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ORGANIZATIONAL RESILIENCE CAPABILITIES AND OPERATIONAL CAPABILITIES IN SMES: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

This paper presents a systematic literature review of the relationship between organizational resilience capabilities (ORC) and operational capabilities in small and medium-sized enterprises (SMEs), covering Scopus-indexed research published between 2015 and 2022. Following the PRISMA protocol, 143 records were initially identified, screened according to predefined inclusion and exclusion criteria, and ultimately reduced to 41 peer-reviewed journal articles for full-text analysis. Three research questions guided the synthesis: what operational capabilities have been associated with ORC in SMEs (RQ1); what antecedents, outcomes, and theoretical frameworks explain this relationship (RQ2); and what research gaps persist (RQ3). The review reveals that dynamic capabilities – particularly sensing, seizing, and reconfiguring – are the dominant theoretical lens, appearing in nearly three-quarters of included studies. Supply chain agility, flexibility, and risk management emerge as the most consistently documented operational capabilities, though their relative importance varies by disruption type, firm size, and geographic context. Emerging economies account for over half of empirical contributions, yet comparative studies with developed-economy SMEs remain scarce. A research agenda is proposed around five priority gaps: the moderating role of firm size in capability effectiveness; the dynamics of capability deployment across disruption phases; the decoupling of resilience from financial performance under systemic shocks; the underexplored contribution of social and family capital; and the absence of longitudinal designs capable of capturing capability evolution.

KEYWORDS: Organizational Resilience, Operational Capabilities, Smes, Systematic Literature Review, Dynamic Capabilities, Supply Chain Resilience, PRISMA.

1. INTRODUCTION

The question of how small and medium-sized enterprises survive shocks — financial crises, pandemics, natural disasters, geopolitical disruptions — has moved from the margins of management research to its center. The COVID-19 pandemic alone forced the closure or temporary suspension of operations of an estimated 50% of SMEs globally during 2020 (ILO, 2020), and recovery trajectories have been deeply uneven. Some firms emerged operationally stronger; others did not recover at all. The difference rarely traced back to capital reserves alone. What distinguished the more resilient firms was their capacity to sense the disruption early, reconfigure their operations rapidly, and mobilize relational and knowledge resources that competitors could not replicate. In short, resilience in SMEs appears to be a capability problem before it is a financial one.

Organizational resilience capability (ORC) has been defined as the ability of a firm to anticipate, absorb, and adapt to disruptions in ways that maintain operational continuity and, under favorable conditions, generate competitive advantage from adversity (Lengnick-Hall et al., 2011; Ponomarov & Holcomb, 2009). The construct has attracted growing scholarly attention since the mid-2000s, fueled by supply chain disruption research and, more recently, by the COVID-19 experience. Yet two features of the literature limit its practical usefulness for SME managers and policymakers. First, the theoretical framing remains dominated by the Dynamic Capabilities View (Teece et al., 1997), which was developed primarily from evidence on large, resource-endowed organizations. Whether its predictions hold for small firms — with their thinner resource bases, higher owner-manager concentration, and greater dependence on informal networks — is an empirical question the literature has not resolved. Second, a considerable body of conceptual work proposes frameworks and constructs without specifying which operational capabilities, concretely, a firm needs to build and prioritize before a disruption arrives.

This gap matters because operational capabilities — supply chain agility, flexibility, risk management infrastructure, innovation investment, knowledge management — are where managers can actually intervene. Unlike dynamic capabilities, which require years of organizational learning to develop, operational capabilities can be built incrementally and their effects measured against specific disruption types. Understanding which ones matter most, for which disruption contexts, and subject to what

contingencies, offers more actionable guidance than abstract arguments about capability portfolios.

Several literature reviews have addressed related terrain. Hohenstein et al. (2015) and Tukamuhabwa et al. (2015) mapped the supply chain resilience literature up to 2014. Iftikhar et al. (2021) conducted a meta-analysis of capability-resilience-performance linkages across 55 empirical studies. Kamalahmadi and Parast (2016) reviewed resilience principles in enterprise and supply chain contexts. None of these reviews, however, focuses specifically on SMEs as the unit of analysis, covers the 2015–2022 period in which both the field and its empirical base expanded substantially, or addresses the intersection between organizational resilience capability and the operational capabilities that constitute its building blocks. This review fills that gap.

We conducted a systematic literature review following the PRISMA protocol (Page et al., 2021), searching Scopus for peer-reviewed journal articles published between 2015 and 2022. From an initial pool of 143 records, 41 articles met the eligibility criteria and were included in the synthesis. Three research questions structured the analysis: (RQ1) what operational capabilities have been associated with organizational resilience capability in SMEs? (RQ2) what antecedents, outcomes, and theoretical frameworks explain this relationship? (RQ3) what research gaps remain, and what should a future research agenda prioritize?

The review makes three contributions. Theoretically, it maps the operational capability landscape of ORC research in SMEs and identifies where the Dynamic Capabilities View generates genuine explanatory value and where it falls short. Methodologically, it documents the field's heavy reliance on cross-sectional survey designs and argues that this limits what the accumulated evidence can claim about capability development over time. Practically, it offers a consolidated, evidence-based account of which capabilities matter most under different disruption types, firm size categories, and geographic contexts — information that has direct relevance for SME managers making investment decisions under uncertainty.

The remainder of the paper is organized as follows. Section 2 describes the methodology. Section 3 presents the results organized around the three research questions. Section 4 discusses three cross-cutting themes that the synthesis surfaces. Section 5 draws conclusions and acknowledges limitations.

2. METHODOLOGY

2.1. Research Design and Protocol

This review adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework as its methodological backbone (Page et al., 2021; Moher et al., 2009). PRISMA was chosen because it provides a transparent, reproducible structure for identifying, screening, and synthesizing literature – criteria that are particularly important when the unit of analysis spans multiple disciplines, as is the case here given the intersection of strategic management, operations management, and entrepreneurship that defines the ORC-SME field. The review protocol was defined prior to data collection and covers the search strategy, eligibility criteria, data extraction procedure, and quality appraisal approach.

The research is structured around three questions derived from the state of the literature. The first (RQ1) asks what operational capabilities have been associated with organizational resilience capabilities in SMEs. The second (RQ2) asks what antecedents, outcomes, and theoretical frameworks have been used to explain that relationship. The third (RQ3) asks where the empirical and conceptual gaps lie and what a future research agenda should prioritize. These questions are intentionally broad enough to capture the diversity of methodological approaches and theoretical lenses documented in the literature, while remaining specific enough to generate a coherent synthesis.

2.2. Database And Search Strategy

The literature search was conducted exclusively in Scopus, chosen as the sole database because of its comprehensive coverage of business and management journals, its robust abstract and citation indexing, and its widespread use in management-focused systematic reviews (Donthu et al., 2021). Restricting the search to a single database is consistent with the review's focus on well-indexed, peer-reviewed scholarly output and with the need for a reproducible and auditable protocol.

The search string was constructed to capture the

core conceptual intersection – organizational resilience, firm-level capabilities, and SMEs – while accommodating terminological variation across sub-fields.

Boolean connectors were applied to three conceptual clusters using the TITLE-ABS-KEY field:

(TITLE-ABS-KEY("organizational resilience" OR "firm resilience" OR "supply chain resilience" OR "business resilience" OR "resilience capability") AND TITLE-ABS-KEY("SME*" OR "small and medium" OR "small firm*" OR "family firm*" OR "entrepreneurial firm*" OR "emerging economy firm*") AND TITLE-ABS-KEY("operational capabilit*" OR "dynamic capabilit*" OR "supply chain capabilit*" OR "operational flexibilit*" OR "agility" OR "innovation capabilit*" OR "risk management capabilit*")) AND PUBYEAR > 2014 AND PUBYEAR < 2023 AND DOCTYPE(ar) AND LANGUAGE(english)

The temporal window was set at 2015–2022 for two reasons. The year 2015 marks the period immediately following a major consolidation of the resilience literature in operations management – notably the reviews by Hohenstein et al. (2015) and Tukamuhabwa et al. (2015) – making it a natural starting point for a review that aims to map subsequent theoretical development. The year 2022 represents the most recent full calendar year. Both endpoints are inclusive. The search was restricted to articles published in English and classified as journal articles in Scopus, thereby excluding conference papers, book chapters, editorials, and review articles. This constraint was intentional: the goal was to assess the body of primary empirical and theoretical contributions rather than prior reviews.

2.3. Eligibility Criteria

Inclusion and exclusion criteria were specified at two levels: title and abstract screening, and full-text review. At both stages, two independent reviewers applied the criteria, with disagreements resolved through discussion. The criteria are summarized in Table 1.

Table 1: Eligibility Criteria for Article Inclusion.

Criterion	Inclusion	Exclusion
Database	Scopus only	Web of Science, Google Scholar, etc.
Document type	Peer-reviewed journal articles	Conference papers, book chapters, editorials, grey literature
Language	English	All other languages
Publication period	2015–2022	Before 2015 or after 2022
Thematic focus	Organizational resilience capability (or supply chain resilience) as a core construct; explicit mention of operational or dynamic capabilities	Papers focusing exclusively on community or engineering resilience; resilience without a capability dimension
Organizational unit	Studies with a firm-level unit of analysis; includes SMEs, family firms, or contexts where SMEs can be distinguished	Studies focused exclusively on macroeconomic, national, or purely individual-level resilience

Methodology	Empirical (quantitative, qualitative, mixed methods) and conceptual/theoretical articles with clearly stated contribution	Purely descriptive case narratives without theoretical framing; industry reports
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2.4. Screening Process and PRISMA Flow

The search returned 143 records. After removing 25 records that were indexed as document types other than journal articles (conference proceedings, book reviews, and editorials incorrectly categorized under the TITLE-ABS-KEY search), 118 journal articles remained for title and abstract screening. This step led to the exclusion of 77 articles that failed to meet the thematic relevance criterion: studies that mentioned resilience only tangentially (e.g., as a dependent variable in a broader HRM or marketing

study), studies focused on infrastructure or community resilience with no organizational capability dimension, and studies in sectors with no conceivable SME relevance (e.g., large-scale nuclear plant safety).

The remaining 41 articles were subjected to full-text screening. All 41 met the inclusion criteria at this stage. This high retention rate reflects the precision of the initial search string and the conservative application of the title-and-abstract exclusion criteria. Figure 1 presents the PRISMA flow diagram.

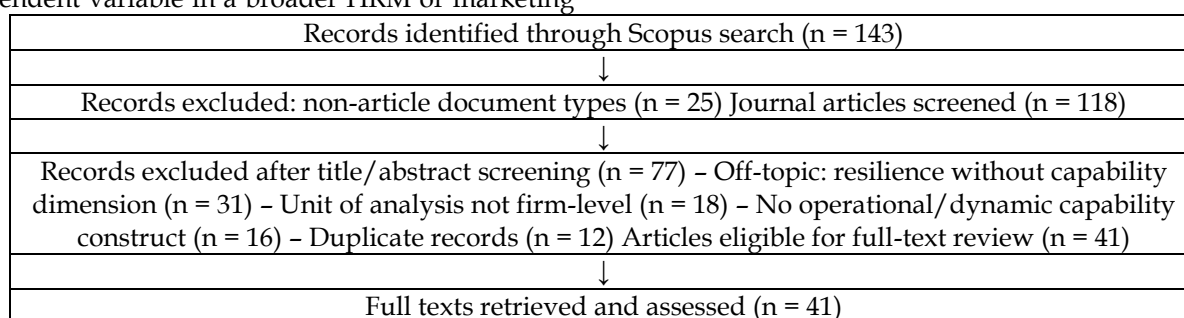


Figure 1: Prisma Flow Diagram.

2.5. Data Extraction and Quality Appraisal

Data were extracted from each included article using a standardized protocol developed specifically for this review. The extraction template covered twelve fields: (1) bibliographic data; (2) country and geographic region; (3) sector and firm size; (4) disruption type analyzed; (5) theoretical framework(s) employed; (6) methodology and sample characteristics; (7) operational capabilities identified; (8) antecedents of organizational resilience capability; (9) reported outcomes; (10) key quantitative findings where available; (11) research gaps identified by the authors; and (12) connections to the three research questions guiding this review. Extraction was conducted independently by two reviewers, with a third reviewing cases where the initial two assessments diverged.

Quality appraisal followed criteria adapted from the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). Empirical quantitative studies were assessed against five criteria: a clearly stated research question, a representative sample, adequate measurement of variables, appropriate statistical methods, and explicit discussion of limitations. Qualitative studies were assessed for clarity of research question, appropriateness of design, rigor of data collection, coherence of analysis, and reflexivity.

Conceptual and theoretical articles were assessed for internal consistency, grounding in the literature, and the clarity of the propositions developed. No articles were excluded on quality grounds; instead, methodological limitations identified in the appraisal informed the discussion of generalizability and the weighting given to specific findings in the synthesis.

2.6. Descriptive Profile of the Included Literature

The 41 included articles span eight years, with a pronounced concentration in 2022 (n=18, 44%), reflecting the surge of disruption-focused research triggered by COVID-19. The years 2020 and 2021 together account for a further 15 articles (37%), while contributions from 2015 to 2019 are comparatively sparse (n=8, 19%). This temporal distribution is itself a finding: the field's engagement with the relationship between operational capabilities and resilience is predominantly a post-2020 phenomenon, which has methodological implications for generalizability to non-pandemic disruption contexts.

In terms of geographic coverage, Asia-Pacific economies dominate, accounting for 14 of the 41 articles (34%), with Indonesia, Pakistan, India, South Korea, and China as the most represented countries. European contributions account for a further 8

articles (20%), primarily from Western and Northern Europe. Studies from the Americas contribute 7 articles (17%), with Brazil providing the largest single national contribution from that region. Africa and the MENA region, despite housing the majority of the world's SMEs, account for only two empirical

contributions — one from Nigeria (Akpan *et al.*, 2021) and one from Lebanon (Fares *et al.*, 2022) — along with two articles grounded in Tunisian family firms (Mzid *et al.*, 2019). Table 2 summarizes the descriptive characteristics of the corpus.

Table 2: Descriptive Profile of Included Articles (N = 41).

Characteristic	Category	n (%)
Publication year	2015–2019	8 (19.5%)
	2020–2021	15 (36.6%)
	2022	18 (43.9%)
Scopus quartile	Q1	17 (41.5%)
	Q2	12 (29.3%)
	Q3	12 (29.3%)
Geographic region	Asia-Pacific (incl. MENA)	18 (43.9%)
	Europe	11 (26.8%)
	Americas	8 (19.5%)
	Sub-Saharan Africa	2 (4.9%)
	Multi-country / conceptual	2 (4.9%)
Research methodology	Quantitative (survey/SEM)	23 (56.1%)
	Qualitative (case/interview)	12 (29.3%)
	Mixed methods	2 (4.9%)
	Conceptual/framework	3 (7.3%)
Dominant theoretical lens	Meta-analysis	1 (2.4%)
	Dynamic Capabilities View	29 (70.7%)
	Resource-Based View / CRBV	7 (17.1%)
	Social Capital Theory	4 (9.8%)
	Other / multiple	10 (24.4%)
Primary disruption context	COVID-19 pandemic	24 (58.5%)
	Natural disasters	5 (12.2%)
	SC disruptions (general)	8 (19.5%)
	Political/economic crises	4 (9.8%)

The methodological mix of the corpus is broadly pluralistic: 23 articles (56%) adopt quantitative designs — predominantly PLS-SEM and CB-SEM — while 12 (29%) rely on qualitative approaches, mainly multiple-case study and semi-structured interview designs. The remaining 6 articles span mixed methods (n=2), conceptual frameworks (n=3), and meta-analysis (n=1). This distribution reflects the field's simultaneous need for theory development, which qualitative and conceptual work enables, and for the kind of statistical rigor that quantitative designs provide when translating conceptual propositions into testable hypotheses.

3. RESULTS

The synthesis is organized around the three research questions. Section 3.1 addresses RQ1 by mapping the operational capabilities most consistently associated with organizational resilience in SMEs. Section 3.2 addresses RQ2 by examining the antecedents, outcomes, and theoretical frameworks that structure this relationship. Section 3.3 addresses RQ3 by consolidating the research gaps identified across the corpus and linking them to the

methodological and contextual limitations of the field.

A preliminary clarification is necessary regarding the boundaries between constructs. The Dynamic Capabilities View (Teece *et al.*, 1997; Teece, 2007) distinguishes between dynamic capabilities — higher-order capacities that modify, integrate, and reconfigure the firm's resource base — and operational or ordinary capabilities, which are the routines and processes through which the firm earns its living on a day-to-day basis. Several studies in the corpus conflate these two levels, treating sensing, seizing, and transforming as operational capabilities alongside agility or risk management. This review maintains the distinction: dynamic capabilities are treated as antecedents of organizational resilience and are discussed in Section 3.2, while the operational capabilities that constitute the proximate mechanisms of resilience are the subject of Section 3.1. Social capital is similarly treated as a relational resource that conditions capability effectiveness rather than as an operational capability in its own right.

3.1. Operational Capabilities Associated with

Organizational Resilience in Smes (RQ1)

Across the 41 included articles, 11 distinct operational capability constructs appear with sufficient frequency and conceptual distinctiveness

to be treated as meaningful categories in the synthesis. Table 3 maps these capabilities to the studies that document them and records the direction and magnitude of effects where quantitative evidence is available.

Table 3: Operational Capabilities Associated with Organizational Resilience in Smes.

Operational Capability	Representative Studies	Evidence Type	Direction / Effect
SC Agility	Hussain & Malik (2022); Sinniah et al. (2022); Shin & Park (2021); Ahmed & Rashidi (2022); Um & Han (2021)	Quantitative	Positive; $\beta = 0.532$ on operational performance (Sinniah et al., 2022); mediates seizing and transforming $\rightarrow$ resilience (Hussain & Malik, 2022); agile strategy generates adaptability ($\beta = 0.484$), lean strategy does not (Ahmed & Rashidi, 2022)
SC Flexibility	Piprani et al. (2022); Ahmed & Rashidi (2022); Sinniah et al. (2022); Sá et al. (2020); Ozanne et al. (2022)	Quantitative + qualitative	Positive; β range 0.300–0.619; not significant under systemic pandemic disruption (Ongkowijoyo et al., 2020); downstream firms substitute it for upstream absence of resilience (Sá et al., 2020)
Risk Management Capability	Ongkowijoyo et al. (2020); Piprani et al. (2020); Um & Han (2021); Moura & Tomei (2021)	Quantitative + mixed	Positive; only significant A-SCM component under severe pandemic disruption (Ongkowijoyo et al., 2020); SC Resilience Capability fully mediates SC risks $\rightarrow$ resilience across sourcing, manufacturing, and delivery risks (Um & Han, 2021)
Innovation Capability (incl. R&D)	Parast (2020); Sabahi & Parast (2020); Su & Linderman (2016); Do et al. (2022)	Quantitative	Positive; R&D mitigates process disruption $\rightarrow$ firm performance ($\beta = -1.204$), supply disruption ($\beta = -0.973$), demand disruption ($\beta = -0.859$); innovation drives performance level, improvement capability drives consistency (Su & Linderman, 2016)
SC Integration	Ozanne et al. (2022); Alvarenga et al. (2022); Piprani et al. (2020); Iftikhar et al. (2021)	Quantitative + meta-analysis	Positive; strongest meta-analytic effect across all SC capabilities ($rc = 0.515$, Iftikhar et al., 2021); internal SC integration has direct effect on resilience; external integration requires mediation through higher-order capability processes (Ozanne et al., 2022)
SC Redundancy	Sá et al. (2020); Iftikhar et al. (2021); Piprani et al. (2020)	Qualitative + meta-analysis	Positive; multi-sourcing across geographically dispersed suppliers compensates for upstream vulnerability in agri-food chains (Sá et al., 2020); safety stocks and backup capacity among most cited resilience elements
SC Alertness	Shin & Park (2021)	Quantitative	Positive; partial mediator of SCLMX $\rightarrow$ SC resilience (bootstrap CI: 0.24–0.82); strongest mediating capability in relational SC contexts; SC flexibility and agility do not mediate this path
SC Visibility	Alvarenga et al. (2022); Um & Han (2021); Sá et al. (2020)	Quantitative + qualitative	Positive but consistently weaker than integration and redundancy; constitutes one dimension of SC Resilience Capability (SRC) construct; absent in low-interdependence chains where individual-node strategies dominate (Sá et al., 2020)
Strategic Preparedness	Gilinsky et al. (2020); Moura & Tomei (2021); Piprani et al. (2020)	Quantitative + mixed	Positive; operationalized as contingency plans, emergency notification systems, mutual aid agreements, and insurance instruments; larger firms perceive greater resilience (Gilinsky et al., 2020); firm age does not predict preparedness level
Operational Knowledge Infrastructure	Audretsch & Belitski (2021); Orlando et al. (2022); Parameswar et al. (2021)	Quantitative	Positive; IT investment and digital tools amplified by resilience (+42.67% on sales); knowledge preparedness mitigates SC disruption impact on cross-border trade (Orlando et al., 2022); high resilience paradoxically reduces returns from inter-organizational collaboration – the lock-in paradox (Audretsch & Belitski, 2021)
Absorptive Capacity	Yuan et al. (2022); Orlando et al. (2022)	Qualitative + quantitative	Positive; operationalized through inter-organizational collaboration routines, IT-enabled knowledge integration, and employee versatility; enables three-stage resilience cycle – anticipation, exploitation of shared resources, competitive positioning (Yuan et al., 2022)

Note. SC = Supply Chain; R&D = Research and Development; A-SCM = Adaptive Supply Chain Management; SRC = SC Resilience Capability; SCLMX = Supply Chain Leader-Member Exchange. Operational Knowledge Infrastructure encompasses IT investment,

digital tools, and knowledge preparedness mechanisms as operationalized in the included studies. Absorptive capacity is classified as an operational capability because both studies in which it appears measure it through process-level mechanisms rather than as a strategic or cultural variable. Dynamic capabilities (sensing, seizing, transforming), social capital, and organizational learning are treated as antecedents of resilience and discussed in Section 3.2.

3.1.1. Agility And Flexibility: The Foundational Layer

Supply chain agility and flexibility are the operational capabilities documented across the broadest range of studies and sectoral contexts in the corpus, making them the most consistently evidenced building blocks of organizational resilience in SMEs. The two constructs are related but distinct. Agility captures a firm's capacity to respond quickly to environmental changes — shortening lead times, adjusting production volumes, rerouting delivery flows — typically in response to demand or supply shocks that develop rapidly. Flexibility is more structural: it refers to the range of operational options a firm can exercise across its supply chain, encompassing product design adaptability, multi-modal logistics, and production reconfiguration capacity.

Sinniah et al. (2022), drawing on 85 Malaysian organizations surveyed during the post-COVID period, found that agility ($\beta = 0.532$, $p < 0.001$) and flexibility ($\beta = 0.300$, $p < 0.001$) were the only resilience dimensions with a significant positive effect on operational performance. Two other dimensions — ability and adaptability — did not reach significance. Notably, firm size did not moderate this result ($\beta = 0.066$, $p = 0.176$): SMEs and large firms showed equal dependence on agility and flexibility for post-disruption performance, which challenges the assumption that resilience capabilities are principally a function of organizational scale. Piprani et al. (2022) corroborate this in a Pakistani large-scale manufacturing context, finding that multi-dimensional supply chain flexibility significantly improves supply chain resilience ($\beta = 0.619$, $p < 0.01$), with customer-oriented and external risks amplifying the relationship.

The conditions under which agility and flexibility fail to generate resilience are as revealing as the conditions under which they succeed. Ongkowijoyo et al. (2020), studying 120 Indonesian manufacturing firms during the pandemic peak, found that neither resource reconfiguration nor supply chain flexibility contributed significantly to firm resilience when the disruption was systemic. Only risk management capability remained significant. This pattern points to a threshold effect: agility and flexibility are effective operational levers under moderate, localized disruption, but when a shock collapses the broader operational environment — closing borders,

shutting logistics networks, eliminating demand — these capabilities have no traction because the system in which they are exercised has itself broken down.

Ahmed and Rashidi (2022) add a further qualification with direct relevance for SME managers. Testing the Triple-A supply chain framework in Pakistan, they find that lean supply chain strategy does not generate adaptability (non-significant path), while agile strategy clearly does ($\beta = 0.484$, $p < 0.001$). The implication is that SMEs pursuing lean operations primarily to reduce costs may be inadvertently trading away the adaptive capacity that resilience requires. A leagile combination — lean for alignment and efficiency, agile for adaptability and responsiveness — produces the strongest overall resilience configuration ($R^2 = 0.532$).

3.1.2. Risk Management Capability: Decisive Under Extreme Disruption

Risk management capability — understood as the firm's capacity to identify, monitor, and respond to supply chain risk through contingency planning and proactive mitigation — occupies a distinctive position in the corpus. Under moderate disruption, it functions as one operational lever among several. Under severe, systemic disruption, it becomes the critical differentiator.

Ongkowijoyo et al. (2020) provide the clearest evidence of this distinction. Testing the Adaptive Supply Chain Management (A-SCM) framework — which comprises risk management, resource reconfiguration, and supply chain flexibility — against data from the Indonesian pandemic lockdown, they find that only risk management generates significant firm resilience. Resource reconfiguration and SC flexibility, both of which show positive effects under normal conditions in the literature, do not reach significance in this context. The explanation offered is straightforward: when disruption is severe enough to disable routine operations, only firms that had invested in contingency planning prior to the shock retain any structured capacity to respond. Reactive operational capabilities cannot compensate for the absence of pre-built risk management infrastructure.

Um and Han (2021) extend this picture by decomposing risk management into a ten-dimension SC Resilience Capability (SRC) construct and showing that SRC fully mediates the relationship between supply chain risks — sourcing,

manufacturing, and delivery – and overall resilience. The indirect paths are consistently stronger than the direct paths across all three risk types, and the effectiveness of seven mitigation strategies varies asymmetrically by risk type: control strategies work best for sourcing risk, speculation and risk-sharing for manufacturing risk, and postponement combined with risk-transfer for delivery risk. The practical implication is that risk management capability is not a generic buffer but a portfolio of specific instruments whose deployment should be calibrated to the risk profile of the firm's supply chain.

3.1.3 Innovation Capability And R&D Investment

Innovation capability, operationalized primarily through R&D investment intensity, constitutes a distinct and empirically well-supported operational mechanism for building resilience to supply chain disruptions. Parast (2020) provides the most precise quantitative evidence from U.S. manufacturing and service firms: R&D investment significantly mitigates the negative effects of process disruption on firm performance ($\beta = -1.204$), supply disruption ($\beta = -0.973$), and demand disruption ($\beta = -0.859$). The effects on supply chain performance follow a different pattern – process disruption ($\beta = -1.85$) and environmental disruption ($\beta = -0.791$) respond to R&D, while demand and supply disruptions do not – suggesting that innovation capability is not a generic absorber of all disruption types but operates through specific process-level and structural mechanisms that vary by disruption source.

Su and Linderman (2016) draw an analytically important distinction between the capabilities required to achieve high performance and those required to sustain it. From survey data on 147 U.S. manufacturing business units, they find that innovation capability and responsiveness drive the level of quality performance, while improvement capability and the sensing of weak signals drive performance consistency over time. Reframed in resilience terms, this suggests that a firm that has achieved high operational performance may not automatically be more resilient: it may need to invest separately in consistency-oriented capabilities – particularly in the organizational attention to early warning signals that characterizes high-reliability organizations. The finding has direct implications for SMEs that concentrate on performance achievement without building the monitoring and improvement infrastructure needed to sustain it through disruption.

Do et al. (2022), in a three-wave longitudinal study of 188 Vietnamese SMEs, confirm that resource-based management initiatives generate resilience through an organizational learning pathway rather than directly, a finding consistent with Parast's (2020) mechanism-specificity argument. Innovation at the organizational level creates the adaptive capacity that then enables resilience across disruption cycles.

3.1.4 SC Integration, Redundancy, And Visibility

A cluster of supply chain structural capabilities – integration, redundancy, and visibility – recurs across the corpus as enabling conditions for operational resilience. Their effects, however, are substantially moderated by the structure of the supply chain in which the firm operates, a nuance that is frequently understated in single-firm or single-sector studies.

SC integration appears in its strongest form in the meta-analysis by Iftikhar et al. (2021), which synthesizes 55 studies with a combined $N = 26,155$ and finds that SC integration is the capability with the strongest overall association with resilience across proactive, reactive, and dynamic resilience dimensions ($rc = 0.515$). Ozanne et al. (2022), from a PLS-SEM study of 419 SMEs in Australia and New Zealand, introduce an important qualification: internal supply chain integration has a direct effect on resilience, while external integration – connecting with customers and supply chain partners – operates only indirectly, through higher-order capability processes. This distinction matters for resource-constrained SMEs, which may need to prioritize internal integration before attempting the more complex and resource-intensive work of external SC integration.

SC redundancy – the maintenance of excess capacity, safety stocks, and alternative supply sources – appears most prominently in qualitative research. Sá et al. (2020), from 41 interviews conducted across two Brazilian agri-food supply chains during the 2014–2015 extreme drought, document that downstream processors and manufacturers who had built multi-sourcing redundancy into their operations were able to compensate for the near-complete absence of resilience capability among upstream farmers. The study generates a proposition that challenges a core assumption of the SCRES literature: supply chain resilience does not depend on all nodes being resilient; it depends on whether the node that can reconfigure resources to control the disruption has

the capacity to do so. In chains with low interdependence, firm-level redundancy substitutes for chain-level collaboration.

SC visibility — real-time awareness of operational conditions and asset status across the supply chain — features as one component of the SC Resilience Capability construct in Um and Han (2021) and as a partial enabler in Alvarenga *et al.* (2022), but its independent contribution to resilience is consistently weaker than that of integration and redundancy. Its absence, documented in Sá *et al.*'s (2020) Brazilian agri-food chains, is treated as a structural vulnerability rather than a manageable deficit, reinforcing the view that visibility requires systemic investment rather than firm-level effort alone.

3.1.5. Strategic Preparedness

Strategic preparedness — understood as the operational implementation of pre-disruption readiness — is classified as an operational capability in this review on the basis of how it is measured in the included studies. The decision to invest in preparedness is strategic; the mechanisms through which preparedness is built are operational: contingency plans, emergency notification systems, mutual aid agreements with supply chain partners, insurance instruments, and scenario-based drills. These are concrete, implementable artifacts that operations managers design and maintain, and their presence or absence at the moment a disruption arrives determines how quickly the firm can activate a response.

Gilinsky *et al.* (2020), drawing on survey data from 81 U.S. wine industry firms following a series of major wildfires and earthquakes in California, find that firm size — measured both by annual production and by number of employees — predicts perceived resilience and preparedness significantly. Larger firms perceive greater resilience, consistent with Parast's (2022) theoretical argument that resource slack amplifies the effectiveness of any given capability investment. The study's most counterintuitive finding, however, is that firm age does not predict preparedness level. Longer-established wine businesses are not better prepared than newer ones, which challenges the intuitive assumption that experience with disruptions accumulates into preparedness over time.

Moura and Tomei (2021), studying four Brazilian organizations during COVID-19, find that the practices most closely associated with fast and effective responses were those embedded in organizational routines before the pandemic: systematic scenario analysis, structured stakeholder

partnerships, disciplined financial reserve management, and established information-sharing channels. Preparedness, in this account, is not an emergency response plan filed in a drawer; it is a set of operational habits that the organization practices continuously and that prove their value when a shock arrives.

3.1.6. Operational Knowledge Infrastructure and Absorptive Capacity

Operational Knowledge Infrastructure and absorptive capacity share a common logic: both concern the firm's capacity to acquire, process, and deploy information and knowledge in ways that sustain operational continuity under uncertainty. The distinction between them is primarily one of scope and mechanism.

Operational Knowledge Infrastructure, as operationalized in the included studies, covers IT investment, digital tools adoption, and the organizational routines that convert knowledge into operational decisions. Audretsch and Belitski (2021), in their longitudinal study of 102 European SMEs, find that managerial knowledge and IT investment are amplified by resilience: the combination of high resilience and strong IT capability generates a net sales uplift of 42.67%. However, they also document a paradox — the lock-in effect — whereby highly resilient SMEs progressively reduce their reliance on inter-organizational collaboration, substituting internal knowledge mobilization for external partnerships. This substitution yields short-term performance gains but may erode the external learning channels through which firms update their knowledge base over longer disruption cycles. Orlando *et al.* (2022) capture a related mechanism at the supply chain level: knowledge preparedness — the accumulated understanding of SC disruption risk patterns — reduces the impact of COVID-19 on cross-border trade performance.

Absorptive capacity, as operationalized in the two studies that include it, functions through three concrete process-level mechanisms rather than as an abstract organizational trait. In Yuan *et al.* (2022), a Chinese sharing economy platform builds absorptive capacity through structured inter-organizational collaboration with technology and hospitality partners, knowledge integration routines that combine external information with internal processes, and a workforce of versatile employees who serve as operational buffers against demand uncertainty. These mechanisms enable a three-stage resilience cycle: anticipating changes, minimizing vulnerability through exploitation of shared

resources, and ultimately achieving competitive positioning. In Orlando et al. (2022), absorptive capacity appears as knowledge preparedness – prior familiarity with disruption risk patterns that reduces the firm's cognitive and operational response time. Both operationalizations are concrete and process-level, justifying the classification of absorptive capacity as an operational rather than strategic construct in this context.

3.1.7. *Sc Alertness*

SC alertness is the operational capability that has received the least independent attention in the corpus, appearing in a single study, yet the evidence available makes a disproportionately strong case for its importance. Where SC visibility concerns the availability of information about the state of the supply chain, alertness concerns the organizational capacity to notice, interpret, and act on that information before it escalates into disruption. Visibility provides the data; alertness is what a firm does with it.

Shin and Park (2021) operationalize SC alertness as the continuous monitoring of macroeconomic shifts, demand fluctuations, and early-warning signals originating both inside and outside the firm's immediate supply chain. In their CB-SEM analysis of 228 Korean suppliers, alertness emerges as a partial mediator between the quality of the buyer-supplier relationship (SCLMX, $\beta = 0.87$) and SC resilience, with a bootstrap confidence interval of 0.24 to 0.82 – the widest and among the most robust mediation effects reported for any capability in the corpus. What makes this finding analytically significant is the comparison set: in the same model, SC flexibility and SC agility – the two capabilities that dominate Sections 3.1.1 through 3.1.4 of this review – do not mediate the SCLMX-resilience relationship at all. In a supply chain organized around strong relational governance, it is not the capacity to move quickly or to reconfigure operations that converts relationship quality into resilience; it is the capacity to notice that something requires attention in the first place.

This result carries a specific implication for SMEs operating as suppliers within larger buyer-led networks – a structural position occupied by a substantial share of manufacturing SMEs globally. Such firms typically have limited capacity to influence the overall architecture of the supply chain in which they operate; they cannot unilaterally build redundancy across the network or impose visibility standards on trading partners. What they can do is invest in their own alertness – in the organizational routines, personnel, and information channels that

allow them to detect shifts in buyer demand, market conditions, or upstream supply risk earlier than their relationship position alone would otherwise allow. Shin and Park's (2021) finding suggests that this investment may generate resilience returns that are at least comparable to, and in their sample greater than, investment in operational flexibility – a capability that is both more commonly emphasized in the literature and considerably more resource-intensive to build.

The evidence base for SC alertness remains the thinnest of any capability discussed in this review, resting on a single study in a single national context. Its inclusion here is therefore better understood as flagging a capability that the corpus has under-examined relative to the strength of the one finding available, rather than as an established pattern. Section 3.3 returns to this point as part of the broader research agenda.

3.2. *Antecedents, Outcomes, And Theoretical Frameworks (RQ2)*

3.2.1. *Antecedents Of Organizational Resilience Capability*

The antecedents of ORC documented in the corpus can be grouped into four broad categories: internal capability configurations, external relational factors, governance and strategic orientation, and environmental context. These categories are not mutually exclusive – many studies document interactions across them – but the grouping is analytically useful for identifying patterns in the literature.

Internal capability configurations are the most extensively studied antecedents. Dynamic capabilities, whether measured at the first-order level (sensing, seizing, transforming) or as composite constructs, appear as antecedents in 29 of the 41 studies. The meta-analysis by Iftikhar et al. (2021), synthesizing 55 empirical studies with a combined sample of $N = 26,155$, found that supply chain capabilities – organizational capability, SC flexibility, and SC integration – all positively influence proactive, reactive, and dynamic resilience, with SC integration showing the strongest overall effect ($rc = 0.515$). R&D investment operates as a specific type of internal capability antecedent, moderating the relationship between disruption and performance by building adaptive capacity through innovation pipelines (Parast, 2020; Sabahi & Parast, 2020).

External relational antecedents encompass supply chain integration, inter-organizational collaboration,

buyer-supplier relationship quality, and leadership quality in the supply chain network. Ozanne et al. (2022) document the differential role of internal versus external social capital, while Shin and Park (2021) demonstrate that SCLMX quality is the most powerful single antecedent of resilience in their sample ($\beta = 0.87$). The implication is that resilience is not solely built from within but is co-produced through the quality of a firm's relational network – a point that sits uncomfortably with the predominantly firm-centric framing of the DCV literature.

Governance and strategic orientation antecedents include CSR engagement (Berger-Douce, 2021; Torres & Augusto, 2021), CEO duality (Torres & Augusto, 2021), and the presence of sustainability practices (Karman & Savanevičienė, 2021). Torres and Augusto's fuzzy-set QCA of 204 publicly listed tourism firms finds that the combination of a CSR committee, high ESG scores, CEO duality, and positive slack resources generates the most robust resilience configuration. Notably, CEO duality only appears in configurations that include CSR engagement, suggesting that governance flexibility requires substantive strategic commitment to function as a resilience enabler. Berger-Douce (2021), in a case study of a French textile SME that converted its production line to manufacture face masks in the early weeks of COVID-19, documents how pre-existing CSR engagement generated the stakeholder network and reputational capital that made rapid resource reconfiguration possible.

Environmental antecedents function primarily as moderators or activators. Environmental turbulence is documented as a driver of dynamic capability development ($\beta = 0.49$ in Hamsal et al., 2022), consistent with Teece's (2007) argument that DCs are most necessary – and most actively developed – in rapidly changing environments. Do et al. (2022) show, in a three-wave longitudinal study of 188 Vietnamese SMEs, that environmental dynamism strengthens the path from resource-based management initiatives through organizational learning to resilience and innovation.

3.2.2. Outcomes Of Organizational Resilience Capability

The outcomes reported in the corpus are concentrated in three clusters: firm performance (financial and operational), competitive advantage, and specific adaptive responses. The majority of quantitative studies report firm or supply chain performance as the primary dependent variable, with resilience treated as an intermediate construct.

The meta-analysis by Iftikhar et al. (2021) is notable for finding that the effect of resilience on non-financial performance ($rc = 0.540$) is stronger than its effect on financial performance – a pattern that aligns with the intuition that resilience enables survival and market position maintenance more directly than it generates financial returns.

A particularly significant outcome-related finding is the decoupling of organizational resilience from financial performance under systemic shocks. Hamsal et al. (2022) found that organizational resilience had no significant effect on hotel performance during the COVID-19 peak in Indonesia ($\beta = 0.03$, $t = 0.12$, not significant), despite dynamic capabilities generating strong resilience ($\beta = 0.90$). The authors interpret this as evidence of a 'survival mode': when the disruption is systemic enough to collapse the market – international airport closures, total tourism collapse, mandatory social distancing – even highly resilient firms cannot translate resilience into financial performance because the enabling conditions for revenue generation no longer exist. Hotels offered rooms as COVID-19 isolation facilities and catering to households simply to cover operational costs, not to generate profit.

This finding is reinforced obliquely by Audretsch and Belitski (2021), who identify a paradox at the other end of the performance cycle. In their longitudinal study of 102 European SMEs, firm resilience amplified the positive effect of managerial skills on sales by 42.67%, but simultaneously reduced the positive effect of inter-organizational collaboration on sales by 1.99%. Highly resilient firms appear to substitute internal resource mobilization for external collaboration, generating a lock-in effect that may limit long-run learning and knowledge acquisition. These two findings together suggest that the resilience-performance relationship is substantially more contingent than the bulk of the literature acknowledges.

Among qualitative contributions, the outcome most frequently documented is what the included studies variously call evolutionary resilience (Fares et al., 2022), adaptive resilience (Yuan et al., 2022), or ecological resilience (Fares et al., 2022). Fares et al.'s taxonomy – distinguishing engineering resilience (return to prior state), ecological resilience (survival at a new equilibrium), and evolutionary resilience (transformation and opportunity capture) – provides the most nuanced outcome framework in the corpus, though it was developed inductively from Lebanese firms navigating multiple simultaneous crises and requires empirical testing in other contexts.

3.2.3. Dominant Theoretical Frameworks

The Dynamic Capabilities View (Teece et al., 1997; Teece, 2007) dominates the theoretical landscape of the corpus to a degree that is noteworthy: it serves as the primary theoretical lens in 29 of the 41 articles (71%). This near-monopoly creates both analytical convenience – a common conceptual vocabulary – and a significant blind spot: theoretical traditions that might offer competing or complementary explanations are systematically underrepresented.

The Resource-Based View (RBV) and its contingent variant (CRBV) appear in 7 studies, most explicitly in Parast (2022), who argues that the RBV's assumption of capability effectiveness across all contexts should be replaced by a contingent framework in which firm size, industry type, and environmental dynamism moderate the relationship between operational capabilities and resilience. This proposition has direct practical relevance for SMEs, which have systematically different resource endowments than the large manufacturing firms that anchor most of the RBV-resilience literature.

Social Capital Theory serves as either a primary or secondary theoretical lens in 9 studies, contributing a relational perspective that the DCV largely neglects. Studies grounded in this tradition (Mzid et al., 2019; Ozanne et al., 2022; Shin & Park, 2021; Martinelli et al., 2018; Berger-Douce, 2021) consistently emphasize that the quality and structure of a firm's network relationships mediate the extent to which internal capabilities translate into resilience outcomes.

A set of less frequently used but theoretically rich frameworks deserve mention. Leader-Member Exchange Theory (Shin & Park, 2021) introduces the governance quality of buyer-supplier relationships as an antecedent of capability effectiveness. The Attention-Based View (Torres & Augusto, 2021) offers a behavioral theory of the firm that explains how governance structures allocate executive attention to social issues, enabling resilience through enhanced legitimacy. The Sustainable Family Business Theory (Mzid et al., 2019) captures the distinctive resource configuration of family-owned SMEs. The Absorptive Capacity framework (Yuan et al., 2022) bridges knowledge management and resilience through a process-based model of learning under uncertainty. And the contingent resource-based view (Parast, 2022) offers the most explicit theoretical challenge to the dominant strand: the argument that the same capability can produce radically different resilience outcomes depending on the structural context in which it is deployed.

3.2.4. The Contingency Question: Firm Size,

Sector, And Geography

One of the most persistent tensions in the corpus is the question of whether the documented relationships between operational capabilities and organizational resilience generalize across firm size, sector, and geographic context. The evidence here is mixed in ways that are theoretically interesting.

On firm size, the evidence is genuinely inconclusive. Parast (2022) argues theoretically that firm size is the most critical contingency in resilience research, because larger firms have access to greater slack resources that amplify the effectiveness of any given operational capability. Gilinsky et al. (2020) confirm this empirically in the U.S. wine industry, where larger firms (by production volume and number of employees) report significantly higher perceived resilience. Yet Sinniah et al. (2022) find that firm size does not moderate the relationship between resilience dimensions and operational performance in their Malaysian sample ($\beta = 0.066$, $p = 0.176$), and that SMEs and large organizations exhibit similar needs for agility and flexibility. Parast's theoretical argument and Sinniah et al.'s empirical finding are not necessarily contradictory – the former concerns capability effectiveness and the latter concern the configuration of capabilities that generate performance – but the discrepancy highlights the need for designs that explicitly model firm size as a moderator rather than a control variable.

On sector, the distribution of empirical evidence in the corpus is heavily skewed toward manufacturing and hospitality, with tourism and agri-food supply chains also well represented. Financial services, technology, and professional services sectors are absent. Given that SMEs in these sectors account for a substantial share of employment and economic output in most economies, the generalizability of the synthesis's conclusions to these contexts is limited.

Geographic context introduces perhaps the most consequential source of heterogeneity in the corpus. The finding that social capital is the most critical resilience capability for Tunisian family SMEs (Mzid et al., 2019) may reflect institutional features of MENA economies – weak formal contract enforcement, high relationship-dependence in business transactions – as much as any universal property of small firm resilience. Similarly, the finding from Nigerian manufacturing (Akpan et al., 2021) that sensing and reconfiguration capabilities generate adaptability and agility extends the DCV's empirical base to a sub-Saharan African context, but the absence of comparison groups and the small sample ($n = 86$ across 11 firms) limits the strength of

inference. The Lebanese 'Armageddon' study (Fares et al., 2022), documenting firms navigating simultaneous economic collapse, a catastrophic port explosion, and a pandemic, provides evidence on capability deployment under extreme compound crises that has no parallel in the developed-economy literature and raises serious questions about whether Western resilience frameworks are applicable in such environments.

3.3. Research Gaps and Future Research Agenda (RQ3)

The research gaps documented in the 41 included studies cluster into five broad areas that together constitute a coherent agenda for future research. These gaps are not merely absences in the coverage of topics; they reflect structural limitations in how the field has conceptualized, measured, and contextualized the relationship between operational capabilities and organizational resilience in SMEs.

3.3.1. The Contingent Effect of Firm Size on Capability Effectiveness

Firm size is acknowledged as a moderator in the theoretical literature (Parast, 2022) but is rarely tested as such empirically. The majority of quantitative studies in the corpus include firm size as a control variable — when they include it at all — rather than as a moderating variable. The implication is that the documented relationships between capabilities and resilience are treated as invariant across small, medium, and large firms, which the theoretical literature explicitly suggests they are not. Future research should design studies with sufficient statistical power to test moderated mediation models that allow firm size to condition the capability-resilience-performance chain. Studies that sample explicitly from micro-enterprises (fewer than 10 employees) alongside medium-sized firms would also add resolution to a size distribution that the current corpus treats as undifferentiated.

3.3.2. Phase-Contingent Capability Deployment

Martinelli et al. (2018) and Fares et al. (2022) both demonstrate, through qualitative designs, that the capabilities most relevant to resilience vary depending on whether the firm is in a pre-disruption, emergency, or recovery phase. No quantitative study in the corpus tests this proposition. The practical significance of phase-contingency is considerable: managers who invest in the wrong capabilities for the phase they are currently navigating may deplete resources without improving resilience. Longitudinal and experience-sampling designs

capable of tracking which capabilities firms activate at different stages of a crisis would provide a methodologically rigorous test of what the qualitative literature suggests.

3.3.3. Resilience-Performance Decoupling Under Systemic Shocks

The finding by Hamsal et al. (2022) that organizational resilience does not generate firm performance under systemic pandemic conditions represents the starkest challenge to the implicit linearity of the resilience → performance pathway that most quantitative studies assume. If resilience is fundamentally a survival mechanism rather than a performance driver when shocks are sufficiently severe, then investment in resilience capabilities requires a different justification and a different set of success metrics than the literature currently provides. Research is needed that explicitly distinguishes the resilience-performance relationship under moderate, severe, and catastrophic disruption conditions — a design requirement that calls for either longitudinal data across disruption cycles or comparative studies across contexts that differ in disruption intensity.

3.3.4. Social And Family Capital as Resilience Mechanisms in Emerging Economy Smes

Social capital — particularly in the form of trust-based networks, family relationships, and community embeddedness — is documented as a critical resilience mechanism for SMEs in emerging economies but is absent from the dominant theoretical framework. The DCV has no natural home for relational mechanisms that do not derive from deliberate strategic investment; they are exogenous to the firm's capability-building logic. Yet the evidence from Tunisia (Mzid et al., 2019), Lebanon (Fares et al., 2022), and Nigeria (Akpan et al., 2021) consistently points to relational and social resources as decisive factors. A theoretical integration that treats social capital as an antecedent or moderator of dynamic capability effectiveness — rather than a separate explanation — would advance both the DCV and the social capital literature and would provide more actionable guidance for policymakers working with family-owned and community-embedded SMEs in the Global South.

3.3.5. The Lock-In Paradox and the Long-Run Cost of Resilience

Audretsch and Belitski (2021) document a finding that deserves more attention than it has received: highly resilient SMEs may reduce their reliance on

inter-organizational collaboration precisely because their resilience allows them to internalize functions that less resilient firms must outsource or partner on. If sustained over time, this substitution could reduce knowledge diversity and external learning – precisely the mechanisms that the absorptive capacity and dynamic capabilities literatures identify as drivers of long-run adaptation. The empirical

evidence for this lock-in effect rests on a single study with a modest sample; replication and extension across sectors, economies, and firm sizes would establish whether the paradox is a generalizable feature of resilience investment or an artifact of the specific European VUCA context in which it was observed.

Table 4: Summary of Key Research Gaps and Future Research Directions.

Gap	Evidence Base in Corpus	Proposed Research Direction	Recommended Design
Firm size as moderator	Parast (2022); Gilinsky et al. (2020) vs. Sinniah et al. (2022)	Test moderated mediation of capability-resilience-performance chain across size categories	Multi-group SEM comparing micro / small / medium subsamples
Phase-contingent capabilities	Martinelli et al. (2018); Fares et al. (2022); Ongkowitzo et al. (2020)	Quantitatively test which capabilities matter at which disruption phase	Longitudinal panel or experience-sampling across pre/during/post disruption
Resilience-performance decoupling	Hamsal et al. (2022); Audretsch & Belitski (2021)	Examine conditions under which resilience does / does not convert to performance	Comparative studies across disruption severity levels; longitudinal designs
Social/family capital integration	Mzid et al. (2019); Fares et al. (2022); Akpan et al. (2021)	Develop integrated models embedding social capital as moderator of DC effectiveness	Mixed-method comparative designs in emerging economies; FSQCA
Lock-in paradox	Audretsch & Belitski (2021)	Replicate and extend the substitution of external collaboration by internal resilience	Multi-country longitudinal studies with network data and collaboration metrics

Note: SC = Supply Chain; DCs = Dynamic Capabilities; fsQCA = Fuzzy-Set Qualitative Comparative Analysis; SEM = Structural Equation Modeling.

4. DISCUSSION

Three cross-cutting themes emerge from the synthesis that are worth discussing in relation to the broader literature on organizational resilience and SME management.

4.1. The Dcv Dominance Problem

The near-total dominance of the Dynamic Capabilities View in this corpus is simultaneously a mark of theoretical maturity – the field has a common conceptual vocabulary – and a potential source of confirmation bias. When 71% of studies adopt the same theoretical lens, they are more likely to find evidence consistent with that lens and less likely to notice the phenomena that the lens cannot see. Social capital mechanisms, family-business-specific resource configurations, institutional embeddedness, and the political dimensions of crisis response are all difficult to accommodate within the DCV framework without stretching it to the point of tautology. The field would benefit from explicit theoretical pluralism in its research designs – not abandoning the DCV, which provides real analytical value, but routinely positioning it alongside competing or complementary frameworks so that boundary conditions can be identified rather than assumed away.

4.2. The Emerging Economy Paradox

More than half of the corpus's empirical contributions come from emerging economies, yet the theoretical frameworks applied to these contexts are almost exclusively developed in, and calibrated against, evidence from advanced industrial economies. The DCV, the RBV, and supply chain resilience frameworks were built on data from U.S. manufacturing, European multinationals, and East Asian industrial clusters – organizational contexts with strong institutional environments, deep capital markets, and access to formal risk management instruments. SMEs in Lebanon, Tunisia, Indonesia, or Nigeria operate in institutional environments where property rights are weaker, information asymmetries are greater, formal insurance mechanisms are thinner, and crisis exposure is more frequent and severe. The assumption that theoretical relationships calibrated in high-income economy contexts will hold in these settings is an empirical question, not a premise.

4.3. The Measurement Problem

A persistent methodological limitation across the quantitative studies in the corpus is the reliance on perceptual, self-report measures of both operational capabilities and resilience outcomes. The modal design is a cross-sectional survey of managers or executives at a single point in time, with both independent and dependent variables measured

through Likert-scale items. This design is vulnerable to common method variance, social desirability bias, and the conflation of capability possession with capability deployment. The few studies that introduce objective measures – Parast (2020) uses R&D investment figures and objective financial performance data; Orlando et al. (2022) use Eurostat trade data – consistently produce findings with different nuance and generalizability than pure survey studies. The field would advance considerably from more creative data collection designs: archival analysis of capability investment prior to known disruptions, combined with performance data from post-disruption periods, would provide a natural experiment structure that avoids the most serious self-report confounds.

5. CONCLUSIONS

This review set out to map the state of research on the relationship between operational capabilities and organizational resilience in SMEs between 2015 and 2022, to characterize the antecedents and outcomes through which this relationship operates, and to identify the gaps that most urgently require attention.

On the first question, the synthesis finds that supply chain agility, flexibility, dynamic capabilities, innovation capability, and risk management capability are the most consistently documented operational capabilities associated with ORC in SMEs. These are not equally effective across all contexts: risk management capability is the only component of adaptive supply chain management that retains significance under pandemic-level disruption; agility and flexibility are the operative capabilities for post-disruption performance recovery; and innovation capability, measured through R&D intensity, is the most powerful mitigator of process disruption specifically.

On the second question, the antecedents most robustly linked to ORC are dynamic capabilities (particularly when operationalized as the sensing-seizing-transforming triad), internal social capital, and specific governance configurations including CSR engagement. The outcomes most consistently reported are competitive advantage, operational performance, and survival – though the resilience-

performance linkage proves more conditional than the literature's dominant framing implies, and the 'survival mode' phenomenon documented in Indonesia suggests that resilience under catastrophic disruption may be entirely decoupled from financial returns.

On the third question, five priority research directions emerge: the moderation of capability effectiveness by firm size; the phase-contingency of capability deployment across disruption cycles; the conditions governing resilience-performance decoupling; the integration of social and family capital mechanisms into mainstream resilience frameworks; and the investigation of the lock-in paradox whereby high resilience substitutes external collaboration.

Two limitations of this review deserve acknowledgment. The restriction to Scopus means that important contributions published in regional journals indexed in other databases may have been missed, particularly those from Latin America and Africa. Second, five articles that met all inclusion criteria at the screening stage could not be retrieved in full text, introducing a small but non-trivial information gap that may have marginally skewed the synthesis. Future reviews should consider multi-database designs and should build in more systematic author contact protocols to address full-text access barriers.

Taken together, the findings of this review suggest that organizational resilience in SMEs is not a stable trait but a dynamic configuration of capabilities whose effectiveness is contingent on disruption type, phase, severity, firm size, relational context, and institutional environment. Managing for resilience therefore requires not a universal capability investment but a context-sensitive portfolio – one that places agility and flexibility at the operational core, anchors them in strong relational networks, and continuously renews its innovation and risk management infrastructure. The field's capacity to offer actionable guidance on how this portfolio should be configured will depend on its willingness to move beyond cross-sectional survey designs and the theoretical comfort of the DCV toward the more demanding – and more informative – territory of longitudinal, multi-level, and comparative research.

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