

PAPER

Digital Disaster Crisis Management: Examining the Influence of Mobile Technology and Organizational Effectiveness on Disaster Governance

Helen Dias Andhini ,
Abdul Rahman Kadir ,
Muhammad Yunus Amar ,
Mursalim Nohong  (✉),
Suhaily Sudarman 

Hasanuddin University,
Makassar, Indonesia

[mursalimnohong@
fe.unhas.ac.id](mailto:mursalimnohong@fe.unhas.ac.id)

ABSTRACT

This study examines how mobile technology acceptance and organizational efficacy influence crisis information sharing and how this sharing affects disaster response effectiveness and governance quality. Using a quantitative cross-sectional design, data were collected from 285 Indonesian disaster response personnel and analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that technology acceptance ($\beta = 0.34$, $p < 0.001$) and organizational efficacy ($\beta = 0.41$, $p < 0.001$) significantly promote information sharing. Information sharing, in turn, positively impacts response effectiveness ($\beta = 0.52$) and governance quality ($\beta = 0.58$). However, mediation analysis indicates that information sharing does not mediate all relationships; specifically, it does not mediate the link between technology acceptance and governance quality nor between organizational efficacy and tactical response effectiveness. The model accounts for up to 51% of the variance in governance outcomes. These findings offer a nuanced perspective for disaster management theory, highlighting that while digital tools are important catalysts, they must be integrated with institutional capacity and structured governance to ensure shared information leads to improved disaster outcomes.

KEYWORDS

mobile technology acceptance, crisis information sharing, disaster response effectiveness, crisis governance, organizational efficacy

1 INTRODUCTION

With the increasing frequency and severity of both natural and human-induced disasters globally, the development of robust disaster response systems has become critically important. Incidents such as earthquakes, floods, pandemics, and industrial accidents demand rapid intervention, effective cross-sector coordination, and the strategic utilization of information to mitigate adverse impacts [1]. Indonesia is located

Andhini, H. D., Kadir, A. R., Amar, M. Y., Nohong, M., Sudarman, S. (2026). Digital Disaster Crisis Management: Examining the Influence of Mobile Technology and Organizational Effectiveness on Disaster Governance. *International Journal of Interactive Mobile Technologies (IJIM)*, 20(10), pp. 70–81. <https://doi.org/10.3991/ijim.v20i10.61581>

Article submitted 2025-09-16. Revision uploaded 2026-02-27. Final acceptance 2026-03-20.

© 2026 by the authors of this article. Published under CC-BY.

on the “Ring of Fire” and often experiences earthquakes and severe weather [2]. In Indonesia, which sits on the “Ring of Fire” and often faces earthquakes and severe weather [3], digital technologies, especially mobile platforms, have become key tools. These technologies are changing how disaster response agencies in Indonesia communicate, work together, and manage emergencies [4]. Mobile devices help gather real-time data, map locations, and track resources, thereby speeding decision-making in chaotic situations [5]. However, the mere presence of technology is insufficient. Success depends on user acceptance, organizational capability, and the effectiveness of information sharing across various groups [6].

Although mobile technologies are widely used in disaster management, major challenges remain in achieving smooth cross-sector collaboration and effective crisis governance [5]. Research shows that during large disasters, Indonesian government agencies like BNPB/BPBD, non-governmental organizations, and private companies often struggle to coordinate. These problems usually come from fragmented information, incompatible digital systems, and strong organizational boundaries [7]. Mobile technologies are expected to help close these gaps, but their exact effect on how information is shared and on disaster outcomes is not yet clear. Also, most studies examine technology use, organizational factors, and information sharing separately, without offering a unified framework to explain how these elements interact to improve disaster response and governance [8].

A review of the literature identifies several important research gaps that require further study. First, while technology acceptance models like the Unified Theory of Acceptance and Use of Technology (UTAUT) are often used in stable corporate settings, they have rarely been applied in high-stress, time-sensitive disaster situations in Indonesia [9]. Second, while organizational efficacy is acknowledged as a critical factor in disaster management, specific dimensions, including collaboration, mission clarity, and resilience, have seldom been analyzed in relation to information-sharing behaviors.

Third, the construct of crisis governance quality, encompassing accountability, coordination, analytical capacity, and self-organization, remains underexplored in empirical disaster research. Most importantly, the mediating role of crisis information sharing in the relationships among technology acceptance, organizational efficacy, and disaster outcomes has not been rigorously examined [10].

This research aims to assess how mobile technology acceptance and organizational effectiveness directly affect crisis information sharing among Indonesian disaster response teams secondly, to examine how crisis information sharing influences disaster response success and crisis governance quality; and lastly, to explore whether crisis information sharing mediates the relationship between these factors and the final outcomes. By meeting these objectives, the study shows how digital tools and organizational strengths can lead to better management results. The research also draws on ideas from technology acceptance, organizational behavior, and crisis governance to offer a broad view of how modern disaster response operates. This research integrates concepts from technology acceptance, organizational behavior, and crisis governance to develop a unified model that clarifies disaster response processes.

2 LITERATURE REVIEW

2.1 Mobile technology acceptance in disaster context

The adoption and use of mobile technologies in disaster response contexts is a critical area of research, as these tools increasingly mediate how responders

acquire, process, and share information during crises [11]. Technology acceptance theories, particularly the UTAUT, provide robust frameworks for understanding user adoption tendencies across various settings [9]. In disaster management, performance expectancy, the degree to which individuals believe technology will enhance job performance, becomes especially significant, as responders require tools that can rapidly improve decision-making under time constraints [10]. Effort expectancy, or perceived ease of use, is also crucial in high-stress environments where cognitive overload is common and intuitive interfaces can reduce training demands.

Social influence, defined as the impact of colleagues and supervisors on technology adoption, may be amplified in disaster scenarios where team cohesion and adherence to common protocols are paramount [12]. Although less frequently examined in disaster research, hedonic motivation refers to the intrinsic satisfaction derived from using technology, which may support sustained engagement during prolonged operations.

Facilitating conditions, encompassing organizational and technical infrastructure that support technology use, are particularly relevant given the resource scarcity and infrastructure disruptions characteristic of disaster zones [13]. Despite the relevance of these dimensions, there is a notable lack of empirical research applying comprehensive technology acceptance frameworks within disaster response organizations, with most studies focusing on specific technologies or isolated dimensions.

Within disaster management, organizational efficacy is conceptualized through three interrelated dimensions: collaboration, mission and future orientation, and resilience [14]. Collaboration reflects the organization's ability to cooperate with both internal and external stakeholders, a factor consistently identified as critical for effective disaster response [15]. Research indicates that organizations with strong collaborative cultures demonstrate enhanced information sharing, resource pooling, and coordinated action during crises, thereby reducing duplication and addressing service delivery gaps [14]. Robust organizations maintain operations during crises, learn from experience, and improve following adversity.

2.2 Crisis information sharing: Channels and mechanisms

Sharing information during a crisis works best when using several channels, and the choice of medium can shape disaster outcomes. Researchers highlight three main types: (1) social media, (2) interpersonal communication and (3) official organizational channels [16]. Social media has changed crisis response by allowing agencies and the public to communicate in real time, quickly share warnings, and gather information from many sources [17]. Interpersonal channels, such as direct messages and phone calls, remain important for trusted, complex coordination that requires context [17]. Official channels offer reliable, verified information needed for critical health and safety decisions [18]. Although these channels shape how information flows, there is still little research on how combining them, especially with ethical app-based management, affects long-term governance and response effectiveness [9].

Disaster response effectiveness comprises multiple dimensions, including disaster assessment, emergency rescue, psychological support, and role adaptation [18]. These competencies, as measured by the Disaster Response Self-Efficacy Scale (DRSES), influence an agency's capacity to prioritize interventions and stabilize survivors during high-pressure situations [19].

2.3 Conceptual framework

Figure 1 presents the conceptual framework model, showing how the study variables are connected. The framework explains that Mobile Technology Acceptance, or how people adopt new technology, and organizational efficacy, a group’s clear purpose and resilience, are the main factors that help improve communication. These factors do not directly affect performance. Instead, they improve crisis information sharing through social, personal, and official channels within an organization. Sharing information in this way helps turn technology use and organizational strengths into real results. When information flows better, it leads to two main outcomes: tactical success, which is effective disaster response, and systemic success, which is strong crisis governance and accountability.

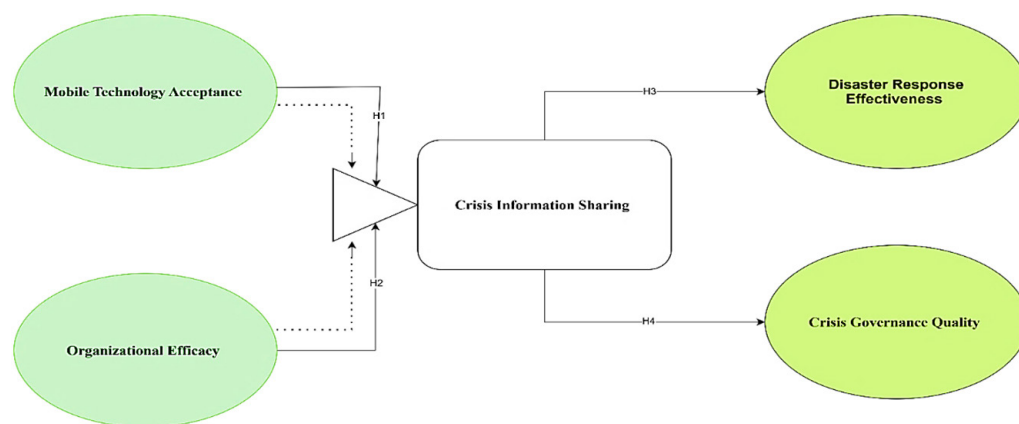


Fig. 1. Conceptual model

3 METHODOLOGY

3.1 Research design

A quantitative cross-sectional design is employed to examine the structural relationships among technological, organizational, and behavioural factors in disaster management. Due to the complexity of the Indonesian disaster response environment, Partial Least Squares Structural Equation Modelling (PLS-SEM) is applied.

3.2 Sampling and data collection

Data were collected from staff at Indonesian disaster response agencies, including the National Disaster Management Authority (BNPB), non-governmental organizations (NGOs), and the general public. Purposive sampling was used to select respondents with direct experience in mobile-based crisis communication.

Due to the lack of a centralized sampling frame, purposive sampling was applied to recruit individuals with relevant experience in using mobile technology during crisis situations. Approximately 250 to 300 questionnaires were distributed to ensure adequate statistical power. Data collection occurred over a three-month period via digital platforms and professional disaster management networks.

3.3 Construct measurement

The questionnaire was developed by measuring constructs with validated scales adapted for the Indonesian context and employing a five-point Likert scale. The research instrument was a structured online questionnaire comprising three sections: (1) informed consent and study purpose, (2) demographic and professional profiles and (3) adapted scales for the core constructs as presented in Table 1. To minimize response bias, items were randomized within each section. Three experts in information systems and disaster management evaluated the instrument for face and content validity.

Table 1. Measurement framework

Construct	Dimensions	Source
Mobile Tech Acceptance	UTAUT dimensions (Expectancy, Habit, Influence, Motivation, Conditions)	[20]
Organizational Efficacy	Collaboration, Mission Clarity, Resilience	[21]
Crisis Info Sharing	Social Media, Interpersonal, and Official Channels	[22]
Response Effectiveness	Assessment, Rescue, Psychological, and Role Adaptation (DRSES)	[23]
Crisis Governance	Responsibility, Coordination, Analytical, and Self-Organization	[24]

3.4 Data analysis

Data analysis employed a two-stage approach using PLS-SEM. In the initial stage, the measurement model was evaluated to establish construct reliability and validity. This process confirmed that all indicator loadings exceeded 0.70, Average Variance Extracted (AVE) was above 0.50, and both Cronbach's alpha and Composite Reliability (CR) were greater than 0.70. Discriminant validity was assessed using the HTMT ratio and the Fornell-Larcker criterion to verify statistical distinction among variables. In the subsequent stage, the structural model was examined to test the hypothesized relationships.

A bootstrapping procedure with 5,000 resamples determined the significance of path coefficients at a 95% confidence level. Model performance was evaluated by examining R^2 values for explanatory power, f^2 for effect sizes, and the Stone-Geisser Q^2 via blindfolding to confirm predictive relevance in the context of Indonesian disaster response dynamics.

4 RESULT AND DISCUSSION

4.1 Descriptive statistics

Table 2 shows that Indonesian disaster response personnel received high ratings across all areas, with averages ranging from 3.58 to 3.82 on a five-point scale. Mobile Technology Acceptance scored the highest ($M = 3.82$), suggesting that staff are ready to use digital tools during emergencies. Disaster Response Effectiveness had the lowest average ($M = 3.58$), so even though technology use is high, personnel are more

reserved when rating their own field performance. Standard deviations ranged from 0.64 to 0.73, showing that responses were generally consistent but still varied enough for structural modeling. Skewness and kurtosis values for all measures were within recommended limits for social science research.

Table 2. Descriptive statistics of constructs and demographics (N = 285)

Construct/Variable	N	Mean	Std. Deviation	Skewness	Kurtosis
Mobile Technology Acceptance	285	3.82	0.64	-0.45	0.32
Organizational Efficacy	285	3.71	0.71	-0.38	0.15
Crisis Information Sharing	285	3.65	0.68	-0.29	-0.08
Disaster Response Effectiveness	285	3.58	0.73	-0.33	0.11
Crisis Governance Quality	285	3.61	0.7	-0.41	0.23
Years of Experience	285	8.47	6.23	1.12	1.85
Age (Years)	285	38.24	9.15	0.28	-0.54

4.2 Assessment of the measurement model

The measurement model was assessed to establish the reliability and validity of the latent constructs and their associated dimensions. Table 3 demonstrates that all criteria for internal consistency, indicator reliability, and convergent validity were satisfied.

Table 3. Measurement model assessment results

Construct	Dimension	Items	Loading Range	Cronbach's α	rho_A	Composite Reliability	AVE
Mobile Technology Acceptance	Performance Expectancy	6	0.78–0.89	0.89	0.9	0.92	0.66
	Habit	4	0.81–0.88	0.85	0.86	0.9	0.69
	Social Influence	5	0.76–0.87	0.87	0.88	0.91	0.67
	Hedonic Motivation	4	0.79–0.91	0.88	0.89	0.92	0.74
	Facilitating Conditions	5	0.74–0.85	0.84	0.85	0.89	0.62
	Behavioral Intention	6	0.82–0.90	0.91	0.91	0.93	0.7
	Effort Expectancy	3	0.80–0.88	0.82	0.83	0.89	0.73
Organizational Efficacy	Collaboration	9	0.71–0.86	0.92	0.92	0.93	0.6
	Mission and Future	5	0.79–0.88	0.87	0.88	0.91	0.67
	Resilience	3	0.82–0.90	0.84	0.85	0.9	0.75
Crisis Information Sharing	Non-Facebook social media	10	0.73–0.87	0.93	0.93	0.94	0.62
	Interpersonal Channels	3	0.85–0.91	0.86	0.87	0.92	0.79
	CDC Facebook	3	0.80–0.89	0.83	0.84	0.9	0.75

(Continued)

Table 3. Measurement model assessment results (Continued)

Construct	Dimension	Items	Loading Range	Cronbach's α	rho_A	Composite Reliability	AVE
Disaster Response Effectiveness	Disaster Assessment Competency	5	0.77–0.88	0.88	0.89	0.91	0.68
	Disaster Emergency Rescue Competency	8	0.75–0.86	0.91	0.91	0.93	0.63
	Disaster Psychological Nursing Competency	4	0.81–0.90	0.87	0.88	0.91	0.72
	Disaster Role Quality and Adaptation Competency	4	0.79–0.87	0.84	0.85	0.89	0.68
Crisis Governance Quality	Responsibility Capacity	10	0.72–0.85	0.93	0.93	0.94	0.61
	Coordination and Cooperation Capacity	6	0.78–0.88	0.9	0.9	0.92	0.67
	Analytical Capacity	12	0.74–0.86	0.94	0.94	0.95	0.6
	Self-organization Capacity	7	0.76–0.87	0.91	0.91	0.93	0.65

All item loadings were above 0.70, as shown in Table 3, which means each item strongly represented its underlying construct. Internal consistency was supported by Cronbach's alpha values between 0.82 and 0.94, composite reliability values from 0.89 to 0.95, and rho values above 0.83. These values are all well above the 0.70 standard. Convergent validity was also confirmed because the AVE for each dimension ranged from 0.60 to 0.79, which exceeds the recommended 0.50 cutoff. Figure 2 presents the measurement model created with PLS-SEM and shows the structural paths between indicators and latent variables.

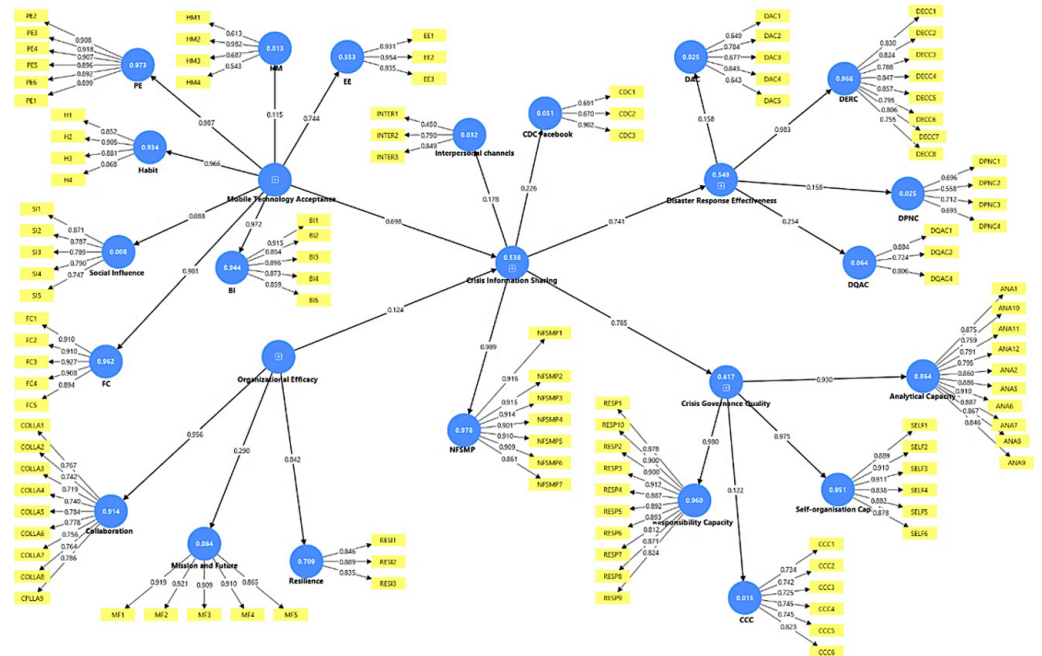


Fig. 2. Measurement model

4.3 Discriminant validity

We assessed discriminant validity using the Heterotrait-Monotrait (HTMT) ratio of correlations. Table 4 shows that all HTMT ratios range from 0.49 to 0.67, well below the conservative threshold of 0.85. These findings show that the constructs are empirically distinct. Confirming discriminant validity, along with earlier evidence of reliability and convergent validity, supports the integrity of the measurement model for structural hypothesis testing.

The evaluation of the structural model used to test the hypothesized relationships between constructs. In this step, we analysed path coefficients (β), assessed their statistical significance using bootstrapping, and evaluated the model’s explanatory and predictive power. These results help determine whether to accept or reject the research hypotheses about the Indonesian disaster response framework.

Table 4. HTMT ratio

Construct	1	2	3	4	5
1. Mobile Technology Acceptance					
2. Organizational Efficacy	0.58				
3. Crisis Information Sharing	0.53	0.61			
4. Disaster Response Effectiveness	0.49	0.64	0.57		
5. Crisis Governance Quality	0.54	0.67	0.59	0.65	

4.4 Structural model assessment and hypothesis testing

The structural model was tested for the eight hypothesized relationships using path coefficients (β), t-statistics, and p-values, all calculated from a bootstrapping procedure with 5,000 resamples.

Table 5. Structural model assessment results (hypothesis testing)

Hypothesis	Path	β	SD	t-Stat	p-Value	95% CI	Decision
Direct Effects							
H1	MTA → CIS	0.34	0.06	5.67	0.000	[0.23, 0.45]	Supported
H2	OE → CIS	0.41	0.05	8.20	0.000	[0.31, 0.51]	Supported
H3	CIS → DRE	0.52	0.04	13.0	0.000	[0.44, 0.60]	Supported
H4	CIS → CGQ	0.58	0.04	14.5	0.000	[0.50, 0.66]	Supported
Mediation							
H5	MTA → CIS → DRE	0.18	0.03	6.00	0.000	[0.12, 0.24]	Supported
H6	MTA → CIS → CGQ	0.08	0.05	1.60	0.110	[-0.02, 0.18]	Not Supported
H7	OE → CIS → DRE	0.07	0.04	1.75	0.080	[-0.01, 0.15]	Not Supported
H8	OE → CIS → CGQ	0.24	0.03	8.00	0.000	[0.18, 0.30]	Supported

Notes: MTA: Mobile Technology Acceptance; OE: Organizational Efficacy; CIS: Crisis Information Sharing; DRE: Disaster Response Effectiveness; CGQ: Crisis Governance Quality.

Results in Table 5 support six out of eight hypotheses. All direct effects (H1 to H4) were significant ($p < 0.001$). Organizational Efficacy ($\beta = 0.41$) had a stronger effect on Crisis Information Sharing than Mobile Technology Acceptance ($\beta = 0.34$). Information Sharing also had strong predictive value for both Disaster Response Effectiveness ($\beta = 0.52$) and Crisis Governance Quality ($\beta = 0.58$). The mediation results were mixed. Information sharing mediated the link from technology acceptance to response effectiveness (H5) and from organizational efficacy to governance quality (H8). However, the other paths (H6 and H7) were not significant because their confidence intervals included zero. This may mean that factors beyond the current model affect how technology acceptance influences governance and how organizational efficacy influences response. The model shows strong explanatory power. The independent variables account for 48% of the variance in information sharing, 43% in response effectiveness, and 51% in governance quality. Predictive relevance was confirmed because all Q^2 values were well above zero.

5 DISCUSSION

This study offers useful insights into how mobile technology acceptance, organizational efficacy, and information sharing work during disaster response. Both mobile technology acceptance (H1) and organizational efficacy (H2) have strong direct effects on crisis information sharing, consistent with earlier studies that show information sharing is complex. Notably, Organizational Efficacy had a stronger influence than Mobile Technology Acceptance. This suggests that factors such as collaboration, clear missions, and organizational resilience may matter more than individual attitudes toward technology when it comes to sharing information in a crisis. These findings add to what we know about technology acceptance by showing that an organization's abilities can be more important than personal beliefs about technology in high-pressure, collaborative situations [25].

Crisis information sharing has a strong positive effect on both disaster response effectiveness (H3) and crisis governance quality (H4), underscoring the importance of information flow in crisis management. These results support earlier research that sees information sharing as key to coordinated action and decision-making. However, there was no significant mediation effect (H6 and H7), suggesting certain limits. The fact that crisis information sharing does not link mobile technology acceptance and crisis governance quality suggests that adopting technology alone, without organizational or governance support, is not enough to improve governance. Similarly, Organizational Efficacy does not significantly mediate Disaster Response Effectiveness. This means that while organizations' ability to share information is helpful, other factors, such as training, resources, and coordination between organizations, are also needed to turn information sharing into better response outcomes.

6 CONCLUSION AND RECOMMENDATIONS

This study finds that while accepting mobile technology and effective organizations are key to sharing information during crises in Indonesia, these factors do not influence all outcomes equally. The results show that sharing information helps improve both tactical response and overall governance, but it needs strong institutional support to connect individual technology use with better governance.

Therefore, the benefits of digital tools in disaster management depend on a complete system that matches technology with clear organizational goals. Indonesian disaster agencies (BNPB/BPBD) should do more than just offer mobile tools. They need to focus on activities that build effectiveness by clarifying roles and mission goals. This will help make sure that information is shared with a clear purpose, not just quickly. Governance reforms should focus on making information channels between sectors more consistent. It is important to ensure that official data and social media data are in sync to avoid the coordination problems observed in this study. Future research should use long-term studies to track these changes across different disaster stages and examine how regional infrastructure quality may affect the results.

7 REFERENCES

- [1] S. Pilemalm and K. Y. Mojir, "Digitalized cross-sector collaboration for an effective emergency response: Emerging forms of network governance," in *Disaster Management and Information Technology: Professional Response and Recovery Management in the Age of Disasters*, Cham, Switzerland: Springer International Publishing, 2023, pp. 269–305. https://doi.org/10.1007/978-3-031-20939-0_13
- [2] A. Reid, "History and seismology in the Ring of Fire: Punctuating the Indonesian past," in *Environment, Trade and Society in Southeast Asia*, Leiden, Netherlands: Brill, 2015, pp. 62–77. https://doi.org/10.1163/9789004288058_006
- [3] I. F. Meutia, A. G. Zainal, B. Sujadmiko, M. S. Assalam, and R. A. Putri, "Adaptive management in disaster crisis: Role analysis in cross-sector collaboration," *Jamba-J. Disaster Risk Stud.*, vol. 17, no. 1, Art. no. 1830, 2025. <https://doi.org/10.4102/jamba.v17i1.1830>
- [4] A. Arslan, I. Golgeci, Z. Khan, O. Al-Tabbaa, and P. Hurmelinna-Laukkanen, "Adaptive learning in cross-sector collaboration during global emergency: Conceptual insights in the context of COVID-19 pandemic," *Multinat. Bus. Rev.*, vol. 29, no. 1, pp. 21–42, 2021. <https://doi.org/10.1108/MBR-07-2020-0153>
- [5] M. B. K. Adobor, "Achieving disaster responsiveness under conditions of dysfunctional humanitarian environment: The role of cooptation and disaster preparedness," Doctoral dissertation, Brunel Business School, Brunel Univ. London, London, UK, 2025.
- [6] D. Ayuningtyas, S. Windiarti, M. S. Hadi, U. U. Fusrini, and S. Barinda, "Disaster preparedness and mitigation in Indonesia: A narrative review," *Iran. J. Public Health*, vol. 50, no. 8, pp. 1536–1546, 2021. <https://doi.org/10.18502/ijph.v50i8.6799>
- [7] S. Karim and E. Gide, "The use of interactive mobile technology to improve the quality of health care services in private and public hospitals in Australia," *Int. J. Interactive Mobile Technol. (ijIM)*, vol. 12, no. 6, pp. 4–18, 2018. <https://doi.org/10.3991/ijim.v12i6.9204>
- [8] R. An, "The role of digital media in shaping public relations: Developing successful online communication strategies for enterprises," *J. Adv. Humanities Res.*, vol. 3, no. 3, pp. 51–68, 2024. <https://doi.org/10.56868/jadhur.v3i3.246>
- [9] S. D. Sabbar, A. R. Kadir, M. Nohong, A. Mannan, O. M. T. Alkanan, and S. A. Anter, "Adoption of mobile learning: Education's use of app-based learning management systems & ethical implementation," *Int. J. Interactive Mobile Technol. (ijIM)*, vol. 19, no. 18, pp. 175–188, 2025. <https://doi.org/10.3991/ijim.v19i18.57611>
- [10] K. Meechang, N. Leelawat, J. Tang, A. Kodaka, and C. Chintanapakdee, "The acceptance of using information technology for disaster risk management: A systematic review," *Eng. J.*, vol. 24, no. 4, pp. 111–132, 2020. <https://doi.org/10.4186/ej.2020.24.4.111>

- [11] J. Wahyudi, "The acceptance of a smartphone application for disaster: Technology acceptance model approach," *IOP Conf. Ser.: Earth Environ. Sci.*, vol. 1180, no. 1, 2023. <https://doi.org/10.1088/1755-1315/1180/1/012002>
- [12] P. S. Brar, B. Shah, J. Singh, F. Ali, and D. Kwak, "Using modified technology acceptance model to evaluate the adoption of a proposed IoT-based indoor disaster management software tool by rescue workers," *Sensors*, vol. 22, no. 5, p. 1866, 2022. <https://doi.org/10.3390/s22051866>
- [13] M. Wirz, D. Roggen, and G. Troster, "User acceptance study of a mobile system for assistance during emergency situations at large-scale events," in *Proc. 3rd Int. Conf. Human-Centric Comput.*, 2010, pp. 1–6. <https://doi.org/10.1109/HUMANCOM.2010.5563347>
- [14] C. B. Gabler, R. G. Richey Jr., and G. T. Stewart, "Disaster resilience through public–private short-term collaboration," *J. Bus. Logistics*, vol. 38, no. 2, pp. 130–144, 2017. <https://doi.org/10.1111/jbl.12154>
- [15] Y. Li, L. Shen, and M. Wang, "The implementation effect, blocking factors and relief paths of the policy on cultivating new professional farmers based on the perspective of policy network theory," *Int. J. Manag. Thinking*, vol. 2, no. 2, pp. 107–122, 2025. <https://doi.org/10.56868/ijmt.v2i2.79>
- [16] C. F. Huang, J. J. Wang, and T. J. Lin, "Resource sufficiency, organizational cohesion, and organizational effectiveness of emergency response," *Natural Hazards*, vol. 58, no. 1, pp. 221–234, 2011. <https://doi.org/10.1007/s11069-010-9662-y>
- [17] S. H. Hong, S. H. Seo, and W. H. Yi, "Analysis of the moderating effect of disaster management organization type on resilience capability and organizational effectiveness," *J. Korean Soc. Hazard Mitig.*, vol. 20, no. 3, pp. 19–25, 2020. <https://doi.org/10.9798/KOSHAM.2020.20.3.19>
- [18] D. Qiu, B. Lv, Y. Cui, and Z. Zhan, "The role of response efficacy and self-efficacy in disaster preparedness actions for vulnerable households," *Nat. Hazards Earth Syst. Sci.*, vol. 23, no. 12, pp. 3789–3803, 2023. <https://doi.org/10.5194/nhess-23-3789-2023>
- [19] N. Andreassen, O. J. Borch, and A. K. Sydnæs, "Information sharing and emergency response coordination," *Safety Sci.*, vol. 130, p. 104895, 2020. <https://doi.org/10.1016/j.ssci.2020.104895>
- [20] B. Nowell, T. Steelman, A. L. K. Velez, and Z. Yang, "The structure of effective governance of disaster response networks: Insights from the field," *Amer. Rev. Public Admin.*, vol. 48, no. 7, pp. 699–715, 2018. <https://doi.org/10.1177/0275074017724225>
- [21] K. Açıkgül and S. N. Şad, "Mobile technology acceptance scale for learning mathematics: Development, validity, and reliability studies," *Int. Rev. Res. Open Distrib. Learn.*, vol. 21, no. 4, pp. 161–180, 2020. <https://doi.org/10.19173/irrodl.v21i4.4834>
- [22] J. G. Bohn, "Development and exploratory validation of an organizational efficacy scale," *Hum. Resour. Develop. Q.*, vol. 21, no. 3, pp. 227–251, 2010. <https://doi.org/10.1002/hrdq.20048>
- [23] Y. I. Lee and Y. Jin, "Crisis information seeking and sharing (CISS): Scale development for measuring publics' communicative behavior in social-mediated public health crises," *J. Int. Crisis Risk Commun. Res.*, vol. 2, no. 1, pp. 13–38, 2019. <https://doi.org/10.30658/jicrcr.2.1.2>
- [24] H. Y. Li, R. X. Bi, and Q. L. Zhong, "The development and psychometric testing of a disaster response self-efficacy scale among undergraduate nursing students," *Nurse Educ. Today*, vol. 59, pp. 16–20, 2017. <https://doi.org/10.1016/j.nedt.2017.07.009>
- [25] L. A. Doğrusöz and S. Yazıcı, "Measuring organisational governance capacity in health-care organisations: A scale development and validation study," *BMC Health Serv. Res.*, vol. 25, Art. no. 338, 2025. <https://doi.org/10.1186/s12913-025-12442-0>

8 AUTHORS

Helen Dias Andhini (SKM, ME), is pursuing her doctoral (PhD) studies there, as she is actively involved in advanced research projects typically conducted by doctoral candidates in the Faculty of Economics and Business, Hasanuddin University (E-mail: bahtiarherman@feb.umsrappang.ac.id).

Prof. Dr. Abdul Rahman Kadir, M.Si., CIPM, CWM, CRA, CRP, teaches at the Faculty of Economics and Business at Hasanuddin University. He earned his Bachelor of Economics, then completed a Master of Science, and later received his doctorate. He also holds several professional certifications, such as Certified International Project Manager, Certified Wealth Management, Certified Risk Associate, and Certified Risk Professional. In addition to serving as Dean of FEB Unhas, Prof. Kadir is a member of the Advisory Board of the Indonesian Management Forum (FMI) and was the South Sulawesi regional coordinator for the 2019–2023 period (E-mail: rahmankadir77@fe.unhas.ac.id).

Prof. Dr. Muhammad Yunus Amar, SE, MT, is a leading Indonesian Academician and Professor at the Faculty of Economics and Business, Hasanuddin University (UNHAS) in Makassar. He is recognized for his work in management, strategic planning, and financial literacy (E-mail: myunmar@unhas.ac.id).

Professor Dr. Mursalim Nohong serves as Dean of the Faculty of Economics and Business at Universitas Hasanuddin (UNHAS) in Makassar, Sulawesi Selatan. He regularly delivers lectures and training on entrepreneurship, SME finance, green financial management, and public sector financial and asset management (E-mail: mursalimnohong@fe.unhas.ac.id).

Mr. Suhaily Sudarman is an Indonesian researcher and academician recognized for his work on the socio-economic traditions of the Bugis tribe in South Sulawesi. He is working at the Faculty of Economics and Business, Hasanuddin University, Indonesia (E-mail: arifuddin@fe.unhas.ac.id).