



Governance Maturity of Police Operational Funds Based on Financial Risk Literacy in Managerial Education for Apparatus

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ABSTRACT

The maturity of police operational fund governance needs to be strengthened because public-sector financial management is required not only to comply with administrative procedures, but also to be accountable, transparent, risk-sensitive, and grounded in apparatus competence. This study aims to synthesize empirical evidence on governance, accountability, risk management, internal control, accounting literacy, digital competence, and managerial education as a basis for developing the theme of police operational fund governance maturity based on financial risk literacy. A systematic literature review design was applied using the PRISMA guidelines. The search was conducted in the Scopus database using keywords relevant to the public sector, governance, accountability, risk management, training, competence, and financial management. From 89 initial articles, screening by publication year, document type, language, and open-access status resulted in 12 articles. After eligibility was assessed based on abstracts, relevance, and the priority of empirical data, 10 articles were included. The synthesis shows that governance maturity is not sufficiently determined by formal compliance, but is also shaped by the integration of risk management, the quality of internal control, contextual competence, accounting-risk literacy, technology utilization, and an accountable culture. Digitalization is considered important, but its effectiveness depends on user skills, control design, and institutional response. This study contributes by providing an initial conceptual map for formulating managerial education for police apparatus that emphasizes risk reasoning, decision integrity, and the responsible use of financial information.

INTRODUCTION

Public-sector financial accountability has increasingly been positioned as a prerequisite for governance that emphasizes not only reporting compliance, but also the organizational capacity to generate public value, transparency, and verifiable control. In public organizations, accountability and sustainability reporting are required so that resource use can be explained more broadly than budget realization alone (Gherardi et al., 2021). At the same time, collaborative governance can strengthen accountability, but it can also create new problems when responsibility, oversight, and authority are not clearly formulated (Sørensen & Torfing, 2021). The quality of financial reporting and online disclosure has also been shown to be associated with more transparent governance practices in government agencies (Garcia-Lacalle & Torres, 2021). In addition, public-sector audit remains an important mechanism in the relationship among government, the legislature, and citizens (Ferry et al., 2022). Thus, the urgency of this study lies in the need to formulate accountable, measurable, and risk-sensitive operational fund governance, rather than governance that is merely administratively compliant.

The current research map indicates that studies on public financial management have moved across four main clusters, namely the use of accounting-budgeting information, financial literacy among apparatus, accountability of public funds, and the readability of financial reports by citizens. Accounting and budgeting information has not always been used optimally in government financial management processes because its benefits depend on organization, reporting, and the ability to interpret data (Jovanović & Vašiček, 2021). In the Indonesian context, low financial literacy and reporting complexity have been linked to implementation problems in village fund management (Harun et al., 2021). Accountability and transparency have also been positioned as important factors in building public trust, particularly when service quality functions as an intervening variable (Pratolo et al., 2022). However, financial-report transparency does not automatically become meaningful when citizens find it difficult to understand the basic information presented (Haustein & Lorson, 2023). This research map shows that the issue of public fund accountability has developed, but it has not been sufficiently integrated with risk literacy, competence development, and managerial education for apparatus.

A more specific knowledge gap is evident in the limited number of studies that connect operational fund governance maturity, financial risk literacy, and managerial education for apparatus within a single systematic literature review framework. Studies on village fund administration have shown that risk management is needed in planning, budgeting, administration, reporting, accountability, and supervision (Ginting et al., 2023). Competence, leadership, internal control, external pressure, and prosocial behavior have also been examined as determinants of fund management accountability (Diansari et al., 2023). At the level of ministries and agencies, the sustainability of non-tax state revenue is influenced by internal control, human resource competence, leadership, and accountability as a mediator (Wibowo & Murwaningsari, 2024).

The development of artificial intelligence has even begun to be linked to financial accountability, fraud detection, and automated reporting in the public sector (Aldemir & Uçma Uysal, 2025). This gap confirms the need for a systematic literature review to connect dispersed empirical evidence into a conceptual foundation for research on police governance maturity.

This study is directed toward developing a systematic synthesis of the maturity of police operational fund governance based on financial risk literacy in managerial education for apparatus. This urgency is reinforced by findings showing that public-sector financial management education in MPA and MPM programs in Europe has not fully provided a comprehensive competence package for prospective public managers (Karatzimas et al., 2025). The need to establish a common body of knowledge in public-sector accounting education has also been emphasized so that the competence of report users, decision-makers, and fund managers can be developed more systematically (Chan, 2022). Challenges in public-sector accounting education in business schools further indicate that materials, methods, and institutional contexts need to be adapted to the needs of government practice (Neves et al., 2022). Therefore, the research questions addressed in this study are how the elements of operational fund governance maturity can be mapped, how financial risk literacy is associated with accountability, control, competence, and digitalization, and how managerial education for apparatus can be formulated as a basis for strengthening governance. The main contribution of this study is the provision of a synthesis map that can be used as a preliminary study, a basis for title selection, and a reference for developing a maturity model of police operational fund governance.

METHOD

This study employed a systematic literature review design to synthesize articles on governance, accountability, risk management, competence, training, and public-sector financial management. The identification and screening process was conducted using the PRISMA flow to ensure that article selection could be traced systematically and replicated. The initial search was conducted in the Scopus database using the keywords ("public sector" AND governance AND accountability AND "risk management" AND training AND competence AND "financial management"). The initial search yielded 89 articles. After the publication-year filter for 2021–2026 was applied, 65 articles were retained. The next screening using the document type "journal article" resulted in 19 articles. The English-language filter retained 19 articles, while the All Open Access filter resulted in 12 articles.

The eligibility of the 12 articles was assessed based on abstracts, titles, subjects, research designs, and substantive proximity to operational fund governance maturity based on financial risk literacy and managerial education for apparatus. The inclusion criteria covered open-access articles written in English, relevant to governance, internal control, accountability, risk, competence, accounting literacy, or financial management, and based on primary

empirical data or institutional archival data. The exclusion criteria covered pure literature review articles, articles that did not present empirical data, articles that were too distant from financial governance and risk issues, duplicate articles, and retracted articles. No duplicate or retracted articles were found. Two articles were excluded because they were based on non-empirical literature reviews and were less relevant to the focus on operational fund governance. Thus, 10 articles were included in the final synthesis.

At the identification stage, 89 initial articles were obtained from Scopus. At the 2021–2026 publication-year screening stage, 65 articles were retained. At the journal-article document-type screening stage, 19 articles were retained. At the English-language screening stage, 19 articles were retained. At the open-access screening stage, 12 articles were considered eligible for further review. After eligibility was assessed through abstracts, thematic relevance, and the character of empirical data, 2 articles were excluded. At the final stage, 10 articles were included in the synthesis.

PRISMA Flowchart

The following section presents the article selection flow based on the PRISMA guidelines, from the identification stage in the Scopus database to the final inclusion of articles that met the eligibility criteria for further analysis in this study. This flow describes the number of records at each stage and the reasons for exclusion that were applied systematically, as shown in Figure 1.

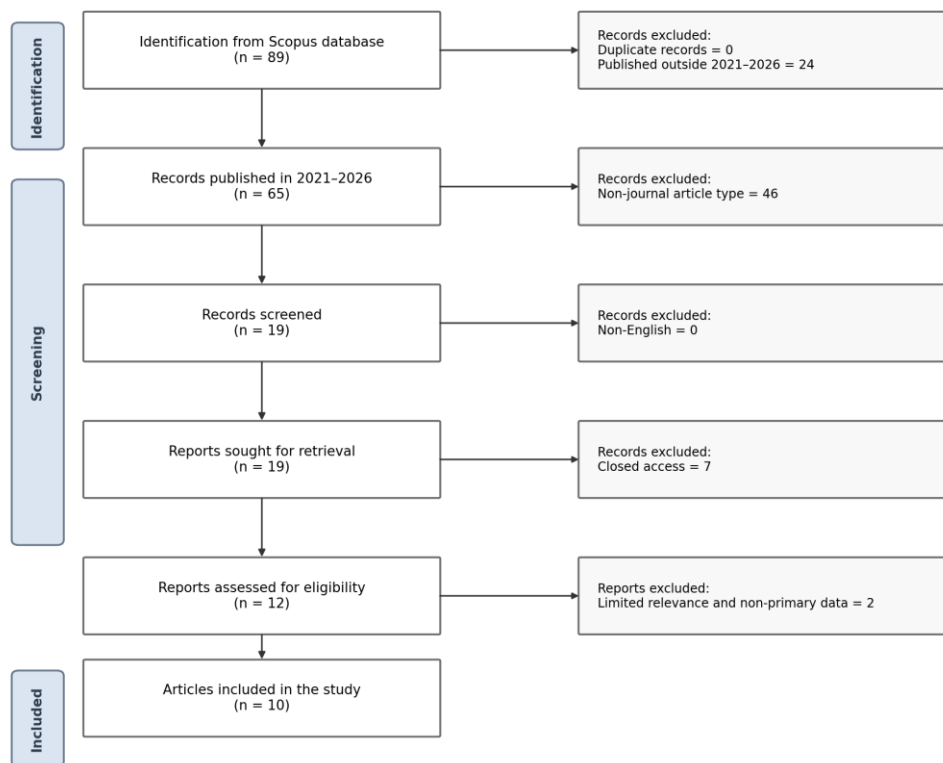


Figure 1. PRISMA Flowchart

RESULTS

The screening results show that the 10 included articles have substantial proximity to the issues of governance, accountability, competence, internal control, accounting literacy, risk management, and fraud detection. Although not all articles explicitly examined police institutions, the available empirical evidence provides a conceptual basis for developing a maturity model of police operational fund governance based on financial risk literacy in managerial education for apparatus.

Table 1. Synthesis of Included Articles

No	Name	Findings
1	Ionescu-Feleagă et al. (2022)	Professional digitalization is influenced by national competitiveness and association capacity. Service gaps require more equitable accounting regulation and education across European countries.
2	Thulasi and Dharmaraj (2025)	Awareness of MFI governance remains limited. Weak training, resources, and regulation increase the risks of cash mismanagement, embezzlement, and reputational damage.
3	González-Soberado and Odriozola (2026)	CSR increases organizational commitment directly and through DEI. Meaningful work was not proven to strengthen this relationship among the Spanish-Portuguese workers surveyed.
4	Hasiara et al. (2025)	Accounting literacy, the availability of financial information, and accounting knowledge strengthen MSME growth. Business information becomes an important mediator of success in the supporting regions of Indonesia's new capital city.
5	Sidki et al. (2024)	Board educational competence and experience do not increase SOE profitability. Managerial experience outside the energy sector even appears to harm the performance of German utility companies.
6	Mat Ridzuan et al. (2022)	Digital technology skills improve the effectiveness of fraud risk assessment. Personality and general competence do not show a significant influence on Malaysian external auditors.
7	Bracci et al. (2024)	The integration of performance management and risk management is easily disintegrated when the roles of key actors, organizational practices, and action knowledge are not aligned in regional government.
8	Achmad et al. (2024)	Communication, psychosocial, and accounting-audit skills increase auditor efficacy. GAS strengthens the relationship between efficacy and fraud detection, whereas whistleblowing does not show the same effect in the Indonesian context.

No	Name	Findings
9	Saptono et al. (2024)	Creative compliance does not directly increase resilience. Tax incentives support long-term sustainability through innovation as the main mediator among Indonesian MSMEs.
10	Boufounou et al. (2024)	Local government internal control is influenced by personnel competence, legal compliance, collaboration, and technology. Audit weaknesses inhibit revenue transparency and operational efficiency.

DISCUSSION

The findings from the included articles show that operational fund governance maturity cannot be built solely through administrative compliance, but must be supported by the integration of control, risk management, and performance accountability. In public organizations, the integration of risk management and performance management can shift into disintegration when key actors do not share an understanding of the objectives, procedures, and practical knowledge that must be used (Bracci et al., 2024). A similar condition appears in local government, where internal control weakens because of procedural fragmentation, limited human resources, and ineffective internal audit practices (Boufounou et al., 2024). In microfinance institutions, weak training and regulation also increase the risks of cash mismanagement, embezzlement, and reputational damage (Thulasi & Dharmaraj, 2025). This evidence shows a gap between formal compliance and substantive governance maturity, making this theme important as a basis for preliminary study and research focus selection. Thus, governance maturity needs to be understood as the institutional capacity to integrate rules, competence, control, and accountable behavior into a consistent risk management system.

Financial risk literacy appears to be an important node because the ability to read information, assess risk, and use technology is not automatically formed within organizations. Digital technology skills have been proven to be more decisive in the effectiveness of fraud risk assessment than auditors' personality and general competence (Mat Ridzuan et al., 2022). In the Indonesian context, communication, psychosocial, and accounting-audit skills strengthen auditor efficacy, while generalized audit software strengthens the relationship between efficacy and fraud detection (Achmad et al., 2024). Evidence from the supporting regions of Indonesia's new capital city also shows that accounting literacy, the availability of financial information, and accounting knowledge increase growth through the mediation of business information (Hasiara et al., 2025). At the professional level, the digitalization of accounting and finance is associated with association capacity and national competitiveness (Ionescu-Feleagă et al., 2022). Therefore, managerial education for apparatus should not stop at rule dissemination, but should be directed toward analytical, technological, and financial risk interpretation skills.

An important debate emerges when formal competence does not always correlate directly with organizational performance. In German state-owned enterprises, the education and experience of board members did not show a positive effect on profitability, while managerial experience from outside the energy sector even appeared to harm performance (Sidki et al., 2024). This finding warns that certificates, positions, and experience should not automatically be equated with governance maturity. Conversely, organizational commitment can increase when social responsibility practices form an inclusive work environment, although meaningful work was not proven to be a significant moderator (González-Soberado & Odriozola, 2026). In MSMEs, creative compliance also does not directly increase resilience, whereas innovation becomes an important mediator of sustainability (Saptono et al., 2024). Governance maturity therefore needs to be assessed through the fit between competence and task context, rather than merely through formal individual attributes.

Digitalization offers strong opportunities for operational fund governance, but the findings of the included articles show that technology is effective only when it is combined with a control system and professional behavior. The digitalization of the accounting profession expands services, accelerates standardization, and strengthens information capacity, but gaps between countries still appear when institutional support differs (Ionescu-Feleagă et al., 2022). At the audit level, digital skills and the use of GAS help risk assessment and fraud detection, whereas whistleblowing mechanisms do not always function as strengthening instruments when institutional design and organizational responses remain inadequate (Mat Ridzuan et al., 2022; Achmad et al., 2024). In local government, technology is also positioned as a factor that strengthens internal control, particularly when accompanied by personnel competence and legal compliance (Boufounou et al., 2024). However, risk integration can still fail when technology is not connected to daily performance practices (Bracci et al., 2024). Thus, digitalization must be positioned as a supporting instrument of maturity, not as a substitute for risk literacy and managerial responsibility.

The literature synthesis conducted in this study leads to a model of operational fund governance maturity that emphasizes four main components, namely governance awareness, accounting-risk literacy, contextual competence, and control innovation. Governance awareness becomes a prerequisite because weak training and regulation can open opportunities for fund mismanagement (Thulasi & Dharmaraj, 2025). Accounting literacy is needed so that financial information is not only recorded, but also used as a basis for managerial decisions (Hasiara et al., 2025). Contextual competence is important because formal experience does not necessarily improve performance when it does not fit the character of public organizations (Sidki et al., 2024). At the same time, organizational commitment and policy innovation can strengthen the sustainability of compliance practices (González-Soberado & Odriozola, 2026; Saptono et al., 2024). In the police context, these findings imply that managerial

education for apparatus needs to be directed toward strengthening risk reasoning, control discipline, decision integrity, and the responsible use of financial information.

CONCLUSION

This systematic literature review concludes that the maturity of police operational fund governance can be developed through the integration of accountability, risk management, internal control, accounting literacy, digital competence, and managerial education for apparatus. Of the 12 open-access articles obtained from the Scopus screening process, 10 articles were considered the most relevant because they contained empirical evidence on governance, risk, control, competence, audit, digitalization, or financial information management. Two articles were excluded because they did not meet the priorities of empirical data and core relevance.

The synthesis shows that governance weaknesses are generally caused not only by the lack of rules, but also by the low capacity of implementers, procedural fragmentation, weak internal audit, and the limited use of financial information in decision-making. Technology and digitalization have been proven important, but their effectiveness depends on user skills, control design, and an accountable culture. Therefore, managerial education for apparatus needs to be directed toward the ability to read financial risks, use data, understand fraud, implement internal control, and connect budget management with organizational performance. The suggested maturity model positions financial risk literacy as a bridge between administrative compliance and accountable decision-making.

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