

Entrepreneurship and Natural Disasters: Adaptive Leadership and Community Resilience

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ABSTRACT

The increasing frequency and intensity of natural disasters have highlighted the need for innovative approaches to the socioeconomic recovery of affected communities. In this context, this study investigates how adaptive leadership, effectuation, and entrepreneurship can strengthen community resilience and drive sustainable reconstruction strategies. To this end, a systematic literature review (SLR) was conducted, following the PRISMA guidelines, analyzing 45 scientific articles published between 2019 and 2024. The results demonstrate that the interaction between these approaches promotes greater flexibility in decision-making, effective resource mobilization, and the generation of innovative solutions in the face of extreme uncertainties. Empirical evidence also points to the growing role of digital technologies, such as big data, artificial intelligence, and social networks, in optimizing crisis management and coordinating emergency responses. As main contributions, the study integrates multiple theoretical perspectives to advance knowledge on adaptive leadership in natural disasters and suggests directions for future research, including empirical studies that assess the application of the practices identified in different contexts. The research implications reinforce the importance of formulating public policies and initiatives that foster resilient entrepreneurship, aiming to transform challenges into opportunities for agile and sustainable socioeconomic reconstruction.

Keywords: Adaptive Leadership, Disaster Response, Resilience, Entrepreneurial Crisis Management

INTRODUCTION

In recent years, Brazil has faced natural disasters of significant magnitude, intensifying the socioeconomic vulnerability of thousands of people and highlighting the need for rapid and effective responses. Floods in Rio Grande do Sul (2024), tragedies in Petrópolis (2022), Pernambuco (2022), and on the coast of São Paulo (2023) resulted in the loss of hundreds of lives and the displacement of millions of individuals. These events underscore the urgency of innovative

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and adaptive approaches for the recovery of affected communities, with an emphasis on entrepreneurial initiatives that drive economic reconstruction and local resilience.

Decision-making in crisis contexts faces significant challenges due to extreme uncertainty and resource scarcity. Adaptive leadership theory (Heifetz & Linsky, 2002) emphasizes the importance of flexible and responsive strategies to address unpredictable scenarios, a principle that converges with the effectuation approach (Sarasvathy, 2001). Both highlight the ability of entrepreneurs to mobilize available resources to respond to emerging challenges. In natural disaster situations, this capacity is fundamental for the effectiveness of responses and the strengthening of community resilience, promoting rapid solutions to mitigate adverse socioeconomic impacts.

Effectuation proposes that entrepreneurs make decisions and act based on available resources, allowing for continuous adjustments as new information emerges (Sarasvathy, 2001). In contexts of extreme uncertainty, many entrepreneurs adopt a behavior known as "crazy action" – impulsive and high-risk actions that, despite being unconventional, can be effective in adapting to new scenarios and responding to unexpected challenges (Nelson & Lima, 2020). This behavior is particularly relevant in entrepreneurship in urgent situations, as it enables individuals affected by crises to provide rapid responses to adversities, enhancing initial improvements. If "crazy action" produces positive effects, it can be one of the first necessary contributions to overcoming the crisis and socioeconomic reconstruction, adding to strategic efforts for a more structured "building back better" recovery process (Achieng, Asego & Gyasi, 2023).

Furthermore, the advancement of digital technologies has played a central role in mitigating crises and promoting community resilience (Audretsch *et al.*, 2024; Carvalho, 2022). Tools such as big data, artificial intelligence, and social media enable the coordination of emergency efforts, resource distribution, and support for local enterprises, making responses more agile and effective. The integration of these technologies with adaptive leadership models broadens the impact of recovery initiatives, providing support for better solutions in the face of disasters.

Despite the growing literature on adaptive leadership, effectuation, and entrepreneurship in crisis contexts, there is still a gap in understanding how these approaches interact in extreme scenarios, such as natural disasters. Previous studies have focused separately on organizational resilience or the role of entrepreneurship in mitigating crises (Bornstein, 2007; Polak, 2009). However, investigations that articulate these perspectives in an integrated manner, also considering adaptive entrepreneurial behaviors such as "crazy action" in emergency response, are lacking. This gap limits the formulation of theoretical models applicable to the socioeconomic recovery of affected communities, hindering the implementation of effective adaptive entrepreneurship strategies in natural disasters.

In this context, this study investigates how adaptive leadership, effectuation, and entrepreneurial behaviors, such as "crazy action," can contribute to an entrepreneurship model aimed at the recovery of communities affected by natural disasters in Brazil. To this end, a systematic literature review (SLR) was conducted, based on the PRISMA guidelines, to identify empirical evidence on the application of these approaches in crisis scenarios. The results aim to deepen the theoretical and practical understanding of adaptive entrepreneurship, highlighting its potential to strengthen community resilience and transform extreme challenges into sustainable socioeconomic reconstruction opportunities.

THEORETICAL BACKGROUND

Adaptive Leadership theory, proposed by Heifetz and Linsky (2002), emphasizes that in contexts of high uncertainty, effective leaders must be able to mobilize individuals and communities for dynamic and flexible responses. Differentiating itself from traditional leadership approaches, this theory highlights experimentation, continuous adaptation, and collective mobilization as essential strategies for dealing with emerging challenges. In the context of natural disasters, this response capability is crucial, as it enables the reorganization of resources and the creation of effective emergency solutions. Recent studies indicate that adaptive leadership has played a decisive role in mitigating crises, as it facilitates the articulation of support networks and strengthens community resilience (Audretsch et al., 2024; Duchek, 2018).

Complementing this perspective, Effectuation theory, developed by Sarasvathy (2001, 2008), describes entrepreneurial decision-making in uncertain scenarios. Unlike the traditional causal model, which starts from pre-established goals, effectuation proposes that entrepreneurs use available resources to create new opportunities flexibly and iteratively. In natural disasters, this approach is particularly relevant, as individuals and organizations need to act quickly and strategically, using the means at their disposal to create viable solutions. Lima and Nelson (2020) demonstrate that entrepreneurs who apply the principles of effectuation can transform constraints into innovation, facilitating the socioeconomic recovery of affected communities.

In addition to effectuation, a specific entrepreneurial behavior that stands out in extreme crisis situations is the phenomenon of crazy action, characterized by impulsive and high-risk decisions that, despite appearing unconventional, can generate effective responses in emergency scenarios (Nelson & Lima, 2020). This behavior becomes particularly relevant in natural disaster contexts, where the need for immediate action often requires improvisation and unplanned solutions. "Crazy action" can allow severely impacted individuals and communities to give their first responses to adversities, creating emergency initiatives that, when successful, significantly contribute to socioeconomic reconstruction and the strengthening of local resilience.

Another essential concept for this research is the entrepreneurial profile that plays a strategic role in the recovery of vulnerable communities. This model emphasizes the participation of

marginalized groups in the formulation of sustainable socioeconomic solutions, promoting equity and social cohesion. Iizuka and Costa (2022) highlight that women entrepreneurs have played a central role in post-disaster recovery, mobilizing support networks and applying effectuation principles to overcome structural barriers. This entrepreneurial profile can strengthen community resilience and enhance the positive impact of entrepreneurship in the reconstruction of affected communities.

In parallel, digital innovation has significantly transformed crisis management and community resilience. Tools such as artificial intelligence, big data, and machine learning are increasingly being used to predict risk patterns, optimize resource allocation, and improve emergency communication (Fabbicatti *et al.*, 2020; Purohit *et al.*, 2020). Furthermore, the use of digital platforms and social networks has become an essential resource for organizing rapid responses, allowing greater efficiency in coordinating emergency efforts and expanding the impact of entrepreneurial initiatives in crisis contexts (Correia & Pereira, 2023).

Thus, the intersection between adaptive leadership, effectuation, entrepreneurship, and digital innovation forms a robust theoretical framework for understanding the role of adaptive leadership in natural disasters. These approaches complement each other and demonstrate great potential to transform extreme challenges into sustainable opportunities for socioeconomic reconstruction. Thus, this research is based on these concepts to investigate how strategies associated with adaptive leadership can strengthen community resilience, promoting innovative solutions and a post-crisis recovery process.

METHODS

This systematic literature review was conducted with the aim of investigating how the concepts of adaptive leadership and effectuation can be integrated to strengthen the socioeconomic resilience of vulnerable communities affected by natural disasters. The study sought to understand how these entrepreneurial approaches contribute to response capacity, strategic adaptation, and sustainable reconstruction in crisis scenarios. Thus, the research was guided by the following guiding question: "How can the concepts of adaptive leadership and effectuation be integrated to strengthen the socioeconomic resilience of vulnerable communities affected by natural disasters?"

To ensure methodological rigor, the study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, establishing clear criteria for the inclusion and exclusion of studies, as well as systematic strategies for data search and analysis. Only peer-reviewed articles published between 2019 and 2024 were included, addressing the applicability of adaptive leadership and effectuation theories in natural disaster contexts, with a focus on socioeconomic resilience and the recovery of vulnerable communities. On the other hand, studies that did not address the intersection between adaptive leadership, effectuation, and community resilience, as well as those not peer-reviewed or published before 2019, were excluded.

The search for articles was conducted in the Scopus, Web of Science, IEEE Xplore, and Periódicos CAPES databases, using descriptors in English and Portuguese, combined with Boolean operators ("AND" and "OR") to ensure comprehensiveness and accuracy in the retrieval of studies. The main terms used were: Effectuation, Adaptive Leadership, Disaster Response, Emergency Management, Crisis Management, Resilience, Vulnerable Populations, and Entrepreneurship, in addition to their Portuguese counterparts: *Efetuação, Liderança Adaptativa, Resposta a Desastres, Gestão de Emergências, Gestão de Crises, Resiliência, Populações Vulneráveis, and Empreendedorismo.*

The identified studies were organized in the Zotero reference manager and subjected to a two-stage selection process. In the initial screening, titles and abstracts were analyzed to verify adherence to the inclusion and exclusion criteria. Subsequently, in the full analysis, the selected articles were read in full and underwent a new application of the methodological criteria, resulting in the final definition of the research *corpus*.

The extracted data were categorized into thematic axes, allowing for a structured analysis of: the role of adaptive leadership in resource mobilization, the influence of effectuation on strategic adaptation in uncertain environments, and the intersection of these approaches in strengthening socioeconomic resilience. To deepen the analysis, VOSviewer software was used to map the co-occurrence of keywords in the selected studies. This mapping made it possible to identify patterns in the relationship between entrepreneurial decision-making, adaptive leadership, innovation in crisis scenarios, and social resilience, contributing to the advancement of knowledge about the impact of adaptive entrepreneurship on the socioeconomic recovery of vulnerable communities affected by natural disasters.

DATA PRESENTATION

The systematic literature review resulted in the selection of 45 scientific articles, published between 2019 and 2024, that investigate the relationship between entrepreneurship, leadership, and resilience in natural disasters. The analysis of these studies revealed three main thematic axes: (i) adaptive leadership in resource mobilization and community resilience, (ii) application of effectuation as an entrepreneurial strategy in contexts of uncertainty, and (iii) intersection between technological innovation and inclusive entrepreneurship in post-disaster socioeconomic recovery.

The studies evidenced that adaptive leadership has been a recurring approach in crisis management, allowing for the rapid reorganization of resources and the strengthening of resilience in affected communities. Furthermore, the data show that effectuation, characterized by the creative use of available resources, has been widely employed by entrepreneurs in disaster scenarios, enabling the creation of innovative solutions to address socioeconomic challenges.

The analysis also revealed that the use of digital technologies is on the rise as a disaster response tool. Tools such as big data, artificial intelligence, and social networks were mentioned in more than half of the analyzed studies, being used to optimize resource distribution, facilitate emergency communication, and improve coordination among agents involved in crisis management.

Another relevant data point identified in the systematic review was the protagonism of women in post-disaster entrepreneurship. Several studies highlighted that women entrepreneurs have played a central role in the socioeconomic reconstruction of affected communities, especially through the creation of support networks and socially sustainable businesses.

The analysis of the articles' keywords, conducted with the support of VOSviewer software, demonstrated a strong correlation between the concepts of adaptive leadership, digital innovation, and socioeconomic resilience. Furthermore, the reviewed studies indicate that the implementation of entrepreneurial strategies based on these principles has significantly contributed to the reduction of socioeconomic vulnerability in areas affected by disasters.

The presented data consolidate a robust empirical overview, demonstrating that the interaction between adaptive leadership, effectuation, digital innovation, and entrepreneurship strengthens the response and recovery capacity of vulnerable communities. These findings provide subsidies for improving public policies and crisis management strategies, promoting a more agile and sustainable socioeconomic reconstruction.

DATA ANALYSIS

The data analysis of this research was conducted through a systematic literature review (SLR), following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The objective was to understand how adaptive leadership, effectuation, and inclusive entrepreneurship contribute to the socioeconomic resilience of communities affected by natural disasters. After the final selection of 45 articles, the data analysis focused on identifying thematic patterns, trends in the literature, and intersections between the studied concepts.

The first stage of the analysis involved identifying the main theoretical approaches used in the reviewed studies. It was found that Adaptive Leadership (Heifetz & Linsky, 2002) and Effectuation (Sarasvathy, 2001) are the predominant frameworks in the investigation of entrepreneurship and resilience in crisis scenarios. Furthermore, a growing incorporation of the concept of “crazy action” (Nelson & Lima, 2020), characterized by intuitive and high-risk actions adopted by entrepreneurs in situations of extreme uncertainty, was observed. The presence of these approaches in multiple studies suggests that flexibility in decision-making and continuous adaptation are key elements for post-disaster socioeconomic recovery.

The second stage consisted of categorizing the extracted data based on three main axes: (i) resource mobilization and decision-making in crisis contexts; (ii) strategic adaptation and innovation in uncertain environments; and (iii) intersection between technology, inclusive entrepreneurship, and community resilience. To structure this analysis, VOSviewer software was used, which allowed mapping the co-occurrence of keywords in the reviewed articles. This mapping evidenced the strong relationship between the concepts of adaptive leadership and resilience, as well as the growing influence of digital technologies in crisis management and socioeconomic reconstruction.

The analysis of the articles also demonstrated that the performance of women entrepreneurs has stood out as a relevant factor in post-disaster recovery. Studies such as those by Iizuka and Costa (2022) indicate that women often play a central role in mobilizing support networks and developing businesses that promote social and economic recovery. This finding reinforces the importance of the intersection between entrepreneurship and community resilience, pointing to the need for public policies that encourage the participation of vulnerable groups in post-crisis reconstruction.

Another relevant finding was the correlation between the advancement of digital technologies and the effectiveness of entrepreneurial responses to natural disasters. Tools such as artificial intelligence, big data, and machine learning have been used to predict risk patterns, optimize resource allocation, and facilitate emergency communication (Fabbricatti *et al.*, 2020; Purohit *et al.*, 2020). Furthermore, the use of social networks and digital platforms proved to be an effective strategy for coordinating emergency actions and strengthening community resilience (Correia & Pereira, 2023).

The data analysis allowed us to identify that the combination of adaptive leadership, effectuation, and digital innovation constitutes an effective model for the socioeconomic recovery of communities affected by disasters. Empirical evidence demonstrates that entrepreneurs who adopt these strategies not only minimize the impacts of crises but also transform adversities into sustainable opportunities for reconstruction. Thus, the results of this research contribute to the advancement of knowledge in the area by integrating different theoretical and methodological perspectives, providing subsidies for the improvement of crisis management strategies and resilient socioeconomic development.

PRESENTATION OF RESULTS

The systematic literature review resulted in the identification of 3,965 articles. After the initial screening, 2,914 studies were excluded for not meeting the research scope. The analysis of abstracts led to the elimination of 333 articles, and in the eligibility phase, 45 studies were discarded after full reading. The detailed selection process can be seen in Figure 1. As a result, 49 articles (4 national and 45 international) were considered relevant, consolidating a significant body of knowledge on entrepreneurial responses and socioeconomic resilience in natural disasters.

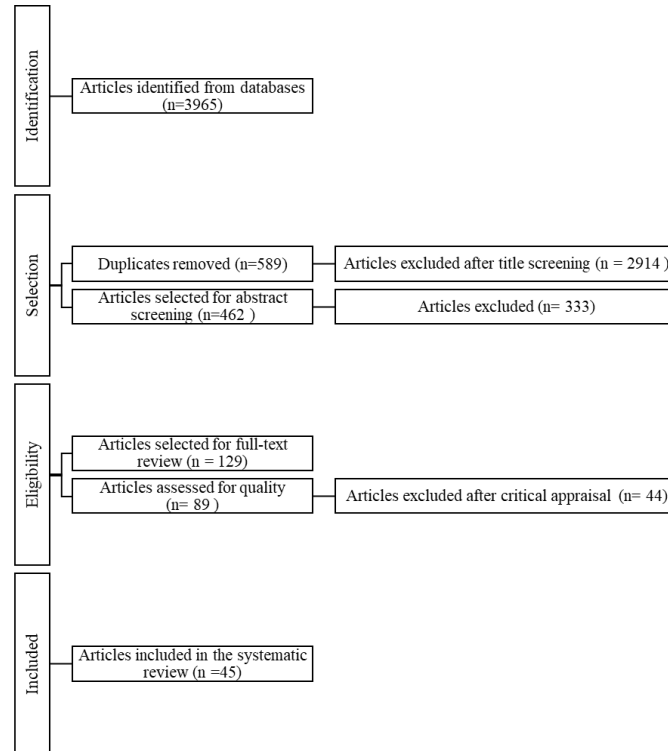


Figure 1: Selection and evaluation process of scientific articles.

The analysis of the temporal distribution of publications revealed a significant growth in academic interest at the intersection of entrepreneurship, resilience, and natural disasters over the past five years. This increase can be attributed to recent critical events, such as the COVID-19 pandemic and large-scale environmental disasters, which have driven research on adaptive strategies, leadership in crisis contexts, and technological innovation in disaster management (Ratten, 2020; Audretsch *et al.*, 2024). The correlation between the intensification of these events and the surge in academic publications reinforces the urgency of inclusive and flexible entrepreneurial strategies to mitigate socioeconomic impacts.

The results highlight two essential conceptual frameworks for understanding entrepreneurship in crisis contexts: Adaptive Leadership (Heifetz & Linsky, 2002) and Social Bricolage (Baker & Nelson, 2005). While adaptive leadership excels in mobilizing resources and the capacity for strategic reorganization in the face of crises, social bricolage emerges as a fundamental emergency response in the immediate aftermath of a disaster, when there is an urgent need for improvised solutions to address pressing demands. Effectuation (Sarasvathy, 2001) is also present, but its application predominantly occurs in the post-crisis phases, when there is greater predictability and the possibility of planning based on available resources.

Beyond theoretical approaches, the research identified technology as a determining factor in disaster response. The use of digital platforms, social networks, artificial intelligence, and big data was widely documented in the reviewed articles, highlighting their role in the efficient distribution of resources, emergency communication, and optimization of crisis management (Correia & Pereira, 2021, 2023). The use of Geographic Information Systems (GIS) also proved essential for identifying risk areas and planning preventive measures, while social network analysis algorithms have been employed to classify and prioritize emergency requests, increasing the effectiveness of responses (Purohit *et al.*, 2020).

Another relevant finding concerns entrepreneurship, particularly regarding the protagonism of women in post-disaster socioeconomic reconstruction. Reviewed studies indicate that women entrepreneurs frequently mobilize support networks, create socially sustainable businesses, and implement innovative solutions that promote equity and economic recovery in affected communities (Iizuka & Costa, 2022). Thus, the active participation of the community in these initiatives emerges as a key element to strengthen resilience and even reduce inequalities in vulnerable contexts.

Furthermore, the interdisciplinarity of the analyzed research also stood out. The systematic review revealed a predominance of publications in Business (20 studies), Political Science (18), Computer Science (15), Geography (13), Entrepreneurship (12), and Emergency Management (10). This panorama demonstrates that understanding the challenges and opportunities of entrepreneurship in natural disasters requires a multidisciplinary approach, encompassing technological innovation, organizational adaptation, and social impact (Figure 2).

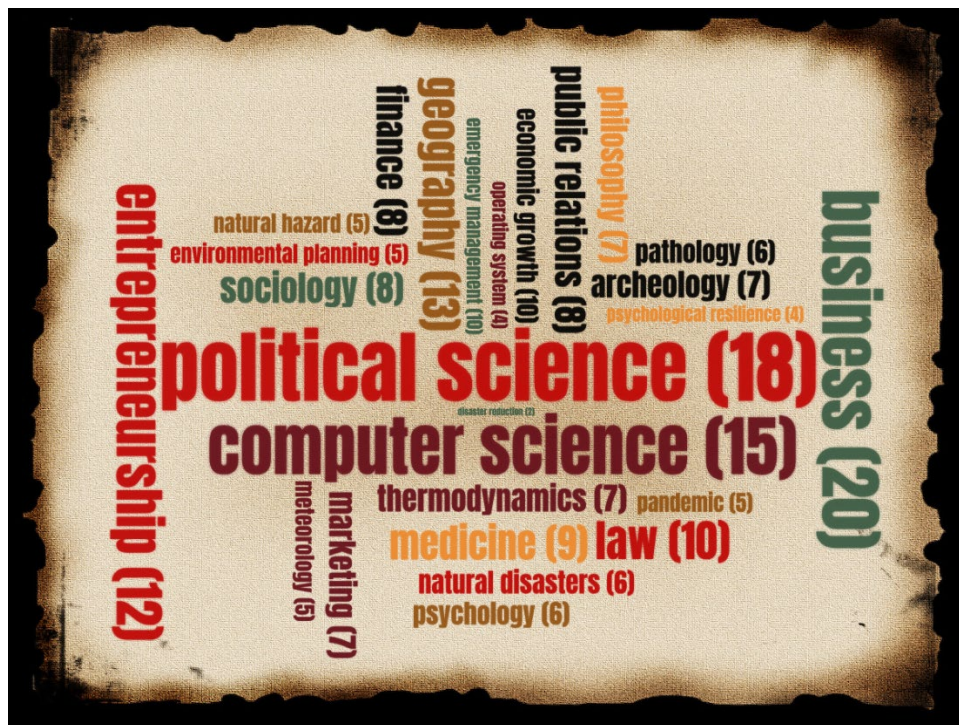


Figure 2 – Knowledge domains associated with research on entrepreneurship and socioeconomic resilience in natural disaster contexts.

The presented data reinforce the need to integrate adaptive leadership strategies, social bricolage, technology, and entrepreneurship to strengthen community resilience in the face of natural disasters. Drawing from the intersection of fields such as business, political science, emergency management, and computer science, this research analyzes different approaches adopted throughout the disaster phases, considering resource mobilization, the application of digital technologies, and decision-making in uncertain scenarios. The results contribute to the formulation of more effective public policies and operational strategies, fostering a dynamic and sustainable socioeconomic reconstruction.

DISCUSSION AND CONCLUSION

Theoretical Contribution

The main theoretical contribution of this study lies in the articulation of different approaches to understand this profile of entrepreneurship that is built in disaster contexts. By integrating concepts of Adaptive Leadership (Heifetz & Linsky, 2002), Effectuation (Sarasvathy, 2001), and “Crazy Action” (Nelson & Lima, 2020), we expand the understanding of entrepreneurial decision-making, especially in high-uncertainty environments. Unlike previous studies—which analyze these approaches in isolation—this study proposes a theoretical model that systematizes their interdependence and highlights the role of entrepreneurship as a dynamic phenomenon that

emerges in response to the destruction of infrastructures and resource scarcity. The introduction of the concept of 'crazy action' as a mechanism for catalyzing innovation in times of crisis also represents a theoretical advancement, evidencing the importance of radical experimentation and an adaptive leadership context for overcoming extreme challenges.

Beyond the contemporary case of Nova Friburgo, historical examples reinforce the robustness of the proposed model. For instance, the actions of Mother Cabrini in the 19th century, in supporting marginalized Italian immigrants in New York, illustrate how Adaptive Leadership and Effectuation can play a critical role in overcoming crises (Orsi, 2002; McGuinness, 2013). Another relevant aspect is the impact of women entrepreneurs in post-disaster reconstruction, evidenced by their engagement in formal and informal networks and the use of bricolage strategies to transform community resources into income-generating opportunities. The articulation between entrepreneurship and support networks, driven by local adaptive leadership, broadens the scope and effectiveness of these initiatives, promoting innovative and socially sustainable solutions. These cases further reinforce that community mobilization, innovation, and adaptability are determining factors for overcoming crises.

Practical/Policy Implications

The research findings indicate that entrepreneurial strategies based on Adaptive Leadership and Effectuation can be a differential in the recovery of communities affected by disasters. The study also highlights that the entrepreneurship that emerges in these contexts does not necessarily follow conventional patterns, but responds to immediate challenges and often operates in environments of high uncertainty and informality. Therefore, the empirical analysis confirms that community support networks and local leadership are fundamental for the effectiveness of these strategies, consolidating as key factors for socioeconomic resilience.

The empirical analysis of the Nova Friburgo case following the 2011 disaster illustrates the applicability of this model. The Street Runners Association (ASCOF), severely impacted by the event, demonstrated a recovery trajectory based on bricolage and improvisation in the initial post-disaster moments, followed by a progressive organization of initiatives through effectuation (Nelson & Lima, 2020). The adaptive leadership of the community in question emerged as an essential element in this process, enabling the continuity and expansion of the group's activities.

By proposing an integrative theoretical model and suggesting directions for future research, this study contributes to the advancement of academic knowledge on entrepreneurship in crisis scenarios and provides subsidies for the formulation of more effective policies and practices in the field of disaster management.

Limitations and Future research

Despite the contributions, the study presents some limitations. The systematic literature review was based on articles published between 2019 and 2024, which may have restricted the inclusion of relevant previous research. Furthermore, the research focused on theoretical evidence and documented case studies, without including primary analyses based on interviews or direct observation of entrepreneurs operating in disaster scenarios. These limitations indicate opportunities for future research that seek to deepen the understanding of the effectiveness of entrepreneurial strategies in crisis contexts.

Field studies, both qualitative and quantitative, can provide more detailed insights into how entrepreneurs, public managers, and civil society organizations use these approaches to mitigate the impacts of natural disasters.

Another aspect to be explored in future research is the role of digital technologies in entrepreneurial resilience. Artificial intelligence, big data, and digital platforms can enhance the coordination of emergency responses and the creation of more effective support networks, enabling the scalability of entrepreneurial initiatives. The incorporation of these tools into the theoretical model can contribute to the formulation of more effective public policies and the development of innovative disaster management strategies.

REFERENCES

- Akinboye, A. K., & Morrish, S. C. (2022). Conceptualizing post-disaster entrepreneurial decision-making: Prediction and control under extreme environmental uncertainty. *International Journal of Disaster Risk Reduction*, 68, 102703. <https://doi.org/10.1016/j.ijdrr.2021.102703>
- Alam, M. S., Rahman, M. M., & Akter, M. (2022). Evacuation dilemmas of coastal households during cyclone Amphan and amidst the COVID-19 pandemic: A study of the Southwestern region of Bangladesh. *Natural Hazards*, 115(1), 507–537. <https://doi.org/10.1007/s11069-022-05564-9>
- Asrofi, D. A. N. (2023). Natural disasters and women entrepreneurs during the COVID-19 pandemic in Indonesia. *Asia Pacific Journal of Management and Education*, 6(1). <https://www.researchgate.net/publication/369399152>
- Audretsch, D. B., Heger, D., & Veith, T. (2024). Natural selection or strategic adaptation? Entrepreneurial digital technologies and survival of the species. *The Journal of Technology Transfer*. <https://doi.org/10.1007/s10961-024-10065-x>

- Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50(3), 329–366. <https://doi.org/10.2189/asqu.2005.50.3.329>
- Bornstein, D. (2007). *How to change the world: Social entrepreneurs and the power of new ideas*. Oxford University Press.
- Carvalho, A. L. (2022). Pequenos negócios e a COVID-19: Uma análise à luz do Entrepreneurial Marketing (EM). *Revista da Micro e Pequena Empresa*, 11(3), 51–67. <https://doi.org/10.5902/198346596392>
- Chen, J., Shi, T., & Li, N. (2021). Pedestrian evacuation simulation in indoor emergency situations: Approaches, models and tools. *Safety Science*, 142, 105378. <https://doi.org/10.1016/j.ssci.2021.105378>
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Harvard Business Review Press.
- Correia, A. M. S. S., & Pereira, Y. V. (2021). International entrepreneurship and the impacts of catastrophes on the tourism sector. *Revista Rosa dos Ventos - Turismo e Hospitalidade*, 13(4), 1–19. <https://doi.org/10.18226/21789061.v13.n4.01>
- Correia, A. M. S. S., & Pereira, Y. V. (2023). Empreendedorismo e catástrofes no turismo. *PODIUM Sport, Leisure and Tourism Review*, 12(2), 335–366. <https://doi.org/10.5585/podium.v12n2.19705>
- Correia, L., & Pereira, R. (2021). Uso de plataformas digitais na gestão de desastres: desafios e oportunidades. *Revista Brasileira de Gestão e Desenvolvimento*, 17(3), 45-67.
- Correia, L., & Pereira, R. (2023). Redes sociais como ferramenta de coordenação em crises: um estudo empírico no Brasil. *Estudos em Administração Pública*, 28(1), 102-125.
- Dees, G. (1998). *The meaning of social entrepreneurship*. Kauffman Center for Entrepreneurial Leadership.
- Duchek, S. (2018). Entrepreneurial resilience: A biographical analysis of successful entrepreneurs. *International Entrepreneurship and Management Journal*, 14(2), 429–455. <https://doi.org/10.1007/s11365-017-0467-2>
- Fabbricatti, K., Almeida, P., & Souza, T. (2020). Sistemas de informação geográfica aplicados ao planejamento de desastres naturais: uma revisão sistemática. *Revista de Geotecnologias Aplicadas*, 12(2), 88-104.

- Fabbricatti, K., Boissenin, L., & Citoni, M. (2020). Heritage community resilience: Towards new approaches for urban resilience and sustainability. *City, Territory and Architecture*, 7(1), 1–20. <https://doi.org/10.1186/s40410-020-00117-8>
- Felisberto, J. L. M., & Pardini, D. J. (2022). Gestão de desastres na perspectiva institucional: Interações de bricolagem na ambiência local. *Contribuciones a las Ciencias Sociales*, 281–300.
- Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36(5), 1019–1051. <https://doi.org/10.1111/j.1540-6520.2012.00537.x>
- Haefele, S., & Craig, A. W. (2020). Commercial social spaces in the post-disaster context. *Journal of Entrepreneurship and Public Policy*, 9(3), 303–317. <https://doi.org/10.1108/JEPP-08-2020-0064>
- Heifetz, R. A., & Linsky, M. (2002). *Leadership on the line: Staying alive through the dangers of leading*. Harvard Business Review Press.
- Iizuka, E. S., & Costa, H. S. (2022). Negócios inclusivos liderados por mulheres empreendedoras: busca por avanços teóricos e empíricos. *Cadernos EBAPE.BR*, 20(4). <https://doi.org/10.1590/1679-395120220011>
- Khalid, S., Ahmed, R., & Santos, M. (2024). Women’s entrepreneurial resilience in disaster recovery: Overcoming structural and socioeconomic barriers. *Journal of Entrepreneurship and Disaster Management*, 9(1), 56-78.
- Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Morales Reyes, C. A., Prochotta, A., & Berger, E. S. (2020). Startups in times of crisis – A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, 13, e00169. <https://doi.org/10.1016/j.jbvi.2020.e00169>
- Lima, E. de O. (2022). Empreender com modos não Schumpeterianos (ou alternativos): Efetuação e bricolagem para superar crises. *Revista de Empreendedorismo e Gestão de Pequenas Empresas*, 11(3), 1–15. <https://doi.org/10.14211/regepe.v11i3.1809>
- Lima, E., & Nelson, R. (2020). Effectuations, social bricolage and causation in the response to a natural disaster. *Small Business Economics*, 54(3), 721–750. <https://doi.org/10.1007/s11187-019-00234-3>
- McGuinness, M. M. (2013). *Called to Serve: A History of Nuns in America*. New York: NYU Press.

- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152. <https://doi.org/10.5465/amr.2006.19379628>
- Orsi, R. A. (2002). The Madonna of 115th Street: Faith and Community in Italian Harlem, 1880-1950. *Journal for the Scientific Study of Religion*, 26(1), 10.2307/1385846.
- Ochieng, V., Asego, C. S., & Gyasi, R. M. (2023). The place of academia and industry in the adoption and adaptation of educational technologies for a post-COVID-19 recovery in Africa. *Scientific African*, 20, e01658. <https://doi.org/10.1016/j.sciaf.2023.e01658>
- Polak, P. (2009). *Out of poverty: What works when traditional approaches fail*. Berrett-Koehler Publishers.
- Ratten, V. (2020). Coronavirus (COVID-19) and entrepreneurship: Cultural, lifestyle and societal changes. *Journal of Entrepreneurship in Emerging Economies*, 12(5), 747–761. <https://doi.org/10.1108/JEEE-06-2020-0163>
- Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243–263.
- Sarasvathy, S. D. (2008). *Effectuation: Elements of entrepreneurial expertise*. Edward Elgar Publishing.
- Yunus, M. (1999). *Banker to the poor: Micro-lending and the battle against world poverty*. PublicAffairs.