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A mixed-method analysis of fraud awareness, fraud literacy, public service motivation, professional scepticism, and corruption

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ABSTRACT

This study examines whether fraud awareness and fraud literacy reduce corrupt behaviour in public institutions and whether public service motivation and professional scepticism condition these relationships. Drawing on Social Exchange Theory, the study adopts an explanatory sequential mixed-method design. Quantitative data were collected from 137 employees of a local government institution in East Java and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). To complement the quantitative findings, qualitative data were subsequently gathered through semi-structured interviews with eight participants and analysed using thematic analysis. The quantitative results show that fraud awareness, fraud literacy, public service motivation, and professional scepticism do not have significant direct effects on corruption. However, the interaction effects are negative and significant. These suggest that fraud awareness and fraud literacy become behaviourally meaningful to prevent corruption when combined with public service motivation and professional scepticism that activate ethical responsibility within organisational relationships. Interestingly, the qualitative findings deepen this explanation by showing that employees interpret responsibility through shared decision structures, hierarchical relationships, and clearly defined role boundaries. These relational conditions shape how individuals translate knowledge of fraud risks into ethical actions in everyday administrative work. Although this study is conducted in the public sector, its insights extend to private sector governance as well. For instance, this perspective enriches existing fraud prevention research by highlighting how knowledge-based capacities interact with motivational and professional orientations to shape integrity outcomes across different organisational contexts.

Introduction

Corruption and occupational fraud continue to impose severe financial and social costs across the globe. The Association of Certified Fraud Examiners (ACFE) reports in its Report to the Nations that organisations lose an estimated five percent of annual revenue to fraud, with public sector entities experiencing substantial median losses and prolonged detection periods (ACFE, 2024). Beyond direct financial loss, corruption erodes public trust, weakens institutional legitimacy, and reduces service delivery quality (Transparency International, 2023). In public institutions, where authority is exercised on behalf of citizens, integrity failures represent a breach of reciprocal expectations embedded in democratic governance (Ohemeng et al., 2020). These patterns underscore a pressing practical urgency to understand how corrupt behaviour can be effectively constrained within bureaucratic systems.

Empirical scholarship has responded to this urgency by identifying organisational controls, ethical climate, whistleblowing mechanisms, and fraud training as key safeguards (Trompeter et al., 2014; Brink et al., 2022; Wei et al., 2021). Fraud awareness and fraud literacy receive particular emphasis, since employees serve as frontline guardians capable of recognising irregularities before they escalate (Sihombing et al., 2023). Awareness enhances sensitivity to red flags, whereas literacy strengthens analytical capability in examining documentation and transactional patterns. Prior studies frequently associate these capacities with improved detection and stronger ethical judgment (Trompeter et al., 2014). Public administration research further highlights the role of public service motivation in encouraging commitment to societal welfare and ethical conduct (Kim et al., 2023; Andersen & Pedersen, 2012). In parallel, accounting and auditing literature demonstrates that professional scepticism supports critical evaluation and reduces judgment bias (Nolder & Kadous, 2018; Fehrenbacher et al., 2021).

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Despite this theoretical foundation, empirical findings show persistent inconsistencies. Knowledge-based interventions often generate uneven behavioural outcomes across organisational contexts (Brink et al., 2022; Campa & Laguecir, 2025). Employees may demonstrate high awareness of procedural irregularities while corrupt practices continue to occur within layered approval systems and hierarchical governance environments (Wang et al., 2019; Su & Ni, 2023). This divergence suggests an incomplete empirical explanation. Recent scholarship increasingly calls for relational and contextual perspectives that examine how institutional structures shape the translation of knowledge into action (Cropanzano & Mitchell, 2005; Wang, 2020; Weißmüller & Zuber, 2023).

Beyond empirical inconsistencies, prior studies frequently evaluate fraud awareness and fraud literacy in private sector or audit contexts, leaving public bureaucratic settings comparatively underexplored (Wei et al., 2021; Brink et al., 2022). The public sector differs in its moral architecture. Authority is exercised on behalf of citizens, and legitimacy depends on trust-based reciprocity (Rothstein & Varraich, 2017). In such contexts, there is a growing emphasis on the importance of public service motivation and professional scepticism as foundational drivers of ethical governance within public institutions. Unfortunately, there is limited literature on how knowledge is applied under such conditions of discretion and relational sensitivity. Addressing this gap is especially important in present governance climates where legitimacy depends on how effectively public servants convert ethical recognition into principled action within structured exchange environments.

Therefore, based on these explanations, the current study seeks to fulfil such empirical voids by answering the following research question: "*how do fraud awareness and fraud literacy influence corrupt behaviour in public institutions, and what roles do public service motivation and professional scepticism play in shaping this relationship within bureaucratic contexts?*". This study makes several contributions to the existing literature. Firstly, the study has enriched fraud prevention literature by extending that, neither fraud awareness nor fraud literacy will directly lower the likelihood of corruption. It can be powerful if those are interacted by public service motivation and professional scepticism. Secondly, this study contributes to prior empirical studies by addressing the proposed relationships in the context of public administration, which has not yet been studied as intensively as that in private companies and in auditing fields. Thirdly, by adopting an explanatory sequential mixed-method research design, which follows up quantitative data with qualitative inquiry. The existing literature usually focuses on the direct impacts of fraud awareness, whereas this research finds that organizational structures, such as the role and boundaries of an individual's job, hierarchical relationship, and responsibilities, are critical organisational influences that affect the relationship. In particular, it offers a qualitative insight to understand why fraud awareness and literacy might not be sufficient for inhibiting corruption within a bureau.

The remainder of this paper is organised as follows. The second section of this paper discusses relevant literature, theoretical development and the research hypotheses. Section 3 details the research method encompassing data collection method, variable measurement and data analysis method. Section 4 presents the results and discussion, covering the quantitative results, the qualitative results, and the theoretical and managerial implications. Lastly, section 5 concludes the study and discusses the limitations and suggestions for future study.

Literature Review

Underpinning Theory: Social Exchange Theory

This study is anchored in social exchange theory, which views social life as a sequence of reciprocal interactions governed by expectations of fairness, obligation, and mutual benefit (Cropanzano & Mitchell, 2005). Drawing on Ko and Hur (2014), individuals enter into exchanges with their organizations and with broader societal stakeholders. The concern is that it is not about a contractual arrangement, but a relational exchange shaped by perceptions of reciprocity, fairness, and trust. As demonstrated by Ko and Hur (2014), employees interpret organizational provisions, such as benefits, fair procedures, and managerial trustworthiness, as signals of how much they are valued and respected.

In the public sector, this exchange carries an additional layer of moral weight. Public employees are entrusted with authority and access to collective resources, and citizens expect integrity in return (Ohemeng et al., 2020). Corruption, however, represents a breakdown in this reciprocal arrangement. From a network-exchange perspective, Wang (2020) further illustrates how corruption is sustained through relational ties and brokerage positions that span institutional boundaries. In such cases, exchanges move from legitimate reciprocity to clandestine benefit-sharing networks, where trust is redirected away from citizens and toward collusive actors.

If we refer to the prior work (Groves, 2009; Potipiroon, 2025), reciprocity in this setting depends on how individuals interpret risks, consequences, and ethical boundaries embedded in their responsibilities. Limited understanding of misconduct or narrow perceptions of accountability increases the likelihood of rationalization and self-serving justification (Christensen, 2016; Islam et al., 2024). As a result, it may weaken the moral foundation of the exchange relationship (Cropanzano & Mitchell, 2005; Ko & Hur, 2014). Within this fraudulent concern, there is a growing discussion about the need for fraud awareness and fraud literacy among employees. For instance, Mandal and Amilan, S. (2025) highlight the importance of structured fraud education in developing ethical sensitivity in organizational levels. Similarly, Wei et al. (2021) demonstrate that fraud literacy enhances employees' ability to detect irregularities and respond responsibly.

Under the current study, such fraud awareness and fraud literacy can shape how individuals understand their responsibilities in the exchange relationship. Moreover, we agree with some scholars that public service motivation and professional scepticism have psychological effects on the application of practical knowledge and skills. For example, Andersen and Pedersen (2012) explain that public service motivation encourages employees to focus on serving society. This motivation guides how they apply their skills at work. In addition, Nolder and Kadous (2018) show that professional scepticism shapes cognitive processing, judgment quality, and the depth of evidence evaluation. Therefore, we perceive that as a return to the organization through the prevention of corruption, fraud awareness and fraud literacy need to be encouraged. At the same time. employees need strong public service motivation to stay committed to the public interest and professional scepticism to question unusual transactions and weak explanations. When these elements work together, employees are more likely to use their knowledge carefully, make better judgments, and protect public resources in a responsible way.

Fraud Awareness and Corruption

The link between fraud awareness and corruption can be approached through the idea of decision framing. In public administration, many corrupt acts begin as small choices that appear technical rather than ethical (Weißmüller & Zuber, 2023). Employees who are aware of fraud risks are expected to become more attentive to unethical practices and more willing to avoid behaviours that undermine organisational integrity. The way a situation is framed in the mind of the decision maker influences the direction of action. For instance, Maulidi et al. (2024) argue that higher fraud awareness increases the likelihood that financial irregularities are framed as ethical risks instead of routine adjustments. This framing effect matters because individuals tend to act consistently with the meaning they attach to a situation. If an act is understood as harmful to institutional integrity, resistance becomes stronger. If it is seen as minor or common, resistance weakens. Then, employees who recognize the broader impact of corrupt conduct may perceive a stronger obligation to protect the trust placed in them (Crepaz & Arikan, 2024). They understand that misuse of authority violates the implicit contract between public servants and citizens. We proposed that this awareness strengthens the perception that integrity is part of what they owe in return for organizational support and public trust. In the context of Indonesian public institutions, where administrative processes involve substantial discretion and public resources, fraud awareness may discourage behaviours that prioritise personal interests over public responsibilities (Maulidi et al., 2024). Based on this reasoning, our hypothesis is:
H_1: Higher levels of fraud awareness are expected to be associated with lower levels of corrupt behavior.

Fraud Literacy and Corruption

We propose that fraud literacy shapes how employees perceive their obligations within social and institutional exchanges. Employees with higher fraud literacy may interpret every decision as part of a broader network of relationships, and they understand that ethical and unethical choices alter the balance of obligations among colleagues, the organization, and the public. As stated before, fraud literacy drives reflection on potential risks and moral debts (Trompeter et al., 2014). It guides attention toward subtle relational and symbolic effects, which reinforces alignment with organizational norms and ethical standards (Wang, 2020). In this situation, every act of potential misconduct triggers evaluation of its effect on obligations, trust, and social capital, which produces a consistent pattern of ethical judgment (Bai et al., 2022). So, they recognize that ethical behavior preserves stability while corruption generates tension. This point is underpinned by the work of Ko and Hur (2014) that employees must recognise their obligations and understand how organisational practices affect exchange relationships with stakeholders. As a result, we expect that employees with higher fraud literacy are more likely to recognize early signs of potential misconduct, evaluate the cascading impact of small ethical lapses, and consider how their behavior sets precedents for peers. Thus, it can be argued that fraud literacy can serve as an important mechanism for strengthening accountability. Based on this reasoning, our hypothesis is:
H_2: Higher levels of fraud literacy are expected to be associated with lower levels of corrupt behavior.

Public Service Motivation and Corruption

Lee et al. (2024) suggest that higher public service motivation shifts attention away from personal benefit and toward public accountability. If referring to social exchange theory, individuals' behaviour is influenced by how they define their exchange partners and obligations. We agree with Lee et al. (2024) that public service motivation reflects a strong commitment to serving society and advancing collective welfare. If individuals see their work as a form of service, ethical conduct becomes part of their professional identity. Such perception generates a felt obligation to reciprocate through responsible conduct and faithful stewardship of public resources (Ripoll & Schott, 2024; Kim et al., 2023). Previous studies consistently report that public service motivation is associated with ethical

behaviour, public accountability, and lower tolerance for misconduct (Andersen & Pedersen, 2012; Lee et al., 2024). Employees who possess stronger public service values tend to demonstrate greater commitment to integrity and public welfare. Specifically, we propose that, as this relational awareness deepens, employees become more attentive to how small deviations can accumulate into larger breaches of trust. For example, minor shortcuts are no longer perceived as harmless efficiency measures. In fact, they are evaluated in terms of their impact on society and organization (Ripoll & Schott, 2024). Accordingly, employees begin to ask whether a decision can withstand public scrutiny, whether documentation reflects genuine transactions, and whether explanations align with shared expectations of fairness. Based on this reasoning, our hypothesis is:
H_3: Higher levels of Public Service Motivation are expected to be associated with lower levels of corrupt behavior.

The Moderating role of Public Service Motivation on Fraud Awareness and Corruption

As mentioned before, fraud awareness enables employees to recognise procedural irregularities, suspicious transactions, and behavioural cues associated with misconduct (Sihombing et al., 2023). However, if it is just recognition, it represents only the cognitive dimension of ethical judgment. Employees may perceive warning signs and still hesitate to intervene (Lee et al., 2024; Potipiroon, 2024). Commonly, this hesitation often stems from fear of retaliation, social pressure, or career considerations (Potipiroon, 2024). At this point, internal value systems begin to shape behavioural choices. Building on this foundation, the essence of public service motivation can guide employees' behavioural choices (Potipiroon, 2024). In the current study, public service motivation transforms awareness into principled responsiveness. It broadens the employee's perception of the exchange relationship. Unlike a traditional conception, public service motivation considers that the obligation of an employee cannot be reduced to organizational needs or supervision pressures (Lee et al., 2024). The motivated public servant considers themselves to be responsible to the citizens, and ultimately to society as a whole. So, employees who strongly identify with public service values tend to experience moral discomfort when exposed to signs of corruption (Gans-Morse et al., 2022). This discomfort may stimulate internal dialogue about responsibility and accountability. We propose that employees' desire to perform public service, and the resulting increase in public service motivation, is able to compensate for these internal concerns, by instilling employees with a greater sense of responsibility to the wider public, and making them feel a greater obligation to 'give something back' to society for trusting them to act in the appropriate way. For example, it strengthens their willingness to question, for example, irregular authorisations or undocumented adjustments. Through this process, due to high public service motivation, therefore, awareness shifts from passive observation to active engagement. Based on this reasoning, our hypothesis is:
H_4: Public service motivation moderates the relationship between fraud awareness and corruption

The Moderating role of Public Service Motivation on Fraud Literacy and Corruption

It is debatable that the technical knowledge, provided by fraud literacy, does not determine ethical outcomes. Such literacy equips individuals with only analytical tools to assess risk exposures (Trompeter et al., 2014). Therefore, the moral orientation guiding the application of knowledge becomes critical. Interestingly, we believe that public service motivation provides that orientation. Some scholars (Kim et al., 2023; Gans-Morse et al., 2022; Potipiroon, 2024), acknowledge that employees guided by service values are more likely to challenge questionable directives grounded in procedural loopholes. So, those employees who have higher level of public service motivation would feel this relationship of exchange more profoundly than the employees whose motivation is more focused on individual gains. The latter would perceive the utilisation of fraud knowledge more of their duties to upkeep the public trust and commitment toward society. Practically, they tend to design stronger verification procedures and reinforce segregation of duties (Ripoll & Schott, 2024). They are also more attentive to strengthening audit trails and documentation standards. Therefore, public service motivation is expected to strengthen the effectiveness of fraud literacy in discouraging corruption. Based on this reasoning, our hypothesis is:
H_5: Public service motivation moderates the relationship between fraud literacy and corruption

Professional Scepticism and Corrupt Behavior

Professional scepticism reflects a questioning mindset grounded in critical evaluation and disciplined judgment (Nolder & Kadous, 2018). Kelly and Larres (2025), note that it encourages individuals to seek sufficient evidence before accepting claims, authorisations, or explanations. In organisational settings, individuals who demonstrate high professional scepticism tend to resist surface-level explanations and instead pursue deeper verification through comparison, corroboration, and analytical reasoning (Nolder & Kadous, 2018). In other words, when the behavior displayed deviates from what is anticipated, the professional doubt that employees raise can make those behaviors more susceptible to examination by asking whether they were valid or not, and by seeking further information. There is a body of literature which is consistent with this logic. Specifically, some researchers consistently demonstrate that professional skepticism enhanced judgment quality and increases the probability that the person will detect an error they might not have Otherwise (Fehrenbacher et al., 2021; Sun et al., 2022). As a result, potentially corrupt practices face procedural barriers rooted in inquiry and verification. So, in environments where scepticism is consistently exercised, corrupt actors encounter greater difficulty in rationalising misconduct as routine practice. Moreover, sceptical professionals are more inclined to delay acceptance until sufficient evidence is obtained (Chiang, 2016), which reduces impulsive compliance with ethically questionable directives. Based on this reasoning, our hypothesis is:

H_6: Higher levels of professional scepticism are expected to be associated with lower levels of corrupt behavior.

The Moderating role of Professional Scepticism on Fraud Awareness and Corruption

Fraud awareness primarily signals the presence of potential issues (Sihombing et al., 2023), whereas behavioural consequences depend on how those signals are interpreted and acted upon (Endrawes et al., 2023). We believe that professional scepticism has a crucial role to play by offering interpretive processes that encourage employees to interrogate the plausibility of explanations associated with suspicious activities (Nolder & Kadous, 2018).

Such a role is important because exchange relationships within organisations are sustained by expectations that individuals will fulfil their responsibilities in ways that support collective goals. According to a study conducted by Maulidi and Ali (2025), employees frequently rely on information, decisions, and actions provided by others when performing their duties. However, these exchanges can become vulnerable when individuals accept information without sufficient scrutiny. In this context, professional skepticism provides a mechanism by which the knowledge gained of the potential for fraud is translated into sceptical assessment. So, when fraud awareness intersects with a questioning mindset, employees move beyond recognition toward structured examination (Grenier, 2017). This kind of thought process will not take routines for granted and therefore ensures the unusual will be noticed. They compare supporting documents, reassess approval chains, and analyse whether operational justifications support financial evidence. Therefore, awareness signals the possibility of misconduct, while scepticism tests its validity. As scepticism increases, the negative association between fraud awareness and corruption becomes more pronounced. Based on this reasoning, our hypothesis is:

H_7: Professional scepticism moderates the relationship between fraud awareness and corruption.

The Moderating role of Professional Scepticism on Fraud Literacy and Corruption

In the current study, we propose that the behavioural impact of fraud literacy also depends on the disposition that guides its use in everyday decision-making. The mere possession of knowledge does not guarantee its vigilant application (Campa & Laguecir, 2025). Professional scepticism, in this case, can activate fraud literacy, for example, by embedding it within a mindset of disciplined inquiry and evidential rigor (Campa & Laguecir, 2025). In high-discretion settings where sophisticated manipulation may occur (Wang et al., 2019), such integration becomes especially critical. It facilitates a transition away from unconditional acceptance of information and toward actively evaluating how the organisation functions. So, the sceptical employee would apply their fraud-related knowledge to seek out discrepancies and gaps in explanation and to determine whether sufficient evidence exists for organizational decisions.

We expect that employees equipped with both attributes demonstrate greater persistence in verifying compliance and less tolerance for ambiguity that obscures accountability. In this regard, as explained by Kim and Trotman (2015), accountability functions as a relational norm rather than merely a regulatory requirement. Employees may possess substantial fraud-related knowledge yet fail to apply it rigorously if they are inclined to accept information at face value or avoid questioning the actions of others. Under these circumstances, employees must rely on their own knowledge and judgement to evaluate whether the actions of others are consistent with expected obligations and responsibilities. It can be argued that employees must persist in verification because doing so protects the integrity of reciprocal expectations within the organisation. Therefore, through this relational mechanism, the joint presence of fraud literacy and professional scepticism can generate a system of reciprocal accountability, that constrains corrupt behaviour at both individual and collective levels (Weißmüller & Zuber, 2023). Based on this reasoning, our hypothesis is:

H_8: Professional scepticism strengthens the negative relationship between fraud literacy and corruption.

According to the discussion of hypothesises development, we illustrate them visually in Figure 1.

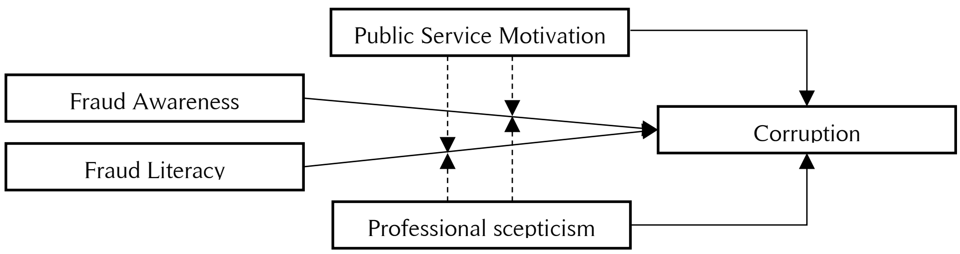

Figure 1. Research model
Source: Created by Author

Research Method

Data Collection Method

This study adopts a mixed-method design that integrates quantitative and qualitative approaches. The quantitative phase was conducted through the distribution of structured questionnaires to employees of a local government in East Java. The selected local government has undergone considerable socio-economic and administrative transformation during the past twenty years. It is located in an important region of East Java and is more interconnected with the large economic and administrative areas. All of this adds complexity to both public service provision and infrastructure management, and to public resources distribution. In these environments, public employees have to make frequent decisions that impact public resources, the enforcement of rules and regulations, and the provision of public services. Therefore, they regularly encounter situations in which judgment, responsibility, and measures to deter corruption need to be carefully assessed. The combination of these features thus provides an excellent context in which to analyze the impact of fraud awareness, literacy, motivation to provide public service, and professional skepticism on corruption behavior.

Table 1. Respondents' Information

Participant Section	Category	Description	Frequency	Percentage (%)
Quantitative Participants	Gender	Male	78	56.9
		Female	59	43.1
		Total	137	100
	Age	Under 30 years	21	15.3
		31–40 years	49	35.8
		41–50 years	43	31.4
		Above 50 years	24	17.5
		Total	137	100
	Education Level	Diploma	8	5.8
		Bachelor's Degree	92	67.2
		Master's Degree	37	27.0
		Total	137	100
	Years of Service	Less than 5 years	26	19.0
		5–10 years	38	27.7
		11–20 years	64	46.7
		More than 20 years	9	6.6
		Total	137	100
Qualitative participants	Gender	Male	5	62.5
		Female	3	37.5
		Total	8	100
	Age	Under 30 years	5	62.5
		31–40 years	3	37.5
		Total	8	100
	Education Level	Bachelor's Degree	8	100
		Total	8	100
	Years of Service	Less than 5 years	3	37.5
		5–10 years	5	62.5
		Total	8	100

Source: Processed by Authors

In regard to the quantitative data collected from respondents, the selection criteria adopted included the following. Firstly, respondents must be permanent members of the institution. Secondly, they must be occupied in operational, managerial, administrative, functional, supervisory or financial planning roles. Finally, respondents should have adequate years of service in their roles, to be familiar with organizational policies, accountability and the risks of fraud in their units. Due to voluntary survey, the final dataset consisted of 137 usable questionnaires, which were subsequently used in the quantitative analysis

The details of participants characteristics are reported in Table 1. As suggested, the demographic profile shows that out of 137 respondents, 78 are male (56.9%) and 59 are female (43.1%). In terms of age distribution, 21 respondents (15.3%) are under 30 years old, 49 respondents (35.8%) are between 31 and 40 years, 43 respondents (31.4%) are between 41 and 50 years, and 24 respondents (17.5%) are above 50 years old. Regarding educational background, 8 respondents (5.8%) hold a diploma qualification, 92 respondents (67.2%) hold a bachelor's degree, and 37 respondents (27.0%) hold a master's degree.

In terms of the qualitative phase, it was conducted after analysing the quantitative data as part of an explanatory sequential mixed-method design. This phase aimed to deepen and clarify the statistical results by exploring how participants interpret responsibility, hierarchy, and decision-making processes in their everyday work. The inclusion criteria were that interviewees must have an adequate experience of organizations and directly related with the work on administrative, manager, supervisory, financial or operational level. The latter were chosen because positions require management tasks concerning accountability, decision making, internal control and the use of public funds, so the informants selected had to have an adequate comprehension of organizational practices and behaviors relevant to corruption control.

There are 8 informants participating in this semi-structured interview. According to Table 1, The participants were predominantly male (62.5%), while females accounted for 37.5%. In terms of age, most participants were under 30 years (62.5%), followed by those aged 31-40 years (37.5%). All respondents held a bachelor's degree (100%). Regarding years of service, the majority had 5–10 years of experience (62.5%), while 37.5% had less than 5 years of service.

Measurement

For the quantitative data collection, all constructs in this study were measured using multi-item scales adapted from prior studies. Fraud awareness was measured using six items developed from Eutsler et al. (2016). Building on this, fraud literacy was measured using five items developed from Cooper et al. (2013) as well as Trompeter et al. (2014). In addition, public service motivation was measured using five items based on the work of Andersen and Pedersen (2012). Moreover, professional scepticism was measured using five items based on Nolder and Kadous (2018). Finally, corruption was measured using six items develpoped from Su and Ni (2023). All items were assessed using a five-point Likert scale ranging from strongly disagree to strongly agree. The operational definitions are reported in Appendix A.

In terms of qualitative data, semi-structured interviews were conducted to obtain deeper insights into participants' experiences and perceptions related to fraud awareness, fraud literacy, professional judgement, and corruption risks within public institutions. The interviews allowed participants to elaborate on how these issues emerge in everyday organisational practices and how employees interpret ethical responsibilities in their professional roles. An interview guide was prepared to ensure consistency across participants while still allowing flexibility for probing questions and follow-up discussions. The sample questions are provided in Appendix B.

Analysis Data

We carried out the data analysis in two main stages. In the first stage, we used Microsoft Excel to prepare and screen the dataset. All questionnaire responses were coded numerically and entered manually into a spreadsheet. We then reviewed the data row by row to ensure accuracy in entry. During this stage, we checked for missing values, duplicate entries, and unusual response patterns. We also verified that reverse-coded items were properly recoded before proceeding. This initial step helped us confirm that the dataset was clean, consistent, and ready for further statistical testing. After completing the preliminary screening in Excel, we analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The first assessment focused on indicator reliability by examining outer loadings (Hair eta al., 2019). We then evaluated internal consistency reliability using composite reliability values. Convergent validity was assessed through average variance extracted (AVE) that each construct explained a sufficient portion of variance in its indicators. Discriminant validity was examined using the Fornell-Larcker criterion and cross-loadings to confirm that each construct was empirically distinct. To test the proposed hypotheses, the following structural equations were estimated using PLS-SEM:

Model 1: Direct Effects: $COR = \beta_0 + \beta_1 FA + \beta_2 FL + \beta_3 PSM + \beta_4 PS + \varepsilon$

where:

COR = Corruption
FA = Fraud Awareness
FL = Fraud Literacy
PSM = Public Service Motivation
PS = Professional Scepticism
ε = Error term

Model 2: Moderating Effects: $COR = \beta_0 + \beta_1 FA + \beta_2 FL + \beta_3 PSM + \beta_4 PS + \beta_5(FA \times PSM) + \beta_6(FL \times PSM) + \beta_7(FA \times PS) + \beta_8(FL \times PS) + \varepsilon$

where:

FA × PSM = Interaction between Fraud Awareness and Public Service Motivation
FL × PSM = Interaction between Fraud Literacy and Public Service Motivation
FA × PS = Interaction between Fraud Awareness and Professional Scepticism
FL × PS = Interaction between Fraud Literacy and Professional Scepticism

The interaction terms were included to examine whether public service motivation and professional scepticism strengthen or weaken the relationships between fraud awareness, fraud literacy, and corruption. The significance of the direct and moderating effects was assessed using bootstrapping procedures.

Moreover, the qualitative data were analysed using a thematic analysis approach (Lochmiller, 2021). The analysis began with repeated reading of the transcripts to familiarise the researchers with the narratives, followed by open coding to capture significant statements related to corruption control, organisational relationships, and ethical decision-making. These initial codes were then compared and grouped into broader categories based on conceptual similarity. Through this iterative process, three interrelated themes were identified that explain how ethical behaviour and corruption prevention operate within the local government context. The themes highlight that employees' responses to corruption risks are shaped by individual awareness and by reciprocal obligations, organisational structures, and social interactions within the bureaucracy.

Result and Discussion

Quantitative Results

We conducted measurement model assessment by focusing on convergent validity (see Tables 2 and 3) and discriminant validity (see Tables 4,5, and 6).
Indicator Reliability and Collinearity. Table 2 reports the factor loadings and variance inflation factor (VIF) values for all measurement items.

Table 2. Factor Loading and VIF

Measurement Items	Factor Loading	VIF
CO1	0.877	3.296
CO2	0.867	3.235
CO3	0.896	3.688
CO4	0.861	3.301
CO5	0.887	2.874
CO6	0.883	3.103
FA1	0.735	2.277
FA2	0.821	1.949
FA3	0.898	2.902
FA4	0.861	3.232
FA5	0.833	2.781
FA6	0.860	2.721
FL1	0.684	1.984
FL2	0.908	2.699
FL3	0.872	2.019
FL4	0.619	2.201
FL5	0.726	1.842
PS1	0.779	2.798
PS2	0.894	2.040
PS3	0.855	2.341
PS4	0.579	2.005
PS5	0.822	2.419
PSM1	0.844	2.087
PSM2	0.817	2.632
PSM3	0.723	2.559
PSM4	0.788	3.133
PSM5	0.902	2.082

Source: Processed from PLS

The factor loadings range from 0.579 to 0.908. Most indicators exceed the recommended threshold of 0.70. It indicates satisfactory indicator reliability (Hair et al., 2019). A small number of items display loadings slightly below 0.70, yet they remain above 0.50 and therefore retain acceptable explanatory contribution to their respective constructs. In addition, VIF values range between 1.842 and 3.688. All values fall well below the conservative threshold of 5.00. It suggests that collinearity does not threaten the stability of the measurement model.

Internal Consistency Reliability and Convergent Validity
Table 3 presents Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) for each construct. Cronbach's alpha values range from 0.883 to 0.942. These exceed the recommended minimum of 0.70. Then, composite reliability values range from 0.877 to 0.953, further confirming strong internal consistency across all constructs (Hair et al., 2019).

Table 3. Construct Reliability and Validity

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
CO	0.942	0.953	0.772
FA	0.920	0.933	0.699
FL	0.883	0.877	0.593
PS	0.895	0.893	0.630
PSM	0.899	0.909	0.668

Source: Processed from PLS

Moreover, within this study, convergent validity was also assessed using AVE values. As reported in Table 3, All constructs report AVE values between 0.593 and 0.772, surpassing the recommended threshold of 0.50. This indicates that each construct explains more than half of the variance in its indicators. Taken together, these results confirm that the constructs of corruption, fraud awareness, fraud literacy, professional scepticism, and public service motivation exhibit satisfactory convergent validity (Hair et al., 2019).

Analysis of Fornell-Larcker Criterion

According to Table 4, the square root of AVE for each construct appears on the diagonal of the matrix and exceeds the correlations with other constructs. According to Hair et al. (2019), these results indicate that each construct captures phenomena that are empirically distinct from the others.

Table 4. Fornell-Larcker Criterion

Variables	CO	FA	FL	PS	PSM
CO	0.879				
FA	0.078	0.836			
FL	0.083	-0.031	0.770		
PS	-0.182	-0.148	-0.100	0.793	
PSM	0.062	-0.239	-0.020	-0.027	0.817

Source: Processed from PLS

Analysis of Cross-Loadings

Table 5 provides the examination of cross-loadings. As suggested, each indicator loads highest on its assigned construct compared to other constructs. This demonstrates that the indicators do not exhibit problematic cross-construct overlap (Hair et al., 2019).

Table 5. Cross Loading

Measurement Items	CO	FA	FL	PS	PSM
CO1	*0.877*	0.079	0.027	-0.140	0.077
CO2	*0.867*	0.069	0.045	-0.104	0.046
CO3	*0.896*	0.056	0.106	-0.159	0.037
CO4	*0.861*	0.071	0.084	-0.088	-0.050
CO5	*0.887*	0.086	0.118	-0.183	0.103
CO6	*0.883*	0.051	0.044	-0.221	0.051
FA1	0.002	*0.735*	-0.057	-0.149	-0.096
FA2	0.072	*0.821*	-0.090	-0.077	-0.131
FA3	0.085	*0.898*	0.006	-0.109	-0.184
FA4	0.043	*0.861*	-0.019	-0.131	-0.248
FA5	0.033	*0.833*	-0.057	-0.194	-0.219
FA6	0.073	*0.860*	0.008	-0.164	-0.275
FL1	0.004	-0.032	*0.684*	-0.022	-0.024
FL2	0.073	-0.013	*0.908*	-0.085	-0.027
FL3	0.059	-0.010	*0.872*	-0.120	-0.068
FL4	-0.026	-0.008	*0.619*	-0.031	-0.175
FL5	0.021	-0.110	*0.726*	0.032	-0.040
PS1	-0.042	-0.133	-0.061	*0.779*	0.012
PS2	-0.182	-0.103	-0.049	*0.894*	-0.087
PS3	-0.116	-0.132	-0.182	*0.855*	0.026
PS4	0.061	-0.073	-0.055	*0.579*	-0.031
PS5	-0.102	-0.152	-0.048	*0.822*	0.009
PSM1	0.052	-0.255	0.028	0.018	*0.844*
PSM2	0.027	-0.219	-0.137	0.021	*0.817*
PSM3	-0.002	-0.166	-0.128	0.081	*0.723*
PSM4	0.017	-0.175	-0.115	-0.012	*0.788*
PSM5	0.071	-0.172	0.015	-0.071	*0.902*

Source: Processed from PLS

Heterotrait-Monotrait Ratio (HTMT)

We also assessed discriminant validity using the heterotrait–monotrait ratio (HTMT). As reported in Table 6, all HTMT values range between 0.061 and 0.239, where those are well below the conservative threshold of 0.85 (Hair et al., 2019). These low values indicate a clear distinction among the constructs (Hair et al., 2019). Therefore, the HTMT results reinforce the conclusions drawn from the Fornell-Larcker and cross-loading assessments.

Table 6. Heterotrait-Monotrait Ratio (HTMT)

Variables	CO	FA	FL	PS	PSM
CO					
FA	0.073				
FL	0.073	0.074			
PS	0.124	0.157	0.087		
PSM	0.061	0.239	0.148	0.083	

Source: Processed from PLS

According to the above results, the measurement model demonstrates satisfactory indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Therefore, those provide a satisfactory foundation for subsequent structural model evaluation.

Structural Model Assessment

After confirming the adequacy of the measurement model, we proceeded to evaluate the structural relationships. Hypothesis testing was conducted using bootstrapping procedures in PLS-SEM to obtain path coefficients (β), standard deviations (SD), and significance levels. The results are presented in Table 7.

Table 7. Hypothesis Testing

Direct Effect				
Paths	β	SD	Sig.	Notes
H1: FA → CO	0.009	0.119	0.943	Rejected
H2: FL → CO	-0.058	0.128	0.647	Rejected
H3: PSM → CO	0.066	0.106	0.533	Rejected
H6: PS → CO	-0.053	0.172	0.756	Rejected
Indirect Effect				
Paths	β	SD	Sig.	Notes
H4: FA*PSM → CO	-0.311	0.128	0.016	Accepted
H5: FL*PSM → CO	-0.289	0.125	0.021	Accepted
H7: FA*PS → CO	-0.395	0.138	0.004	Accepted
H8: FL*PS → CO	-0.266	0.116	0.022	Accepted

Source: Processed from PLS

Direct effects

According to Table 7, the direct paths from fraud awareness (FA), fraud literacy (FL), public service motivation (PSM), and professional scepticism (PS) to corruption (CO) do not show statistical significance. Specifically, the path from FA to CO yields $\beta = 0.009$ ($p = 0.94$), indicating an extremely small and statistically insignificant effect. Similarly, the relationship between FL and CO reports $\beta = -0.058$ ($p = 0.647$), which also fails to reach significance.

Moreover, public service motivation demonstrates a positive but non-significant coefficient toward corruption ($\beta = 0.066$, $p = 0.533$). Professional scepticism shows a negative but statistically insignificant association with corruption ($\beta = -0.053$, $p = 0.756$). These findings indicate that, in this sample, the individual direct effects of fraud awareness, fraud literacy, public service motivation, and professional scepticism do not independently predict corrupt behavior. Accordingly, *H1*, *H2*, *H3*, and *H6* are rejected.

Moderating effects

In contrast, all proposed interaction effects demonstrate statistical significance. The interaction between fraud awareness and public service motivation (FA*PSM) shows a significant negative effect on corruption ($\beta = -0.311$, $p = 0.016$). This result supports *H4* and suggests that public service motivation strengthens the influence of fraud awareness in reducing corrupt behavior. Then, the interaction between fraud literacy and public service motivation (FL*PSM) also reports a significant negative effect ($\beta = -0.289$, $p = 0.021$), supporting *H5*. This finding indicates that fraud literacy becomes more effective in constraining corruption in the presence of stronger public service motivation.

Similarly, the interaction between fraud awareness and professional scepticism (FA*PS) demonstrates a significant negative relationship with corruption (β = -0.395, p = 0.004). It supports *H7*. Additional Table 7 suggests that the interaction between fraud literacy and professional scepticism (FL*PS) is also significant and negative (β = -0.266, p = 0.022). As such it supports *H8*.

Result Summary

The structural model shows an interesting pattern. While the direct effects of the core predictors on corruption are statistically insignificant, their interactive effects are consistently negative and significant. The results suggest that awareness and literacy do not automatically reduce corrupt behavior. However, their effectiveness depends on the presence of strong public service motivation and professional scepticism. So, these findings highlight the importance of motivational and professional dispositions in shaping how fraud-related capacities translate into behavioral outcomes.

Qualitative Results

This section is a result of following up the quantitative results. Based on the interview, we found three interrelated themes.

Diffused responsibility exchange

Participants consistently described decision-making as shared and layered. This collective design shapes how obligation is experienced. The following quotes below indicate '*shared decision chains'* that may influence employees' action. The reflections show that obligation is distributed rather than concentrated.

> "In government offices, decisions rarely come from one person. Usually, many units are involved, so responsibility is shared along the process." (IN8)

Others added when responsibility is experienced as shared, awareness may not create strong individual pressure to intervene. So, action becomes relationally dependent.

> "Before something becomes final, it goes through different sections. Everyone contributes a part." (IN3)
> "Most administrative outcomes are the result of coordination. It is not individual judgement." (IN5)

Moreover, our informants below mentioned *layered approval process* that strongly influences how responsibility is experienced and enacted. The system is perceived as carrying part of the moral burden. In such a structure, individual fraud awareness does not automatically translate into action because the exchange expectation is that prior levels have fulfilled their duty.

> "If something passes through all levels, people tend to assume it has already been checked." (IN1)
> Similarly:
> "If it has signatures from several levels, people feel confident that it is already safe. Done is done" (IN4)
> "When documents move step by step, employees trust the process." (IN8)

As consequence of the approval system itself viewed as a safeguard, it leads to *distributed accountability perception.* Accountability was often framed as collective identity. This point is evidenced by the following quotes.

> "Accountability here is a team matter. We work together, and responsibility is also together." (IN4)
> Additional comments reinforce this:
> "Public service is based on teamwork, so integrity is also considered collective." (IN6)
> "People see outcomes as group results, not individual actions." (IN7)

These narratives indicate that integrity is socially embedded, and reciprocity is maintained at the group level.

Hierarchical exchange structure

In this section we find that respect and loyalty define reciprocal expectations. The common view from the interview discussion is *vertical loyalty norms.* Participants highlighted loyalty toward superiors (see the quotes below).

> "Respecting your superior is very important. People are careful when raising concerns." (IN5)
> Others also noted that reciprocity flows vertically
> "There is a strong culture of following the chain of command." (IN1)
> "Employees usually prioritise loyalty when communicating upward." (IN4)

Furthermore, we highlighted *deference expectations* where respect for hierarchy influences when and how concerns are raised. The quotes below imply that deference was described as normative behaviour.

"People prefer formal channels instead of direct questioning." (IN3)
"Tone and timing matter in sensitive discussions." (IN2)

Here, questioning becomes relationally regulated. Awareness must operate within exchange etiquette. So, before making actions, they consider *relational cost sensitivity.* Participants below openly acknowledged relational consequences.

"People think carefully before speaking up because they consider how it will affect working relationships." (IN1)
"People do not want to create unnecessary tension." (IN6)

Role-bound reciprocity

Furthermore, our informants talked about obligation that was frequently interpreted through formal job boundaries. Employees did not reject responsibility. However, they located it within clearly *defined role expectations*. Participants emphasised role clarity.

"People focus on what is clearly under their responsibility." (IN4)

This view shows that reciprocity is role-anchored. Other also added obligations are structured through formal assignment.

"Job descriptions guide what people feel accountable for." (IN2)
"If it is part of the role, people take it seriously." (IN3)
"Employees concentrate on their defined area." (IN7)

According to above quotes, actual actions depend on what one perceives as owed within a relationship. Here, what is "owed" is defined by job description. When issues crossed departmental or positional lines, participants described a pattern of coordination rather than unilateral action. The next quotes emphasised *task-limited accountability.*

"If something is outside our task, we coordinate first rather than act directly." (IN8)
"People prefer not to step beyond their authority." (IN5)

These remarks show that accountability is not absent but procedurally negotiated. So, authority, responsibility, and recognition are conditioned within structural boundaries. Another quote also mentioned *narrow obligation interpretation.* These participants framed responsibility in explicitly procedural terms.

"People feel responsible when it is clearly stated in their job description." (IN2)
"If responsibility is not assigned, action may feel optional." (IN4)

The interviews suggest that practical knowledge or skill operate within structured exchange systems. These systems shape how obligation is interpreted, how action is evaluated, and how responsibility is distributed. Across the three themes, it shows that ethical behaviour is embedded in relational arrangements rather than driven solely by individual cognition.

In diffused responsibility exchange, responsibility is shared across decision chains and layered approvals. As such, when obligation is experienced collectively, individual awareness does not automatically generate behavioural pressure. Employees may assume that integrity has already been safeguarded by prior actors in the process. Similarly, the hierarchical exchange structure shows that reciprocity is vertically organised. Respect, loyalty, and deference regulate how concerns are expressed. Fraud awareness may not override these relational norms because questioning authority carries social cost. Furthermore, role-bound reciprocity demonstrates that obligation is interpreted through formal job boundaries. Responsibility is narrowly defined. Employees act decisively when issues fall clearly within their assigned duties. However, once irregularities cross departmental lines, action becomes procedurally negotiated.

Discussion

This study set out to examine whether fraud awareness and fraud literacy reduce corrupt behaviour in public institutions and whether public service motivation and professional scepticism condition this relationship. The results show a striking pattern. None of the core predictors demonstrate a significant direct effect on corruption. Yet all interaction terms are negative and significant. This challenges the assumption that anti-corruption capacities function as direct determinants of behaviour. Instead, the results suggest that these factors operate as latent resources whose effectiveness depends on their interaction with other individual characteristics. In other words, fraud awareness may increase recognition of risks, fraud literacy may enhance understanding of fraudulent practices, public service motivation may strengthen commitment to public values, and professional scepticism may encourage critical thinking. However, none of these factors alone appears sufficient to influence corruption-related behaviour directly (see *H1, H2, H3, H6)*

Based on the qualitative results, the absence of direct effects is theoretically sound. The interviews show that fraud-related capacities operate within structured relational environments. Prior research has consistently positioned fraud awareness and fraud literacy as protective capacities that enhance ethical sensitivity and detection ability (Trompeter et al., 2014; Wei et al., 2021). Within this logic, increased recognition of irregularities should translate into reduced corrupt behaviour. The present findings invite a more refined interpretation. Under our study, the existence of such knowledge does not automatically determine behavioural outcomes. Interview participants indicated that organisational realities, including hierarchical relationships, informal norms, interpersonal considerations, and situational pressures, frequently influence how employees respond to fraud-related concerns. This distinction between knowing and acting is particularly important because corruption frequently persists not because employees fail to recognise unethical conduct, but because they are reluctant to intervene when confronted with it.

As illustrated in qualitative results, fraud knowledge or skill exist within institutional exchange systems that shape how responsibility is interpreted and enacted. Social exchange theory provides a strong foundation for interpreting this mechanism. Exchange relationships generate felt obligations that guide conduct (Cropanzano et al., 2017). These obligations, however, vary in intensity depending on how individuals define their exchange partners and perceive their role within relational structures (Cropanzano & Mitchell, 2005). It is confirmed by the direct effect of PSM on corruption (see *H3*). This means that a commitment to public service does not inherently provide employees with the ability to recognise when public interests are being compromised. Employees may strongly value honesty, accountability, and service to citizens, yet still struggle to identify specific organisational practices that threaten those values. In this regard, public service motivation reflects a general willingness to promote the common good rather than a direct mechanism for detecting corruption risks. The influence of such motivation depends on whether employees can recognise situations in which public resources, public trust, or organisational integrity are at stake (see *H4* and *H5*). Without this recognition, public service values may remain abstract principles that guide overall attitudes but exert limited influence on specific behavioural decisions. Consequently, employees may remain committed to serving the public while overlooking misconduct that is embedded within routine organisational processes or disguised as legitimate administrative practices.

Our informants in qualitative data illuminate how this variation unfolds in public institutions. When responsibility is diffused across teams, approval layers, and procedural checkpoints, employees often interpret integrity as collectively managed. The system itself appears to carry evaluative weight. In such arrangements, each actor assumes that others within the chain exercise their evaluative role. From this perspective, our study supports some scholars that public service motivation broadens the perceived exchange partner from internal authority structures to society at large (Ritz et al., 2023). Obligation is no longer confined to fulfilling expectations within the chain of command. The situation can be different if the perceived benefactor is society itself. In the work of Dierdorff and Rubin (2022), it intensifies the felt obligation to reciprocate through ethical conduct and the return expected is responsible and principled conduct. This interpretation is also in line with work demonstrating that public service motivation reflects commitment to public interest and societal welfare (Andersen & Pedersen, 2012; Kim et al., 2023).

Similarly, professional scepticism appears to activate the behavioural dimension of fraud literacy and fraud awareness. Prior research conceptualises professional scepticism as a questioning mindset combined with critical assessment of evidence (Nolder & Kadous, 2018). Then, some studies show that scepticism improves fraud detection and reduces judgment bias (Fehrenbacher et al., 2021). The present findings broaden this understanding by situating scepticism within relational governance systems. Although sceptical employees tend to scrutinise information and challenge assumptions, such tendencies do not necessarily translate into corruption-resistant behaviour (see *H6*). The difference between critical evaluation and behavioural response may help explain the absence of a significant direct relationship between professional scepticism and corruption. Professional scepticism enhances vigilance and critical judgement, yet corruption prevention often requires additional elements, including the ability to recognise fraud-related risks and understand how misconduct can occur within organisational processes. Without such knowledge, a questioning mindset may generate scrutiny but provide limited direction regarding what should be scrutinised and why it matters for organisational integrity (See *H7* and *H8*).

The qualitative findings provide additional insight into why professional scepticism did not directly reduce corruption. Several participants indicated that questioning unusual activities or challenging decisions is not always a common practice, particularly when decisions originate from individuals occupying higher positions. Although employees may critically assess information and recognise inconsistencies, they often exercise caution before expressing concerns because organisational relationships are built upon norms of respect and procedural authority. Employees tend to apply scepticism selectively. These insights suggest that the effectiveness of professional scepticism depends on the organisational legitimacy attached to questioning itself.

In hierarchical exchange environments, it frames questioning as a legitimate component of professional duty. From a social exchange perspective, it correlates inquiry with stewardship rather than confrontation (Verwey & Asare, 2022; Sun et al., 2022). It encourages individuals to examine substance beyond procedural form and to revisit assumptions even after formal clearance. Employees who internalise scepticism as part of their professional role perceive inquiry as an obligation to the integrity of the system. As illustrated in above analysis, when employees possess fraud awareness and fraud literacy, scepticism encourages them to engage more deeply with warning signals, evaluate explanations more critically, and scrutinise behaviours that may otherwise be accepted without challenge. Consequently, fraud-related knowledge becomes more likely to influence behavioural decisions because employees are encouraged to actively interrogate the information available to them. As a consequence, it becomes an expression of commitment to maintaining the integrity of exchange relationships between public institutions and the citizens they serve. Therefore, our results suggest that professional scepticism strengthens the behavioural force of fraud awareness and literacy by embedding them within a normatively supported practice of accountability.

Moreover, this study contributes to fraud prevention scholarship. Training programmes often emphasise awareness and literacy as primary safeguards (Trompeter et al., 2014; Wei et al., 2021). Yet empirical evidence frequently shows that knowledge-based interventions yield uneven behavioural outcomes (Brink et al., 2022). The present study offers a relational explanation for this inconsistency. Awareness operates within exchange systems where responsibility is structured, loyalty expectations are embedded, and role boundaries are formalised. Motivation and scepticism intensify perceived accountability within those systems, enabling knowledge to overcome structural containment. This reframes how fraud prevention initiatives should be conceptualised. Rather than treating awareness training as a self-sufficient deterrent, the findings suggest that its effectiveness depends on the motivational and professional climate in which it is embedded. Training that enhances technical literacy without strengthening public-oriented commitment or sceptical discipline may elevate recognition while leaving behavioural translation uneven. Conversely, environments that cultivate strong service values and professional scrutiny enable awareness to overcome structural containment within exchange systems.

Practical implications

The findings carry clear implications for how public institutions design anti-corruption strategies. The findings suggest that public institutions need to move beyond standard fraud training and redesign how integrity is activated in daily work. First, fraud awareness programs can include a “citizen impact reflection module” where employees trace how a small procedural manipulation could affect public services, budgets, and community trust. This makes fraud risks concrete rather than abstract. Second, institutions can introduce a mandatory verification checkpoint rule in layered approval systems. Each approver signs only after answering two short written questions: What did I personally verify? and What risk remains? This shifts signatures from routine formality into accountable review. Third, agencies can implement a rotating integrity reviewer system, where staff from different units periodically review transactions outside their department. This expands responsibility beyond narrow role boundaries and reduces diffused accountability.

The results also indicate that motivation and professional scepticism need structured reinforcement. Public institutions can establish monthly integrity dialogue forums where employees openly discuss ambiguous cases in a guided and respectful setting. This normalises questioning as part of professional duty. In addition, performance appraisals can include a specific indicator called “evidence-based verification practice,” which assesses how often employees document their review process and request clarification when needed. Leaders can also adopt a public accountability briefing practice, where major financial decisions are periodically explained in simple language as if presented to citizens. This strengthens the sense that society is the ultimate exchange partner. Therefore, through these targeted mechanisms, fraud literacy and awareness become activated within real governance routines and lead to consistent and observable integrity behaviour.

Conclusion

This study advances a relational understanding of corruption prevention by demonstrating that fraud awareness and fraud literacy function as latent ethical capacities whose behavioural impact depends on the exchange structures in which they are embedded. Drawing on social exchange theory, the findings show that in organisation characterised by diffused responsibility, hierarchical loyalty norms, and role-bound reciprocity, cognitive recognition of wrongdoing does not automatically translate into reduced corrupt behaviour. Instead, public service motivation and professional scepticism operate as activating forces that intensify felt obligation and legitimise inquiry within structured governance systems. In this way, the study reframes corruption control from a purely knowledge-based approach toward an integrated relational model in which awareness, motivation, and sceptical discipline jointly sustain reciprocal accountability between public servants and society.

This study has several limitations which need to be noted. First, the study was conducted in one local government, which may limit the generalisability of the findings to other public-sector organisations that have different characteristics regarding their structures and governance. Secondly, the cross-sectional nature of the study was used to measure the attitudes of respondents at a particular time. Thus, it is difficult to establish a cause-and-effect relationship among the variables under study. Thirdly, although guarantees of confidentiality were given to the participants, the use of self-reported data may be affected by social desirability bias. Lastly, although qualitative data supplemented and deepened our understanding of quantitative data, only a small number of interviewees participated in this phase of research.

These limitations can be addressed in future studies by looking at different local governments or even different public sector organizations in order to increase the external validity, and to make comparisons among them. Longitudinal research would be another solution. It is to provide stronger evidence regarding causal mechanisms. Other organisational variables can also be added to the current study, such as perceived organisational justice, or public trust to develop a more comprehensive understanding of corruption prevention in public-sector organisations. Moreover, future studies may employ more extensive qualitative approaches, such as case studies, focus group discussions, or mixed-method designs involving multiple institutions, to gain deeper insights into how public employees interpret and respond to corruption risks in different organisational environments.

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Appendix A. Operational Definitions

Variable	Operational Definition	Dimensions	Questionnaire Statements
Fraud Awareness	The extent to which public officials recognise the existence, risk, and consequences of fraudulent activities within organisational processes.	Awareness of fraud risk	1. I am aware that fraud can occur in various administrative and financial processes in my organisation.
			2. I understand the common forms of fraud that may occur in government institutions.
		Sensitivity to warning signals	3. I can recognise warning signs that may indicate potential fraud.
			4. I believe employees should remain alert to unusual transactions or activities.
		Responsibility awareness	5. Preventing fraud is a responsibility shared by all employees.
			6. Awareness of fraud risk is important in performing my daily duties.
Fraud Literacy	The level of knowledge and understanding regarding fraud mechanisms, prevention strategies, and detection practices.	Knowledge of fraud mechanisms	1. I understand how fraudulent activities are typically carried out in organisations.
			2. I am familiar with common techniques used to conceal fraud.
		Understanding prevention mechanisms	3. I understand organisational procedures designed to prevent fraud.
			4. I know how internal controls can help reduce fraud risks.
		Analytical understanding	5. I am able to evaluate situations that may involve potential fraud.
Public Service Motivation	The intrinsic motivation of public officials to serve society and prioritise public interest in their work.	Commitment to public interest	1. I am motivated to serve the public and contribute to society.
			2. Serving the public interest is an important part of my job.
		Compassion and civic duty	3. I feel a personal responsibility to contribute positively to society through my work.
			4. I care about improving the well-being of the community.
		Self-sacrifice	5. I am willing to put extra effort into my work for the benefit of the public.
Professional Scepticism	A questioning mindset that encourages employees to critically evaluate information and remain alert to potential irregularities.	Questioning mindset	1. I tend to question information when something appears unusual.
			2. I do not easily accept information without verification.
		Critical evaluation	3. I critically evaluate evidence before forming conclusions.
			4. I remain cautious when reviewing organisational information.
		Alertness to irregularities	5. I stay alert to potential inconsistencies in organisational activities.
Corruption	The misuse of public authority for private benefit, including bribery, favouritism, and abuse of power.	Abuse of authority	1. Some officials may misuse their authority for personal benefit.
			2. Personal relationships may influence administrative decisions.

Variable	Operational Definition	Dimensions	Questionnaire Statements
		Bribery and improper benefits	3. Offering benefits to obtain favourable decisions sometimes occurs in public institutions. 4. Receiving gifts or incentives may influence official decisions.
		Ethical tolerance of corruption	5. Some employees justify unethical actions if they benefit the organisation or individuals. 6. Corruption may occur when individuals prioritise personal gain over public interest.

Source: Processed by Authors

Appendix B. Sample of Questions for an interview

Public Responsibility
- In general, how do public employees in Indonesia understand their responsibility to society?
- Do you think public trust plays an important role in how government employees work? Why?
- In Indonesia, when administrative decisions affect the public, how are they usually viewed?

Rules and Real Practice
- In Indonesia, public employees often understand rules and procedures well. How are those rules usually applied in practice?
- Are there situations where rules are clear, but adjustments are made? What usually explains that?
- Do you think technical knowledge about fraud or procedures strongly influences behaviour in Indonesia? Why or why not?

Public Service Values
- How strong is the spirit of public service in Indonesian government institutions?
- When facing difficult or unclear situations, do public service values usually influence decisions?
- Do you think public servants in Indonesia feel a moral duty toward citizens? In what way?

Questioning and Verification
- How common is it for employees to question decisions or ask for clarification?
- Is questioning a superior generally seen as professional or inappropriate?
- Under what conditions do employees feel safe to verify decisions more carefully?
- How is someone perceived if they are very critical or always double-checking?

Sample of Follow up questions
- In Indonesia, based on your views, what kinds of irregular or unclear practices sometimes appear in public institutions?
- When something seems unusual, how do government employees generally respond?
- Is it common for employees in Indonesia to openly discuss possible problems?
- In what situations do public employees in Indonesia tend to remain silent?