Resilience of Small Medium Business

Vol 01 (2) 2025 p. 139-153

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Received 22 January 2026;
Accepted 05 March 2026;
Published 12 March 2026;

Conflict of interest statement:
Author(s) reported no conflict of interest

DOI: http://doi.org/10.70764/gdpu-rsmb.2025.1(2)-03

BUSINESS RESILIENCE STRATEGIES IN ORGANIZATIONS IN AN ERA OF UNCERTAINTY: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

Objective: This study aims to develop an evidence-based synthesis of business resilience strategies adopted by organizations operating in an era of uncertainty during 2016– 2025, with particular attention to how resilience is defined, operationalized, and translated into actionable strategy bundles across disruption phases.

Research Design & Methods: A Systematic Literature Review (SLR) was conducted following PRISMA 2020 guidelines. Literature was retrieved from major academic databases (Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink, Google Scholar, and national databases), screened using predefined inclusion or exclusion criteria, and assessed through a three item quality appraisal (QA1– QA3). Fifteen peer-reviewed studies published between 2016 and 2025 were included and synthesized using descriptive mapping and thematic analysis.

Findings: The review shows a clear conceptual shift from resilience as a post-disruption outcome toward resilience as a capability-based, dynamic, and multi-level construct. Strategies are rarely isolated; instead, they form cross-domain bundles spanning governance or BCM, operations and supply chain continuity, financial buffering, human capital, and digital adaptation. The synthesis supports a sequenced pathway in which business continuity management (BCM) enables operational resilience by stabilizing critical functions, which subsequently supports organizational resilience through learning, resource reconfiguration, and strategic renewal. Strategy effectiveness is contingent on disruption type and pre-crisis organizational capacity.

Implications & Recommendations: Organizations should adopt a staged resilience roadmap, strengthen BCM maturity, invest in operational continuity capabilities, and institutionalize learning-based renewal mechanisms. SMEs should prioritize cashflow discipline, network access, and scalable digital pivots aligned with resource constraints.

Contribution & Value Added: This study clarifies construct boundaries by proposing a mechanism-based integration of business continuity management (BCM), operational resilience, and organizational resilience, thereby offering a structured and actionable framework for both research and practice.

Keywords: business resilience; operational resilience; business continuity management; organizational resilience; systematic literature review

JEL codes: D81, M15, L26.
Article type: research paper

INTRODUCTION

Over the past decade, organizations have operated within an increasingly complex landscape of uncertainty, often conceptualized as a *polycrisis*, driven by the convergence of public health shocks, supply chain disruptions, hydrometeorological disasters, accelerated digitalization,

and escalating cybersecurity risks. The implications of these conditions are evident across both macro and micro level indicators. Globally, the International Monetary Fund (IMF) reported that the world economy contracted by 3.3% in 2020, underscoring the magnitude of systemic pressure on cross-sector business activity (IMF, 2021b, 2021a). In Indonesia, Statistics Indonesia (BPS) documented a 2.07% year on year contraction in 2020 compared to 2019, with the most severe decline occurring in the transportation and warehousing sector (− 15.04%) (Badan Pusat Statistik, 2021).

Uncertainty has also become increasingly physical and recurrent. The National Disaster Management Agency (BNPB) recorded 5,400 disaster events in 2023, predominantly hydrometeorological in nature, resulting in 275 fatalities and affecting or displacing 8,491,288 individuals. At the same time, digital risks have expanded the spectrum of disruption. IBM reported that the average global cost of a data breach reached USD 4.88 million in 2024, reinforcing the reality that operational and reputational disruptions are now frequently triggered by cyber incidents (IBM Security, 2024). These pressures are particularly consequential for economies dominated by small and medium sized enterprises (SMEs). The OECD emphasizes that SMEs account for approximately 99% of businesses and make substantial contributions to employment and value creation across many countries (OECD, 2024).

Within this context, *business resilience* is increasingly understood not merely as survival, but as an organization' s capacity to anticipate, absorb, adapt to, and transform in response to shocks while sustaining core functions and performance. This perspective aligns with standardized approaches to business continuity management, for instance through frameworks such as the Business Continuity Management System (BCMS) outlined in ISO standards (ISO, 2019). Nevertheless, Duchek (2020) argues that resilience should also be viewed as a strategic construct encompassing organizational capabilities, learning processes, and multi-level governance spanning individuals, teams, organizations, and the broader ecosystem.

Despite the rapid growth of organizational resilience research, several influential reviews and key studies consistently highlight persistent gaps in the literature. Annarelli & Nonino (2016) emphasize that resilience is often positioned at the intersection of strategic and operational decision making, however, managerial approaches remain diverse and fragmented. Linnenluecke (2017) demonstrates that while resilience has become a broad research agenda within business and management studies, definitions and measurement approaches are frequently inconsistent, thereby limiting cross study comparability. Ruiz-Martin et al. (2018) further argue that existing resilience knowledge has not yet fully clarified what works, under which conditions, particularly when disruption contexts differ substantially, such as natural disasters, economic crises, pandemics, or supply chain interruptions.

More recently, Conz & Magnani (2020) call for conceptualizing resilience as a dynamic process, yet comprehensive syntheses mapping portfolios of strategies across the full crisis cycle, from pre-crisis to post-crisis, remain limited. Duchek (2020) advances a capability based conceptualization of resilience, comprising anticipation, coping, and adaptation, nevertheless, empirical evidence testing bundles of strategies and their performance implications remains dispersed. Hillmann & Guenther (2021) even stress the need to consolidate conceptual boundaries and clarify the construct of resilience to strengthen its analytical utility in management research. From an integrative perspective, Raetze et al. (2021) show that resilience is multi level and contex dependent, however, strategy mapping across levels such as governance, human resources, digital capabilities, supply chain management, business model innovation, and related domains has yet to be consolidated into a single synthesis specifically focused on business resilience strategies.

Additional gaps are evident in the context of small and medium sized enterprises (SMEs). Saad et al. (2021) review business resilience in SMEs, yet more operational strategy groupings are still required to support managerial decision making. Similarly, Affa et al. (2025), in their discussion of business continuity management (BCM) in SMEs, indicate that BCM practices are not always integrated with strategic learning and transformation, even though the 2016– 2025 period has been characterized by recurring shocks and intensifying cyber risks. In the Indonesian context, studies on MSME resilience during the pandemic have highlighted adaptation through digital sales channels

and policy support, but such findings are rarely positioned within a resilience strategy framework that spans disruption phases and diverse risk types (Raharjo & Mulyani, 2020).

These conditions underscore the need for a systematic literature review (SLR), given that resilience related publications have increased rapidly but remain dispersed across multiple themes. Without a systematic synthesis, organizations may adopt popular strategies that are misaligned with their specific contexts, while researchers face difficulties in identifying robust patterns, explaining divergent findings, and formulating truly prioritized research agendas. The PRISMA 2020 reporting guidelines further stress the importance of transparency in the selection process to ensure that syntheses are credible and replicable (Page et al., 2021).

This study contributes novelty in three key respects. First, by focusing on the 2016– 2025 period, it captures the evolution of resilience strategies before, during, and after major shocks (particularly the COVID-19 pandemic), alongside the increasing prevalence of hydrometeorological and cyber risks. Second, this SLR frames resilience as a business strategy rather than merely a conceptual construct, by mapping strategies across phases and domains. Third, the synthesis is designed to generate a conceptual framework that links strategies, disruption contexts, and outcomes, while also proposing a more focused future research agenda.

Accordingly, this study aims to develop an evidence based synthesis of business resilience strategies adopted by organizations in an era of uncertainty through an SLR covering 2016– 2025. The expected outputs include: (1) mapping the definitions and operationalization of the resilience concept, (2) classifying dominant strategies and the contexts in which they are applied, and (3) identifying contingency factors, performance consequences, and research gaps to inform both theoretical and practical recommendations.

LITERATURE REVIEW

Organizational resilience has evolved into a central concept in management and sustainability studies, especially when organizations are faced with recurring and intertwined disruptions. Early studies defined resilience primarily as a company's ability to recover from shocks by emphasizing stability and continuity of operations. More recent perspectives have expanded this meaning by viewing resilience as a strategic capability that enables organizations not only to survive, but also to reconfigure resources and take advantage of opportunities arising from crises (Duchek, 2020; Hillmann & Guenther, 2021). Theoretically, resilience is often associated with the resource-based view (RBV) and dynamic capabilities theory. Within this framework, resilience is understood as the result of developing valuable, scarce, difficult-to-imitate, and irreplaceable resources that strengthen an organization's adaptive capacity. The theory of dynamic capabilities emphasizes the processes of sensing, seizing, and transforming as the main mechanisms for organizations to respond to environmental turbulence, thus positioning resilience as an outcome of strategic learning and continuous organizational renewal (Conz & Magnani, 2020).

The literature has also developed various typologies of resilience strategies that reflect the multidimensional nature of this construct. A number of studies distinguish proactive strategies such as risk management and redundancy building from reactive strategies such as improvisation and short-term cost control. Other studies group strategies based on the crisis phase, namely pre-crisis, during crisis, and post-crisis, which confirms that resilience is a process that occurs over time, not a single response (Annarelli & Nonino, 2016). In empirical studies, consistent governance and leadership are identified as the main foundations of organizational resilience (Tvedt et al., 2023). Strategic leadership that encourages decentralized decision-making and cross-functional coordination has been shown to improve the speed and quality of responses to disruptions. Trust-based governance structures and stakeholder engagement also strengthen collective problem-solving and facilitate access to critical resources during crises (Hillmann & Guenther, 2021; saad et al., 2021).

Human resource management plays a crucial role in shaping resilience outcomes. Workforce flexibility, continuous training, and a safe psychological climate enable employees to adapt to changing operational conditions and contribute to innovation under pressure (Caligiuri,

2025). Empirical findings show that resilient organizations tend to develop a culture of learning and empower employees, which in turn strengthens long-term absorptive and adaptive capacity (Duchek, 2020). Digital capabilities are an increasingly prominent domain of resilience strategy in the literature. Information systems, data analytics, and digital platforms support real-time monitoring of disruptions and facilitate cross-organizational coordination. In the context of a crisis, digitization has been shown to improve operational continuity through remote working, online transactions, and virtual collaboration, thereby reducing dependence on physical infrastructure (Matteis et al., 2023; saad et al., 2021). Supply chain resilience is also an important focus in business resilience studies. Research emphasizes supplier diversification, localization strategies, and the creation of strategic reserves as key mechanisms for reducing disruption risk. Collaboration and information sharing among supply chain partners also increase collective resilience by improving visibility and responsiveness to shocks, especially in environments characterized by high uncertainty (Annarelli & Nonino, 2016; Hillmann & Guenther, 2021).

Business model innovation is recognized as an important path to organizational resilience. Companies that reconfigure their value propositions, revenue structures, and distribution channels in response to disruptions demonstrate higher levels of survival and recovery. This transformation often involves a shift toward digital platforms, service-based offerings, or hybrid models that reduce dependence on a single market or customer segment (saad et al., 2021). Although the literature shows significant progress, resilience studies remain conceptually and methodologically fragmented. Definitions of resilience vary widely, ranging from operational continuity to strategic transformation, making it difficult to systematically accumulate knowledge (Conz & Magnani, 2020). Measurement approaches also vary, using either perception indicators or financial and operational performance indicators, which limits comparability across studies (Hillmann & Guenther, 2021).

Micro, small, and medium enterprises (MSMEs) occupy a unique position in the resilience literature. Compared to large companies, MSMEs face resource constraints that hinder investment in formal risk management and business continuity systems. However, MSMEs often compensate for these limitations through agility, customer proximity, and informal networks that accelerate adaptation in crisis situations (Matteis et al., 2023; saad et al., 2021). Empirical findings on MSME resilience highlight digital adoption and market diversification as dominant strategies for survival. MSMEs that utilize e-commerce, social media, and digital financial solutions demonstrate stronger business continuity and better access to external support. However, these strategies are rarely placed within an integrated resilience framework that simultaneously covers the disruption phase and the strategy domain (Matteis et al., 2023; saad et al., 2021).

Another limitation relates to the context sensitivity of resilience strategies. Strategies that are effective in dealing with natural disasters may not necessarily be relevant to financial crises or cyber incidents. Many studies still generalize findings without distinguishing between types of disruptions, thereby obscuring contingency effects and reducing practical relevance for decision makers (Hillmann & Guenther, 2021). Overall, the literature suggests that business resilience is a portfolio of strategies encompassing governance, human resources, digital capabilities, supply chain management, and business model innovation (Sadeghi et al., 2024). However, comprehensive syntheses integrating these domains across crisis phases and organizational contexts remain limited. This fragmentation underscores the importance of a systematic approach to consolidating empirical evidence and explaining the relationship between strategy, disruption context, and organizational performance (Duchek, 2020; Hillmann & Guenther, 2021).

METHODS

This study employed a Systematic Literature Review (SLR) to identify, evaluate, and synthesize scholarly evidence on business resilience strategies published between 2016 and 2025. The review process followed the PRISMA 2020 principles to ensure methodological transparency and replicability (Page et al., 2021). The SLR procedure was structured into the following stages.

Research Questions (RQ1– RQ3)

The review was guided by three research questions:

a. RQ1: How is *business resilience* defined and operationalized in organizational studies published between 2016 and 2025?
b. RQ2: What strategies are most frequently reported for developing business resilience, and under which disruption contexts are these strategies applied?
c. RQ3: What contingency factors are most consistently associated with business resilience strategies?

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were defined to ensure relevance and methodological rigor, as presented in Table 1.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Peer-reviewed national and international journal articles discussing strategies/capabilities/practices aimed at strengthening business/organizational/firm resilience	Opinion pieces, editorials, news articles, training materials, or other non-peer-reviewed sources
Publication period: 2016– 2025	Published before 2016
Organizational or firm-level context (private, public, or non-profit) and relevance to uncertainty/disruption	Primary focus is not organizational/business-related (e.g., purely clinical studies or non-managerial technical studies without strategic implications)
Written in Indonesian or English	Languages other than Indonesian or English
Full-text accessible for quality appraisal and data extraction	Full-text unavailable

Literature Search Strategy and PRISMA Flow

The literature search was conducted using multiple academic databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink, and Google Scholar, as well as national databases (e.g., Garuda/SINTA) to capture relevant Indonesian literature. Search strings were developed using Boolean operators. An example of the search query is as follows:

> *(" business resilience" OR " organizational resilience" OR " firm resilience" OR " enterprise resilience") AND (strategy OR capability OR " dynamic capabilities" OR " business continuity" OR " risk management" OR " crisis management" OR " supply chain" OR cyber).*

The search results were recorded and reported in accordance with the PRISMA flow in figure 1, with a target of 15 included studies to ensure depth of synthesis:

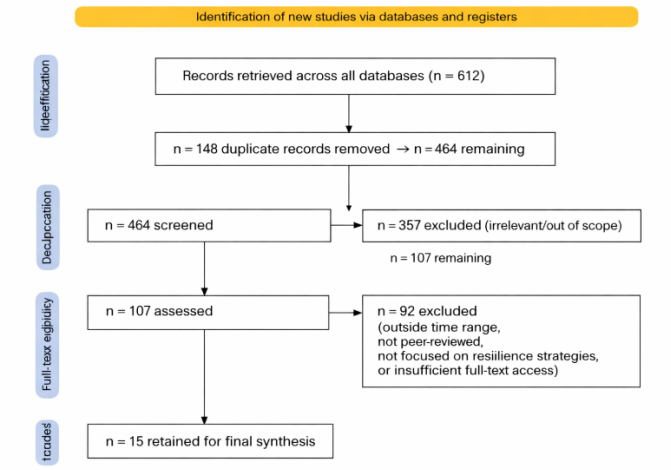

Figure 1. PRISMA Flow Diagram for the Systematic Literature Review

Quality Assessment (QA1– QA3)

Study quality was assessed using three binary indicators scored as Yes (1) or No (0). Articles scoring ≥ 2 were retained for synthesis. The quality assessment instrument is presented in Table 2.

Table 2. Quality Assessment Instrument

Code	QA Question	Score
QA1	Was the article published between 2016 and 2025?	1/0
QA2	Does the article explicitly discuss strategies/capabilities to build business resilience?	1/0
QA3	Does the article provide extractable evidence/arguments (context, mechanisms, or resilience outcomes)?	1/0

The results of the quality appraisal are summarized in Table 3.

Table 3. Quality Assessment Results

No.	Author(s), Year, Journal	Title	QA1	QA2	QA3	Decision
1	Annarelli & Nonino (2016), *Omega*	Strategic and operational management of organizational resilience: Current state of research and future directions	Y	Y	Y	Included
2	Linnenluecke (2017), *International Journal of Management Reviews*	Resilience in business and management research: A review of influential publications and a research agenda	Y	Y	Y	Included
3	Ruiz-Martin et al. (2018), *International Journal of Production Management and Engineering*	What we know and do not know about organizational resilience	Y	Y	Y	Included
4	*Entrepreneurship & Regional Development*	Rethinking organizational resilience and strategic renewal in SMEs	Y	Y	Y	Included
5	Conz & Magnani (2020), *European Management Journal*	A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research	Y	Y	Y	Included
6	Duchek (2020), *Business Research*	Organizational resilience: A capability-based conceptualization	Y	Y	Y	Included
7	Raharjo & Mulyani (2020), *Jurnal Utilitas*	Resiliensi UMKM di masa pandemi Covid-19: Kajian literatur	Y	Y	Y	Included

8	Saad et al. (2021), *Cogent Business & Management*	Conceptualization of SMEs' business resilience: A systematic literature review	Y	Y	Y	Included
9	Hillmann & Guenther (2021), *International Journal of Management Reviews*	Organizational resilience: A valuable construct for management research?	Y	Y	Y	Included
10	Raetze et al. (2021), *Group & Organization Management*	Resilience in organizations: An integrative multilevel review and editorial introduction	Y	Y	Y	Included
11	Klyver & Nielsen (2021), *Journal of Business Venturing Insights*	Which crisis strategies are (expectedly) effective among SMEs during COVID-19?	Y	Y	Y	Included
12	Su & Junge (2023), *European Management Journal*	Unlocking the recipe for organizational resilience: A review and future research directions	Y	Y	Y	Included
13	Galaitsi et al. (2023), *International Journal of Disaster Risk Science*	Business Continuity Management, Operational Resilience, and Organizational Resilience: Commonalities, Distinctions, and Synthesis	Y	Y	Y	Included
14	Steen et al. (2024), *Journal of Contingencies and Crisis Management*	Business continuity and resilience management: A conceptual framework	Y	Y	Y	Included
15	Maulana & Suhaya (2025), *AdBispreneur*	Analisis Ketahanan Usaha pada Usaha Mikro, Kecil, dan Menengah (UMKM) Kuliner di Kabupaten Pangandaran	Y	Y	Y	Included

The literature search and selection process was documented and reported following PRISMA guidelines to ensure transparency and replicability. In brief, the process began with the identification stage, where all records retrieved from the selected databases were compiled. Duplicate entries were then removed to obtain a set of unique records. Next, title and abstract screening was conducted based on topical relevance to business or organizational resilience and alignment with organizational contexts. Subsequently, full-text eligibility assessment ensured compliance with the inclusion criteria (2016– 2025 publication period, indexed journal/proceeding status, explicit relevance to resilience strategies, and full-text availability). As a result, 15 studies were included in the final synthesis, forming the basis for thematic analysis and the mapping of business resilience strategy trends.

Data Extraction and Analysis

Data extraction included the following attributes: author(s) and year, organizational/industry context, type of disruption, definition of resilience, proposed or tested strategies, research methods, and reported outcomes. The analysis was conducted through:

a. descriptive analysis (publication trends by year, sector, region, and methodology), and

b. thematic synthesis to categorize resilience strategies into key themes and phases of resilience.

This approach aligns with established SLR guidelines emphasizing systematic screening and traceable synthesis procedures.

Protocol Validation and Limitations

To ensure consistency, the search protocol and selection criteria were agreed upon prior to screening and were applied consistently throughout the review process. Several limitations are acknowledged. First, the review may be subject to publication bias, as non-peer-reviewed literature was excluded. Second, language restrictions (Indonesian and English only) may have limited the coverage of relevant evidence. Third, the heterogeneity of study designs may constrain generalizability and hinder the feasibility of conducting a quantitative meta-analysis.

RESULT

This study is a Systematic Literature Review (SLR) that aims to develop an evidence based synthesis of business resilience strategies adopted by organizations in an era of uncertainty (2016– 2025). The synthesis is grounded in 15 included articles that passed the PRISMA selection process and the quality assessment criteria (QA1– QA3). Overall, the findings indicate that the last decade of scholarship has progressed from conceptually fragmented discussions toward efforts to consolidate definitions, mechanisms, and multi-level bundles of resilience strategies (Annarelli & Nonino, 2016a; Hillmann & Guenther, 2021; Su & Junge, 2023). This evolution has occurred alongside the growing complexity of risks and the recurrence of disruptions (polycrisis), such that resilience is no longer understood merely as a reactive capacity, but rather as a strategic capability that must be systematically cultivated through organizational governance.

Beyond conceptual consolidation, recent literature also highlights an increasingly strong need to differentiate, while simultaneously connecting, business continuity management (BCM), operational resilience, and organizational resilience within a coherent strategic logic that is actionable for managers (Galaitsi et al., 2023; Steen et al., 2024). Accordingly, the main contribution of this SLR is to develop a resilience strategy synthesis that moves beyond a descriptive inventory of practices by articulating a coherent mechanism based progression. In this progression, business continuity management (BCM) provides the structured foundation for planned preparedness, this foundation enables operational resilience by supporting the stabilization and continuity of critical functions under disruption, and, over time, these capabilities underpin organizational resilience by facilitating strategic adaptation and renewal.

Characteristics of Included Studies and General Trends

Across the 15 included studies, the evidence base is dominated by review and conceptual articles (e.g., SLRs, integrative reviews, conceptual frameworks), complemented by several studies addressing the COVID-19 crisis context and the dynamics of resilience among SMEs/MSMEs (Klyver & Nielsen, 2021; Maulana & Suhaya, 2025). Substantively, three broad streams characterize the development of organizational resilience scholarship during 2016– 2025. Table 4. Summary profile of included studies (n = 15)

Focus group	Primary scope	Studies	Implications for synthesis
Strategic operational reviews	Mapping resilience domains and research directions	Annarelli & Nonino (2016); Linnenluecke (2017); Ruiz-Martín et al. (2018)	Highlights conceptual fragmentation and the need for an integrated framework
Definitions, construct boundaries, and multi-level perspectives	Clarifying definitions and levels of analysis	Hillmann & Guenther (2021); Raetze et al. (2021); Su & Junge (2023)	Establishes resilience as a multi-level construct and calls for consistent operationalization
Resilience capabilities and dynamics	Resilience processes and mechanisms	Conz & Magnani (2020); Duchek (2020)	Reinforces resilience logic as capability-based and underscores learning/renewal
SMEs/MSMEs and crisis contexts	Response and adaptation strategies in small firms	Saad et al. (2021); Klyver & Nielsen (2021); Raharjo & Mulyani (2020); Maulana et al. (2024)	Reveals pragmatic strategies (cashflow, market pivots, digitalization) but potentially context-biased toward pandemic settings
BCM, OR, OrgR integration	Distinctions and synthesis across related concepts	Galaitsi et al. (2023); Steen & Haug (2023)	Forms the novelty basis: sequencing BCM → operational resilience → organizational resilience

First, a stream emphasizing the need to consolidate concepts and clarify construct boundaries so resilience can be more robustly used in management research (Hillmann & Guenther, 2021). Second, a stream conceptualizing resilience as a dynamic process and an evolving capability

over time (Conz & Magnani, 2020a; Duchek, 2020). Third, a stream focusing on aligning resilience with more operational managerial practices such as BCM and operational resilience frameworks (Galaitsi et al., 2023; Steen et al., 2024).

Collectively, these trends suggest that organizational resilience research has moved toward a more integrative understanding, while continuing to face challenges arising from definitional heterogeneity and inconsistent measurement or indicators. This limits cross-study comparability and complicates the identification of strategies that are consistently effective under specific disruption contexts (Hillmann & Guenther, 2021; Ruiz-Martin et al., 2018). Therefore, this SLR positions resilience strategies not as abstract concepts, but as a portfolio of actions that can be mapped by disruption phase and organizational domain.

RQ1: How is Business Resilience Defined and Operationalized (2016– 2025)?

The synthesis shows that definitions of business or organizational resilience in the 2016–2025 literature increasingly converge on capabilities, rather than resilience as an outcome. Two contributions are particularly influential: (1) the argument that resilience remains a " fuzzy" concept requiring clearer boundaries and more rigorous taxonomy (Hillmann & Guenther, 2021), and (2) the capability based conceptualization of resilience as a meta capability comprising anticipation, coping, adaptation (Duchek, 2020). This definitional shift is consequential because it moves the analytical focus from " whether an organization survives" to " which capabilities enable organizations to survive and subsequently develop following disruption."

From a firm level perspective, Conz and Magnani (2020) conceptualize resilience as a dynamic phenomenon that changes over time. Accordingly, resilience strategies are best understood as an evolving portfolio rather than a single intervention. In practical terms, resilience is shaped by the ability to combine defensive actions with offensive actions. This view aligns with the dynamic capabilities lens, emphasizing strategic adjustment in response to environmental change.

Earlier reviews such as Annarelli and Nonino (2016) and Linnenluecke (2017) also locate resilience at the intersection of strategic and operational decision making while acknowledging diversity in research domains and terminological inconsistency. This condition has strengthened calls for studies that explicitly map resilience strategies and clarify how resilience is built, tested, and measured across disruption contexts.

Across the 15 included studies, resilience operationalization can be synthesized into four dominant approaches (Table 5).

Table 5. Synthesis of resilience definitions and operationalizations (RQ1)

Conceptualization of resilience	Operational explanation	Typical indicators/proxies	Supporting studies
(A) Resilience as continuity/robustness	Maintaining critical functions or recovering rapidly	service continuity, recovery time, process stability	Annarelli & Nonino (2016); Galaitsi et al. (2023); Steen & Haug (2023)
(B) Resilience as process capability	Sequential capability: anticipation, coping, and adaptation	preparedness, crisis response, learning, adjustment	Duchek (2020); Su & Junge (2023); Raetze et al. (2021)
(C) Resilience as dynamic capabilities	Reconfiguring resources and strategy amid environmental change	(implicit) sensing, seizing, reconfiguring; strategic pivoting	Conz & Magnani (2020)
(D) Resilience as multi-level and networked construct	Resilience emerges from interactions across individual, team, organization, network levels	Cross level coordination, external ties, governance	Raetze et al. (2021); Su & Junge (2023); Hillmann & Guenther (2021)

Overall, RQ1 indicates that resilience in the 2016– 2025 literature is no longer framed as " survival" alone, but as a phased capability encompassing anticipation, response, adaptation, and renewal. A direct implication is the need for a stable working definition. Based on this synthesis, the

most operational definition for the present study is resilience as a phased capability, traceable through indicators of operational continuity, recovery, and strategic renewal.

RQ2: Which Strategies are Most Frequently Reported, and Under Which Disruption Contexts are They Applied?

The synthesis indicates that resilience strategies rarely operate in isolation. Rather, the literature most commonly presents strategy bundles that span disruption phases (pre-, during, and post-disruption) and organizational domains (governance, operations/supply chain, finance, human resources, digital, and networks). This pattern reinforces the argument that resilience is a systemic capability requiring cross functional coordination.

In fast moving, high magnitude crises such as the COVID-19 pandemic, SME focused studies document combined defensive and offensive responses. Klyver and Nielsen (2021) show that SME crisis strategies are heterogeneous and influenced by firms' initial positions and performance expectations. In such contexts, actions such as cost control, operational adjustments, and directed innovation can generate divergent responses across firms. This supports the view that resilience strategies are contingent and cannot be treated as one-size-fits-all solutions.

Based on the thematic synthesis, resilience strategies can be mapped using a phase × domain matrix (Table 6), directly addressing the second study output, classification of dominant strategies and their contexts.

Table 6. Mapping of business resilience strategies by phase and domain (RQ2)

Strategy domain	Pre-disruption (Anticipate)	During disruption (Absorb/Coping)	Post-disruption (Adapt/Transform)	Key studies
BCM & governance	BIA, identification of critical functions, continuity plans, exercises/simulations, crisis roles	plan activation, response coordination, stakeholder communication	continuous improvement, audit, plan revision	Steen & Haug (2023); Galaitsi et al. (2023)
Operations & processes	standardization of critical processes, minimum redundancy, capacity preparedness	service stabilization, capacity rescheduling, operational switching	process redesign, automation, reliability improvement	Annarelli & Nonino (2016); Galaitsi et al. (2023)
Supply chain & networks	supplier diversification, contingency contracting, visibility	supplier substitution, logistics collaboration, distribution prioritization	network reconfiguration (context-dependent)	Annarelli & Nonino (2016); Su & Junge (2023)
Finance & cashflow	liquidity buffers, basic stress tests, cost control	cash conservation, renegotiation, emergency financing access	portfolio reorientation, selective investment for growth	Saad et al. (2021); Klyver & Nielsen (2021)
HR & leadership	crisis training, role clarity, safety and learning culture	sensemaking, cross-team coordination, psychosocial support	organizational learning, capability renewal, structural change	Duchek (2020); Raetze et al. (2021)
Digital & business model innovation	digital readiness, data governance, technology risk mitigation	channel pivoting (online), resource reallocation, disciplined improvisation	business model innovation, end-to-end digitalization, transformation	Conz & Magnani (2020); Raharjo & Mulyani (2020); Maulana et al. (2024)

Conceptually, Steen and Haug (2023) emphasize BCM as a system that provides planning structures and risk analysis for maintaining operations during disruptive events. Galaitsi et al. (2023) further clarify both the overlaps and distinctions between BCM, operational resilience, and organizational resilience. Synthesizing these contributions underpins the study' s novelty: effective resilience strategies tend to progress from BCM (planned readiness) to operational resilience (stabilizing critical functions) and ultimately to organizational resilience (strategic adaptation and renewal). Thus, resilience is not assessed solely through the ability to endure disruption, but also through the ability to convert disruption into momentum for renewal.

This matrix underscores that resilience strategies are not static checklists, but an evolving sequence of capabilities progressing from preparedness to renewal. In the pre-disruption phase, strategies emphasize readiness, risk assessment, and mapping critical functions. During disruption, priorities shift toward stabilizing core functions, enhancing process flexibility, and enabling rapid response. Post-disruption, more mature strategies emphasize learning, innovation, and organizational transformation. This pattern aligns with resilience as a meta capability (Duchek, 2020) and with calls for more parsimonious construct boundaries that are empirically testable (Hillmann & Guenther, 2021).

The synthesis also indicates that strategy effectiveness is highly dependent on disruption type and organizations' initial capacities. Ruiz-Martín et al. (2018) argue that the literature still struggles to specify " what works under which conditions," particularly when disruption contexts vary across pandemics, economic crises, natural disasters, or supply chain disruptions. For SMEs during COVID-19, for example, strategies perceived as effective may differ between firms that are severely affected and those able to exploit new opportunities driven by shifts in consumer behavior (Klyver & Nielsen, 2021). This reinforces the need to position resilience strategies within a contingency framework rather than treating them as universal bundles.

RQ3: Which Contingency Factors and Outcomes are Most Consistently Associated with Resilience Strategies?

The synthesis identifies several contingency factors that repeatedly appear as prerequisites for the success of resilience strategies. At the organizational level, learning capability, sensemaking, and resource reconfiguration function as the " engine" of adaptation (Conz & Magnani, 2020; Duchek, 2020).

Table 7. Contingency factors and resilience outcomes (RQ3)

Component	Consistent themes	Brief explanation	Supporting studies
Contingency factors	Resource slack & financial capacity	cash buffers/financing access determine the ability to absorb shocks	Saad et al. (2021); Klyver & Nielsen (2021)
	Learning capability & sensemaking	accelerates the shift from coping → adaptation/transformation	Duchek (2020); Raetze et al. (2021)
	Networks/collaboration	external resource access and coordination strengthen resilience	Su & Junge (2023); Annarelli & Nonino (2016)
	BCM formalization & governance	planning structures and exercises improve response quality and continuity	Steen & Haug (2023); Galaitsi et al. (2023)
Outcomes	Continuity & recovery speed	maintaining critical functions and minimizing downtime	Galaitsi et al. (2023); Annarelli & Nonino (2016)
	Performance stability & revenue expectations	certain strategies relate to turnover expectations (SME context)	Klyver & Nielsen (2021)
	Strategic renewal	mature resilience is marked by the ability to bounce forward	Conz & Magnani (2020)

For SMEs, resource constraints make strategies particularly sensitive to financing access, networks, and pivoting capability (Klyver & Nielsen, 2021; Saad et al., 2021). At the multi-level level, interactions among individuals, teams, and organizations shape response and recovery quality;

therefore, resilience requires not only procedures but also strengthened coordination and leadership (Raetze et al., 2021; Su & Junge, 2023).

DISCUSSION

The literature indicates that resilience outcomes are frequently mixed, combining operational indicators and strategic indicators. This is where Hillmann and Guenther's (2021) critique becomes particularly salient: without clear construct boundaries, empirical studies often measure different phenomena under the same label. This SLR addresses the gap through a " strategy chain" novelty that differentiates the function of each layer: BCM is closer to preparedness and procedural indicators; operational resilience is closer to continuity and process stability indicators; and organizational resilience is closer to learning, adaptation, and strategic renewal. This separation enables a more consistent interpretation of resilience outcomes aligned with phases and strategy domains.

Drawing on the thematic results across RQ1– RQ3, the conceptual synthesis can be expressed as the following mechanism based pathway. First, BCM (planned readiness) cultivates planning discipline, critical function identification, exercises, and response coordination (Steen et al., 2024). BCM functions as a foundation by providing structures that enable organizations to identify operational choke points, clarify crisis roles, and prepare response procedures. Second, BCM strengthens operational resilience, namely the capability to maintain and restore critical functions during shocks through redundancy, process flexibility, and operational coordination (Annarelli & Nonino, 2016; Galaitsi et al., 2023). At this stage, resilience is primarily about keeping the organization running under pressure, thereby minimizing disruption impacts on services, core processes, and value chains.

Third, when organizations convert disruption experience into learning and resource reconfiguration, organizational resilience emerges, characterized by anticipation, coping, and adaptation capabilities and the ability to bounce forward (Conz & Magnani, 2020; Duchek, 2020). In other words, mature resilience does not end with recovery; it generates strategic renewal and capability upgrading. Fourth, the effects of resilience strategies are shaped by contingency factors such as resource slack, digital readiness, networks, leadership, and multi-level interactions. Consequently, effective strategies must be interpreted in relation to disruption contexts and organizations' initial capacities (Raetze et al., 2021; Klyver & Nielsen, 2021). This strengthens the argument that resilience cannot be built through procedures alone, but requires integration across formal structures, adaptive capabilities, and organizations' ability to mobilize internal and external resources.

Thus, the novelty of this study lies not merely in combining the terms BCM, operational resilience, and organizational resilience, but in providing a mechanism-based pathway that clarifies which strategies are foundational (BCM), which sustain critical functions (operational resilience), and which transform the organization through adaptation and renewal (organizational resilience).

Theoretically, this SLR makes three key contributions. First, it refines construct boundaries by arguing that business continuity management (BCM) should not be treated as equivalent to organizational resilience; instead, BCM functions as an enabling foundation that strengthens operational resilience and, in turn, supports the development of broader organizational resilience. Second, it advances a mechanism-based explanation of how resilience unfolds by linking planned readiness, operational stability, and strategic renewal into a coherent staged process that can be examined empirically in management research. Third, it conceptualizes resilience as a phased and multi-level capability, highlighting the need to integrate strategies across organizational domains while explicitly accounting for contingency factors that shape effectiveness across contexts.

Practically, organizations may develop a staged resilience roadmap: beginning with BCM development, followed by strengthening the resilience of critical functions, and culminating in adaptive capacity building. For SMEs or MSMEs, strategy bundles should emphasize realistic strengthening of cashflow, network access, and market or digital pivots aligned with resource constraints. Through this staged approach, resilience strategies can be implemented more

measurably and contextually, rather than merely replicating popular practices that may not fit disruption characteristics or organizational capacity.

CONCLUSION

This study developed an evidence based synthesis of business resilience strategies in organizations operating under persistent uncertainty during 2016– 2025 through a PRISMA-guided SLR of 15 included studies. Overall, the findings indicate a clear evolution in the resilience literature: resilience is increasingly conceptualized not as a post-disruption outcome (recovery), but as a capability-based, dynamic, and multi-level construct. The most robust operational framing positions business resilience as a phased capability encompassing anticipation, absorption or coping, adaptation, and transformation or renewal, and observable through indicators of operational continuity, recovery performance, and strategic renewal.

A key contribution of this review is its mechanism-based clarification of construct boundaries. The synthesis suggests that business continuity management (BCM) should not be treated as equivalent to organizational resilience. Instead, the evidence supports a sequenced pathway in which BCM provides planned preparedness and governance discipline, enabling operational resilience through the stabilization and continuity of critical functions under disruption, which subsequently supports organizational resilience via learning, resource reconfiguration, and strategic renewal. This staged logic addresses recurring calls for conceptual clarity by differentiating how outcomes should be interpreted: BCM aligns most closely with preparedness and procedural integrity, operational resilience with continuity and process stability, and organizational resilience with adaptation and renewal.

The review further demonstrates that resilience strategies typically operate as cross-domain bundles spanning governance, operations or supply chain, finance, human capital, and digitalization, and their effectiveness is contingent on disruption type and pre-crisis organizational capacity. Accordingly, organizations may adopt a pragmatic roadmap by strengthening BCM, investing in operational resilience capabilities, and institutionalizing organizational resilience through learning routines and deliberate renewal mechanisms. For SMEs or MSMEs, feasible bundles emphasize cashflow discipline, network access, and scalable digital pivots aligned with resource constraints.

Several limitations should be acknowledged. First, the review applied language restrictions to Indonesian and English publications, which may have led to the omission of relevant studies in other languages. Second, the exclusion of grey literature introduces the possibility of publication bias, as practitioner reports, policy documents, and other non peer-reviewed sources may contain pertinent evidence on resilience practices. Third, the heterogeneity of study designs and measures across the included articles constrains causal inference and reduces the feasibility of conducting a quantitative meta-analysis.

Future research should empirically examine the proposed sequencing that links BCM, operational resilience, and organizational resilience through longitudinal and, where feasible, multi-wave designs. It should also refine measurement models that clearly distinguish preparedness, continuity, and renewal outcomes to strengthen construct validity and comparability across studies. In addition, subsequent studies should investigate contingency configurations, such as resource slack, digital readiness, governance maturity, and ecosystem relationships, across a broader range of disruption types beyond pandemic-centric contexts, including supply chain shocks, climate-related events, and cyber incidents.

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