



Thriving in turbulence: resilience and strategic adaptation in global business

Faisal Saeed Malik¹ · Orestis Terzidis¹

Received: 28 January 2025 / Accepted: 10 September 2025
© The Author(s) 2025

Abstract

This research employs a hybrid systematic literature review methodology, combining bibliometric mapping with the Theory-Context-Characteristics-Methodology (TCCM) framework, to critically examine the scholarship on resilience and strategic adaptation in global business under conditions of geopolitical uncertainty. Drawing on 59 high-impact, peer-reviewed articles, the study identifies dynamic capabilities, institutional theory, and organizational agility as the predominant explanatory frameworks for firm-level adaptation. Through the synthesis of these perspectives, we observe the emergence of a conceptual construct termed the *Resilience Strategy Engine*, which comprises four interrelated components: institutional adaptation mechanisms, organizational agility, digital enablers, and contextual intelligence. These constructs reflect the operationalization of dynamic capabilities in navigating external shocks. Methodologically, the literature reveals a strong reliance on cross-sectional quantitative designs and bibliometric techniques, with limited engagement in longitudinal research, big data analytics, and mixed-methods approaches. The hybrid methodology applied in this study enables a structured, multi-dimensional analysis that captures both theoretical patterns and empirical gaps, offering a comprehensive lens on how resilience has been conceptualized and examined in global business contexts.

Keywords Resilience · Strategic adaptation · Geopolitical uncertainty · Dynamic capabilities · Digital transformation · TCCM framework

JEL Classification D81 · F23 · M1 · M10 · M16

✉ Faisal Saeed Malik
Faisal.malik@kit.edu

Orestis Terzidis
orestis.terzidis@kit.edu

¹ The Institute of Entrepreneurship, Technology-Management, and Innovation (EnTechnon), Karlsruhe Institute of Technology (KIT), Fritz Erler Str. 1-3, Gebäude 01.85, 76131 Karlsruhe, Germany

1 Introduction

The intensification of geopolitical turbulence, through trade wars, sanctions, regional conflicts, and shifting regulatory regimes, poses significant challenges to firms' ability to sustain operational continuity and competitive advantage (Cuervo-Cazurra et al. 2023; Nielsen et al. 2023; Pitelis et al. 2024). In response, resilience and strategic adaptation have become central concerns in global business scholarship. Foundational theories such as dynamic capabilities (Teece et al. 1997; Xu and Abdullah 2024), institutional theory (Meyer 2004; Scott 2017), and organizational agility (Doz and Kosonen 2010; Overby et al. 2006) offer complementary insights into how firms sense external shifts, respond to institutional pressures, and adapt operations under uncertainty. However, these perspectives often evolve in isolation, limiting an integrated understanding of multi-level adaptation processes in volatile environments.

Moreover, the integration of digital transformation into resilience research remains fragmented. Technologies such as artificial intelligence (AI), blockchain, the Internet of Things (IoT), and big data analytics have demonstrated potential to enhance sensing, transparency, and adaptive responsiveness (D'Angelo et al. 2024; Feliciano-Cestero et al. 2023; Mariani et al. 2023). However, the conceptual and empirical linkages between these digital enablers and core theoretical constructs, dynamic capabilities, institutional demands, and agility, are underdeveloped (Kraus et al. 2022; Sauer and Seuring 2023).

To address these gaps, this study employs a hybrid systematic literature review methodology, combining bibliometric mapping (Derviş 2019) with the Theory–Context–Characteristics–Methodology (TCCM) framework (Paul and Rosado-Serrano 2019). Drawing on 59 high-impact review articles, we identify a recurring set of inter-related constructs, namely institutional adaptation mechanisms, organizational agility, digital enablers, and contextual intelligence, that collectively constitute what we term the *resilience strategy engine*. These components reflect how firms operationalize dynamic capabilities to withstand and adapt to geopolitical disruption. Methodologically, we observe the dominance of cross-sectional and bibliometric approaches, with limited adoption of longitudinal, big-data, or mixed-methods designs, tools necessary for capturing resilience as a temporal and evolving phenomenon.

This paper contributes by (1) synthesizing a multi-level framework that captures the interplay between institutional and organizational mechanisms of resilience; (2) introducing the concept of the *resilience strategy engine* as an integrative construct grounded in dynamic capabilities theory; and (3) advancing a replicable hybrid review methodology that enhances theoretical rigor and provides analytical clarity on how firms adapt in uncertain global environments.

2 Theoretical foundations and research questions

The growing volatility of the global environment, marked by geopolitical tensions, trade wars, and regulatory uncertainties, has placed resilience and strategic adaptation at the forefront of global business research. Understanding how firms navigate such complex challenges necessitates an integrative theoretical lens. This study

employs three complementary theoretical perspectives: dynamic capabilities, institutional theory, and organizational agility to examine how firms strategically adapt and remain resilient in the face of geopolitical uncertainty. These theories were selected for their collective ability to address the multi-level nature of resilience: dynamic capabilities capture firm-level strategic renewal (Teece et al. 1997; Barreto 2010), institutional theory provides insight into external pressures and constraints (Scott 2017; Greenwood et al. 2017), and organizational agility highlights the operational adaptability that enables firms to act swiftly under uncertainty (Doz and Kosonen 2010; Overby et al. 2006). Together, these lenses form a robust foundation for synthesizing fragmented literature and advancing theory in the field of global strategic management (Wilden et al. 2016; Makkonen et al. 2014).

Other theories explain aspects of strategic adaptation. However, the selection of these three frameworks is both logical and coherent given the study's focus. For instance, upper echelons theory (Hambrick and Mason 1984), resource dependence theory (Pfeffer and Salancik 2015), and stakeholder theory (Freeman 2010) offer valuable insights into managerial cognition, power asymmetries, and stakeholder engagement, they do not adequately address the integrated dynamics of strategic adaptation under geopolitical uncertainty at the organizational level. For example, upper echelons theory helps explain leadership behaviors and executive decision-making in turbulent contexts. However, it offers limited guidance on how firms build systemic resilience over time or respond to institutional voids (Rodrigues et al. 2017). In contrast, the selected frameworks capture both internal strategic reconfiguration (dynamic capabilities) and the role of external constraints (institutional theory), as well as rapid operational responsiveness (organizational agility), thereby offering a more comprehensive understanding suitable for this study's focus on organizational resilience in volatile global settings.

2.1 Dynamic capabilities: core constructs and research gaps

The dynamic capabilities framework, pioneered by Teece et al. (1997), remains central to understanding how firms reconfigure internal competencies to address rapidly changing environments. It emphasizes three core capabilities: sensing, seizing, and transforming that enable firms to build resilience and sustain competitive advantage in volatile settings. The framework has been widely applied to multinational corporations (MNCs), where capabilities such as opportunity sensing and resource reallocation are essential for responding to geopolitical threats (Pitelis et al. 2024; Xu and Abdullah 2024).

Despite its value, the application of dynamic capabilities is often skewed toward large firms, overlooking the adaptive behaviors of small and medium-sized enterprises (SMEs) and startups. These firms frequently demonstrate innovative resilience mechanisms under resource constraints (Freixanet and Federo 2022). Furthermore, the literature often treats dynamic capabilities as static attributes, with limited focus on their iterative development through experience and learning. Future research should explore how these capabilities evolve, particularly in protracted crises and turbulent institutional contexts (Macpherson et al. 2015; Wiedemann et al. 2024).

2.2 Institutional theory: external pressures and organizational responses

Institutional theory provides a powerful lens for examining how external environmental factors, such as regulations, norms, and sociopolitical expectations, influence firm behavior and strategy (Dacin et al. 2002; Scott 2017). In the context of geopolitical uncertainty, institutional voids, regulatory fragmentation, and legitimacy challenges often compel firms to develop adaptive strategies, such as informal partnerships or political networking (Rodrigues et al. 2017; Cuervo-Cazurra et al. 2019).

However, institutional theory has been predominantly applied to firms operating in developed economies with relatively stable institutional frameworks. This leaves a gap in understanding how firms in emerging markets, characterized by weak regulatory enforcement and institutional turbulence, build resilience. Extending institutional theory to account for these contexts may uncover novel adaptation strategies. Moreover, the interplay between institutional pressures and internal strategic capabilities remains underexplored, suggesting the need for integrative studies that bridge institutional theory with dynamic capabilities and agility perspectives (Deng 2012; Xu and Abdullah 2024).

2.3 Organizational agility: bridging flexibility and long-term strategy

Organizational agility, defined as a firm's ability to reconfigure operations in response to environmental change rapidly, complements the other two frameworks by emphasizing responsiveness and flexibility (Doz and Kosonen 2010; Mariani et al. 2023). While dynamic capabilities emphasize long-term renewal, institutional theory explains the pressures firms face, and agility focuses on real-time action and operational adjustments.

Agility has gained increasing attention in recent crises, such as the COVID-19 pandemic, where firms needed to shift rapidly in response to supply chain disruptions, regulatory changes, and workforce challenges (Gupta and Chauhan 2021). Nevertheless, its conceptual boundaries remain blurred, and its integration into broader strategic resilience frameworks is limited. Agility is often treated as a stand-alone capability, rather than as part of a system of adaptive behaviors. More research is needed to understand how agility interacts with sensing and transforming functions into dynamic capabilities and how it is shaped by institutional environments (Christofi et al. 2021; Klarin et al. 2024).

2.3.1 Integrative framing and research questions

Together, dynamic capabilities, institutional theory, and organizational agility offer a holistic lens for understanding how firms build and sustain resilience under geopolitical uncertainty. Dynamic capabilities provide insight into how firms reconfigure their resource base, institutional theory contextualizes the external pressures that necessitate adaptation, and organizational agility highlights the executional speed and flexibility required to respond effectively. The interplay of these theories allows for a nuanced exploration of both internal capabilities and external constraints. This study seeks to address the following research questions:

- How do firms develop and operationalize dynamic capabilities to address geopolitical risks?
- What role do institutional pressures play in shaping resilience strategies, particularly in emerging markets?
- How can firms integrate organizational agility with long-term resilience frameworks to enhance adaptation and innovation?

3 Literature search and study selection

This study ensures a rigorous and transparent synthesis of the literature on resilience and strategic adaptation in global business. We employed a hybrid methodology combining a systematic literature review (SLR) with bibliometric analysis, structured through the TCCM (Theory, Context, Characteristics, Methodology) framework (Paul and Rosado-Serrano 2019; Donthu et al. 2021). The methodological process consisted of three phases: (i) literature search and data retrieval, (ii) article selection and screening, and (iii) coding, synthesis, and analysis (Transfield et al. 2003; Clark et al. 2021).

3.1 Database justification and search strategy

The literature search was conducted in the Web of Science (WoS) Core Collection, which was selected for its methodological rigor, high-quality indexing, and alignment with international academic standards (Aria and Cuccurullo 2017; Kraus et al. 2020a). WoS is widely recognized for its multidisciplinary coverage and is particularly suitable for bibliometric analysis in the social sciences due to its transparent indexing criteria and inclusion of journals categorized under the Social Sciences Citation Index (SSCI) (Vieira and Gomes 2009; Merigó and Yang 2017). Although Scopus is known for its broader journal coverage, WoS remains a preferred choice for bibliometric analysis due to its higher standardization and data quality (Donthu et al. 2021; Lin et al. 2024). The challenges associated with merging datasets from multiple databases, such as duplication and increased human error, further justified the sole reliance on WoS. Other sources, like JSTOR and Google Scholar, were used only for triangulation and cross-verification during the scoping stage, but not in the final analysis.

WoS houses over 15,000 journals and 50 million documents spanning 151 subject categories, offering comprehensive coverage of business and management research (Thelwall 2008; Merigó and Yang 2017). Search terms were refined through iterative keyword testing and validation through exploratory searches. The final query string included: "geopolitical uncertainty" (Topic) AND ("multinational corporations" OR "global strategy") (All Fields) AND ("resilience" OR "dynamic capabilities") (All Fields) AND "Review Article" (Document Types). Articles were filtered to include only those in WoS categories "Business" and "Management" and citation topics 6.3.726 (Entrepreneurship), 6.3.1229 (Internationalization), and 6.3 (Management). Only peer-reviewed English-language articles published between 1996 and 2024 were considered, ensuring a comprehensive temporal scope.

3.2 Inclusion criteria and filtering process

To ensure quality and domain relevance, only articles published in journals ranked A+, A, or B by the Australian Business Deans Council (ABDC) were retained. This approach aligns with best practices in prior SLRs (Arun et al. 2021; Feliciano-Cestero et al. 2023; Keupp and Gassmann 2009; Fisch and Block 2018). The search yielded an initial dataset of 5,065 review articles. Articles were screened through a multi-stage process: (i) disciplinary filters were applied to narrow results to 463 articles; (ii) titles and abstracts were screened for relevance to resilience, strategic adaptation, and geopolitical uncertainty, reducing the dataset to 392; and (iii) full-text reviews were conducted to evaluate theoretical contribution, contextual relevance, and methodological rigor. This resulted in a final sample of 59 articles selected for in-depth analysis.

3.3 Article selection and screening process

The article selection followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol (Moher et al. 2009), ensuring transparency and reproducibility. The process was carried out in multiple stages, designed to refine and narrow the scope of available publications systematically. This resulted in a focused and objective set of studies for further analysis. Data collection for this literature review occurred between September 2024 and December 2024. A detailed overview of each step in the literature retrieval process is illustrated in Fig. 1. The selection process followed a three-stage filtering mechanism: first, articles matching the search terms and filters were retrieved from the WoS database. Next, titles and abstracts were screened for relevance to resilience, strategic adaptation, and geopolitical uncertainty. Finally, a full-text review assessed theoretical contributions, contextual alignment, and methodological rigor, resulting in a final dataset of 59 articles.

3.4 Bibliometric analysis procedure

To complement the SLR, bibliometric analysis was conducted using the Biblioshiny interface of the Bibliometrix R package (Aria and Cuccurullo 2017). Biblioshiny allows interactive and transparent bibliometric mapping without coding, making it ideal for capturing and visualizing scholarly patterns. The tool was used to extract key bibliometric indicators, including annual publication trends, journal and author impact, country-level contributions, and keyword co-occurrence networks. These insights enabled the identification of thematic clusters, leading authors, and conceptual structures in the field.

The bibliometric component enriched qualitative synthesis by revealing intellectual foundations and research fronts. This hybrid integration of bibliometric analysis with systematic review ensured methodologically rigorous and theoretically grounded literature mapping. As highlighted in Clark et al. (2021), combining bibliometric techniques with thematic synthesis strengthens transparency and enables researchers to identify structural gaps in literature.

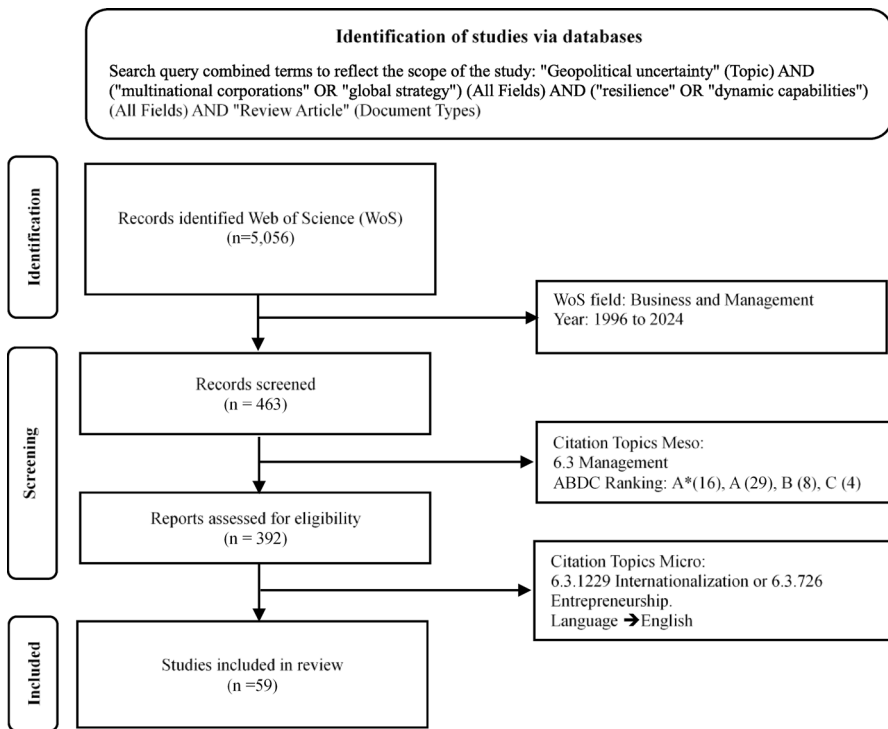


Fig. 1 Step-by-Step Protocol. *Source:* Author (2025)

3.5 Coding and TCCM synthesis

The final dataset of 59 articles was manually coded according to the TCCM framework (Paul and Benito 2018; Kraus et al. 2022). Theoretical coding classified studies under lenses such as dynamic capabilities, institutional theory, organizational agility, and upper echelons theory. Contextual coding categorized articles based on geographical focus, institutional environment, and geopolitical risks. Characteristics coding focused on firm types (e.g., MNEs, SMEs), leadership structures, and innovation capabilities. Methodological coding captured the nature of research designs (qualitative, quantitative, or mixed), data sources (e.g., longitudinal or cross-sectional), and analytical techniques.

This integrative methodological approach ensured theoretical depth, contextual specificity, and methodological transparency. By aligning bibliometric insights with a structured TCCM synthesis, the study provides a robust platform for theory development and future empirical inquiry into strategic adaptation and resilience in the context of geopolitical uncertainty.

We used ChatGPT to enhance the readability of the manuscript. Additionally, we have verified the consistency of clusters developed manually using the Notebooklm tool (Malik and Terzidis 2025).

4 Analysis and findings

This study employs a hybrid systematic literature review approach, combining bibliometric analysis with the TCCM framework to achieve a thorough and methodologically robust literature evaluation. Drawing on the guidelines established by Chakma et al. (2021), the hybrid approach leverages the analytical depth of bibliometric methods (Derviş, 2019; Rajni et al. 2022) and the structured synthesis capabilities of the TCCM framework (Paul and Rosado-Serrano 2019; Paul and Criado 2020). This integration enables a critical and evidence-based assessment of resilience and strategic adaptation studies in the context of geopolitical uncertainty.

The TCCM framework, widely recognized for its utility in systematic reviews, allows for categorizing research into four key dimensions: *Theory*, focusing on the conceptual frameworks guiding the studies; *Context*, analyzing the geographical, industrial, and geopolitical settings; *Characteristics*, which examine firm-specific traits such as size, agility, and innovation; and *Methodology*, evaluating the research designs, data sources, and analytical techniques employed (Chen et al. 2021; Hassan et al. 2022; Khlystova et al. 2022). This combined approach ensures a nuanced understanding of the selected studies' theoretical and empirical contributions. It provides a holistic perspective on emerging trends, methodological gaps, and future research opportunities (Rother 2007).

The findings begin by presenting the bibliometric profile of the studies, encompassing aspects such as publication trends, authorship patterns, and citation analysis, as suggested by previous bibliometric research in management and international business (Fisch and Block 2018; Kraus et al. 2022; Kraus et al. 2023, 2024). Subsequently, the research settings are described in detail, highlighting the key elements of the TCCM framework, including the theories applied, contextual focus, characteristic features of the studies, and methodological approaches utilized, following the structured review guidelines (Paul and Rosado-Serrano 2019).

4.1 Bibliometric analysis

4.1.1 Profile of publications

Table 1 showcases the 33 academic outlets in this systematic literature review (SLR), encompassing prominent fields such as management, international business, and entrepreneurship. Leading journals, including the *Academy of Management Review* (Teece et al. 1997), *Journal of Business Venturing* (Shepherd 2009), *Journal of International Business Studies* (Cuervo-Cazurra et al. 2019; Meyer 2004), and *Journal of Management Studies* (Oliver and Holzinger 2008; Tan et al. 2020), feature prominently in the dataset. These journals represent key platforms for advancing research on geopolitical uncertainty, resilience, adaptation strategies, and technological advancements. The journal distribution underscores a strong focus on resilience and strategic responses to geopolitical disruptions (Freixanet and Federo 2022; Nielsen et al. 2023) and the role of innovation and digital transformation (Feliciano-Cestero et al. 2023; Mariani et al. 2023). However, an observed gap is the limited integration of these themes into broader theoretical frameworks, such as institutional theory (Scott

Table 1 List of journals for quality assurance. *Source:* Author (2025)

Publication titles	Frequency	ABDC journal ranking
Academy of management review	1	A*
Journal of business venturing	4	A*
Journal of international business studies	5	A*
Journal of management studies	2	A*
Journal of world business	2	A*
Organization science	1	A*
Research policy	1	A*
Asia pacific journal of management	2	A
Entrepreneurship and regional development	2	A
International business review	2	A
International journal of management reviews	3	A
International marketing review	2	A
International small business journal researching entrepreneurship	1	A
Journal of business industrial marketing	1	A
Journal of business research	4	A
Journal of international management	3	A
Journal of international marketing	1	A
Journal of knowledge management	1	A
Journal of small business management	1	A
Management international review	1	A
Small business economics	3	A
Strategic entrepreneurship journal	1	A
Technovation	1	A
Canadian journal of administrative sciences revue canadienne des sciences de l'administration	1	B
Cross cultural strategic management	1	B
Entrepreneurship research journal	1	B
European management journal	2	B
International journal of emerging markets	1	B
Multinational business review	1	B
Asian business management	1	C
European journal of innovation management	1	C
European journal of international management	2	C
Review of managerial science	3	

*ABDC stands for Australian Business Deans Council Journal Ranking. It is ranked according to the 2022 ranking of the journals

2017) and dynamic capabilities (Teece et al. 1997). This lack of synthesis allows future research to build on foundational work by contextualizing resilience strategies within evolving global business environments (Gupta and Chauhan 2021; Klarin et al. 2024).

4.1.2 Authorship patterns

Figure 2 highlights the 10 most influential articles based on citation counts within the scope of this review. Among these, Meyer (2004), published in the *Journal of International Business Studies*, and Oliver and Holzinger (2008), featured in the *Academy of Management Review*, emerge as the most influential works, each exceeding 450 citations. These foundational studies have significantly shaped research on geopolitical uncertainty and strategic adaptation. Additionally, Dabic et al. (2020a), published in *Small Business Economics*, stand out for their high average citations among recent studies, underlining the growing relevance of their insights into SME resilience and internationalization (Dabic et al. 2020a). The citation distribution in Fig. 2 underscores the sustained impact of foundational research while highlighting the rising prominence of newer contributions. For example, Pitelis et al. (2024), exploring dynamic capabilities in MNEs, and Mariani et al. (2023), focusing on digital transformation and innovation, are gaining significant scholarly attention (Mariani et al. 2023; Pitelis et al. 2024). This trend reflects the evolving research priorities and the increasing focus on resilience, adaptation strategies, and the role of technological advancements in navigating geopolitical uncertainties (Klarin et al. 2024; Nielsen et al. 2023).

4.1.3 Global publication trends: regional contributions and research emphases

The 59 studies analyzed represent a global scholarly effort to understand resilience and strategic adaptation amidst geopolitical uncertainty, emphasizing contributions from developed regions (see Fig. 3). North America leads the discourse with 26 studies, including 20 from the USA, underscoring its dominance in international business and resilience research. Foundational works from this region, such as Meyer's (2004) exploration of strategies in emerging markets and Oliver and Holzinger's (2008) study on political risk management, have significantly influenced the field. Canada's six contributions enrich the literature by focusing on SME internationalization and

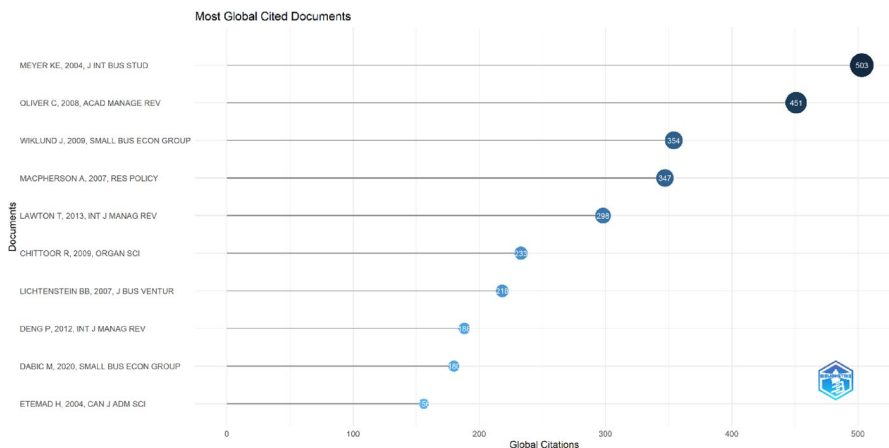


Fig. 2 Top Ten Most Cited Publications. Source: Author (2025)

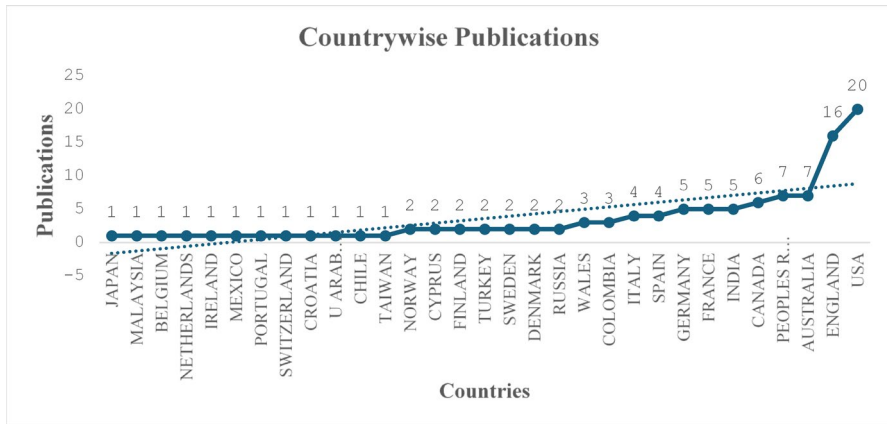


Fig. 3 Publication Trend Demographically. *Source:* Author (2025)*Source:* Author (2025)

innovation, exemplified by Etemad's (2004) grounded theoretical framework for small firm internationalization. Additionally, studies like those by Dean and Meyer (1996) on demand determinants in entrepreneurial contexts reflect North America's long-standing contribution to the foundational theories in resilience research.

Europe emerges as another significant hub of resilience research, accounting for 44 studies that reflect its diverse academic landscape. England leads the region with 16 studies, including influential contributions such as Pitelis et al. (2024) on dynamic capabilities in global strategy and Mariani et al. (2023) on agility and flexibility in international business. Germany and Spain contribute five and four studies, respectively, with Spain's works, for instance, Freixanet and Federo (2022) offering insights into SME resilience and adaptation strategies. Northern Europe, including Denmark and Sweden, emphasizes dynamic collaboration and innovation under uncertainty (Nielsen et al. 2023), while Southern and Eastern Europe focus on entrepreneurial ecosystems and resilience in emerging economies (Cuervo-Cazurra et al. 2019; Orozco et al. 2024). Studies from Eastern Europe, such as those by Hutzschenreuter and Gröne (2009), highlight responses to competitive pressures in MNEs. This regional diversity highlights Europe's critical role in advancing resilience theory across various contexts and industries.

The Asia-Pacific region reflects its growing influence, with 16 studies emphasizing emerging multinationals, innovation, and resilience strategies. China's seven contributions include Baglieri's (2024) work on green hydrogen R&D. India's five studies focus on resilience strategies in politically volatile environments, such as Chittoor et al. (2009) analysis of institutional transformation in Indian firms. With seven studies, Australia leads in research on global value chain resilience and adaptation strategies (Klarin et al. 2024). Further, Xu and Abdullah (2024) emphasize dynamic capabilities in emerging economies, extending resilience research to underexplored contexts. Latin America contributes four studies, with research from Colombia and Mexico exploring corporate entrepreneurship in developing markets (Orozco et al. 2024). Meanwhile, studies by Baier-Fuentes et al. (2019) and Tzeng (2008) provide comple-

mentary perspectives on resilience and adaptation in developing regions, emphasizing the role of informal networks and indigenous strategies.

While contributions from Africa and the Middle East remain limited, the UAE offers valuable insights into SME adaptation to geopolitical shocks, building on studies like Shepherd (2009) that address resilience at the micro and meso levels. This geographic distribution underscores the dominance of North America and Europe in resilience research while highlighting significant gaps in contributions from under-represented regions like Africa and the Middle East. The skew toward developed markets underscores the need to explore further resilience strategies tailored to emerging economies, where institutional voids and political volatility present unique challenges (Rodrigues et al. 2017; Cuervo-Cazurra et al. 2019; Nielsen et al. 2023). These findings call for greater regional inclusivity in resilience research to enrich theoretical and practical understandings of firm adaptation across diverse global contexts (Paul and Rosado-Serrano 2019; Sauer and Seuring 2023).

The publication trend of the 59 selected studies highlights the dynamic evolution of academic interest in resilience, strategic adaptation, and related themes driven by global crises and heightened uncertainties (see Fig. 4). A sharp increase in scholarly output is evident in recent years, with 2024 (8 studies), 2022 (7 studies), and 2023 (6 studies) marking peak periods. This trend aligns with contemporary disruptions, including the COVID-19 pandemic, geopolitical conflicts, and global economic instability, which have underscored the urgent need for research on resilience strategies and firm adaptability (Mariani et al. 2023; Pitelis et al. 2024; Wiedemann et al. 2024). These recent studies emphasize integrating dynamic capabilities (Teece et al. 1997; Xu and Abdullah 2024), institutional theory (Cuervo-Cazurra et al. 2019; Scott 2017), and organizational agility (Doz and Kosonen 2010) into comprehensive frameworks for navigating uncertainty.

Earlier foundational works, such as Meyer (2004) on emerging market strategies and Oliver and Holzinger (2008) on political risk management, laid the groundwork for resilience theory in international business. Peaks in 2008 (4 studies) and 2009 (5 studies) coincide with the global financial crisis, reflecting scholarly efforts to under-

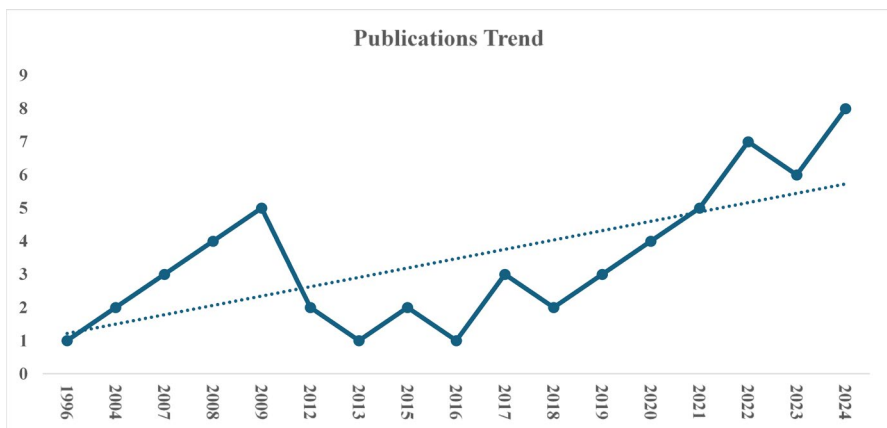


Fig. 4 Annual Distribution of Publications. *Source:* Author (2025)

stand organizational and institutional resilience during periods of economic turmoil (Freixanet and Federo 2022; Hutzschenreuter and Gröne 2009). Although the output during the 2010s was relatively steady, with contributions such as Macpherson and Holt (2007) on SME growth and Lichtenstein et al. (2007) on entrepreneurial complexity dynamics, the period focused on incremental theoretical advancements during relatively stable global conditions. Recent research has expanded to under-represented areas, including SMEs and emerging markets, addressing gaps in earlier studies that predominantly focused on developed markets and large multinational enterprises (Baier-Fuentes et al. 2019; Dabic et al. 2020a, b; Huang et al. 2021).

The increasing academic output underscores resilience research's evolving complexity and global significance. The recent surge highlights the importance of interdisciplinary approaches, such as hybrid systematic reviews (Paul and Rosado-Serrano 2019; Sauer and Seuring 2023) and bibliometric analyses (Derviş, 2019; Klarin et al. 2024; Mariani et al. 2023), to unravel the mechanisms underlying resilience and strategic adaptation. This trend reflects a maturing field that is addressing emerging complexities, such as the role of digital transformation (D'Angelo et al. 2024; Feliciano-Cestero et al. 2023) and green innovation (Baglieri 2024), providing actionable insights for firms operating in volatile global environments. The academic community is well-positioned to leverage these advancements to bridge existing gaps and foster innovative research methodologies, particularly in regions and industries facing unique geopolitical challenges (Chittoor et al. 2009; Orozco et al. 2024).

4.2 TCCM framework: a comprehensive analytical tool

This study employs the **TCCM** framework to systematically review and synthesize the existing literature on resilience and strategic adaptation in global business amidst geopolitical uncertainty. Introduced by Paul and Rosado-Serrano (2019), the TCCM framework provides a robust and integrative approach to analyzing theoretical foundations, contextual diversity, firm-specific characteristics, and methodological trends within the selected body of research. This structured framework enables the identification of dominant patterns, critical gaps, and emerging trends, offering a holistic perspective on the state of resilience research. It builds on similar frameworks applied in systematic reviews to ensure rigor and consistency in management and international business research (Kraus et al. 2022; Tranfield et al. 2003).

A qualitative meta-synthesis approach (Hoon 2013) was applied to integrate findings and derive theoretical insights, emphasizing identifying underexplored contexts, methodological shortcomings, and emergent theoretical frameworks. By adopting a hybrid systematic literature review method (Chakma et al. 2021), this study combines the strengths of bibliometric analysis (Rajni et al. 2022) and the TCCM framework, delivering a rigorous, evidence-based evaluation of the literature (Derviş, 2019; Paul et al. 2024). This hybrid approach aligns with best practices for conducting systematic reviews in management and international business (Liberati et al. 2009; Sauer and Seuring 2023), ensuring methodological robustness and a nuanced understanding of resilience and adaptation strategies amid geopolitical disruptions.

4.2.1 Justification for the TCCM framework's adoption

The TCCM framework is particularly suited for this study, given its ability to systematically examine diverse research dimensions, including *theory*, *context*, *characteristics*, and *methodology* (Paul and Criado 2020; Paul et al. 2024). Its comprehensive approach facilitates the identification of theoretical advancements, contextual variations, and methodological trends while uncovering underexplored areas in resilience research (Freixanet and Federo 2022; Wiedemann et al. 2024). For example, this framework has highlighted critical gaps, such as the underrepresentation of emerging markets, SMEs, and informal networks in resilience research (Macpherson and Holt 2007; Xu and Abdullah 2024). Moreover, integrating the TCCM framework with bibliometric methods enables the study to identify and map the evolution of resilience-related concepts across disciplines (Derviş, 2019; Feliciano-Cestero et al. 2023; Klarin et al. 2024).

Given the interdisciplinary nature of resilience and strategic adaptation research, the TCCM framework offers a structured roadmap for synthesizing knowledge across various domains (Kraus et al. 2020a; Mariani et al. 2023). Its application ensures methodological rigor and reliability, enabling replicability and advancing theoretical understanding. Furthermore, leveraging a hybrid review approach that combines qualitative synthesis and bibliometric analysis (Derviş, 2019) enhances the comprehensiveness of this study, providing deeper insights into the mechanisms underpinning resilience in global business (Moher et al. 2009; Rother 2007; Sauer and Seuring 2023). By applying the TCCM framework, this research advances resilience theory and provides actionable insights for practitioners navigating complex, uncertain global environments.

4.2.2 Insights from theory (T)

The theoretical exploration of resilience and strategic adaptation highlights the prominence of the **dynamic capabilities framework** (Teece et al. 1997) in explaining how firms respond to geopolitical uncertainties (see Table 2). Dynamic capabilities emphasize firms' abilities to sense opportunities and threats, seize them through resource reconfiguration, and transform operations to sustain competitive advantage. This framework has been extensively applied to market entry, innovation management, and organizational change, providing valuable insights into firm adaptability (D'Angelo et al. 2024; Xu and Abdullah 2024). Despite its relevance, its application remains concentrated on large MNEs, with limited attention to SMEs, which often demonstrate unique adaptive behaviors, such as leveraging agility and innovation under resource constraints (Freixanet and Federo 2022; Wiedemann et al. 2024).

Institutional theory (Dacin et al. 2002; Scott 2017) is a complementary lens, emphasizing the impact of regulatory frameworks, cultural norms, and socio-political pressures on firm behavior (see Table 2). It provides a robust framework for analyzing how external environments shape firms' strategies, especially under conditions of geopolitical uncertainty. For example, firms in regions characterized by weak institutional frameworks often develop informal networks and innovative strategies to navigate institutional voids (Cuervo-Cazurra et al. 2019; Evers et al. 2023). How-

Table 2 Theory cluster with key focus. *Source:* Author (2025)

Theory clusters	Key Focus	Authors
Dynamic capabilities	Dynamic capabilities in MNE strategy, ambidexterity, and resource optimization	Pitelis et al. (2024), Figueiredo et al. (2024), Xu and Abdullah (2024), Juergensen et al. (2022), Macpherson et al. (2015)
Corporate entrepreneurship	Role of entrepreneurship in innovation, digital transformation, and resilience under uncertainty	D'Angelo et al. (2024), Orozco et al. (2024), Shepherd (2009), Wuytens et al. (2024)
Ambidexterity	Exploration–exploitation balance for innovation and organizational performance	Figueiredo et al. (2024), Mariani et al. (2023)
Competitive dynamics	Impact of competition on firm strategies and responses to exogenous shocks	Yao et al. (2024), Nielsen et al. (2023)
Organizational capabilities	Development of innovation, marketing, and organizational competencies for resilience and competitive advantage	Baglieri (2024), Mandler et al. (2021), Gupta and Chauhan (2021)
Value chain resilience	Strategies for building robust and adaptable global value chains under crises and deglobalization trends	Klarin et al. (2024), Ruppenthal and Bausch (2009)
Digital transformation	Digital innovation and integration strategies for achieving competitive advantage and navigating industry shifts	Feliciano-Cestero et al. (2023), D'Angelo et al. (2024)
Innovation	Drivers and barriers to innovation, focusing on SMEs, export performance, and emerging economies	Bicakcioglu-eynirci et al. (2020), Chittoor et al. (2009), Mariani et al. (2023)
International entrepreneurship	Entrepreneurial opportunities, new venture creation, and internationalization strategies in emerging markets and SMEs	Baier-Fuentes et al. (2019), Companys and McMullen (2007), Etemad (2004), Huang et al. (2021)
Knowledge management	Knowledge transfer and utilization for fostering innovation and improving organizational efficiency	Iddy and Alon (2019), Macpherson and Holt (2007)
Networks	The role of social and professional networks in enabling international expansion and resource access	Bembom and Schwens (2018), Radulovich et al. (2018)
SME internationalization	Pathways and challenges for SMEs entering international markets, focusing on post-entry performance and adaptation	Dabic et al. (2020a), Etemad (2004), Freixanet and Federo (2022)
International business (IB) responses	Strategic responses of MNEs to disasters, political risks, and market disruptions	Deng (2012), Nielsen et al. (2023), Lawton et al. (2013)
Strategic IB responses	Proactive global market strategies focus on ecosystem orchestration and political risk management	Cuervo-Cazurra et al. (2023), Burström et al. (2023), Jain et al. (2022), Lawton et al. (2013)
Political risk management	Managing political risks and uncertainties through dynamic capabilities and institutional strategies	Cuervo-Cazurra et al. (2023), Oliver and Holzinger (2008)
Pro-market institutions	Institutional reforms' impact on global strategy and market competitiveness	Cuervo-Cazurra et al. (2019)

Table 2 (continued)

Theory clusters	Key Focus	Authors
Export performance	Innovation-driven export growth and performance metrics in global markets	Gupta and Chauhan (2021), Ruppenthal and Bausch (2009)
Agility and flexibility	Organizational adaptability and flexibility in response to external pressures and rapid environmental changes	Christofi et al. (2021), Klarin et al. (2024)
Business growth	Resource configurations, capabilities, and growth strategies for small and large firms	Wiklund et al. (2009), Dean and Meyer (1996)
Real options theory	Strategic investment decision-making under uncertainty	Tong and Li (2008)
Complexity dynamics	Patterns and behaviors of nascent entrepreneurial ventures under complex environments	Lichtenstein et al. (2007)
Strategic opportunity pursuit	Mechanisms for identifying and capitalizing on strategic opportunities in dynamic markets	Mitchell and Shepherd (2012)
Grief recovery	Coping mechanisms and recovery processes for businesses experiencing significant losses	Shepherd (2009)
Effectuation theory	Entrepreneurial decision-making processes based on available resources and dynamic goals	Jones and Li (2017)
Marketing standardization	Balancing global standardization and local adaptation of marketing strategies for enhanced performance	Mandler et al. (2021)
Post-entry evolution	Growth trajectories and strategic adaptations of born-global firms post-internationalization	Freixanet and Federo (2022)
Tacit knowledge	Importance of implicit knowledge in entrepreneurial ecosystems and organizational learning	Wuytens et al. (2024)
Ecosystem orchestration	Governance and coordination mechanisms for building and sustaining business ecosystems	Burström et al. (2023)
Emerging multinationals	Strategies and challenges of emerging market multinationals in global competition	Chittoor et al. (2009), Mathews (2017)

ever, existing research predominantly focuses on firms in developed markets, with a limited examination of how institutional pressures manifest in emerging and volatile economies. This gap highlights the need for integrating institutional and dynamic capabilities perspectives to explore the interplay between external pressures and internal adaptive mechanisms (Burström et al. 2023; Klarin et al. 2024).

Emerging perspectives, such as **organizational agility** (Doz and Kosonen 2010), further enrich resilience discourse by emphasizing rapid decision-making and strategic flexibility. This construct is particularly relevant for SMEs and startups, which often lack resource redundancy but exhibit higher adaptability to external shocks (Christofi et al. 2021; Gupta and Chauhan 2021). However, the interplay between short-term agility and long-term resilience remains under-theorized, calling for future research to bridge these constructs systematically (see Fig. 5).¹ The review highlights

¹ The "conf. percentage" in Fig. 5 refers to **confidence levels** or **percentage contribution** of the specific terms or topics within their respective clusters. The **conf. percentage** indicates how strongly a topic is associated with its cluster. A higher percentage (e.g., 100%) means the topic is a core focus in that cluster, while lower percentages suggest a weaker or more peripheral association. For example, "foreign direct investment—conf. 66.7%" means 66.7% of the cluster's documents emphasize this topic. This measure helps identify dominant themes and potential areas for more profound exploration within each cluster.

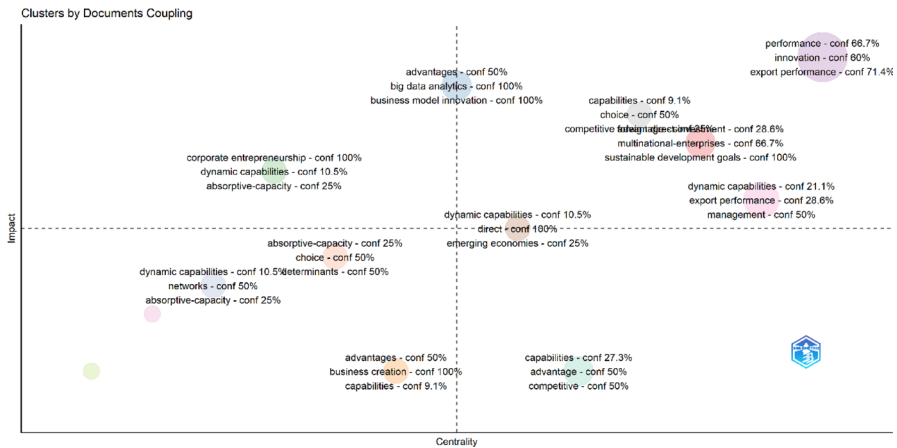


Fig. 5 Theoretical Trends. *Source:* Author (2025)

the necessity of *theoretical pluralism* to address the complexity of resilience and strategic adaptation in global business. Integrating underutilized frameworks, such as resource dependency theory and ecosystem theory, can deepen our understanding of how firms navigate geopolitical disruptions and build organizational and systemic resilience (Jain et al. 2022; Nielsen et al. 2023). By synthesizing these perspectives, future research can address significant gaps in theory and practice, particularly in contexts characterized by uncertainty and institutional volatility.

4.2.3 Contextual trends (C)

The contextual analysis of the 59 selected studies underscores a significant Western-centric bias in resilience and strategic adaptation literature (see Table 3). Most studies focus on developed markets such as the United States and Europe, reflecting the dominance of regions with stable institutional frameworks. As Cuervo-Cazurra et al. (2019) highlight, emerging economies are underrepresented in the literature despite their growing integration into global value chains. These regions, particularly in Africa and Southeast Asia, face unique geopolitical challenges such as institutional voids, political instability, and limited infrastructure, presenting opportunities for advancing resilience research (Rodrigues et al. 2017; Pitelis et al. 2024; Wiedemann et al. 2024). While geopolitical events like trade wars, Brexit, and regional conflicts have been extensively studied in developed markets (Huang et al. 2021; Nielsen et al. 2023), there is a lack of longitudinal analysis on the sustained impacts of these disruptions on global supply chains and firm strategies. Including emerging markets could offer insights into firms' innovative strategies in volatile contexts (Freixanet and Federo 2022; Xu and Abdullah 2024).

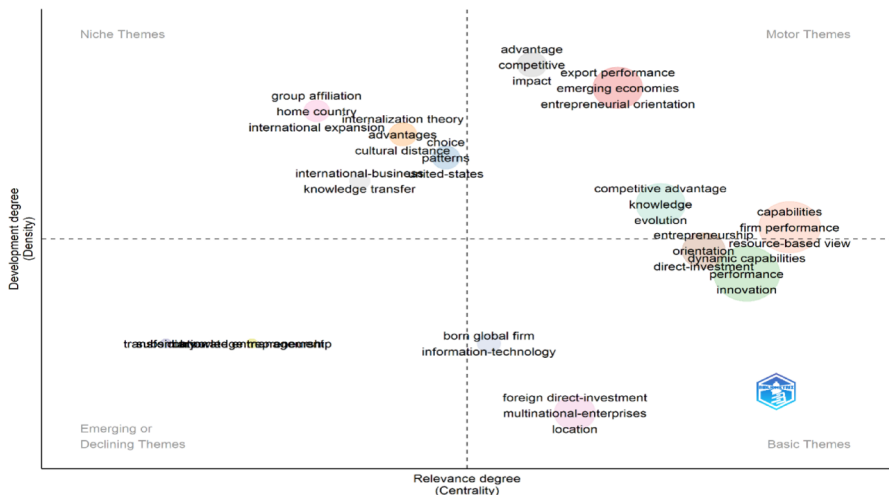
Industry-specific trends reveal that sectors such as technology, healthcare, and manufacturing exhibit distinct resilience patterns (see Fig. 6). For instance, technology-intensive industries depend heavily on digital innovation and agile decision-making to mitigate geopolitical risks (Feliciano-Cestero et al. 2023; Mariani et al.

Table 3 Contextual Trends. *Source:* Author (2025)

Context	Shared context	Authors
MNEs in global strategy	Strategic alignment, competitive dynamics, and institutional influences in MNE operations	Pitelis et al. (2024), Yao et al. (2024), Jain et al. (2022), Cuervo-Cazurra et al. (2023)
Born-global firms	Early internationalization, ambidexterity, and adaptation in international markets	Figueiredo et al. (2024), Huang et al. (2021), Baier-Fuentes et al. (2019), Freixanet and Federo (2022)
Emerging economies	Capabilities and strategic responses of firms in emerging markets facing global challenges	Xu and Abdullah (2024), Deng (2012), Mathews (2017), Meyer (2004)
Multinational enterprises	Global competition, resource allocation, and institutional strategies of multinational firms	Tan et al. (2020), Purkayastha et al. (2020), Cuervo-Cazurra et al. (2019), Hutzschenreuter and Gröne (2009)
Digital transformation	Integration of digital technologies for innovation, resilience, and competitive advantage	D'Angelo et al. (2024), Feliciano-Cestero et al. (2023), Klarin et al. (2024), Mariani et al. (2023)
Entrepreneurship	Entrepreneurial decision-making, opportunity recognition, and innovation in dynamic environments	Breslin (2008), Companys and McMullen (2007), Lichtenstein et al. (2007), Mitchell and Shepherd (2012), Shepherd (2009)
Small firms and SMEs	Resource accumulation, resilience, and internationalization strategies for small firms	Macpherson and Holt (2007), Etemad (2004), Dabic et al. (2020a), Koryak et al. (2015), Wiklund et al. (2009)
Export performance	Linkages between innovation, capabilities, and export growth	Bicakcioglu-Peynirci et al. (2020), Gupta and Chauhan (2021), Ruppenthal and Bausch (2009)
International new ventures	Performance and growth strategies of new ventures in global markets	Huang et al. (2021), Baier-Fuentes et al. (2019), Evers et al. (2023)
Entrepreneurial ecosystems	Knowledge sharing, innovation hubs, and ecosystem dynamics supporting entrepreneurship	Orozco et al. (2024), Wuytens et al. (2024), Fernhaber and Zou (2022)
Professional services	Competitiveness and internationalization of professional service firms	Radulovich et al. (2018), Chabowski and Mena (2017)
Venture capital ecosystems	Governance and mechanisms supporting venture capital ecosystems	Burström et al. (2023)
Global value chains (GVCs)	Resilience, localization, and adaptation in global value chains	Klarin et al. (2024), Chabowski and Mena (2017)
Foreign market entry (FME)	Decision-making processes and strategies for entering foreign markets	Surdu and Mellahi (2016), Lawton et al. (2013)
Family businesses	Emotional resilience, knowledge transfer, and succession planning in family-owned enterprises	Shepherd (2009), Jones and Li (2017)
Indian context	Industry-specific challenges and strategies in the Indian market	Chittoor et al. (2009), Radulovich et al. (2018)
Green hydrogen RandD	Innovation and commercialization of green hydrogen technologies for decarbonization	Baglieri (2024)
Asia–pacific MNEs	Real options and strategic decision-making for multinational enterprises in the Asia–Pacific region	Tong and Li (2008)

Table 3 (continued)

Context	Shared context	Authors
Developing countries	Resilience and innovation strategies for firms in developing nations	Orozco et al. (2024), Tzeng (2008)
Corporate crises	Crisis management, foresight, and adaptation in response to global disruptions	Macpherson et al. (2015), Nielsen et al. (2023)

**Fig. 6** Themes development and relevance. *Source:* Author (2025)

2023). Meanwhile, manufacturing firms prioritize supply chain diversification and localized operations to enhance resilience (Klarin et al. 2024; Wiedemann et al. 2024).

Similarly, entrepreneurial ecosystems in developing regions focus on localized adaptation strategies to navigate institutional voids and socio-economic challenges (Rodrigues et al. 2017; Orozco et al. 2024). Despite these advancements, literature lacks comparative, cross-industry analyses, limiting the generalizability of existing findings. Future research should adopt a cross-sectoral approach to explore how distinct sectoral dynamics influence resilience and strategic adaptation, addressing gaps in theoretical and empirical generalizability (Freixanet and Federo 2022; Wuytens et al. 2024; Xu and Abdullah 2024).

These findings highlight the need to expand resilience studies' geographical and industrial scope to include underrepresented regions and sectors. A more comprehensive and interdisciplinary approach will enhance the theoretical rigor and practical relevance of resilience strategies, particularly in addressing the unique challenges posed by geopolitical uncertainty and global disruptions (Paul and Rosado-Serrano 2019).

4.3 Characteristics of resilient firms (C)

Firm-specific characteristics play a pivotal role in shaping resilience strategies under geopolitical uncertainty. Larger firms, endowed with substantial financial and tech-

nological resources, often rely on redundancy-based strategies to absorb shocks, such as diversifying supply chains and building operational buffers (Bicakcioglu-Peynirci et al. 2020; Dabic et al. 2020a). Conversely, SMEs leverage innovation, flexibility, and entrepreneurial orientation to navigate uncertainties (see Table 4). These adaptive behaviors enable SMEs to respond dynamically to external disruptions despite resource constraints (Gupta and Chauhan 2021; Radulovich et al. 2018). Leadership and decision-making also emerge as critical determinants of resilience, with entrepreneurial leadership characterized by proactive risk-taking and opportunity-seeking, proving especially salient in high-risk geopolitical environments (Baglieri 2024; D'Angelo et al. 2024; Felin and Powell 2016).

The heterogeneity of firm responses underscores the importance of tailoring resilience strategies to specific organizational characteristics (see Fig. 7). For instance, family-owned businesses often leverage relational capital and localized networks to mitigate geopolitical risks, while global startups prioritize digital transformation and agile practices to maintain operational flexibility (Freixanet and Federo 2022; Huang et al. 2021). The role of collaborative networks and global value chains is also pivotal, with studies emphasizing their contribution to building organizational resilience through resource sharing and co-specialization (Burström et al. 2023).

Moreover, organizational attributes such as size, ownership structure, and international experience influence the design and implementation of resilience strategies (Christofi et al. 2021; Etemad 2004). Despite these advances, gaps remain in understanding how firms with varying characteristics adapt to geopolitical uncertainty. For example, the interplay between organizational characteristics and external shocks, such as trade wars or sanctions, remains underexplored, highlighting the need for future research to address these critical intersections (Nielsen et al. 2023; Wiedemann et al. 2024). This represents an opportunity to expand theoretical frameworks and empirical studies that account for the dynamic and context-dependent nature of resilience in global business.

4.3.1 Methodological trends (M)

The methodological analysis reveals a predominance of quantitative approaches, with regression analysis and meta-analytical techniques frequently employed for their statistical rigor and generalizability (Dabic et al. 2020b; Paul and Rosado-Serrano 2019). Meta-analyses, such as those by Bicakcioglu-Peynirci et al. (2020), Cuervo-Cazurra et al. (2023), and Gupta and Chauhan (2021), provide robust statistical syntheses of existing studies, emphasizing causality and generalization across contexts. However, these methods often fail to capture the nuanced and temporal dimensions of resilience strategies, which are critical for understanding firms' adaptive behaviors in dynamic geopolitical environments (see Table 5).

Case studies, offering rich contextual insights, remain underutilized, constituting less than 10% of the reviewed literature (Freixanet and Federo 2022; Macpherson et al. 2015; Nielsen et al. 2023). For example, Burström et al. (2023) employed qualitative case studies to explore the role of entrepreneurial ecosystems in fostering resilience, highlighting how collaborative networks can mitigate resource constraints. Similarly, longitudinal studies, essential for capturing the evolution of resilience

Table 4 Clusters of characteristics. *Source:* Author (2025)

Clusters	Characteristics	Authors
Dynamic capabilities and strategic alignment	Strategy alignment, firm performance	Pitelis et al. (2024)
	Innovation, resource reconfiguration	Figueiredo et al. (2024)
	Knowledge absorption, resource optimization	Xu and Abdullah (2024)
	Growth capabilities and leadership in SMEs	Koryak et al. (2015)
	Developing dynamic capabilities through resource accretion	Macpherson et al. (2015)
Competitive dynamics and co-opetition	Dynamic capabilities in maturing early internationalizers	Freixanet and Federo (2022)
	Multi-level competition, co-opetition	Yao et al. (2024)
	CPA strategies and their institutional focus	Lawton et al. (2013)
	Competitive dynamics in oligopolistic industries	Yao et al. (2024)
	Multi-theoretical insights on equity-based FME	Surdu and Mellahi (2016)
Organizational and firm-level innovation	Patterns of startup activities and outcomes	Lichtenstein et al. (2007)
	Low-carbon innovation, commercialization	Baglieri (2024)
	Conceptualization of agility and flexibility in IB	Christofi et al. (2021)
	Firm-level determinants of INV performance	Huang et al. (2021)
	Crisis-driven resource accumulation for resilience	Macpherson et al. (2015)
Global value chains and localization	AI's role in fostering organizational innovation	Mariani et al. (2023)
	Barriers and enablers of SME global access	Dabic et al. (2020a)
	Innovation and export performance linkage	Bicakcioglu-Peynirci et al. (2020)
	Deglobalization, localization strategies	Klarin et al. (2024)
	Internal/external influences on export performance	Ruppenthal and Bausch (2009)
Cultural, institutional, and regulatory factors	Global marketing and competitiveness	Chabowski and Mena (2017)
	Strategies for resilient value chains	Klarin et al. (2024)
	Cultural/institutional factors in MandA	Wiedemann et al. (2024)
	Impact of foreign competition on scope	Hutzschenreuter and Gröne (2009)
	Regulation decision/administration	Cuervo-Cazurra et al. (2023)
Digital transformation and technology	Institutional changes and organizational transformation	Chittoor et al. (2009)
	Pro-market reforms and reversals	Cuervo-Cazurra et al. (2019)
	Host country political risks and impacts on firms	Cuervo-Cazurra et al. (2023)
	CE strategy, digital innovation	D'Angelo et al. (2024)
	Digitalized industries	Feliciano-Cestero et al. (2023)
	Firms adopting AI	Mariani et al. (2023)
	Managing investment uncertainty with real options	Tong and Li (2008)
	The impact of digital transformation in SMEs	Feliciano-Cestero et al. (2023)

 Springer

Table 5 Clusters of methodology. *Source:* Author (2025)

Methodologies	Justification and rigor	Authors
Systematic reviews	Systematic reviews were conducted rigorously using structured methodologies, including inclusion criteria and straightforward research questions Overlaps occur when scientometric or PRISMA-guided methods are embedded	Bembom and Schwens (2018); Cuervo-Cazurra et al. (2019); D'Angelo et al. (2024); Evers et al. (2023); Feliciano-Cestero et al. (2023); Fernhaber and Zou (2022); Freixanet and Federo (2022); Jie et al. (2023); Juergensen et al. (2022); Macpherson and Holt (2007); Nielsen et al. (2023); Orozco et al. (2024); Pitelis et al. (2024); Purkayastha et al. (2020); Surdu and Mellahi (2016); Wuytens et al. (2024)
Meta-analyses	Meta-analyses provide a robust, statistical synthesis of prior studies, emphasizing generalizability and causation	Bicakcioglu-Peynirci et al. (2020), Cuervo-Cazurra et al. (2023); Gupta and Chauhan (2021)
Literature reviews	Traditional literature reviews synthesize fragmented research streams but may lack statistical rigor compared to systematic reviews	Figueiredo et al. (2024); Wi- edemann et al. (2024); Schmidt and Santamaria-Alvarez (2022); Baier-Fuentes et al. (2019), Companys and McMullen (2007)
PRISMA/Scientometric	Scientometric and PRISMA-guided reviews use structured, replicable methods. Overlaps occur with systematic reviews when quantitative citation analyses are included	Xu and Abdullah (2024); Klarin et al. (2024); Mariani et al. (2023); Jain et al. (2022); Chabowski and Mena (2017); Iddy and Alon (2019); Dabic et al. (2020a)
Conceptual frameworks	Conceptual frameworks offer theoretical advancements but may require empirical validation for generalizability	Baglieri (2024); Mathews (2017); Oliver and Holzinger (2008); Tong and Li (2008)
Empirical studies	Empirical studies emphasize real-world applicability but rely on context-specific datasets	Chittoor et al. (2009); Dean and Meyer (1996); Hutzschenreuter and Gröne (2009); Lichtenstein et al. (2007); Radulovich et al. (2018); Wiklund et al. (2009)
Field experiments	Field experiments offer causality but may face challenges in ecological validity and sample generalizability	Mitchell and Shepherd (2012)
Bibliometric analyses	Bibliometric analyses systematically map research patterns and trends. These often complement systematic reviews	Iddy and Alon (2019); Jain et al. (2022); Mariani et al. (2023); Orozco et al. (2024)
Narrative reviews	Narrative reviews are qualitative and rely on subjective interpretation, limiting reproducibility	Ruppenthal and Bausch (2009)
Longitudinal studies	Longitudinal studies provide insights over time, enhancing contextual depth but requiring extended timelines	Chittoor et al. (2009); Jones and Li (2017)
Critical reviews	Critical reviews evaluate theoretical gaps but may lack systematic rigor	Baier-Fuentes et al. (2019); Deng (2012)

Table 5 (continued)

Methodologies	Justification and rigor	Authors
Multi-level theories	Multi-level approaches bridge micro, meso, and macro perspectives, but their complexity can hinder empirical validation	Shepherd (2009)
Dynamic capability models	These models integrate theory with practice but are often conceptual, requiring empirical support	Oliver and Holzinger (2008)
Qualitative studies	Qualitative studies provide depth and context but may have limited generalizability	Burström et al. (2023); Jones and Li (2017); Macpherson et al. (2015)
Multi-dimensional scaling	It offers quantitative visualizations of thematic trends, but data interpretation can be subjective	Chabowski and Mena (2017)
Theoretical models	Theoretical models advance abstract ideas but may lack empirical grounding	Breslin (2008); Tzeng (2008)
Overview	Provides foundational insights but may not include recent developments	Etemad (2004)
Comprehensive reviews	Comprehensive reviews synthesize extensive research, combining breadth and depth	Tan et al. (2020)

strategies over time, are notably sparse (Evers et al. 2023; Wuytens et al. 2024). Jones and Li (2017) provided insights into entrepreneurial sensemaking under uncertainty using longitudinal methods, yet this approach remains underrepresented in the field.

Emerging methodological trends emphasize integrating big data analytics and mixed method approaches to address gaps in resilience research (see Fig. 8). Big data analytics, capable of processing voluminous and complex datasets, has the potential to uncover patterns in firms' adaptive behaviors across diverse geopolitical contexts (Baglieri 2024; Klarin et al. 2024; Mariani et al. 2023). Combining quantitative methods like bibliometric analysis with qualitative techniques such as case studies and longitudinal research can provide a holistic understanding of resilience strategies (Evers et al. 2023; Feliciano-Cestero et al. 2023; Xu and Abdullah 2024). Despite these advancements, their adoption remains limited, presenting a critical area for methodological innovation (Dabic et al. 2020a).

Greater transparency in reporting methods, triangulation of findings across datasets, and interdisciplinary approaches can further advance resilience research (Jie et al. 2023; Wiedemann et al. 2024). These improvements will enhance methodological rigor and bridge gaps in understanding how firms navigate geopolitical uncertainties while sustaining competitive advantage.

5.1 Implications for research

This study adopts a hybrid systematic literature review framed within the TCCM

5.1.1 Bibliometric analysis

The bibliometric analysis conducted in this study serves as a foundational component

The analysis identifies dynamic capabilities (Teece et al. 1997), institutional theory (Scott 2017), and organizational agility (Doz and Kosonen 2010) as recurring theoretical foundations, confirming their dominance in shaping scholarly understanding. These three frameworks form the backbone of existing knowledge on how

firms sense, respond to, and recover from geopolitical disruptions. In the co-citation network, these contributions form highly interconnected nodes, indicating a robust intellectual consensus around these frameworks. However, bibliometric maps also indicate the fragmented application of these theories across different contexts, with limited cross-pollination between studies focusing on large MNCs, SMEs, and emerging market firms.

Keyword co-occurrence analysis reveals notable gaps and emerging frontiers. Thematic clusters highlight concentration around terms such as "resilience capabilities," "dynamic capabilities," "institutional voids," and "agility," suggesting that core theoretical constructs are well-represented. Yet, there is limited intersection with practice-oriented themes such as "entrepreneurial orientation," "digital innovation," "geopolitical risk management," and "crisis leadership," which are gaining prominence in managerial discourse. Additionally, emerging keywords such as "supply chain resilience," "sustainability," and "global value chains" are increasingly co-occurring with traditional constructs, indicating a need to integrate resilience research with broader grand challenges and sustainability agendas (Klarin et al. 2024).

Furthermore, the analysis of authorship patterns and institutional affiliations highlights a concentration of knowledge production in Western academic institutions, with underrepresentation from scholars based in emerging economies. This geographical imbalance reinforces epistemic asymmetries and limits the generalizability of resilience frameworks, particularly in politically volatile or resource-constrained settings. Addressing this imbalance presents a fruitful avenue for future research that seeks to develop more inclusive, context-sensitive theories of resilience.

From a methodological standpoint, the integration of bibliometric techniques in this study adds transparency and structure to the knowledge synthesis process. By combining quantitative mapping with the qualitative depth of the TCCM framework, the hybrid approach enhances both breadth and depth of literature review (Donthu et al. 2021; Kraus et al. 2020a, b). This dual strategy not only identifies dominant paradigms and research silos but also enables critical reflection on their limitations. For example, while many studies emphasize the strategic renewal aspect of resilience, few investigate the microfoundations of learning and cognition in top management teams or how frontline decision-making shapes adaptive outcomes (Pitelis et al. 2024; Xu and Abdullah 2024).

The bibliometric findings support the formulation of a future research agenda that bridges conceptual silos, fosters methodological pluralism, and expands empirical coverage. Specifically, future studies could build on keyword linkages to explore intersections between resilience and topics such as digital transformation, stakeholder management, and institutional entrepreneurship. Moreover, the findings advocate for multi-method approaches that integrate bibliometric reviews with longitudinal case studies, configurational methods (e.g., fsQCA), and ethnographic inquiry to unravel the complexities of strategic adaptation in turbulent environments.

In summary, the bibliometric analysis in this study not only maps the current intellectual landscape but also functions as a strategic tool for identifying underexplored domains, theoretical blind spots, and emergent themes. This reinforces the need for diversified theorizing, cross-contextual validation, and innovative methodological

approaches in advancing the field of resilience and strategic adaptation in global business.

5.2 TCCM Framework

5.2.1 T. Theoretical implications

The hybrid systematic literature review reveals significant gaps in dominant theoretical frameworks, emphasizing the need for deeper integration and expansion to enhance the understanding of resilience in global business. One critical avenue for advancing theory lies in combining dynamic capabilities (Teece et al. 1997) with ecosystem theory (Burström et al. 2023) and complexity theory (Lichtenstein et al. 2007). These integrated perspectives can provide a more holistic understanding of how firms navigate interconnected geopolitical risks. For example, while dynamic capabilities focus on sensing, seizing, and transforming opportunities, ecosystem theory highlights collaborative networks and interdependencies critical for resilience. Similarly, complexity theory underscores the nonlinear, adaptive processes that firms must employ to respond to volatile environments, offering a dynamic lens to study resilience strategies.

Expanding underutilized frameworks such as resource dependency theory (Xu and Abdullah 2024) and resilience engineering (Feliciano-Cestero et al. 2023) provide further theoretical depth. Resource dependency theory, for instance, sheds light on how firms secure essential resources from their external environments, while resilience engineering emphasizes proactive risk management and systemic adaptation. Incorporating these frameworks into resilience research can offer novel insights into how organizations adapt to systemic disruptions, especially in contexts of geopolitical uncertainty. Moreover, digital transformation emerges as a pivotal factor, with technologies such as AI, blockchain, and IoT playing crucial roles in augmenting dynamic capabilities and organizational agility (D'Angelo et al. 2024; Mariani et al. 2023). These technologies enable real-time data-driven decision-making, enhance operational flexibility, and bolster firms' capacity to navigate uncertainties effectively.

This paper contributes to the theoretical discourse by synthesizing dominant perspectives, including dynamic capabilities, institutional theory, and digital transformation frameworks, to identify synergies and address gaps. Proposing a conceptual foundation that integrates digital technologies with established theories advances the understanding of resilience and adaptation strategies. Furthermore, the study offers a roadmap for future research to explore the interplay between emerging technologies and traditional theoretical constructs, providing a more comprehensive framework for understanding how firms thrive amid geopolitical uncertainties. These contributions underline the necessity of *theoretical pluralism* and innovative integration in resilience research.

5.2.2 C. Contextual implications

This study underscores the significant geographical and sectoral biases that characterize existing resilience research, emphasizing the need for contextual diversity

in understanding organizational adaptation strategies. Much of the current literature is concentrated on developed regions, such as North America and Europe, while underrepresenting emerging economies in Africa, South Asia, and Latin America. These regions face unique challenges, including weak institutional frameworks, political instability, and limited infrastructure, which shape their resilience strategies in distinct ways (Orozco et al. 2024; Cuervo-Cazurra et al. 2019). Expanding the geographical scope of resilience research is crucial for capturing the diversity of firm responses to geopolitical uncertainties, particularly in contexts where institutional voids and resource constraints necessitate innovative and grassroots solutions (Rodrigues et al. 2017).

The sectoral focus of resilience studies also reveals notable gaps, with industries such as agriculture, education, and professional services remaining underexplored despite their unique resilience dynamics. For example, while technology and manufacturing dominate the literature, the agricultural sector faces distinct challenges related to supply chain vulnerabilities and climate risks, requiring tailored resilience strategies (Freixanet and Federo 2022). Similarly, the professional services sector, which is increasingly globalized, must address geopolitical uncertainties and market disruptions through innovative approaches to service delivery and client engagement (Huang et al. 2021). These sector-specific dynamics offer fertile ground for future research to investigate how resilience strategies vary across industries, particularly in geopolitical and economic uncertainty contexts.

This paper contributes to the literature by providing a geographically inclusive review highlighting the necessity of regional diversity in resilience research. By emphasizing the importance of studying underrepresented regions, such as emerging markets and developing economies, it advocates for a more comprehensive understanding of resilience strategies. The study identifies critical sector-specific gaps, particularly in agriculture and professional services, and emphasizes the need for industry-focused research to develop tailored resilience frameworks. These contributions advance the contextual dimension of resilience research, offering valuable insights into how firms adapt across diverse geographical and sectoral contexts.

5.3 C. Organizational characteristics implications

This paper emphasizes the significant heterogeneity in firm-level responses to resilience, illustrating how organizational attributes shape adaptive strategies in the face of geopolitical uncertainty. SMEs and startups demonstrate unique adaptive mechanisms due to their reliance on flexibility, entrepreneurial orientation, and grassroots innovation (Gupta and Chauhan 2021; Freixanet and Federo 2022). Unlike MNCs with extensive resources, these smaller firms often leverage their agility to pivot rapidly and develop innovative solutions to mitigate geopolitical shocks. For instance, startups in emerging economies frequently employ informal networks and community-driven strategies to address resource constraints, which highlights the need for further investigation into their distinctive resilience pathways.

Family-owned enterprises represent another critical yet underexplored segment in resilience research. These organizations often draw upon relational capital and localized networks to navigate geopolitical challenges, leveraging strong ties within

communities and industry clusters to maintain operational continuity (Chittoor et al. 2009; Huang et al. 2021). The role of cultural and institutional contexts in shaping these localized strategies is particularly pronounced in family-owned businesses, as they often operate in environments characterized by institutional voids and political instability (Rodrigues et al. 2017). Understanding how these firms utilize their unique organizational structures and relationships to foster resilience could provide valuable insights into the intersection of family dynamics and strategic adaptation.

Leadership and decision-making styles also emerge as crucial determinants of organizational resilience. Transformational and entrepreneurial leadership, in particular, significantly influence how firms respond to uncertainty by fostering innovation, risk-taking, and proactive adaptation (Baglieri 2024; D'Angelo et al. 2024). Entrepreneurial-minded leaders are better equipped to identify opportunities within crises and implement strategies that enhance organizational resilience. This paper contributes to the literature by emphasizing the interplay between leadership, organizational characteristics, and resilience strategies. Introducing SMEs, startups, and family-owned enterprises as critical lenses for resilience research underscores the importance of investigating how diverse organizational attributes and leadership styles shape adaptive capacities in resource-constrained and volatile geopolitical contexts.

5.4 M. Methodological implications

This paper advances methodological rigor in resilience research by advocating for innovative and integrative approaches to studying resilience in global business. Applying big data analytics and AI-augmented models offers transformative potential for uncovering resilience patterns across diverse industries and regions. These tools enable researchers to analyze vast and complex datasets in real time, providing granular insights into how firms respond to geopolitical shocks, trade disruptions, and other systemic risks (Mariani et al. 2023; Baglieri 2024). For instance, machine learning algorithms can reveal hidden drivers of resilience by identifying correlations and trends across multiple variables, enhancing both predictive accuracy and decision-making capabilities. Despite these opportunities, big data remains underutilized in resilience studies, underscoring the need for greater methodological innovation in this domain.

Longitudinal studies also emerge as critical for understanding the dynamic and evolving nature of resilience strategies. While much of the existing research relies on cross-sectional designs that provide static snapshots, longitudinal research can track firms over extended periods to uncover how resilience develops, adapts, and transforms in response to prolonged uncertainty (Evers et al. 2023; Wuytens et al. 2024). For example, studies that monitor organizational strategies over time during geopolitical crises, such as trade wars or regional conflicts, can identify key inflection points and adaptive behaviors. Such temporal analyses provide a richer and more nuanced understanding of the processes through which firms sustain resilience, offering insights that cross-sectional methods are unable to capture.

Additionally, the integration of mixed-methods research and cross-disciplinary perspectives offers a comprehensive approach to studying resilience. Combining quantitative techniques, such as regression analysis and structural equation model-

ing, with qualitative methods, including interviews and case studies, ensures both breadth and depth in exploring resilience strategies (Feliciano-Cestero et al. 2023; Freixanet and Federo 2022). Moreover, incorporating insights from disciplines such as psychology, political science, and economics can enrich resilience research by broadening its conceptual and analytical scope (Jain et al. 2022; Nielsen et al. 2023). This paper contributes by promoting the adoption of these advanced methodologies and encouraging researchers to embrace longitudinal and cross-disciplinary approaches, ultimately capturing the temporal and contextual nuances of resilience strategies while addressing the gaps in current research practices.

5.4.1 Overall research design implications

This study underscores the importance of inclusivity and transparency in research design, addressing critical biases that limit the generalizability of resilience literature. Expanding the scope of research to include underrepresented regions, such as Africa, South Asia, and Latin America, can provide valuable insights into resilience strategies that reflect diverse institutional and cultural contexts (Xu and Abdullah 2024; Orozco et al. 2024). These regions often grapple with unique challenges, including weak institutional frameworks, limited infrastructure, and heightened geopolitical volatility, yet remain underexplored in existing studies. Similarly, cross-industry analyses are essential for uncovering distinct resilience drivers and barriers specific to various sectors. While technology and manufacturing dominate the literature, sectors like agriculture, education, and professional services merit greater attention to capture the broader landscape of resilience dynamics (Bicakcioglu-Peynirci et al. 2020; Klarin et al. 2024). Comparative studies across industries can provide tailored insights, enabling a more nuanced understanding of how sectoral characteristics shape adaptive strategies under uncertainty.

Transparency and replicability emerge as critical dimensions for advancing methodological rigor in resilience research. By adopting standardized methodologies, such as the PRISMA guidelines, researchers can ensure greater transparency in data collection and reporting processes (Paul and Rosado-Serrano 2019; Sauer and Seuring 2023). This fosters a more robust foundation for future studies, allowing for the replication of findings across diverse contexts and settings. Integrating transparent and standardized approaches also addresses concerns about methodological inconsistencies, enhancing the credibility of resilience research. This paper contributes to the field by advocating for greater diversity in regional and industry-focused research and by emphasizing methodological transparency and replicability. These recommendations ensure that resilience research adheres to rigorous academic standards while reflecting the global diversity of firms and industries navigating geopolitical uncertainty.

This paper demonstrates the utility of a hybrid systematic literature review, framed within the TCCM framework, to provide a nuanced and comprehensive understanding of resilience in global business. By addressing theoretical fragmentation, contextual biases, organizational diversity, and methodological gaps, this study lays a robust foundation for future research.

5.5 Implications for practice

This study offers practical strategies for firms to navigate the complexities of geopolitical uncertainty effectively. A key insight is the emphasis on fostering dynamic capabilities to build organizational agility and flexibility. Firms need to prioritize investments in internal processes that allow for rapid adaptation to changing geopolitical environments. For instance, MNCs could enhance supply chain resilience by diversifying sourcing locations, leveraging predictive analytics, and integrating scenario planning to manage disruptions preemptively (Pitelis et al. 2024; Wiedemann et al. 2024). Such strategies not only mitigate immediate risks but also enable long-term stability in uncertain global markets.

Leadership development emerges as another critical area for practical application. Training programs that focus on decision-making under uncertainty and cultivating entrepreneurial leadership can equip managers with the skills needed to navigate crises effectively. Emphasizing scenario planning, risk assessment, and stakeholder engagement can enable leaders to make informed decisions in high-pressure geopolitical contexts (Gupta and Chauhan 2021). These capabilities are especially vital for firms operating in volatile regions where the unpredictability of events can significantly impact operations. Moreover, firms should foster a culture of resilience by encouraging proactive risk management and emphasizing innovation.

Collaboration with local stakeholders, including policymakers, industry associations, and community groups, is essential for strengthening resilience strategies. Local partnerships can help firms navigate regulatory changes, access critical resources, and gain social legitimacy in volatile environments (Cuervo-Cazurra et al. 2023). This is particularly relevant for SMEs, which often face resource constraints but can leverage agility to adapt more quickly. For example, localized networks can provide SMEs with access to informal knowledge and resources that are critical for managing geopolitical risks effectively.

Digital transformation is another indispensable component of resilience strategies. Firms must adopt technologies that enhance operational efficiency and decision-making capabilities. Predictive analytics, for example, can offer real-time insights into global operations, while blockchain technology can improve transparency and trust in transactions across value chains (Mariani et al. 2023). Additionally, digital platforms can facilitate seamless communication and collaboration across geographically dispersed teams, enabling firms to maintain organizational cohesion during crises. Adopting digital tools also supports the development of dynamic capabilities, enhancing firms' ability to sense and respond to geopolitical shocks.

Finally, industry-specific strategies are crucial for addressing unique vulnerabilities. For instance, firms in energy and natural resources can invest in renewable energy projects to reduce dependence on politically unstable oil-producing regions, thereby mitigating geopolitical risks. Similarly, technology firms should diversify their R&D investments and secure intellectual property to minimize exposure to politically sensitive regions (Freixanet and Federo 2022). These tailored strategies ensure that firms address sector-specific challenges while aligning their operations with broader resilience goals.

This study bridges theoretical understanding and practical application by providing these actionable insights. It delivers a roadmap for firms to build robust resilience strategies, equipping them to navigate the complexities of geopolitical uncertainty. Applying the TCCM framework to analyze 59 seminal studies, this research synthesizes theoretical perspectives, contextual gaps, firm-level attributes, and methodological trends. While emphasizing dynamic capabilities, institutional theories, and organizational agility, the findings identify underexplored areas, such as behavioral and complexity theories, which could enrich resilience research.

Moreover, there is a significant emphasis on the need for comparative regional studies, particularly in underrepresented areas such as sub-Saharan Africa and the Middle East, and industry-specific investigations in agriculture and energy. Firm-level characteristics, such as innovation intensity and digital resilience, are critical factors for addressing geopolitical challenges. Moreover, the analysis underscores the importance of adopting advanced methodological approaches, including longitudinal studies, big data analytics, and experimental research designs. By integrating cross-disciplinary theories, focusing on diverse contexts, and employing innovative methodologies, this study offers a robust framework for advancing resilience research and practice.

5.5.1 Contributions: integrative reflection and theoretical synthesis

This study contributes to the growing body of scholarship that seeks to explain how firms develop resilience and strategic adaptability in response to geopolitical uncertainty and institutional turbulence. To synthesize and extend the fragmented literature identified through the bibliometric and TCCM analyses, we introduce a conceptual model (Fig. 9) that articulates the core relationships between institutional inputs, organizational mechanisms, and strategic outcomes. Specifically, the model conceptualizes institutional turbulence, including geopolitical shocks, regulatory volatility, and institutional voids, as the primary exogenous force influencing firms' strategic responses (Cuervo-Cazurra et al. 2019; Scott 2017). In reaction to these external pressures, organizations activate a "resilience strategy engine" composed of five interrelated internal mechanisms: dynamic capabilities (Teece 2007), institutional adaptation strategies (Oliver 1991), digital enablers (Nambisan et al. 2019), organizational agility (Doz and Kosonen 2010), and contextual intelligence (Kutz 2008). The integration of these elements supports the development of resilience capabilities, defined as the capacity to absorb, adapt to, and recover from external shocks, which ultimately contribute to long-term strategic outcomes such as competitive renewal, innovation capacity, and sustained global performance (Lengnick-Hall et al. 2011; Pitelis et al. 2024).

There are other theoretical perspectives, such as upper echelons theory, behavioral theory of the firm, and institutional entrepreneurship, that also offer valuable insights into strategic adaptation. For example, the upper echelons perspective emphasizes the role of top management teams in shaping adaptive behavior and performance heterogeneity (Hambrick and Mason 1984; Wang et al. 2016). However, the selection of dynamic capabilities, institutional theory, and organizational agility as the core frameworks in this study is both logical and coherent given the research focus. These

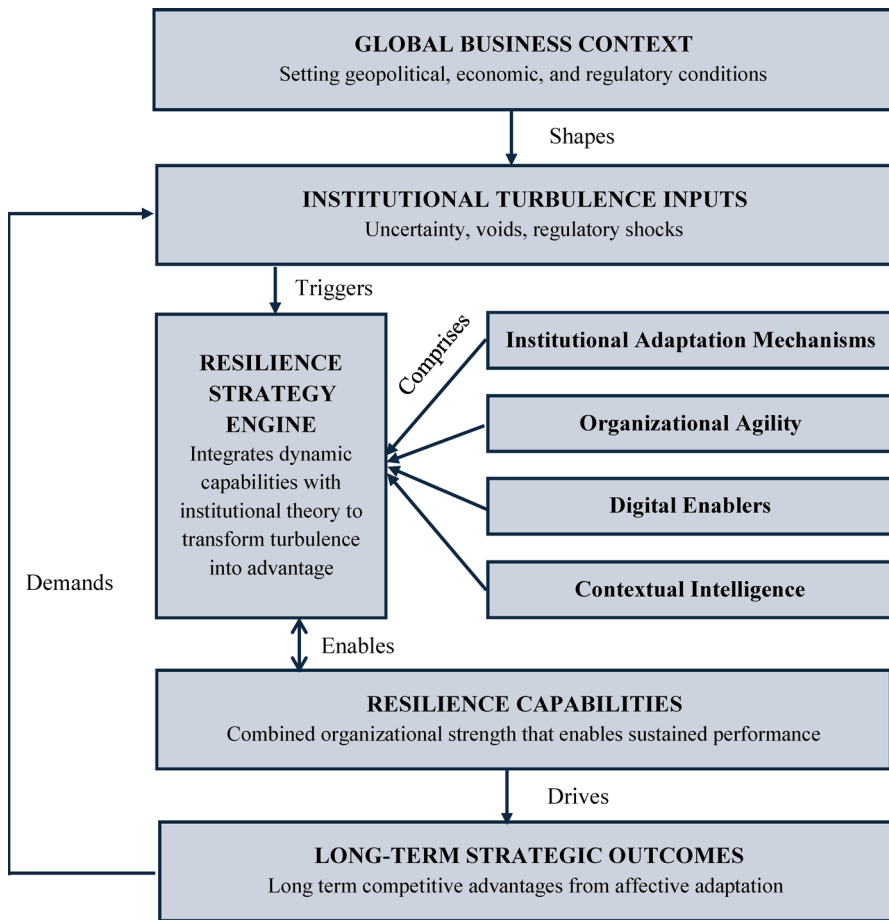


Fig. 9 Proposed conceptual model. *Source*: Author (2025)

three perspectives collectively allow for a balanced exploration of internal capabilities, external pressures, and processual adaptation—core dimensions that underlie resilience in uncertain global environments. Furthermore, their widespread use in extant literature, as demonstrated in the co-citation and thematic cluster analyses, justifies their selection as anchor constructs for this review (Donthu et al. 2021; Duchek 2020). By offering an integrated model grounded in these foundational theories, this study lays the groundwork for a focused research agenda and a clearer theoretical direction for future empirical work.

5.6 Research agenda for the future

Table 6 provides a structured research agenda aligned with the TCCM framework, offering a comprehensive pathway to advance resilience research in global business. It combines theoretical advancements, contextual diversity, organizational characteristics, and methodological rigor to address the pressing challenges of geopolitical

Table 6 Future research agenda. *Source:* Author (2025)

TCCM	Focus area	Research questions	Proposed research agenda
Theory	Integration of frameworks	Why is integrating dynamic capabilities with ecosystem and complexity theory critical to resilience?	Develop hybrid models combining cross-disciplinary theories, such as dynamic capabilities, complexity theory, and resilience engineering, to address interconnected geopolitical crises (Burström et al. 2023; Lichtenstein et al. 2007; Pitelis et al. 2024)
		How do hybrid theoretical models explain firm adaptability to cascading geopolitical crises?	Evaluate the applicability of integrated frameworks through empirical testing across diverse organizational contexts (Freixanet and Federo 2022; Xu and Abdullah 2024)
	Digital transformation and theories	When do digital technologies like AI, blockchain, and IoT significantly enhance institutional theory and dynamic capabilities?	Explore time-sensitive integration of digital tools in resilience frameworks, focusing on how digital transformation enhances organizational adaptability (D'Angelo et al. 2024; Feliciano-Cestero et al. 2023)
		What contextual factors influence the adoption of digital transformation in resilience frameworks?	Conduct cross-regional and industry-specific studies to assess how contextual differences shape integrating digital technologies with resilience theories (Klarin et al. 2024; Mariani et al. 2023)
	Behavioral and stakeholder theories	Why should behavioral decision-making and stakeholder theory be integrated into resilience research?	Expand resilience research by integrating behavioral theories and stakeholder engagement, particularly in volatile geopolitical environments (Jain et al. 2022; Nielsen et al. 2023; Shepherd 2009)
		What are the psychological and organizational factors affecting leadership decisions during geopolitical uncertainty?	Investigate decision-making frameworks under uncertainty, linking behavioral theories with resilience practices in firms operating in high-risk regions (Chittoor et al. 2009; Mitchell and Shepherd 2012)

Table 6 (continued)

TCCM	Focus area	Research questions	Proposed research agenda
Context	Geographical diversity	Why do resilience strategies differ across underrepresented regions like sub-Saharan Africa and Latin America?	Conduct comparative bibliometric analyses and case studies to identify region-specific resilience mechanisms and institutional voids (Cuervo-Cazurra et al. 2019; Orozco et al. 2024; Xu and Abdullah 2024)
		What institutional voids create the most significant barriers to resilience in emerging markets?	Investigate the role of institutional deficiencies and local adaptations in shaping firm-level resilience strategies in developing regions (Etemad 2004; Huang et al. 2021)
	Sectoral diversity	When are sector-specific strategies most effective in responding to geopolitical crises?	Investigate industry-specific resilience patterns in agriculture, education, and professional services to reveal unique resilience dynamics (Dabic et al. 2020a; Freixanet and Federo 2022; Klarin et al. 2024)
		How do resilience strategies differ in knowledge-intensive industries compared to resource-dependent sectors?	Conduct sectoral bibliometric analyses to understand varying resilience mechanisms across industry types (Mariani et al. 2023; Nielsen et al. 2023)
	Geopolitical risk analysis	Why are long-term geopolitical risks, such as trade wars and sanctions, underexplored in resilience research?	Examine bibliometric trends to identify gaps in research on geopolitical risks and their cascading effects on global supply chains and firm strategies (Klarin et al. 2024; Wiedemann et al. 2024)
		What are the long-term consequences of geopolitical risks on firm-level governance structures and strategies?	Analyze case studies and bibliometric patterns to map governance changes in response to geopolitical disruptions (Cuervo-Cazurra et al. 2023; Lawton et al. 2013)

Table 6 (continued)

TCCM	Focus area	Research questions	Proposed research agenda
Characteristics	SMEs and startups	Why do SMEs and startups rely on grass-roots innovation and entrepreneurial leadership for resilience?	Explore adaptive strategies of smaller firms, focusing on informal networks, innovation, and rapid decision-making processes in response to geopolitical shocks (Dabic et al. 2020a; Freixanet and Federo 2022; Gupta and Chauhan 2021)
		How do resource constraints influence SMEs' resilience strategies in high-risk geopolitical environments?	Examine how SMEs adapt their innovation strategies under varying geopolitical risks using comparative studies across regions (Bembom and Schwens 2018; Etemad 2004)
	Family-owned enterprises	When do family-owned businesses outperform larger firms in leveraging relational capital during geopolitical uncertainty?	Investigate how family-owned businesses utilize localized networks and cultural assets to foster resilience in politically unstable regions (Chittoor et al. 2009; Huang et al. 2021; Macpherson et al. 2015)
		What are generational leadership and succession planning roles in family-owned firms' resilience strategies?	Explore resilience practices tied to leadership transitions and relational capital in family firms across diverse cultural contexts (Baier-Fuentes et al. 2019; Shepherd 2009)
	Leadership and decision-making	Why does entrepreneurial leadership enhance resilience strategies during geopolitical uncertainty?	Examine the role of leadership in shaping firm-level resilience and explore decision-making under high-risk geopolitical environments (Baglieri 2024; D'Angelo et al. 2024; Mitchell and Shepherd 2012)
		How do leadership styles influence strategic pivoting and organizational adaptation in volatile geopolitical scenarios?	Conduct empirical studies linking leadership frameworks with real-world case studies of firms operating in conflict-prone regions (Christofi et al. 2021; Dabic et al. 2020a)

Table 6 (continued)

TCCM	Focus area	Research questions	Proposed research agenda
Methodology	Bibliometric analysis	Why are certain regions and industries underrepresented in resilience research according to bibliometric trends?	Conduct bibliometric analysis to map global research output, highlighting underrepresented areas and sectors in resilience literature (Paul and Rosado-Serrano 2019; Pitelis et al. 2024; Sauer and Seuring 2023)
		What bibliometric techniques can provide deeper insights into citation patterns and underexplored research themes?	Employ advanced bibliometric tools like co-citation and clustering analysis to uncover hidden themes in resilience research (Jain et al. 2022; Mariani et al. 2023)
	Big data analytics	When is big data analytics most effective in uncovering resilience strategies across geopolitical contexts?	Use AI-driven models to analyze real-time resilience trends, providing predictive insights for varying geopolitical scenarios (Baglieri 2024; Mariani et al. 2023)
		How can big data analytics integrate with traditional methods to provide more comprehensive insights into resilience?	Combine big data analytics with qualitative case studies to balance statistical robustness and contextual richness in resilience studies (Nielsen et al. 2023; Xu and Abdullah 2024)
	Longitudinal studies	Why is longitudinal research crucial for capturing the evolution of resilience strategies in global business?	Design longitudinal studies that track firms over extended periods, revealing the temporal dynamics of resilience (Evers et al. 2023; Wuytens et al. 2024)
		What are the critical inflection points in firms' resilience strategies during prolonged geopolitical uncertainty?	Investigate long-term adaptation patterns using longitudinal data across industries and regions (Freixanet and Federo 2022; Pitelis et al. 2024)

Table 6 (continued)

TCCM	Focus area	Research questions	Proposed research agenda
Research design	Regional representation	Why do resilience strategies from under-represented regions matter for global business research?	Include regional diversity in bibliometric and empirical studies to ensure globally representative findings (Orozco et al. 2024; Xu and Abdullah 2024)
		What contextual variables in under-represented regions influence the adoption of global resilience strategies?	Explore cross-regional data to analyze unique contextual drivers of resilience in developing markets (Chittoor et al. 2009; Huang et al. 2021)
	Cross-industry comparisons	When do resilience strategies vary significantly across industries, such as manufacturing, technology, and agriculture?	Conduct cross-sector bibliometric and empirical comparisons to uncover unique drivers and barriers of resilience (Bicakcioglu-Peynirci et al. 2020; Klarin et al. 2024)
		How do supply chain structures and resource dependencies shape resilience strategies across sectors?	Analyze bibliometric trends and conduct empirical studies on sector-specific resilience mechanisms (Cuervo-Cazurra et al. 2019; Lawton et al. 2013)
	Transparency and replicability	Why does methodological transparency improve the reliability of resilience research?	Adopt PRISMA guidelines and data-sharing practices to ensure transparency and replicability in resilience studies (Paul and Rosado-Serrano 2019; Sauer and Seuring 2023)
		What are the most effective strategies for ensuring replicability in resilience research across diverse contexts?	Develop standardized reporting templates and open-access repositories to enhance transparency in resilience studies (Dabic et al. 2020a; Mariani et al. 2023)

uncertainty and beyond. The research agenda builds directly on the bibliometric and systematic findings of this study and is designed to bridge conceptual, empirical, and methodological gaps.

Theoretically, future research should continue to deepen and refine the application of dynamic capabilities, institutional theory, and organizational agility while integrating complementary frameworks such as the upper echelons theory and resource orchestration perspectives. These additions can help explain how cognitive biases, leadership heterogeneity, and decision-making logics at the top management team (TMT) level affect resilience trajectories (Hambrick and Mason 1984; Helfat and Peteraf 2015).

In terms of context, there is an urgent need to move beyond the Western-centric and MNC-focused literature. Future studies should examine resilience and strategic adaptation in underrepresented regions such as Sub-Saharan Africa, Latin America, and South Asia. This also includes exploring industry-specific dynamics in vulner-

able sectors, such as agriculture, creative industries, education, and informal enterprises, which remain largely invisible in resilience research (Doh et al. 2017).

Regarding firm characteristics, researchers should investigate how SME-specific constraints and advantages, such as resource scarcity, informal structures, and entrepreneurial orientation, shape resilience responses. Furthermore, more attention should be paid to digital-born firms and startups operating in a constantly turbulent environment, especially in technology-intensive sectors.

Methodologically, this study advocates for the use of longitudinal, multi-level, and configurational designs (e.g., fsQCA, process tracing) to unpack the temporal and contingent nature of resilience. The integration of big data analytics, digital trace data, and ethnographic methods can also offer more profound insights into behavioral and strategic adaptations over time (Antons et al. 2023; Kraus et al. 2020a, b).

Each component of Table 6 corresponds to a key theme emerging from the co-citation clusters, keyword co-occurrence, and systematic classification, aligning directly with the research gaps identified in findings. For example, the lack of empirical studies from emerging economies is addressed in the "Context" column, while the "Methodology" column emphasizes pluralistic designs to counter the dominance of conceptual or single-case approaches.

To move the field forward, future research should ask: How do SMEs in politically volatile contexts reconfigure their dynamic capabilities differently from MNCs? What institutional mechanisms foster or constrain organizational agility in emerging markets? How do leadership cognition and decision-making processes interact with environmental turbulence to shape firm resilience? These and other questions proposed in Table 6 serve as a call to action for scholars to adopt more integrative, context-aware, and methodologically diverse approaches.

5.6.1 Limitations and directions for future work

As with any systematic literature review, this study is subject to several limitations. First, despite rigorous search and screening protocols, the reliance on a single database, WoS, may have excluded relevant studies indexed elsewhere. Although WoS ensures quality and coverage, future reviews may benefit from triangulating across multiple databases, such as Scopus or Dimensions. Second, while the bibliometric analysis provides an objective overview of research trends and intellectual structures, it does not fully capture nuanced theoretical arguments or emerging debates. A manual qualitative synthesis of individual articles could complement the quantitative mapping to gain richer insights into conceptual evolution. Third, the exclusive focus on review articles, while ensuring theoretical comprehensiveness, may overlook cutting-edge empirical research. Expanding the inclusion criteria in future research could balance theoretical depth with empirical relevance.

Lastly, the generalizability of the findings is constrained by the dominance of literature from developed economies and large firms. Further research is needed to incorporate the voices and experiences of SMEs, startups, and non-Western firms that operate under different constraints and institutional realities. In conclusion, this study outlines a future research roadmap rooted in the dual insights of bibliometric and systematic synthesis. By addressing theoretical gaps, embracing contextual diversity,

and adopting methodological innovation, future studies can contribute to building more resilient and adaptable global businesses.

5.6.2 Outlook: toward a comprehensive resilience strategy engine

As global firms grapple with increasingly turbulent geopolitical, institutional, and technological environments, there is a pressing need to conceptualize the **Resilience Strategy Engine** as a multidimensional and integrative construct. Beyond institutional adaptation mechanisms, organizational agility, digital enablers, and contextual intelligence, this study proposes several additional capabilities that operationalize resilience under uncertainty. **Strategic foresight**, for instance, enables firms to anticipate environmental discontinuities and integrate future-oriented thinking into their strategic planning, thereby enhancing both sensing and seizing capabilities (Rohrbeck and Kum 2018; Teece 2014). Complementing this is **the firm's knowledge integration capability**, its ability to absorb, recombine, and apply diverse knowledge inputs—a function critical for innovation and dynamic adaptation (Zahra and George 2002; Grant 1996). Equally essential is **collaborative orientation**, which facilitates resource sharing and coordinated responses through partnerships and ecosystem networks (Burström et al. 2023; Etemad 2004). Such interorganizational orchestration becomes particularly vital for firms in emerging markets, where institutional voids necessitate relational forms of resilience (Rodrigues et al. 2017).

In parallel, cognitive and behavioral constructs such as **sensemaking and strategic framing** enrich the engine by enabling firms to interpret ambiguity and co-construct meaning in crisis contexts, thus translating environmental signals into coherent strategic action (Weick 1995; Maitlis and Christianson 2014). This interpretive process underpins rapid response and long-term adaptability. Additionally, **entrepreneurial orientation**, characterized by proactiveness, innovativeness, and risk-taking, reinforces adaptive experimentation and opportunity recognition in the face of disruption (Lumpkin and Dess 1996; Gupta and Chauhan 2021). At a foundational level, a **resilience mindset** characterized by psychological safety and openness to learning promotes organizational cohesion and adaptive problem-solving (Sutcliffe and Vogus 2003; Edmondson 1999). Collectively, these constructs operate as interdependent levers within the resilience strategy engine, forming a dynamic system through which firms build, deploy, and sustain resilience capabilities. Future research should further investigate how these dimensions interact, evolve across institutional contexts, and differ by firm size or industry, thereby enriching the theoretical and practical understanding of organizational resilience.

6 Conclusion

This study provides a comprehensive and integrative review of the literature on organizational resilience and strategic adaptation in the context of global business under geopolitical uncertainty. Drawing on a hybrid systematic literature review of 59 high-impact, peer-reviewed articles and complemented by bibliometric mapping, the analysis identifies three foundational theoretical lenses—dynamic capabilities,

institutional theory, and organizational agility—as the dominant paradigms shaping current scholarly discourse. While each framework offers important insights, their application has evolved mainly in isolation, resulting in conceptual fragmentation and limited integration in empirical research.

By leveraging the TCCM framework in combination with bibliometric tools such as Bibliometrix and Biblioshiny, this study reveals key thematic clusters, citation trajectories, and methodological trends. In doing so, it surfaces critical gaps in the literature, particularly the underutilization of longitudinal, big-data, and mixed-method approaches. A key contribution of this review is the identification of a recurring configuration of constructs—*namely, institutional adaptation mechanisms, organizational agility, digital enablers, and contextual intelligence—which we synthesize into a cohesive conceptual model termed the Resilience Strategy Engine*. This model captures how firms operationalize dynamic capabilities to adapt to institutional turbulence and sustain long-term strategic outcomes. By articulating this framework, the study not only consolidates fragmented theoretical streams but also provides a structured foundation for future research into the mechanisms of resilience in volatile global environments. Ultimately, this work enhances scholarly understanding of how organizations build and deploy resilience, offering a replicable methodological roadmap for advancing research in this critical and rapidly evolving field.

Acknowledgements This research received no specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Funding Open Access funding enabled and organized by Projekt DEAL.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Antons D, Breidbach CF, Joshi AM, Salge TO (2023) Computational literature reviews: method, algorithms, and roadmap. *Organ Res Methods* 26(1):107–138
- Aria M, Cuccurullo C (2017) Bibliometrix: an R-tool for comprehensive science mapping analysis. *J Informetr* 11(4):959–975
- Arun TM, Kaur P, Ferraris A, Dhir A (2021) What motivates the adoption of green restaurant products and services? A systematic review and future research agenda. *Bus Strateg Environ* 30(4):2224–2240

- Baglieri D (2024) Turning green hydrogen into firms' decarbonization strategies: opportunities, challenges, and implications for China. *Asian Bus Manag* 23(5):660–682
- Baier-Fuentes H, Hormiga E, Miravittles P, Blanco-Mesa F (2019) International entrepreneurship: a critical review of the research field. *Eur J Int Manag* 13(3):381–412
- Barreto I (2010) Dynamic capabilities: a review of past research and an agenda for the future. *J Manage* 36(1):256–280
- Bembom M, Schwens C (2018) The role of networks in early internationalizing firms: a systematic review and future research agenda. *Eur Manag J* 36(6):679–694
- Bıçakcıoğlu-Peynirci N, Hizarci-Payne AK, Özgen Ö, Madran C (2020) Innovation and export performance: a meta-analytic review and theoretical integration. *Eur J Innov Manag* 23(5):789–812
- Breslin D (2008) A review of the evolutionary approach to the study of entrepreneurship. *Int J Manag Rev* 10(4):399–423
- Burström T, Lahti T, Parida V, Wartiovaara M, Wincent J (2023) A definition, review, and extension of global ecosystems theory: trends, architecture and orchestration of global VCs and mechanisms behind unicorns. *J Bus Res* 157:113605
- Chabowski BR, Mena JA (2017) A review of global competitiveness research: past advances and future directions. *J Int Mark* 25(4):1–24
- Chakma R, Paul J, Dhir S (2021) Organizational ambidexterity: a review and research agenda. *IEEE Trans Eng Manag* 71:121–137
- Chen Y, Mandler T, Meyer-Waarden L (2021) Three decades of research on loyalty programs: a literature review and future research agenda. *J Bus Res* 124:179–197
- Chittoor R, Sarkar MB, Ray S, Aulakh PS (2009) Third-world copycats to emerging multinationals: Institutional changes and organizational transformation in the Indian pharmaceutical industry. *Organ Sci* 20(1):187–205
- Christofi M, Pereira V, Vrontis D, Tarba S, Thrassou A (2021) Agility and flexibility in international business research: a comprehensive review and future research directions. *J World Bus* 56(3):101194
- Clark WR, Clark LA, Raffo DM, Williams RI (2021) Extending Fisch and Block's (2018) tips for a systematic review in management and business literature. *Manage Rev* 71:215–231
- Compans YE, McMullen JS (2007) Strategic entrepreneurs at work: the nature, discovery, and exploitation of entrepreneurial opportunities. *Small Bus Econ* 28:301–322
- Cuervo-Cazurra A, Gaur A, Singh D (2019) Pro-market institutions and global strategy: the pendulum of pro-market reforms and reversals. *J Int Bus Stud* 50:598–632
- Cuervo-Cazurra A, Duran P, Arregle JL, van Essen M (2023) Host country politics and internationalization: a meta-analytic review. *J Manage Stud* 60(1):204–241
- D'Angelo S, Cavallo A, Ghezzi A, Di Lorenzo F (2024) Understanding corporate entrepreneurship in the digital age: a review and research agenda. *Rev Manag Sci*. <https://doi.org/10.1007/s11846-024-00730-8>
- Dabić M, Maley J, Dana LP, Novak I, Pellegrini MM, Caputo A (2020a) Pathways of SME internationalization: a bibliometric and systematic review. *Small Bus Econ* 55:705–725
- Dabić M, Vlačić B, Paul J, Dana LP, Sahasranamam S, Glinka B (2020b) Immigrant entrepreneurship: a review and research agenda. *J Bus Res* 113:25–38
- Dacin MT, Goodstein J, Scott WR (2002) Institutional theory and institutional change: introduction to the special research forum. *Acad Manage J* 45(1):45–56
- Dean TJ, Meyer GD (1996) Industry environments and new venture formations in US manufacturing: a conceptual and empirical analysis of demand determinants. *J Bus Venturing* 11(2):107–132
- Deng P (2012) The internationalization of Chinese firms: a critical review and future research. *Int J Manag Rev* 14(4):408–427
- Derviş H (2019) Bibliometric analysis using bibliometrix an R package. *J Scientometr Res* 8(3):156–160
- Doh J, Rodrigues S, Saka-Helmhout A, Makhija M (2017) International business responses to institutional voids. *J Int Bus Stud* 48(3):293–307
- Donthu N, Kumar S, Mukherjee D, Pandey N, Lim WM (2021) How to conduct a bibliometric analysis: an overview and guidelines. *J Bus Res* 133:285–296
- Doz YL, Kosonen M (2010) Embedding strategic agility: a leadership agenda for accelerating business model renewal. *Long Range Plann* 43(2–3):370–382
- Duchek S (2020) Organizational resilience: a capability-based conceptualization. *Bus Res* 13(1):215–246
- Edmondson A (1999) Psychological safety and learning behavior in work teams. *Adm Sci Q* 44(2):350–383
- Etemad H (2004) Internationalization of small and medium-sized enterprises: a grounded theoretical framework and an overview. *Can J Adm Sci* 21(1):1

- Evers N, Ojala A, Sousa CM, Criado-Rialp A (2023) Unraveling business model innovation in firm internationalization: a systematic literature review and future research agenda. *J Bus Res* 158:113659
- Feliciano-Cestero MM, Ameen N, Kotabe M, Paul J, Signoret M (2023) Is digital transformation threatened? A systematic literature review of the factors influencing firms' digital transformation and internationalization. *J Bus Res* 157:113546
- Felin T, Powell TC (2016) Designing organizations for dynamic capabilities. *Calif Manage Rev* 58(4):78–96
- Fernhaber SA, Zou H (2022) Advancing societal grand challenge research at the interface of entrepreneurship and international business: a review and research agenda. *J Bus Venturing* 37(5):106233
- Figueiredo M, Ferreira JJ, Vrontis D (2024) Perspectives on dynamic capabilities and ambidexterity in born-global companies: theoretical framing, review and research agenda. *J Int Manag* 30(1):101099
- Fisch C, Block J (2018) Six tips for your (systematic) literature review in business and management research. *Manag Rev Q* 68:103–106
- Freeman RE (2010) Strategic management: a stakeholder approach. Cambridge University Press, Cambridge
- Freixanet J, Federo R (2022) When born globals grow up: a review and agenda for research on the performance of maturing early internationalizers. *Manag Int Rev* 62(6):817–857
- Grant RM (1996) Toward a knowledge-based theory of the firm. *Strateg Manag J* 17(S2):109–122
- Greenwood R, Meyer RE, Lawrence TB, Oliver C (2017) The Sage handbook of organizational institutionalism
- Gupta P, Chauhan S (2021) Firm capabilities and export performance of small firms: a meta-analytical review. *Eur Manage J* 39(5):558–576
- Hambrick DC, Mason PA (1984) Upper echelons: the organization as a reflection of its top managers. *Acad Manage Rev* 9(2):193–206
- Hassan SM, Rahman Z, Paul J (2022) Consumer ethics: a review and research agenda. *Psychol Mark* 39(1):111–130
- Helfat CE, Peteraf MA (2015) Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strateg Manag J* 36(6):831–850
- Hoon C (2013) Meta-synthesis of qualitative case studies: an approach to theory building. *Organ Res Methods* 16(4):522–556
- Huang S, Zhu Y, Zhang K, Ding Z (2021) The determinants of international new venture performance: a review and future research agenda. *Int Mark Rev* 38(5):1006–1046
- Hutzschenreuter T, Gröne F (2009) Product and geographic scope changes of multinational enterprises in response to international competition. *J Int Bus Stud* 40:1149–1170
- Iddy JJ, Alon I (2019) Knowledge management in franchising: a research agenda. *J Knowl Manag* 23(4):763–785
- Jain R, Oh CH, Shapiro D (2022) A bibliometric analysis and future research opportunities in Multinational Business Review. *Multinatl Bus Rev* 30(3):313–342
- Jie S, Harms R, Groen AJ, Jones P (2023) Capabilities and performance of early internationalizing firms: a systematic literature review. *J Small Bus Manage* 61(3):1143–1173
- Jones O, Li H (2017) Effectual entrepreneurship: sensemaking in a family-based start-up. *Entrep Reg Dev* 29(5–6):467–499
- Juergensen JJ, Narula R, Surdu I (2022) A systematic review of the relationship between international diversification and innovation: a firm-level perspective. *Int Bus Rev* 31(2):101955
- Keupp MM, Gassmann O (2009) The past and the future of international entrepreneurship: a review and suggestions for developing the field. *J Manage* 35(3):600–633
- Khlystova O, Kalyuzhnova Y, Belitski M (2022) The impact of the COVID-19 pandemic on the creative industries: a literature review and future research agenda. *J Bus Res* 139:1192–1210
- Klarin A, Ray PK, Ray S, Xiao Q (2024) Mapping global value chain, production network, and commodity chain literature using scientometrics: an integrative resilient value chains model based on a review of the literature. *J Bus Ind Mark* 39(10):2257–2274
- Koryak O, Mole KF, Lockett A, Hayton JC, Ucbasaran D, Hodgkinson GP (2015) Entrepreneurial leadership, capabilities and firm growth. *Int Small Bus J Res Entrepreneursh* 33(1):89–105
- Kraus S, Breier M, Dasí-Rodríguez S (2020a) The art of crafting a systematic literature review in entrepreneurship research. *Int Entrep Manag J* 16(3):1023–1042
- Kraus S, Clauss T, Breier M, Gast J, Zardini A, Tiberius V (2020b) The economics of COVID-19: initial empirical evidence on how family firms in five European countries cope with the corona crisis. *Int J Entrep Behav Res* 26(5):1067–1092

- Kraus S, Breier M, Lim WM, Dabić M, Kumar S, Kanbach D, Mukherjee D, Corvello V, Piñeiro-Chousa J, Liguori E, Palacios-Marqués D, Schiavone F, Ferraris A, Fernandes C, Ferreira JJ (2022) Literature reviews as independent studies: guidelines for academic practice. *Rev Manag Sci* 16(8):2577–2595
- Kraus S, Mahto RV, Walsh ST (2023) The importance of literature reviews in small business and entrepreneurship research. *J Small Bus Manage* 61(3):1095–1106
- Kraus S, Bouncken RB, Yela Aránega A (2024) The burgeoning role of literature review articles in management research: an introduction and outlook. *Rev Manag Sci* 18(2):299–314
- Kutz MR (2008) Contextual intelligence: An emerging competency for global leaders. *Regent Global Bus Rev* 2(2):5–8
- Lawton T, McGuire S, Rajwani T (2013) Corporate political activity: a literature review and research agenda. *Int J Manag Rev* 15(1):86–105
- Lengnick-Hall CA, Beck TE, Lengnick-Hall ML (2011) Developing a capacity for organizational resilience through strategic human resource management. *Hum Resour Manage Rev* 21(3):243–255
- Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JP et al (2009) The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Ann Internal Med*. <https://doi.org/10.1136/bmj.b2700>
- Lichtenstein BB, Carter NM, Dooley KJ, Gartner WB (2007) Complexity dynamics of nascent entrepreneurship. *J Bus Venturing* 22(2):236–261
- Lin X, Ribeiro-Navarrete S, Chen X, Xu B (2024) Advances in the innovation of management: a bibliometric review. *Rev Manag Sci* 18(6):1557–1595
- Lumpkin GT, Dess GG (1996) Clarifying the entrepreneurial orientation construct and linking it to performance. *Acad Manage Rev* 21(1):135–172
- Macpherson A, Holt R (2007) Knowledge, learning and small firm growth: a systematic review of the evidence. *Res Policy* 36(2):172–192
- Macpherson A, Herbane B, Jones O (2015) Developing dynamic capabilities through resource accretion: expanding the entrepreneurial solution space. *Entrep Reg Dev* 27(5–6):259–291
- Maitlis S, Christianson M (2014) Sensemaking in organizations: taking stock and moving forward. *Acad Manage Ann* 8(1):57–125
- Makkonen H, Pohjola M, Olkkonen R, Koponen A (2014) Dynamic capabilities and firm performance in a financial crisis. *J Bus Res* 67(1):2707–2719
- Malik FS, Terzidis O (2025) A hybrid framework for creating artificial intelligence-augmented systematic literature reviews. *Manag Rev Quarter*. <https://doi.org/10.1007/s11301-025-00522-8>
- Mandler T, Sezen B, Chen J, Özsoy A (2021) Performance consequences of marketing standardization/adaptation: a systematic literature review and future research agenda. *J Bus Res* 125:416–435
- Mariani MM, Machado I, Magrelli V, Dwivedi YK (2023) Artificial intelligence in innovation research: a systematic review, conceptual framework, and future research directions. *Technovation* 122:102623
- Mathews JA (2017) Dragon multinationals powered by linkage, leverage and learning: a review and development. *Asia Pac J Manag* 34:769–775
- Merigó JM, Yang JB (2017) A bibliometric analysis of operations research and management science. *Omega* 73:37–48
- Meyer KE (2004) Perspectives on multinational enterprises in emerging economies. *J Int Bus Stud* 35:259–276
- Moher D, Liberati A, Tetzlaff J, Altman DG, and PRISMA Group*, T (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Ann Intern Med* 151(4):264–269
- Nambisan S, Wright M, Feldman M (2019) The digital transformation of innovation and entrepreneurship: progress, challenges and key themes. *Res Policy* 48(8):103773
- Nielsen BB, Wechtler H, Zheng LG (2023) Disasters and international business: insights and recommendations from a systematic review. *J World Bus* 58(4):101458
- Oliver C (1991) Strategic responses to institutional processes. *Acad Manage Rev* 16(1):145–179
- Oliver C, Holzinger I (2008) The effectiveness of strategic political management: a dynamic capabilities framework. *Acad Manage Rev* 33(2):496–520
- Orozco J, Turro A, Urbano D (2024) Research on corporate entrepreneurship in developing countries: a review and agenda for future directions. *Entrep Res J* 14(4):1735–1779
- Overby E, Bharadwaj A, Sambamurthy V (2006) Enterprise agility and the enabling role of information technology. *Eur J Inf Syst* 15(2):120–131
- Paul J, Benito GR (2018) A review of research on outward foreign direct investment from emerging countries, including China: what do we know, how do we know and where should we be heading? *Asia Pac Bus Rev* 24(1):90–115

- Paul J, Criado AR (2020) The art of writing literature review: what do we know and what do we need to know? *Int Bus Rev* 29(4):101717
- Paul J, Rosado-Serrano A (2019) Gradual internationalization vs born-global/international new venture models: a review and research agenda. *Int Mark Rev* 36(6):830–858
- Paul J, Khatri P, Kaur Duggal H (2024) Frameworks for developing impactful systematic literature reviews and theory building: what, why and how? *J Decis Syst* 33(4):537–550
- Pfeffer J, Salancik G (2015) External control of organizations—Resource dependence perspective. *Organizational behavior* 2. Routledge, New York, pp 355–370
- Pitelis CN, Teece DJ, Yang H (2024) Dynamic capabilities and MNE global strategy: a systematic literature review-based novel conceptual framework. *J Manage Stud* 61(7):3295–3326
- Purkayastha A, Sharma S, Karna A (2020) Theoretical foundations of antecedents of internationalization and moderators in multinationality–performance relationship: what is missing? *Cross Cult Strateg Manag* 27(2):213–243
- Radulovich L, Javalgi RRG, Scherer RF (2018) Intangible resources influencing the international performance of professional service SMEs in an emerging market: evidence from India. *Int Mark Rev* 35(1):113–135
- Rajni-Swami A, Khan M, Hemrajani P, Dhiman R (2022) Mapping the intellectual structure of workplace spirituality through bibliometric analysis. *FIIB Bus Rev*. <https://doi.org/10.1177/23197145221099090>
- Robert Mitchell J, Shepherd DA(2012) Capability development and decision incongruence in strategic opportunity pursuit. *Strateg Entrepreneurship J* 6(4):355–381.
- Rodrigues S, Saka-Helmhout A, Makhija M (2017) International business responses to institutional voids. *J Int Bus Stud* 48(3):293–307
- Rohrbeck R, Kum ME (2018) Corporate foresight and its impact on firm performance: a longitudinal analysis. *Technol Forecast Soc Change* 129:105–116
- Rother ET (2007) Systematic literature review x narrative review. *Acta Paul Enferm* 20:v–vi
- Ruppenthal T, Bausch A (2009) Research on export performance over the past 10 years: a narrative review. *Eur J Int Manag* 3(3):328–364
- Sauer PC, Seuring S (2023) How to conduct systematic literature reviews in management research: a guide in 6 steps and 14 decisions. *Rev Manag Sci* 17(5):1899–1933
- Schmidt HM, Santamaria-Alvarez SM (2022) Routines in international business: a semi-systematic review of the concept. *J Int Manag* 28(2):100878
- Scott WR (2017) Institutional theory: onward and upward. *The Sage Handbook of Organizational Institutionalism* 900:853–871
- Shepherd DA (2009) Grief recovery from the loss of a family business: a multi-and meso-level theory. *J Bus Ventur* 24(1):81–97
- Surdu I, Mellahi K (2016) Theoretical foundations of equity based foreign market entry decisions: a review of the literature and recommendations for future research. *Int Bus Rev* 25(5):1169–1184
- Sutcliffe KM, Vogus TJ (2003) Organizing for resilience. In: Cameron K, Dutton J (eds) *Positive organizational scholarship: Foundations of a new discipline*. Berrett-Koehler Publishers, Oakland
- Tan D, Su W, Mahoney JT, Kor Y (2020) A review of research on the growth of multinational enterprises: a Penrosean lens. *J Int Bus Stud* 51:498–537
- Teece DJ (2007) Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strateg Manag J* 28(13):1319–1350
- Teece DJ (2014) The foundations of enterprise performance: dynamic and ordinary capabilities in an (economic) theory of firms. *Acad Manage Perspect* 28(4):328–352
- Teece DJ, Pisano G, Shuen A (1997) Dynamic capabilities and strategic management. *Strateg Manag J* 18(7):509–533
- Thelwall M (2008) Bibliometrics to webometrics. *J Inf Sci* 34(4):605–621
- Tong TW, Li J (2008) Real options and MNE strategies in Asia Pacific. *Asia Pac J Manage* 25:153–169
- Tranfield D, Denyer D, Smart P (2003) Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Br J Manage* 14(3):207–222
- Tzeng CH (2008) Developing high-technology latecomer firms to compete internationally: a three-sector growth model. *J Int Manag* 14(2):190–206
- Vieira ES, Gomes JA (2009) A comparison of Scopus and Web of Science for a typical university. *Scientometrics* 81(2):587–600
- Wang G, Holmes RM Jr, Oh IS, Zhu W (2016) Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. *Pers Psychol* 69(4):775–862
- Weick KE (1995) *Sensemaking in organizations*, Vol. 3, No. 10.1002. Thousand Oaks, CA

- Wiedemann M, zu Knyphausen-Aufseß D, Ippendorf N (2024) Revisiting Shimizu et al. (2024) What do we know and what should we know about cross-border mergers and acquisitions?. *Rev Manag Sci*, 1–49
- Wiklund J, Patzelt H, Shepherd DA (2009) Building an integrative model of small business growth. *Small Bus Econ* 32:351–374
- Wilden R, Devinney TM, Dowling GR (2016) The architecture of dynamic capability research identifying the building blocks of a configurational approach. *Acad Manage Ann* 10(1):997–1076
- Wuytens N, Schepers J, Vandekerckhof P, Voordeckers W (2024) The allegory of tacit knowledge: a review and research agenda for entrepreneurship. *Rev Manag Sci*. <https://doi.org/10.1007/s11846-024-00794-6>
- Xu Z, Abdullah NL (2024) A multi-dimensional framework of dynamic capabilities in emerging economies' multinationals: a systematic review of the literature. *Int J Emerg Markets*. <https://doi.org/10.1108/IJOEM-08-2023-1314>
- Yao FK, Chen MJ, Li J, Combs D, Li Q (2024) A review of 50 years of research since Knickerbocker (1973): competitive dynamics in international business. *J Int Bus Stud*. <https://doi.org/10.1057/s41267-024-00707-5>
- Zahra SA, George G (2002) Absorptive capacity: a review, reconceptualization, and extension. *Acad Manage Rev* 27(2):185–203

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.