, diligent effort, and acceptable competence. An individual is considered to possess integrity when they are truthful with themselves and uphold moral principles (Schiller & Bryant, 2002). Integrity is also a fundamental ethical standard for auditors, requiring them to adopt an honest, courageous, reasonable, and responsible approach (Rifai & Mardijuwono, 2020). In all professional interactions, accountants are expected to maintain integrity by being forthright and truthful (Code of Ethics, 2020, p. 7).

Attribution theory by Heider (1958) suggests that human behavior is influenced by both internal (personal) and external (environmental) factors. The theory helps explain how employee integrity affects fraud prevention, highlighting the role of institutional regulations as behavioural guidelines. Dishonest actions by government officials, driven by pressures and opportunities, can be mitigated through support from authority figures. By understanding the factors behind fraudulent behavior and fostering employee integrity, effective preventive measures can be developed.

Integrity, deeply embedded in government staffing institutions, plays a crucial role in fostering an honest, unbiased, and resolute attitude when applying principles, beliefs, and decisions (BPK No. 3 of 2020). Previous

studies have suggested that integrity positively impacts fraud prevention (Asrin et al., 2021; Hamid & Nasih, 2021; Rifai & Mardijuwono, 2020). Therefore, the first hypothesis is proposed as follows:

H₁ Employee integrity positively influences fraud prevention.

The General Guidelines for Indonesian Public Sector Governance (PUGSPI), prepared by the National Committee for Governance Policy (KNKG) in 2022, emphasise the importance of good governance in the public sector. Effective governance practices enhance accountability to stakeholders and improve organisational performance. Public sector governance is intrinsically linked to fraud prevention, as it establishes the frameworks for overseeing public resources to achieve state objectives, primarily ensuring equitable prosperity for the people.

Agency theory by Jensen and Meckling (1976) further underscores the connection between fraud prevention and public sector governance. Civil servants (agents) are entrusted with the responsibility of managing public resources on behalf of the people (the principals). The legislative branch acts as a check on executive power, while the executive branch is responsible for policy formulation and implementation. Within this context, the role of functional internal auditors in government inspectorates is crucial to preventing fraud. Thus, the second hypothesis is proposed:

H₂ Public sector governance positively impacts fraud prevention.

Information technology (IT), encompassing hardware, software, databases, networks, and other electronic tools, is essential for modern organisational operations (Ferina et al., 2021). Studies on IT governance (Utami et al., 2020) suggest that IT plays a significant role in fraud prevention, particularly through early fraud detection mechanisms. The utilisation of IT allows for more reliable information processing, which reduces fraud risks within organisations (Halbouni et al., 2016). Therefore, the third hypothesis is proposed:

H₃ Information technology enhances fraud prevention.

Organisational culture, defined as the collective set of values adopted by an organisation and applied to the perspectives, behaviours, and responses of its employees (Utami et al., 2020), also plays a pivotal role in fraud prevention. A strong organisational culture reinforces ethical behavior and supports the development of an effective internal control system, which in turn influences employees' behaviour in preventing fraud (Putri et al., 2022). Organisational culture has been shown to moderate the relationship between integrity and fraud prevention, highlighting the importance of cultural alignment in fostering ethical conduct. Therefore, the fourth hypothesis is proposed:

- H₄ Organisational culture moderates the relationship between employee integrity and fraud prevention.

Motivation theory, as described by Wlodkowski (1985), explains how motivation influences behavior, persistence, and direction. Motivation serves as a driving force behind individuals' actions and decisions. In the context of public sector governance, motivation can guide individuals to adopt behavior that aligns with ethical principles and enhances fraud prevention efforts. The application of motivation theory in this study seeks to understand how motivation influences actions taken by government employees to support fraud prevention. Therefore, the fifth hypothesis is proposed:

- H₅ Organisational culture strengthens the effect of public sector governance on fraud prevention.

The theory of task-technology fit (TTF), which emphasises the alignment between job requirements and technological capabilities, is used to understand the impact of IT on fraud prevention. Task-technology fit theory, along with the technology acceptance model (TAM), provides insight into how technology adoption affects individuals' attitudes and behaviours (Davis, 1989; Ajzen, 1991). The relationship between IT and fraud prevention is influenced by how well technology is integrated into organisational processes, with the potential to reduce the opportunities for fraudulent activities. As such, the sixth hypothesis is proposed:

- H₆ Organisational culture moderates the effect of information technology on fraud prevention.

3. Methodology

This study focuses on individual functional auditor officials within the Government's Internal Supervisory Apparatus (APIP) across various Ministries of the Republic of Indonesia, with a specific emphasis on those at the Class III (minimum Penata) level. This study collected primary data through a survey using a random sampling technique (probability sampling) of 238 respondents, to ensure that each unit in the population has an equal chance of being selected so that the resulting sample can represent the population more accurately. The application of this random sampling method aims to minimise selection bias and increase the external validity of the research findings, where conclusions drawn from the sample of 238 respondents spread across 19 Inspectorates General are expected to be generalisable at a broader level. This research was conducted for three months, namely February to April 2025. The research employs multiple regression and moderation regression analyses to examine the relationships between the variables under consideration. The data for this study were collected through a cross-sectional survey, utilising a research questionnaire instrument. The indicators in the questionnaire were measured using an ordinal scale, and responses were recorded on a five-point Likert scale.

The dependent variable in this study is fraud prevention, which encompasses the establishment of policies, cultural norms, services, and teams dedicated to fraud mitigation. Fraud prevention is measured using six dimensions: (1) Policy and guideline implementation, (2) Creation of a fraud prevention culture, (3) Service development focused on cost and quality control, (4) Establishment of a fraud prevention team, (5) Assessment of anti-fraud processes and controls, and (6) Data access management policy. Each of these dimensions is represented by specific indicators, as outlined in prior research (Sow et al., 2018).

The independent variables in this study are employee integrity, public sector governance, and information technology. Employee integrity is assessed through four dimensions: honest attitude, employee behaviour, employee attitude, and competence, based on the work of Rifai and Mardijuwono (2020). Public sector governance is measured using six principles: leadership, rule of law, transparency, independence, accountability, and collaboration (PUGSPI - KNKG, 2022). Information technology is measured through the technological components used by the

organisation, including networks, databases, hardware, software, and other devices (Ferina et al., 2021).

Organisational culture is treated as a moderating variable, with its impact measured across three dimensions: clarity of ordering, extent of ordering, and core values being intensely held (Utami et al., 2020). Additionally, control variables such as organisational commitment and internal control are included to strengthen the model, with their respective dimensions and indicators drawn from previous research (Rifai & Mardijuwono, 2020; Utami et al., 2020). In the SEM-PLS approach, organisational culture is proven to act as a moderating variable when the interaction between exogenous and endogenous variables is statistically significant, as tested through bootstrapping. This significance confirms that the strength and direction of the relationship between factors such as integrity or governance and fraud prevention are not fixed, but are highly dependent on the level of organisational culture possessed by the agency.

This study utilises Structural Equation Modeling (SEM) with SmartPLS software for data analysis. Validity, reliability, and model assessment procedures, including inner and outer model evaluations, will be employed to test the proposed hypotheses. A sensitivity test is also incorporated to examine the effectiveness of adding additional indicators. The SEM approach with SmartPLS in this study is necessary because of its superior ability to test complex relationships between several latent variables simultaneously, including the moderating effect of organisational culture, which is the core of the hypothetical model. The use of validity, reliability, and model evaluation procedures (such as outer and inner models) is crucial to ensure that the indicators used actually measure the intended variables (such as integrity and governance) and that the model is robust and reliable. Furthermore, sensitivity tests are specifically needed to verify the effectiveness of the addition of seven new indicators to the research framework, so that the contribution of the methodological novelty offered can be measured and empirically accounted for before this model is used to draw conclusions and policy recommendations.

4. Results

The research was conducted by distributing Google Form questionnaires to 230 APIP officials at the Inspectorate General of various Indonesian

ministries, targeting civil servants with at least a third-grade position and a bachelor's degree. Once all data were collected, processing began. Based on respondent identification, the general demographics are as follows:

- a. Employees of the inspectorate general of the Ministry of Finance made up the majority of research participants (17.23%), followed by those of the inspectorate general of the Ministry of Education, Culture, Research, and Technology (14.29%), according to the institution's department.
- b. Regarding gender, 62% of respondents are men, and the remaining are women.
- c. Regarding education, 60.5% of the respondents had an undergraduate degree, while the remaining had both S2 and S3 degrees.
- d. Staff members comprise the bulk of responses (63.4%), followed by supervisors and department leaders.
- e. In terms of duration of service, 45.8% of respondents have worked for more than 12 years, with respondents with 3–6 years of experience coming in second.

The reliability of the study variables is a key takeaway from the research. The outer loading of every statement used as a measurement was determined to be above 0.60, as confirmed by the results in Table 1 for each study variable employed. The AVE value being more than 0.50 further strengthens the results. Both the Composite Reliability and Cronbach's Alpha values were more than 0.70, providing further assurance of the validity and reliability of each study variable that was employed.

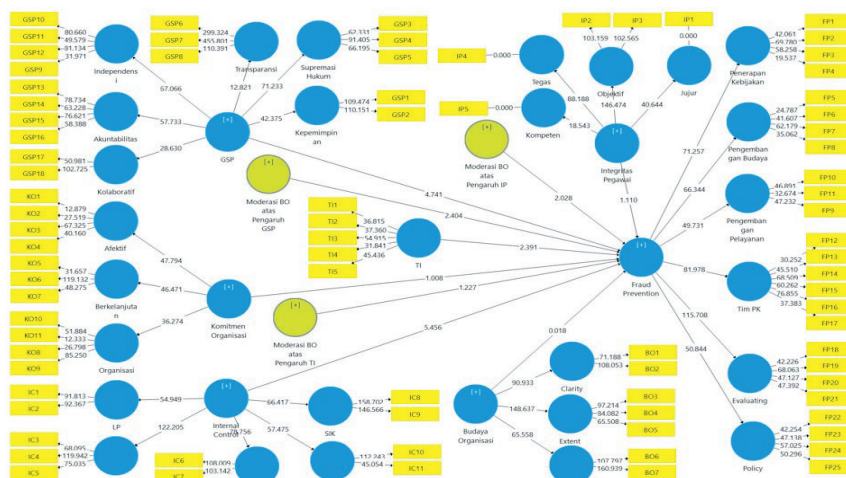
Table 1: Validity and reliability

	Outer Loading Variables	AVE	Cronbach's Alpha	Composite Reliability
Fraud Prevention	0.719 – 0.848	0.622	0.974	0.976
Employee Integrity	0.775 – 0.942	0.804	0.938	0.953
Public Sector Governance	0.736 – 0.881	0.675	0.971	0.974
Information Technology	0.844 – 0.895	0.750	0.917	0.938
Organisational Culture	0.833 – 0.909	0.781	0.953	0.963
Organisational Commitment	0.701 – 0.855	0.551	0.915	0.930
Internal Control	0.743 – 0.908	0.756	0.967	0.971

The inner model is analysed using R^2 before the hypothesis testing stage. According to the first substructure, which has an R-square value of 0.789, internal control, organisational commitment, organisational culture, employee integrity, public sector governance, and information technology can all influence changes in fraud prevention by 0.789, or 78%. Other variables not included in the current research model can influence the remaining 22% of other contributions.

The hypothesis testing process is guided by the measurement framework model, which elucidates the relationships between each research variable. This model plays a pivotal role in the testing process, which is followed by two phases of analysis. The construction of the first measurement model is depicted in Figure 1.

Figure 1: Full structure model



It is evident from the measurement framework model that the idea being employed is second-order. It is evident from the model that, in addition to being assessed using reliable statement instruments, the study variables employed are also measured with indicators. Every variable was measured using an instrument whose outer loading value was more than 0.60, as shown in the model. Aside from that, two sub-structures typically make up the measurement model framework.

The hypothesis testing phase can begin once all testing protocols have been completed. There are two phases to the testing process: direct effect

testing and indirect impact testing. The direct effect test is conducted using t-statistical testing and the original sample coefficient as a guide.

Table 2: Hypothesis results

	Prediction	Coefficient	T-statistic	P-value	Result
EI → FP	+	"-0.048"	1.11	0.134	Rejected
PSG → FP	+	"0.383"	4.74	0.000***	Accepted
IT → FP	+	"0.160"	2.39	0.009***	Accepted
OC*EI → FP	+	"-0.075"	2.02	0.022	Rejected
OC * PSG → FP	+	"0.153"	2.40	0.008***	Accepted
OC * IT → FP	+	"-0.078"	1.22	0.110	Rejected

Notes: EI = Employee Integrity. PSG = Public Sector Governance. IT = Information Technology. OC = Organisational Culture. FP = Fraud prevention

Table 2 summarises the hypothesis test results. The first hypothesis is rejected because employee integrity does not affect fraud prevention (p-value of 0.134 and original sample size of -0.048); the second hypothesis is accepted because public sector governance has a positive and significant impact on fraud prevention (p-value of 0.000 and original sample size of 0.383). The third hypothesis is accepted as information technology's beneficial influence on preventing fraud, with a p-value of less than 0.009 and an initial sample size of 0.160. 4) It supports the statistical finding and rejects the fourth hypothesis, with a p-value of 0.022 and an initial sample size of -0.075. The fifth hypothesis, which states that organisational culture improves the impact of public sector governance on fraud prevention, is accepted. The p-value of 0.008 and the original sample size of 0.153 support this claim. 6) states that organisational culture cannot increase the impact of information technology on fraud prevention, with a p-value of 0.110 and an initial sample size of -0.078. As a result, the sixth hypothesis is rejected.

Table 3 shows that new measurements on fraud prevention variables analysed from the influence of employee integrity, public sector governance, information technology, and organizational culture are better than existing measurements. The sensitivity test was carried out to analyse the impact of novelty on the research model. The change in significance, particularly in hypothesis 5, explains why the new measurement is superior to the prior measurement, even though it is not by much.

Table 3: Sensitivity test results

No	Hypothesis	New measurement		Existing measurement	
		Coefficient	P values	Coefficient	P values
1	EI → FP	-0.048	0.134	-0.049	0.132
2	PSG → FP	0.383	0.000***	0.379	0.000***
3	IT → FP	0.160	0.009***	0.159	0.008***
4	OC* EI → FP	-0.075	0.022	-0.077	0.030
5	OC * PSG → FP	0.153	0.008***	0.136	0.015**
6	OC * IT → FP	-0.078	0.110	-0.068	0.144
R Square		78.9%		78.8%	
Adjusted R Square		78.1%		78.0%	

Notes: EI = Employee Integrity. PSG = Public Sector Governance. IT = Information Technology. OC = Organisational Culture. FP = Fraud prevention

5. Discussion

5.1 *Effect of employee integrity on fraud prevention*

The findings demonstrate that fraud prevention is unaffected by employee honesty. Indicates that employee integrity, demonstrated by four criteria: competence, solid ideals, objective behaviour, and honest attitude, has little impact on preventing fraud. These findings clarify that employee integrity has no bearing on applying policies and guidelines to prevent fraud due to the system's successful role in preventing fraud, which includes regular data updates and the public complaint mechanism facilitated by the IT system. Therefore, high and low employee integrity has no bearing on fraud prevention. The mechanism for public complaints through the IT system and routine data updates exemplify how high and low employee integrity does not affect fraud prevention. These results explain why employee integrity does not affect implementing policies and guidelines for preventing fraud. It is likely due to the system's successful role in preventing fraud. However, employee integrity is suspected to have little effect on preventing fraud because most analysis units comprise APIPs who have worked there for more than 12 years. As a result, their confidence level in preventing fraud is too high, making it impossible for them to implement integrity consistently at all times.

The finding reveals a critical paradoxical reality. Rather than denying the importance of integrity, these results suggest that in the context of Indonesian bureaucracy, the effectiveness of individual integrity is highly dependent on the systemic context in which it is situated. This weak influence of integrity is likely due to two scenarios: first, the dominance of governance and technology systems that have become so stringent that they mechanistically “force” compliance, rendering variations in individual integrity levels insignificant; or second, a more problematic scenario, whereby a collectivist and conformist organisational culture actually pressures individuals with integrity not to speak out about perceived irregularities (a silencing effect), or makes compliance only superficial. Thus, integrity may not be lost, but rather suppressed or marginalised by a more powerful system and culture. The implication is that future integrity development can no longer focus solely on individuals, but must be accompanied by a transformation of organisational culture that encourages empowerment and protection for whistleblowers, so that integrity values can be actualised, not merely possessed.

The study’s findings refute the idea of agency theory. While APIPs, as individual civil servants or community agents, are given strong directives from the community to perform internal control tasks with the utmost integrity, some employees still fail to maximise integrity, contributing to a lack of maximum fraud prevention. Nevertheless, this is limited to private persons and cannot be applied to all workers in other roles. The findings of studies (Asrin et al., 2021; Hamid & Nasih, 2021; Rifai & Mardijuwono, 2020) that suggest integrity has a beneficial impact on fraud prevention are in opposition to the findings of this study.

5.2 The effect of public sector governance on fraud prevention

The findings show that public sector governance positively affects fraud prevention. Measured by leadership, rule of law, transparency, independence, accountability, and teamwork, governance significantly influences fraud prevention activities. Early detection of irregularities is promptly reported to internal supervisors, and new policies, regulations, and organisational culture are consistently socialised with a focus on quality and cost control. Strong governance also enhances the role of human resources in the inspectorate by supporting supervision, evaluation, and monitoring of APIP reporting to improve fraud prevention.

The study's findings support the notion of motivation theory. According to Wlodkowski (1985), motivation is a state that results in or causes particular behaviours and provides these behaviours with persistence and direction. The process of trying to persuade someone to do what they desire is known as motivation theory. Descriptive data indicate that the public sector has the most significant governance implementation compared to other factors. Implementation is undoubtedly dependent on employee enthusiasm to affect fraud prevention positively. The present study's findings are consistent with other research (Pangaribuan, 2019; Wahyuni-TD et al., 2021; Wardhani & Purnamasari, 2021) that show the beneficial effects of public sector governance on the prevention of fraud.

5.3 Effect of information technology on fraud prevention

The findings demonstrate the beneficial effect of information technology on preventing fraud. Five indicators—hardware, software, databases, networks, and other electronic devices—indicate that APIP is assisted in preventing fraud by information technology.

The use of IT significantly enhances fraud risk management by improving commitment, detection, communication of fraud potential, and routine risk assessments. IT also strengthens officials' understanding of discretionary policies against criminal law. Access to information, such as the Internal Audit Supervision Charter, and the management of data access rights, including oversight of financial reporting data processed by Walidata, are all significantly influenced by IT, which in turn boosts employee performance (Zwaid et al., 2023).

The study's findings support the task technology fit theory. Task Technology Fit Theory creates a construct model known as task and technology fit (TTF), which is the ability of technology to support work or the fit between technological capabilities and job objectives. Although employee proficiency with information technology has not been fully utilised, it has significantly influenced advancements in fraud prevention. The study's findings are consistent with previous research (Ferina et al., 2021; Halbouni et al., 2016), which suggests that information technology can effectively prevent fraud.

5.4 Moderating organisational culture on the effect of employee integrity on fraud prevention

The findings demonstrate how organisational culture reduces the impact of employee integrity on preventing fraud. The failure of employee integrity and organisational culture to work together harmoniously hinders to prevent of fraud. Three variables measure organisational culture: the degree of order, clarity, and the fervent holding of core values. The application of organisational culture, that is, the degree and clarity of order and the fervent holding of core values, supports employees' honest, impartial, firm, and capable attitude as proof of integrity (Cicea et al., 2022; Mingaleva et al., 2022). However, it does not affect fraud prevention. Applying fraud prevention rules and guidelines is not significantly impacted by the combination of organisational culture tactics and employee integrity (Achmad et al., 2024; Roffia & Poffo, 2025; Wahyudi et al., 2022). The absence of employee integrity and organisational culture is probably why employee integrity's influence on fraud prevention has not been strengthened by organisational culture (Van Rooij & Fine, 2018). Formally, integrity is well regulated in every organisation, but the implementation of integrity returns to the individual to implement or not, continuously at work or only occasionally.

These findings also starkly contradict the application of attribution theory, offering a new perspective that posits that an individual's behaviour in performing an activity or making a decision is impacted by both external and internal factors, including their surroundings and their abilities. In actuality, employee integrity cannot be promoted by organisational culture in a way that would boost fraud prevention. According to Morissan (2013), attribution theory clarifies how individuals deduce the reasons behind their own or other people's actions. Better fraud prevention is not affected by the level of behaviour outlined in employee integrity; however, there are still departures from it. The present investigation's findings run counter to those of other studies (Sow et al., 2018; Putri et al., 2022; Sara et al., 2023) that indicate organisational culture can enhance the impact of employee integrity on fraud prevention.

5.5 Moderating organisational culture on the effect of public sector governance on fraud prevention

The findings demonstrate how organisational culture enhances the public sector governance's impact on fraud prevention. Fraud prevention benefits greatly from the organisational culture's synergy and engagement with public sector governance. The impact of public sector governance using six indicators leadership, rule of law, transparency, independence, accountability, and collaboration can be strengthened by the moderating role of organisational culture with three indicators: clarity of ordering, extent of ordering, and deeply held core values (Koeswayo et al., 2024).

The synergy of public sector governance leadership with organisational culture can improve fraud prevention by increasing service development oriented towards quality control and cost control, supporting better evaluating of anti-fraud processes and controls fraud prevention (Chairina & Tjahjadi, 2023). Independence as a behaviour carried out by APIP, accountability as a form of responsibility, and collaboration are part of public sector governance; if supported by the implementation of organisational culture, they can influence fraud prevention (Boufounou et al., 2024).

The study's findings support the notions of motivation theory and attribution theory. According to the idea of attribution by Heider (1958), human behaviour is influenced by both external (environmental attributes) and internal (personal) factors. Motivation is a state that produces or gives rise to particular behaviours and provides these behaviours with persistence and direction (Wlodkowski, 1985). There is no denying the connection between internal organisational dynamics and public sector governance. Positive reinforcement and internal fortitude will result in appropriate behaviour, including actions that avoid fraud. The study's findings are consistent with previous research (Putri et al., 2022) and theoretical predictions that organisational culture might enhance the effect of governance on fraud prevention.

5.6 Moderating organisational culture on the effect of information technology on fraud prevention

The findings indicate that organisational culture does not moderate the impact of information technology (IT) on fraud prevention. IT, measured

through hardware, software, databases, networks, and other electronic tools, cannot rely on organisational culture, measured by clarity of orders, scope of directives, and core values, to enhance its effectiveness. Properly used software, secure networks, and updated databases significantly streamline work processes. However, because organisational culture in applying IT operational standards remains low, such as infrequent sharing of technological updates, it does not contribute to early fraud prevention.

The notions of task technology fit theory and attribution theory are not supported by the findings of this investigation. According to the idea of attribution by Heider (1958), both external (environmental factors) and internal (personal) forces influence human behaviour. Task-technology fit, or the appropriateness of technology to support work, is the appropriateness between technical capabilities and job demands. On the other hand, task-technology fit theory proposes a construct model of task-technology fit. Organisational culture is a term used to describe the internal and external forces that exist within organisations or corporations. Information technology advancements and organisational culture have not been able to coexist, so their combined lack of effectiveness has not affected fraud prevention. The study's findings run counter to theories and research findings. It serves as justification for the claim that organisational culture can increase the impact of information technology on preventing fraud.

The finding that employee integrity has no significant impact on fraud prevention reflects the reality of Indonesian bureaucracy, where formal systems have taken over the role of control. In this context, mechanisms such as the e-procurement system, the SAKTI application for financial management, and multi-layered oversight by the Government Internal Supervisory Apparatus (APIP) have created an environment where compliance is driven more by system design than "forces" compliant behaviour, regardless of individual intentions. The numerous issues that still frequently ensnare bureaucratic officials confirm that personal integrity is often compromised, but a sound system can limit the scope for deviant behaviour. In other words, a robust system can compensate for imperfect individual integrity.

Organisational culture in Indonesia plays a dual role: on the one hand, a culture of "reticence" and a dense hierarchy actually weaken the impact of individual integrity, with employees who discover fraud often reluctant to report it due to pressures of social conformity. However, on the other

hand, this collectivist culture actually strengthens the effectiveness of governance when organisational norms have shifted to anti-corruption. A concrete example is seen in institutions that implement meritocracy and transparency. A culture of cooperation, driven by good values, actually creates a reinforcing effect on existing policies. This polarity explains why bureaucratic reform cannot rely solely on systemic changes but must be accompanied by systematic reengineering of organisational culture.

The finding that information technology effectively prevents fraud and is independent of organisational culture confirms the success of digitising Indonesia's public sector. Technology, such as systems in place at the prosecutor's office or ministry applications, functions as an "automatic brake" that operates independently of local culture. An automated audit trail, for example, will still record any irregularities regardless of whether the organisational culture is collusive or not. That explains why digitalisation is a game-changer in eradicating corruption, as technology creates an environment that is inherently less susceptible to manipulation by an unchanging organisational culture.

6. Conclusions

The findings demonstrate that fraud prevention is unaffected by employee honesty. The findings demonstrate the beneficial effect that public sector governance has on preventing fraud. The findings demonstrate the beneficial effect of information technology on preventing fraud. The findings demonstrate how organisational culture reduces the impact of employee integrity on preventing fraud. The findings demonstrate how organisational culture enhances the public sector governance's impact on fraud prevention. The findings demonstrate that the impact of information technology on preventing fraud is not mitigated by organisational culture. The test results and the study's discussion lead to the conclusion that while employee integrity cannot directly impact fraud prevention, the government should consider the most ethical APIP staff when choosing the most ethical. On the other hand, information technology and public sector governance help to prevent fraud. Organisational culture was found in the moderation study to improve the influence of public sector governance on fraud prevention; however, employee integrity and technology were not found to be strengthened by organisational culture as a moderation.

The study's findings inform government policy on hiring APIPs to improve fraud prevention, IT utilisation, and the application of standard technology to enhance job quality. Public sector governance procedures can be optimised to strengthen fraud prevention, and employee selection for APIP roles should be reconsidered to ensure integrity supports performance. Sensitivity tests indicate that the new fraud prevention measurement is superior to previous methods, providing a basis for future research in analysing public sector fraud prevention.

This study has limitations. The quantitative approach was unable to fully understand the meaning behind the finding of the insignificant influence of integrity on fraud prevention. Structured survey data limited understanding of the processes and mechanisms by which organisational culture concretely moderates the variables studied. The specific organisational context and unique dynamics of each government agency cannot be adequately revealed through a quantitative approach alone. Future research should employ a mixed methods approach to confirm, deepen, and enrich the quantitative findings through in-depth interviews and case studies, thus explaining the causal mechanisms, organisational context, and paradoxes not revealed through a quantitative approach alone.

CrediT author statement

Feber Sormin: Conceptualisation, design of methodology, data collection, formal analysis, writing - original draft. **Murtanto:** Conceptualisation, design of methodology, data collection, formal analysis, writing - original draft preparation and editing. **Muhammad Nuryatno:** Conceptualisation, design of methodology, data collection, formal analysis, writing - original draft.

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References

- Abdullah, S. Y., Nugraha, S. A., Devara, M. A., Zulfikar, G., & Arsalan, S. (2020). Analysis of integrity and competency of internal auditors affecting fraud prevention. *Solid State Technology*, 63(5), 3304–3313.
- Achmad, T., Ghozali, I., & Pamungkas, I. D. (2024). Detecting fraudulent financial statements with analysis fraud hexagon: Evidence from state-owned enterprises Indonesia. *WSEAS Transactions on Business and Economics*, 21, 2314–2323. <https://doi.org/10.37394/23207.2024.21.190>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. <https://doi.org/10.4135/9781446249215.n22>
- Asrin, D. S., Budhi, M. K. S., & Yasa, W. M. (2021). The effect of internal control systems, utilization of information technology, and human resource competency on village financial integrity and fraud prevention. *Turkish Journal of Computer and Mathematics Education*, 12(13), 7025–7036.
- Boufounou, P., Eriotis, N., Kounadeas, T., Argyropoulos, P., & Pouloupoulos, J. (2024). Enhancing internal control mechanisms in local government organizations: A crucial step towards mitigating corruption and ensuring economic development. *Economies*, 12(4), 78. <https://doi.org/10.3390/economies12040078>
- Chairina, C., & Tjahjadi, B. (2023). Green governance and sustainability report quality: The moderating role of sustainability commitment in ASEAN countries. *Economies*, 11(1), 27. <https://doi.org/10.3390/economies11010027>
- Chebab, D., Samour, A., & Saad, N. M. (2022). The role of corruption in natural resource–financial development nexus: Evidence from MENA region. *Institutions and Economics*, 14(2), 1–23. <https://doi.org/10.22452/IJE.vol14no2.1>
- Cicea, C., Țurlea, C., Marinescu, C., & Pintilie, N. (2022). Organizational culture: A concept captive between determinants and its own power of influence. *Sustainability*, 14(4), 2021. <https://doi.org/10.3390/su14042021>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>

- Ferina, I. S., Mulyani, S., Afia, N. N., & Poulus, S. (2021). The zero fraud implementation through the innovation of information technology and organizational culture. *Journal of Southwest Jiaotong University*, 56(1), 324–334. <https://doi.org/10.35741/issn.0258-2724.56.1.30>
- Halbouni, S. S., Obeid, N., & Garbou, A. (2016). Corporate governance and information technology in fraud prevention and detection: Evidence from the UAE. *Managerial Auditing Journal*, 31(6–7), 589–628. <https://doi.org/10.1108/MAJ-02-2015-1163>
- Hamid, A., & Nasih, M. (2021). Fraud prevention of village funds in East Java, Indonesia. *Management Science Letters*, 11, 2033–2044. <https://doi.org/10.5267/j.msl.2021.3.006>
- Heider, F. (1958). The psychology of interpersonal relations. *Lawrence Erlbaum Associates*. <https://doi.org/10.1037/10628-000>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Juhandi, N., Zuhri, S., Fahlevi, M., & Noviantoro, R. (2020). Information technology and corporate governance in fraud prevention. In *E3S Web of Conferences* (Vol. 202, p. 16003). *EDP Sciences*. <https://doi.org/10.1051/e3sconf/202020216003>
- Koeswayo, P. S., Haryanto, H., & Handoyo, S. (2024). The impact of corporate governance, internal control and corporate reputation on employee engagement: a moderating role of leadership style. *Cogent Business & Management*, 11(1), 2296698. <https://doi.org/10.1080/23311975.2023.2296698>
- Mingaleva, Z., Shironina, E., Lobova, E., Olenov, V., Plyusnina, L., & Oborina, A. (2022). Organizational culture management as an element of innovative and sustainable development of enterprises. *Sustainability*, 14(10), 6289. <https://doi.org/10.3390/su14106289>
- Morissan. (2013). Teori komunikasi individu hingga massa. *Kencana*.
- Sow, A. N. G., Basiruddin, R., Mohammad, J., & Rasid, S. Z. A. (2018). Fraud prevention in Malaysian small and medium enterprises (SMEs). *Journal of Financial Crime*, 25(2), 499–517. <https://doi.org/10.1108/JFC-05-2017-0049>
- Pangaribuan, D. (2019). Governance practices, accountability performance, and implementation of risk management and implications for fraud

- detection and prevention. *International Journal of Contemporary Accounting*, 1(2), 75–98. <https://doi.org/10.25105/ijca.v1i2.6167>
- Putri, N. P. A. W., Putra, I. N. W. A., Wirakusuma, M. G., & Suputra, I. D. G. D. (2022). Effect of independence, professionalism, and experience of internal auditors on fraud prevention with organizational culture as moderating variable. *Linguistics and Culture Review*, 6, 565–580. <https://doi.org/10.21744/lingcure.v6ns1.2108>
- Rifai, M. H., & Mardijuwono, A. W. (2020). Relationship between auditor integrity and organizational commitment to fraud prevention. *Asian Journal of Accounting Research*, 5(2), 315–325. <https://doi.org/10.1108/AJAR-02-2020-0011>
- Roffia, P., & Poffo, M. (2025). Revisiting the fraud triangle in corporate frauds: Towards a polygon of elements. *Journal of Risk and Financial Management*, 18(3), 156. <https://doi.org/10.3390/jrfm18030156>
- Rosmi, S., & Syamsir. (2020). The importance of integrity values as corruption prevention measures. *TEST Engineering & Management*, 83(12043), 12043–12054.
- Sara, I. M., Putra, I. B. U., Saputra, K. A. K., & Utama, I. W. K. J. (2023). Financial literacy, morality, and organizational culture in preventing financial mismanagement: A study on village governments in Indonesia. *Cogent Business & Management*, 10(1), 2166038. <https://doi.org/10.1080/23311975.2023.2166038>
- Schiller, P., & Bryant, T. (2002). 16 nilai moral dasar bagi anak. Elex Media Komputindo.
- Schlenker, B. R. (2008). Integrity and character: Implications of principled and expedient ethical ideologies. *Journal of Social and Clinical Psychology*, 27(10), 1078–1125. <https://doi.org/10.1521/jscp.2008.27.10.1078>
- Syalwa, M., Maria, M., & Kadarwati, S. (2023). Pencegahan fraud pengadaan barang dan jasa pada dinas pupr Kota Palembang. *Jurnal Riset Terapan Akuntansi*, 7(1), 1-8.
- Tarmidi, D., Murwaningsari, E., & Ahnan, Z. M. (2021). Earnings quality and audit quality: Analysis of investor reaction. *Humanities and Social Sciences Letters*, 9(3), 250–259. <https://doi.org/10.18488/journal.73.2021.93.250.259>
- Thorbecke, W. (2023). Sectoral evidence on Indonesian economic performance after the pandemic. *Asia and the Global Economy*, 3(2),

100069. <https://doi.org/10.1016/j.aglobe.2023.100069>
- Utami, W., Nugroho, L., Mappanyuki, R., & Yelvionita, V. (2020). Early warning fraud determinants in banking industries. *Asian Economic and Financial Review*, 10(6), 604–627. <https://doi.org/10.18488/journal.aefr.2020.106.604.627>
- Van Rooij, B., & Fine, A. (2018). Toxic corporate culture: Assessing organizational processes of deviancy. *Administrative Sciences*, 8(3), 23. <https://doi.org/10.3390/admsci8030023>
- Wahyudi, S., Achmad, T., & Pamungkas, I. D. (2022). Prevention village fund fraud in Indonesia: Moral sensitivity as a moderating variable. *Economies*, 10(1), 26. <https://doi.org/10.3390/economies10010026>
- Wahyuni-TD, I. S., Haron, H., & Fernando, Y. (2021). The effects of good governance and fraud prevention on performance of the zakat institutions in Indonesia: A Shari‘ah forensic accounting perspective. *International Journal of Islamic and Middle Eastern Finance and Management*, 14(4), 692–712. <https://doi.org/10.1108/IMEFM-03-2019-0089>
- Wardhani, F. K., & Purnamasari, D. I. (2021). The impact of accountability, transparency, and morality of village apparatus on fraud prevention in the management of allocated village funds. *Journal of Business and Information Systems*, 3(2), 137–144. <https://doi.org/10.36067/jbis.v3i2.104>
- Wlodkowski, R. J. (1985). How to plan motivational strategies for adult instruction. *Performance & Instruction*, 24(9), 1–6. <https://doi.org/10.1002/pfi.4150240902>
- Zwaid, J. G., Kareem, H. B., Abed, R. A., & Fatima, K. (2023). Implementation of accounting information systems and information technology (IT) in the sustainability of the developed economic units. *Eastern-European Journal of Enterprise Technologies*, 4(13(124)), 79–86. <https://doi.org/10.15587/1729-4061.2023.286380>