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Fraud Risk Analysis in Public Fund Management Using the Fraud Hexagon: A Case Study of a Provincial Election Supervisory Body in Indonesia

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Abstract: Public institutions that safeguard democratic integrity must also demonstrate integrity in their own use of public funds. This study examines how fraud risk emerges across the end-to-end fund management process of a provincial election supervisory body in Indonesia and how existing controls respond to that exposure. An interpretive qualitative single-case design was employed. Evidence was obtained from ten purposively selected informants, limited non-participant observation, and financial, procedural, reconciliation, cash-examination, tax, asset, and reporting documents. Agency theory provides an accountability lens, while the Fraud Hexagon is used as a sensitising framework rather than as proof of misconduct. The findings identify a nine-stage public-fund value chain and show that risk is concentrated at process handoffs. Pressure is mainly organisational and temporal, arising from schedule changes, dense activity cycles, budget revisions, delayed supporting documents, and accountability deadlines. Opportunity is documentary and procedural, arising where payment eligibility, tax treatment, system input, archiving, and audit trails depend on complete and timely evidence. Capability has a dual character: technical expertise enables compliance but becomes a vulnerability when knowledge or system access is concentrated. Evidence for rationalisation, arrogance, and collusion is limited and does not support claims of actual fraud. Existing segregation, layered verification, treasury reconciliation, cash checks, digital records, and oversight reduce risk, however, unit-specific fraud-risk documentation, residual-risk ownership, and structured mitigation remain areas for strengthening. The study contributes a processual, evidence-sensitive framework that shifts analysis from suspected actors to the public-fund value chain and connects compliance controls to risk-based accountability.

Keywords: public financial accountability, fraud risk, Fraud Hexagon, public-sector accounting, internal control, election oversight, government internal control system (SPIP)

BACKGROUND

Public-sector fraud is often examined after allegations, audit findings, prosecutions, or institutional scandals have made misconduct visible. Such research is indispensable, yet it gives less attention to the ordinary administrative processes through which vulnerability develops before an event can be classified as fraud. Public funds move through planning, authorisation, implementation, payment, bookkeeping, reporting, and oversight. Each stage creates evidence for the next, and each handoff can either strengthen or weaken accountability. A process perspective is therefore required to understand how legitimate administrative pressures,



incomplete documentation, concentrated expertise, and fragmented information can interact to create risk without implying that fraud has occurred.

This issue is particularly important for institutions whose legitimacy depends on integrity. Election supervisory bodies are expected to protect the fairness and credibility of democratic processes. Their internal financial management is consequently more than an administrative concern: it is part of the institutional credibility through which electoral oversight is exercised. Research on election institutions has largely concentrated on electoral rules, institutional independence, and procedural integrity (Hayckel et al., 2024). The internal management of public funds within these bodies remains comparatively under-examined, particularly in emerging democracies where activity cycles are intense, politically salient, and governed by multiple layers of public-finance regulation.

Contemporary Indonesian Governance Context: MBG and Pertamina in 2026

Recent Indonesian developments illustrate why fraud-risk analysis should begin before control failures become established findings. In 2025, the Corruption Eradication Commission warned that the scale, centralised funding, monitoring demands, supplier selection, and reporting architecture of the Makan Bergizi Gratis (MBG) programme required transparent and technology-supported governance (Corruption Eradication Commission of the Republic of Indonesia, 2025). The governance concern became more concrete in 2026. On 3 June 2026, the Attorney General's Office announced that three former leaders of the National Nutrition Agency had been named suspects in an alleged corruption case concerning the governance of Satuan Pelayanan Pemenuhan Gizi under the MBG programme. The official account referred to alleged affiliated foundations, intervention in procurement planning, specifications that did not reflect operational needs, and price inflation. On 2 July 2026, the Attorney General's Office also reported that part of the investigation had been transferred for joint civil-military handling after investigators identified the alleged involvement of an active-duty military officer serving as a commitment-making official (Attorney General's Office of the Republic of Indonesia, 2026a, 2026b).

Pertamina-related developments in 2026 provide a second illustration of why enforcement and prevention should be connected. On 5 January 2026, the Corruption Eradication Commission announced the detention of a former processing director in an alleged bribery case concerning catalyst procurement at PT Pertamina. On 14 January 2026, the Commission separately published a corruption-risk assessment of a proposed special energy-assignment policy, highlighting the need for a clear legal basis, fair supplier competition, transparent price setting, measurable objectives, and accountable contracts and investments (Corruption Eradication Commission of the Republic of Indonesia, 2026a, 2026b). These official announcements concern allegations and preventive assessments that remain subject to due process. They are included only as contemporary public-governance context and are not evidence about the election supervisory body examined in this study.



Public-sector fraud scholarship has developed along several streams. One stream examines the determinants of misconduct through extensions of the fraud triangle and the Fraud Hexagon, often using survey-based or secondary-data designs (Fathmaningrum et al., 2025; Fikiza & Halimatusyadiah, 2025; Suryandari & Valentin, 2021). A second stream focuses on prevention, audit, internal control, whistleblowing, and fraud-risk assessment (Abdullahi & Mansor, 2018; Istianah et al., 2024; Mahsun et al., 2021; Muhyidin et al., 2025; Nasution & Bayudhigantara, 2025; Othman et al., 2015; Wibowo & Tobing, 2021). A third analyses corruption and fraud through organisational, institutional, behavioural, and network perspectives (Ceschel et al., 2022; Lyra et al., 2022; Thomann et al., 2025; Weißmüller & Zuber, 2023). Together, these studies demonstrate that fraud risk is multidimensional, but they rarely trace how risk moves across the complete financial process of a single public organisation. A Bawaslu-focused study examined grant-fund management, accountability, and reporting at local level, but did not trace fraud-risk conditions across an end-to-end public-fund value chain (Litualy et al., 2021).

The Fraud Hexagon combines pressure, opportunity, rationalisation, capability, arrogance, and collusion (Vousinas, 2019). Its breadth is analytically useful, but it creates a methodological risk when every administrative problem is treated as evidence of personal motive or moral failure. Documentary delays, hierarchical communication, technical access, and multi-actor coordination can have several plausible explanations. A qualitative study must therefore distinguish between strongly supported process conditions, plausible vulnerabilities, and allegations that cannot be sustained by evidence. This evidentiary distinction is especially important when research participants are public officials and the study is not a forensic investigation.

The fieldwork underlying this article identified an end-to-end sequence of nine fund-management stages at the Secretariat of the DKI Jakarta Provincial Election Supervisory Body. Rather than immediately ranking Fraud Hexagon dimensions, the analysis first examines pressure, opportunity, rationalisation, capability, arrogance, and collusion separately against interview, documentary, and process evidence. Only after this dimension-by-dimension assessment does the article compare evidentiary strength, identify the most prominent conditions, and connect them to the controls and residual-risk decisions required for prevention.

Accordingly, this study asks three questions. First, how is public-fund management organised across the end-to-end process of a provincial election supervisory body? Second, where do fraud risks arise, and how are the six Fraud Hexagon dimensions manifested across that process? Third, how do existing controls and formal risk-management arrangements reduce or leave residual vulnerabilities? The study does not investigate a suspected fraud case. It prospectively maps risk by integrating interviews, administrative documents, financial records, and procedural guidance.



The article makes three contributions. First, it develops a public-fund value-chain perspective that locates fraud risk at nine interdependent stages rather than in isolated transactions. Second, it offers an evidence-sensitive application of the Fraud Hexagon: pressure and opportunity are interpreted as strongly supported process conditions, capability as a dual-use organisational resource, and rationalisation, arrogance, and collusion as dimensions that require higher evidentiary thresholds. Third, it connects operational compliance controls with risk-based accountability by showing that segregation, verification, reconciliation, and audit trails are necessary but insufficient unless risks are assessed after controls, assigned to owners, treated, and monitored as residual exposures. This transition from control presence to control effectiveness forms the basis of the proposed Public Fund Fraud Risk Governance Framework.

THEORETICAL FRAMEWORK

Public Financial Accountability and Agency Relations

Agency theory highlights the problems created when principals delegate authority to agents who possess more detailed information about operational decisions (Jensen & Meckling, 1976; Eisenhardt, 1989). In public administration, the principal-agent chain is layered rather than singular. Citizens delegate authority to elected and administrative institutions, organisational leaders delegate tasks to financial officials and operational units, and each official depends on evidence created by others. Public-fund management is therefore an architecture of delegated authority, reporting obligations, and review forums rather than a simple two-party contract.

Public accountability requires an actor to explain and justify conduct to a forum that can question, judge, and respond (Bovens, 2007). Accounting systems contribute to this relationship by making actions visible and contestable, but their effects depend on organisational practice (Roberts & Scapens, 1985). Budgets, payment files, cash books, tax records, reconciliation reports, asset registers, and accountability reports are not merely technical artefacts. They connect an operational claim to authorisation and enable one actor to evaluate another actor's stewardship.

Segregation and monitoring can reduce agency risk, but handoffs can also create information loss. A technical unit may know why an activity changed, whereas a verifier sees only the evidence submitted. A treasurer may understand the cash effect, whereas an asset custodian must connect a payment to a physical item and an asset-system record. Delays in transferring information can therefore intensify information asymmetry even when formal roles are clearly separated. This study treats such asymmetry as a process condition rather than as proof of opportunistic behaviour.

Fraud Risk as a Process Condition

Fraud and corruption in the public sector arise from interactions among individual, organisational, institutional, and relational conditions (Ceschel et al., 2022; Thomann et al., 2025; Weißmüller & Zuber, 2023). Research on emergency public programmes demonstrates



that urgency, fragmented responsibility, changing directives, and weak verification can magnify exposure (Valiquette L'Heureux, 2022). Public-procurement research similarly shows that fraud and collusion are embedded in networks of actors, transactions, and documents rather than in a single decision (Lyra et al., 2022). These findings support a processual view in which vulnerability is produced by the configuration of work, information, authority, timing, and controls.

Fraud-risk assessment differs from proving misconduct. It identifies plausible events, causes, impacts, existing controls, and remaining exposure. In public audits, however, fraud-risk assessment is constrained by competence, standards, evidentiary access, and organisational willingness (Mahsun et al., 2021). Case-based research shows that anti-fraud strategies become more useful when risk scenarios are linked to preventive, detective, corrective, and responsive controls (Wibowo & Tobing, 2021). The relevant question is therefore not merely whether a control exists on paper, but whether its design and implementation reduce the specific risk under examination.

A process condition can be risky without being improper. Time pressure, for example, may reduce the period available for review even when no employee intends to bypass a requirement. Incomplete documentation may weaken assurance even when the underlying activity is legitimate. Concentrated expertise may create dependency while simultaneously being necessary for accurate processing. A process-based assessment therefore examines how conditions affect the reliability, completeness, timeliness, and traceability of evidence.

Fraud Hexagon as a Sensitising Framework

The fraud triangle identifies pressure, opportunity, and rationalisation as conditions associated with occupational fraud (Cressey, 1953). The fraud diamond adds capability, recognising that an opportunity cannot be exploited without position, knowledge, confidence, or skill (Wolfe & Hermanson, 2004). The S.C.O.R.E. model subsequently added ego and collusion, producing what is widely referred to as the Fraud Hexagon (Vousinas, 2019). In Indonesian public-sector research, the six dimensions have been applied to village funds, local governments, asset misappropriation, and governmental workplaces (Fathmaningrum et al., 2025; Fikiza & Halimatusyadiah, 2025; Suryandari & Valentin, 2021).

Results across these studies are inconsistent. Some find opportunity, rationalisation, capability, arrogance, and collusion significant while pressure is not, others report different combinations. These variations may reflect the institutional context, the type of fund, the respondent group, measurement choices, and the distinction between perceived tendency and documented process conditions. Most studies operationalise the dimensions as variables. Such designs are useful for detecting statistical patterns, but they provide less insight into how the dimensions appear in daily administrative work.

This article therefore uses the Fraud Hexagon as a sensitising framework. Pressure may be personal, but it may also be generated by organisational timing and workload. Opportunity may arise from control gaps, but documentary incompleteness is not equivalent to intentional



manipulation. Capability may support compliance and control rather than wrongdoing. Rationalisation, arrogance, and collusion involve internal justification, disregard for control, or coordinated intent, they consequently require direct or convergent evidence. This evidentiary hierarchy prevents a risk model from becoming an attribution device.

Conceptual Meaning of the Six Fraud Hexagon Dimensions

Pressure. Pressure refers to a perceived need, strain, incentive, or demand that can increase the attraction of an improper response. In a public institution, pressure may be personal, but it may also arise from organisational targets, workload, changing programmes, limited time, budget absorption expectations, and accountability deadlines. Organisational pressure is analytically relevant because it can reduce the time and attention available for control even when no fraudulent motive is established (Cressey, 1953; Vousinas, 2019).

Opportunity. Opportunity is the perceived possibility that an irregular action, unsupported transaction, or misleading representation could be initiated or remain undetected. It can be created by weak segregation, incomplete documentation, inconsistent review, concentrated access, information asymmetry, or an audit trail that cannot reliably connect an activity to authorisation, payment, accounting, assets, and reporting. Opportunity describes exposure, it does not prove that the exposure was exploited.

Rationalisation. Rationalisation is the cognitive justification through which an actor frames an improper practice as acceptable, temporary, necessary, deserved, or harmless. In administrative settings, it may appear when repeated exceptions, late evidence, or incomplete compliance become normalised as routine. Because rationalisation concerns internal justification, a qualitative study should require direct statements or convergent behavioural evidence rather than infer it from delay or error alone.

Capability. Capability refers to the position, knowledge, confidence, authority, technical skill, or system access required to recognise and use an opportunity (Wolfe & Hermanson, 2004). In public financial management, capability is a dual-use resource: the same competence that makes accurate processing possible can create dependency or opacity when expertise and access are concentrated without peer review, substitution, documentation, and traceability.

Arrogance. Arrogance reflects ego, superiority, entitlement, or the belief that formal rules and controls do not apply to the individual concerned. In hierarchical organisations, the relevant exposure may be an attempt to pressure reviewers, bypass escalation, or treat authorisation as a substitute for evidence. Formal rank alone is not arrogance, evidence of disregard, override, or exceptional treatment is required before the dimension can be strongly supported.

Collusion. Collusion is coordinated action between two or more internal or external parties to manipulate a process, evade independent review, conceal an irregularity, or obtain an improper benefit. It is particularly important because coordinated behaviour can defeat controls that would be effective against a single actor. Routine coordination, however, is not collusion, the



inference requires evidence of agreement, concealment, reciprocal benefit, or a jointly organised circumvention of control (Vousinas, 2019; Lyra et al., 2022).

The six dimensions are therefore conceptually distinct and need not be equally present in one organisation. This study applies them sequentially and uses different evidentiary thresholds: process conditions such as pressure and opportunity can be supported by convergent administrative evidence, whereas rationalisation, arrogance, and collusion require stronger evidence of justification, disregard, or coordinated intent.

Internal Control, SPIP, and Risk-Based Accountability

Internal control translates accountability principles into operational practices. Preventive controls seek to stop an invalid or unsupported transaction before it proceeds. Detective controls identify differences through review, reconciliation, cash examination, monitoring, and audit. Corrective controls return, amend, recover, or otherwise resolve identified problems. In the Indonesian government context, these practices operate within the Sistem Pengendalian Intern Pemerintah (SPIP), whose components include the control environment, risk assessment, control activities, information and communication, and monitoring.

Within Bawaslu, Regulation No. 9 of 2023 provides the institutional basis for SPIP across national, provincial, and regency/city levels, within the wider government internal-control framework (Republic of Indonesia, 2008; Badan Pengawas Pemilihan Umum, 2023). The existence of that framework means that risk management is not a new system external to the organisation. However, regulation and control presence do not automatically demonstrate unit-level integration or effectiveness. A risk-based approach requires the organisation to specify objectives, identify risk events and causes, assess inherent exposure, map actual controls, evaluate control effectiveness, determine residual risk, assign ownership, select treatment, and monitor results.

This distinction is central to the article. Transaction controls answer whether a claim can proceed and whether recorded information matches supporting evidence. Risk management asks what remains after the control operates and who is accountable for the remaining exposure. Connecting the two moves the organisation from compliance-based control toward risk-based accountability.

Table 1. Regulatory and institutional basis for risk-based accountability

Regulation / guidance	Core relevance	Use in this study
Government Regulation No. 60 of 2008	Establishes the Government Internal Control System (SPIP), including risk identification and analysis.	Provides the general basis for integrating risk assessment with financial controls.



Regulation / guidance	Core relevance	Use in this study
Bawaslu Regulation No. 9 of 2023	Regulates SPIP implementation across Bawaslu, provincial Bawaslu, and regency/city Bawaslu.	Provides the current institutional control framework relevant to the case.
Secretary General of Bawaslu Decision No. 0074/Bawaslu/SJ/PW.07/2019	Provides technical guidance for the application of risk management, risk registers, treatment, monitoring, and review.	Clarifies the sequence from context and identification to residual risk and mitigation.
BPKP Regulation No. 5 of 2021	Guides assessment of integrated SPIP maturity, risk management, and corruption-control effectiveness.	Supports evaluation of process maturity rather than mere control existence.
Presidential Regulation No. 39 of 2023	Promotes integrated national development risk management for entities managing state finance.	Strengthens the policy context for linking risk management with planning and evaluation.

Source: Indonesian public-sector and Bawaslu risk-management regulations (2026).

Integrative Analytical Position

The analytical framework integrates three ideas. First, the public-fund value chain identifies where accountability evidence is created, transferred, tested, recorded, and reviewed. Second, the Fraud Hexagon helps interpret why a process point may become vulnerable, while preserving evidentiary boundaries. Third, agency theory and internal-control perspectives explain how segregation, authorisation, documentation, reconciliation, and oversight reduce information asymmetry and constrain discretion.

The analytical unit is therefore not a suspected individual. It is the relationship among a process stage, a risk condition, the quality of evidence, and an accountability response. Risks arise within a sequence of interdependent stages, control effectiveness determines the remaining exposure, and monitoring feeds learning back into planning and process redesign.

The article therefore treats the Fraud Hexagon as a diagnostic lens within a broader accountability architecture. The six dimensions are not used to label individuals or declare that fraud has occurred. They are used to organise evidence about conditions that may intensify exposure at particular process stages. Existing controls are then evaluated against those conditions to determine whether meaningful residual risk remains and whether mitigation should be strengthened.



METHOD

Research Design and Case Selection

The study adopted an interpretive qualitative single-case design. This design was appropriate because the study sought to understand how fund-management practices, perceived vulnerabilities, and controls were constituted within one organisational setting rather than to estimate the prevalence of fraud (Yin, 2018). The case was the secretariat supporting a provincial election supervisory body in Indonesia, operating within the formal organisational structure of Bawaslu secretariats (Badan Pengawas Pemilihan Umum, 2021). The organisation manages state funds under national public-finance rules while supporting an institution whose legitimacy depends on independence, integrity, and public trust.

The case was selected for theoretical relevance. Its activities are cyclical and schedule-sensitive, allowing temporal pressure, documentary requirements, multi-actor coordination, system use, and accountability demands to be observed together. The case is not presented as representative of every election institution. Instead, it is used to develop a contextually grounded explanation that may be transferable to comparable public organisations and other integrity institutions.

The study did not conduct a forensic audit and did not begin from an allegation of fraud. The objective was prospective risk mapping. Consequently, interview questions and document review focused on how work was performed, where errors or delays could arise, how evidence was tested, and how controls and follow-up operated.

Informants and Data Sources

Data were collected from ten purposively selected informants who either participated directly in fund management or provided internal and external oversight perspectives. Informants were assigned codes to protect confidentiality. Interviews were supported by limited non-participant observation and document review. Table 2 summarises the evidentiary role of each informant.

Table 2. Informants and evidentiary roles

Code	Role category	Primary evidentiary contribution
I-01	Provincial oversight leader	Strategic accountability, leadership monitoring, and integrity
I-02	Head of secretariat / budget authority	Budget cycle, control responsibilities, risk management, and oversight
I-03	Planner	Planning, revisions, timelines, and risk mitigation
I-04	Commitment-making / administrative officer	Claims, document verification, correction, and payment readiness
I-05	Expenditure treasurer	Cash books, advances, tax, cash examination, and accountability reports



Code	Role category	Primary evidentiary contribution
I-06	Payment-order signing official	Payment testing, account validation, and evidence checks
I-07	State-asset custodian	Asset receipt, documentation, and system recording
I-08	Central-level governance expert	Internal control, competence, risk management, and organisational integrity
I-09	Finance management staff	System input, preliminary checks, archiving, reconciliation, and audit trail
I-10	Civil-society election specialist	External perspective on transparency, legitimacy, and public trust

Source: Fieldwork data. Personal identities are not reproduced in the manuscript (2026).

Interview questions covered the end-to-end flow of public funds, responsibilities, required documents, areas prone to error or delay, existing controls, system use, monitoring, and the six Fraud Hexagon dimensions. Interviews were recorded with consent where permitted, transcribed, and supplemented by field notes. Participants were not asked to accuse colleagues or disclose protected transaction details.

Documentary evidence included organisational regulations, standard operating procedures, budget and work-plan materials, appointment decisions for financial officials, payment documents, cash books and subsidiary ledgers, expenditure-treasurer accountability reports, cash-examination minutes, bank and treasury reconciliation outputs, tax-remittance records, asset-receipt and recording documents, financial statements, and digital archiving practices. Not every transaction file, system log, risk register, or access-control record was available. Documents were used to establish process and control evidence rather than to make a forensic determination.

Data Analysis and Trustworthiness

Analysis followed the interactive logic of data reduction, data display, and conclusion drawing (Miles et al., 2014). First-cycle coding identified actors, documents, actions, handoffs, control points, timing problems, corrections, and risk statements. Second-cycle coding grouped these codes into process stages and cross-cutting patterns. Coding was conducted manually with spreadsheet support, consistent with the thesis methodology.

The six Fraud Hexagon dimensions were first applied as separate sensitising categories and were compared only after the evidence for each dimension had been examined. A dimension was classified as strongly supported when multiple interviews and relevant documents converged, moderately supported when a process condition was visible but no misuse was evidenced, and limited when direct evidence of motive, disregard, or coordinated intent was absent. This grading was not a statistical score. It was an interpretive device for keeping claims proportional to the available evidence and for preventing an early conclusion from substituting for dimension-specific analysis.



Triangulation occurred across informant roles, interviews, procedures, and financial documents. Process descriptions were checked against documentary artefacts, control claims were compared with the records through which the control would leave a trace, and differences were retained rather than forced into a single account. Negative evidence was important. The absence of direct evidence for rationalisation, arrogance, or collusion prevented the study from treating ordinary coordination, hierarchy, or delay as misconduct.

Trustworthiness was also supported by a clear audit trail from interview codes to process stages, risk categories, control evidence, and conclusions. Organisational and participant identities were protected in quoted material, and sensitive transaction details were excluded. The analysis recognises that documentary access was incomplete and therefore distinguishes between 'not verified' and 'not present'.

To reduce interpretive overreach, evidence was graded qualitatively. A Fraud Hexagon dimension was treated as strongly supported when multiple interview accounts converged with documentary or process evidence, moderately supported when plausible evidence was present but less broadly triangulated, and limited when the condition remained inferential or weakly documented. This procedure is central to the ethical and analytical position of the study because it distinguishes risk mapping from an allegation or forensic conclusion.

RESULTS

The Nine-Stage Public-Fund Management Cycle

The fund-management process consisted of nine interdependent stages: budget planning, establishment of the budget implementation and operational documents (DIPA/POK), activity implementation, submission of claims, verification and payment testing, treasury disbursement and payment, treasurer administration, accountability and reporting, and monitoring, evaluation, oversight, and follow-up. Each stage generated evidence needed by the next. A schedule change at the implementation stage, for example, could alter budget needs, delay supporting evidence, compress verification time, affect payment, and postpone accountability reporting.

The process was therefore not a linear sequence of independent tasks. It functioned as a value chain in which accountability depended on the quality of handoffs. Plans had to be translated into activities, activities into evidence, evidence into authorised payments, payments into cash, tax, and asset records, and records into reconciled reports and follow-up. Risk accumulated where these links were incomplete, late, inconsistent, or dependent on one person's knowledge.

Table 3 maps the main activity, potential risk points, and observed controls at each stage. The table does not indicate that the listed risk events occurred as fraud. It identifies conditions under which an error, unsupported transaction, misclassification, or deliberate irregularity could become more difficult to prevent or detect.

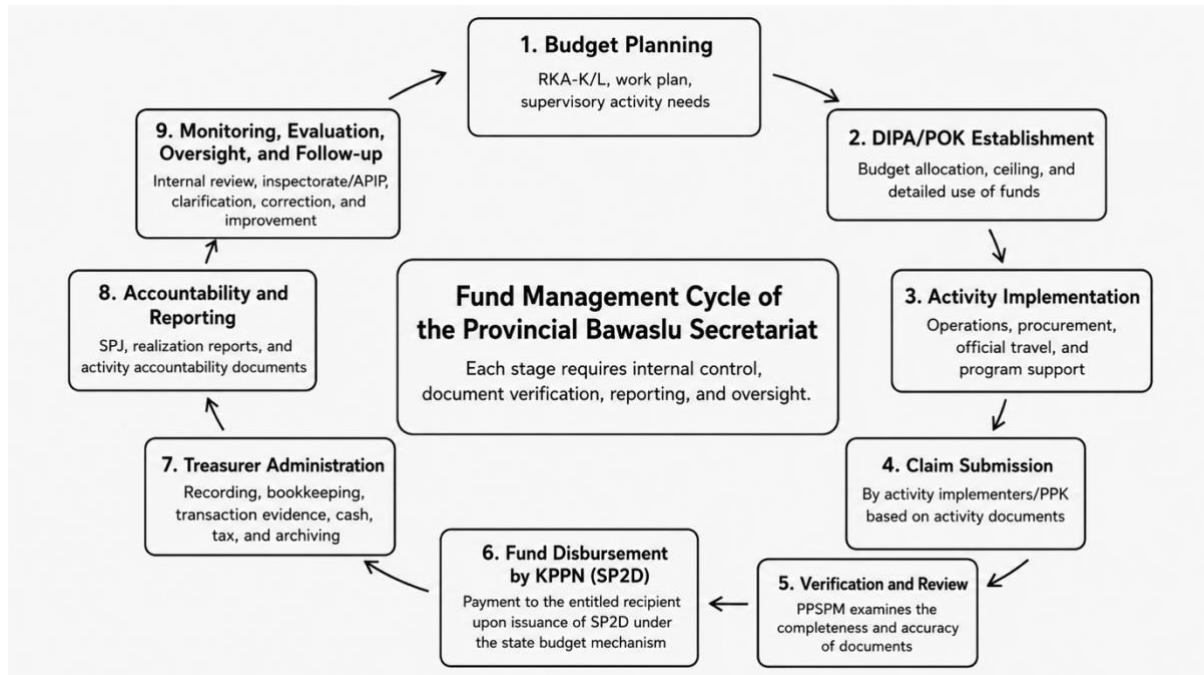


Figure 1. Nine-stage public-fund management cycle at the Secretariat of the DKI Jakarta Provincial Election Supervisory Body.

Source: Developed from interview and documentary findings. Labels are retained in Indonesian to preserve institutional terminology (2026).

Actors, Value Outputs, and Risk Points Across the Value Chain

The detailed value-chain map shows that each stage combines a group of responsible actors, a value or accountability output, and a distinct set of risk points. Planning and DIPA/POK establish legitimacy and resource alignment, implementation and claim submission generate substantive and documentary evidence, verification and payment test eligibility and authorisation, treasury administration and reporting create the accounting record, and monitoring converts deviations and corrections into organisational learning. Internal oversight, external examination, and public-information functions operate across the chain rather than as routine operational actors.

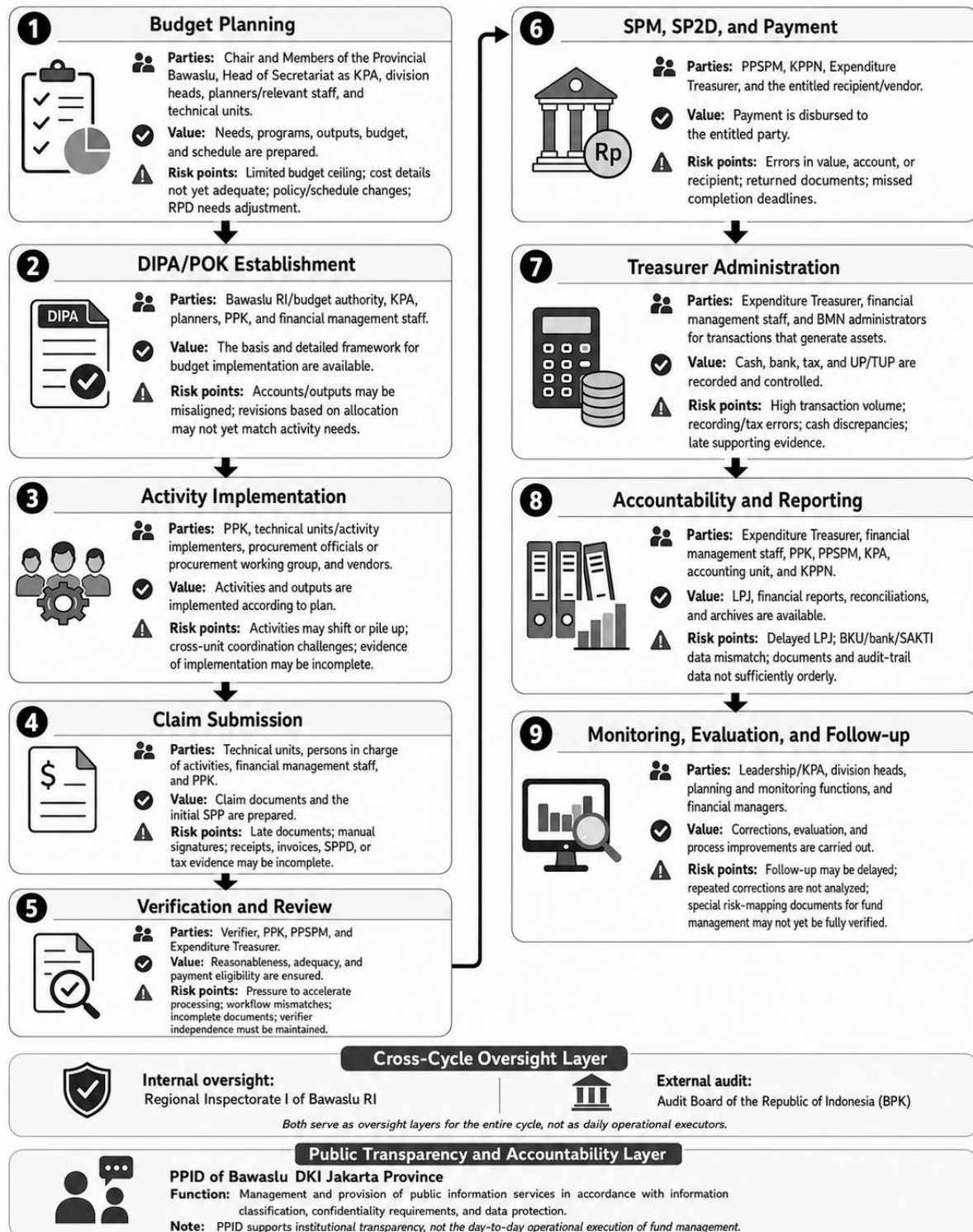


Figure 2. Detailed public-fund value chain, responsible actors, accountability value, and major risk points.

Source: Developed from the fieldwork findings. The figure distinguishes operational actors from cross-cycle oversight and transparency functions (2026).



Table 3. Public-fund value chain, risk points, and observed controls

No.	Stage	Core activity	Potential risk points	Observed controls
1	Budget planning	Needs, activities, cost estimates, timelines, and cash plans are prepared.	Unrealistic scheduling, incomplete needs, late policy changes, mismatch among outputs, accounts, and ceilings.	Work plans, budget estimates, cash plans, review, revision procedures, and monitoring.
2	DIPA/POK establishment	Approved allocations and operational details become the basis for implementation.	Incorrect account or allocation, delayed revision, activity-budget inconsistency.	Formal approval, document review, revision control, and distribution to responsible officials.
3	Activity implementation	Programmes, procurement, travel, meetings, and other activities are executed.	Schedule change, evidence not prepared at source, conflict of interest, delivery not linked to specifications.	Terms of reference, assignment letters, attendance/evidence, procurement documentation, supervision, and acceptance records.
4	Claim submission	Operational units submit claims and supporting documents.	Missing invoices, signatures, attendance, travel evidence, tax documents, or proof of entitlement, late submission.	Document requirements, preliminary checks, checklists, return for completion, and submission tracking.
5	Verification and testing	Commitment and payment officials test eligibility, amount, account, evidence, and compliance.	Temporal pressure, wrong account or amount, inconsistent correction, reviewer dependence, attempted acceleration.	Layered review, segregation, written correction, refusal to process incomplete files, and authorisation.
6	Treasury disbursement and payment	Authorised payment orders are validated and funds are transferred to entitled recipients.	Wrong amount, account, payee, or route, weak link to acquired assets, deadline pressure.	Separate commitment and payment-order roles, treasury validation, payment records, and asset receipt documents.
7	Treasurer administration	Cash, bank, tax, advances, and related records are maintained.	Late posting, unresolved advances, tax error, cash-book difference, incomplete source documents.	General and subsidiary cash books, bank matching, tax records, cash examination, and system entries.



No.	Stage	Core activity	Potential risk points	Observed controls
8	Accountability and reporting	Transactions are consolidated into accountability and financial reports.	Late accountability files, classification/input error, disordered archive, finance-asset inconsistency.	Accountability reports, reconciliation, scanning, filing, financial and asset review, and correction.
9	Monitoring and follow-up	Deviations are evaluated, recommendations followed up, and lessons inform future cycles.	Late or inaccurate information, repeated corrections not analysed, overdue follow-up, incomplete risk documentation.	Budget/output monitoring, evaluation forums, internal oversight, external examination, and corrective action.

Source: Interview and documentary analysis. Risk points indicate exposure and do not constitute evidence that fraud occurred (2026).

Planning and DIPA/POK

The first two stages determine whether operational objectives, outputs, budget ceilings, accounts, and timing are mutually consistent. Interview evidence indicates that planning and cash schedules were prepared in advance, but policy changes and rescheduling could still require revision. These changes were important because downstream actors depended on the accuracy and timeliness of planning information. The central risk was therefore not merely an incorrect budget line, it was the possibility that late adjustment would compress implementation and accountability time.

Activity Implementation and Claim Submission

Implementation produced the substantive evidence on which later payment and reporting depended. Meetings, official travel, procurement, and other activities generated different documentary requirements. Informants described the risk of late or incomplete evidence, especially when activity schedules changed or documents were treated as an after-the-event administrative task. Claim submission was the first formal handoff where the quality of operational evidence became visible to the financial function.

Verification, Testing, and Payment

Verification was a critical preventive checkpoint. PPK, PPSPM, the treasurer, and finance staff assessed completeness, eligibility, account accuracy, tax treatment, and beneficiary information before payment. Informants emphasised that incomplete files were returned for correction. This practice reduced exposure, but its effectiveness depended on sufficient review time, consistent checklists, competent reviewers, and organisational support for verifier independence.



Treasury Administration, Accountability, and Reporting

After payment, treasury books, bank records, tax evidence, accountability reports, and reconciliation files created the formal audit trail. The case showed that digital applications and physical records jointly supported traceability. Risk remained where data input, version control, archiving, or tax documentation was inconsistent. These stages therefore demonstrate that payment approval is not the end of accountability, the transaction must remain retrievable, reconcilable, and explainable.

Monitoring, Evaluation, Oversight, and Follow-Up

Monitoring and follow-up closed the cycle by comparing plans, outputs, records, and recommendations. Internal oversight and external examination provided challenge and assurance, while organisational leaders and financial managers remained responsible for corrective action. The empirical issue was not the absence of oversight, but whether recurring corrections and findings were systematically converted into unit-specific risk statements, residual-risk decisions, mitigation plans, and evidence of closure.

Fraud Hexagon Findings

Pressure as Organisational and Temporal Demands

Pressure was the most consistently reported process condition. It did not appear primarily as personal financial pressure or an explicit motive to commit fraud. Instead, it arose from dense activity schedules, changes in programme dates, budget revisions, limited ceilings, delayed evidence, and year-end accountability deadlines. These conditions compressed the time available for verification, payment, bookkeeping, correction, and reporting.

Planning personnel explained that schedules and cash-withdrawal plans were prepared at the beginning of the period, yet policy changes and rescheduling still required adjustment. Finance and payment personnel similarly described circumstances in which complete files were received close to deadlines. Pressure was transmitted across the value chain. A delay at the activity or document-preparation stage became a verification and payment problem, a late payment or incomplete record then became a treasurer and reporting problem.

Temporal compression matters because a control may be well designed but weakly executed when reviewers have insufficient time. Informants nevertheless emphasised that urgency did not eliminate documentary requirements. A verifier stated that documents containing review notes or lacking required evidence were returned for completion rather than forwarded for payment. This response protects the control boundary, but it can shift the deadline burden back to operational units when upstream preparation is weak.

The evidence therefore supports pressure as an organisational risk condition, not as proof of fraudulent intent. Its preventive implication is significant: realistic calendars, internal submission cut-offs, early document checks, activity-risk flags, workload distribution, and escalation of schedule changes are fraud-prevention mechanisms even though they appear managerial rather than ethical.



Opportunity as Documentary and Procedural Exposure

Opportunity was the second strongly supported dimension and was distributed across the value chain. Claims and payments depended on the organisation's ability to connect an activity, budget account, payee, amount, evidence, tax treatment, authorisation, and, where relevant, asset receipt. When one link was missing or inconsistent, verification became less reliable. Opportunity arose not from an absence of rules but from the possibility that rules might be applied inconsistently under incomplete evidence or compressed time.

Documentary completeness varied by transaction type. Meetings and activities required invitations, attendance records, photographs, receipts, and other evidence, procurement and travel transactions required more complex files. Informants reported missing invoices, incorrect receipts, incomplete travel evidence, signatures, or tax documents as administrative issues that required correction. The evidence did not establish fictitious claims. It showed points at which the organisation's ability to distinguish a valid transaction from an invalid one depended on the quality, timing, and traceability of supporting evidence.

Opportunity also existed after payment. Treasurer records connected transactions to the general cash book, bank, tax and advance subsidiary books, bank statements, tax remittances, and accountability reports. Cash examinations and reconciliation outputs reviewed during the study demonstrated that detective controls operated. However, a zero difference at one date cannot establish that every underlying document was correct or that every period was risk-free. Reconciliation reduces risk, it does not abolish it.

Digital and physical records jointly formed the audit trail. Finance staff grouped processed accountability files, scanned documents, and stored them in financial folders, while physical originals retained administrative value. Digital archiving improved retrieval, but the study did not comprehensively test folder structure, version control, retention, backup, access rights, or user logs. The evidence therefore supports the existence of an audit trail but not a conclusion that information-governance controls were fully mature.

Rationalisation as Potential Normalisation of Administrative Non-Compliance

Rationalisation concerns the internal justification through which an individual or group considers an improper practice acceptable, necessary, or harmless. Direct evidence of such justification was limited in the present case. Informants did not explicitly state that incomplete documentation, delayed accountability, or procedural deviation was acceptable. The analysis therefore did not infer rationalisation merely from administrative delay, correction, or workload pressure.

A plausible exposure would arise if late supporting documents, repeated corrections, or incomplete files gradually became normalised because an activity had already been implemented or a payment deadline was approaching. Over time, statements such as “the document can follow later” or “this is how urgent activities are usually handled” could weaken the preventive value of documentary standards. The available evidence did not establish that



such justification had become an accepted organisational norm, but it identified the conditions under which normalisation could develop.

Document return, written review notes, layered verification, and refusal to process incomplete claims limited this exposure. These controls should be reinforced through recorded reasons for rejection, periodic analysis of recurring deficiencies, ethical reinforcement, and consistent confirmation that urgency does not remove accountability requirements. Rationalisation was consequently classified as limited: it remained relevant for prevention, but direct or convergent evidence of improper justification was not available.

Capability as a Dual-Use Organisational Resource

Capability received moderate evidentiary support. Public financial management requires specialised knowledge of budget classifications, procurement evidence, payment mechanisms, taxation, cash books, reconciliation, government applications, and asset recording. Without this capability, compliance itself would be impossible. The data showed that capability was distributed among formally designated roles, but some tasks still depended on experienced personnel and system users.

Capability becomes risky when knowledge, authority, or access is concentrated without adequate review, documentation, substitution, or knowledge transfer. A technically skilled official may be able to identify and correct errors, but organisational dependence on that person can reduce resilience. Similarly, access to a financial or asset application is necessary for processing but requires role-based authorisation, review, and traceability.

The observed control response was to separate planning, commitment, payment authorisation, treasury administration, finance processing, and asset recording. Reconciliation and supervisory review converted individual expertise into organisational assurance. The appropriate governance objective is therefore not to suppress capability but to govern it through access control, peer review, documented procedures, periodic training, cross-training, and succession arrangements.

Arrogance as Hierarchical Influence and Potential Control Override

Arrogance refers to superiority, entitlement, or the belief that formal controls can be ignored or overridden. The study found no direct evidence that an official regarded themselves as being above financial procedures, compelled staff to approve an unsupported transaction, or successfully bypassed verification and authorisation. Formal hierarchy and leadership authority were therefore not treated as evidence of arrogance.

The structural exposure remained relevant because several stages depended on professional challenge across hierarchical levels. Informal requests for accelerated payment, reluctance to return a senior actor's incomplete file, undocumented exceptions, or resistance to escalation could weaken verifier independence even if no successful override was identified in the available material. The risk concerned the possibility that status could influence control performance, not a finding that such influence had produced misconduct.



Leadership support for rule-based decisions, written escalation procedures, documentation of exceptional decisions, and protection for reviewers who return incomplete claims can reduce this exposure. Arrogance was classified as limited because the study did not obtain direct or convergent evidence of disregard for controls or successful control override.

Collusion as Multi-Actor and Conflict-of-Interest Exposure

Collusion involves coordinated action between two or more internal or external parties to manipulate a transaction, evade independent review, conceal an irregularity, or obtain an improper benefit. The study did not identify direct evidence of an agreement among officials, suppliers, beneficiaries, or other parties to bypass financial controls. Routine coordination among planners, operational units, commitment-making officials, verifiers, treasurers, asset custodians, and service providers was therefore not equated with collusion.

Nevertheless, multi-actor transactions, procurement relationships, beneficiary verification, asset receipt, and the preparation of supporting documents can create collusion exposure when responsibilities are unclear, conflicts of interest are undisclosed, or several actors rely on the same unverified evidence. These structural conditions justify vigilance because collusion can weaken segregation by converting apparently independent roles into a coordinated chain.

Proportionate controls include segregation of duties, conflict-of-interest declarations, supplier and beneficiary verification, independent evidence of delivery, transparent correction histories, rotation or secondary review in high-risk transactions, and a confidential reporting mechanism. Collusion was classified as limited because no agreement to evade controls or conceal an irregularity was evidenced in the case material.

Comparative Assessment of the Six Fraud Hexagon Dimensions

The dimension-by-dimension assessment shows that the six elements were not equally manifested. Pressure was the most pervasive condition because temporal compression, changing schedules, budget revisions, delayed supporting documents, and accountability deadlines appeared repeatedly across planning, implementation, verification, payment, treasury administration, and reporting. Its prominence was organisational rather than personal: the evidence described how workload and timing affected control performance, not a personal motive to commit fraud.

Opportunity was also strongly supported and constituted the most direct procedural fraud-risk exposure. Its manifestation concerned the completeness and traceability of evidence, the consistency of verification, tax and account treatment, beneficiary accuracy, system input, archiving, asset linkage, and the reliability of the audit trail. Pressure and opportunity reinforced one another because late submission reduced the review window and increased the significance of documentary or procedural weaknesses.

Capability received moderate support. Specialised competence and system access were indispensable to compliance, but concentration of knowledge, authority, or access could create dependency and reduce resilience. Rationalisation, arrogance, and collusion received limited



support because the study did not obtain direct or convergent evidence of improper justification, successful control override, or coordinated misconduct. Their limited classification did not remove them from the prevention agenda, it kept the claims proportionate to the evidence.

Overall, pressure was the most prominent Fraud Hexagon dimension in terms of breadth across the public-fund value chain, whereas opportunity was the dimension most directly connected to a plausible pathway for an unsupported or irregular transaction to pass through the process. Capability was a secondary, governable exposure. The other three dimensions remained preventive watchpoints rather than established characteristics of the case organisation.

Existing Controls and the Transition to Risk-Based Accountability

The organisation had substantial preventive, detective, and corrective controls, including segregation, layered verification, treasury validation, cash examination, reconciliation, system records, archiving, monitoring, and oversight. These controls reduced exposure, but their presence did not by itself establish effectiveness in every period. The remaining challenge was to connect actual controls to documented residual risks, assigned owners, treatment actions, indicators, deadlines, and organisational learning across the full process. Priority strengthening should focus on realistic internal calendars, transaction-specific evidence checklists, traceable correction histories, verifier independence, role-based access, knowledge continuity, conflict-of-interest safeguards, confidential reporting, and systematic follow-up.

These arrangements demonstrate that fraud prevention was not absent. However, operational control and formal risk management are not identical. Operational controls determine whether a transaction can proceed and whether recorded information matches supporting evidence. Risk management requires an explicit sequence: define objectives, identify risk events and causes, assess inherent risk, map actual controls, evaluate control effectiveness, determine residual risk, assign ownership, select treatment, set indicators and deadlines, and monitor progress.

The Indonesian government internal-control framework and Bawaslu Regulation No. 9 of 2023 provide an institutional basis for this sequence. Evidence from Indonesian local governments also indicates that internal-supervisory capability and risk-management maturity are relevant to stronger fraud control (Qamariyyah et al., 2025). The study nevertheless could not fully verify a unit-specific fraud-risk register covering all nine stages, formally assigned risk owners, likelihood-impact ratings, residual-risk decisions, and documented mitigation plans. This finding does not mean that risk management was absent. It means that the integration and documentation of fraud risk at the case-unit level could not be completely verified from the available evidence.

One informant summarised the desired direction: 'To reduce risk in fund management, risk mitigation, periodic monitoring of programme implementation, and an understanding of applicable regulations are needed.' Existing controls provide the starting point. Residual risk determines where additional action is justified.

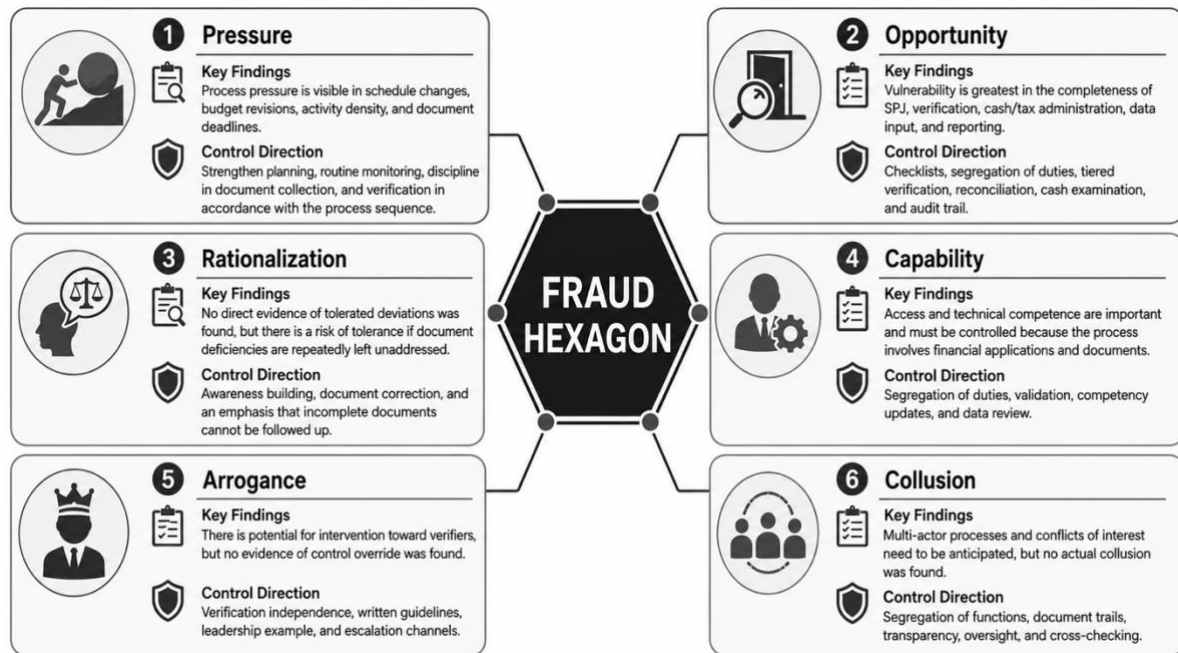


Figure 3. Empirical Fraud Hexagon findings and corresponding control directions.

Source: Author synthesis from interviews, documents, and the Fraud Hexagon analysis. The figure maps risk conditions rather than allegations of actual fraud (2026).

Table 4. Evidence assessment of the Fraud Hexagon dimensions

Dimension	Evidence strength	Case manifestation	Interpretive boundary
Pressure	Strong - most pervasive	Temporal compression from dense activities, changing schedules, revisions, late documents, and accountability deadlines across several process stages.	An organisational process condition, not evidence of personal motive or misconduct.
Opportunity	Strong - most direct exposure	Dependence on complete evidence, verification quality, tax and account treatment, system input, archiving, asset linkage, and audit trails.	A procedural vulnerability, not evidence that a control gap was exploited.
Rationalisation	Limited	Potential normalisation of incomplete compliance, late evidence, or repeated administrative exceptions.	No direct or convergent evidence that actors justified or accepted improper practices.



Dimension	Evidence strength	Case manifestation	Interpretive boundary
Capability	Moderate	Specialised knowledge, authority, and access to financial and asset systems, with some dependency on experienced personnel.	A dual-use resource governed through segregation, review, access control, cross-training, and knowledge transfer.
Arrogance	Limited	Potential hierarchical pressure on verification, exception handling, or escalation.	No evidence that a person disregarded controls or successfully overrode independent review.
Collusion	Limited	Multi-actor transactions, procurement relationships, and potential conflicts of interest.	No evidence of an agreement to evade controls or conceal irregularities.

Source: Author analysis. Evidence strength is qualitative and does not estimate the probability of fraud (2026).

Control Synthesis and Strengthening Priorities

Figure 4 consolidates the preventive, detective, and corrective mechanisms evidenced in the case and links them to proportionate strengthening priorities. The emphasis is not on accumulating more formal controls, but on improving timeliness, traceability, verifier independence, access governance, knowledge continuity, and documented follow-up.

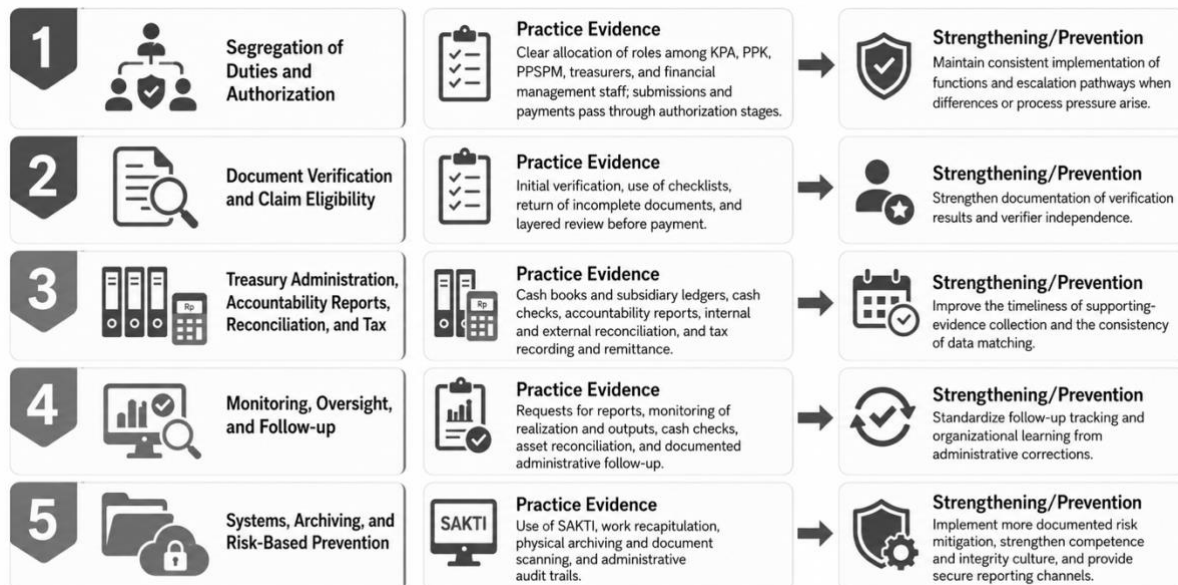


Figure 4. Internal-control mechanisms, evidence of practice, and directions for strengthening.

Source: Author synthesis based on the fieldwork findings (2026).



DISCUSSION

From Actor-Centred to Process-Centred Fraud Risk

The principal theoretical implication is that fraud risk in public organisations should be analysed through processes before it is attributed to actors. Conventional fraud models are frequently read as lists of traits that potential perpetrators possess. The case revealed a different pattern. The strongest dimensions—pressure and opportunity—were produced by temporal organisation, documentary dependencies, and handoffs. They existed even where no participant expressed a fraudulent intention and no exploited control gap was evidenced.

This process-centred interpretation complements studies that locate corruption in interactions between individual judgement and institutional context (Weißmüller & Zuber, 2023) and integrated models that emphasise configurations of conditions (Thomann et al., 2025). The case adds a meso-level mechanism, process handoffs transmit pressure and information asymmetry. A delay, omission, or weak document at one stage changes the risk profile of the stages that follow.

The value-chain perspective also clarifies why fraud prevention cannot be confined to payment approval or audit. Planning quality affects document timing, document timing affects verification, verification affects payment, payment affects treasurer and asset records, and records affect reporting and oversight. Risk prevention must therefore begin upstream and continue through follow-up.

Pressure and Opportunity Reinforce One Another Across Handoffs

Pressure and opportunity were analytically distinct but operationally connected. Schedule changes and late supporting evidence reduced the time available for review. Reduced review time increased the possibility that inconsistencies would be overlooked or corrections would be poorly documented. Documentary opportunity therefore became more consequential when temporal pressure was high.

This interaction explains why a purely ethical response is insufficient. Telling employees to act carefully does not remove a deadline created by delayed upstream submission. Effective prevention requires process redesign: realistic calendars, staged evidence collection, pre-event document guidance, internal cut-off dates, visible status tracking, and early escalation. These controls reduce pressure and opportunity simultaneously.

The finding also helps explain variation in prior Fraud Hexagon studies. Survey-based studies often treat dimensions as independent predictors, while qualitative process evidence shows that the dimensions can be mutually reinforcing. The prominence of pressure in this case does not contradict studies in which pressure was statistically insignificant, it indicates that organisational pressure may be expressed differently from personal financial pressure and may not be captured by the same measurement items.



Capability Must Be Governed, Not Suppressed

Fraud models commonly portray capability as the capacity to exploit opportunity. The case demonstrates that public financial accountability also depends on capability. Officials must understand budget classifications, payment evidence, tax obligations, cash books, reconciliation, and asset recording. Weak capability can itself generate risk through misclassification, tax error, incomplete documentation, or incorrect system input.

The governance objective is therefore to prevent concentration and opacity rather than to reduce expertise. Segregated roles, access control, peer review, documented procedures, knowledge transfer, and reconciliation convert individual expertise into organisational capacity. This interpretation extends the Fraud Hexagon by separating capability as a neutral organisational resource from the misuse of capability as a risk event.

The practical implication is that training must be joined with resilience. Certification or technical instruction is not sufficient when procedures are undocumented or only one person can perform a task. Cross-training, rotation where feasible, backup personnel, documented decision logic, and periodic access review reduce dependency without sacrificing competence.

Limited Dimensions as Evidence-Sensitive Findings

The limited classification of rationalisation, arrogance, and collusion is analytically meaningful. It does not establish that the dimensions can never arise, and it does not justify removing safeguards. Instead, it records that the available interviews and documents did not support strong claims about internal justification, control override, or coordinated intent. Treating limited evidence as a result protects the analysis from converting ordinary delay, hierarchy, and coordination into allegations.

For rationalisation, the prevention priority is to stop exceptions from becoming normal practice through documented rejection reasons and analysis of recurring deficiencies. For arrogance, the priority is verifier independence, written escalation, and leadership support for evidence-based decisions. For collusion, the priority is conflict-of-interest control, independent confirmation, supplier and beneficiary checks, and a confidential reporting route. These responses are justified by plausible exposure even when the corresponding behavioural dimension is not established.

This interpretation refines the use of the Fraud Hexagon in qualitative public-sector research. Dimensions associated with observable process conditions can be supported through process and documentary convergence, whereas dimensions involving motive or coordinated intent require a higher threshold. The resulting asymmetry is not a weakness of the model, it is an ethical and evidentiary discipline that enables prevention without unjustified attribution.

Accountability Architecture and the Limits of Control Presence

Agency theory explains why the observed controls matter. Segregation limits concentrated authority, documentation reduces information asymmetry, reconciliation compares



representations with independent data, and oversight creates a forum for explanation and correction. Together these mechanisms form an accountability architecture.

Control presence, however, is not the same as control effectiveness. A checklist completed after a deadline, a signature unsupported by sufficient evidence, a reconciliation that does not analyse recurring differences, or an archive without consistent version control may satisfy form while providing limited assurance. This concern parallels the distinction between substantive accountability and verification rituals (Power, 1997). The case does not support a simple conclusion that more controls are always required. It points to control quality: timely evidence, independent judgement, traceable corrections, reliable system input, and completed follow-up.

The distinction between operational control and formal risk management is therefore significant. Controls are transaction-oriented, risk management is objective- and exposure-oriented. It requires an organisation to decide what remains after controls and who owns that residual risk. This is the point at which compliance controls become risk-based accountability.

Public Fund Fraud Risk Governance Framework

The findings support a Public Fund Fraud Risk Governance Framework that connects the value chain, the Fraud Hexagon, actual controls, residual risk, and organisational learning. The framework is not a replacement for SPIP. It is a way of operationalising fraud-risk assessment within the existing internal-control architecture.

The framework begins with objectives and process mapping because a risk cannot be assessed without knowing what the stage is expected to achieve. It then identifies events and causes at process handoffs, using the Fraud Hexagon as a diagnostic lens. Existing controls are mapped before new recommendations are proposed. Their effectiveness is assessed to determine residual exposure. Only then are risk owners, treatment actions, deadlines, indicators, and monitoring arrangements assigned. Findings from correction, internal oversight, external examination, and public feedback are fed back into planning and process redesign.

This sequence prevents two common weaknesses. First, it prevents generic recommendations that duplicate controls already in place. Second, it prevents the Fraud Hexagon from being used as a direct label of misconduct. The framework positions the six dimensions as possible sources or amplifiers of vulnerability, formal risk priority and treatment decisions remain the responsibility of authorised organisational actors under SPIP.

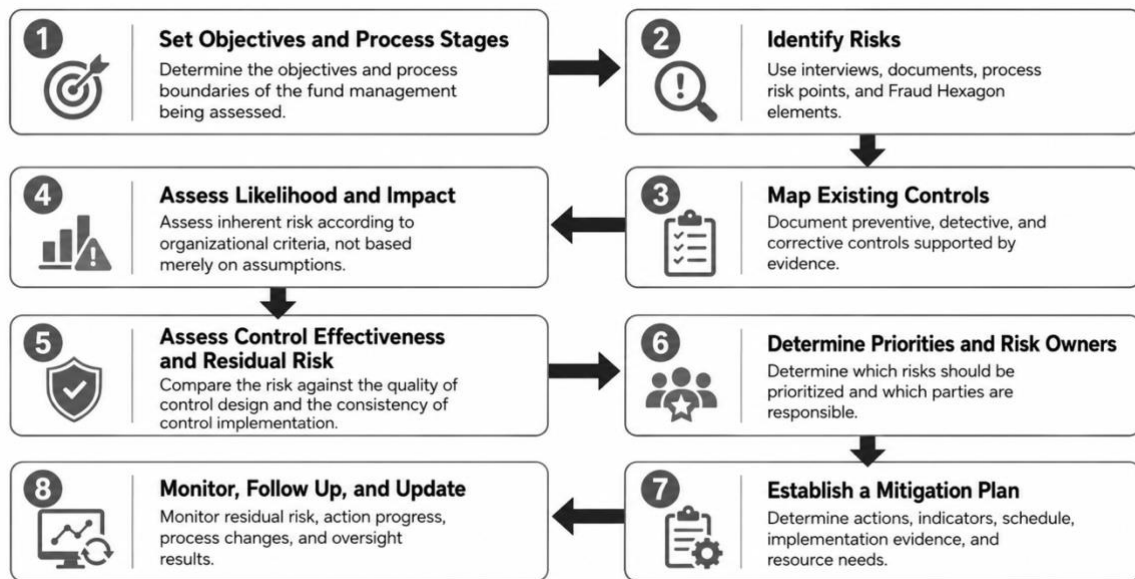


Figure 5. Public-fund fraud-risk governance cycle for residual-risk prioritisation, mitigation, and monitoring.

Source: Developed from the fieldwork findings, Fraud Hexagon analysis, and SPIP-based risk-management logic (2026).

The governance cycle clarifies that mitigation is not derived directly from the Fraud Hexagon. The framework first establishes process objectives, identifies risk events and causes, maps actual controls, evaluates likelihood and impact, and determines the residual exposure. Only after this sequence can authorised risk owners prioritise treatment, assign responsibilities, set evidence and deadlines, and monitor implementation. This distinction prevents generic recommendations and aligns the qualitative findings with the logic of SPIP and institutional risk management.

Theoretical Contributions

The study contributes an evidence-sensitive, processual interpretation of the Fraud Hexagon. Evidence sensitivity means that dimensions are not declared present merely because a corresponding organisational condition can be imagined. Strong claims require convergent evidence. Processuality means that dimensions are located within the flow of work, documents, authority, and information. Together, these principles retain the heuristic value of the Fraud Hexagon while reducing over-attribution.

The study also extends public financial accountability research by identifying process handoffs as locations where information asymmetry is produced and reduced. Accounting artefacts do more than report past transactions, they connect delegated responsibilities across the value chain. A document that is late, incomplete, or untraceable weakens the accountability relation even when the transaction itself is legitimate.



Finally, the study distinguishes technical capability from misuse of capability. Capability is a dual-use resource whose effect depends on how it is governed. This refinement is theoretically important in public-sector settings because specialised competence is indispensable to compliance, yet concentration of that competence can create dependency and opacity.

A further contribution lies in the combination of processual analysis and evidentiary restraint. Fraud frameworks can become analytically weak when every delay, error, hierarchy, or coordination problem is automatically interpreted as fraud-related behaviour. The present study shows that the Fraud Hexagon remains useful when dimensions are anchored to process evidence and bounded by explicit thresholds. This approach supports preventive governance while protecting against unjustified attribution.

Practical and Policy Implications

The practical implications are organised around the strongest risks and the controls already present. They are intended to strengthen implementation rather than create a wholly separate system. Table 5 provides a risk-control strengthening matrix.

Table 5. Risk-control strengthening matrix

Priority risk	Existing control	Strengthening action	Indicative evidence
Temporal pressure	Work plans, cash plans, monitoring, document return.	Set internal cut-offs, flag high-change activities, stage evidence collection, balance workload, escalate delays early.	Fewer late submissions, longer review window, reduced repeated corrections.
Documentary opportunity	Checklists, layered verification, authorisation, refusal to process incomplete files.	Standardise checklists by transaction, record reasons for return, analyse recurring deficiencies, protect verifier independence.	Complete evidence before payment, traceable correction history, decline in recurring deficiencies.
System and archive exposure	Government financial applications, scanned files, physical originals, reconciliation.	Define naming/version standards, review access, document changes, maintain backup and retention rules, test retrieval.	Faster retrieval, fewer version conflicts, reviewed access list, complete change history.



Priority risk	Existing control	Strengthening action	Indicative evidence
Capability concentration	Segregated roles, supervisory review, reconciliation.	Cross-train staff, document procedures, appoint backups, periodic technical and regulatory training, conduct access review.	Reduced single-person dependency, continuity during rotation or absence, fewer technical errors.
Residual-risk documentation	SPIP framework, monitoring, internal and external oversight.	Develop a process-based risk register, assess inherent/control/residual risk, assign owners, set treatment, deadlines, and indicators.	Priority risks have owners, treatments, status, and review evidence.
Integrity, escalation, and reporting	Leadership supervision, formal authorisation, public-information service.	Clarify escalation, reinforce ethical leadership, maintain conflict declarations, provide a confidential reporting channel distinct from PPID.	Documented escalation and resolution, protected reports, clear triage and follow-up.
Oversight learning	Monitoring, internal oversight, external examination, follow-up.	Use correction patterns and findings to update risks and controls, track overdue actions, share lessons across units.	Risk register updated after reviews, fewer repeated issues, timely closure of actions.

Source: Author synthesis. Formal likelihood, impact, acceptance, and ownership decisions remain the responsibility of authorised organisational risk owners (2026).

First, risk assessment should be conducted across the entire fund-management cycle, with particular attention to activities involving frequent schedule changes, high transaction complexity, large document volumes, or tight accountability deadlines. The nine-stage map provides a practical structure for risk-register development.

Second, documentary control should become more visible and analysable. Standardised checklists, clear internal deadlines, return reasons, correction histories, and status tracking allow the organisation to distinguish isolated mistakes from recurring process weaknesses. This evidence can support both control improvement and fair evaluation of responsible units.

Third, competence development should combine training with knowledge continuity. Staff should understand not only how to operate applications but also the regulatory, tax, verification, asset, and accountability logic behind each entry. Procedure documentation and cross-training reduce dependency on individual expertise.



Fourth, verifier independence requires organisational support. A written escalation route should be available when there is pressure to accelerate an incomplete claim, disagreement over evidence, or inconsistent interpretation. Leadership support for rule-based decisions is a control in its own right.

Fifth, public information and whistleblowing should be institutionally distinguished. PPID supports public transparency and access to information, whereas a whistleblowing mechanism receives suspected violations and requires confidentiality, protection, triage, and follow-up. Strengthening one should not be presented as evidence that the other already operates.

Finally, internal oversight and external examination should feed the risk register. Findings, repeated corrections, unresolved advances, tax issues, archive weaknesses, and overdue actions should be translated into updated risk statements and control treatments. Oversight should challenge process owners but should not replace their responsibility for managing residual risk.

Implications for Democratic Integrity Institutions

The case has implications beyond the immediate financial administration of one provincial secretariat. Institutions responsible for protecting democratic integrity are judged not only by the quality of their external oversight but also by the consistency of their internal governance. Financial accountability therefore becomes part of institutional legitimacy. Where the public can see that planning, payment, reporting, and follow-up are supported by traceable evidence and independent review, confidence in the institution is reinforced. Conversely, repeated administrative opacity, even without proven fraud, can create reputational vulnerability because it weakens the organisation's ability to explain how public resources support its mandate.

This relationship between internal administration and external legitimacy is particularly important for election supervisory bodies. Their programmes may involve compressed electoral schedules, rapid changes in field needs, geographically dispersed activities, and coordination with several stakeholders. These characteristics make temporal pressure structurally significant. The appropriate response is not to weaken control for the sake of speed, but to design controls that anticipate volatility. Risk-based calendars, advance document preparation, internal cut-off dates, escalation routes, and transaction-specific checklists allow the organisation to respond quickly while preserving accountability.

The findings also suggest that transparency should be understood as an accountability ecosystem. Public-information services, financial reporting, internal oversight, external examination, and safe reporting channels serve different purposes. PPID enables lawful access to public information, but it should not be treated as a substitute for a confidential whistleblowing mechanism. Similarly, external audit provides independent examination, but it does not replace management responsibility for identifying and treating risks before an audit occurs. A strong integrity institution therefore differentiates these mechanisms while ensuring that information can move among them without compromising confidentiality, independence, or due process.



For comparable public organisations, the most transferable lesson is the value of mapping the complete process before proposing additional controls. A generic recommendation to strengthen supervision may add little when the organisation already has multiple reviewers. Process mapping can reveal whether the real weakness lies earlier, such as delayed activity evidence, inconsistent account interpretation, concentrated system access, or incomplete correction histories. This makes mitigation more proportionate and prevents control accumulation that increases bureaucracy without reducing residual risk.

Finally, the governance approach developed in this study aligns fraud prevention with organisational learning. Corrections, rejected claims, reconciliation differences, tax issues, archive retrieval problems, and audit recommendations should be treated as data about the process. When these patterns are periodically analysed, they can update risk registers, refine training, improve document templates, and support decisions about access, staffing, and supervision. This learning orientation is important for democratic institutions because it transforms accountability from a retrospective obligation into a continuous capability for maintaining public trust.

Risk Management Functioning in the Case Institution

The findings do not support the conclusion that risk management is absent. Bawaslu has a regulatory basis, institutional roles, SPIP arrangements, and evidence of control, monitoring, oversight, and follow-up. At the unit level, however, the study could not fully verify a dedicated fraud-risk register that mapped all nine stages, distinguished inherent from residual risk, assigned risk owners, and documented treatment indicators. The academically appropriate conclusion is therefore that risk management has been functioning institutionally but should be strengthened so that fraud-risk analysis is more integrated, consistent, documented, and linked to residual-risk decisions in the fund-management cycle.

CONCLUSION

This study examined fraud risk across the public-fund value chain of a provincial election supervisory body in Indonesia. It identified nine interdependent stages and demonstrated that risk is concentrated at process handoffs where time, evidence, authority, and information intersect. The six Fraud Hexagon dimensions were analysed separately before their evidentiary strength was compared. Pressure was the most pervasive dimension because organisational and temporal demands travelled across several stages of the value chain. Opportunity was also strongly supported and represented the most direct procedural exposure through documentary completeness, verification, tax and account treatment, system input, archiving, asset linkage, and audit trails. Capability received moderate support as a necessary but governable organisational resource. Rationalisation, arrogance, and collusion received limited support because the evidence did not establish improper justification, successful control override, or coordinated misconduct.



The organisation had substantial preventive, detective, and corrective controls, including segregation, layered verification, treasury validation, cash examination, reconciliation, system records, archiving, monitoring, and oversight. The remaining challenge was not an absence of control or a complete absence of risk management. It was the need to connect actual controls to documented residual risks, owners, treatment actions, indicators, and learning across the full process.

The article advances a processual, evidence-sensitive approach to fraud-risk analysis. By relocating the analytical focus from suspected actors to the public-fund value chain, it enables public organisations to identify vulnerabilities without conflating risk with guilt. Its principal theoretical contribution is the distinction between the breadth of pressure, the direct procedural pathway represented by opportunity, the dual-use nature of capability, and the higher evidentiary threshold required for rationalisation, arrogance, and collusion. For election supervisory bodies and other integrity institutions, financial accountability is not peripheral to legitimacy, it is one of the conditions through which public trust is sustained.

Research Limitations

The study is limited by its single-case design. The findings are analytically transferable but cannot be statistically generalised to all election institutions or government units. The case context—its activity cycle, organisational structure, and regulatory environment—shapes the observed configuration of pressure, opportunity, and controls.

Documentary access was substantial but incomplete. The study did not examine every transaction, system log, user-access configuration, risk register, whistleblowing record, or audit working paper. It consequently cannot provide assurance that all controls operated consistently in all periods. Statements that a practice was not verified should not be read as proof that it did not exist.

Interview evidence is also subject to retrospective interpretation and social desirability. Triangulation reduced this limitation but could not eliminate it. Finally, the qualitative evidence-strength categories were interpretive and were not intended to estimate the probability or financial impact of fraud.

Future Research

Future research should compare several Bawaslu units or other public organisations to examine how process structure, document discipline, competence, and control maturity shape different Fraud Hexagon configurations. Comparative case studies could identify which elements of the proposed framework are portable and which are context-specific.

Mixed-method studies could combine interviews and document analysis with structured surveys, transaction analytics, process mining, or exception testing. Longitudinal research could examine conditions before and after implementation of administrative calendars, standardised checklists, risk registers, access reviews, or digital archiving improvements.



Further work should also examine individual stages in greater depth, including planning and budget revision, procurement, UP/TUP management, payment verification, taxation, state-asset recording, and audit follow-up. Such research could operationalise residual risk and test whether process-based interventions reduce repeated corrections, delays, and control exceptions.

Ethics, Data Availability, Funding, and Conflict of Interest

Participants provided informed consent, and their identities and sensitive transaction details were protected. Interview transcripts and financial documents are not publicly available because they contain confidential organisational and participant information. This research protocol was exempt from formal ethics committee review based on the academic policies for non-medical research at Universitas Negeri Jakarta. Participant protection was fully guaranteed through strict anonymity and the voluntary signing of informed consent forms. No external funding was declared for this study, and the author declares no conflict of interest.

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