

Review

# Antecedents of entrepreneurial resilience in regions: A systematic literature review

Adriana Mosquera-Carrascal<sup>1,\*</sup>, Esteban López-Zapata<sup>2</sup>, Diego Armando Jurado-Zambrano<sup>3</sup><sup>1</sup> Departamento de Ciencias Administrativas, Universidad Francisco de Paula Santander Ocaña, Ocaña 546552, Colombia<sup>2</sup> Facultad de Ciencias Económicas, Universidad de Antioquia, Medellín 050010, Colombia<sup>3</sup> Territorial Antioquia, Escuela Superior de Administración Pública (ESAP), Medellín 050031, Colombia\* **Corresponding author:** Adriana Mosquera-Carrascal, [amosquerac@ufps.edu.co](mailto:amosquerac@ufps.edu.co)

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**Abstract:** Entrepreneurial resilience in regions is essential for enabling the entrepreneurial ecosystem to overcome natural disasters, catastrophes, wars, and various crisis situations it may face. However, this phenomenon has been underexplored in the literature despite its critical importance for business development, and consequently, for social progress. Therefore, the objective of this article is to conduct a systematic literature review to identify the antecedents of regional entrepreneurial resilience in situations of adversity. To achieve this goal, a qualitative, descriptive research approach was employed. Specifically, a systematic literature review was carried out following the PRISMA method, which included a total of 231 scientific articles retrieved from high impact journals. Of these, only 12% (27 documents) focused on regional entrepreneurial resilience. Five key antecedents of regional entrepreneurial resilience were identified: action orientation, the region's historical precedents, opportunity exploitation, collaboration, resources, and preparedness. Additionally, it is suggested that future research should focus on understanding the impact of crises, identifying agile response models to crises, defining roles for each member of the entrepreneurial ecosystem to achieve economic recovery in regions, and analyzing the design of public policies that contribute to overcoming adversity. The study concludes that when a region is resilient, it is more likely to overcome crises and adversity.

**Keywords:** background; entrepreneurial resilience; territorial resilience; systematic literature review

## 1. Introduction

The concept of resilience has been applied in a wide range of disciplines, from ecology to strategic management, and spans different geographic and organizational scales, from countries and regions to companies and individuals (Vorley and Williams, 2014). Although there is no universally accepted definition of what constitutes resilience, the appropriation of the concept within the social sciences, and in terms of regional economic development and competitiveness in particular, has emphasized the cyclical nature of resilience and the ability to withstand, adapt to and respond to exogenous disruptions and crises (Vorley and Williams, 2017).

Likewise, the concept of entrepreneurship is considered a crucial factor that affects the resilience of regional economies, especially from the perspective of regional policy as contributions to the development of local economies. This is achieved through the formulation of effective policies to respond and adapt to adverse events, thereby helping localities become more resilient over time (Vorley and Williams, 2014).

The concept of a region refers to the specific characteristics and dynamics of a territory, which can be geographical, economic, social, historical, cultural, or political in nature (Müller, 2016). In this context, it is used to analyze how the particularities of entrepreneurial resilience in a territory impact its economic development. Specifically, this document explores scientific articles globally, covering various territories and regions to identify the antecedent factors of entrepreneurial resilience, emphasizing the role of the entrepreneur and their organizations as key actors within this ecosystem.

Thus, the concept of regional entrepreneurial resilience takes shape, referring to a community's ability to withstand and recover from disaster (Greve and Rao, 2018). It is also understood as the regions' capacity to confront adverse conditions stemming from natural disasters, extreme poverty, unstable economic forces, unfavorable geographical locations, or challenging social and security conditions (Iacobucci and Perugini, 2021; Pedi and Sarri, 2021; Vorley and Williams, 2014), and to recover by developing appropriate responses to these external shocks or disruptions (Bishop and Shilcof, 2017; Roundy et al., 2017).

This is understood with the knowledge that, when disasters occur in a territory, simultaneous impacts are often felt on people, organizations, communities, the environment, and the overall surroundings (Gur et al., 2020). However, not all recover at the same pace, leading to the question of why some regions have a greater capacity to transform and renew after experiencing a crisis or adverse event, while others remain stagnant, trapped in decline or underperformance (Gherhes et al., 2018). The key may lie in the entrepreneurial resilience of the region.

This is particularly true when we know that through entrepreneurship, communities can develop a solid capacity to become resilient. This process not only strengthens the ability to recover from adversity but also attracts valuable social capital and knowledge resources to traditional geographic communities (Demangeot and Sankaran, 2017). By creating collaborative networks and leveraging previously overlooked opportunities, communities can foster a more dynamic and adaptable environment. Thus, entrepreneurship becomes a key driver for researchers because it is considered a crucial prerequisite for economic growth and job creation (Sköld and Tillmar, 2015).

Therefore, clearly defining the conceptual principles of resilience at the regional level is essential for exploring and understanding the interrelationships between resilience and entrepreneurship, as well as understanding how entrepreneurship can contribute to increasing regional resilience (Vorley and Williams, 2017). This step provides a solid foundation for investigating the factors that strengthen regions' ability to recover from adversity and the triggers that help maintain their economic and social vitality.

Despite the scientific community's efforts to understand the phenomenon of entrepreneurial resilience in regions, it has not yet been clearly explained how some regions manage to recover, while others show poor performance in this effort (Bishop, 2019; Greve and Rao, 2018; Henn et al., 2022; Lew, 2014; Martin, 2012; Martin and Sunley, 2015). Additionally, there is a lack of empirical research on entrepreneurship in regions (Long et al., 2023), and the literature has not provided solid normative models that communities can follow in disaster situations, likely because most of these, and their recommendations, are based on the experience of governments,

military entities, or commercial companies (Lima and Nelson, 2020), rather than on research results. Consequently, this type of research is crucial for stimulating regional economic regeneration, growth, and sustainability (Gherhes et al., 2018; Iacobucci and Perugini, 2021), particularly when employment in the region is a concern for the public sector, communities, and regulators (Bauer and Mouzas, 2022).

In line with this, this article seeks to determine, through a systematic literature review, the antecedents of entrepreneurial resilience in regions to highlight the reasons why some territories are more resilient than others (Martin, 2012). It is important to clarify that to comprehensively understand entrepreneurial resilience in a region, the role of all actors in the entrepreneurial ecosystem must be considered, such as educational institutions, local governments, investors, and social support networks (Mosquera et al., 2021; Roundy et al., 2017). The resilience of this ecosystem is not limited to entrepreneurs but depends on the interaction and collaboration between these actors, as well as their integration into the region's social and cultural context (Owen and Vedanthachari, 2022; Peterková et al., 2022; Qiu et al., 2023). However, this research specifically focused on identifying the antecedents of entrepreneurial resilience in regions, highlighting entrepreneurs as the main resilient actors in the regional context. While the relevance of other actors in the ecosystem is recognized, the scope of this study was intentionally limited to entrepreneurs, who play a fundamental role in the regions' ability to adapt and recover. For this reason, the present manuscript does not provide a detailed analysis of each actor in the regional entrepreneurial ecosystem.

It is essential to clarify that this document does not aim to analyze a specific region or compare multiple regions. The systematic literature review was conducted to address the research question regarding the antecedents of entrepreneurial resilience in different regional contexts. To achieve this objective, a systematic review of 27 high impact, peer reviewed scientific articles focused on entrepreneurial resilience was carried out. The articles were selected using the PRISMA method, guided by the research question: What are the antecedents of entrepreneurial resilience in regions? This methodology allowed for the identification of the main factors contributing to the development of entrepreneurial resilience in various regional environments.

Finally, the document is structured as follows. First, a synthesis of the concept of resilience, entrepreneurial resilience, and regional entrepreneurial resilience is presented. Next, the methodology is described, outlining the steps of the PRISMA method. Third, the findings or results are presented in an organized, coherent, and structured manner, addressing the posed question. Then, the discussion involves triangulation between the findings and other studies on the topic, allowing the authors to formulate a particular perspective on the phenomenon. Finally, the conclusions of the research are drawn, and a future research agenda is proposed.

## **2. Literature review**

### **2.1. Resilience**

The concept of resilience originated in the United States and, over time, expanded to other countries. Initially, it was adopted in France, Germany and Spain, where numerous studies were conducted, and various practical applications were developed.

Eventually, the concept reached Latin America, where it has been the subject of a multitude of research. In this region, studies on resilience have addressed a variety of specific contexts and challenges, adapting the concept to local needs and realities. This has allowed for a more integrated and holistic approach to resilience, promoting policies and practices that strengthen the capacity of communities and systems to face and recover from various adversities (Caridad and Ferrer, 2017).

The term resilience originated in physics, where it is related to elasticity and describes the ability of an object to withstand an impact. The concept was later adopted by the social sciences, where it is defined as the ability of a person to live, develop and succeed in any circumstance, even in the midst of adversity and fatigue, even though these situations may involve significant risk with possible negative outcomes (Bronfenbrenner, 1979).

Resilience has been linked over time to various crises (Doern, 2016; Hadjielias et al., 2022; Herbane, 2019; Iacobucci and Perugini, 2021; Iborra et al., 2022; Korber and McNaughton, 2018). In the specific context of entrepreneurship, it refers to the ability to recover from adverse events, conflicts, and failures (Branicki et al., 2018). Ahmed et al. (2022) associates it with stress management and coping, while Engel et al. (2021) conceive it as a process that requires the development and utilization of skills to interact and adjust positively. It is also related to external shocks (Cannavale et al., 2020), disasters (Gur et al., 2020; Martinelli et al., 2018), being defined in terms of the recovery of businesses, individuals, institutions, and territories, and is conceptualized in three categories: outcome, process, and capabilities (Belitski et al., 2022). Likewise, the term is linked to survival (Chadwick and Raver, 2020; Honjo and Kato, 2022; Manfield and Newey, 2018), uncertainty (d'Andria et al., 2018; Kuckertz, 2021; Morais-Storz et al., 2018), challenging conditions (Eberl and Haase, 2019; Le Breton-Miller and Miller, 2017), adversity (Hartmann et al., 2022; Manfield and Newey, 2018; Marcazzan et al., 2022), and failure (Lattacher and Wdowiak, 2020).

## **2.2. Regional entrepreneurial resilience**

Resilience is related to the ability of systems to absorb and recover from impacts, while simultaneously transforming their structures and operational methods to cope with long term stresses, adapt to change, and manage uncertainty. This ability not only implies an immediate and effective response to adverse events but also continuous adaptation that strengthens the system over time (Shepherd and Williams, 2016). Resilience has also been studied over time by various disciplines: psychology, sociology, ecology, engineering, disaster management, business administration (Korber and McNaughton, 2018) and has been applied to each context according to its subject of study.

In this document, resilience is applied specifically to entrepreneurial resilience in the context of regions. This resilience means implementing entrepreneurial strategies that not only restore what was lost but also improve future resistance, thus promoting sustainable development that is adaptable to new conditions and challenges. This allows for the connection of entrepreneurship with the concept of regional resilience. The latter refers to a region's ability to withstand and adapt to external impacts,

allowing us to affirm that entrepreneurial behavior is a crucial factor enabling regions to overcome crises and adjust to new economic conditions (Bishop, 2019).

Expanding on the concept of regional entrepreneurial resilience, it refers to the process of interacting with environmental resources that promote well-being and protect against the overwhelming influence of risk factors (McInnis-Bowers et al., 2017), especially during crises, such as the COVID-19 pandemic (Aidoo et al., 2021). This unique and powerful disruption (Simms et al., 2022), which spread at unprecedented speed and scale (Miroshnychenko et al., 2023), caused significant disruptions in social and economic activities (Nautiyal and Pathak, 2023). Various economic sectors faced major disruptions (Anggadwita et al., 2023), where external factors like financial support (Bernini and La Rosa, 2023), digital platforms (Shen et al., 2023), and state subsidies were crucial in mitigating the effects (Schwaiger et al., 2022). Globally, events with adverse economic effects (Câmara et al., 2023) negatively impacted business activities, such as financial losses and liquidity problems (Messabia et al., 2022), making resilience essential for survival (Al-Omouh et al., 2023) and mitigating harmful impacts on business (Bürgel et al., 2023).

Moreover, resilience involves the strategic agility (Liu et al., 2020) of entrepreneurs, who play a key role in a region's economic recovery (Meyer et al., 2021). This includes mobilizing capacities, developing entrepreneurial skills, and fostering innovation (Saba et al., 2022) to address and respond to the pandemic (Amaral and Da Rocha, 2023). In this context, it is essential not only to protect jobs and support businesses but also to encourage productive entrepreneurship that allows for the development of resilient business ecosystems tailored to the specificities of each region (Belitski et al., 2022). This comprehensive approach is crucial for social, economic, and community recovery (Ozanne et al., 2022).

Precisely, in some cases, the perception of resilience has been interpreted as the speed at which life can return to normal after a disaster. This view implies that a resilient region is one that can restore its daily routine and achieve normalcy as quickly as possible (Gajendran and Oloruntoba, 2017). For regions to be resilient, they must be prepared and make collaborative decisions at the group level rather than individually (Kimbu and Ngoasong, 2016). In this sense, when an entrepreneurial community shows resilience, it establishes close ties with both the market and the broader environment, adapting to external impacts and market turbulence (Qiu et al., 2023) as a result of sound decision making.

In this research, regional entrepreneurial resilience is defined as the capacity of regions to foresee, prepare for, respond to, recover from, and adapt to disasters and economic challenges, enabling communities to confront and adjust to various challenges. Resilient regions overcome economic difficulties and disasters by organizing to minimize negative impacts and promoting new entrepreneurial initiatives and the strengthening of their social and economic infrastructure (Linnenluecke and McKnight, 2017). This requires understanding the historical and sociocultural context of the regional system, as these factors are key to adaptation and transformation (Kawharu et al., 2017). Moreover, regional entrepreneurial resilience involves the adaptation of actors such as organizations, workers, institutions, and local political figures, allowing for a rapid recovery and the seizing of emerging opportunities (Gherhes et al., 2018).

Thus, the importance of a deeply rooted entrepreneurial culture in a region lies not only in facilitating the identification of business opportunities but also in strengthening the region's ability to adapt and recover from significant external impacts. This is especially evident in crisis situations, where opportunities that arise after a disaster, such as access to funding, the opening of new markets, and economic compensation, can not only revitalize specific sectors but also catalyze large scale transformations within an entire industry (Gur et al., 2020).

Therefore, it is crucial to identify the barriers and challenges faced by the entrepreneurial ecosystem to foster regional entrepreneurial resilience. This will allow the development of effective strategies to overcome these obstacles, thus promoting sustainable evolution at both the regional and international levels. These strategies should not only facilitate local competitiveness but also create favorable conditions for resilient growth in a global context (Henn et al., 2022). Economic growth is driven by the entrepreneurial resilience of the region, linked to the capacity of its inhabitants to generate opportunities through new ventures, foster job creation, and promote the sustainable development of the community (Klyver et al., 2022).

Considering the above, especially recognizing that entrepreneurship develops in a context where various interdependent actors, individuals, entities, and regulatory bodies interact within a specific geographical area (Iacobucci and Perugini, 2021), the importance of human well-being after facing adverse events in the region is emphasized. Particularly, understanding that local actors, such as entrepreneurs, play a crucial role in establishing organizations at the regional level. These actors serve as agents of change that shape the local economy and generate social value by promoting the development of a sustainable entrepreneurial fabric within the community (Morrison et al., 2017).

Consequently, resilience not only involves crisis management focused on post disaster recovery but also the promotion of regional initiatives that emerge as behavioral responses, as well as the proper management of the psychological states of all those affected by the disaster. This approach is not limited solely to practical and strategic actions for rebuilding and restoration but also includes the emotional and psychological support necessary to facilitate the comprehensive recovery of affected communities (Gur et al., 2020).

Other studies have shown that regional entrepreneurial resilience is linked to the ability of institutions to anticipate and address adversity before major crises occur. Actors, particularly the state, must take responsible measures and foster multi actor partnerships as a more effective strategy for achieving integration and overcoming crises (Krlev, 2023). In this regard, when preventive processes are carried out, this type of resilience allows adaptation and persistence in line with the changing needs of individuals and communities, ensuring that they can remain relevant and effective in dynamic contexts resulting from having experienced a crisis or adversity (Lew, 2014).

This makes it possible for an ecosystem to absorb disturbances and make the necessary adjustments to transform its fundamental behaviors, structures, and identity, becoming a system better equipped to face disruptions (Roundy et al., 2017). A system that fosters community development through entrepreneurial efforts in various regions of the world through the presence of social capital to stimulate natural, adaptive

resilience, and goal-oriented resilience, strengthening the region's ability to adapt and thrive in the face of challenges (Demangeot and Sankaran, 2017).

This social capital in the resilience of territories is fundamental for establishing a regional structure with connections, networks, and links between actors from other regions, thereby avoiding the negative block due to the lack of openness and flexibility in combining these resources (Suire and Vicente, 2014). These social resources are crucial because regional entrepreneurial resilience involves the reconstruction of people and society after a major crisis. This is achieved by providing both direct assistance to those affected by the disaster and indirect assistance to those linked to the region who are distant from the event (Veer et al., 2016).

The resilient response to adversity at the regional level relates to how territories face, manage, and recover from disasters. This involves not only the regions' ability to withstand the initial impact but also their ability to adapt and transform their structures and systems in response to adversity. Among the ecology inspired principles that enhance regional entrepreneurial resilience are diversity, understood as the presence of diverse economic and institutional forms within the territory; modularity, which implies the ability to recombine modular components without compromising their function when necessary; and the strengthening of environmental feedback, which allows for better detection of the consequences of human actions to adjust activities accordingly (Vlasov et al., 2018).

### **3. Materials and methods**

The research used a qualitative approach. Specifically, a combination of the PRISMA method (Liberati et al., 2009) and the process proposed by Massaro et al. (2016). Finally, the process considered 10 steps, which are developed below.

Literature review protocol.

The protocol included the components described below. First, the objective was defined, which consisted of carrying out a systematic review of the literature on the background and effects of the entrepreneurial resilience capacity of regions or territories. Secondly, the research question to be addressed was posed. Thirdly, the type of research was specified, which corresponds to a qualitative study through a systematic review of the literature; fourth, a specific route for its development was established. Finally, the method suggests presenting a report of results.

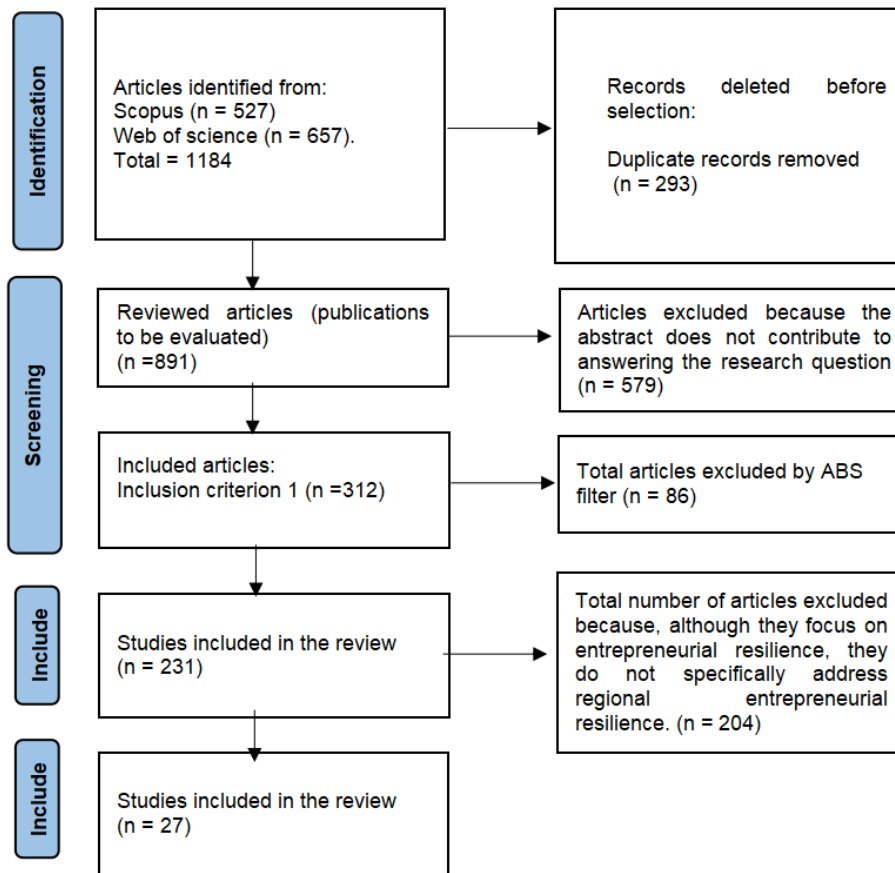
Definition of the review question.

The question guiding this literature review was: What are the antecedent factors and their effects that explain resilience capacity in regions? To address this question, the current view on how research is developing was identified, the existing critical approach was analyzed, and the future of the research topic was explored.

Determining the type of studies and exhaustive bibliographic search.

An exhaustive search was carried out in the Scopus and Web of Science databases. (Charters and Kitchenham, 2007). Specifically, the following keywords were used: "entrepre\* AND resilien\*". A representative set of documents of the type article (Ar) and literature reviews were included. To consider the most recent publications on the phenomenon of entrepreneurial resilience in the categories of Business and Management, a time limit of 10 years was used ((Paul and Rialp, 2020),

covering the period between 2014 and 2023. **Figure 1** details the PRISMA scheme used to detail the process followed by the selection of documents.



**Figure 1.** PRISMA protocol for systematic literature review.

Source: adapted from (Liberati et al., 2009).

### 3.1. Measuring the impact of the article

In order to obtain relevant and quality academic conversations, the second inclusion criterion is applied to them, referring to the ABS filter, which classifies the articles into 1, 2, 3, 4 and 4\* according to their impact on the academic community, with 86 being eliminated for not being classified; thus, the database reaches a total of 231 articles that are classified.

With this number of articles, the analysis of the complete document begins using a matrix as an information collection tool to systematize the analysis of the 231 selected scientific articles, which were asked about the background of entrepreneurial regional resilience.

### 3.2. Definition of the analytical framework

According to Massaro et al. (2016) By defining the analytical framework in a systematic literature review, the key parameters that will guide the organization and analysis of the information collected are established. In this case, the units of analysis were recorded, which include the antecedents of regional entrepreneurial resilience. This involves identifying and categorizing the prior factors or contextual conditions that influence a region's capacity to develop entrepreneurial resilience. By defining



these antecedents, the analytical framework allows structuring the review, helping to synthesize the relevant studies and highlighting patterns, theoretical gaps and methodological approaches, facilitating a coherent and in-depth analysis of the topic in question.

### **3.3. Establish the reliability of the literature review**

To reduce bias, information was triangulated with resilience theories, following recommendations by Massaro et al. (2016), achieving a reliable analytical and coding framework.

### **3.4. Validity test of the literature review**

A ten-year analysis period was defined, from 2014 to 2023. (Paul and Rialp, 2020). Each of the authors carried out an individual review of the papers, and then the analysis was contrasted. We started with a small set of articles to develop preliminary conclusions and then expanded the analytical framework to cover all articles.

### **3.5. Encode data using the developed framework**

The important characteristics related to the background of entrepreneurial regional resilience were identified in the selected articles and then sought to code them, for which the method that includes the matrix where the results are synthesized was **used in the coding process.**

### **3.6. Creation of the categorization of entrepreneurial resilience**

Creation of first cycle codes. Descriptive coding (capturing the essence of the categories and using a reduced number of words or a concrete and short phrase) and magnitude coding (adding a sub code to the classified element that denotes its absence or presence of relationship) were implemented; the above, in accordance with the recommendations of Aguinis et al. (2020) in correspondence with the diversity of scientific articles consulted.

Creation of the second cycle codes. Pattern coding was used, which are descriptive codes that identify emerging concepts with the purpose of generating a parsimonious summary of the key concepts identified (Aguinis et al., 2020).

Developing ideas and critiques through analysis of the data set.

The findings were synthesized as an assembly through the following two stages:

First: Knowledge development. Descriptive statistics were produced using tables that ensure, reassure, increase the reliability of the research and increase transparency regarding data collection, the respective analysis and the reporting of findings (Aguinis et al., 2020), in order to develop knowledge on the determinants of regional entrepreneurial resilience within the analytical framework determined in the research in such a way that the existing literature on this important phenomenon can be expanded.

Second: development of the critique. It was based on the researcher's perception based on what was found to undo the roots of the frozen meanings of entrepreneurial regional resilience seeking to challenge rather than confirm, to disturb rather than reproduce traditional conceptions (Massaro et al., 2016).

Based on the above and in accordance with Aguinis et al. (2020), the findings were reported in the final report where the collection of qualitative data was graphically illustrated, the tables with the corresponding information were designed and presented in the results and discussion section. The generation of the tables with each of these dimensions served to understand the progress of science in these aspects and will contribute to determining the most important issues that will be empirically investigated in entrepreneurial regional resilience.

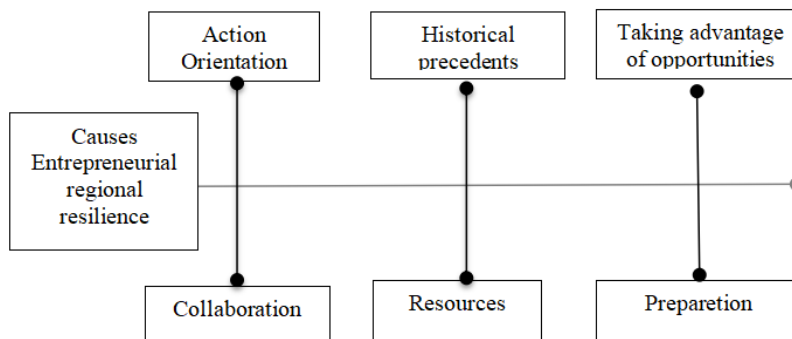
### 3.7. Develop future lines of research and questions

General areas of concern were identified in the systematic review that could indicate specific regional entrepreneurial resilience themes for future studies, proposing a research agenda.

## 4. Results Background of regional entrepreneurial resilience

The systematic literature review allowed for the identification and analysis of the antecedents of entrepreneurial resilience at the regional level. First, the antecedents that facilitate the development of entrepreneurial resilience in various territories will be explored. This section will address factors present in the territories that contribute to the recovery and adaptation capacity of entrepreneurs in the face of challenges and adversities. This comprehensive review provides a deep and nuanced understanding of how and why regional entrepreneurial resilience emerges and develops, as well as its implications for local communities and economies.

**Figure 2** shows the six antecedents (achievement orientation, historical precedents, opportunity exploitation, collaboration, resources, and preparedness) were found to enable territories to develop entrepreneurial resilience after experiencing a crisis. These six antecedents interact and reinforce each other, creating a robust environment that facilitates the emergence and consolidation of entrepreneurial resilience in territories affected by adverse events. Understanding and strengthening these factors not only helps regions recover from crises, but also enables them to thrive in the long term. Each of them is listed below:



**Figure 2.** Background of regional entrepreneurial resilience.

Source: Self-made, based on the results obtained from the systematic literature review.

### 4.1. Action orientation

This factor refers to the entrepreneurs’ willingness to make quick decisions and act proactively. Action orientation implies a practical and decisive approach to facing

challenges, which allows entrepreneurs to adapt and respond effectively to adverse situations. This mindset spreads throughout the community, fostering a culture of dynamism and resolution. **Table 1** provides a summary of the findings associated with this factor, outlined below:

**Table 1.** Background action orientation.

<b>Author</b>	<b>Action Orientation</b>
Aguinis et al. (2023)	Action guided by government policies
Bishop and Shilcof (2017)	Dynamic and adaptive response.
Gajendran and Oloruntoba (2017)	
Morrison et al. (2017)	Reconstruction and ability to self-organize and self-repair
Kawharu et al. (2017)	
Gherhes et al. (2018)	Capacity for renewal, transformation
Gur et al. (2020)	Action for recovery
Henn et al. (2022)	
Williams and Vorley (2014)	Action for regional development
Lew (2014)	
Iacobucci and Perugini (2021)	Ability to address change
Linnenluecke and McKnight (2017)	Speed

Note: The table shows the action orientation as an antecedent of entrepreneurial regional resilience found in the systematic literature review.

Source: Own construction based on scientific articles included.

Action guided by government policies is a fundamental antecedent for regional entrepreneurial resilience. When communities follow courses of action directed by public policies, especially after facing adversities like the catastrophic COVID-19 pandemic (Aidoo et al., 2021), their capacity for adaptation and recovery is strengthened. These governance principles direct the choices and actions of individuals, organizations, communities, and societies as a whole; without a clear and well-defined policy framework, it is difficult to foster a resilient entrepreneurial culture that can thrive in the face of challenges (Aguinis et al., 2023).

Appropriate policies provide a stable and predictable environment, incentivizing entrepreneurs to make informed and strategic decisions. They also promote collaboration and the exploitation of opportunities. These policies can also facilitate access to necessary resources, training and support, thus strengthening the capacity of communities to innovate and grow sustainably (Aguinis et al., 2023).

Furthermore, action orientation is related to the dynamic and adaptive response of resilient entrepreneurial regions. High rates of new business formation facilitate a dynamic and adaptive response to the crisis. Entrepreneurial regions, by constituting a resilient entrepreneurial regime, are better able to adapt to the effects of an exogenous shock compared to less entrepreneurial regions (Bishop and Shilcof, 2017).

Similarly, the action orientation focuses on post disaster reconstruction through governance structures, with the aim of building resilient communities; governance plays a crucial role in resilience capacity, affecting business opportunities during reconstruction and economic sustainability (Gajendran and Oloruntoba, 2017).

In this sense, action orientation refers to the capacity of a region to self-organize, rebuild affected areas, learn and adapt to changing circumstances within a complex environment (Morrison et al., 2017). This capacity contributes to fostering regional entrepreneurial resilience.

Thus, action orientation facilitates the development of the capacity of regions to self-repair and self-organize, where entrepreneurship plays a central role in achieving this and promoting regional resilience. This resilience focuses on the power, rights and authority of each actor within the region, together with the responsibility of care and service that is manifested through interpersonal connections and relationships (Kawharu et al., 2017).

Another crucial factor is renewal and transformation. Some local and regional economies have the capacity to continuously adapt and transform in response to the constant changes to which they are subject, which can generate structural changes based on the characteristic heterogeneity of local economies (Gherhes et al., 2018). This is achieved when entrepreneurial regions show resilience.

In addition, another action-oriented factor that produces regional entrepreneurial resilience is regional recovery efforts, especially those related to industry level marketing to attract business, such as offers and material support provided to regions affected by an adverse event. (Gur et al., 2020) It is evident that entrepreneurship and its system have a positive effect on the ability of regions to withstand shocks and recover from the crisis (Iacobucci and Perugini, 2021).

Additionally, the action orientation encompasses strategies related to the development of ecosystems in these territories, driven by both public and private actors. In these contexts, job creation mainly through the formation and growth of new companies highlights the crucial importance of entrepreneurial processes for economic development, especially in times of recession (Henn et al., 2022) In this way, economic development is possible with the action orientation of entrepreneurial regions as a response to the external impacts of these territories, being fundamental to sustain a dynamic and resilient economy (Vorley and Williams, 2014).

Accordingly, the action orientation of regional entrepreneurial resilience is closely linked to regional development. It is based on entrepreneurs' management of community level disaster maintenance, repair, response and recovery needs, thereby enabling socio ecological adjustments in a rapidly changing world (Lew, 2014).

In this context, action orientation is closely linked to the ability to adapt to change, since entrepreneurship and its structure have a positive impact on the persistence and control of the direct impact generated by the creation of new companies, thus strengthening entrepreneurial resilience at a regional level (Iacobucci and Perugini, 2021).

These changes must be implemented quickly, which is why action orientation involves quickly carrying out recovery actions when faced with disasters, providing regional resilience through entrepreneurship. This refers to private sector efforts to create or maintain value during and after a disaster, taking advantage of business opportunities and meeting needs by providing goods and services to actors in the affected region (Linnenluecke and McKnight, 2017)

## **4.2. Historical precedents**

Previous experiences of overcoming crises and adversities are vital for resilience. Territories that have faced and overcome difficulties in the past, such as the unique and powerful disruption known as COVID-19 (Simms et al., 2022), develop a collective memory of effective strategies, lessons learned, and greater confidence in their ability to face future challenges. This accumulated experience provides a solid foundation upon which resilience can be built. **Table 2** summarizes the findings related to this factor, presented below:

**Table 2.** Historical precedents.

<b>Authors</b>	<b>Historical precedents</b>
Gajendran and Oloruntoba (2017)	Governance
Ngoasong and Kimbu (2016)	
Gherhes et al. (2018)	Corporate culture
Gur, et al. (2020)	
Henn et al. (2022)	
Sankaran and Demangeot (2017)	
Rao and Greve (2018)	
Bishop (2019)	

Note: The table shows the historical precedents as an antecedent of regional entrepreneurial resilience found in the systematic literature review.

Source: Scientific articles included in the systematic literature review.

Future conditions are influenced by past conditions, meaning that regional development evolves based on its history. Thus, remote historical events and past investments can significantly influence the future progress of regions and their development (Bishop and Shilcof, 2017).

Historical background has a significant influence on regional entrepreneurial resilience, as legacies of the past in certain places shape both present and future entrepreneurial activity, which in turn affects the region's ability to adapt and recover. When the local history is adverse, characterized by low levels of aspiration, loss of identity, generational unemployment and negative perceptions, these factors can limit economic development and, therefore, the region's ability to foster entrepreneurial resilience (Gherhes et al., 2018).

Among the historical precedents that underpin regional entrepreneurial resilience is governance. This relates to the government structures that influence the reconstruction of the region, making it sustainable and resilient after experiencing an adverse event. The design of these governance structures not only impacts the ability to withstand and recover from disasters, but also plays a crucial role in promoting long term economic, social and environmental development (Gajendran and Oloruntoba, 2017).

In this sense, regions are more resilient and entrepreneurial when they historically have adequate governance systems that guide the development of standardized procedures to serve community members. These systems should establish legal norms that allow to more effectively address organizational and client needs, strengthen relationships of trust and power to mobilize members, and use group resources to reduce the impact of adverse events (Kimbu and Ngoasong, 2016).

Thus, when analyzing the background of entrepreneurial resilience in the regions, it can be seen that among the historical precedents is the entrepreneurial culture inherent to the territories. Business culture is associated with traits of community memory and suggests that the community has a local culture that citizens use to reflect and feel how their environment should be organized (Greve and Rao, 2018).

This culture, according to Gherhes et al. (2018) allows for a favourable response to the recovery of an economy after a shock. Therefore, these researchers state that it is essential to have prior exposure to entrepreneurship and to develop entrepreneurial skills, fostering a solid business culture. This business culture, even when faced with sudden changes, persists and strengthens the capacity for economic recovery.

Furthermore, according to Gur et al. (2020) the existence of an entrepreneurial culture in a region can improve the ability to identify business opportunities and strengthen regional resilience, especially in the face of significant external shocks. This is because the opportunities that emerge after a disaster, such as financial support, opening of new markets and economic rewards, have the potential to generate significant changes in an entire industry.

Besides, Henn et al. (2022) they say that the entrepreneurial culture that emerges from experience generates a commitment and passion among local actors to improve conditions through entrepreneurship, even when government leadership is not significant. This disappointment at the lack of action by local authorities drives the community to create associations and spaces for entrepreneurs.

Thus, in adverse circumstances, entrepreneurial culture can flourish, boosting business and contributing to the re stabilisation of social and economic infrastructure. This entrepreneurial culture is intrinsically linked to regional entrepreneurship in its political, social and environmental dimensions. In this context, entrepreneurship, typically rooted in community culture, considers natural and social capital as integral and inseparable elements of economic considerations, thus transforming the community into an entrepreneur and a business (Demangeot and Sankaran, 2017).

### **4.3. Taking advantage of opportunities**

The ability to identify and capitalize on new opportunities is crucial for entrepreneurial resilience, a skill that was demonstrated during the COVID-19 pandemic (Nautiyal and Pathak, 2023), where ventures emerged amidst adversity. This includes the ability to pivot and adapt business models in response to market changes, as well as the willingness to explore new markets and niches. Resilient entrepreneurs stay alert to emerging trends and are capable of transforming crises into opportunities for growth and innovation. **Table 3** outlines the findings associated with this factor, detailed below:

An important antecedent of regional entrepreneurial resilience is the ability to recognize opportunities that emerge from the crisis. The recognition of entrepreneurial opportunities plays a fundamental role in regional entrepreneurial resilience, because many entrepreneurial opportunities arise from disasters when external shocks are faced during the transformation, especially when financial support is provided, markets are expanded and repairs are carried out in the region, recognizing that they

have the potential to transform the industry making it resilient and promoting economic recovery (Gur et al., 2020).

**Table 3.** Taking advantage of opportunities.

<b>Authors</b>	<b>Taking advantage of opportunities</b>
Gur et al. (2020)	
Linnenluecke and McKnight (2017)	Opportunities arising from the crisis.
McInnis-Bowers et al. (2017)	
Morrison et al. (2017)	
Roundy et al. (2017)	Seizing opportunities through innovation.
ankaran and Demangeot (2017)	Take advantage of previously ignored opportunities.
Williams and Shepherd (2016)	Opportunities to alleviate suffering.

Note: The table shows the exploitation of opportunities as an antecedent of regional entrepreneurial resilience found in the systematic literature review.  
Source. Scientific articles included in the systematic literature review.

Entrepreneurship during disasters can open the door to profitable opportunities to contribute to community response and recovery efforts by capitalizing on business opportunities and offering essential products and services to those affected or involved (Linnenluecke and McKnight, 2017). In this sense, entrepreneurship empowers communities to strengthen their resilience by attracting business resources that enable them to face local challenges and take advantage of previously ignored opportunities (Demangeot and Sankaran, 2017).

In some circumstances, resilience arises as a response to the imperative need to survive, driving the community to adopt entrepreneurial thinking and action to confront and overcome adversity such as overcoming poverty, creating employment and advancing living conditions (McInnis-Bowers et al., 2017).

In addition, regional entrepreneurial resilience is strengthened by fostering an environment that encourages innovation and diversity, and by developing skills to generate employment and wealth through community business projects that take advantage of identified opportunities and improve economic conditions.(Morrison et al., 2017).This is how regional entrepreneurial resilience in the face of adverse events manifests itself through a market oriented business orientation that prioritizes innovation, the creation of new markets, business models and technologies.(Roundy et al., 2017).

In this sense, regional entrepreneurial resilience stems from transformative initiatives that emerge after a disaster aimed at alleviating suffering by introducing services or products that help meet the needs of victims. (Shepherd and Williams, 2016)

#### **4.4. Collaboration**

Cooperation between entrepreneurs, businesses, institutions and the community are essential to strengthening resilience. Collaborative networks allow for the sharing of resources, knowledge and mutual support, facilitating recovery and growth in difficult times. Collaboration also fosters innovation through the combination of different perspectives, skills and experiences, creating an enabling environment for

creative and effective solutions to emerge. **Table 4** presents a summary of the findings related to this factor, detailed below:

**Table 4.** Collaboration as a precursor to regional entrepreneurial resilience.

<b>Author</b>	<b>Collaboration</b>
Gajendran and Oloruntoba (2017)	
Gur et al. (2020)	
Krlev (2023)	Support, cooperation, collaboration and connection between multiple stakeholders
Qiu et al. (2023)	
Vorley and Williams (2017)	
Henn et al. (2022)	
Morrison et al. (2017)	
Sankaran and Demangeot (2017)	Presence of networks
Veer et al. (2016)	
Vlasov et al. (2018)	

Note: The table shows the collaboration as an antecedent of regional entrepreneurial resilience found in the systematic literature review.

Source: Scientific articles included in the systematic literature review.

Among the key factors of regional entrepreneurial resilience, collaboration stands out, which promotes community support from the government and the expansion of essential services. This effort is manifested through planned social events that bring the community together, driving recovery initiatives and improving the well-being of victims of adverse events (Gajendran and Oloruntoba, 2017).

Collaboration is evident in three fundamental aspects. First, the support and cooperation among multiple stakeholders. State collaboration and support in regional recovery, such as the subsidies provided during the COVID-19 pandemic (Schwaiger et al., 2022), along with disaster management and the identification of opportunities, are crucial for strengthening entrepreneurial resilience (Gur et al., 2020). This interaction between public and private actors enhances institutional capacity to face crises and increases territorial resilience (Krlev, 2023). The success of these processes depends on effective collaboration and the mobilization of resources to address emerging challenges.

The second key factor of collaboration as an antecedent of regional entrepreneurial resilience is trust and bonds between the actors in affected communities. Building trust between public and private actors is essential to strengthening entrepreneurial ecosystems in the face of both exogenous and endogenous crises. By fostering effective and transparent collaboration, a favorable environment is created that stimulates business activity and promotes economic growth (Henn et al., 2022). This cooperation facilitates the mobilization of resources and knowledge exchange, helping to mitigate risks and enabling companies to quickly adapt to changes and take advantage of new opportunities.

The development of institutional agreements and collaboration among stakeholders is fundamental to business activity. These joint and long-term approaches are essential for restructuring territories affected by adverse events, such as in post war contexts (Vorley and Williams, 2017). Territorial resilience is also reinforced by the



connection between actors who promote the development of the community's civic capacity. This facilitates the creation of nonprofit organizations, such as cooperatives and community groups, which play a crucial role in the strength and adaptability of communities (Qiu et al., 2023).

The third key factor within collaboration as an antecedent of regional entrepreneurial resilience is the presence of networks. The construction and effective operation of local networks are essential for resilience and community development. These networks include support mechanisms, communication, collaboration, and social creativity, which create an environment conducive to growth and adaptation (Morrison et al., 2017). Support networks provide essential resources, while communication and collaboration strengthen community cohesion. Additionally, social creativity drives innovation and problem solving, facilitating adaptation to changes and challenges. The integration of these elements strengthens the resilient development of local networks (Morrison et al., 2017).

Similarly, social networks, such as virtual communities focused on specific interests, promote online entrepreneurship, strengthening community resilience. These platforms allow communities to overcome difficulties by offering support that complements institutional efforts. Community entrepreneurship can even replace institutional support previously considered indispensable for addressing resilience issues, especially in disadvantaged communities (Demangeot and Sankaran, 2017).

Veer et al. (2016) highlight that online tool, such as social networks and virtual communities, foster emotional bonds by facilitating the sharing of stories after disasters. This type of digital support becomes a valuable resource for affected territories, promoting recovery and reinforcing community resilience through interpersonal connections.

Finally, trans local grassroots networks facilitate integration in territories affected by adversity, positively influencing proactive entrepreneurship and generating resilience. These networks strengthen sociocultural ties, improve access to local resources, and legitimize the creation of social value within the community. They also provide entrepreneurs with transferable knowledge about sustainability and global solutions to local problems (Vlasov et al., 2018).

#### **4.5. Resources**

The availability and access to material, financial, and human resources are essential for regional entrepreneurial resilience. This includes physical and financial resources (industrial structure and infrastructure, technological position and structural conditions, indigenous resources, and financial capital); human resources (human capital, skills and attitudes, leadership; bricolage). The presence of these resources allows entrepreneurs to start, maintain, and expand their businesses, even in adverse contexts, providing a solid foundation for recovery and sustainable development.

When resources are abundant, it is referred to as robustness. This is associated with the ability to withstand impacts without degradation, by having surplus resources that allow for mitigating and containing the effects of disasters when they occur and carrying out recovery activities in a way that minimizes interruptions and future

impacts from disasters (Linnenluecke and McKnight, 2017). **Table 5** provides an overview of the findings related to this factor, outlined below.

**Table 5.** Resources as an antecedent of regional entrepreneurial resilience.

<b>Authors</b>	<b>Resources</b>
Bishop and Shilcof (2017)	Physical Resources
Lew (2014)	
Suire and Vicente (2014)	
Ngoasong and Kimbu (2016)	
Mouzas and Bauer (2022)	Financial capital
Gajendran and Oloruntoba (2017)	Human capital
Henn et al. (2022)	
Iacobucci and Perugini (2021)	
Krlev (2023)	Human leadership
Morrison et al. (2017)	
Nelson and Lima (2020)	DIY
Qiu et al. (2023)	

Note: The table shows the resources as an antecedent of entrepreneurial regional resilience found in the systematic literature review.

Source: Scientific articles included in the systematic literature review.

Physical and infrastructural resources, such as industrial structure, infrastructure, technological position, indigenous resources, and financial capital, are fundamental for fostering regional entrepreneurial resilience. Industrial structure, in particular, influences regional variations in business creation, highlighting sectors such as business services, which benefit from low entry barriers, numerous innovation opportunities, and favorable technological characteristics (Bishop and Shilcof, 2017).

During crises, such as the COVID-19 lockdown (Bürgele et al., 2023), infrastructure disruptions affect access to critical resources. For this reason, private actors actively engage in the swift recovery of infrastructure in affected areas, contributing to a rapid recovery and strengthening regional entrepreneurial resilience (Lew, 2014).

Additionally, the technological position and structural conditions of a region are essential for facilitating businesses' adaptation to instability and new consumption paradigms. By leveraging network effects and interaction with external audiences, strategic decisions can be geared towards overcoming challenges, ensuring the competitiveness and preparedness of the business ecosystem (Suire and Vicente, 2014).

On the other hand, indigenous or group resources, such as community projects providing microcredit and development opportunities, and local initiatives promoting business activities, are key to regional entrepreneurial resilience (Kimbu and Ngoasong, 2016). Moreover, financial capital is a crucial factor in driving regional entrepreneurial resilience, as it plays a vital role in ensuring profitability, sustainable growth, and the financial stability of territories (Bauer and Mouzas, 2022). These resources strengthen the local economic fabric, increasing adaptability and the ability to respond to external challenges.

Human capital is the second key factor among the resources driving regional entrepreneurial resilience. This component is essential in entrepreneurial ecosystems as it improves performance during economic crises and strengthens provinces' capacity to face adversities, especially when diversification is present (Iacobucci and Perugini, 2021). Additionally, human capital promotes local entrepreneurship and is critical in situations of natural disasters, economic crises, or political upheavals, as it forces the community to continuously recycle and adapt resources (Henn et al., 2022).

A crucial aspect of human capital is the development of skills. The interaction between a diversity of skills and cohesion around shared values reinforces regional entrepreneurial resilience. This is particularly relevant in ecosystems characterized by diverse participants, types of enterprises, business models, and support organizations, as well as coherence in values and common activities (Roundy et al., 2017).

Another critical resource that emerges within human capital is leadership. During crises, private actors take on a leadership role due to their management capabilities, while state support ensures greater connection with affected groups (Krlev, 2023). Leaders are essential in developing post disaster recovery strategies through dialogue among stakeholders and public participation, based on effective communication and building personal and collective efficacy (Gajendran and Oloruntoba, 2017).

The leadership of social entrepreneurs also plays a decisive role in community resilience and sustainability. These leaders drive the development of social enterprises that enable business activities to thrive, strengthening communities' ability to adapt and overcome challenges (Morrison et al., 2017).

The third key factor among the resources acting as antecedents of regional entrepreneurial resilience is bricolage. Regional resilience emerges when community residents respond progressively through social bricolage, supporting grassroots recovery efforts (Lima and Nelson, 2020). This approach drives the creation of new ventures both during crises and in the recovery process.

Furthermore, regional entrepreneurial resilience is reinforced through the interaction between local practices and bricolage. Along with international networks, these initiatives have fostered emerging communities of users and global movements (Qiu et al., 2023). This interaction favors both internal alignment and the connection of the ecosystem with its external environment.

#### **4.6. Preparation**

The ability to anticipate and prepare for potential adversities is essential for resilience. This involves strategic planning, risk management, and the development of contingency plans. Proper preparation enables entrepreneurs and communities to respond effectively and quickly when facing adverse events, minimizing the negative impact and accelerating the recovery process. **Table 6** summarizes the findings related to this factor, presented below:

The first factor in preparedness as an antecedent to regional entrepreneurial resilience is the implementation of specific policies. Although one can never be fully prepared to face crises like COVID-19 (Câmara et al., 2023), in key sectors of the economy, these targeted policies contribute to generating entrepreneurial resilience by counteracting market failures, creating appropriate incentives, and impacting both

formal and informal institutions (Aguinis et al., 2023). Moreover, they aim to strengthen resilience through business activity by fostering productive entrepreneurship through institutional agreements that promote diversification, capacity building, and reduce economic informality.

**Table 6.** Preparation as a precedent of regional entrepreneurial resilience.

<b>Authors</b>	<b>Preparation</b>
Aguinis et al. (2023)	
Vorley and Williams (2017)	Prior existence of policies
Vorley and Williams (2017)	
Morrison et al. (2017)	Anticipation
Lew (2014)	Resilience planning

Note: The table shows the readiness as an antecedent of regional entrepreneurial resilience found in the systematic literature review.

Source: Scientific articles included in the systematic literature review.

In this context, the second factor is anticipation and planning. According to Morrison et al. (2017), entrepreneurs can strengthen regional resilience and sustainability through anticipation, preparation, and the development of contingency plans. This contributes to the creation of resilient communities, demonstrating effective adaptation to changes.

The third factor related to preparation is resilience planning. According to Lew (2014), this has emerged in recent years as an alternative to the sustainable development paradigm. This new perspective offers renewed approaches to community development and socio ecological adjustments in a rapidly changing world. Therefore, it is crucial that entrepreneurs manage not only the day-to-day maintenance needs but also the community’s preparation, response, and recovery in the face of disasters.

## **5. Discussion**

The COVID-19 pandemic triggered an unprecedented crisis in human history (Miroshnychenko et al., 2023), highlighting the importance of caring for life on the planet. This global event revealed the urgent need to develop entrepreneurial resilience in regions (Nautiyal and Pathak, 2023). The magnitude and impact of this unique disruption in modern life (Simms et al., 2022) spurred a surge of research aimed at mitigating the effects of the crisis through digital platforms (Shen et al., 2023), state subsidies (Schwaiger et al., 2022), reducing financial losses (Messabia et al., 2022), strengthening business activity (Bürgel et al., 2023), or, in many cases, simply survival (Al-Omouh et al., 2023). This universal crisis demonstrated how some regions were able to recover more quickly than others, prompting this research to identify key factors influencing regional entrepreneurial resilience.

In this context, regional entrepreneurial resilience is understood as a complex phenomenon that depends on multiple interrelated factors. Through this research, six key antecedents were identified, explaining why some regions recover faster than others after a crisis, contributing to a better understanding of the processes underlying effective regional recovery through the strengthening of entrepreneurial capacity. One

fundamental element is action orientation, reflected in their ability to self-organize and rebuild (Gajendran and Oloruntoba, 2017). This capacity is intrinsically linked to the existence of well-established and executed public policies, underscoring the importance of governments not only designing these policies but also allocating resources for their implementation (Bishop, 2019). Future research could explore the relationship between the contextual characteristics of regions and their resilience, given that some territories demonstrate a greater capacity for transformation and renewal after a crisis (Gherhes et al., 2018; Henn et al., 2022).

Another key aspect of regional resilience is historical precedents such as governance. Governance systems, which have traditionally characterized each region, can both limit and stimulate economic development and resilience capacity (Gherhes et al., 2018). These structures are essential in guiding the region through legal frameworks, both during and after a crisis (Kimbu and Ngoasong, 2016). Collaborative governance, in particular, facilitates access to the necessary resources, training, and support, strengthening communities' capacity to innovate and grow sustainably (Aguinis et al., 2020). Effective collaboration between public and private actors not only improves institutional capacity to face crises but also facilitates resource mobilization and the identification of emerging opportunities, reinforcing territorial resilience (Gur et al., 2020; Krlev, 2023). Additionally, local culture plays a crucial role in the recovery and resilience of regions. This culture, marked by the need to adapt to the environment (Greve and Rao, 2018), along with prior training in entrepreneurial skills (Gur et al., 2020) and entrepreneurial natural and social capital (Demangeot and Sankaran, 2017), are elements that impact communities' ability to respond to crises.

Another highlighted factor is the exploitation of opportunities that arise from crises. Opportunities generated by innovation and the pursuit of previously discarded possibilities (Demangeot and Sankaran, 2017) can help alleviate suffering (Shepherd and Williams, 2016). As regions face different types of crises over time, future research could analyze how the entrepreneurial ecosystem has responded to and overcome these challenges, identifying best practices that could be incorporated into the design or update of public policies that foster entrepreneurial activity.

It is also essential to investigate the robustness of resources in regions. Physical and infrastructural resources, such as industrial structure and financial capital, are crucial in facilitating a rapid recovery and strengthening the local economic fabric during crises (Bishop and Shilcof, 2017; Lew, 2014). However, it is important to recognize that during times of crisis, trust between actors may be affected due to the difficulty in generating income to support transactions. Therefore, governance modes must establish support mechanisms for entrepreneurs, such as facilitating access to resources through low interest loans or production incentives.

The implementation of specific policies in key sectors can significantly contribute to collaboration and, consequently, resilience by mitigating market failures and strengthening both formal and informal institutions (Aguinis et al., 2020). Additionally, these policies facilitate diversification and capacity development, helping to reduce economic informality and foster productive entrepreneurship. This approach opens the door to future research on how public policy responds in crisis situations, ensuring the development of resilient entrepreneurship in regions.

Finally, since crises can be prolonged, anticipation and strategic planning are essential. These allow entrepreneurs and communities to develop contingency plans that strengthen their capacity to respond and adapt to unforeseen changes (Morrison et al., 2017). Adequate preparation not only addresses daily needs but also prepares communities to respond effectively to disasters (Lew, 2014). This reinforces the idea that resilience involves not only collaborative actions but also the strategic agility of entrepreneurs (Liu et al., 2020). Future research could examine how resilient entrepreneurs identify and capitalize on new opportunities, turning challenges into competitive advantages. During crises, the recognition of opportunities can be particularly valuable, as these situations often generate unmet demands and open doors for innovation and growth (Linnenluecke and McKnight, 2017).

The above discussion suggests that the theoretical framework of entrepreneurial resilience offers a valuable lens to understand how regions can recover quickly and effectively from global crises like the COVID-19 pandemic. By focusing on entrepreneurs' ability to adapt, innovate, and seize emerging opportunities, this approach highlights the importance of prior preparation and strategic planning (Morrison et al., 2017). Regions with a strong entrepreneurial culture, collaborative governance systems, and public policies that support skill development and resource mobilization are better positioned to overcome the disruptions and challenges posed by crises (Aguinis et al., 2020). Entrepreneurial resilience not only enables regions to respond quickly but also provides the opportunity to turn obstacles into competitive advantages, promoting sustained and sustainable recovery (Linnenluecke and McKnight, 2017).

Moreover, this theoretical approach emphasizes how strengthening entrepreneurial capacities through collaboration between public and private actors is crucial for mobilizing resources, fostering innovation, and supporting economic growth (Krlev, 2023). Although devastating, crises can generate opportunities that, if well managed, allow regions not only to recover but to thrive. The ability to self-organize and adapt quickly, combined with governance that facilitates access to subsidies and digital platforms, strengthens communities' capacity to face future crises with greater resilience and strategic agility (Liu et al., 2020; Schwaiger et al., 2022), thus contributing to greater regional resilience.

Finally, in light of the debate that emerged during the discussion of the results, **Table 7** presents a series of key questions that could guide the future research agenda. These questions are organized into three main areas: impact, public policies, and collaboration between actors.

Research is needed on the impact of crises on industries and the transferability of policies at the local level (Aguinis et al., 2023; Gherhes et al., 2018; Kawharu et al., 2017). Furthermore, it is crucial to explore how collaboration can boost innovation and institutional resilience (Krlev, 2023). Community resilience should be assessed, and policies developed to promote it (Bauer and Mouzas, 2022; Linnenluecke and McKnight, 2017; Morrison et al., 2017).

In the public policy arena, there is a need to investigate the integration of state activities to strengthen state community ties (Kimbu and Ngoasong, 2016), as well as the use of DIY ecosystems in adverse economic conditions (Qiu et al., 2023). It is also crucial to explore the entrepreneurial ecosystem and community resilience

(Demangeot and Sankaran, 2017; Roundy et al., 2017), understand how structural characteristics affect entrepreneurship (Sköld and Tillmar, 2015), and the impact of turbulent macroeconomic environments (Suire and Vicente, 2014). Investigate the contribution of social networks to individual and community recovery after crisis events, as well as the relationship between entrepreneurship, resilience, and sustainability (Veer et al., 2016; Vlasov et al., 2018). Furthermore, understanding of economic resilience linked to entrepreneurship and competitiveness needs to be expanded (Vorley and Williams, 2017), and exploring how entrepreneurship can enhance economic resilience in different regions (Vorley and Williams, 2014). Researching ways to support emerging activities to alleviate suffering is essential (Shepherd and Williams, 2016).

**Table 7.** Future Research agenda for regional entrepreneurial resilience.

Level of resilience	Focus of the research	Research Questions
Regional or territorial resilience	Impact	1. How do contemporary crises and solutions impact a community’s industries?
		2. How can entrepreneurship stimulate and improve economic resilience in different regions?
		3. How can we best assess community resilience, considering the disaster response system at both the enterprise and community levels?
	Public policies	4. How does the transferability of policies from the national level to the local level influence the resilience of territories?
		5. How does public policy respond in a crisis to preserve the rights and duties of communities in relation to the development of resilient organizational entrepreneurship?
		6. How can state policies promote resilience and sustainability by supporting community development and facilitating resource mobilization to assist communities in times of crisis?
	Collaboration	7. How can a proactive collaborative approach stimulate innovation and institutional resilience?

Note: The table shows the questions of the proposed research agenda derived from the systematic literature review. Source: Own elaboration.

## 6. Limitations, implications, contributions and conclusions

### 6.1. Limitations of the study

The systematic literature review has certain limitations. First, the analysis focused on a 10-year time horizon, which allowed for the assessment of the recent development of entrepreneurial regional resilience but excluded research prior to this period. Although this temporal bias could have influenced the results, its impact is minimal, given that interest in the topic has grown mainly in recent years, driven by territorial conflicts. Furthermore, the exclusive focus on entrepreneurial regional resilience may have reduced the scope of the study, limiting the analysis of resilience from a more general perspective, although this restriction was necessary to meet the objective of the study. Finally, the decision to consider only high quality and high impact publications could have left out some important results on entrepreneurial regional resilience, although the methodological and scientific soundness of the selected works was prioritized.

### 6.2. Implications for research, academia, management, and public policy

This systematic review of the literature on entrepreneurial regional resilience offers recommendations that can guide future research on territorial resilience, suggesting the use of mixed approaches (qualitative and quantitative) to explore this phenomenon in different regions and actors, as proposed in the research agenda of this paper. Furthermore, the results of this study are valuable for academics, through higher education institutions, to promote outreach programs aimed at training regional leaders, political representatives, and the community at large. These programs can use the antecedents of entrepreneurial regional resilience as a basis for strengthening and preparing regions, improving their adaptive capacity to crises, disasters, and adversities. In terms of management, entrepreneurs and regional actors can use the insights from this study to develop anticipatory mitigation and redirection strategies, equipping regions with tools to effectively deal with crises. Finally, policymakers can leverage the antecedents of entrepreneurial regional resilience identified in this study to design policies and regulations that better respond to territorial needs in times of crisis, optimizing existing support programs and creating robust action plans to ensure an adequate and timely response to adversities.

### **6.3. Contributions**

A comprehensive systematic literature review was conducted to analyze the background that drives regional entrepreneurial resilience in situations of crisis and adversity. This analysis allowed for a deeper understanding of the factors that strengthen entrepreneurial resilience in the territories. The research contributes to scientific progress by offering a broader understanding of the mechanisms that generate, promote and structure regional entrepreneurial resilience, all through a rigorous, transparent and coherent methodological approach. Likewise, the formulation of a future research agenda is highlighted, composed of 7 key questions related to territorial resilience, supported by the findings of various studies analyzed. These questions offer a guide for future research, allowing to expand and enrich knowledge on entrepreneurial resilience.

### **6.4. Conclusions**

In this research, six key factors were identified that explain why some regions recover more quickly after a crisis. One fundamental element is the effective implementation of public policies and collaborative governance systems that allow regions to self-organize and rebuild. Coordination between public and private actors is essential for accessing resources, fostering innovation, and ensuring sustainable growth. Additionally, effective governance facilitates the mobilization of critical resources during crises, while the local entrepreneurial culture strengthens the region's ability to respond to challenges and emerge stronger.

Another crucial aspect is a region's capacity to anticipate crises and prepare its response through strategic planning. Collaboration among the various actors in the regional ecosystem, as well as the ability to seize emerging opportunities, are determining factors in regional resilience. These elements allow regions to transform challenges into competitive advantages, enabling a quicker recovery. Studying these



factors provides a framework for designing policies and strategies that enhance the capacity of regions to respond and adapt to future disruptive events.

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