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Entrepreneurial Resilience in SMEs: A Bibliometric Perspective

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Abstract: Entrepreneurial resilience is essential to SMEs' success and long-term viability, especially when faced with competitive pressures and economic uncertainty. The resilience of their leaders and staff is critical to SMEs' capacity to weather economic downturns, adjust to shifting market conditions, and seize new opportunities. Because of the rapidly expanding and multidisciplinary nature of the research, a bibliometric analysis was carried out, as it is crucial in the field of entrepreneurial resilience. The Scopus database provided the bibliometric information used in this investigation. The results highlight the most significant writers, organizations, and geographical areas that contribute to the field, as well as trends in keyword co-occurrence and citation. The results and limitations of this study can be taken into consideration for future research.

Keywords: *Entrepreneurial Resilience, Small and Medium Enterprise (SME), Bibliometric Analysis*

1. Introduction

Small and medium-sized enterprises (SMEs) function as essential economic growth drivers and job creators throughout the world, but they struggle because of their limited resources and increased market sensitivity (Cheruiyot, 2024). The economic development of SMEs remains essential because they generate substantial GDP and improve living standards worldwide, thus helping to resolve poverty and unemployment issues (Liu et al., 2022). The limited size and restricted resources of SMEs create obstacles for them, including limited financial access and elevated failure rates, particularly in developing countries (Fatoki, 2018; Saad et al., 2021).

The ability of entrepreneurs to survive challenges and become stronger through adversity has emerged as a vital element for small and medium enterprise (SME) survival and success (Duchek, 2017). The leadership and decision-making traits of entrepreneurs play a crucial role in organizational resilience because SMEs heavily rely on these characteristics (Liu et al., 2022). Entrepreneurs who operate in uncertain environments with informal structures and direct experience of hardship tend to show high resilience, which enables their SMEs to adapt to challenges and recover from failures while maintaining a positive outlook (Branicki et al., 2018).

The concept of resilience faces challenges because it exists differently across various disciplines, research settings, and enterprise sizes, which leads to fragmented business literature understanding (Saad et al., 2021). This study is grounded in the resilience concept, which positions resilience as a dynamic capability that enables individuals and organizations to adapt, recover, and grow stronger through adversity (Duchek, 2018). According to Duchek's model, resilience is not a static trait but an evolving process involving anticipation of crises, coping during adversity, and subsequent adaptation and transformation.

The combination of personal traits like perseverance, optimism, and problem-solving abilities with organizational strengths including adaptability, innovation, and strong social networks defines entrepreneurial resilience (Saad et al., 2021; Liu et al., 2022). Entrepreneurs use cognitive, emotional, and behavioral elements to handle obstacles while extracting valuable lessons from their mistakes, which leads to enduring business success (Dewi, 2024; Pramesti & Prihastiwi, 2020).

Research shows that resilient entrepreneurs maintain better agility and flexibility during crises, which helps them create a continuous improvement culture in their firms (Hartmann et al., 2022; Sachdev, 2023). The ability to adapt and innovate becomes crucial for SME survival during disruptive events such as the COVID-19 pandemic (Liu et al., 2022). The definition and measurement ambiguity of SME resilience creates difficulties for both research and practical applications, according to Saad et al. (2021). A thorough comprehension of entrepreneurial resilience factors enables the development of successful strategies to promote SME growth and sustainability. Given that entrepreneurial resilience intersects multiple disciplines such as psychology, management, and economics, bibliometric analysis (BA) helps organize and synthesize this complex body of

literature, offering a comprehensive overview that traditional reviews may overlook. Thus, the objectives of this study are to map the production of publications on entrepreneurial resilience in SMEs and to identify common terminologies and keywords related to entrepreneurial resilience in SMEs.

2. Methodology

This study involved bibliometric analysis (BA), in which further discussion will be focused on the selection of the database, search strategy, analysis, and approach.

Selection of a database

The bibliographical data for this study were obtained from the Scopus database. It was selected because it covers a wide range of subjects, especially in social sciences and management (Sweileh, 2022). Scopus has more citation indexes than the Web of Science (WoS), with about 60% more, which makes it better for finding more relevant articles (Magadán-Díaz & Rivas-García, 2022). Scopus also provides up-to-date coverage of over 42,000 journals and useful tools like author profiles and citation tracking (Quvae, 2023). Many recent review studies have used Scopus, showing it is a trusted and popular choice for research (Pham-Duc et al., 2023; Singh & Arora, 2023; Ullah et al., 2023).

Search strategy

The search initiated on February 1, 2025. The main keyword that we use is "entrepreneurial resilience" and "small and medium enterprises". Interchangeable and synonymous terms for these two concepts were derived from the literature as presented in Table 1.

Table 1: Finalized search terms and definitions

Search concept	1	2
Main keywords (and definitions)	*entrepreneurial resilience* Entrepreneurs demonstrate their ability to adapt and recover while continuing their goals through challenging situations. Entrepreneurs use psychological and behavioral abilities to control stress while learning from failures and staying motivated in unpredictable situations (Garrett & Zettel, 2021)	*small and medium enterprises* Small and medium enterprises (SMEs) are broadly defined as businesses with limited employees and revenue, although exact definitions vary by country and study (Senderovitz, 2016).
Synonymic and interchangeable keywords	Business resilience, entrepreneur resilience, resilience in business,	SMEs, small businesses, medium enterprises, individual businesses

The initial keyword search yielded 546 articles, which were then narrowed down to those published between 2006 and 2024 to explore the development of research on entrepreneurial resilience. We selected this time frame due to the oldest published date was in 2006 and the publication cycle for the year 2024 has already been completed. 466 articles remained after we filtered by publication year. Afterward, we implemented the subsequent exclusion criteria to enhance the dataset:

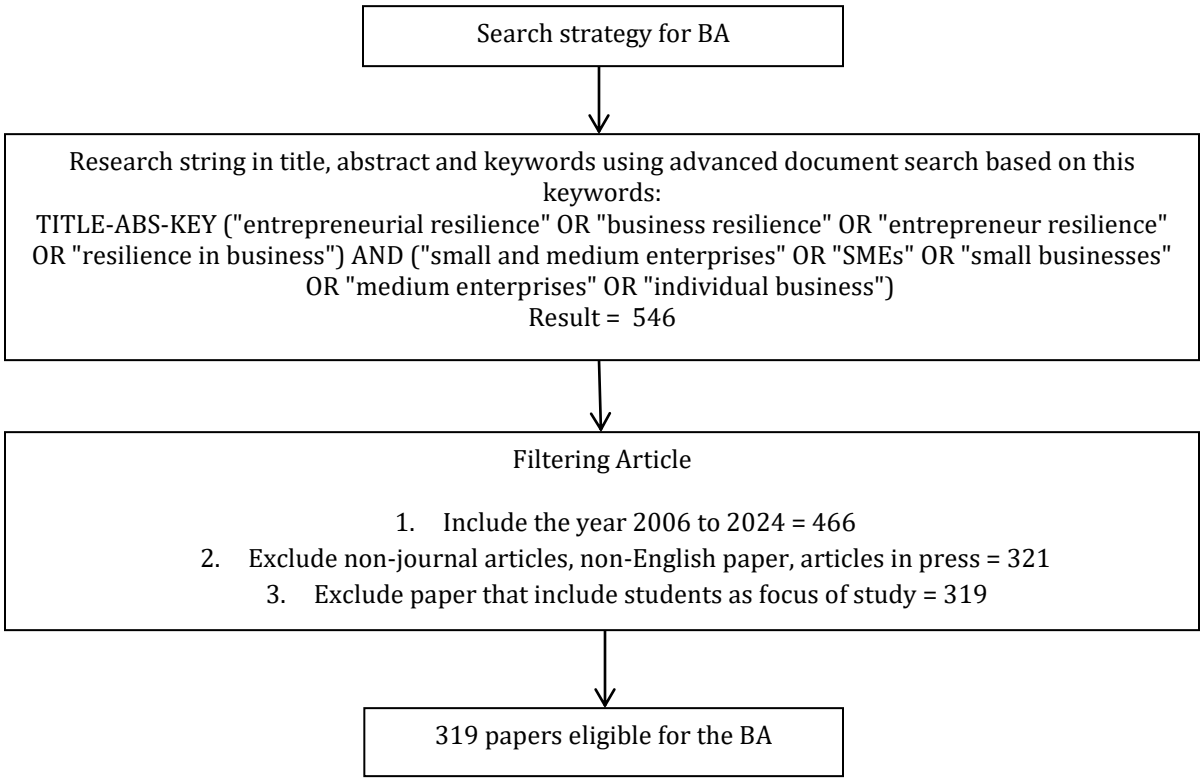
Article Type: Our concentration was solely on peer-reviewed journal publications. Non-journal sources, including conference papers, press articles, and surveys, were removed to maintain methodological consistency and emphasize properly evaluated academic literature.
Language: Only English-language publications were chosen to ensure uniformity in content assessment and facilitate worldwide comparability. Although this may create a linguistic bias, standardizing the bibliometric and content analysis process was essential.
Context: We eliminate studies that utilized students as study respondents.

After applying these filters, the dataset was reduced to 319 articles representing global research on entrepreneurial resilience. Figure 1 shows the inclusion and exclusion criteria applied in this study.

Analysis approach

A total of 319 articles were analyzed using Bibliometric Analysis (BA), following the guidelines outlined by Block and Fisch (2020). BA is a powerful technique for exploring large volumes of scientific data to identify the evolution of a discipline, key contributors, and emerging research areas (Donthu et al., 2021). Visualization maps were generated using VOSviewer (van Eck & Waltman, 2010), a tool that offers flexible data editing and distance-based visualization capabilities (Iddy & Alon, 2019). In our analysis, we examined annual publication trends, leading countries, prominent scholars, influential journals, and the most cited articles to understand overall researcher engagement in entrepreneurial resilience. Additionally, we applied bibliometric techniques such as keyword co-occurrence analysis to map thematic research trends.

Figure 1: Search strategy for bibliometric analysis for this study



We implemented the following measures to guarantee transparency and reproducibility:

Data Source: The analysis utilized data obtained from Scopus, which provides high-quality, peer-reviewed literature.

Inclusion Criteria: Only articles published in peer-reviewed journals were considered. To ensure consistency, non-journal sources such as conference papers, press articles, and surveys, as well as non-English papers, were excluded.

Time Range: The dataset encompassed articles published from 2006 to 2024 to include both foundational and contemporary research.

Software and Settings: VOSviewer was utilized for network visualization, implementing a threshold to eliminate isolated nodes with weak citation links.

Normalization and Data Cleaning: To ensure accuracy, the thesaurus function in VOSviewer was employed to merge duplicate author names and standardize keyword spellings, thereby minimizing inconsistencies in the dataset.

Co-Occurrence Analysis: Keywords were included only if they appeared at least three times, thereby ensuring that only commonly used terms contributed to thematic mapping.

3. Findings

The results for this paper will focus on BA involving 319 global-based articles. Our BA examined the annual publication trends, the most productive countries and institutions, the most prolific authors, the most cited articles, author collaboration networks, and keyword analysis.

Annual publication trend

Figure 2 depicts the annual and cumulative trends in scholarly publications focusing on entrepreneurial resilience from 2006 to 2024. The data differentiates between the number of new publications each year and the cumulative total over time, illustrating the evolution of academic interest in this field.

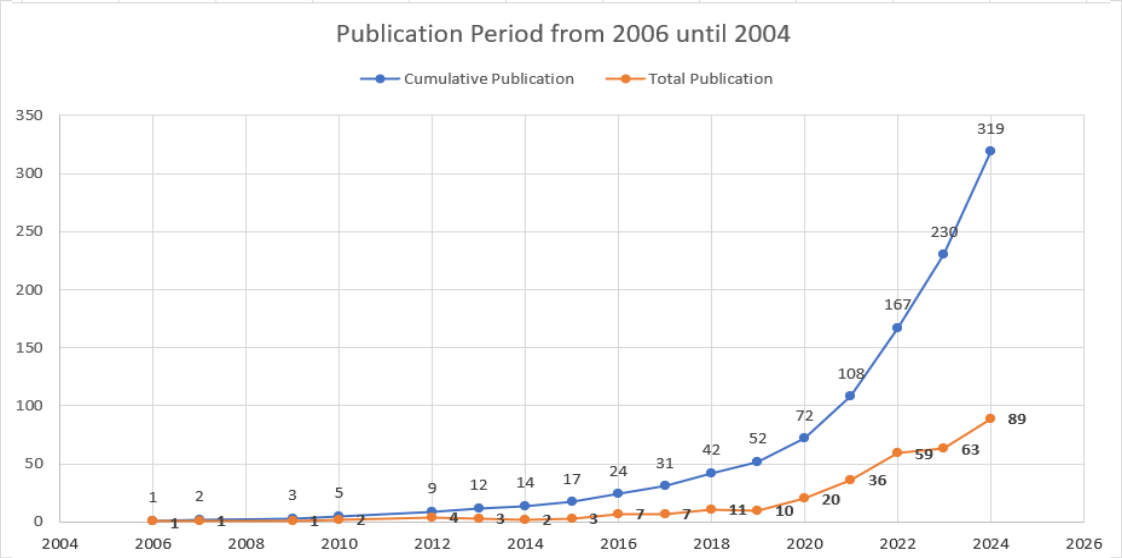
Between 2006 and 2015, research on entrepreneurial resilience was sparse, with annual publications ranging from only 1 to 4 articles. The cumulative number of publications during this period remained below 20, indicating that entrepreneurial resilience was still an emerging concept within academic discourse and had yet to attract widespread scholarly attention (Grčić Fabić et al., 2025).

Starting in 2016, there was a steady increase in publication output, with yearly articles rising from 4 in 2016 to 20 in 2020. This period reflects growing recognition of entrepreneurial resilience as a critical area of study, driven by increasing awareness of the challenges entrepreneurs face in volatile environments (Grčić Fabić et al., 2025; Hwang, 2024).

The most pronounced growth occurred from 2021 onwards, with annual publications sharply increasing to 36 in 2021, 59 in 2022, 63 in 2023, and reaching a peak of 89 in 2024. Correspondingly, the cumulative total surged from 109 publications in 2021 to 319 by 2024, marking nearly a threefold increase within just three years. This rapid expansion aligns with heightened scholarly focus on resilience in the wake of global disruptions such as the COVID-19 pandemic, which underscored the importance of resilience for entrepreneurial survival and growth (Grčić Fabić et al., 2025; Hwang, 2024; Telli, 2023).

This surge also reflects the integration of resilience theory with crisis management and entrepreneurial studies, emphasizing strategies such as innovation, digital transformation, and emotional resilience as vital components for navigating economic uncertainty (Hwang, 2024). The growing body of literature highlights entrepreneurial resilience not only as a mechanism for survival but also as a driver of long-term competitiveness in turbulent economic contexts (Hwang, 2024; de Vries & Shields, 2006).

Figure 2: Yearly trend for publication on entrepreneurial resilience (Authors' construct)



Top 10 productive countries and institutions

Table 2 highlights the leading countries and academic institutions contributing to research on entrepreneurial resilience, as measured by total publication count (TPC) and the proportion of single-country publications (SCP). The top 10 countries include the United Kingdom, Indonesia, the United States, China, Malaysia, India, Italy, Spain, Australia, and New Zealand.

The United Kingdom ranks first with 41 publications, with Aberystwyth University identified as its most productive institution, followed by Indonesia with 37 publications. The United States, China, and Malaysia also rank in the top 10 with 37, 23, and 20 publications, respectively. Among the 10 countries, we can see that India has the highest percentage of single-country publications (78.95%), indicating that it produces a large number of articles without collaborating with other countries.

Table 2: Top ten most productive countries and academic institutions for entrepreneurial resilience

Rank	Country	Total publication of a given country (TPC)	Most productive academic institutions based on TPC	Single-country publications (SCP)(%)
1	United Kingdom	41	Aberystwyth University	43.90
2	Indonesia	37	Universitas Gadjah Mada	70.27
3	United States	37	Purdue University	51.35
4	China	23	Sun Yat-Sen University	65.22
5	Malaysia	20	Universiti Teknologi MARA	70.00
6	India	19	Symbiosis International (Deemed University)	78.95
7	Italy	19	Università degli Studi di Modena e Reggio Emilia	68.42
8	Spain	19	Universidad de Málaga	73.68
9	Australia	17	Victoria University	35.29
10	New Zealand	16	University of Otago	62.50

These regional differences may reflect variations in national research funding, institutional priorities, and policy focus on SME development. For instance, countries like the UK (e.g., Davis et al., 2023) and Indonesia (e.g., Prayitno et al., 2024) may prioritize entrepreneurship resilience due to their policy responses to recent economic disruptions. The higher SCP rate in India could suggest a strong local academic network but limited global research engagement.

Figure 3: Co-occurrence map generated from VOSviewer for countries in entrepreneurial resilience

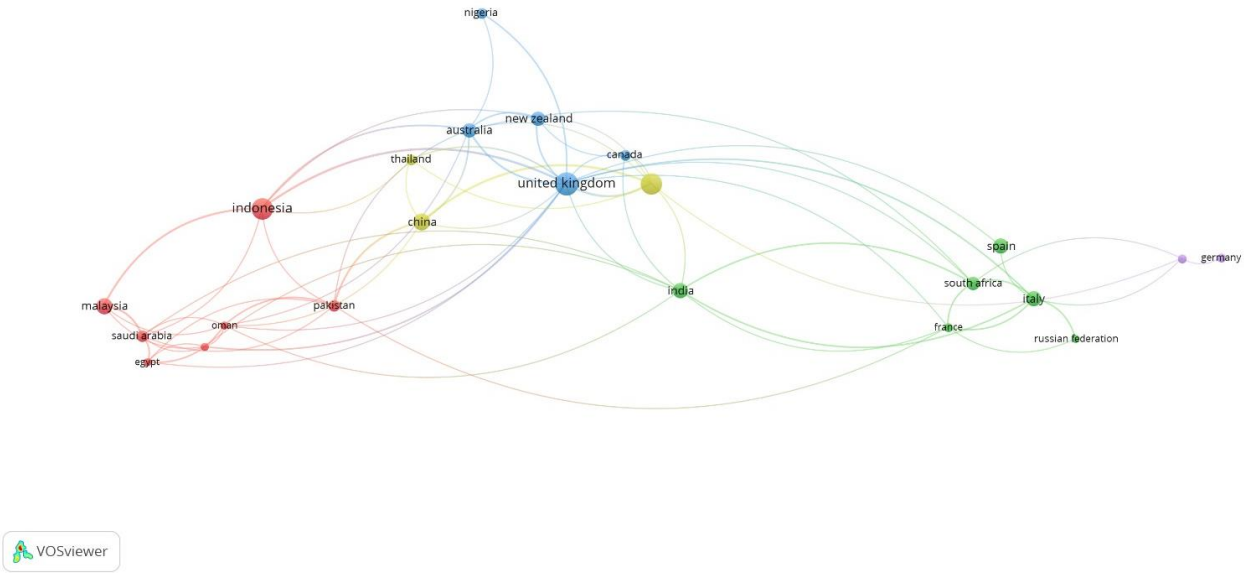


Figure 3 illustrates the co-occurrence of the leading countries, where proximity among countries signifies a stronger connection in VOSviewer (Zhou et al., 2022). The borders between nations illustrate co-citation relationships, where total link strength reflects the overall robustness of a researcher's co-authorship connections, and the link denotes the quantity of co-authorship relationships (van Eck & Waltman, 2022).

The co-occurrence map shows that 23 countries are producing articles on entrepreneurial resilience. The United Kingdom collaborates with several countries, including the United States, India, Canada, New Zealand, Australia, Thailand, and Indonesia. This collaboration is the strongest, with 16 links, 41 documents, and 29 total link strengths in co-authorship. The United States and Australia follow with 14 total link strengths, and Indonesia has 13 total link strengths in co-authorship.

Top 10 productive journals

Table 3 presents the ten most productive academic journals that have contributed to the field of entrepreneurial resilience. The analysis is based on the three key indicators, which include the Total Publications, Total Citations, and Cite Score (2024), which measure a journal's influence in this research area. Journal of Sustainability (Switzerland) ranks the most productive journal with 21 total publications, followed by Frontiers in Psychology, International Journal of Disaster Risk Reduction, and International Journal of Entrepreneurial Behavior and Research with 6 total publications.

In terms of total citations, International Journal of Entrepreneurial Behavior and Research emerged as the most cited journal, accumulating 227 citations from an article produced by Branicki et al. (2018). The high citation volume suggests that articles published in this journal are widely referenced and considered influential within the academic community, especially in studies exploring behavioral and psychological aspects of entrepreneurship.

The Journal of Hospitality and Tourism Management reported the highest CiteScore of 14.9 among the top ten journals. With only four publications on entrepreneurial resilience, the journal still achieved 119 citations, reflecting a high average impact per article. The most cited publication is "Transcending the COVID-19 crisis: Business resilience and innovation of the restaurant industry in China" by Li et al. (2021). This journal's prominence underscores the relevance of entrepreneurial resilience in service-based and tourism-oriented industries, especially in the context of crisis and recovery.

Table 3: Top ten most productive journals for entrepreneurial resilience

Journal	Total Publication	Total Citation	Cite Score (2024)	Most Cited Article in the Journal
Sustainability (Switzerland)	21	107	7.7	Toward a business resilience framework for startups (Aldianto et al., 2021)
Frontiers in Psychology	6	15	6.3	Entrepreneurial mindfulness and organizational resilience of Chinese SMEs during the COVID-19 pandemic: The role of entrepreneurial resilience (Liu et al., 2022)
International Journal of Disaster Risk Reduction	6	33	8.5	Psychological capital, social capital, and organizational resilience: A Herringbone Model perspective (Tanner et al., 2022)
International Journal of Entrepreneurial Behavior and Research	6	227	9.3	How entrepreneurial resilience generates resilient SMEs (Branicki et al., 2018)
International Entrepreneurship and Management Journal	5	164	10.7	The role of mentoring in the learning development of the novice entrepreneur (St-Jean & Audet, 2012)
Journal of Contingencies and Crisis Management	5	101	4.1	Does social capital pay off? The case of small business resilience after Hurricane Katrina (Torres et al., 2019)

Journal of Entrepreneurship in Emerging Economies	5	76	8.1	Entrepreneurial resilience during the Covid-19 pandemic: navigating survival, continuity and growth (Purnomo et al., 2021)
Cogent Business and Management	4	105	4.9	Conceptualization of SMEs' business resilience: A systematic literature review (Saad et al., 2021)
International Journal of Organizational Analysis	4	45	7.5	In the family way: an exploration of family business resilience (Beech et al., 2020)
Journal of Hospitality and Tourism Management	4	119	14.9	Transcending the COVID-19 crisis: Business resilience and innovation of the restaurant industry in China (Li et al., 2021)

Top 10 prolific authors

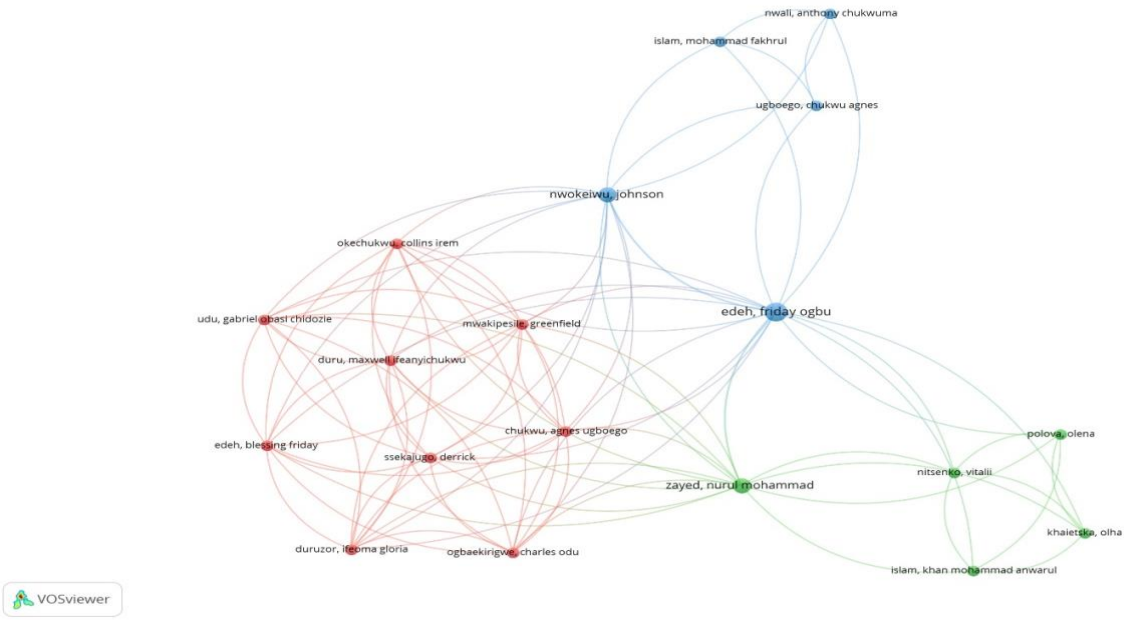
Table 4 displays a summary of the top ten authors who have published the most articles in the field of entrepreneurial resilience. The table includes each author's h-index, total number of publications, total citations, institutional affiliation, and country of origin. The analysis below highlights the most productive contributors based on three key indicators: the highest number of publications, the highest total citations, and the highest h-index. We can see from the table that most authors come from Indonesia, Italy, and the United States, with 2 authors originating from each country, and 1 author comes from India, Saudi Arabia, Uganda, and the United Kingdom.

By focusing on authors, we can identify prominent scholars who have significantly contributed to the development of literature on entrepreneurial resilience. We identified 19 influential authors who have played a pivotal role in shaping the research landscape, with their work profoundly impacting the study of entrepreneurial resilience (Figure 4).

Table 4: Top ten prolific authors in entrepreneurial resilience studies

Author	Scopus ID	h-Index	Total Publication	Total Citation	Affiliation	Country
Alshebami, Ali Saleh	57211347764	19	4	50	King Faisal University	Saudi Arabia
Anggadwita, G.	56540008500	20	4	107	Telkom University	Indonesia
Martinelli, Elisa	55337570700	12	4	129	Università di Pisa	Italy
Wang, Qingfang	56543851800	12	4	11	University of California	United States
Abdinagoro, S. B.	57193864630	10	3	4	Bina Nusantara University	Indonesia
Agarwal, Sucheta	56865149900	14	3	52	GLA University	India
Edeh, Friday Ogbu	57225150404	6	3	16	Kampala International University	Uganda
Kang, Wei	57191076284	11	3	11	University of North Texas	United States
Morris, Wyn	57194398389	10	3	66	Aberystwyth University	United Kingdom
Tagliazucchi, Giulia	57201005335	7	3	129	Università degli Studi di Modena e Reggio Emilia	Italy

Figure 4: Most contributed authors in the field of entrepreneurial resilience



Based on Table 4, Martinelli, E., and Tagliazucchi, G. are the most influential, with 129 total citations. Anggadwita, G. has also made major contributions to the discipline and received more than 100 citations. These authors have been instrumental in promoting research on entrepreneurial resilience, and their work remains highly cited in academia.

Top 10 cited articles.

Table 5 presents the 10 most cited articles from Scopus. Analysing the top 10 most cited articles from highlights the most influential and foundational research in the field. Citation counts reflect a study's impact and relevance, helping to identify key contributions and emerging trends. This analysis supports informed literature reviews, guides future research, and benchmarks scholarly quality, providing valuable insights into the core developments shaping the discipline. The highest cited article is from Dahles & Susilowati (2015) with 352 total citations. This research highlights the importance of embeddedness, livelihoods, and adaptive strategies in fostering business resilience in developing country contexts affected by sustained crises.

Table 5: Top ten most cited articles in entrepreneurial resilience research

Author	Title	Journal	Total Citation
Dahles & Susilowati (2015)	Business resilience in times of growth and crisis	Annals of Tourism Research	352
Branicki et al. (2018)	How entrepreneurial resilience generates resilient SMEs	International Journal of Entrepreneurial Behavior and Research	227
Shepherd et al. (2020)	How to circumvent adversity? Refugee-entrepreneurs' resilience in the face of substantial and persistent adversity	Journal of Business Venturing	171
St-Jean & Audet (2012)	The role of mentoring in the learning development of the novice entrepreneur	International Entrepreneurship and Management Journal	164
Corner et al. (2017)	Entrepreneurial resilience and venture failure	International Small Business Journal Researching Entrepreneurship	153

Duchek (2018)	Entrepreneurial resilience: a biographical analysis of successful entrepreneurs	International Entrepreneurship and Management Journal	151
Santoro et al. (2021)	Searching for resilience: the impact of employee-level and entrepreneur-level resilience on firm performance in small family firms	Small Business Economics	148
Orchiston (2013)	Tourism business preparedness, resilience, and disaster planning in a region of high seismic risk: The case of the Southern Alps, New Zealand	Current Issues in Tourism	135
Santoro et al. (2020)	Exploring the relationship between entrepreneurial resilience and success: The moderating role of stakeholders' engagement	Journal of Business Research	134
Martinelli (2018)	The resilient retail entrepreneur: dynamic capabilities for facing natural disasters	International Journal of Entrepreneurial Behavior and Research	129

Keyword clusters

Co-occurrence analysis was employed to identify the primary topics in the research on entrepreneurial resilience within SMEs, utilising widely recognised keywords. The keywords deemed "popular" are generally considered significant and are selected based on their frequency or through centrality-based network measurements, both of which have been shown to yield highly comparable keyword selections (Choi et al., 2011). Eight analogous keywords are grouped according to their co-occurrence frequency in scientific literature. This process creates a mapping of research domains and subgroups, illustrating the connections between various document groups and scientific publications (Zupic & Cater, 2015; Vorgel, 2012).

Figure 5 displays co-occurrence relationships among key research keywords in the analyzed literature dataset. Each node (circle) represents a keyword, and links (lines) between nodes represent the frequency with which two keywords appear together in the same publication. Node size and link thickness indicate the frequency and strength of these relationships, respectively. Different colors represent clusters of related keywords, suggesting thematic groupings within the research field.

The term “resiliency” is prominently featured at the center of the map, appearing in 222 articles and being linked to most of the keywords on the cluster map with a total link strength of 259. This demonstrates its substantial correlation with entrepreneurship, COVID-19, crisis, and sustainability. The term "entrepreneur" ranks as the second most frequently occurring term, as denoted by the blue colour on the cluster map. It demonstrates a strong correlation with most terms, exhibiting a total link strength comparable to that of COVID-19. The link strength of 77 between "resilience" and "entrepreneur" indicates significant interaction between these variables. This has significantly impacted research on entrepreneurial issues.

Table 6: Keywords clusters in entrepreneurial resilience

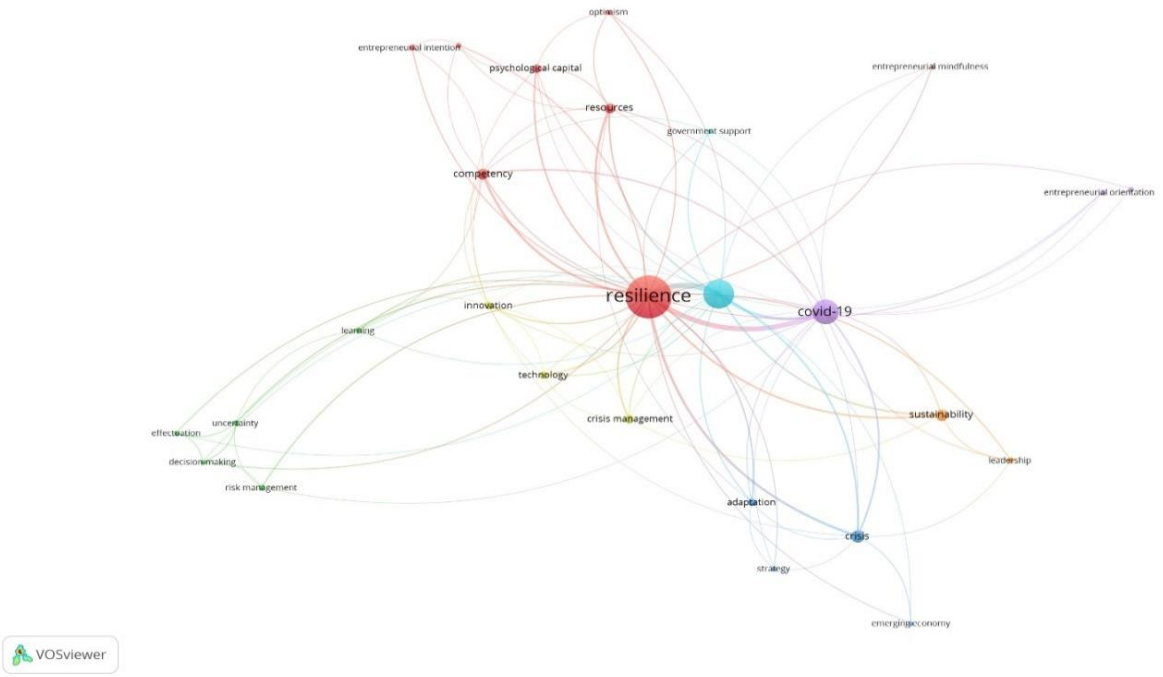
Cluster	Keywords	Overarching Themes	Significance
Cluster 1	Competency, entrepreneurial intention, entrepreneurial passion, optimism, psychological capital, resilience, resources	*Multidimensional construct:* This cluster integrates the individual (psychological capital), social (networks), and organizational (strategic adaptability) dimensions, reflecting how resilience is not a single trait or action but a dynamic, context-driven process influenced by personal, relational, and structural factors, especially under crisis or uncertainty	*Policy interventions and entrepreneurial development*. Development of policy and investment in entrepreneurial development, especially in psychological and leadership skills, will help maintain business continuity and competitiveness during crises.
Cluster 2	Decision-making, effectuation, learning, risk management,	*Decision making and uncertainty*: this cluster particularly focuses on how entrepreneur and their enterprises	*Creating a supportive ecosystem.* Targeted interventions such as financial education, resilience

	uncertainty	respond to crises, disasters, and uncertain environments. The focus includes psychological traits, adaptive behaviors, strategic decision making, and organizational capabilities to help businesses survive, recover, and grow amid crises and uncertainty.	training programs, and policies that facilitate access to resources and networks can be created (Seraj et al., 2022). To add, promoting entrepreneurial learning and digital adoption can help SMEs better navigate crises and seize emerging opportunities (Abbas et al., 2024).
Cluster 3	Adaptation, crisis, emerging economy, strategy	*Crises response and adaptation*: This cluster focuses on how businesses adapt, innovate, and sustain operations during and after disruptive events. It focuses on how businesses across industries build and leverage resilience to survive, adapt, and recover from crises, emphasizing the interplay of innovation, leadership, ecosystem support, and adaptive strategies.	*Enhancing adaptability and innovation.* Benefit from embracing digital technologies and creative pivots will help sustain operations and seize new opportunities during crises (Santos et al., 2023). It is also crucial for entrepreneurs to have entrepreneurial mindfulness, which will help them maintain focus, manage stress, and foster resilience, which in turn improves crisis response.
Cluster 4	Crisis management, innovation, technology	*Organizational change and future readiness.* Response to external shocks such as disasters, crises, and COVID-19. Various integrated approaches will enable businesses to withstand external disruptions like pandemics, economic shocks, or environmental challenges, ensuring their survival and growth.	Resilience is not only about surviving disruptions but also about proactively adapting, innovating, and growing. For entrepreneurs and organizations, resilience translates into operational continuity, competitive strength, and sustainable success. For governments and policymakers, fostering resilience supports economic stability, social welfare, and sustainable development in the face of ongoing global uncertainties.
Cluster 5	COVID-19, entrepreneurial orientation, recovery	*Resilience-building mechanisms.* This cluster emphasizes the importance of psychological, social, and entrepreneurial capital, sustainability integration, and robust research methodologies to understand and support business recovery and long-term sustainability.	As for an entrepreneur, emotional intelligence, leadership skills, as well as long-term financial stability are crucial to maintain team cohesion during crises and improve the business's sustainability and attractiveness.
Cluster 6	Entrepreneurs, government support	*SMEs enabler*: This cluster focuses on government support as an SMEs enabler that acts as a key catalyst in strengthening SME resilience. Supports in terms of facilitating adaptability, promoting technology adaptation, and enhancing financial literacy will enable SMEs to better withstand shocks and facilitate sustainable recovery and growth.	*Government support* is fundamental to building SME resilience and driving economic growth by providing financial relief, fostering digital adoption, enhancing workforce capabilities, and promoting innovation. These measures enable SMEs to sustain operations and compete globally, thereby underpinning broader economic stability and transformation.
Cluster 7	Leadership, sustainability	*Sustainability*: This cluster focuses on how effective leadership, sustainability-oriented strategies (including CSR and ESG), resilience-building, and knowledge management contribute to the long-term sustainability, growth, and competitive advantage of SMEs and small businesses across diverse contexts	*Improve the entrepreneur's capacity to survive.* Entrepreneurs who cultivate adaptability, embrace technology, and develop financial and leadership competencies—supported by targeted government initiatives—are better equipped to build resilient, sustainable

		and sectors.	businesses capable of thriving amid uncertainty and change.
Cluster 8	Entrepreneurial mindfulness	*Entrepreneurial mindfulness.* This cluster focuses on entrepreneurial mindfulness and leadership in enhancing resilience and performance in startups and SMEs. Being aware, present, and reflective helps entrepreneurs improve mental clarity, emotional regulation, and adaptability.	*Designing Mental Health and Leadership Development Initiatives.* Policies can promote mindfulness training and leadership development as part of entrepreneurship support services to enhance decision-making, stress management, and adaptive capacity.

Altogether, the eight keyword clusters reflect a multidimensional research field that spans the individual, organizational, and institutional levels of entrepreneurial resilience. For instance, the integration of psychological capital, decision-making processes, innovation strategies, government support, and sustainability reveals that resilience is no longer viewed as a single trait but as a dynamic capability shaped by internal capacities and external systems. The prominence of COVID-19 across clusters also signals how global disruptions have accelerated scholarly focus on crisis response and adaptability. This thematic diversity highlights a shift toward more holistic understandings of resilience, capturing not only how entrepreneurs survive disruptions but also how they evolve, transform, and sustain long-term growth across varying contexts.

Figure 5: Keywords co-occurrence map generated from VOSviewer in the field of entrepreneurial resilience



The third most common keyword is "COVID-19," as it was used in 76 documents with 121 total link strength. This keyword's frequency and connectedness in contemporary studies emphasize its centrality in debates regarding entrepreneurial resilience. The link strength of 63 between "resilience" and "COVID-19" shows that these topics are frequently discussed together in the literature on the area of entrepreneurial resilience in SMEs.

This map demonstrates that resilience and entrepreneurship are deeply interconnected themes in the current research landscape, particularly in the context of crises like COVID-19. The centrality of these keywords and their strong associations with concepts such as innovation, crisis management, and competency reflect a scholarly emphasis on understanding how entrepreneurs and entrepreneurial ventures navigate, adapt to, and thrive amid adversity.

4. Conclusion and Recommendations

The research objective was to identify the intellectual structure together with emerging trends in entrepreneurial resilience studies of SMEs. The research shows that resilience' and 'entrepreneur' are the most frequently used keywords in the field of entrepreneurial resilience. The study identified eight different clusters, which represent groups of keywords that appear together frequently. The United Kingdom, Indonesia, and the United States emerged as leading contributors, while journals such as Sustainability (New Zealand) dominated the publication landscape.

The analysis shows that crisis management and entrepreneurial adaptation are fundamental topics, while digital transformation and external environment issues in entrepreneurship during crisis times are emerging areas that provide a detailed understanding of current research priorities. The research indicates a growing interest in startup company resilience and the hospitality and retail industries. By examining prolific authors, influential journals, and country-level contributions, the study sheds light on the geographic and institutional landscape of entrepreneurial resilience research, noting that collaboration remains limited and suggesting the need for more interdisciplinary partnerships.

While this study offers a descriptive mapping of the entrepreneurial resilience literature, interpreting the findings through a theoretical lens can enhance their significance. For instance, Duchek's (2018) model of resilience, as a dynamic capability comprising anticipation, coping, and adaptation, provides a useful framework for understanding the progression of topics identified in the clusters. The emergence of themes like crisis management, digital transformation, and adaptation aligns with these stages, indicating how entrepreneurial resilience evolves in response to environmental challenges. Integrating such models in future bibliometric or empirical research could deepen understanding of resilience development among SMEs.

The research contains specific boundaries that need attention. Our research depended exclusively on Scopus database information. Although this database includes numerous high-impact journals yet it fails to include all relevant sources. The exclusion of Web of Science and Google Scholar databases from our analysis might have led to missing important studies that appear in regional or emerging journals that Scopus does not index. Future research should use multiple databases to collect publications because this approach will enhance both the quantity and quality of research findings.

In addition, this study adopts a general bibliometric scope, capturing cross-sectoral insights into government support, psychological capital, and crisis management. While this provides a broad overview of the field, future studies may benefit from an industry-specific focus to derive more tailored practical implications. For practitioners, the findings suggest that resilience-building initiatives should prioritize leadership development and digital innovation, particularly in crisis-sensitive sectors such as tourism, hospitality, and retail, which were among the most impacted during the COVID-19 pandemic.

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