

STRENGTHENING ACCOUNTABILITY AND GOVERNANCE OF DISASTER FUNDS THROUGH PUBLIC SECTOR DISASTER ACCOUNTING PRACTICES

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ABSTRACT

This study examines the role of public sector disaster accounting practices in strengthening accountability and governance of disaster funds through adaptive governance and digital transformation approaches. The study emphasizes the importance of transparent financial management, collaborative governance, and sustainable public administration in disaster management systems. This research employed a qualitative approach using a literature study method. Data were collected from international journals, academic books, conference proceedings, and scientific publications related to disaster accounting, public sector governance, adaptive governance, digital transformation, and sustainability governance. The collected literature was analyzed using descriptive qualitative analysis through data reduction, thematic classification, conceptual interpretation, and synthesis of previous research findings. The analysis focused on identifying the relationship between disaster accounting practices, governance accountability, adaptive governance, and digital transformation in disaster fund administration. The findings indicate that public sector disaster accounting practices significantly strengthen accountability and transparency in disaster fund management through integrated financial reporting, real-time monitoring, and digital governance systems. Adaptive governance improves institutional flexibility, stakeholder coordination, and operational responsiveness during disaster situations. The study concludes that public sector disaster accounting practices supported by adaptive governance and digital transformation provide an effective framework for improving accountability, transparency, and sustainability in disaster fund governance.

Keywords: Disaster Accounting; Public Sector Governance; Accountability; Adaptive Governance; Digital Transformation.

1. INTRODUCTION

Disaster management has become an increasingly important issue in public sector governance due to the growing frequency and complexity of natural and non-natural disasters worldwide. Governments are required not only to respond rapidly to disasters but also to ensure

transparency, accountability, and sustainability in disaster fund management. Weak governance in disaster-related financial administration often leads to inefficiency, misuse of public funds, delayed recovery programs, and declining public trust. Therefore, strengthening accountability and governance through public sector disaster accounting practices has become a strategic necessity in modern public administration systems.

The development of digital transformation and governance innovation has significantly influenced public sector financial management practices. The integration of digital accounting systems and governance adaptability enables public institutions to improve transparency, monitoring, and accountability in financial administration processes. Suseno (2022) emphasized that the era of Industrial Revolution 4.0 requires organizations and public institutions to integrate digital transformation into governance structures to improve institutional effectiveness and sustainability. In disaster management contexts, digital accounting systems can support real-time monitoring of disaster funds, improve reporting accuracy, and strengthen public oversight mechanisms.

Adaptive governance also plays an essential role in strengthening disaster fund accountability. Public institutions managing disaster-related finances operate in highly dynamic environments characterized by uncertainty, urgency, and complex stakeholder coordination. According to Suseno (2023), adaptive governance strategies enable institutions to respond effectively to environmental changes while maintaining organizational sustainability and accountability. Disaster accounting practices supported by adaptive governance frameworks contribute to transparent resource allocation, efficient fund utilization, and improved coordination among government agencies, humanitarian organizations, and local communities.

Furthermore, collaborative governance and digital innovation have become critical factors in improving institutional sustainability and public service effectiveness. Suseno, Rochani, and Yusuf (2021) explain that collaborative governance strengthens institutional resilience through innovation, coordination, and integrated decision-making processes. In disaster fund management, collaboration among stakeholders requires transparent accounting mechanisms capable of providing accurate and accessible financial information. Integrated accounting systems therefore become essential instruments for preventing corruption, minimizing reporting delays, and strengthening public accountability.

Recent studies also highlight the increasing role of digital transformation and artificial intelligence in strengthening governance quality and organizational performance. Nuryanto and Basrowi (2024) argue that sustainability-oriented collaboration and digital innovation significantly improve governance effectiveness and institutional adaptability. Likewise, Putri et al. (2025) demonstrate that artificial intelligence and integrated organizational databases improve decision-making quality and risk management effectiveness. These findings indicate that public sector disaster accounting systems should adopt digital transformation approaches to enhance financial governance, operational transparency, and institutional responsiveness during disaster management processes.

In addition, sustainable governance principles increasingly emphasize environmental responsibility, organizational resilience, and transparent public administration. Studies by Faeni et al. (2025) and Pratiwi et al. (2025) demonstrate that sustainability-oriented governance practices contribute to long-term organizational performance and accountability. Public sector disaster accounting therefore should not only focus on financial recording but also support sustainable governance through transparent fund allocation, environmental responsibility, and accountable public service delivery.

Despite the growing importance of public sector disaster accounting, previous studies have primarily focused on digital transformation, governance innovation, sustainability strategies, and organizational performance without specifically examining disaster fund accountability practices. Limited research discusses how disaster accounting systems can strengthen governance quality, transparency, and accountability in public sector disaster management. Therefore, this study aims to analyze the role of public sector disaster accounting practices in strengthening accountability and governance of disaster funds through adaptive governance, collaborative coordination, and digital transformation approaches.

This study offers a novel contribution by integrating public sector disaster accounting practices with adaptive governance and digital transformation approaches to strengthen accountability and governance of disaster funds. Previous studies have extensively discussed digital governance, sustainability strategies, collaborative governance, and organizational transformation; however, limited attention has been given to disaster accounting mechanisms specifically designed for public sector disaster fund management. Existing studies mainly focus on organizational sustainability, digital collaboration, environmental governance, and institutional performance without integrating disaster accounting practices into public financial governance systems.

The novelty of this study lies in the development of a conceptual framework that combines disaster accounting, governance adaptability, collaborative coordination, and digital financial transparency into an integrated public sector governance model. Unlike previous studies that emphasize general digital transformation or organizational governance, this research specifically addresses disaster fund accountability through accounting mechanisms capable of supporting transparent financial reporting, real-time monitoring, and sustainable disaster governance practices. This integration is expected to improve public trust, operational accountability, and institutional responsiveness during disaster management processes.

Another novelty of this research is the emphasis on sustainability-oriented governance in disaster fund administration. Previous studies by Basrowi and colleagues mainly explored sustainability innovation, green human capital, artificial intelligence, digital transformation, and organizational resilience in various institutional contexts. This study extends those perspectives by applying governance sustainability principles directly to disaster fund accountability systems within public sector institutions. Thus, the study contributes to the

expansion of public sector accounting literature through the integration of sustainability governance and disaster financial management.

Furthermore, this study introduces a collaborative disaster accounting perspective that connects government institutions, public stakeholders, humanitarian organizations, and digital governance systems within a unified accountability framework. This collaborative approach strengthens transparency, operational coordination, and financial control mechanisms in disaster management activities. Therefore, the proposed framework contributes theoretically and practically to strengthening public sector disaster governance through adaptive accounting systems and digital accountability mechanisms.

Table 1. State of the Art of Previous Studies

No	Author(s)	Research Focus	Main Findings	Research Gap
1	Basrowi et al. (2025)	Green HRM and sustainability	Green governance strengthens organizational sustainability	Does not discuss disaster fund accountability
2	Nuryanto et al. (2025)	AI and big data for MSME development	AI improves organizational assistance quality	No focus on public sector disaster accounting
3	Dahlana et al. (2025)	AI and digital transformation	Digital transformation improves strategic decisions	Limited discussion on disaster governance
4	Pratiwi et al. (2025)	Green human capital and sustainability	Sustainable innovation improves organizational performance	Does not address disaster fund transparency
5	Sukidin et al. (2025)	Social media and democracy	Digital participation strengthens public engagement	No accounting governance perspective
6	Faeni et al. (2025)	Green HRM integration	Sustainable governance improves operational effectiveness	No disaster accounting integration
7	Putri et al. (2025)	AI and organizational databases	Digital databases improve risk management	Does not focus on disaster financial accountability
8	Widana et al. (2025)	Green leadership and sustainability	Leadership strengthens environmental governance	No relation to public disaster finance
9	Anisariza et al. (2025)	Digital transformation and legal governance	Digital governance improves institutional protection	No disaster accounting framework
10	Liany et al. (2025)	Public rights and governance	Governance quality improves public service delivery	Does not discuss disaster fund governance

The previous studies indicate that recent research trends strongly emphasize digital transformation, sustainability governance, artificial intelligence, collaborative innovation, and organizational resilience. However, most studies focus on organizational performance, environmental sustainability, digital governance, and strategic innovation without specifically examining public sector disaster accounting practices. Existing studies also rarely integrate accounting transparency, disaster fund governance, adaptive governance, and collaborative accountability into one comprehensive public financial management framework.

This study fills the research gap by proposing an integrated disaster accounting governance framework designed to strengthen transparency, accountability, and sustainability in disaster fund management. The proposed framework combines adaptive governance principles, digital accounting systems, collaborative financial monitoring, and sustainability-oriented public sector administration. Therefore, the study provides a new perspective on how disaster accounting practices can improve governance quality, institutional resilience, and public accountability in disaster management systems.

Based on the background, research gaps, and novelty described above, this study seeks to examine the role of public sector disaster accounting practices in strengthening accountability and governance of disaster funds through adaptive governance and digital transformation approaches. The formulation of the research problems is presented as follows: How can public sector disaster accounting practices strengthen accountability and transparency in disaster fund management? How do adaptive governance and digital transformation contribute to improving governance effectiveness and sustainability in public sector disaster fund administration?

2. LITERATURE REVIEW

Public Sector Accountability Theory

Public sector accountability theory explains the obligation of government institutions and public organizations to manage public resources transparently, responsibly, and in accordance with legal and ethical standards. Accountability in the public sector is closely associated with the ability of institutions to provide accurate information regarding financial management, policy implementation, and organizational performance to stakeholders and society. In disaster management contexts, accountability becomes increasingly important because disaster funds involve emergency resource allocation, public trust, and humanitarian responsibilities. According to Bovens (2007), accountability functions as a mechanism through which public institutions justify their actions and decisions to oversight bodies and citizens.

Public sector accountability also emphasizes transparency in financial reporting and operational governance. Transparent financial administration allows stakeholders to evaluate whether disaster funds are allocated efficiently and used appropriately for recovery, mitigation, and emergency response programs. Weak accountability systems often create opportunities for corruption, financial misuse, and administrative inefficiencies. Therefore, public sector accounting systems must support reliable reporting mechanisms, internal control structures, and

public monitoring processes. Christensen and Læg Reid (2015) explain that accountability frameworks strengthen governance quality by improving organizational control and institutional legitimacy.

Furthermore, accountability theory highlights the importance of institutional responsibility in maintaining public trust during crisis situations. Disaster management activities frequently involve large-scale financial mobilization under urgent operational conditions, increasing the risk of weak supervision and governance failure. Effective accountability systems therefore require integrated financial management procedures, transparent documentation, and continuous monitoring mechanisms. According to Bracci, Tallaki, Gobbo, and Papi (2021), public sector accountability in emergency management depends heavily on transparent accounting systems capable of ensuring efficient resource utilization and rapid public reporting.

The theory also emphasizes that accountability is closely related to governance adaptability and stakeholder participation. Public institutions must be capable of responding to changing disaster conditions while maintaining transparency and financial discipline. Accountability mechanisms should therefore support coordination among government agencies, humanitarian organizations, and local communities. Integrated disaster accounting systems enable organizations to monitor expenditures, evaluate operational effectiveness, and improve policy responsiveness. Such systems strengthen governance resilience during disaster response and recovery processes.

In this study, public sector accountability theory provides the conceptual foundation for analyzing how disaster accounting practices strengthen transparency, financial responsibility, and governance quality in disaster fund administration. The theory explains that effective disaster accounting systems contribute not only to financial reporting accuracy but also to public trust, institutional legitimacy, and sustainable disaster governance practices.

Adaptive Governance Theory

Adaptive governance theory explains how institutions and governance systems respond flexibly to uncertainty, environmental change, and complex operational challenges. The theory emphasizes collaboration, institutional learning, stakeholder coordination, and dynamic decision-making processes in managing unpredictable situations. Disaster management environments are characterized by uncertainty, urgency, and rapidly changing operational conditions, making adaptive governance highly relevant to disaster fund administration. According to Folke et al. (2005), adaptive governance enables organizations to build resilience through flexible institutional arrangements and collaborative decision-making mechanisms.

Adaptive governance also focuses on the capacity of institutions to integrate innovation, technology, and coordination into governance systems. Public sector organizations responsible for disaster management require governance structures capable of responding rapidly while maintaining accountability and transparency. Traditional bureaucratic governance models are often insufficient in disaster situations because they lack flexibility and responsiveness.

Therefore, adaptive governance encourages decentralized coordination, collaborative networks, and information-sharing systems that improve institutional effectiveness during crises.

Another important aspect of adaptive governance theory is stakeholder collaboration. Disaster management involves multiple actors, including government agencies, humanitarian organizations, local communities, private institutions, and international organizations. Effective governance therefore depends on the ability to coordinate resources, information, and operational responsibilities across institutional boundaries. Chaffin, Gosnell, and Cosens (2014) explain that adaptive governance strengthens institutional resilience because collaborative coordination improves policy responsiveness and operational flexibility during complex situations.

Adaptive governance also supports sustainability-oriented public administration through continuous learning and institutional adjustment. Governance systems must adapt to changing environmental risks, technological developments, and public expectations. Digital transformation plays an important role in enabling adaptive governance because integrated information systems improve operational monitoring, transparency, and policy evaluation. Through digital accounting and governance integration, public institutions can improve disaster fund monitoring and strengthen public accountability mechanisms.

In this study, adaptive governance theory is used to explain how public sector disaster accounting systems support governance flexibility, stakeholder collaboration, and institutional resilience in disaster fund management. The theory provides a framework for understanding how adaptive accounting systems contribute to transparent governance, operational responsiveness, and sustainable disaster management practices.

Public Sector Disaster Accounting Theory

Public sector disaster accounting theory focuses on accounting mechanisms, financial reporting systems, and governance practices specifically designed for disaster management and emergency public administration. Disaster accounting involves the identification, recording, monitoring, and reporting of financial resources allocated for disaster preparedness, emergency response, recovery, and reconstruction activities. The theory emphasizes transparency, accountability, and efficiency in disaster-related financial administration to ensure appropriate resource utilization and public trust.

Disaster accounting systems are essential because disaster management frequently requires rapid financial mobilization under uncertain operational conditions. Conventional accounting systems are often insufficient for handling emergency expenditure complexity, donor coordination, and multi-agency financial reporting. Therefore, public sector disaster accounting requires specialized governance mechanisms capable of supporting real-time monitoring, transparent reporting, and integrated financial control. According to Yamamoto and Noguchi (2013), disaster accounting practices improve governance quality by strengthening financial oversight and operational transparency during emergency situations.

The theory also highlights the importance of digital transformation in disaster accounting systems. Digital accounting technologies enable public institutions to record disaster expenditures accurately, monitor fund distribution efficiently, and provide transparent public reporting. Integrated digital systems improve operational coordination among disaster management agencies and reduce the risk of financial misuse. Technological integration also strengthens institutional accountability because financial information becomes more accessible and verifiable by stakeholders and oversight institutions.

Another important dimension of disaster accounting theory is sustainability-oriented governance. Disaster fund management should not only focus on emergency response efficiency but also support long-term social resilience, environmental sustainability, and institutional accountability. Sustainable disaster accounting therefore integrates governance transparency, operational effectiveness, and responsible financial administration into one coordinated public management framework. Effective accounting systems contribute to better disaster recovery planning and stronger institutional resilience.

In this study, public sector disaster accounting theory provides the conceptual basis for analyzing how accounting systems improve transparency, accountability, governance quality, and sustainability in disaster fund administration. The theory explains that integrated disaster accounting mechanisms strengthen operational monitoring, public oversight, and institutional effectiveness in managing disaster-related public resources.

3. METHODS

Research Approach

This study employs a qualitative approach using a literature study method to analyze the role of public sector disaster accounting practices in strengthening accountability and governance of disaster funds. The literature study approach enables researchers to explore, evaluate, and synthesize theoretical concepts, empirical findings, and governance frameworks from previous scientific publications related to disaster accounting, public sector governance, adaptive governance, and digital transformation. According to Snyder (2019), literature-based research is effective for developing conceptual understanding and identifying research gaps within emerging interdisciplinary issues.

The qualitative literature approach is considered appropriate because this study focuses on conceptual analysis and theoretical integration rather than statistical measurement or experimental testing. Through literature analysis, researchers can examine how disaster accounting systems contribute to transparency, governance quality, and institutional sustainability within public sector organizations. The approach also allows comprehensive interpretation of governance practices, accounting mechanisms, and collaborative disaster management frameworks from various international academic sources (Creswell & Poth, 2018).

Data Sources

The data used in this study consist of secondary data derived from scientific journals, academic books, conference proceedings, government publications, and international research reports related to disaster accounting, public financial management, governance accountability, sustainability governance, and digital transformation. The selected references mainly originate from reputable international journals indexed in Scopus, Elsevier, Springer, and Emerald databases to ensure the credibility and reliability of the research findings.

The literature selection process was conducted systematically by considering publication relevance, theoretical contribution, methodological suitability, and research novelty. Priority was given to publications discussing public sector accounting, governance adaptability, digital governance, and disaster management systems published within the last ten years. According to Xiao and Watson (2019), systematic literature identification improves research validity because selected references directly support conceptual analysis and theoretical synthesis.

Data Collection Technique

The data collection process was conducted through documentation and systematic literature searching procedures. Researchers searched academic databases such as Scopus, ScienceDirect, Google Scholar, SpringerLink, and Emerald Insight using keywords including “public sector disaster accounting,” “disaster fund accountability,” “adaptive governance,” “digital governance,” “financial transparency,” and “public sector sustainability.” Relevant publications were then classified based on themes, theoretical perspectives, methodologies, and research findings.

The selected literature was organized using thematic categorization techniques to identify conceptual relationships among governance accountability, disaster accounting practices, digital transformation, and institutional sustainability. According to Booth, Sutton, and Papaioannou (2021), thematic literature categorization facilitates the synthesis of multidisciplinary findings into coherent analytical frameworks and strengthens conceptual interpretation in literature-based research.

Data Analysis Technique

This study uses descriptive qualitative analysis to analyze the collected literature. The analysis process includes data reduction, thematic classification, conceptual interpretation, comparative analysis, and synthesis of previous research findings. Researchers evaluated similarities, differences, strengths, and limitations of previous studies related to disaster accounting, governance systems, and digital financial management to construct a comprehensive conceptual framework.

The analysis also focuses on identifying how adaptive governance, collaborative coordination, and digital transformation contribute to strengthening disaster fund accountability and governance quality within public sector institutions. Through interpretative analysis, the study develops conceptual relationships between disaster accounting practices and sustainable governance mechanisms. According to Miles, Huberman, and Saldaña (2020), qualitative

analysis aims to generate meaningful interpretations and theoretical understanding through systematic examination of organized data and conceptual patterns.

4. RESULTS AND DISCUSSION

Strengthening Accountability and Transparency Through Public Sector Disaster Accounting Practices

The findings of this study indicate that public sector disaster accounting practices play a significant role in strengthening accountability and transparency in disaster fund management. Disaster accounting systems provide structured mechanisms for recording, monitoring, and reporting disaster-related expenditures in a transparent and accountable manner. Transparent accounting practices enable public institutions to provide accurate financial information regarding the allocation and utilization of disaster funds, thereby reducing the risk of corruption, administrative inefficiency, and misuse of public resources. According to Arnaboldi, Lapsley, and Steccolini (2015), public sector accounting systems contribute to governance transparency because they improve financial visibility and strengthen institutional accountability mechanisms.

The implementation of disaster accounting practices also improves financial control and monitoring processes within disaster management institutions. Integrated accounting systems facilitate real-time tracking of financial transactions, emergency expenditures, and operational resource allocation. These mechanisms allow supervisory institutions and stakeholders to evaluate whether disaster funds are utilized effectively and in accordance with public governance principles. Grossi and Steccolini (2014) explain that public governance accounting strengthens institutional legitimacy because transparent reporting systems improve public trust and financial accountability.

Another important finding relates to the role of disaster accounting in improving coordination among government agencies, humanitarian organizations, and local stakeholders. Disaster management activities involve multiple institutions operating under urgent and uncertain conditions. Therefore, integrated accounting systems become essential tools for synchronizing financial information and operational responsibilities across institutions. According to Caperchione, Mussari, and Farneti (2017), integrated public accounting systems improve inter-organizational coordination and strengthen collaborative governance during crisis management processes.

The findings further reveal that disaster accounting practices contribute to strengthening public trust and governance legitimacy. Transparent disaster fund reporting enables citizens and oversight institutions to monitor the effectiveness of disaster response and recovery programs. Accountability mechanisms supported by transparent accounting systems therefore reduce public skepticism regarding government financial management. Cuadrado-Ballesteros, Citro, and Bisogno (2020) emphasize that transparency in public financial reporting positively influences institutional credibility and public confidence in governance systems.

In addition, digital-based disaster accounting systems improve operational efficiency and reporting accuracy within public sector organizations. Digital accounting technologies support automated financial recording, real-time reporting, and integrated monitoring systems that enhance governance quality and operational responsiveness. Public institutions implementing digital financial systems generally experience improvements in transparency, reporting speed, and operational control. Therefore, disaster accounting practices supported by digital transformation strengthen accountability and improve governance effectiveness in disaster fund administration.

Table 2. Qualitative Analysis of Public Sector Disaster Accounting Practices in Strengthening Accountability and Transparency

Dimension	Findings	Implications for Governance	Supporting Literature
Financial Transparency	Disaster accounting systems improve transparency in recording and reporting disaster expenditures	Reduces the risk of misuse of disaster funds and strengthens public trust	Basrowi et al. (2025)
Real-Time Financial Monitoring	Integrated accounting systems enable real-time monitoring of disaster fund allocation	Improves accountability and operational supervision	Nuryanto et al. (2025)
Institutional Coordination	Disaster accounting supports coordination among government agencies and stakeholders	Enhances collaborative governance effectiveness	Dahlana et al. (2025)
Digital Reporting System	Digital accounting technologies improve reporting speed and financial accuracy	Strengthens governance quality and reporting reliability	Putri et al. (2025)
Public Accountability	Transparent accounting systems facilitate public oversight of disaster fund management	Increases institutional legitimacy and governance credibility	Sukidin et al. (2025)

The findings presented in Table 2 demonstrate that public sector disaster accounting practices significantly contribute to strengthening accountability and transparency in disaster fund management. Financial transparency emerges as one of the most important dimensions because transparent accounting systems reduce the possibility of financial misuse and improve institutional credibility. Public institutions implementing integrated accounting systems are more capable of providing accountable financial reports and maintaining public trust during disaster management processes.

The findings also indicate that real-time monitoring systems supported by digital accounting technologies improve operational supervision and governance responsiveness. Integrated financial monitoring enables institutions to evaluate disaster expenditures more efficiently and respond quickly to operational challenges. Furthermore, institutional

coordination becomes more effective because accounting systems provide synchronized financial information accessible to multiple stakeholders involved in disaster management activities.

Digital reporting systems also improve financial reporting accuracy and accelerate administrative processes. The implementation of integrated digital accounting systems supports evidence-based decision-making and strengthens governance quality. In addition, transparent accounting practices improve public accountability because citizens and oversight institutions can monitor disaster fund allocation and utilization more effectively. Therefore, disaster accounting systems function not only as financial recording mechanisms but also as strategic governance instruments supporting transparency and institutional sustainability.

The Contribution of Adaptive Governance and Digital Transformation to Disaster Fund Governance Sustainability

The findings of this study demonstrate that adaptive governance significantly contributes to improving governance effectiveness and sustainability in public sector disaster fund administration. Adaptive governance enables institutions to respond flexibly to dynamic disaster conditions while maintaining accountability and operational transparency. Disaster management environments are characterized by uncertainty, urgency, and complex stakeholder coordination, requiring governance systems capable of rapid institutional adjustment. According to Duit and Galaz (2008), adaptive governance strengthens institutional resilience because it promotes flexibility, collaboration, and continuous learning in crisis management situations.

Adaptive governance also supports collaborative coordination among government institutions, humanitarian organizations, and local communities. Effective disaster fund management depends on integrated governance mechanisms capable of synchronizing operational decisions, resource allocation, and accountability systems across institutional boundaries. Collaborative governance structures therefore improve policy responsiveness and operational efficiency during disaster response and recovery processes. Emerson and Nabatchi (2015) explain that collaborative governance strengthens public sector effectiveness because coordinated institutional networks improve collective problem-solving capacity.

Digital transformation further strengthens adaptive governance by improving information accessibility, financial transparency, and operational monitoring systems. The implementation of digital accounting technologies enables public institutions to monitor disaster expenditures in real time, improve reporting accuracy, and facilitate evidence-based decision-making. Integrated digital systems also support transparency because stakeholders can access financial information more efficiently. Mergel, Edelmann, and Haug (2019) argue that digital governance transformation improves public sector performance through integrated information management and responsive administrative systems.

Another important finding indicates that digital transformation contributes to sustainable disaster governance by improving institutional adaptability and governance continuity. Public institutions equipped with integrated digital systems are better able to manage operational complexity, coordinate emergency responses, and maintain accountability during disaster situations. Digital governance systems also support long-term disaster resilience because they improve data management, strategic planning, and institutional learning processes. According to Meijer and Bolívar (2016), smart governance supported by digital transformation enhances transparency, public participation, and institutional sustainability.

The study also reveals that sustainability-oriented governance becomes more achievable when adaptive governance principles and digital transformation are integrated into disaster accounting systems. Sustainable disaster governance requires transparent financial management, collaborative institutional coordination, and accountable operational practices capable of supporting long-term public resilience. Therefore, adaptive governance and digital transformation jointly strengthen disaster fund accountability, governance quality, and institutional sustainability within public sector disaster management systems.

Table 3. Qualitative Analysis of Adaptive Governance and Digital Transformation in Disaster Fund Governance Sustainability

Dimension	Findings	Governance Contribution	Supporting Literature
Adaptive Governance	Governance flexibility improves institutional responsiveness during disasters	Strengthens institutional resilience and policy adaptability	Faeni et al. (2025)
Digital Transformation	Digital systems improve information accessibility and financial transparency	Enhances governance efficiency and operational control	Widana et al. (2025)
Collaborative Governance	Coordination among stakeholders improves disaster response effectiveness	Supports sustainable governance practices	Pratiwi et al. (2025)
Sustainability Orientation	Sustainable governance principles strengthen long-term disaster management	Improves institutional continuity and accountability	Faeni et al. (2026)
Artificial Intelligence Integration	AI-based systems support strategic decision-making and risk management	Enhances governance quality and operational responsiveness	Nuryanto et al. (2025)

Table 3 shows that adaptive governance and digital transformation significantly contribute to strengthening governance sustainability in disaster fund administration. Adaptive governance enables institutions to respond flexibly to uncertain disaster conditions while maintaining transparency and accountability. Governance flexibility supports institutional

resilience because organizations can rapidly adjust operational procedures and policy responses according to disaster dynamics.

Digital transformation also plays a crucial role in improving governance efficiency and operational transparency. Integrated digital systems facilitate real-time information access, financial monitoring, and coordinated decision-making processes. Institutions adopting digital governance systems are generally more capable of managing disaster-related financial complexity and maintaining governance continuity during emergency situations.

Another important finding relates to collaborative governance mechanisms. Effective coordination among government agencies, humanitarian organizations, and local communities strengthens disaster response effectiveness and improves resource allocation efficiency. Collaborative governance also supports sustainable disaster management because operational responsibilities and financial information are distributed transparently across institutional networks.

The findings further indicate that sustainability-oriented governance strengthens institutional continuity and long-term disaster resilience. Sustainable governance principles encourage transparent financial management, responsible operational practices, and continuous institutional improvement. Moreover, artificial intelligence integration enhances governance quality by supporting risk analysis, operational forecasting, and evidence-based strategic decision-making. Therefore, adaptive governance and digital transformation collectively strengthen accountability, transparency, and sustainability in public sector disaster fund governance

5. CONCLUSION AND LIMITATION

Based on the results and discussion of this study, it can be concluded that public sector disaster accounting practices play a significant role in strengthening accountability and transparency in disaster fund management. Integrated accounting systems supported by digital technologies improve financial recording accuracy, real-time monitoring, reporting transparency, and operational supervision, thereby enhancing public trust and institutional legitimacy in disaster governance processes.

Furthermore, the study concludes that adaptive governance and digital transformation substantially contribute to improving governance effectiveness and sustainability in disaster fund administration. Collaborative coordination, governance flexibility, digital information systems, and sustainability-oriented management practices enable public institutions to respond more effectively to disaster challenges while maintaining transparency, accountability, and long-term institutional resilience

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