Editorial: Exploring the resilience and innovation nexus – a call for interdisciplinary research

Introduction

Research and academic practice have shown that resilience is a desirable characteristic of an organization. Resilience is the ability of an organization to adaptively respond, recover and create innovative business methods when facing threats and constraints due to unexpected events and abrupt changes (Linnenluecke, 2017). Despite early empirical findings (e.g. Bristow & Healy, 2018; Fougère & Meriläinen, 2021), results on the role of innovation in promoting resilience for businesses and societies, in general, remain uncertain. The global COVID-19 pandemic has exposed the lack of resilience of many communities and businesses worldwide, shedding light on the pressing need to explore how innovation, both at the organizational and societal level, can support – or undermine – attempts to build long-term resilience.

Thus, resilience has gained strength in organization studies in recent years (Hillmann & Guenther, 2021). However, there are still many obstacles to be overcome. *Resilience* is a multi-level phenomenon that can be assessed from different perspectives (i.e. individual, organizational, industrial, regional or country), creating many definitions that challenge research and practice (Horgan & Dimitrijević, 2018; Linnenluecke, 2017). Thus, the ambiguity of the concepts is widely criticized for lacking an accepted or consistent definition and conceptualization (see Linnenluecke, 2017 for an exciting review). Even more critical to the concept is the understanding that resilience is determined by a single organization's capabilities, relationships and interactions with actors in its external environment. Thus, measuring resilience can be challenging and remains an opportunity for researchers.

Resilience and innovation often express themselves "hand-in-hand" in organizations. However, innovation is fairly well-studied in organization studies and management, unlike resilience. Innovation can be driven by market-related demands (profit) and nonmarket demands (social and environmental). It spurs change and allows a quick response to changing variables in the environment of firms and other organizations, connecting it to resilience arguments. In the context of extraordinarily complex and multi-faceted challenges, organizations implement different capabilities and expertise to reduce short- and-long-term risks (Al-Omoush, Ribeiro-Navarrete, Lassala & Skare, 2022; Hilmersson & Hilmersson, 2021). The development of new products or services through radical or incremental changes directed to processes or products (McKeown, 2008), the entry into different markets or the complete reformulation of a company's business model are typical results of business efforts in response to crises. Thus, innovation emerges as the recipe for success and survival and helps strengthen an organization's resilience.

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By combining resilience and innovation, we can emphasize the divergent results obtained so far in current research, especially concerning the fine line between innovation and chaos. Fougère & Meriläinen (2021) emphasize that both concepts can be contradictory to the extent that inevitable disruptions associated with innovation may not lead to the stability that follows resilience at any level. Furthermore, once implemented, specific innovations can generate unexpected results that reinforce the negative spillovers of a given crisis (Horgan & Dimitrijević, 2018). That said, the nature of the relationship between resilience and innovation deserves attention in academic research to better inform practitioners and public policy design. Thus, more research on the innovation and resilience nexus is needed to understand the complexities and interdependencies of the concepts thoroughly.

To help address this lack of research, we are pleased to present this special *Innovation & Management Review* issue on the resilience and innovation nexus. It adds to the growing and large body of research investigating the relationship between resilience and business management. It focuses on how innovation plays a significant role in supporting and building business and community resilience. Such a contribution offers relevant and original findings based on rigorous research that advances our understanding of the intersections of resilience and innovation in the management literature. The selection of questions in the articles assesses and provides evidence at distinct levels of analysis, combining a wide diversity of theoretical perspectives from research areas such as management, economics and political science. When combined, the presented research highlights the role and limits of innovation as a social engine to improve and safeguard the resilience of businesses and communities.

An overview of the contents

The special issue aims to synthesize and discuss the state of the art of research around the resilience and innovation nexus. Selected articles provide critical insights that advance our current understanding of how resilience and innovation are connected in the management environment, spanning distinct levels of analysis and a diverse set of contexts and methodological approaches.

Through a qualitative approach, Miranda Junior, Hoffmann and Filgueiras investigate the regional shock–reaction relationship between 1985 and 2021. Resilience in the context of an economic region can be understood as the capacity of a "regional or local economy to resist or recover from the market, competitive, and environmental shocks that have occurred or are likely to occur in its developmental growth path" (Martin & Sunley, 2015, p. 15). The authors show the consistency of the shock–reaction relationship over time through documentary research and in-depth interviews with actors of a century-old Brazilian textile and apparel industrial region. They bring interesting insights into the role of resources, structures, institutions and actors in the regional response to different shocks during the 40 years under scrutiny. Specifically, the regional reaction will vary in response to distinct shocks and their magnitudes, broadening the discussion beyond strictly economic shocks. More interestingly, different regional shocks lead to specific articulations of relevant regional actors and exploit other intangible territorial elements that shape the local response to a shock.

Viana, Hoffman and Miranda-Junior investigate the nexus of innovation and the regional resilience literature by conducting a scoping review of the Scopus and Web of Science databases. The authors analyzed 48 theoretical and empirical papers, which were thematically coded and assessed using R packages and MaxQDA. Previous research has pointed to a significant and robust relationship between a region's resilience and entrepreneurial and innovative capacities. Since innovation and other learning capabilities present themselves as ways for a region to reorient its technological and industrial structures, innovative regions tend to respond better to crises due to their ability to reinvent themselves and sustain their performance over time. The authors feel that the relationship is relevant but investigated through a narrow lens and with mixed results – mainly due to the availability of innovation performance data at the organizational and regional levels and the lack of consensus on measuring regional resilience. Finally, two strands of research were identified: the first is characterized by studies aimed at identifying predictive models of regional resilience based on innovation-related variables. The second explains how learning capabilities and knowledge retention processes relate to regional resilience. Based on these enlightening findings, the authors recommend future research paths and reinforce the warning that the relationship between regional resilience and innovation cannot be taken for granted.

In contrast, with a focus on firm-level resilience, Salamzadeh and his colleagues investigate the role of business model innovation in better preparing businesses to respond to crises quickly and effectively. The authors emphasize that business model innovation allows companies to reduce risks and resource constraints in times of crisis. In the research carried out in Tehran in 2021, a survey conducted with experts and managers of information and communication technology companies indicates that business model innovation can impact a company's ability to respond better to crises. Entrepreneurial capability, resilience and business performance mediate this relationship and deserve further investigation of their role in promoting better crisis management in companies. Thus, the research presented in this manuscript advances the connection between innovation and entrepreneurial capabilities through which companies build resilience to respond to environmental disruptions. Through risk, trial and error, companies can better prepare themselves to face uncertainty and develop solutions that help ensure their survival during and after the crisis.

Advancing our understanding of organizational preparedness and response to crises, Alvarenga, Sincorá, Oliveira and Zanquetto-Filho aim to investigate how the maturity of internal processes can help develop organizational resilience. The approach taken by the authors is of extreme relevance since better and more efficient processes can help mitigate the effects of crises in a firm's operations (Altay *et al.*, 2018; Alvarenga *et al.*, 2022; Ambulkar *et al.*, 2015; Pettit *et al.*, 2019; Ponomarov & Holcomb, 2009). Business process management (BPM) maturity departs from the assumption that processes follow stages of development that must be monitored over time. By analyzing the maturity of internal processes, a firm can identify bottlenecks and correct problems that will allow it to respond effectively to environmental changes and disruptions. Since organizational resilience entails adaptability, flexibility, maintenance and recovery (Alvarenga *et al.*, *in press*), BPM maturity can help firms achieve high resilience. Results of a survey conducted with professionals who held positions in operational areas in firms located in the State of Espirito Santo, Brazil, supported the authors' assertions. Companies establishing routines centered on managing their operational processes can better respond to crisis without risking survival.

Chapman and Karau focused on the context of small businesses to study their response to the COVID-19 pandemic. The authors conducted in-depth interviews with small business owners in the Midwestern United States to identify response patterns across different business types in a non-urban setting. The COVID-19 pandemic has brought many challenges for small business owners, who have been exposed to unprecedented uncertainty and fear. They were forced to act quickly to remain operational (Chapman and Karau, *in press*). Crises such as the pandemic expose the need for business owners to explore and exploit opportunities, emphasizing the relevance of innovation as a tool that allows businesses to reinvent themselves and find trajectories to survive and overcome the crisis.

Interestingly, the results obtained by Chapman and Karau emphasize that navigating a crisis is a challenging and isolated task, especially for small businesses, and demands continuous strategy reassessment. Interviewees emphasized the relevance of the relationship with their surrounding communities, clients and customers to help solve issues and find solutions for crisis-related challenges. As a result, we have a process model that provides a detailed roadmap for adapting small businesses to future crises and uncertainties.

Finally, Ciccarino and Rodrigues describe the Portuguese context and how a public policy focused on building resilience through innovation can boost initiatives that lead to sustainability. Social innovation allows for reconciling both profit and social goals to resolve social issues that can hinder or improve resilience in the long run. The authors conducted semi-structured interviews with Portuguese social investors and an online survey of social innovation initiatives invested in or awarded between 2015 and 2020. Results show how innovation is the missing link between resilience and sustainable development, moving beyond the focus of economic contributions associated with innovation. In the context assessed, social innovation allowed the unification of the country's social economy, emphasizing its response during a crisis and helping overcome issues related to funding and productivity. The unification boosted collaboration and investment, which contributed to alleviating social issues and building resilience for the future. The benefits of social innovation go beyond its target market, reaching the community and promoting well-being and substantial improvement in quality of life.

Concluding remarks

The articles in this special issue present an interdisciplinary and multi-level analysis of the resilience and innovation nexus. Studies at regional and organizational levels show the numerous benefits of linking innovation to building resilience over time. The central argument is that different types of innovation will support resilience-building processes inside and outside organizations. However, the organizational capabilities that allow organizations to pursue new knowledge and learning are essential to ensuring that innovation can fully contribute to the resilience of businesses and communities. Due to the interdisciplinarity of the articles in this special issue, other relevant aspects of the relationship emerge, which deserve greater emphasis in the management literature. Specifically, the articles emphasize the role of collaborative innovation and social capital as resources that enable firms of all sizes and in all contexts to respond to crisis-related challenges. Such insights support the idea that resilience, at any level, may not be achieved when pursued in isolation. Networks and relationships with customers, clients, community and others, allow individuals, firms and other actors to understand the challenges better and leverage resources, knowledge and capabilities that would otherwise not be available.

To conclude, innovation is crucial for organizational and community resilience in crisis. It allows creativity to merge with collaboration and risk-taking initiatives that can buffer firms from the uncertainty and fear of crises. New products, services or even businesses can emerge from such contexts, proving that crises can also be opportunities for business renewal and sustainability. Such an undertaking is not an easy task, but it is something that small, medium and large businesses should pursue to navigate current and future disruptions.

We sincerely hope the articles in this special issue inspire future research that can advance our understanding of how resilience relates to innovation at the micro-, meso- and macro-levels, inside and outside organizations.

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Further reading

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