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RESEARCH ARTICLE

Entrepreneurial resilience in polycrisis: Adaptation via improvizational action, institutional workarounds, and strategic reconfiguration

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Abstract

This study examines how entrepreneurs balance between short-term operational continuity and long-term development amid a polycrisis comprising economic volatility, geopolitical disruption, and regulatory instability. Using survey data from 150 entrepreneurs and four case studies, it develops the Integrated Entrepreneurial Resilience and Growth model, which theorizes resilience through three interlinked mechanisms: improvizational action, institutional workarounds, and strategic reconfiguration. Findings reveal that entrepreneurs employ dual temporal strategies, improvising for immediate survival while planning for future growth. Additionally, ecosystem engagement with accelerators, mentors, and investors enhances resilience by providing resources, knowledge, and legitimacy. The study advances a dynamic and embedded understanding of resilience by linking internal adaptive capacities with external institutional support. It bridges dynamic capabilities and entrepreneurial ecosystem perspectives to explain how entrepreneurs navigate overlapping crises. The study presents a novel framework for resilience under continuous structural disruptions, offering insights for policymakers and program designers seeking to support entrepreneurship in volatile contexts.

Keywords: entrepreneurial resilience; crisis management; polycrisis; strategic adaptation; emerging economies

Introduction

The concept of *polycrisis* has gained increasing traction in academic and policy discourses (Henig & Knight, 2023; Homer-Dixon, Renn, Rockström, Donges & Janzwood, 2022). Unlike isolated or cyclical crises, a polycrisis context is characterized by the convergence of multiple and mutually reinforcing disruptions, such as economic instability, geopolitical conflict, regulatory volatility, and infrastructural breakdowns. These multiple disruptions unfold simultaneously and interact in unpredictable and compounding ways, producing chronic uncertainty and sometimes institutional disengagement (Maalouf, Miklian & Hoelscher, 2025). These conditions generate persistent instability that undermines conventional entrepreneurial planning and challenges the sustainability of ventures, especially in emerging economies where institutional voids/weak legal infrastructures, and fragmented policy frameworks constrain entrepreneurial activity and necessitate reliance on informal mechanisms and social capital (Bruton, Ahlstrom & Obloj, 2008; Mair, Martí & Ventresca, 2012).

In *Türkiye*, the entrepreneurial environment has been increasingly shaped by the convergence of rapid currency depreciation, unpredictable regulatory shifts, and constrained access to international capital. Inflationary pressures have destabilized cost structures and profit margins. At the same time, erratic policy changes, particularly in taxation, trade, and investment regulations, have created uncertainty in strategic decision-making. At the same time, limited foreign capital inflows and heightened geopolitical tensions have compounded risks, narrowing entrepreneurs' opportunities for growth and internationalization. Together, these conditions reflect a polycrisis context where overlapping disruptions undermine entrepreneurial resilience and long-term planning (Yılmazer, 2024).

While the literature on crisis entrepreneurship has expanded in response to singular events such as financial crashes, natural disasters, or the COVID-19 pandemic (e.g., Doern, Williams & Vorley, 2019; Kuckertz et al., 2020), these studies, though insightful, primarily focus on reactive or event-specific strategies, offering limited conceptual tools for understanding the recursive, strategic, and externally engaged forms of adaptation required in sustained polycrisis contexts (Herbane, 2019). The prevailing frameworks tend to assume linear sequences of crisis response, preparedness, impact, recovery, and learning that do not adequately reflect the recursive and compounding nature of contemporary disruptions (Doern et al., 2019). Moreover, these models often overlook the simultaneity of time horizons entrepreneurs must navigate, where short-term survival tactics must be pursued alongside long-term strategic planning. As a result, a critical gap remains in explaining how entrepreneurs simultaneously manage immediate threats and pursue future-oriented growth under conditions of extreme uncertainty. Recent studies have begun to acknowledge this complexity, highlighting the importance of integrated strategies and technological adaptability for enhancing resilience. For instance, Sharma, Kraus, Liguori, Bamel and Chopra (2024) call for rethinking entrepreneurship in terms of long-term ecosystem interdependencies after crisis, while Shore, Tiwari, Tandon and Foropon (2024) highlight the enabling role of digital tools (especially generative AI) in enhancing real-time entrepreneurial responsiveness and long-term viability.

This study addresses this gap by asking: How do entrepreneurs adapt their strategies to pursue short-term viability and long-term development in a polycrisis context? This question is exceptionally fundamental in regions where volatility is structural rather than episodic. A key challenge is the simultaneity of disruption and opportunity. Entrepreneurs are often forced to pivot mid-recovery, confront new shocks before resolving prior ones, and recalibrate strategies in response to shifting institutional signals (Korber & McNaughton, 2018). These patterns require conceptual models of entrepreneurial adaptation that can capture multi-temporal tensions and contextual dynamism.

The study draws from the literature on entrepreneurial resilience and crisis management, extending it to settings where disruptions are persistent and overlapping. Entrepreneurial resilience has traditionally been conceptualized as the capacity to recover from adversity and maintain core functioning (Williams, Gruber, Sutcliffe, Shepherd & Zhao, 2017). However, this framing assumes an eventual return to stability, a condition increasingly rare in polycrisis contexts. To move beyond static notions of resilience, this research incorporates the concept of *antifragility*, which emphasizes the ability of systems to grow stronger through exposure to volatility (Taleb, 2014). This perspective reframes resilience as a process of iterative reconfiguration in which entrepreneurs respond to uncertainty by experimenting with new capabilities and forming adaptive, often provisional, alliances.

Significantly, entrepreneurial responses are increasingly shaped not only by internal capacities but also by interdependent relationships with external ecosystem actors such as accelerators, mentors, investors, and policy intermediaries. These actors play a critical role in both scaffolding entrepreneurial action and amplifying adaptive capacity. Nevertheless, their influence remains underexplored in polycrisis settings.

To capture these dynamics, the present study introduces the Integrated Entrepreneurial Resilience and Growth (IERG) model, grounded in empirical data that span both firm-level strategies and external ecosystem engagement. The IERG model conceptualizes resilience as an emergent outcome of three interrelated mechanisms: improvizational action, institutional workarounds, and strategic reconfiguration, each shaped through continuous interaction with ecosystem actors. The research draws on 150 survey responses and four in-depth case studies from sectors highly exposed to policy volatility, including technology, retail, manufacturing, and fintech. The methodological approach combines thematic coding of qualitative interviews with descriptive analysis of survey responses to identify how entrepreneurs construct resilience (Tashakkori & Teddlie, 2010).

By investigating entrepreneurial behavior in an enduring polycrisis context, this study contributes to the development of a more dynamic understanding of resilience and strategic adaptation. Specifically, it advances theory by (1) articulating how entrepreneurs balance short-term improvization with long-term planning under conditions of compounded uncertainty and (2) demonstrating how sustained ecosystem engagement significantly shapes resilience trajectories. It seeks to inform not only academic theory but also the design of support mechanisms that can enable entrepreneurial survival and growth in the face of prolonged uncertainty. Given the increasing frequency of interconnected disruptions, rethinking resilience as a proactive and externally scaffolded process is not only timely, it is essential.

The remainder of the paper is organized as follows. The 'Literature review' section reviews the relevant literature on entrepreneurial resilience, digital adaptation, and crisis management, establishing the theoretical foundation for the study. The 'Methodology' section presents the methodological design, including case selection criteria, data sources, and analytical procedures. The 'Results' section delivers the empirical findings. The 'Discussion' section discusses the theoretical and practical implications, situating the findings within broader debates on resilience and entrepreneurial strategy. Finally, the 'Conclusion' section concludes the paper by highlighting contributions, limitations, and avenues for future research.

Literature review

Entrepreneurship scholarship has increasingly focused on how firms navigate external shocks, particularly during times of crisis. However, much of this work has been grounded in contexts where disruptions are episodic and temporally bounded. As the global landscape shifts toward enduring, interlocking crises, referred to as polycrisis, there is a growing need to reexamine existing frameworks and theories. This section critically reviews prior research on entrepreneurial responses to the crisis, identifies limitations in current models under polycrisis conditions, and positions this study's theoretical contributions concerning dynamic capabilities, resilience, and ecosystem engagement.

From episodic crises to polycrisis: rethinking entrepreneurial adaptation

Research has long focused on how firms respond to external disruptions, traditionally treating crises as episodic and bounded events such as natural disasters, financial shocks, or political upheavals (Doern et al., 2019). These studies often employ a linear model of preparedness, response, recovery, and learning, presuming eventual stabilization. However, this assumption is increasingly untenable in today's volatile and interconnected world. The concept of *polycrisis*, which involves the simultaneous unfolding of multiple interacting disruptions, necessitates a shift in thinking (Henig & Knight, 2023; Homer-Dixon et al., 2022). In contexts like Türkiye, entrepreneurs contend with converging geopolitical tensions, inflation, regulatory instability, and restricted access to capital, necessitating a deeper understanding of how entrepreneurial adaptation unfolds under enduring uncertainty.

Earlier empirical work provides important conceptual tools but often overlooks the recursive, compounding dynamics that define polycrisis environments. Entrepreneurs operating in such settings do not follow linear cycles of crisis and recovery; instead, they face overlapping disruptions that repeatedly destabilize nascent adaptation efforts, necessitating continuous recalibration of strategies and resources (Maalouf et al., 2025). In such contexts, traditional crisis response models that presume clear temporal boundaries between phases prove insufficient (Rauch & Hulsink, 2023). Entrepreneurs must simultaneously maintain short-term viability and initiate strategic reorientation, blending improvization with long-term planning to remain resilient amid sustained turbulence.

Recent crisis-oriented entrepreneurship literature has often remained anchored in historical contexts where disruptions were viewed as temporary and spatially confined (e.g., Kuckertz et al., 2020).

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The earlier literature suggests that entrepreneurs return to their pre-crisis routines once the disruption subsides (Xu, Wang, Wang & Skare, 2021). However, scholars have increasingly challenged this framing by integrating crisis and resilience perspectives to address ongoing, multi-scalar adversity as today's environment marks a shift toward permanent volatility (Williams et al., 2017). This *new normal* requires different types of entrepreneurial capabilities, strategies, and resources to support sustainable entrepreneurial ecosystems (Volkmann, Fichter, Klofsten & Audretsch, 2021). Entrepreneurs must not only adapt operationally but also formulate responses that are appropriate for the constant disruption from psychological, community-based, and ecosystem resources (Audretsch & Moog, 2022; Grözinger, Wolff, Ruf, Audretsch & Moog, 2023; Muñoz, Naudé, Williams, Williams & Frías, 2020; Stam & van de Ven, 2021). As crisis becomes a structural condition, relying on earlier models rooted in temporally limited crises is insufficient.

Resilience as a dynamic, ecosystem-embedded capability

Improvization emerges as a core mechanism enabling real-time responsiveness in the face of complex uncertainty (Shepherd & Williams, 2014). Yet improvization, while necessary, is not sufficient on its own. A growing body of literature suggests that resilience must also be understood in terms of broader institutional and ecosystem engagements (Anwar, Coviello & Rouziou, 2023; Audretsch & Moog, 2022; Muñoz et al., 2020; Sharma et al., 2024; Stam & van de Ven, 2021). This insight underpins the central proposition of the current study, which is that entrepreneurs must engage in a multi-scalar process of adaptation involving both internal and external actors.

In polycrisis conditions, the traditional definitions of resilience appear narrow. Taleb (2014) has introduced the concept of *antifragility*, in which systems do not simply absorb shocks but become stronger as a result of them. Likewise, crises can become generative spaces for entrepreneurial innovation (e.g., Ratten, 2020). Resilience, in this context, becomes an ongoing and opportunity-oriented process of recalibration rather than a return to a state of stability.

To integrate these perspectives, the present study adopts a multidimensional definition of resilience. It conceptualizes resilience as a layered and processual capability, one that incorporates not only individual grit or firm flexibility but also cognitive reframing, relational capital, and embeddedness in institutional structures. Resilience is increasingly conceptualized as a temporal and dynamic process that is both relationally constructed and structurally embedded within broader organizational and institutional contexts (Anwar et al., 2023; Duchek, 2020). Building on these foundational perspectives, the present study extends the focus to ecosystem-level and interorganizational dynamics, highlighting how entrepreneurs engage with external actors to navigate polycrisis conditions. In crisis-rich environments, survival depends on a dual-path approach to resilience that combines absorptive capacities, such as operational buffers and risk management, with adaptive strategies that involve resource diversification, learning, and agility (Attieh, 2022). Accordingly, resilience should not be viewed as a static attribute of firms but rather as an emergent and coevolutionary trajectory shaped through ongoing interaction with volatile institutional landscapes and multifaceted support systems.

Positioning the study

Although existing entrepreneurial theories such as *effectuation* (Sarasvathy, 2001) and *bricolage* (Baker & Nelson, 2005) provide valuable insights into how entrepreneurs operate under resource constraints, they often focus too narrowly on intra-firm mechanisms. These perspectives typically highlight how entrepreneurs use available means to improvize and create new combinations internally. While instructive, such firm-centric models do not sufficiently account for how external actors, such as accelerators, mentors, investors, and even regulatory institutions, can shape or enable adaptive responses in times of crisis.

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To address this gap, the current study contributes to the literature by proposing a relational and ecosystem-enabled model of resilience. It extends the dynamic capabilities framework (Teece, Peteraf & Leih, 2016) by situating sensing, seizing, and transforming capacities within networks of institutional and social support. Unlike traditional interpretations that confine these capabilities to firm-level routines, this study reveals how dynamic adaptation under polycrisis is heavily conditioned by the quality of ecosystem ties and institutional scaffolding. Technological adaptation, such as the use of generative AI, is insufficient on its own; it must be embedded within supportive institutional and ecosystem frameworks to foster effective entrepreneurial resilience (Shore et al., 2024).

Methodology

This study employs a mixed-methods approach to investigate how entrepreneurs adapt their strategies to pursue both short-term viability and long-term development in a polycrisis context to achieve entrepreneurial resilience. Integrating survey-based quantitative data with qualitative case studies conducted in Türkiye, the research addresses both the breadth and depth of the topic. This design responds to growing scholarly calls for employing mixed-method approaches to capture the layered and evolving nature of entrepreneurial adaptation amid continuous and overlapping disruptions (e.g., Creswell & Plano Clark, 2018; Anwar et al., 2023; Shepherd, Williams, & Patzelt, 2014; Maalouf et al., 2025).

Contextual framing: Türkiye's entrepreneurial ecosystem under polycrisis

This study has an empirical focus on the Turkish entrepreneurial ecosystem during a period characterized by polycrisis. Since 2018, Turkish entrepreneurs have faced a cascade of disruptive challenges, including prolonged economic instability driven by inflation and currency devaluation, heightened political uncertainty due to shifting regulatory frameworks, and the unprecedented global shock of the COVID-19 pandemic. These crises did not unfold in isolation but overlapped and compounded one another, creating an enduring state of systemic volatility that shaped entrepreneurial behavior in unique and complex ways. As such, Türkiye presents a compelling and prototypical setting for examining entrepreneurial resilience under conditions of sustained disruption.

The Turkish entrepreneurial landscape is further characterized by a volatile institutional environment marked by policy unpredictability, limited access to long-term financing, and recurrent macroeconomic instability. Entrepreneurs in regulated sectors, such as fintech and e-commerce, face significant challenges related to sudden regulatory changes and inconsistent enforcement. In parallel, manufacturing firms are subject to ongoing supply chain volatility and trade-related disruptions. These institutional and economic factors create highly fragmented support structures and uneven resource availability across sectors and geographies, demanding context-sensitive resilience strategies from entrepreneurs.

To capture the complexity of this turbulent environment, the research adopted a multimethod design that integrates qualitative and quantitative data sources. The qualitative component included the case studies of four entrepreneurial ventures: a small manufacturing firm, a retail business, a technology startup, and a family-owned manufacturing business. These cases were selected to reflect variation across key dimensions, including firm size, sector, and geographic location (metropolitan centers such as Istanbul and Ankara, as well as emerging entrepreneurial hubs like İzmir and a medium-sized city in Anatolia).

Complementing the qualitative cases, a survey was administered to generate descriptive data on business characteristics, crisis experiences, and coping strategies while also including open-ended items designed to support thematic triangulation with the qualitative cases. This approach enabled the identification of broad empirical trends while grounding them in lived entrepreneurial experiences.

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Table 1. Participant demographics overview

Industry	Firm Size (Employees)	Geographic Location	Number of Participants
Manufacturing	30–300	Istanbul, Bursa	38
Retail	10–150	Ankara, Izmir	32
Technology	20–200	Istanbul	43
Services	5–50	Istanbul, Izmir, Ankara	37
Total			**150**

The inclusion of both structured and narrative responses allowed for fine-grained comparisons across firm types, sectors, and regions.

The rationale for incorporating sectoral and regional diversity across both data sources was to capture the heterogeneity of entrepreneurial responses in a polycrisis context. Entrepreneurs in different industries and regions encountered varying constraints and opportunities shaped by local institutional differences, access to infrastructure, funding channels, and cultural risk norms. For instance, technology startups in Istanbul faced a vastly different institutional landscape compared to manufacturing firms in medium-sized cities or service firms in İzmir. By attending to these variations, the study constructs a more textured and generalizable theory of entrepreneurial resilience and adaptation, reflecting an interpretive, qualitative stance that prioritizes contextual embeddedness and meaning-making in the face of uncertainty.

Sampling and data collection

The quantitative part of the research employed purposive snowball sampling to collect survey data from 150 entrepreneurs across four key sectors (manufacturing, retail, technology, and services) and from varied geographical contexts, including Istanbul, Ankara, İzmir, and Bursa. This variation enabled the study to examine how sectoral and regional dynamics shape entrepreneurial responses to polycrisis. The selected industries were deliberately chosen based on their differentiated exposure to the dynamics of polycrisis. Specifically, manufacturing firms were affected by supply-side disruptions and inflationary pressures; retail ventures confronted erratic consumer demand patterns and the challenges of rapid digital transition; and technology firms faced heightened volatility in capital access and evolving policy uncertainty related to platform governance. This strategic selection ensured variation in crisis exposure mechanisms across sectors, enriching the study's analytical depth. Firm sizes ranged from microenterprises to mid-sized firms (5–300 employees), ensuring heterogeneity in resource capacities and institutional exposure (see Table 1).

For the qualitative part, four firms were selected through convenience sampling based on their demonstrable engagement with overlapping crises characterized by diverse results, including the COVID-19 pandemic, economic instability, and regulatory volatility. These organizations were selected to reflect diverse adaptive responses and institutional entanglements, offering rich, comparative insights into entrepreneurial behavior under sustained duress. These cases were selected to facilitate theoretical replication (Yin, 2018) and represent a cross-section of high-exposure sectors. Semi-structured interviews lasting 60–90 minutes were conducted in person or via secure video platforms. The interview protocol included questions on crisis navigation, technological adaptation, and ecosystem engagement. Interviews were recorded, transcribed verbatim, and supplemented by document analysis as secondary data, also accessed from these firms' archives (e.g., internal strategy reports and grant applications), as well as limited direct observation of the author (Bowen, 2009; Marshall & Rossman, 2016; Rubin & Rubin, 2012).

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Analytical strategy

The study employs an interpretive thematic analysis approach (Braun & Clarke, 2006). The interviews, transcribed verbatim, were analyzed using NVivo 14, which facilitated the extraction of themes, visualization of codes, and data triangulation. Analysis was conducted using Braun and Clarke's (2006) six-phase model, which was subsequently structured using the Gioia methodology to generate first-order codes, second-order themes, and aggregate theoretical dimensions (Gioia, Corley & Hamilton, 2013). Initial codes, such as 'pivoting to online', 'supplier delays', and 'rejecting state aid', evolved into higher-order constructs, including 'improvizational action' and 'institutional workarounds'. This analytical trajectory laid the groundwork for this study.

To ensure methodological rigor, axial coding, and word frequency analysis were also employed to validate emerging themes and establish cross-case analysis. NVivo enabled a traceable connection between microlevel responses and meso-level ecosystem interactions, making it suitable for capturing the layered complexity of resilience mechanisms under conditions of polycrisis.

Survey-cases ıntegration logic

The survey instrument consisted of four thematic sections: financial management, operational flexibility, technology use, and strategic foresight. It combined Likert-scale questions, binary responses, and open-ended prompts to allow both structured and narrative input. Descriptive statistical techniques were applied to closed responses. At the same time, open-ended items were coded thematically and cross-validated with insights from the qualitative case data.

Triangulation occurred at three levels: (1) between survey results and interview findings, (2) across sectors and geographies, and (3) between case narratives and document evidence. This integrative strategy enhanced both internal validity and conceptual generalizability to similar contexts. By explicitly connecting survey patterns with qualitative mechanisms, the study is grounded in both empirical variation and theoretical abstraction.

Results

Survey findings

This section presents findings from a structured survey of 150 entrepreneurs operating in Türkiye during a period marked by overlapping disruptions, including the COVID-19 pandemic, persistent inflation, currency devaluation, and regulatory uncertainty. The descriptive statistics provide a snapshot of how ventures navigated these turbulent conditions, structured around three core dimensions: short-term survival strategies, long-term growth orientations, and engagement with institutional support mechanisms (see Table 2).

In terms of short-term survival, entrepreneurs demonstrated a high degree of responsiveness to immediate disruptions. Operational flexibility was the most widely adopted measure (mean $= 4.1$; SD $= 0.9$), reflecting adjustments in workforce management, supply chain operations, and production models. Technology adoption (mean $= 3.9$; SD $= 1.0$) also ranked highly, underscoring the central role of digital tools in ensuring business continuity. Cost-cutting measures, including reductions in payroll and overheads, showed a consistent pattern (mean $= 3.8$; SD $= 0.8$). Alternative financing exhibited greater variability (mean $= 3.2$; SD $= 1.1$), indicating uneven access to credit and funding channels, with some entrepreneurs relying on formal loans and others resorting to informal sources of funding.

In the domain of long-term growth strategies, strategic planning recorded the highest mean score (4.2; SD $= 0.7$), indicating widespread recognition of the importance of forward-looking decision-making in the face of uncertainty. Building competitive advantage also scored prominently (mean $= 4.0$; SD $= 0.8$), suggesting that many entrepreneurs sought to differentiate through branding, quality, or niche targeting. Investment in R&D had a moderately high mean (3.5; SD $= 1.2$),

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Table 2. Descriptive statistics of key variables

Variable	Mean	Median	St. Dev.	Min	Max	Freq. (*N*)
Short-term survival strategies						
Cost-cutting measures	3.8	4	0.8	1	5	150
Alternative financing	3.2	3	1.1	1	5	150
Operational flexibility	4.1	4	0.9	2	5	150
Technology adoption	3.9	4	1.0	1	5	150
Long-term growth strategies						
Strategic planning	4.2	4	0.7	2	5	150
Investment in R&D	3.5	3	1.2	1	5	150
Building competitive advantage	4.0	4	0.8	2	5	150
Engagement with institutional support mechanisms						
Strategic partnerships	3.2	3	1.2	1	5	150
External institutional support	3.1	3	1.1	1	5	150
Community/peer support	3.6	4	0.9	2	5	150
Engagement with accelerators/incubators	2.8	3	1.3	1	5	150
Entrepreneurial characteristics						
Number of employees	45.7	30	60.5	5	300	150
Annual revenue (in million USD)	2.6	1.5	3.2	0.1	15	150
Years in operation	8.3	7	5.2	1	25	150

but its wider standard deviation indicates heterogeneity in resource commitment and innovation orientation across the sample.

The third domain, engagement with institutional support mechanisms, reveals differentiated patterns of reliance and access. Community and peer support – such as participation in industry associations, informal mentoring, and mutual aid groups – emerged as the most significant form of external engagement (mean = 3.6; SD = 0.9), particularly among entrepreneurs outside major metropolitan areas. Strategic partnerships (mean = 3.2; SD = 1.2) were used as a mechanism to share resources and reduce exposure, but adoption was uneven. External institutional support, such as public grants or advisory services, had a similar mean (3.1; SD = 1.1), reflecting structural barriers to access and a common perception of bureaucratic inefficiencies. Finally, engagement with accelerators or incubators showed the lowest mean across this category (2.8; SD = 1.3), indicating the underutilization or limited reach of formal ecosystem infrastructures despite their growing presence.

Entrepreneurial characteristics within the sample reveal a diverse set of ventures, with firm size ranging from 5 to 300 employees (mean = 45.7) and annual revenues between $0.1 million and $15 million (mean = $2.6 million). The average firm age was 8.3 years, spanning newly founded startups to more established small and medium-sized enterprises.

The survey findings illustrate a heterogeneous entrepreneurial landscape where immediate adaptation is often coupled with proactive strategic behaviors. Notably, while digital tools and flexible operations underpin short-term survival, long-term success appears tied to institutional connectivity and planning capabilities. However, structural limitations in ecosystem support and disparities in institutional access suggest that many entrepreneurs rely on informal networks and community scaffolding. This diversity in adaptation sets the foundation for a more nuanced exploration of resilience dynamics in the subsequent case analysis.

Case studies

This subsection presents four case studies that constitute the study's qualitative dataset, each illustrating the complexities of entrepreneurial response to continuous disruption. Each case is reported around four core dimensions: (1) background and industry context, (2) short-term survival strategies, (3) long-term adaptive efforts, and (4) theoretical relevance for the study.

Case Study 1: a small manufacturing firm

This case centers on a small, family-run textile manufacturing firm based in the industrial outskirts of Istanbul, established in the early 2000s by two engineers: one with expertise in mechanical engineering and product design and the other in industrial engineering and operations management. The firm initially specialized in upholstery and technic fabrics for manufacturers. When the COVID-19 pandemic struck, the firm experienced a sharp decline in orders from its primary clients, resulting in a severe contraction of revenue and idle capacity.

Faced with a collapse in demand and increasing fixed costs, the cofounders responded by rapidly pivoting their operations toward the production of personal protective equipment (PPE), including face masks, gowns, and face shields, using government support for business development. This transition involved the repurposing of textile machinery, emergency procurement of new input materials, and staff retraining under health protocols. The transformation unfolded within weeks. As one cofounder recalled, 'We saw the crisis unfolding and knew we had to do something, anything, to stay afloat. We had machines idle, so we retooled them for mask production in less than two weeks.'

The short-term outcome of this strategic pivot was a stabilization of cash flow, the retention of most of the workforce, and the establishment of new sales channels with hospitals, municipalities, and even international emergency buyers. A critical element in enabling this shift was the timely acquisition of a government grant aimed at supporting pandemic-response production. As the other cofounder noted, 'It wasn't just the money; it was the speed. We didn't wait for perfect conditions; we acted with what we had.'

Over the longer term, the firm permanently integrated PPE into its product line and began exploring new markets for medical textiles. They launched quality certification processes to comply with export regulations. They initiated research and development for improved PPE designs. The entrepreneurs saw the disruption as a window of opportunity: 'We're not just bouncing back. We're growing sideways,' said one founder, referring to their efforts to create a diversified product portfolio beyond pandemic-related products.

This case exemplifies improvizational action (repurposing machinery for new functions), institutional workarounds (leveraging policy support for strategic redirection), and transformative identity work (repositioning the firm from a niche supplier to a diversified producer in health-related manufacturing). The firm's approach aimed at striking a balance between reactive operational agility and forward-looking strategic planning under volatile conditions.

Case Study 2: a retail business

This case examines the adaptive journey of a mid-sized fashion retailer operating multiple brick-and-mortar stores, primarily in Ankara and Istanbul. The business was founded by two entrepreneurs: one, a designer with experience in merchandising, and the other, a marketing expert with a background in e-commerce. Prior to the pandemic, the firm had a loyal in-store customer base and seasonal product cycles aligned with high-touch boutique shopping experiences.

When the pandemic forced the closure of all stores, the business lost nearly all of its revenue within weeks. The founders responded with urgency, initiating a rapid pivot. 'There was panic, but also clarity', the marketing cofounder recounted. 'If we didn't go online immediately, we wouldn't survive the month.' Within 10 days, they launched a website with a significant e-commerce platform integration. They allocated the marketing budget primarily toward online visibility, with a strong focus on

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social media and influencer partnerships. 'Our existing Instagram account became our new storefront', explained the design cofounder, describing how customer engagement was preserved through digital storytelling and curated product drops.

To ensure operational continuity, the founders negotiated temporary rent reductions with landlords and reallocated staff roles to support digital sales. Customer service representatives were retrained to provide online customer service and live chat support. At the same time, inventory was moved to a local fulfillment center for efficient online dispatch. 'We didn't lay people off; we moved them online, and customer service became emailing or live chat,' one founder emphasized.

As the crisis unfolded, the entrepreneurs made additional strategic moves to support long-term growth. They partnered with a third-party logistics provider, implemented inventory management software, and utilized sales data to inform product development and seasonal planning. 'Now we know what sells before it hits the shelves,' the cofounder added, illustrating a shift to data-driven merchandising.

This case embodies the importance of ecosystem engagement (with logistics firms and tech vendors), operational agility, and strategic reconfiguration and improvization. By leveraging external networks and digital platforms, the entrepreneurs transformed a short-term reaction into a sustainable growth trajectory. As one cofounder summarized, 'Crisis made us digital-first, but we stayed that way by design, not by accident.'

Case Study 3: a technology startup

This case involves a software startup based in İzmir with remote developers across various cities in Türkiye. The firm develops workforce team collaboration tools for distributed work environments. The firm was founded by two recent university graduates: one, a computer engineer with some experience in user interface design and network security, and the other, a business expert with experience in product development. Their product was still in beta when the COVID-19 pandemic erupted.

Unlike most firms that faced collapse, the firm found itself in a position of unexpected opportunity. The shift to remote work created an unexpected demand for digital collaboration tools. 'We were building for the future, and suddenly, the future arrived,' said the technical cofounder. In response, they implemented a freemium model to maximize adoption and capture user feedback on a large scale. 'User data became our compass,' he continued. 'Every new feature was based on what people were struggling with that week.'

To accommodate the influx of users and refine the product, the team sought and secured seed-stage capital from a group of angel investors under tightened global capital conditions. 'Investors told us they weren't funding new projects, but our traction changed their minds,' the business expert cofounder reflected. The startup expanded server capacity and streamlined onboarding for enterprise clients. It scaled modular features that addressed specific use cases in education for elementary and high schools, as well as hybrid workers.

Positioning for long-term growth, the founders initiated discussions with startup accelerators in Izmir and Istanbul. They developed a GDPR-compliant architecture to prepare for entry into the European (EU) market. 'We saw every short-term fix as a prototype for long-term architecture,' said one technical expert, referring to the startup's disciplined approach to innovation.

The case represents a clear illustration of improvizational action, institutional workarounds, and strategic reconfiguration in the face of continuous disruption. As one cofounder emphasized, 'We didn't just grow. We grew strategically, knowing this crisis might not be the last.'

Case Study 4: a family-owned manufacturing business

Case Study 4 concerns a ceramic tile manufacturer located near a midsize city in Anatolia. A second-generation family firm with deep ties to the domestic construction industry, the company faced decreasing demand and raw material bottlenecks during the pandemic. However, its leadership, with complementary backgrounds in mechanical engineering and international business, decided to pursue an export-driven repositioning.

Drawing on the firm's ISO certifications and commercial reputation, they explored expansion into Middle Eastern and Eastern EU markets. 'Our strength was always trust. Builders knew our name,' said the CEO. 'But that name had to mean something outside Türkiye, too.' The firm temporarily scaled back domestic operations to reallocate resources toward new export logistics. A crisis response unit was established internally to adapt delivery timelines, streamline partner onboarding, and manage foreign regulatory compliance for exporting. 'Our staff learned more in six months than they did in six years,' the COO noted. To enhance its online presence, the company collaborated with a firm located at a university technopark to develop a website for exporting that enabled digital ordering and seamless client communication across different time zones. Simultaneously, they invested in complying with EU green standards. 'Sustainability used to be a buzzword. Now it's a requirement,' remarked the operations lead.

The case illustrates how a legacy firm leveraged institutional transformation, ecosystem-based innovation, and strategic internationalization as key drivers of resilience. As the CEO put it, 'We didn't just shift markets; we shifted mindsets.' This transformation reflects resilience as an ongoing process supported by entrepreneurial adaptation with external engagement.

Case study thematic structure

This section examines how entrepreneurs in the Turkish context have responded to polycrisis through iterative and layered adaptation. Using a Gioia-informed analytical framework and NVivo-supported coding, three central thematic domains emerged from the case data: improvizational action for survival, institutional workarounds and ecosystem leverage, and transformative strategic planning under crisis. These findings articulate the mechanisms of the IERG model, demonstrating how entrepreneurs adapt to continuous disruptions by dynamically integrating short-term resilience with long-term orientation (see Table 3).

Cross-Case Comparative Analysis

This section synthesizes key patterns of entrepreneurial adaptation identified across the four case studies, focusing on how firms in distinct sectors adapted to overlapping disruptions through digitally supported strategies, ecosystem leverage, and strategic foresight. The analysis foregrounds three mechanisms: improvizational action, institutional workarounds, and transformative planning. It illustrates their expression across different industrial logics. Table 4 presents a structured summary of the cases, highlighting sector-specific adaptations and shared strategic orientations.

Improvizational Action as a Foundational Response

Across all four cases, improvizational action surfaced as the entrepreneurs' immediate response to crisis-induced disruption, marking the entry point into broader adaptive trajectories. Rather than relying on premeditated digital transformation plans, each firm acted swiftly to repurpose existing technologies and workflows in ways that enabled continuity under pressure. This improvizational logic, triggered by urgent operational demands and constrained by uncertainty, varied in form but shared a common function: creating a provisional bridge between crisis and continuity.

In the textile manufacturing case, improvizational action involved repurposing analog weaving machinery for PPE production lines while developing an ad hoc digital interface to process urgent hospital orders. The retail entrepreneur rapidly launched an online storefront in less than 2 weeks, integrating off-the-shelf e-commerce tools and establishing basic delivery capabilities. The technology startup introduced new features to its platform based on real-time user feedback, pivoting quickly to address emerging needs in the remote work market. Meanwhile, the ceramics firm co-developed a digital export portal with a university lab, enabling immediate outreach to international buyers despite travel restrictions and the disruption of trade shows.

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Table 3. Emergent themes and dimensions

1st-Order Concepts	2nd-Order Themes	Aggregate Dimensions
'We had to move all our operations online overnight.'	Digital migration and tool improvization	**Improvizational action**
'Zoom and WhatsApp became our office.'		
'Customers now expect everything digital.'		
'We built new workflows from scratch on Slack.'	Resource-constrained operational pivots	
'We set up remote coordination with zero budget.'		
'Reorganized deliveries with WhatsApp groups'		
'Accelerators weren't accessible, so we relied on old university friends.'	Informal and personal ecosystem ties	**Institutional workarounds**
'We got informal advice from a retired regulator.'		
'Banks knew us, so we bypassed the queue.'		
'We avoided government channels and went through associations.'	Peripheral institutional navigation	
'Mentorship came from a diaspora network.'		
'Support came via backchannels, not programs.'		
'We redefined our 5-year roadmap during the pandemic.'	Strategic foresight under disruption	**Strategic reconfiguration**
'The crisis forced us to think long-term.'		
'We used downtime to develop new product lines.'		
'We invested in digital logistics to prepare for the next crisis.'	Visionary repositioning amid uncertainty	
'We saw this as a chance to reposition.'		
'Uncertainty became part of our planning model.'		

These responses were neither thoroughly planned nor resource-intensive. Instead, they reflected a pragmatic willingness to act in the face of ambiguity. As one founder explained, 'We had to switch everything online. There was no time to analyze. We need to execute.' Others referred to 'the quickest route to revenue' or 'hacking supply chains', phrases that capture the urgency and makeshift nature of these early moves. Improvization here functioned not as a deviation from strategy but as an emergent form of strategy itself, crafted in situ and enabled by digital tools, however rudimentary.

At the analytical level, this theme clustered around second-order constructs such as digital pivoting, rapid product reconfiguration, and the reimagining of service delivery. These actions were not

Table 4. Comparison of case studies

Case Study	Case Study 1: Small Manuf. Firm	Case Study 2: Retail Business	Case Study 3: Technology Startup	Case Study 4: Manufacturing Business
Sector	Textile	Fashion Retail	Collaboration software	Ceramic tile manufacturing
Location	Istanbul	Ankara and Istanbul	Izmir and a geographically dispersed team	Near a midsize city in Anatolia
Short-Term Adaptation	Repurposed weaving machines for PPE; government support for business development	Launched e-commerce store in 10 days; renegotiated rent and staff scheduling	Secured VC seed funding; introduced freemium model to boost adoption	Deferred payments; formed crisis unit to redirect logistics and preserve liquidity
Long-Term Strategic Shift	Integrated PPE line into core business; initiated quality certifications for export	Logistics revamp; integrated marketplaces; used data to guide design	Expanded to the education market; GDPR compliance for EU entry	Launched digital export; invested in sustainable production
Improvizational action	Reconfigured machinery for new production line	Built digital store and logistics within 2 weeks	Product pivot and user-data-driven design	Co-developed export platform with a startup
Institutional Workarounds	Utilized pandemic grant program	Partnered with fulfillment and logistics vendors	Leveraged investor support amid capital crunch	Used brand legitimacy for export repositioning
Strategic Reconfiguration	Expanded into medical textiles and export certification	Modular digital logistics and customer engagement systems	Modular innovation and global compliance readiness	Global repositioning and eco-efficiency investments

framed by traditional business planning. However, they were instead informed by entrepreneurs' digital familiarity, prior experiential knowledge, and immediate situational cues. These actions exemplify *Improvizational action*, the capacity to rapidly recombine resources and technologies for immediate operational viability.

Quantitative results from the survey substantiate these patterns of improvizational response. High mean scores for operational flexibility (4.1) and technology adoption (3.9) indicate that many entrepreneurs engaged in rapid, often makeshift actions to maintain operational continuity during overlapping crises. These figures suggest that improvization was not confined to a few outlier cases but reflected a broader behavioral pattern among entrepreneurial ventures in Türkiye. The relatively high adoption of off-the-shelf digital tools, restructuring of internal workflows, and shifts in delivery mechanisms mirror the case-based accounts of provisional adaptation. Thus, these findings confirm that improvizational action served as a widespread and immediate mechanism of resilience, catalyzing the transition from short-term coping to more strategic reconfiguration.

Theoretically, this domain extends the dynamic capabilities perspective (Teece, 2007), not by emphasizing deliberate sensing and reconfiguration over time but by demonstrating how high-stakes improvization under duress can initiate adaptive momentum. Rather than being a marginal or reactive maneuver, improvizational action becomes foundational, setting in motion new trajectories of strategic reconfiguration, market repositioning, and institutional engagement that unfold over the longer term.

Institutional Workarounds and Ecosystem Engagement

Across the four cases, entrepreneurs did not passively rely on institutional support; instead, they actively adapted, repurposed, and supplemented these resources to create new opportunity pathways amid the crisis. This adaptive engagement with policy frameworks, funding mechanisms, and ecosystem actors emerged as a second foundational domain of entrepreneurial resilience. Entrepreneurs operated as institutional negotiators, leveraging, bending, and, in some cases, bypassing formal structures to ensure continuity and growth.

In the textile manufacturing case, the founder retrofitted production lines to manufacture PPE while concurrently securing a public pandemic response grant. This dual action exemplified a tactical alignment of internal pivots with external policy opportunities. The retail entrepreneur, in contrast, built a distributed logistics model by forging partnerships with private delivery firms and digital marketers, bypassing broken supply chains through market-based ecosystem alliances. Similarly, the tech startup secured crucial venture funding not through formal programs but via a personal relationship with a former investor, highlighting how informal ties can substitute for institutional scaffolding. The family-run ceramics manufacturer, facing stalled exports, revived dormant trade credentials and expedited documentation through long-standing connections in state trade agencies, converting bureaucratic inertia into navigable terrain through personal diplomacy.

These workarounds, far from marginal, were central to each firm's adaptive response. Entrepreneurs consistently used informal channels and social capital to bypass institutional rigidity. This pattern was reflected in interview codes such as 'I called a friend in government,' 'Nothing formal, but they helped,' and 'We're not in any program. They just liked our idea.' These expressions refer to a form of institutional entrepreneurship that is enacted through relational networks rather than adherence to established policies.

Second-order themes such as workaround financing, informal alliances, and peripheral ecosystem mobilization crystallized from the data. For instance, the startup's founder described their early-stage fundraising as a result of 'relational capital, not institutional support'. At the same time, the manufacturing entrepreneur emphasized that 'the grant wasn't advertised. We heard about it from another founder we trust.' Such episodes highlight the importance of weak ties, community knowledge, and institutional familiarity in navigating complex and interconnected crisis environments.

Quantitative findings from the survey dataset corroborate this pattern. While community and peer support mechanisms received the highest average engagement (mean = 3.6), indicating the centrality of informal and relational scaffolding, formal institutional channels were less utilized and perceived as less responsive. Strategic partnerships (mean = 3.2) and external institutional support (mean = 3.1) displayed moderate uptake but with wide variation, suggesting that access to these mechanisms was uneven and often filtered through prior relationships or informal referrals. Notably, accelerators and incubators had the lowest average engagement score (mean = 2.8) despite their formal role in ecosystem support infrastructure. This underutilization signals a misalignment between the design of such institutions and the lived realities of crisis-embedded entrepreneurship.

These patterns reinforce the central insight from the qualitative cases: entrepreneurs frequently turned to workaround mechanisms grounded in trust, reciprocity, and community knowledge. Formal supports existed, but their efficacy often hinged on entrepreneurs' capacity to access them through informal channels or interpersonal credibility. In effect, what appeared as 'institutional support' on the surface was often mediated through unstructured, relational pathways, such as friendship, collegial referral, or past dealings. This institutional opacity intensified the reliance on social capital. It underscored the performative, negotiated nature of ecosystem engagement in turbulent environments.

Conceptually, this domain aligns with and extends the entrepreneurial bricolage framework (Baker & Nelson, 2005), where entrepreneurs create functionality from available resources under constraints. These institutional workarounds and informal engagements represent *externally scaffolded* *resilience*, a mode of adaptation rooted in the recombination of ecosystem-level assets. Unlike traditional perspectives that view resilience as a purely firm-internal capability, this view highlights its embedded, relational, and negotiated character. Resilience here is not simply about weathering disruption. It is about reconfiguring one's position within a broader, sometimes indifferent, institutional terrain.

Strategic Reconfiguration under Policrisis

As the initial shockwaves of the polycrisis reverberated, all four entrepreneurial ventures progressed beyond mere reactive survival and embarked on deliberate, forward-looking strategic transformation. Importantly, these reconfigurations did not emerge in a postcrisis phase. Instead, they were implemented concurrently with short-term adaptations, reflecting a dynamic of simultaneous sense-making and action under uncertainty. Entrepreneurs reimagined their long-term trajectories while navigating daily operational disruptions, treating crises not as transient interruptions but as catalytic inflection points for strategic realignment and growth.

Each case exemplifies this dual temporality. After pivoting to PPE production during the early stages of the pandemic, the textile manufacturer institutionalized the new product line and pursued international quality certifications, thereby opening avenues for export diversification. The fashion retailer extended its emergency transition to e-commerce by embedding digital infrastructure upgrades, including data analytics and inventory optimization tools, which reshaped seasonal planning and customer segmentation. The tech startup responded to the rising demand for remote collaboration by launching modular features, expanding into adjacent sectors such as education, and proactively aligning with GDPR standards to prepare for entry into the EU market. Likewise, the family-owned ceramics firm reframed its market identity by investing in energy-efficient kilns and building a digital export platform, positioning itself to appeal to environmentally conscious international buyers.

These strategic moves were not merely reactive adjustments; they were deliberate and proactive. Instead, they signaled deeper recalibrations of entrepreneurial vision and capability. Entrepreneurs seized the crisis as an opportunity to reassess core competencies, reimagine value propositions, and realign market aspirations. First-order codes, such as 'we won't go back', 'this changed our roadmap', and 'international growth became urgent', revealed an underlying shift in business logic: a departure from incrementalism toward transformative intent. This pattern suggests that the crisis functioned as a threshold moment for strategic renewal.

Across the cases, second-order themes such as vision resetting, growth under uncertainty, and postcrisis learning emerged as salient. For instance, the founder of the ceramics enterprise referred to the crisis as 'a necessary push to finally act on internationalization', a decision that had been long postponed prior to the disruption. Such reflections underscore how uncertainty was reframed not as a barrier to strategy but as a prompt for strategic audacity. Rather than reverting to pre-crisis equilibria, entrepreneurs seized the opportunity to move toward higher-value offerings, diversified markets, and more robust operating models.

Quantitative findings from the survey reinforce this pattern of strategic reorientation. Among the 150 surveyed entrepreneurs, strategic planning emerged as the highest-rated long-term growth strategy (mean = 4.2), indicating widespread recognition of the need for forward-looking recalibration amid ongoing disruption. Additionally, substantial engagement with building a competitive advantage (mean = 4.0) and investment in R&D (mean = 3.5) suggest that many ventures sought not only to stabilize but also to reposition themselves in their markets. Notably, entrepreneurs also reported meaningful (though uneven) engagement with external support mechanisms. Strategic partnerships (mean = 3.2) and community or peer-based support (mean = 3.6) were more actively pursued than formal institutional support (mean = 3.1) or accelerators and incubators (mean = 2.8), reflecting a hybrid approach to strategic reconfiguration that blends internally driven transformation with selective ecosystem engagement. These data illustrate that entrepreneurs did not simply manage

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through crises; they leveraged them as opportunities to reimagine trajectories, expand capabilities, and reconfigure market positioning, demonstrating resilience as an embedded and forward-facing process.

Theoretically, this domain reinforces the study's emphasis on strategic reconfiguration as a situated process unfolding within sustained disruption. It highlights the importance of entrepreneurial foresight and sensemaking in facilitating concurrent crisis response and resilience planning (Williams et al., 2017). In doing so, it aligns with the literature on effective planning under deep uncertainty, where preparing for multiple possible futures becomes a necessity rather than a luxury (Schoemaker, 1995). Contrary to sequential models that separate survival from growth, the cases illustrate how the two are deeply entangled: resilience and reconfiguration coevolve in crisis environments.

Constructing the IERG model

This section consolidates the empirical and theoretical foundations of a theoretical model by synthesizing findings from both qualitative case studies and quantitative survey data. Rather than reiterating all case-level patterns, the emphasis here is on analytical convergence and divergence across methods, as well as the interpretive logic that led to the construction of the model.

The model was iteratively developed through the Gioia methodology, drawing on first-order inductive codes from four case studies and corroborated by survey responses. Across both datasets, three interrelated mechanisms emerged as central to how entrepreneurs responded to continuous crises: improvizational action, institutional workarounds, and transformative planning. Rather than treating these mechanisms as isolated or sequential, the model frames them as overlapping capabilities that entrepreneurs mobilize in parallel to adapt to complexity and uncertainty.

The model's conceptualization rests on how these mechanisms operate in tandem. Improvizational action reflects more than ad hoc technological adaptation. It serves as a gateway to new value propositions and operational flexibility. Institutional workarounds are not simply circumventions of formal barriers but expressions of relational embeddedness, wherein entrepreneurs draw on informal or peripheral networks to access resources that rigid institutions otherwise block. Transformative planning is not limited to static roadmaps; it entails the continuous recalibration of strategic direction in the face of deep uncertainty. These capabilities reinforce one another: early improvizations enable ecosystem trust, which in turn legitimizes longer-term shifts.

Theoretically, the model extends and builds upon foundational perspectives while addressing gaps left by prior frameworks. It extends beyond dynamic capabilities (Teece, 2007) by incorporating entrepreneurial adaptation into relational and institutional contexts. Unlike effectuation theory (Sarasvathy, 2001), which centers on internal reasoning under uncertainty, the model foregrounds the enabling role of ecosystem actors in shaping strategic trajectories. It also builds on the opportunity-centric view by highlighting how opportunities are not merely discovered but dynamically cocreated through entrepreneurs' interactions with crisis-induced institutional shifts (Zahra, 2008). In this way, the model repositions resilience as an interactive and distributed construct shaped by both agency and structure. Table 3 (Gioia Data Structure) and Fig. 1 (theoretical model) visually illustrate the emergence and interplay of these mechanisms. Rather than narrating the figures in full, it is sufficient to note that they represent the recursive and mutually reinforcing nature of the model's components, providing a visual map of how empirical insights translate into theoretical architecture.

Discussion

This study introduces the IERG model as a theoretically grounded and empirically supported framework for understanding how entrepreneurs adapt to continuous disruptions. Synthesizing evidence from survey and case study data in the Turkish entrepreneurial ecosystem, the model explains how entrepreneurs simultaneously engage in improvizational actions, institutional workarounds, and strategic reconfigurations to sustain and grow their ventures amid polycrisis. This section discusses

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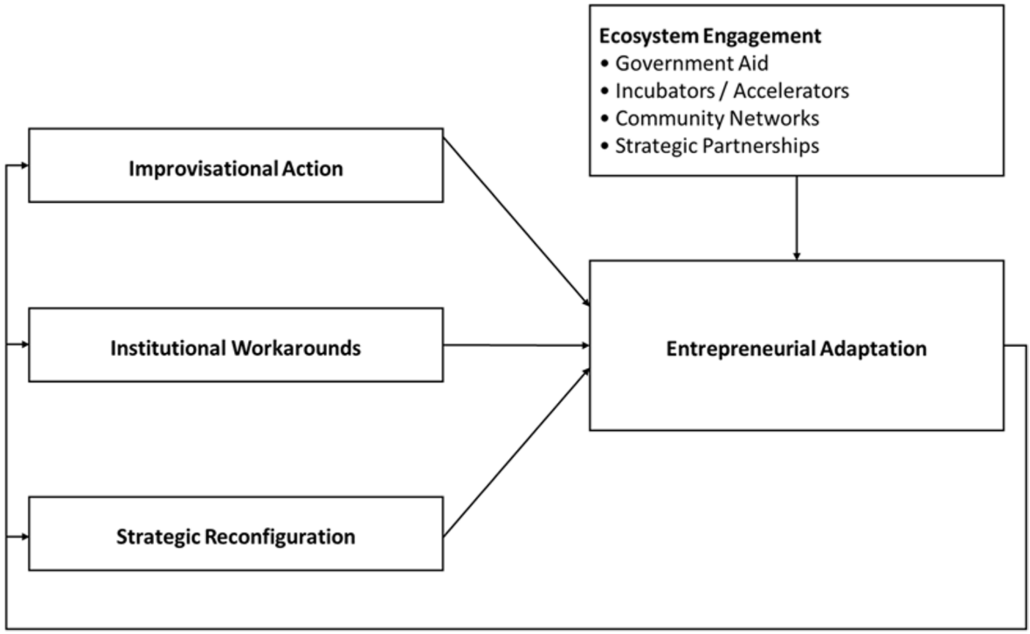

Figure 1. Integrated Entrepreneurial Resilience and Growth model.

the theoretical significance of the model, compares it to extant frameworks, and draws implications for academic debates on dynamic capabilities, resilience, and entrepreneurial ecosystems.

Theoretical contribution: advancing entrepreneurial resilience

This study advances the theoretical understanding of entrepreneurial resilience by developing the IERG model. The model synthesizes and extends insights from three foundational literature streams: effectuation (Sarasvathy, 2001), entrepreneurial bricolage (Baker & Nelson, 2005), and dynamic capabilities (Teece, 2007) while addressing their limitations in polycrisis contexts. Crucially, the model reconceptualizes entrepreneurial resilience not as an exclusively internal or reactive capacity but as a relational and ecosystem-embedded process that unfolds through the interplay of improvizational action, institutional workarounds, and long-term strategic reconfiguration.

Whereas existing theories often depict adaptation as either firm-internal or entrepreneur-centric, the model foregrounds the co-production of resilience through structured engagement with external supports. Improvization is not portrayed as isolated resourcefulness but as a patterned response made possible by the accessibility of digital tools, investor flexibility, public grants, and collaborative infrastructures. Similarly, the model challenges the linearity often implicit in crisis management frameworks, where short-term responses precede long-term planning, by demonstrating that strategic reconfiguration can emerge in tandem with immediate adaptations.

Table 5 clarifies how the IERG model extends and differentiates itself from prior frameworks. The dynamic capabilities perspective emphasizes the internal routines that enable sensing, seizing, and transforming in uncertain environments (Teece, 2007). However, it often treats external support as contextual rather than core. The model, by contrast, redefines dynamic capabilities as ecosystem-enabled, highlighting how entrepreneurs scaffold adaptation through relational resources.

The effectuation theory focuses on adaptive logic under uncertainty, emphasizing the use of available means and social networks (Sarasvathy, 2001). Nevertheless, it remains individualistic

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Table 5. Extending and differentiating prior frameworks

Framework	Core Concepts	Assumptions about Adaptation	Role of External Support	What IERG Adds
Teece (2007) Dynamic Capabilities	Sensing, seizing, and transforming organizational capabilities	Firm-level routines enable adaptive renewal	Treated as contextual or enabling but not core	Reframes dynamic capabilities as ecosystem-enabled; emphasizes relational scaffolding.
Sarasvathy (2001) Effectuation	Decision-making under uncertainty using available means	Entrepreneur-driven, recursive logic	Social networks are secondary; the focus is on individual logic	Highlights structured and institutional support as central to adaptation
Baker and Nelson (2005) Bricolage	Making do with available resources in constraint-heavy environments	Improvization under extreme scarcity	Largely ignored or assumed absent	Positions improvization as supported by accessible digital and financial ecosystems
IERG (This Study)	Improvizational action, institutional workarounds, strategic reconfiguration	Simultaneous, multi-scalar, relational adaptation in polycrisis	Ecosystem actors are co-producers of resilience	Integrates firm- and ecosystem-level processes into a unified model of resilience

mainly, treating structured institutional support as secondary. The model repositions ecosystem elements, accelerators, grants, and trade networks as central, not peripheral, to adaptation. Likewise, bricolage (Baker & Nelson, 2005) emphasizes the concept of 'making do' with available resources. However, it tends to overlook the enabling role of digital and financial ecosystems. IERG demonstrates how entrepreneurs leverage these supports to undertake more systematic and forward-looking transformations.

By situating the model within this comparative landscape, its contributions become clearer. The model offers a holistic and temporally layered perspective, one that bridges microlevel agency and macrolevel ecosystem structures. It also draws from organizational learning literature, emphasizing that real-time responsiveness and strategic foresight can coevolve through iterative learning processes and leadership support (Vera & Crossan, 2004).

Moreover, the study's model challenges the conventional framing of entrepreneurial resilience as a fixed or episodic trait. Instead, it conceptualizes resilience as a recursive process that continuously aligns short-term coping mechanisms with long-term strategic aspirations, capturing the dynamic interplay between improvization and planned adaptation (Williams et al., 2017). This reorientation also builds on the literature on planning under deep uncertainty (e.g., Schoemaker, 1995) and the understanding of dynamic capabilities in entrepreneurship (Zahra, Sapienza & Davidsson, 2006) while extending these frameworks by embedding them in relational and institutional contexts.

The model further contributes by empirically demonstrating how entrepreneurs actively mobilize external supports, public aid, informal investor ties, and digital infrastructure, not just to survive but to transform their business models. While previous studies have emphasized the significance of community networks and formal and informal support mechanisms in buffering entrepreneurs against environmental turbulence (Aldrich & Zimmer, 1986; Bruton et al., 2008; Carter & Wilton, 2006), this study advances the discussion by showing how such support mechanisms actively facilitate the dual pursuit of short-term operational continuity and long-term strategic transformation.

Finally, by capturing adaptation across overlapping and continuous disruptions, the IERG model shifts crisis research away from discrete-event frameworks (Doern et al., 2019). In doing so, it reframes resilience not as an outcome but as a dynamic process of strategic realignment, institutional engagement, and digital innovation under conditions of enduring uncertainty.

Positioning the study within emerging theoretical perspectives

This study contributes to a growing body of research that seeks to theorize entrepreneurial resilience and adaptation in conditions marked by overlapping and compounding disruptions. In line with recent work on polycrisis and systemic volatility, our findings reaffirm the inadequacy of linear or episodic models of crisis response, instead foregrounding resilience as a dynamic, processual, and sociotechnically embedded phenomenon. By integrating our conceptual framework with insights from recent literature, we offer a nuanced theoretical positioning that advances the conversation across five complementary strands.

First, our conceptualization aligns with the emergent perspective presented by Attieh (2022), who examined the survival strategies employed by Lebanese small and medium-sized enterprises during prolonged crises. Similar to her study, we emphasize the interdependence of entrepreneurial action and institutional breakdown. However, while Attieh primarily underscores improvization and sociopolitical embeddedness, our model further elaborates the recursive interaction between improvizational acts, institutional workarounds, and ecosystem-mediated transformation, thus situating entrepreneurial resilience not just as reactive adaptability but as an ongoing reconfiguration of agency within volatile systems.

Second, in dialogue with Henig and Knight's (2023) theorization of polycrisis, our findings support the view that entrepreneurial life is increasingly situated in a landscape where crisis is not an anomaly but a constitutive condition. By advancing a process model that maps how entrepreneurs navigate, endure, and transform through entangled disruptions, we respond to Henig and Knight's call for grounded, ethnographic engagement with the lived experience of polycrisis. Our study thereby reframes resilience not as a heroic trait but as a distributed and negotiated achievement in a world shaped by crisis convergence.

Third, we expand the analytical lens introduced by Maalouf et al. (2025), who document small and medium-sized enterprise responses in Beirut across tactical, strategic, and dormant modes. While Maalouf et al. emphasize firm-level adaptation logics, our study complements and extends their work by introducing a relational process model that explicitly incorporates the roles of digital infrastructure, ecosystem scaffolding, and identity reconstruction. This theoretical extension highlights the significance of meso-level support systems and affective labor in shaping entrepreneurial resilience in the face of systemic uncertainty.

Fourth, our study resonates with Sharma et al. (2024), who argue that the COVID-19 pandemic necessitates a paradigmatic shift in how entrepreneurship is theorized and taught. Their advocacy for postcrisis rethinking of entrepreneurship, centered on inclusivity, adaptability, and ecosystemic support, is echoed in our recommendations. However, whereas Sharma et al. approach this rethinking primarily from a policy and pedagogical standpoint, our contribution is grounded in an empirically derived process model that highlights how entrepreneurs enact this shift in real time through improvization and digitally mediated strategies.

Finally, we integrate and extend insights from Shore et al. (2024), who demonstrate how generative AI can enhance dynamic capabilities and support resilience in small and medium-sized enterprises. Our findings align with this perspective by highlighting how entrepreneurs interact with digital infrastructures, not merely as tools for efficiency but as relational platforms for improvization, opportunity creation, and identity work. However, our framework expands beyond a technological

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affordance view by embedding these digital interactions within broader institutional and affective contexts, thereby advancing a socio-technical understanding of resilience.

Practical ımplications for ecosystem and stakeholders

The IERG model has practical relevance for entrepreneurs, investors, and policymakers. For entrepreneurs, the model highlights the importance of institutionalizing flexibility and embedding adaptive practices not only in operations but also in long-term strategic planning, such as investing in modular systems, forming adaptable partnerships, and proactively engaging with ecosystem actors, as demonstrated in Case Studies 2 and 3. For investors, the model serves as a diagnostic tool to identify ventures with layered resilience, those that combine improvizational agility with ecosystem-anchored growth potential. This issue is particularly crucial in volatile markets where resilience capabilities offer better long-run indicators of sustainability than mere short-term performance metrics.

For policymakers, the findings point to the limitations of episodic or sector-agnostic support structures. Programs should be designed for longitudinal engagement, enabling ventures to evolve their resilience beyond initial crisis reactions. This objective can be achieved by developing crisis-sensitive support infrastructures, such as adaptive funding schemes, digital enablement platforms, and inclusive innovation zones that respond dynamically to sectoral and regional heterogeneity. The Turkish context underscores the need for such tailored support: entrepreneurs in regulated sectors and peripheral regions face asymmetric constraints that generic programs often fail to address. The study offers a blueprint for designing institutional scaffolding that is responsive, enduring, and attuned to the realities of polycrisis.

Challenges and future opportunities

Despite its strengths, this study reveals several tensions. One concerns the coherence-risk trade-off: some ventures prioritized short-term adjustments that compromised their long-term strategic integrity. While improvization was widespread, sustainability depended on the capacity to reintegrate improvized actions into coherent trajectories, a task that only some firms achieved. Another challenge concerns the durability of ecosystem engagement. As seen in Case Studies 1 and 4, initial access to grants or acceleration was not always followed by long-term institutional relationships, raising questions about the design of ecosystems for resilience continuity. These gaps necessitate future research into the temporal structuring of support systems and comparative analyses across various institutional contexts. The model's applicability in other emerging markets, particularly under sustained volatility, also invites further empirical testing, offering the potential to refine its core mechanisms and assess their generalizability across diverse entrepreneurial systems.

Conclusion

This study presents a dynamic and empirically grounded framework, the IERG model, for understanding how entrepreneurs adapt to ongoing, multidimensional disruptions. Grounded in mixed-method evidence from the Turkish entrepreneurial ecosystem, the model captures how entrepreneurial adaptation unfolds through the simultaneous enactment of improvizational tactics, institutional workarounds, and strategic transformation. While the empirical focus was situated in Türkiye, the findings have broader implications for contexts marked by persistent volatility, including other emerging markets and high-uncertainty environments worldwide.

Theoretically, the study makes a distinctive contribution to the literature streams on entrepreneurship and resilience. It reconceptualizes entrepreneurial resilience not as an internal or episodic trait but as a relational, processual, and ecosystem-embedded phenomenon that unfolds through the continuous interplay of improvizational action, institutional navigation, and strategic transformation. This contribution bridges existing gaps in the literature on dynamic capabilities, bricolage, and effectuation by integrating ecosystem support as a core mechanism rather than a contextual backdrop. The model also extends resilience frameworks by highlighting how adaptive strategies evolve in tandem across temporal scales (short-term coping and long-term development), particularly within volatile institutional environments. By reframing resilience as a continuous and co-constructed process, the model redirects attention from reactive survival to iterative capability-building in collaboration with ecosystem stakeholders. This approach offers a novel vantage point for both scholars and practitioners seeking to understand how entrepreneurs leverage external infrastructures, not just to cope with disruption but to reposition for future advantage.

Looking ahead, several avenues of future research emerge. Expanding the geographic scope to include entrepreneurs from other regions, especially in emerging markets, could offer comparative insights into how differing institutional voids, policy instabilities, and ecosystem configurations shape entrepreneurial resilience (Bruton et al., 2008). Comparative studies across diverse institutional environments can explore how varying ecosystem configurations either constrain or enable entrepreneurial resilience. Longitudinal research designs would be particularly valuable for tracing how adaptive strategies evolve, become routinized, or falter over time. Further inquiry could also unpack the micro-dynamics of how entrepreneurs make sense of and adapt to institutional complexity, particularly in regulatory regimes that are simultaneously volatile and restrictive. Additionally, future research could focus on specific industries, such as healthcare, education, or logistics, to better understand sector-specific strategies in the context of continuous multiple crises. These sectors may face unique challenges and ecosystem dependencies that differ from the broader strategies identified in this study.

Practically, the conclusion now articulates three clear and context-sensitive recommendations aimed at entrepreneurs, policymakers, and ecosystem actors. First, it underscores the need for entrepreneurs and ecosystem builders to develop flexible infrastructures that support rapid improvization and pivoting in the face of cascading shocks. Second, it encourages policymakers to strengthen multilevel ecosystem linkages by enabling access to resources, mentoring, and support networks that act as scaffolding during periods of uncertainty. Third, it recommends designing programs that integrate short-term adaptability with long-term capability building, enabling ventures not only to survive crises but also to reconfigure for strategic growth. These insights provide a diagnostic and design-oriented utility for institutions and decision-makers engaged in entrepreneurship support in high-volatility settings.

Finally, the study has relevance beyond the Turkish context. By framing resilience as a continuous, co-produced, and scalable process, the study offers a conceptual foundation for understanding how entrepreneurs in diverse institutional settings adapt to enduring uncertainty and overlapping disruptions. This theoretical reframing contributes to ongoing scholarly debates while also informing the practical design of more effective programs in entrepreneurial ecosystems under polycrisis conditions.

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References

Aldrich, H., & Zimmer, C. (1986). Entrepreneurship through social networks. In D. Sexton & R. Smilor (Eds.), *The Art and Science of Entrepreneurship* (3–23). Ballinger.

Anwar, A., Coviello, N., & Rouziou, M. (2023). Weathering a crisis: A multilevel analysis of resilience in young ventures. *Entrepreneurship Theory and Practice*, *47*(3), 864–892.

Attieh, L. (2022). Entrepreneurship and resilience in times of crises: the case of smes in lebanon. *Entrepreneurship & Organization Management*, *11*(5), 1–14.

Audretsch, D. B., & Moog, P. (2022). Democracy and entrepreneurship. *Entrepreneurship Theory and Practice*, *46*(2), 368–392.

Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, *50*(3), 329–366.

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, *9*(2), 27–40.
Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.
Bruton, G. D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in emerging economies: Where are we today, and where should the research go in the future?. *Entrepreneurship Theory and Practice*, *32*(1), 1–14.
Carter, S., & Wilton, W. (2006). Don't blame the entrepreneur, blame government: The centrality of the government in enterprise development; Lessons from enterprise failure in Zimbabwe. *Journal of Enterprising Culture*, *14*(1), 65–84.
Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.
Doern, R., Williams, N., & Vorley, T. (2019). Special issue on entrepreneurship and crises: Business as usual? An introduction and review of the literature. *Entrepreneurship & Regional Development*, *31*(5–6), 400–412.
Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, *13*(1), 215–246.
Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15–31.
Grözinger, A. C., Wolff, S., Ruf, P. J., Audretsch, D. B., & Moog, P. (2023). The Impact of SME leaders' psychological capital on strategic responses during a crisis. *BRQ Business Research Quarterly* *28*(1), 265–287.
Henig, D., & Knight, D. M. (2023). Polycrisis: Prompts for an emerging worldview. *Anthropology Today*, *39*(2), 3–6.
Herbane, B. (2019). Rethinking organizational resilience and strategic renewal in SMEs. *Entrepreneurship & Regional Development*, *31*(5-6), 476–495.
Homer-Dixon, T., Renn, O., Rockström, J., Donges, J., & Janzwood, S. (2022). A call for an international research program on the risk of a global polycrisis. *Cascade Institute*. Retrieved December 25, 2024, from https://cascadeinstitute.org/wp-content/uploads/2022/04/A-call-for-an-international-research-program-on-the-risk-of-a-global-polycrisis-v1.1.pdf.
Korber, S., & McNaughton, R. B. (2018). Resilience and entrepreneurship: A systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1129–1154.
Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C. A. M., Prochotta, A., Berger, E. S. (2020). Startups in times of crisis–A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, *13*, e00169.
Maalouf, J., Miklian, J., & Hoelscher, K. (2025). Business Survival Strategies in a Polycrisis: SME Experiences from Beirut, Lebanon. *Business Horizons*, *68*(4), 461–477.
Mair, J., Martí, I., & Ventresca, M. J. (2012). Building inclusive markets in rural bangladesh: how intermediaries work to fill institutional void. *Academy of Management Journal*, *55*(4), 819–850.
Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research* (6th ed.). Sage Publications.
Muñoz, P., Naudé, W., Williams, N., Williams, T., & Frías, R. (2020). Reorienting entrepreneurial support infrastructure to tackle a social crisis: A rapid response. *Journal of Business Venturing Insights*, *14*, e00181.
Ratten, V. (2020). Coronavirus and international business: An entrepreneurial ecosystem perspective. *Thunderbird International Business Review*, *62*(5), 629–634.
Rauch, A., & Hulsink, W. (2023). Just one damned thing after another: Towards an event-based perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, *47*(3), 662–681.
Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Sage Publications.
Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, *26*(2), 243–263.
Schoemaker, P. J. (1995). Scenario planning: A tool for strategic thinking. *Sloan Management Review*, *36*(2), 25–40.
Sharma, G. D., Kraus, S., Liguori, E., Bamel, U. K., & Chopra, R. (2024). Entrepreneurial challenges of COVID-19: Rethinking entrepreneurship after the crisis. *Journal of Small Business Management*, *62*(2), 824–846.
Shepherd, D. A., & Williams, T. A. (2014). Local venturing as compassion organizing in the aftermath of a natural disaster: The role of localness and community in reducing suffering. *Journal of Management Studies*, *51*(6), 952–994.
Shore, A., Tiwari, M., Tandon, P., & Foropon, C. (2024). Building entrepreneurial resilience during crisis using generative AI: An empirical study on SMEs. *Technovation*, *135*, 103063.
Stam, E., & van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics*, *56*, 809–832.
Taleb, N. N. (2014). *Antifragile: Things that gain from disorder*. Random House Trade Paperbacks.
Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social and behavioral research* (2nd ed.). Sage Publications.
Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.
Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, *58*(4), 13–35.
Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review*, *29*(2), 222–240.
Volkmann, C., Fichter, K., Klofsten, M., & Audretsch, D. B. (2021). Sustainable entrepreneurial ecosystems: An emerging field of research. *Small Business Economics*, *56*(3), 1047–1055.
Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, *11*(2), 733–769.

Xu, Z., Wang, X., Wang, X., & Skare, M. (2021). A comprehensive bibliometric analysis of entrepreneurship and crisis literature published from 1984 to 2020. *Journal of Business Research*, *135*, 304–318.

Yılmazer, S. (2024). *Access to Finance and Economic Uncertainty: An Examination on SMEs in Turkey and Europe* (Doctoral dissertation, Marmara Universitesi (Türkiye)).

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.

Zahra, S. A. (2008). The virtuous cycle of discovery and creation of entrepreneurial opportunities. *Strategic Entrepreneurship Journal*, *2*(3), 243–257.

Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, *43*(4), 917–955.

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