

# MANAGING EMERGENCIES: UTILISING HISTORICAL INSIGHTS FOR STRATEGIC ENHANCEMENT

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**Abstract:** In a constantly changing world, the ability to manage crises effectively determines the stability and resilience of organisations in the long term. It is especially significant in the context of global interconnectivity and rapid technological development, where crises can immediately impact various aspects of life. The research conducted focuses on three key aspects of crisis management. The first section examines the significance of combining strategic planning with the latest innovations, enabling organisations to anticipate and respond to potential crises flexibly and efficiently. The second section analyses gender diversity in leadership and its impact on crisis management. Gender-diverse leadership teams can offer a broader range of approaches and solutions, enabling a more balanced and comprehensive crisis resolution strategy. In the third section, we explore the role of social media as a tool for effective crisis management, highlighting its ability to provide rapid data collection and analysis, which is essential for timely responses to crises. The research findings reveal innovative strategies and approaches in crisis management that merge strategic planning with gender diversity and the latest communication technologies.

**Keywords:** innovative strategies, communication technologies, emergencies, public administration, civil security.

## 1 Introduction

Crisis management becomes particularly relevant in a world constantly reshaped by economic shocks and political crises. Learning from the past and using that knowledge to enhance future strategies is vital for the survival and prosperity of modern organisations. Our article aims to deepen theoretical and practical knowledge in this critical area by underlining the importance of this task. Emergencies, ranging from natural disasters to technological accidents and epidemics, require prompt and effective public management decisions to ensure civil safety. Therefore, it is essential to develop flexible strategies that can be quickly adapted to changing conditions while still ensuring the protection and safety of citizens. In this context, practical crisis management approaches, strategic planning, and the inclusion of gender diversity in leadership are crucial for creating a public management system ready to meet contemporary emergencies' challenges.

The research results are divided into three sections, each highlighting specific aspects of crisis management. The first section concentrates on strategic planning and innovation, demonstrating how advanced technologies and creative approaches can enhance an organisation's capacity to anticipate and respond to crises. The second section examines the influence of gender diversity and leadership qualities on effective crisis management, evaluating how diverse perspectives can enrich decision-making processes. The final section concludes the review by discussing the role of social media in crisis management. It explores the potential of social media as a tool for rapid data gathering and communication with key stakeholders. Synthesis of these three key areas provides deeper insight into building robust crisis strategies that are effective for the present and future, leading to new heights of flexibility and progress.

This article aims to present an overview of current approaches and methodologies in crisis management, particularly emphasising the significance of crisis forecasting and the creation of predictive models. We seek to investigate the relationship between strategic planning, leadership, and innovation in addressing crisis challenges and analyse the effect

of gender diversity on decision-making processes in crises. In this study, we examine the function of social media in crisis management, specifically as a means of data collection and effective communication.

## 2 Literature review

In today's fast-paced world, managing crises is a significant challenge for organisations of all sizes and types. The study by Adamski and Gallagher (2022) emphasises the significance of an integrated approach to crisis management in critical care settings. It highlights the need for adaptation and rapid response to changing circumstances. Ahmed et al. (2023) further analyse the impact of integrated artificial intelligence on crisis management and lean production. Using a structural equation model, their research underlines how technological innovations can contribute to more efficient crisis management. Arrieta and Davies (2024) continue their research on local self-governance in England and the constraints of resilience in crisis management. They reveal that despite efforts, structural and resource constraints can hinder the effective resolution of crises.

The study by Asinthara et al. (2023) focuses on the practical application of digital social media analysis for crisis management. It demonstrates the potential of machine learning models to categorise tweets during disasters and identify and respond to emergencies in real time. Bahorka et al. (2022) examine the role of marketing activities in crisis management, highlighting the significance of establishing and retaining consumer trust during and after crisis periods. The authors' analysis enhances comprehension of how effective communication and marketing strategies can contribute to crisis management.

The research conducted by Bothe et al. (2023) analyses the role of the OSCE in supporting peace and security, with a focus on conflict prevention, crisis management, and peaceful dispute resolution. The study expands the discussion, highlighting the global aspect of crisis management and the significance of international collaboration for successful conflict resolution. Continuing the analytical literature review on crisis management, it is essential to note the study by Brecher and Wilkenfeld (2022). The authors provide a comprehensive overview of crisis theories and their management, analysing various dimensions of crises, from political to social, and offering a comprehensive view of mechanisms for effective response. This general understanding of crisis management is complemented by the study by Buhagiar and Anand (2023), which focuses on the synergy between leadership, knowledge management, and organisational learning as critical elements in crisis management. This triad contributes to the development of flexible strategies and increases the efficiency of crisis management.

Curnin et al. (2023) investigate the perception of strategic decision-making by crisis teams during training and identify key dimensions for assessing the effectiveness of crisis management. The research highlights the importance of practical training and strategy rehearsal in improving crisis preparedness. El-latif et al. (2023) analysed the impact of strategic intelligence on crisis management effectiveness in four and five-star hotels in Luxor and Aswan. The study found that a high level of strategic intelligence can significantly improve the ability to respond effectively to crisis events. Gernego et al. (2022) examine crisis management in the energy sector in the face of increasing epidemiological risks. The authors emphasise adapting crisis management strategies to the sector's specificities to ensure resilience. Haase (2023) discusses the uncertainty in crisis management, highlighting the importance of flexible and adaptable strategies for effective responses to unforeseen events. Jin's (2023) research proposes a Crisis Communication Think Tank (CCTT) approach to crisis management. The study highlights the importance of integrating communication

strategies with overall response plans and emphasises the significance of communication and interaction as a foundation for successful crisis management.

The following study, which is part of an analytical review of literature on crisis management, is by Pohrishchuk et al. (2023). The study focuses on modelling the application of crisis management in the economy's engineering sector. It highlights the importance of a strategic approach to crisis management in this field and the need for innovative solutions to overcome economic challenges.

Raut et al. (2022) conducted a study examining the impact of workforce flexibility on crisis management, focusing on job characteristics and support from higher administrative authorities in public management. The authors identify flexibility as a crucial factor enabling effective crisis response and promoting organisational resilience. Salnikova et al. (2019) propose a matrix approach to risk management in the national security system. The approach distinguishes criteria for selecting an optimal decision-making strategy, allowing for the systematic and efficient management of risks. It is crucial for ensuring national security. The study conducted by Sharma et al. (2022) analyses the evolving role of innovation in crisis management during the COVID-19 pandemic through an integrative literature review. The authors highlight the significance of innovation in addressing crises, providing novel prospects for improving crisis management effectiveness. Sharma et al. (2022) investigate the potential of big data analytics in crisis management from the perspective of information processing theory. The authors contend that big data can enhance an organisation's ability to respond to crises. Shpak and colleagues (2022a; 2022b) analyse the interconnection between macroeconomic indicators and CO2 emissions in the EU. They propose management strategies for reducing ecological impact. These studies are crucial for understanding the economic aspects of crisis management in the context of environmental sustainability. Shulga and Busser (2024) examine the management of the COVID-19 crisis in terms of human resource costs, emphasising the significance of transformational leadership and ethical climate. The study highlights the crucial role of leadership and organisational culture in effective crisis management.

Karlsen and Antonsen's research (2023) stands out in crisis management during pandemics. They offer a literature review of crisis management from 1984 to 2019, analysing how the perception of crisis management has changed. The authors emphasise pandemic preparedness and response, highlighting the importance of strategic thinking and adaptability. Ketter (2022) investigates crisis management strategies in tourist destinations, exploring their resilience and recovery after a crisis. The study highlights the distinction between recovering to a 'previous state' and achieving 'a better state,' which is crucial for comprehending the long-term effects of crisis events on tourist regions. Ledi et al. (2024) investigate the impact of gender diversity and strategic thinking on crisis management. Their findings suggest that integrating these factors into crisis strategies significantly improves efficiency. It is essential to note the need for straightforward integration of gender diversity and strategic thinking in crisis management. Li et al. (2023) propose an optimisation model for crisis management and public safety in cities through the integration of artificial intelligence technologies. The research highlights the potential of AI in improving responses to crises and managing public safety.

Maghdid et al. (2022) analyse the causes and consequences of crises in the public sector, emphasising the importance of transitioning from crises to effective crisis management. The authors suggest a deep understanding of crisis phenomena is necessary to develop resilient management strategies. The study by Oh et al. (2022) examines crisis management to ensure sustainable corporate value. The authors reveal the interplay between social distancing, crisis response, and its severity and determine that finding a balance among these factors is critical to effective crisis management. Oscarsson (2022) views crisis management as a dynamic process intertwined with everyday

work activities, emphasising the importance of adapting to changing conditions. This research shows that successful crisis management requires flexibility and integration with regular work processes. Park et al. (2022) emphasise the significance of internal resources in enhancing local government resilience, highlighting their importance in crisis management. The authors suggest that strengthening internal resources is crucial to effective crisis response.

In her study, Syrovatka (2024) examines the end of the strict austerity era and national competitiveness councils' failures. The author argues for the need to rethink European crisis management approaches and adapt strategies to the changing global economic circumstances. Tanashchuk et al. (2018) present theoretical and methodological principles for managing the capital structure in telecommunications operators' innovative activities. Their work emphasises the importance of innovation as a critical element in strategic crisis management, especially in technology-oriented sectors. Uy et al. (2023) demonstrate the application of the theory of adaptive crisis management, focusing on the dynamics of leadership in times of crisis. They find that flexible leadership can significantly improve an organisation's ability to respond effectively to unforeseen challenges.

Wolbers (2022) explores distributed sensemaking in crisis management, using the Utrecht terrorist attack as a case study. This account emphasises the significance of coordination and collaboration among organisations for effective crisis resolution. Xue et al. (2022) introduce the fundamental concepts of crisis and crisis management and discuss the challenges of transitioning to crisis management in China. This study reveals the global context of crisis management, indicating the universality and specificity of crisis strategies in different cultural and political conditions. Zhou et al. (2022) investigated the effectiveness of social media in crisis management, specifically focusing on the efficacy of non-pharmacological interventions for managing COVID-19 challenges. The study highlights the significance of digital platforms as tools for information dissemination and community support during crises. Each of these studies contributes to a multifaceted understanding of crisis management. They cover various topics, from developing innovative strategies to adapting leadership and using digital technologies. The studies emphasise the importance of flexibility, strategic thinking, and cross-sector collaboration for effective crisis response. However, exploring crisis management by learning from past experiences and improving strategies remains relatively uncharted territory. It affirms the relevance of our chosen topic.

### 3 Methods

To achieve this goal, we use a holistic approach that integrates systemic and structural-functional analysis to study the individual elements of crisis management and their interplay within the organisational structure. We apply the methods of analysis and synthesis to examine the components of strategic planning and leadership behaviour, their role, and their impact on the overall effectiveness of crisis management. The quantitative method is performed to process and analyse statistical data. It will enable us to assess the impact of various factors on crisis management outcomes and ensure the objectivity of our conclusions.

The results of the analysis will form the basis for recommendations to improve strategic management of crises. These recommendations will be helpful for leaders and managers of organisations across different sectors.

### 4 Results

I. In an often unstable world, strategic planning and innovation are crucial for crisis management. Strategic planning aims to predict potential crises and enable an organisation to adapt quickly, finding creative solutions to complex situations. Innovations, in particular offer new possibilities for responding

to current challenges and strengthening organisational resilience to future shocks.

The economic aspect of crisis management will be examined regarding market dynamics, as shown in Figure 1.

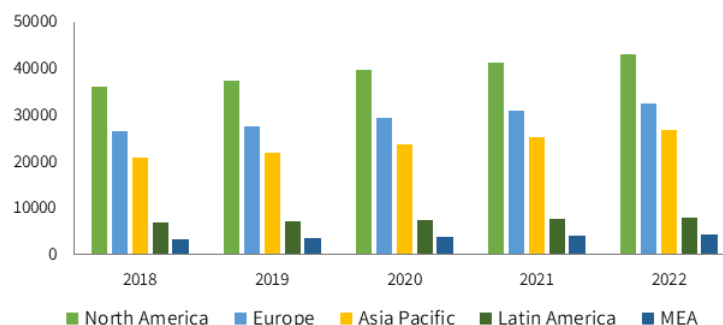


Figure 1. Global Crisis Management Market by Region  
Source: Global Market Insights (n. d.)

The graph presents data indicating global crisis management market changes from 2018 to 2022. Although the market has shown signs of instability, it also presents potential growth opportunities. The pandemic led to a surge in demand for management services, particularly in North America and Europe, highlighting the growing recognition of the need for crisis preparedness.

Innovations often involve introducing technologies that can improve data collection, analytics, and operational problem-solving in this field. It applies to information systems and organisational behaviour and leadership, requiring intellectual flexibility to adapt to changing circumstances. Therefore, strategic planning and innovation in crisis management go beyond simply responding to adversity. They are essential to actively shaping the future, where knowledge, technology, and readiness for change are fundamental for survival and development in an unpredictable world.

II. In contemporary crisis management, gender diversity and leadership are increasingly important. Gender diversity goes beyond just balancing the number of men and women in decision-making; it broadens perspectives, enabling organisations to incorporate a broader range of views and approaches, particularly in response to crises.

When examining leadership from a gender perspective, it is essential to note that diverse leadership styles can offer various strategies for crisis resolution. Women and men often exhibit different approaches to leadership, which can provide additional benefits in crisis management. For example, female leadership is often characterised by empathy and a cooperative style, while male leadership may be more assertive and risk-taking. Both approaches are essential and effective, especially when combined to create a balanced leadership strategy.

Studies have found that organisations with higher levels of gender diversity in leadership often perform better, particularly in the context of crisis management. Gender diversity fosters high creativity and a more significant number of ideas and strategies, which can lead to more innovative solutions in response to unpredictable challenges. Leadership in crisis management goes beyond traditional power and control, offering a flexible and inclusive model that includes a broader range of voices and experiences. In this context, crisis management requires a coordinated collective effort that embraces the full spectrum of gender perspectives, resulting in more resilient and enduring leadership.

III. Social media platforms have become integral to daily life, and their importance in management processes is increasingly recognised. They provide unique real-time situation monitoring and data collection opportunities that can inform decision-making and develop adequate crisis responses. In times of crisis, the speed and accuracy of response can often affect human lives and organisational stability. Social media enables early detection

of crisis trends, crucial for preventing or minimising harm. Data analytics from social networks help leaders understand public perceptions of organisational messages and quickly adapt communication strategies to changing conditions.

Additionally, social media serves as a two-way communication channel, engaging organisations, their clients, and stakeholders in dialogue. It promotes trust and transparency in crisis management, ensuring all interested parties have a voice. During a crisis, organisations can use social media to disseminate important messages, guidance, and support, positioning themselves as a reliable source of information.

Furthermore, analysing and monitoring social media reactions to crisis events can serve as a crucial indicator for evaluating the effectiveness of crisis responses. Collecting data on feedback, dissemination, and emotional reception of crisis communications can provide valuable insights that can be used to refine future strategies. Therefore, social media is not just a tool for communication during crises but also an integral component of crisis management, combining technological innovations, strategic vision, and the human dimension into a single practical system.

## 5 Discussion

The chosen subject matter includes questions that are continually discussed in the literature. We will focus on three critical debate points and express our vision for their development and resolution.

The first point we will emphasise is the substance and significance of strategic planning in crises. One perspective, as highlighted by the research of Curnin and colleagues (Curnin et al., 2023), emphasises the importance of flexibility and adaptability in strategies. It suggests that rigid adherence to predefined plans can lead to adverse outcomes in the dynamic conditions of a crisis. As advocated by Uy and others (Uy et al., 2023), the opposing viewpoint argues that well-structured strategic planning can provide clarity and guidance during a crisis, enabling organisations to recover more quickly. Our evaluation is that genuine strategic planning should harmonise flexibility with structure, allowing for adaptation to crisis conditions while having a clear roadmap for action.

The second focal point pertains to the impact of gender diversity on leadership during crises. There are debates between those who believe that gender diversity is crucial for innovation and a comprehensive understanding of crises (Wolbers, 2022) and those who emphasise the importance of expertise and competencies, regardless of gender. Gender diversity can enrich perspectives and encourage the creation of more flexible and inclusive leadership approaches.

Finally, discussions often centre on using social media in crisis management, raising questions about the effectiveness and reliability of the information provided by these platforms. Some

researchers argue that social media can exacerbate panic and disinformation (Uy et al., 2023), while others view them as a powerful tool for rapid information dissemination and data collection (Curnin et al., 2023). When used responsibly, social media can significantly improve the effectiveness of crisis management by providing a direct connection between the organisation and its audience.

## 6 Conclusion

Our research indicates that the resilience of organisations during crises is determined by the depth of strategic planning and the refinement of innovative approaches. It is crucial to strike a balance between flexibility, which allows for swift adaptation to unforeseen circumstances, and structured processes that provide stability and predictability in management. The novelty of this approach lies in establishing that effective crisis management requires a harmonious symbiosis of these two concepts, where strategic plans must be flexible enough to allow rapid course adjustments depending on situational developments yet maintain a clear set of goals and values that guide the organisation throughout the crisis.

Additionally, exploring gender diversity in leadership roles opens new opportunities for crisis management. Our analysis has confirmed that gender diversity at the management level can enhance innovation and creative problem-solving. Integrating this diversity into managerial structures can increase the breadth of perspectives and approaches utilised during crises and foster the development of more effective communication strategies that meet the needs of diverse stakeholder groups. This approach involves integrating diverse gender perspectives into decision-making to promote inclusivity and consider a broader range of experiences and knowledge. It enhances the overall adaptability and efficiency of crisis management.

The results underscore the importance of balancing flexible and structured approaches in strategic planning. Additionally, the contributions of women's leadership and the value of social media as a bidirectional tool for communication and data gathering are recognised. This work offers updated approaches to crisis management while acknowledging limitations arising from the variability of external conditions and the rapid evolution of technology.

Further exploration of the impact of cultural factors on the choice of crisis management strategies and investigation of the deeper psychological aspects of leadership responses to crises is recommended. It will enrich the theoretical foundations of crisis management and ensure the practical application of strategies across a broader range of crises.

## Literature:

- Adamski, J. L., & Gallagher, J.: Crisis management. *AACN Advanced Critical Care*, 2022, 33(4), 337-338. <https://doi.org/10.4037/aacnacc2022653>
- Ahmed, A. A. A., Mahalakshmi, A., ArulRajan, K., Alanya-Beltran, J., & Naved, M.: Integrated artificial intelligence effect on crisis management and lean production: structural equation modelling frame work. *International Journal of System Assurance Engineering and Management*, 2023, 14(1), 220-227. <https://link.springer.com/article/10.1007/s13198-022-01679-1>
- Arrieta, T., & Davies, J. S.: Crisis management in English local government: the limits of resilience. *Policy & Politics*, 2024, 1-19. <http://dx.doi.org/10.1332/03055736Y2024D000000029>
- Asinthara, K., Jayan, M., & Jacob, L.: Categorising disaster tweets using learning-based models for emergency crisis management. In *2023 9th International conference on advanced computing and communication systems (ICACCS)*, 2023, 1, 1133-1138. <http://dx.doi.org/10.1109/ICACCS57279.2023.10113105>
- Bahorka, M., Ustik, T., & Kvasova, L.: The place of marketing activities in the crisis management system. *Three Seas Economic Journal*, 2022, 3(3), 15-20. <https://doi.org/10.3052/52661-5150/2022-3-3>
- Bothe, M., Ronzitti, N., & Rosas, A. (Eds.): *The OSCE in the maintenance of peace and security: Conflict prevention, crisis management and peaceful settlement of disputes*. Leiden: Martinus Nijhoff Publishers, 2023.
- Boyd, N. M., & Martin, E. C.: Sense of community responsibility at the forefront of crisis management. *Administrative Theory & Praxis*, 2022, 44(1), 71-83. <http://dx.doi.org/10.1080/10841806.2020.1765288>
- Brecher, M., & Wilkenfeld, J. A *study of crisis*. University of Michigan Press, 2022.
- Buhagiar, K., & Anand, A.: Synergistic triad of crisis management: leadership, knowledge management and organisational learning. *International Journal of Organisational Analysis*, 2023, 31(2), 412-429. <http://dx.doi.org/10.1108/IJOA-03-2021-2672>
- Curnin, S., Brooks, B., Owen, C., & Brooks, O.: Perceptions of strategic decision-making by crisis management teams during exercising: Establishing key dimensions. *Journal of Contingencies and Crisis Management*, 2023, 31(3), 338-352. <https://doi.org/10.1111/1468-5973.12442>
- El-latif, A., Fathey, M., & Saad, H. E.: Does strategic intelligence impact the achievement of crisis management effectiveness? Evidence from four and five-star hotels in Luxor and Aswan. *Journal of Association of Arab Universities for Tourism and Hospitality*, 2023, 24(1), 1-24.
- Gernego, I., Liakhova, O., & Dyba, M.: Crisis management in the energy sector in conditions of increasing epidemiological risks. *Energy Policy Journal*, 2022, 25-44. <https://doi.org/10.33223/epj/150002>
- Global Market Insights, n. d. <https://www.gminsights.com/>
- Haase, T. W.: Uncertainty in crisis management. In *Global Encyclopedia of Public Administration, Public Policy, and Governance* (pp. 12957-12961). Cham: Springer International Publishing, 2023.
- Jin, Y.: 'The best of both worlds': The Crisis Communication Think Tank (CCTT) approach to the quest for crisis management keystone. *Journal of Contingencies and Crisis Management*, 2023, 31(4), 968-972. <http://dx.doi.org/10.1111/1468-5973.12469>
- Karlsen, A. R., & Antonsen, S.: What were we thinking? A scoping review of crisis management pandemic literature (1984–2019). *Journal of Contingencies and Crisis Management*, 2023, 31(3), 524-544. <http://dx.doi.org/10.1111/1468-5973.12457>
- Ketter, E.: Bouncing back or bouncing forward? Tourism destinations' crisis resilience and crisis management tactics. *European Journal of Tourism Research*, 2022, 31, 3103-3103. <https://doi.org/10.54055/ejtr.v31i.2748>
- Ledi, K. K., Adu Asare Obeng, I., Ameza-Xemalordzo, E., & Dumeda, R. B.: All hands on the pump: the role of strategic thinking and gender diversity on crisis management. *Current Issues in Tourism*, 2024, 1-17.
- Li, G., Wang, J., & Wang, X.: Construction and path of urban public safety governance and crisis management optimisation model integrating artificial intelligence technology. *Sustainability*, 2023, 15(9), 7487. <https://doi.org/10.3390/su15097487>
- Maghdid, R. S., Othman, B. A., & Omer, A. K.: From crisis to crisis management; causes and impacts of crises in the public sector. *Polytechnic Journal of Humanities and Social Sciences*, 2022, 3(1), 65-74.
- Oh, H. J., Kim, J., & Ham, C. D.: Crisis Management for Sustainable Corporate Value: Finding a Construal Fit between Social Distance, Crisis Response, and Crisis Severity. *Sustainability*, 2022, 14(16), 10244. <http://dx.doi.org/10.3390/su141610244>
- Oscarsson, O.: Crisis management in practice: a dynamic process intertwined with daily work performance. *Disasters*, 2022, 46(3), 720-741. <https://doi.org/10.1111/disa.12506>
- Park, S., Graham, M., & Foster, E. A.: Improving local government resilience: Highlighting the role of internal resources in crisis management. *Sustainability*, 2022, 14(6), 3214. <https://doi.org/10.3390/su14063214>
- Pohrishchuk, B., Kolomiets, T., Chaliuk, Y., Yaremko, I., & Hromadska, N.: Modeling the application of anti-crisis management business introduction for the engineering sector of the economy, *International Journal of Safety and Security*

Engineering, 2023, 13(2), 187-194. <https://doi.org/10.18280/ijss.e.130201>

25. Raut, P. K., Das, J. R., Gochhayat, J., & Das, K. P.: Influence of workforce agility on crisis management: Role of job characteristics and higher administrative support in public administration. *Materials Today: Proceedings*, 2022, 61, 647-652. <http://dx.doi.org/10.1016/j.matpr.2021.08.121>

26. Salnikova, O., Rodchenko, L., Bielialov, T., Skrypnyk, M., Ivanchenkova, L., Slobodianiuk, O.: Matrix approach to risk management in the national security system, highlighting the criteria for choosing the optimal strategy for decision making. *International Journal of Engineering and Advanced Technology*, 2019, 8(5), 2407-2411. <https://www.ijeat.org/portfolio-item/e7699068519/>

27. Sharma, G. D., Kraus, S., Srivastava, M., Chopra, R., & Kallmuenzer, A.: The changing role of innovation for crisis management in times of COVID-19: An integrative literature review. *Journal of Innovation & Knowledge*, 2022, 7(4), 100281. <https://doi.org/10.1016/j.jik.2022.100281>

28. Sharma, P., Tiwari, S., Choi, T. M., & Kaul, A.: Big data analytics for crisis management from an information processing theory perspective: A multimethodological study. *IEEE Transactions on Engineering Management*, 2022, 99. <http://dx.doi.org/10.1109/TEM.2022.3209786>

29. Shpak, N., Ohinok, S., Kulyniak, I., Sroka, W., Androniceanu, A.: Macroeconomic indicators and CO2 emissions in the EU region. *Amfiteatru Economic*, 2022a, 24(61), pp. 817-830. <http://dx.doi.org/10.24818/EA/2022/61/817>

30. Shpak, N., Ohinok, S., Kulyniak, I., Sroka, W., Fedun, Y., Ginevičius, R., Cygler, J.: CO2 Emissions and Macroeconomic Indicators: Analysis of the Most Polluted Regions in the World. *Energies*, 2022b, 15(8), 2928. <https://doi.org/10.3390/en15082928>

31. Shulga, L. V., & Busser, J. A.: Covid-19 crisis management human resource cost-retrenchment: the role of transformational leadership and ethical climate. *International Journal of Contemporary Hospitality Management*, 2024, 36(4), 1213-1234.

32. Syrovatka, F.: When did the austerity era of European crisis management end? On the failure of national competitiveness boards. *Critical Policy Studies*, 2024, 18(1), 52-72. <https://doi.org/10.1080/19460171.2023.2191860>

33. Tanashchuk, E.A., Kovtunenکو, K.V., & Kovtunenکو, Yu.V.: Theoretical and methodical principles of capital structure management in the innovation activity of telecommunication operators. *Journal of Automation and Information Sciences*, 2018, 50(3), 71-84. <http://dx.doi.org/10.1615/JAutomatInfScien.v50.i3.60>

34. Uy, F., Kilag, O. K., Abendan, C. F., Macapobre, K., Cañizares, M. C., & Yray, F.: Application of Adaptive Crisis Management Theory: The Dynamics of Leadership in Times of Crisis. *Excellencia: International Multi-disciplinary Journal of Education* (2994-9521), 2023, 1(5), 159-170. [https://www.researchgate.net/publication/376646061\\_Application\\_of\\_Adaptive\\_Crisis\\_Management\\_Theory\\_The\\_Dynamics\\_of\\_Leadership\\_in\\_Times\\_of\\_Crisis](https://www.researchgate.net/publication/376646061_Application_of_Adaptive_Crisis_Management_Theory_The_Dynamics_of_Leadership_in_Times_of_Crisis)

35. Wolbers, J.: Understanding distributed sensemaking in crisis management: The case of the Utrecht terrorist attack. *Journal of Contingencies and Crisis Management*, 2022, 30(4), 401-411. <http://dx.doi.org/10.1111/1468-5973.12382>

36. Xue, L., Zhang, Q., & Zhong, K.: Basic Concepts: Crisis and Crisis Management. In *Crisis Management in China: Challenges of the Transition* (pp. 23-43). Singapore: Springer Nature Singapore, 2022. <http://dx.doi.org/10.1007/978-981-16-8706-8>

37. Zhou, Y., Draghici, A., Abbas, J., Mubeen, R., Boatca, M. E., & Salam, M. A.: Social media efficacy in crisis management: effectiveness of non-pharmaceutical interventions to manage COVID-19 challenges. *Frontiers in Psychiatry*, 2022, 12, 626134. <https://doi.org/10.3389/fpsy.2021.626134>

**Primary Paper Section: A**

**Secondary Paper Section: AE, AG**