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## Research Article

### The Role of Crisis Management Strategies in Ensuring the Organizational Resilience of Multipurpose Cooperative in Davao Del Norte

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## ABSTRACT

This study investigates the role of crisis management strategies in enhancing the resilience of multipurpose cooperatives in Davao del Norte. Specifically, it explores the effectiveness of prevention, cooperation, containment, and confrontation in addressing operational disruptions and sustaining organizational stability. Given the unpredictable nature of crises, the study aligns with Sustainable Development Goals (SDG) 8 (Decent Work and Economic Growth) and SDG 9 (Industries, Innovation, and Infrastructure), emphasizing the importance of resilient cooperative infrastructures in fostering economic growth and industrial innovation. The research utilized convenience sampling to survey 205 respondents from a population of 92 cooperatives through face-to-face structured questionnaires. Findings revealed a significant relationship between crisis management strategies and organizational resilience. Regression analysis showed that cooperation, containment, and confrontation significantly influenced resilience ( $p < 0.05$ ). These strategies enable cooperatives to effectively navigate crises and sustain operations. This study underscores the need for proactive and adaptable crisis management strategies to strengthen cooperative resilience, safeguard economic stability, and enhance community well-being.

**Keywords:** Crisis management strategies, Organizational Resilience, Multipurpose Cooperatives, Quantitative Research Design, Correlation Technique, Philippines.

## Background

In today's society, organizations face instability in various forms that threaten their function, survival, and operations (Ako 2023, p. 1).

Ritter and Pedersen (2020, p. 2) note that unforeseen events can impair operational efficiency and effectiveness, leading to financial, strategic, and operational losses during crises

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(Farooq et al. 2021, p. 1). Businesses worldwide are challenged by restrictions that sometimes force them to cease operations (Pedersen, Ritter & Benedetto 2020, para. 1). These unanticipated events highlight the need for organizations to respond swiftly and adapt to maintain resilience.

Prior research indicates that factors such as crisis management experience, business size and classification, and the degree of technology adoption can shape how strategic initiatives impact overall business performance (Caroenan & Embalzado 2021, pp. 47-71). Even though organizations have applied the strategies recommended in the literature, these approaches have not been effective as a one-size-fits-all solution. Organizational resilience refers to the built-in strengths that allow them to prepare for, respond to, and bounce back from emergencies and difficult situations (Limpai-bool, Chaisuwan & Buranapin 2019, pp. 87-114). Without adequate resilience capacity, the perceived challenge may lead to the organization's risk of shutting down business operations (Suryaningtyas et al. 2019, para. 1). There is a need for organizations to formulate resilience capacity in highly volatile and uncertain times which allows them to deal effectively with the unexpected occurrences, survive from crisis, and attain future successful endeavors (Duchek 2019, para. 1).

Consequently, various companies develop management strategic approaches to achieve an adequate resilience that organizations need to acquire by utilizing their available resources as a result of recognizing and addressing the need to adapt and survive (Heredia et al. 2022, para. 1). The occurrence of disruptive events became more and more frequent and regular; thus, the development of crisis management strategies is vital for the government and other related economic areas. These strategies that will be developed should ensure improvement of resilience that the organization will achieve (Pinkwart, Schigen & Schlotboller 2022, para. 1). Crisis management approaches varied across distinct phases, reflecting shifts in strategic priorities and response mechanisms as the situation evolved (T Woratanarat, P Woratanarat & Jirathananuwat 2022, pp. 370-

389). Additionally, the main goal of organizations amidst and after the occurrence of unforeseen events is to survive and maintain satisfactory and effective organizational performance. Hence, its ability to recover from crises is dependent on the entrepreneurial ability of the decision makers on how they manage catastrophe (Cucculelli & Peruzzi 2020, para. 1). Recently and currently faced crises emphasize how vital achieving resilience is. However, despite knowing the importance of bouncing back, some organizations survive while others don't (Haase & Vakilzadeh 2020, para. 1). This clearly shows that a well-established strategy of dealing with crises leads to a successful and resilient organization (Montes & Suarez 2020, p. 1). Therefore, uncertain times reveal the need to respond in innovative ways (He, Huang, Choi & Bilgihan 2022, para. 1). There is a gap in research investigating the relationship between crisis management and organizational resilience.

Most prior research rarely examines specific strategies for ensuring resilience, indicating a need for further study, especially regarding the relationship between crisis management and resilience. This is particularly urgent in Davao del Norte, where frequent disasters challenge organizations. Enhancing crisis management supports economic and social progress (Batorski 2021, pp. 75-86). Thus, it is important to study how Multipurpose Cooperatives manage risks through crisis management strategies to ensure organizational resilience. Monitoring these strategies is advisable to minimize negative impacts (Lai 2020, para. 5). Duchek (2020, pp. 215-246) identified resilience as a meta-capability, with crisis management as a core ability. Accordingly, this study will add to the literature on the role of crisis management strategies in ensuring organizational resilience.

## Research Objectives

The result of this study is intended to enhance the resilience and adaptability of organizations among Multipurpose cooperatives in Davao del Norte, thus supporting a more robust and sustainable economic environment. Furthermore, this study will present its objectives:

first, to assess various crisis management strategies implemented in Multipurpose Cooperative in terms of prevention strategies, confrontation strategies, cooperation strategies, and containment strategies. Second, the level of organizational resilience, as to adaptability and Agility, should be evaluated. Third, to understand the relationship between crisis management strategies and organizational resilience. Fourth, to determine which domains of crisis management significantly influence the organizational resilience of Multipurpose Cooperative in Davao del Norte.

## Hypothesis

The significance level is set at 0.05. The researchers will employ a null hypothesis, which holds that there is no significant relationship between crisis management strategies and organizational resilience until it is proven.

## Methods

This section shows the methods used in the study. It includes research respondents, instruments, design, and procedures.

## Respondents

The respondents of this study included individuals who held official positions as members of the Board of Directors, Managers, and Supervisors employed in Multipurpose Cooperatives in Davao del Norte, with a minimum of six months' experience in their respective roles to ensure that they had sufficient understanding of organizational activities and procedures. Employees who failed to meet the specified criteria and those who resigned from their roles as members of the Board of Directors, Managers, and Supervisors were omitted. Furthermore, this study involved a total population of 92 multipurpose cooperatives operating in Davao del Norte, as confirmed through email correspondence with the Cooperative Development Authority (CDA) Region XI. The researchers used Raosoft to calculate the required sample size, which determined that a minimum of 75 multipurpose cooperatives was needed to achieve a 95% confidence level with a 5% margin of error. Additionally, the researchers aimed to target at least four respondents per

cooperative (300), resulting in a recommended sample size of 169. However, the actual number of respondents in this study was 205.

In addition, the researcher employed convenience sampling, which, as defined by Stratton (2021, pp. 373-374), is a non-probability sampling technique where participants either self-select to participate or are chosen through face-to-face structured questionnaire because they are the most accessible to the researcher. This method is popular due to its cost-effectiveness, simplicity, and reduced time requirements compared to other sampling strategies. A convenience sample study can achieve high internal validity if the findings are reliable, provided the research is methodologically rigorous and the data is appropriately analyzed. However, such a study is likely to have limited external validity, as the results cannot be readily generalized to populations with characteristics that differ from those of the accessible group from which the sample was drawn. Lastly, respondents were free to withdraw from participating in the survey anytime. If a respondent chose to withdraw as a participant in the study, the researcher stopped all associated research activities.

## Instrument

The researcher adapted and contextualized survey instruments from previous related studies. For the independent variable, which was "Crisis Management Strategies," they adapted the questionnaire from the study of Gihuki, Elizabeth (2020, pp. 63-65), where it had four (4) indicators to assess the various strategies used by the Multipurpose Cooperative in Davao del Norte. Meanwhile, for the dependent variable, which was "Organizational Resilience," the researcher used the study of Ekom, Eluka, and Waribugo (2021, p. 61), where it also had two (2) indicators to evaluate the capacity of a business organization to deal with unexpected events. This study was conducted through surveys to gather essential data, wherein the respondents answered the questionnaire using a Likert scale. Additionally, only relevant questions were included in the modified questionnaires, which were checked by the adviser and validated by the panel.

## Design and Procedure

The study adopted a quantitative, non-experimental, and descriptive correlational design to understand the relationship between crisis management strategies and organizational resilience. A descriptive correlational design pertains to identifying a relationship between variables. Its primary goal was to determine a relationship or confirm the presence of multiple variables, which needed to be identified and described (Devi et al. 2022, pp. 64-65). Moreover, the descriptive correlational design enabled prediction-making and testing correlations between and among variables (Stangor & Walinga 2011, para. 18).

The survey was conducted in the Second Semester of the School Year 2024-2025, and the researchers disseminated questionnaires to employees associated with the Multipurpose Cooperative sector in Davao del Norte. The data gathered was analyzed and statistically assessed. The study used the mean, Pearson-r, and multiple regression analysis as statistical tools. The mean represented the average and determined the crisis management and organizational resilience level. Pearson-R was employed to identify the relationship between crisis management strategies and organizational resilience. At the same time, regression analysis was used to ascertain whether there were domains of crisis management strategies that significantly influenced organizational resilience.

## Result and Discussion

This section presents the results and discusses the data gathered in the study. It evaluates crisis management strategies regarding Prevention, Confrontation, cooperation, and Containment. It examines how these strategies contribute to organizational resilience, explicitly focusing on Agility and adaptability

among multipurpose cooperatives in Davao del Norte.

### RO1: Level of Crisis Management Strategies among Multipurpose Cooperatives in Davao del Norte

Table 1 shows the mean scores and standard deviations of the crisis management strategies of multipurpose cooperatives in Davao del Norte, along with their corresponding descriptive levels. The overall mean score was 4.28, with a standard deviation of 0.51, indicating a very high descriptive level. This means crisis management strategies such as Prevention, cooperation, Confrontation, and Containment are highly observed in implementing crisis management among multipurpose cooperatives in Davao del Norte. Scholarly work illustrates that organizations' capability to address crises focuses on the principles of "crisis management" and "resilience," emphasizing both strategic preparation and operational execution (Burhan et al. 2021, para. 11). Similarly, in the study Ensuring Organizational Resilience in Times of Crises, highlights that although crises can sometimes occur despite preventive measures, having a comprehensive crisis management plan is essential. This plan enables organizations to navigate a crisis's complex challenges, reducing the likelihood of irreversible harm when addressed promptly, professionally, and proactively (Fleming 2021, p. 34).

Containment had the highest mean of 4.33, with a standard deviation 0.56. Cooperation scored 4.31, with a standard deviation of 0.56. The prevention strategy had a mean of 4.25, with a standard deviation of 0.63; Confrontation had the lowest mean of 4.24, with a standard deviation of 0.57. The data shows that the crisis management strategies for Prevention, Confrontation, cooperation, and Confinement are highly effective, resulting in a high descriptive level for all indicators.

*Table 1. Level of Crisis Management Strategies among Multipurpose Cooperatives in Davao del Norte*

| Indicator      | Mean        | SD          | Descriptive Level |
|----------------|-------------|-------------|-------------------|
| Containment    | 4.33        | 0.56        | Very High         |
| Cooperation    | 4.31        | 0.56        | Very High         |
| Confrontation  | 4.24        | 0.57        | Very High         |
| Prevention     | 4.25        | 0.63        | Very High         |
| <b>Overall</b> | <b>4.28</b> | <b>0.51</b> | <b>Very High</b>  |

Containment stands out as the most evident indicator according to the top management of cooperatives in Davao del Norte, who emphasize the need to control and limit crisis impact. This involves protecting the organization's image, maintaining client trust, and managing stakeholder expectations throughout the crisis. The crisis management process typically follows a five-stage life cycle: signal detection, prevention, damage control, containment, recovery, and learning (Bhaduri 2019, para. 2). Reviewing these stages clarifies the role of crisis management strategies and their interventions (Alzoubi & Jaaffar 2020, p.11).

Cooperation is equally significant. The data shows that collaborative efforts are essential for addressing crisis challenges. Consulting diverse opinions, leveraging expertise, and coordinating with government agencies make situations more manageable. Crisis management often relies on the collective efforts of individuals from different organizations and management levels (Bynander & Nohrstedt 2019, para. 1). Strong coordination between governmental and non-governmental organizations is crucial during emergencies (Alsawidan et al. 2024, para. 1).

Confrontation is another key indicator, reflecting how management responds to crises. Cooperatives gather accurate information to understand the crisis' cause and turn risks into opportunities, learning from past failures. Addressing crises effectively requires balancing regular operations with implementing crisis responses. During the confrontation phase, it's important to empower the crisis management team to execute plans decisively (Al Eid & Arnout 2020, para.56). Confrontation, identification, and reconfiguration are phases of crisis management, with confrontation being vital for recovery and immediate solutions (Spais & Paul 2021, para. 1).

Prevention strategies are highly valued by cooperative management. Vulnerability audits help identify weaknesses, and thorough policies ensure risks are addressed before they escalate. Well-prepared organizations can respond proactively, facilitating efficient containment and recovery (Tokakis, Polychroniou &

Boudtrias 2019, para. 12). Prevention should be prioritized before and during any crisis (Lai & Wong 2020, para. 3).

To conclude, these four indicators of crisis management strategies emphasize the critical importance of effective crisis management. Prevention, Confrontation, cooperation, and Containment all contribute to managing crises successfully, with Containment being highlighted as the most crucial indicator. Therefore, cooperation with professional management teams is essential for preparing for any unavoidable crisis (Motarjemi 2023, p. 1).

#### RO2: Level of Organizational Resilience among Multipurpose Cooperatives in Davao del Norte

Table 2 presents the mean scores and standard deviations for the organizational resilience of multipurpose cooperatives in Davao del Norte, focusing on Agility and adaptability, along with their respective descriptive levels. The overall mean score of 4.41, with a standard deviation of 0.48, reflects a very high descriptive level. This suggests that adaptability and Agility are highly observed in ensuring organizational resilience. At the beginning of the twenty-first century, organizations have experienced significant changes. The unpredictable nature of these changes, combined with the greater demands of today's competitive setting, requires organizations to develop competitive traits such as resilience and Agility. These traits are closely tied to knowledge management, which allows organizations to adapt smoothly to environmental changes, positively influencing their performance stability (Ibrahim et al. 2021, p. 1).

Adaptability has a mean score of 4.43 and a standard deviation of 0.53, while Agility has a mean score of 4.38 and a standard deviation of 0.51. The overall mean score is 4.41, with a standard deviation of 0.48. This means that both Agility and adaptability are highly observed, which resulted in a very high level of organizational resilience. Implementing adaptability and Agility enables multipurpose cooperatives to adapt to changes and respond quickly to challenges.

Table 2. Level of Organizational Resilience among Multipurpose Cooperatives in Davao del Norte

| Indicator      | Mean        | SD          | Descriptive Level |
|----------------|-------------|-------------|-------------------|
| Adaptability   | 4.43        | 0.51        | Very High         |
| Agility        | 4.38        | 0.51        | Very High         |
| <b>Overall</b> | <b>4.41</b> | <b>0.48</b> | <b>Very High</b>  |

Organizational resilience is more than a response to isolated disasters; it encompasses an organization's overall capacity and adaptability. Resilience involves recovering from setbacks, enhancing flexibility, and better equipping the organization for future challenges. This makes it a crucial management priority. Ultimately, resilience is about constructively adapting to constant change—an essential skill in today's shifting environment (Reich and Al 2019, p. 1).

The data gathered highlights adaptability as a highly descriptive key indicator of organizational resilience. This suggests that organizational resilience is practiced among multipurpose Davao del Norte cooperatives. Furthermore, the findings indicate that most multipurpose cooperatives respond swiftly and effectively to customers' needs during times of crisis. These conclusions are supported by the survey questionnaires collected by the researchers. An organization must adjust to internal changes during or after a crisis (Kim 2020, p. 24).

Resilience is also supported by predicting changes, managing risks, maximizing resources, and seizing opportunities—all rooted in adaptability (Yuan et al. 2022, pp. 85-99). Organizations with strong awareness and adaptability are better able to manage disruptions: awareness enables organizations to assess risks and opportunities proactively, while adaptability allows them to adjust structures and processes to recover from setbacks (Rahi 2019, para. 3).

In addition, Agility, another key indicator of organizational resilience, also demonstrates a very high descriptive level. This indicates that multipurpose cooperatives in Davao del Norte exhibit a strong commitment to innovation. The data gathered reveals that top management consistently strives to adopt new marketing techniques in response to changes and ensures introducing new products to meet

customer needs. Such strategies enable these cooperatives to remain resilient and thrive even during times of crisis. Agility refers to an organization's flexible ability to manage changes and uncertainties in its environment (Mrugalska and Ahmed 2021, para. 24). This further emphasizes the critical importance of organizational Agility and resilience in helping organizations overcome and thrive through crises. Furthermore, Agility is positively influenced by both resilience and crisis management (Bek Yağmur and Aydintuğ Myrvang 2023, para. 11). Survival for cooperatives, which typically face resource constraints in an unpredictable environment, depends on the implementation of a well-defined strategy that fosters agile leadership and strengthens entrepreneurial resilience (Lahcen et al. 2024, para. 1).

In discussing an organization's strategic Agility, various factors must be considered, including its organizational capabilities, human resources, technology, and planning (the ability to achieve goals), flexibility (the ability to adapt to market changes using available resources), responsiveness (awareness of changes, seizing opportunities, managing threats, and meeting evolving customer demands), and speed (the capacity to act swiftly). The crisis created can be viewed as an opportunity for organizations to reflect on their adaptability to changing conditions and, at its core, their Agility (Ilknur 2022, para. 1).

**RO3: Significance of the Relationship between Crisis Management Strategies and Organizational Resilience among Multipurpose Cooperatives in Davao del Norte**

Table 3 illustrates the mean and standard deviation for Crisis Management Strategies and Organizational Resilience. Crisis Management Strategies have a mean score of 4.28 with a standard deviation of 0.51, indicating a very

high descriptive equivalent. On the other hand, Organizational Resilience has a mean score of 4.41 with a standard deviation of 0.48, reflecting a very high descriptive level. The analyzed data yielded a p-value of less than 0.001, indicating a significant relationship between Crisis Management Strategies and Organizational Resilience. This highly substantial p-value strongly suggests that the strategies employed in crisis management are crucial in fostering organizational resilience. The clear statistical

evidence underlines the importance of these strategies in enhancing an organization's ability to recover and adapt to challenges. Additionally, the r-value of 0.753\* demonstrates a high positive correlation, suggesting that organizational resilience increases as crisis management strategies are enhanced. Therefore, the null hypothesis is rejected in this study, confirming a significant connection between crisis management strategies and organizational resilience.

*Table 3. Significance of the Relationship between Crisis Management Strategies and Organizational Resilience among Multipurpose Cooperatives in Davao del Norte*

| Variables                           | Mean | SD   | r-value | p-value | Decision  |
|-------------------------------------|------|------|---------|---------|-----------|
| <b>Crisis Management Strategies</b> | 4.28 | 0.51 |         |         |           |
| <b>Organizational Resilience</b>    | 4.41 | 0.48 |         |         |           |
|                                     |      |      | 0.753*  | <.001   | Reject HO |

**Interpretation:** Significant Positive Relationship

\*Significant at 0.05 significance level

The table above demonstrates the two variables that have a positive correlation. It highlights the critical role that effective crisis management can play in improving organizational resilience, making it an essential focus for the board of directors, managers, supervisors, and decision-makers looking to strengthen the organizational resilience of Multipurpose Cooperatives in Davao del Norte. Consequently, effective crisis management requires understanding potential risks, strategic planning, and making quick, decisive decisions under pressure. Organizations can better withstand future disruptions by implementing crisis management strategies and strengthening their resilience (Zainab 2024, p. 33). Moreover, in the study of Monternel, Kilag, and Restauro (2023, p. 280), effective crisis management is a key component of organizational resilience.

The study incorporated the resource-based theory of Penrose (2009), which emphasizes the role of internal resources in achieving sustainability and competitive advantage. Different resources must be utilized to make crisis management strategies effective and valuable. A more resilient environment was created, leading to more competitive and inclusive business practices. Cooperatives must use their different resources and perform innovations to

adapt and address their members' and customers' new demands and needs (Chen & Zhao 2020, p. 3).

In Payton's (2021, pp. 1-33) study, organizational leaders need to implement plans to lessen the effects of crises for the organization's good. Using crisis management techniques is one practical way to reduce these difficulties. A recovery crisis management plan is necessary to safeguard the organization's financial stability and reputation when a crisis unexpectedly arises. Public relations directors use these tactics to handle crises by acting quickly and forcefully, halting additional harm and disturbance that can cause monetary losses. Ultimately, crisis management techniques serve as the foundation for crisis response strategy, allowing businesses to endure and bounce back from disasters.

Crisis management is a complex field that calls for a blend of rapid analysis, introspection, and strategic vision to turn obstacles into chances for development. In an increasingly uncertain global world, this all-encompassing approach is crucial for firms to survive catastrophes and become stronger and more resilient (Kecun 2024, p. 1). A crisis or strategic issue and the crisis management process are long-term events that occur in phases and involve

the business as a whole, not only as a functional unit. This is the primary reason why a culture is necessary. According to research on crisis management, proactive measures, planning, the creation of manuals, and thorough training improve an organization's chances of surviving and growing (Koronis & Ponis 2018, pp. 7-11).

Moreover, Duchek (2020, p. 225) emphasized that relying solely on a single stream of study is insufficient to define the capabilities underlying the various stages of resilience. Instead, they must expand their focus to encompass other relevant areas, such as crisis management. In crisis management, organizational resilience is fast emerging as a crucial goal for many kinds of companies (Evenseth, Sydnes & Gausdal 2022, p. 11).

#### RO4: Regression Analysis on the Influence of Crisis Management Strategies on Organizational Resilience

Regression analysis is a statistical tool to identify which Crisis Management Strategies' domains positively impact Organizational Resilience. Analyzing the relationships between different crisis management strategies and resilience outcomes helps determine which methods are most effective in strengthening an organization's ability to adapt and recover from disruptions. Understanding these

relationships allows organizations to prioritize strategies to enhance their resilience and improve their response to future crises.

The regression analysis results show varying effects of crisis management strategies on organizational resilience. The Prevention strategy has an unstandardized coefficient (B) of 0.014 and a standardized coefficient ( $\beta$ ) of 0.018, with a t-value of 0.259 and a p-value of 0.796. Since the p-value is more significant than 0.05, the Prevention strategy does not have a statistically significant impact on organizational resilience and is not a significant predictor in this model. In contrast, the Confrontation strategy has a B value of 0.156, a  $\beta$  of 0.184, a t-value of 2.435, and a p-value of 0.016, indicating a statistically significant positive effect on resilience. This suggests that increased Confrontation strategies are associated with enhanced organizational resilience. The Cooperation strategy, with a B value of 0.376, a  $\beta$  of 0.434, a t-value of 6.096, and a p-value of <0.001, demonstrates a highly significant and positive impact on resilience, making it one of the most influential strategies in the model. Similarly, the Containment strategy shows a B value of 0.196, a  $\beta$  of 0.229, a t-value of 3.376, and a p-value of <0.001, indicating a statistically significant positive contribution to organizational resilience. To clearly illustrate the data described above, refer to the table below.

*Table 4. Regression Analysis on the Influence of Crisis Management Strategies on Organizational Resilience*

| Crisis Management Strategies                             |                                 |                               |         |         |                  |
|--|---------------------------------|-------------------------------|---------|---------|------------------|
| Indicators   | B (Unstandardized Coefficients) | B (Standardized Coefficients) | t-value | P-value | Decision         |
| constant   | 1.231                           |                               | 6.696   | <.001   |                  |
| <b>Prevention</b>  | 0.014                           | 0.018                         | 0.259   | 0.796   | Do not reject HO |
| <b>Confrontation</b>                                     | 0.156                           | 0.184*                        | 2.435   | 0.016   | Reject HO        |
| <b>Cooperation</b>                                       | 0.376                           | 0.434*                        | 6.096   | <.001   | Reject HO        |
| <b>Containment</b>                                       | 0.196                           | 0.229*                        | 3.376   | <.001   | Reject HO        |
| Dependent Variable:                                      | Organizational Resilience:      |                               |         |         |                  |
| R = 0.778  | $R^2 = 0.0606$                  |                               |         |         |                  |
| F-ratio = 76.907   | p-value < .001                  |                               |         |         |                  |
| <b>Interpretation:</b> Significant Positive Relationship |                                 |                               |         |         |                  |

\*Significant at 0.05 significance level

Among the crisis management strategies analyzed, only Cooperation, Containment, and Confrontation emerged as significant predictors of organizational resilience, with all having p-values less than 0.05. This indicates that these strategies are key contributors to enhancing resilience within organizations. Specifically, the positive impact of Cooperation, Containment, and Confrontation suggests that organizations should prioritize these strategies to strengthen their ability to withstand and recover from crises. In contrast, the Prevention strategy did not show a statistically significant effect on organizational resilience, with its p-value indicating no meaningful contribution to resilience outcomes. Based on these findings, it can be concluded that while Cooperation, Containment, and Confrontation are crucial for improving organizational resilience, Prevention may not be as impactful in this context.

As highlighted in Gichuhi's study (2021, p. 69), understanding the role of leadership in organizational resilience is essential, as it directly impacts the organization's success, particularly in times of crisis. During challenging periods, leadership is a critical element of effective cooperation strategies, as it drives collaboration, facilitates decisive actions, and ensures that the organization's resources are strategically aligned to navigate the crisis. In this regard, cooperation strategies are essential in maintaining resilience, especially when confronted with crises. The effectiveness of industrial leaders in promoting the benefits of collaboration and encouraging organizational experts to acquire and share information for organizational resilience is more likely when cooperation strategies and incentives for achieving overall goals are in place (Cotta & Salvador 2020, p. 1538).

Also, in the study by Peters et al. (2022, p. 48), it is highlighted that one of the key lessons for designing future resilience is the use of containment strategies. By implementing containment strategies, organizations can effectively isolate and manage disruptions, preventing them from spreading and minimizing their impact on operations. This approach allows for a quicker, more focused response, helping maintain stability and ensuring that crises are controlled without overwhelming the organization. Another study concluded that the

resilience of communications firms is significantly influenced by various aspects of crisis management, including Changing Path Strategy, Reserve Mobilization Strategy, Group Work Strategy, Crisis Fragmentation Strategy, and Crisis Containment Strategy (Nnamdi & Onuoha 2020, p.1).

Lastly, according to the study by Azadegan and Dooley (2021, p. 25), lessons from the COVID-19 pandemic offer valuable insights into how management strategies for maintaining resilience are best applied, especially in confronting disruptions. In this regard, confrontation strategies are implemented by designing effective crisis communication, understanding the cause, and quickly gathering sufficient information about the crisis. Such approaches enable organizations to respond quickly, reduce crisis impact, and make decisions that protect operations, helping to maintain the organization's stability. An organization's ability to effectively confront challenges and adapt to changes is vital in an unpredictable and rapidly evolving environment. (Georgescu et al. 2024, p. 1).

Crisis management and resilience are explored to identify the key factors influencing an organization's ability to prepare for and respond to crises. This review emphasizes the importance of learning from rare events to improve organizational capabilities and strengthen resilience. A multilevel framework is introduced to help organizations assess their crisis management practices, improve their responses, and build more substantial capabilities, ultimately enhancing their overall resilience to future challenges (Tasic et al. 2019, p. 3).

Finally, Zainab's study (2024, p. 29) highlights the importance of crisis management in reducing threats and ensuring organizational survival, along with the need for strategies to build organizational resilience. This is supported by the fact that Confrontation, cooperation, and containment strategies are key factors that significantly influence organizational resilience. On the other hand, prevention strategies are needed to create a state-wide model that can drive significant improvements in organizations (Zaman & Raihan 2024, p. 590). This study supports the idea that prevention

strategies do not significantly influence organizational resilience.

## Conclusion

Findings show that the use of containment, confrontation, cooperation, and prevention strategies is high, and that these practices contribute to strong organizational resilience, particularly in agility and adaptability. There is a positive correlation between crisis management strategies and organizational resilience, leading to the conclusion that these strategies have a significant influence on resilience. Therefore, the null hypothesis is rejected. The study by Talak (2021, p. 126) further supports this claim, revealing that top management's approach to crisis management has a significant and positive influence on organizational resilience. Also, Nnamdi and Onuoha (2020, p. 9) emphasize that crisis management is a critical foundation for ensuring an organization's stability. However, among the crisis management strategies mentioned, only cooperation, Confrontation, and containment strategies are the domains that significantly influence the organizational resilience of multipurpose cooperatives in Davao del Norte. According to Penrose's (2009) resource-based theory, an organization's internal resources are essential for developing innovative solutions that provide long-term competitive advantage. There is a significant relationship between crisis management, resource availability and utilization, and crisis preparedness in fostering adequate responses to enable recovery during difficult times. Furthermore, if an organization has a high level of resource availability, the likelihood of a crisis occurring lowers as preparedness levels rise, indicating an inverse connection (Bross, Wienand & Krause 2020, para. 4)

## Recommendations

Based on the findings and conclusions, the following recommendations are provided for multipurpose cooperatives in Davao del Norte. Since cooperation, Confrontation, and containment strategies are the domains of crisis management strategies that significantly influence organizational resilience, organizations are advised to maintain them. This includes understanding the cause and quickly gathering

sufficient and accurate information on the crisis for Confrontation; cooperation by consulting with people's opinions, knowledge, and experience; and Containment by protecting the image of the cooperative by avoiding rumors and exaggerations about the crisis. These measures were highly observed during the study, which suggests a significant impact on ensuring organizational resilience. Employees must stay informed and design effective crisis communication and information systems as key measures to confront and cope with crises.

Furthermore, clients and consumers of multipurpose cooperatives should actively engage in cooperative meetings, provide constructive feedback, and promote the cooperative within the community to significantly enhance its impact, providing them with greater confidence in its operations. Moreover, the Cooperative Development Authorities (CDA) and City Disaster Risk Reduction and Management Office (CDRRMO) should offer training courses that cover various crisis management strategies while promoting flexibility and Agility. This will enhance the workforce's adaptability and ability to respond swiftly to unexpected disruptions. Lastly, future researchers are encouraged to explore the role of prevention strategies towards organizational resilience to understand how proactive measures can mitigate potential crises, especially by investing in physical infrastructure such as backup systems, disaster-resistant buildings, security measures, and fire- and bulletproof doors. This recommendation stems from survey results indicating a low average in these areas, highlighting the need for further investigation and improvement. Future researchers are encouraged to explore other factors that affect organizational resilience and consider expanding the respondent pool to include a more diverse range of organizations and industries. This broader approach can provide a more comprehensive understanding of the various elements that contribute to organizational resilience.

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## References

Ako, E 2023, Effects of Crisis Management on the Performance of Employees: Case of The University of Bamenda (UBa), *Frontiers in Management Science* 2(2), pp.53-68. Retrieved February 25, 2024 from doi: <https://doi.org/10.56397/fms.2023.04.07>

Al Eid, NA & Arnout, BA 2020, Crisis and disaster management in the light of the Islamic approach: COVID -19 pandemic crisis as a model (a qualitative study using the grounded theory), *Journal of Public Affairs*. Retrieved December 19, 2024, from doi: <https://doi.org/10.1002/pa.2217>.

Alsawidan, A, Sama, A, Sama, A, Mubarak, D, Amani, Alqahtani, SH, Moafa, MQ, Saleh, Alsawidan, M. & Alsuwaidan, M 2024, Comprehensive Review of Integrated Approaches to Cooperation and Collaboration in Emergency Response and Crisis Management, *Journal of Ecohumanism*, [online] 3(8). Retrieved December 19, 2024, from doi: <https://doi.org/10.62754/joe.v3i8.50>

Annarelli, Battistella & Nonino 2020, A Framework to Evaluate the Effects of Organizational Resilience on Service Quality, *Sustainability*, 12(3), p.958. Retrieved February 29, 2024, from doi: <https://doi.org/10.3390/su12030958>.

Andrade, C 2020, The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), pp.86-88. Retrieved January 20, 2025 from doi: <https://doi.org/10.1177/0253717620977000>.

Azadegan, A & Dooley, K 2021, A Typology of Supply Network Resilience Strategies: Complex Collaborations in a Complex World. Retrieved December 19, 2024, from [https://d1wqxts1xzle7.cloud-front.net/86523424/jscm-libre.pdf?1653593906=&response-content-disposition=inline%3B+file-name%3DA+Typology+of+Supply+Network+Resilience.pdf&Expires=1736147871&Signature=NEZq5FA0uXJ7pyiCEHePn8ufVvQIeIqdcJYNAaaDd7BC6Vh7jqf0GqO09uLVW~baEqtj6zzyEBahyGFOLLBAFZA5xcfG2iM9R0hYR-guXi5K~ixjOMNDUKfr8wGlyvW~IuWaMu7HjiKXtMbrp8gJExAwZIA~CnHtH0XhZvO~LBwM6krRgWios6wRDeVsTW8pgTj7g8ep4FvJcs8ANCznuvA3X~d-Nfysxww1gYANsIWVv23qKN4G6Bku6UKN~fQUdR9Ic~0BEL6B62FyUNOJP4yQBwU9v-CeZYLgnsBxy1Bne2gtx-Q031 LBUNfrQBYLDK2PDjTjj3GDjnsdvGKA\\_&Key-Pair-Id=APKAJLOHF5GGSL RBV4ZA](https://d1wqxts1xzle7.cloud-front.net/86523424/jscm-libre.pdf?1653593906=&response-content-disposition=inline%3B+file-name%3DA+Typology+of+Supply+Network+Resilience.pdf&Expires=1736147871&Signature=NEZq5FA0uXJ7pyiCEHePn8ufVvQIeIqdcJYNAaaDd7BC6Vh7jqf0GqO09uLVW~baEqtj6zzyEBahyGFOLLBAFZA5xcfG2iM9R0hYR-guXi5K~ixjOMNDUKfr8wGlyvW~IuWaMu7HjiKXtMbrp8gJExAwZIA~CnHtH0XhZvO~LBwM6krRgWios6wRDeVsTW8pgTj7g8ep4FvJcs8ANCznuvA3X~d-Nfysxww1gYANsIWVv23qKN4G6Bku6UKN~fQUdR9Ic~0BEL6B62FyUNOJP4yQBwU9v-CeZYLgnsBxy1Bne2gtx-Q031 LBUNfrQBYLDK2PDjTjj3GDjnsdvGKA_&Key-Pair-Id=APKAJLOHF5GGSL RBV4ZA)

Batorski, J 2021, Crisis Management: The Perspective of Organizational Learning, *Eurasian Studies in Business and Economics*, pp.75-86. Retrieved April 19, 2024, from [https://ideas.repec.org/h/spr/eurchp/978-3-030-65085-8\\_4.html#:~:text=Actions%20under-taken%20in%20terms%20of](https://ideas.repec.org/h/spr/eurchp/978-3-030-65085-8_4.html#:~:text=Actions%20under-taken%20in%20terms%20of).

Bek Yağmur, Ö & Aydintuğ Myrvang, N 2023, The effect of organizational agility on cri-

sis management process and organizational resilience: Health sector example, International Journal of Disaster Risk Reduction, [online] 96, p.103955. Retrieved December 20, 2024, from doi: <https://doi.org/10.1016/j.ijdrr.2023.103955>.

Bento, F, Garotti, L, & Mercado, MP 2021, Organizational resilience in the oil and gas industry: A scoping review, Safety Science, 133, p.105036. Retrieved February 26, 2024, from doi: <https://doi.org/10.1016/j.ssci.2020.105036>.

Bhaduri, RM 2019, Leveraging Culture and Leadership in Crisis Management, European Journal of Training and Development, 43(5/6), pp.554–569. Retrieved December 19, 2024, from doi: <https://doi.org/10.1108/ejtd-10-2018-0109>.

Bross, L, Wienand, I, & Krause, S 2020, Batten Down the Hatches—Assessing the Status of Emergency Preparedness Planning in the German Water Supply Sector with Statistical and Expert-Based Weighting, Sustainability, 12(17), p.7177. Retrieved January 17, 2025 from doi: <https://doi.org/10.3390/su12177177>

Burhan, M, Salam, MT, Hamdan, OA & Tariq, H 2021, "Crisis management in the hospitality sector SMEs in Pakistan during COVID-19", International Journal of Hospitality Management, 98, p.103037. Retrieved December 18, 2024, from doi: <https://doi.org/10.1016/j.ijhm.2021.103037>.

Bynander, F & Nohrstedt, D 2019, Collaborative Crisis Management. Collaborative Crisis Management, pp.1–12. Retrieved December 19, 2024, from doi: <https://doi.org/10.4324/9780429244308-1>.

Caroennan, W & Embalzado, H 2021, The Impacts of COVID-19 Pandemic and Strategic Responses: Insights from Business Owners in Thailand, pp. 47-71. Retrieved September 8, 2025, from <https://search.asean-cites.org/article.html?b3BlbkFydGljbGU-maWQ9NjI5Mzk5>

Chen, R, Xie, Y, & Liu, Y 2021, Defining, Conceptualizing, and Measuring Organizational Resilience: A Multiple Case Study, Sustainability, 13(5), p.2517. Retrieved March 02, 2024, from doi: <https://doi.org/10.3390/su13052517>

Chen, T & Zhao, Y 2020, Demystifying the secret of China Evergrande Group 's online house transactions during COVID-19 crisis. Retrieved January 18, 2025 from <https://finance.sina.com.cn/roll/2020-03-07/doc-iimxyqyz8469103.shtml>

Cotta, D & Salvador F 2020, Exploring the antecedent of organizational resilience practices — A transformative approach, pp. 1531-1559. Retrieved January 20, 2025, from 15 <https://www.emerald.com/insight/content/doi/10.1108/ijopm-12-2019-0827/full/pdf31..1559>

Cucculelli, M & Peruzzi, V 2018, Post-crisis firm survival, business model changes, and learning: evidence from the Italian manufacturing industry, Small Business Economics. Retrieved March 05, 2024, from doi: <https://doi.org/10.1007/s11187-018-0044-2>.

Devi, B, Devi, R, Pradhan, S, Giri, D, Lepcha, N & Basnet, S 2022, Application of Correlational Research Design in Nursing and Medical Research, 65(11), pp.60–69. Retrieved March 11, 2024, from doi: <https://doi.org/10.17605/OSF.IO/YRZ68>

Duchek, S 2020, Organizational resilience: a capability-based conceptualization, Business Research, 13(1), pp.215–246. Retrieved February 25, 2024, from doi: <https://doi.org/10.1007/s40685-019-0085-7>.

Duchek, S, Raetze, S & Scheuch, I 2019, The role of diversity in organizational resilience: a theoretical framework, Business Research, 13(2). Retrieved February 25, 2024, from doi: <https://doi.org/10.1007/s40685-019-0084-8>.

Ekom, EA, Eluka, J, & Waribugo, S 2021, Dynamic Capabilities and Organizational Resilience of Manufacturing Firms in Nigeria, pp. 48-64. Retrieved February 25, 2024, from doi: <https://doi.org/10.1177/0972262920984545>.

Evenseth, LL, Sydnes, M & Gausdal, AH 2022, Building Organizational Resilience Through Organizational Learning: A Systematic Review, *Frontiers in Communication*, [online] 7. Retrieved March 11, 2024, from doi: <https://doi.org/10.3389/fcomm.2022.837386>.

Farooq, S, Ahmed, S, Makhdoomi, M, & Akhtar, S 2021, Performance Evaluation in Crises; An Organizational Perspective, *International Journal of Management (IJM)*, 12(2), 539-545. Retrieved February 25, 2024, from [https://www.researchgate.net/publication/349590860\\_Performance\\_EvaluationinCrisesAnOrganizationalPerspective](https://www.researchgate.net/publication/349590860_Performance_EvaluationinCrisesAnOrganizationalPerspective).

Georgecu, I, Bocean C, Varzaru A, Rotea C, Mangra M, & Mangra, G 2024, Enhancing Organizational Resilience: The Transformative Influence of Strategic Human Resource Management Practices and Organizational Culture, pp. 1-21. Retrieved January 20, 2025, from <https://www.mdpi.com/2071-1050/16/10/4315>

Gichuhi, J 2021, Shared Leadership and Organizational Resilience: A Systematic Literature Review, pp 67-88. Retrieved December 19, 2024, from [https://d1wqtxts1xzle7.cloudfront.net/70416296/Shared\\_Leadership\\_and\\_Org\\_organizational\\_Resilience\\_A\\_Systematic\\_Literature\\_Review-libre.pdf?1632888815=&response-content-disposition=inline%3B+filename%3DShared\\_Leadership\\_and\\_Organizational\\_Res.pdf&Expires=1736150516&Signature=K1x0IRdrweuX2n9otLCZGNJe4s-WaCf5n~~XM0Dy1YTm3xJ4gKj9HgoeLJfW5TptruOQtelGSEyHtOUvSEFefuo3~vMNqFM4ZOWZDHvDD~Bn3CPz8xkV1YenpjDBi](https://d1wqtxts1xzle7.cloudfront.net/70416296/Shared_Leadership_and_Org_organizational_Resilience_A_Systematic_Literature_Review-libre.pdf?1632888815=&response-content-disposition=inline%3B+filename%3DShared_Leadership_and_Organizational_Res.pdf&Expires=1736150516&Signature=K1x0IRdrweuX2n9otLCZGNJe4s-WaCf5n~~XM0Dy1YTm3xJ4gKj9HgoeLJfW5TptruOQtelGSEyHtOUvSEFefuo3~vMNqFM4ZOWZDHvDD~Bn3CPz8xkV1YenpjDBi)

gNj83aykgrJw4EX7Fr7WCU7NRGLhAx0HETyqoW744200luxed~r87a86lFcvNXFRuvpUbx-Hv92SRYLLD-K4tB~I9Cipry3VwpTQ~BMnA3nRAibGex~X4rY~hshCXUYIz8N1J0u1ZquQvFQDcJM8kZ7UebRFG7tR9Jo4FsPe0H3i5XOncl7GQ3bnqSS~aOCOE5TKkn-Eu8AatebU5SfapTS8Q\_&Key-Pair-Id=APKAJL OHF5GGSLRBV4ZA

Gikuhi, EH 2020, Crisis Management Strategies and Business Continuity for Star Rated Hotels in Kenya. [online] erepository.uonbi.ac.ke. Retrieved February 13, 2024, from <http://erepository.uonbi.ac.ke/handle/11295/154032>.

He, Z, Huang, H, Choi, H, & Bilgihan, A 2022, Building organizational resilience with digital transformation, *Journal of Service Management*. Retrieved February 29, 2024, from doi: <https://doi.org/10.1108/josm-06-2021-0216>

Heredia, J, Rubiños, C, Vega, W, Heredia, W & Flores, A 2022, New Strategies to Explain Organizational Resilience on the Firms: A Cross-Countries Configurations Approach, *Sustainability*, 14(3), p.1612. Retrieved February 26, 2024, from doi: <https://doi.org/10.3390/su14031612>.

Huang, W, Chen, S, & Nguyen, LT 2020, Corporate Social Responsibility and Organizational Resilience to COVID-19 Crisis: An Empirical Study of Chinese Firms. *Sustainability*, 12(21), p.8970. Retrieved February 29, 2024, from doi: <https://doi.org/10.3390/su12218970>.

Ibrahim Ismael, Z, Mamdouh El-kholy, S, & Saeed Ahmed Abd-Elrhaman, E 2021, Knowledge Management as a predictor of Organizational Resilience and Agility, *gyptian Journal of Health Care*, 12(4), pp.1397-1412. Retrieved December 20, 2024, from doi: <https://doi.org/10.21608/ejhc.2021.209025>.

Jia, X, Chowdhury, M, Prayag, G, & Chowdhury, H 2020, The role of social capital on proactive and reactive resilience of organizations post-disaster, *Science Direct*. Retrieved February 27, 2024, from

<https://www.sciencedirect.com/science/article/abs/pii/S2212420920300686#preview-section-abstract>.

Kecun, M 2024, Adaptive Leadership in Crisis: Strategies for Managing Uncertainty and Enhancing Organizational Resilience, International Journal of Economics, Business and Management Studies (EBMS), [online] 11(9), pp.1-1. Retrieved December 20, 2024, from <https://eprajournals.com/IJHS/article/13907>

Keziban, T 2021, Pandemi Koşullarında e-Ticarete Doğru Kurumsal Dönüşüm Sürecinde Kriz Yönetiminin İşlevsellüğünün Analizi: Bir Ulusal Zincirde Örgütsel Güçlenme Üzerindeki Yansımalar. AJIT-e: Online Academic Journal of Information Technology, 12(45), pp.124-153. Retrieved December 19, 2024, from doi: <https://doi.org/10.5824/ajite.2021.02.07.x>.

Kim, Y 2020, Organizational Resilience and Employee Work-Role Performance After A Crisis Situation: Exploring the Effects of Organizational Resilience on Internal Crisis Communication, p. 24. Retrieved December 19, 2024, from [https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1552&&context=comm\\_fac&&sei-re-dir=1&referer=https%253A%252F%252Fscholar.google.com%252Fscholar%253Fhl%253Den%2526as\\_sdt%253D0%25252C%2526as\\_ylo%253D2020%2526q%253Dconfrontation%252Bstrategy%252Bare%252Bssignificant%252Bin%252Borganizational%252Bresilience%2526btnG%253D#search=%22confrontation%20strategy%20significant%20organizational%20](https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1552&&context=comm_fac&&sei-re-dir=1&referer=https%253A%252F%252Fscholar.google.com%252Fscholar%253Fhl%253Den%2526as_sdt%253D0%25252C%2526as_ylo%253D2020%2526q%253Dconfrontation%252Bstrategy%252Bare%252Bssignificant%252Bin%252Borganizational%252Bresilience%2526btnG%253D#search=%22confrontation%20strategy%20significant%20organizational%20)

Koronis, E & Ponis, S 2018, Better than before: the resilient organization in crisis mode, Journal of Business Strategy, 39(1), pp.32-42. Retrieved December 20, 2024, from doi: <https://doi.org/10.1108/jbs-10-2016-0124>.

Lahcen, F, Alzoubi, A, Al-Momani, AM, Najah Alshanableh, Alajarmeh, NS, Rehan Tareq Al-Majali, Mazen Alzyoud, Mohammad Sulieman & Muhammad Turki Alshurideh 2024, The Relationship Between Leadership Agility and Entrepreneurial Resilience Among Jordanian Small and Medium-Sized Enterprises (SMEs). Studies in computational intelligence, pp.17-31. Retrieved December 19, 2024, from doi: [https://doi.org/10.1007/978-3-031-57242-5\\_2](https://doi.org/10.1007/978-3-031-57242-5_2).

Lai, I 2020, Comparing Crisis Management Practices in the Hotel Industry between Initial and Pandemic Stages of COVID-19 - 在線閱讀 - 澳門虛擬圖書館. [online]. Retrieved April 19, 2024, from <https://www.macaudata.mo/show-book?bno=p000190>

Lai, IKW & Wong, JWC 2020, Comparing crisis management practices in the hotel industry between initial and pandemic stages of COVID-19. International Journal of Contemporary Hospitality Management, ahead-of-print(ahead-of-print). Retrieved December 19, 2024, from doi: <https://doi.org/10.1108/ijchm-04-2020-0325>.

Limphaibool, W, Chaisuwan, C & Buranapin, S 2019, A Critical Incident Analysis from Experiences of Executives on Organizational Resilience, pp. 87-114. Retrieved September 8, 2025, from <https://search.asean-cites.org/article.html?b3BlbkFydGjbGUmawQ9NTU2NjYw>

Lladó, A & De, C 2024, La importancia de la respuesta inicial ante una crisis de comunicación: análisis comparativo entre la crisis del Prestige y la de Repsol en Perú, repositorio.comillas.edu. Retrieved February 29, 2024, from <https://repositorio.comillas.edu/xmlui/handle/11531/79093>.

Monternel, BM, Kilag, KT & Restauro, GP 2023, Crisis Response and Employee Engagement: The Dynamics of Organizational Resilience with Fink's Model. Retrieved December 20, 2024, from [https://www.researchgate.net/publication/376646164\\_Crisis\\_Response\\_and\\_Employee\\_Engagement\\_The\\_Dynamics\\_of\\_Organizational\\_Resilience\\_with\\_Fink](https://www.researchgate.net/publication/376646164_Crisis_Response_and_Employee_Engagement_The_Dynamics_of_Organizational_Resilience_with_Fink).

Motarjemi, Y 2023, Chapter 46 - Crisis Management, ScienceDirect. Retrieved December

19, 2024, from <https://www.sciencedirect.com/science/article/abs/pii/B9780128200131000310>.

Mrugalska, B & Ahmed, J 2021, Organizational Agility in Industry 4.0: A Systematic Literature Review, *Sustainability*, [online] 13(15), p.8272. Retrieved December 19, 2024, from doi: <https://doi.org/10.3390/su13158272>.

Nesterenko, S, Nekhai, V, Kolokolchykova, I, Rozumenko, S & Nikitina, T 2022, Anti-crisis Management of Socio-economic systems development in the Global competitive environment, *Review of Economics and Finance*, 2022, 20, 363-377. Retrieved January 20, 2025 from Semanticscholar.org

Nnamdi, I & Onuoha, C 2020, Crisis Management and Organizational Resilience in Telecommunications Firms in Rivers State, *International Journal of Advanced Academic Research*, pp.1-13. Retrieved March 05, 2024, from doi: <https://doi.org/10.46654/ij.24889849.b6114>.

Noor, S, Tajik, O & Golzar, J 2022, Simple Random Sampling. [online] ResearchGate, pp. 78-82. Retrieved March 1, 2024, from [https://www.researchgate.net/publication/366390022\\_Simple\\_Random\\_Sampling](https://www.researchgate.net/publication/366390022_Simple_Random_Sampling)

Payton, P 2021, Crisis Management Strategies for Sustaining Organizations Crisis Management Strategies for Sustaining Organizations During a Crisis During a Crisis. Retrieved December 20, 2024, from <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=12288&context=dissertations>.

Pedersen, CL, Ritter, T & Benedetto, CA 2020, Managing through a crisis: Managerial implications for business-to-business firms, *Industrial Marketing Management*, [online] 88(1), pp.314-322. Retrieved January 20, 2025 from doi: <https://doi.org/10.1016/j.indmarman.2020.05.034>.

Peters, E, Knight, L, Boersma, K, & Uenk, N 2022, Organizing for supply chain resilience: a high reliability network perspective. *International Journal of Operations & Production Management*, pp. 48-69. Retrieved December 19, 2024, from <https://www.emerald.com/insight/content/doi/10.1108/ijopm-03-2022-0167/full/> pdf?title=organizing-for-supply-chain-resilience-a-high-reliability-network-perspective

Pinkwart, A, Schingen, G, Pannes, AT & Schlotböller, D 2022, Improving Resilience in Times of Multiple Crisis, *Schmalenbach Journal of Business Research*, 74(4), pp.763-786. Retrieved March 02, 2024, from doi: <https://doi.org/10.1007/s41471-022-00150-y>.

Rahi, K 2019, Indicators to assess organizational resilience – a review of empirical literature. *International Journal of Disaster Resilience in the Built Environment*, 10(2/3). Retrieved December 20, 2024, from doi: <https://doi.org/10.1108/ijdrbe-11-2018-0046>.

Reich, JW and Al, E 2019, *Handbook of adult resilience*, New York: The Guilford Press. Retrieved February 25, 2024, From [https://www.researchgate.net/publication/254336852\\_Handbook\\_of\\_adult\\_resilience\\_edited\\_by\\_John\\_W\\_Reich\\_Alex\\_J\\_Zautra\\_and\\_John\\_Stuart\\_Hall](https://www.researchgate.net/publication/254336852_Handbook_of_adult_resilience_edited_by_John_W_Reich_Alex_J_Zautra_and_John_Stuart_Hall)

Ritter, T & Pedersen, CL 2020, Analyzing the impact of the coronavirus crisis on business models, *Industrial Marketing Management*, 88, 214-224. Retrieved February 25, 2024, from <https://www.sciencedirect.com/science/article/pii/S001985012030308>

Spais, G & Paul, P 2021, A crisis management model for marketing education: Reflections on marketing education system's transformation in view of covid-19 crisis, *Marketing Education Review*, 31(4), pp.1-18. Retrieved January 17, 2025 from doi: <https://doi.org/10.1080/10528008.2021.1951120>

Stratton, S.J. 2021 'Population Research: Convenience Sampling Strategies', *Prehospital and Disaster Medicine*, 36(4), pp. 373-374. Retrieved January 20, 2025 from doi:10.1017/S1049023X21000649.

Stangor, C & Walinga, J 2019, 3.5 Psychologists Use Descriptive, Correlational, and Experimental Research Designs to Understand Behaviour. [online] Usask.ca. Available at: <https://openpress.usask.ca/introductiontopsychology/chapter/psychologists-us-e-descriptive-correlational-and-experimental-research-designs-to-understand-behavior/>.

Suarez, F & Montes, J 2020, Building Organizational Resilience, Harvard Business Review. Retrieved March 05, 2024, from <https://hbr.org/2020/11/building-organizational-resilience>.

Suryaningtyas, D, Sudiro A, Troena, A, & Irawanto, W 2019, Organizational Resilience and Organizational Performance: Examining the Mediating Roles of Resilient Leadership and Organizational Culture, Academy of Strategic Management Journal. Retrieved March 02, 2024 from <https://www.abacademies.org/articles/organizational-resilience-and-organizational-performance-examining-the-mediating-roles-of-resilient-leadership-and-organizational-8077.html>.

Talak, K 2021, Pandemi Koşullarında e-Ticarete Doğru Kurumsal Dönüşüm Sürecinde Kriz Yönetiminin İşlevselliğinin Analizi: Bir Ulusal Zincirde Örgütsel Güçlenme Üzerindeki Yansımalar. AJIT-e: Online Academic Journal of Information Technology, 12(45), pp.124–153. Retrieved February 25, 2024, from doi: <https://doi.org/10.5824/ajite.2021.02.0.07.x>.

Tasic J, Amir S, Tan J, & Khader M 2019, A multilevel framework to enhance organizational resilience. Retrieved December 20, 2024, from [https://www.researchgate.net/publication/333478102\\_A\\_Multilevel\\_Framework\\_to\\_Enhance\\_Organizational\\_Resilience](https://www.researchgate.net/publication/333478102_A_Multilevel_Framework_to_Enhance_Organizational_Resilience)

Tejon, J, Montserrat, J, & Benito, D 2024, Organisational resilience management model: a case study of joint stock companies operating in Spain, International Entrepreneurship and Management Journal. Retrieved February 25, 2024, from doi: <https://doi.org/10.1007/s11365-024-00967-5>.

Thelisson, S & Meier, O 2024, Regenerating after a global crisis: a case study of resilience, Emerald Insight. Retrieved February 25, 2024, from <https://www.emerald.com/insight/content/doi/10.1108/JBS-01-2023-0015/full.html>.

Thomas, L 2023, An introduction to simple random sampling [online]. Retrieved March 1, 2024, from <https://www.scribbr.com/methodology/simple-random-sampling/>.

Tokakis, V, Polychroniou, P, & Boustras, G 2019, Crisis management in public administration: The three phases model for safety incidents, Safety Science, 113, pp.37–43. Retrieved December 21, 2024 from doi: <https://doi.org/10.1016/j.ssci.2018.11.013>.

Utami, H & Alamanos, E 2022, Resource-Based Theory: A review. Retrieved February 15, 2024 from <https://open.ncl.ac.uk/theories/4/resource-based-theory/>.

Vakilzadeh, K & Haase, A 2020, The building blocks of organizational resilience: a review of the empirical literature, Emerald Insight. Retrieved March 05, 2024, from <https://www.emerald.com/insight/content/doi/10.1108/CRR-04-2020-0002/full.html?skipTracking=true>.

Woratanarat, T, Woratanarat, P & Jirathananuwat, A 2022, Crisis Management during the First Wave of COVID-19 Pandemic Situation, pp. 370-389. Retrieved September 8, 2025, from <https://search.asean-cites.org/article.html?b3BlbkFydGjbGUmawQ9NjgzMDY4>

Yuan, R, Luo, J, Liu, MJ & Yu, J 2022, Understanding organizational resilience in a platform-based sharing business: The role of absorptive capacity. Journal of Business Research, [online] 141(1), pp.85–99. Retrieved December 19, 2024, from doi: <https://doi.org/10.1016/j.jbusres.2021.1.012>

Zainab, A & Kiu Publication Extension 2024, Crisis Management and Resilience Planning in Organizations, [online] 3(3), pp.29–34. Retrieved December 20, 2024, from <https://www.re>

searchgate.net/publication/383273444\_Crisis\_Management\_and\_Resilience\_Planning\_in\_Organizations.  
Zaman, MO & Raihan, MMH 2023, Community resilience to natural disasters: A systemic review of contemporary methods and

theories., Natural Hazards Research, Vol. 3, Issue 3, pp. 583-594. Retrieved December 21, 2024 from doi: <https://doi.org/10.1016/j.nhres.2023.05.003>