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Social Media Use, Corporate Entrepreneurship and Organizational Resilience: A recipe for SMEs Success in a Post-Covid Scenario

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Abstract:

The strategic use of social media tools facilitates firms' entrepreneurial capabilities, enabling them to become more innovative, increasing their proactivity, and helping them to renew themselves internally. In today's turbulent landscape, organizational resilience has emerged as a key variable for responding to external challenges and facing uncertainty. In this context, our study aims to analyze the role of social media use as an antecedent of corporate entrepreneurship and firm performance in Spanish SMEs, while also examining the mediating role of organizational resilience in this process. Analyzing data from a sample of 259 firms, we tested our proposed hypotheses using structural equation modeling. The results confirm that use of social media tools positively impacts the entrepreneurial capabilities of the SMEs examined. The findings also stress the strategic relevance of organizational resilience, which exerts a perfect mediating impact on firm performance. These findings have significant implications for managers, as they show the path managers must take to benefit from social media use, become more entrepreneurial and resilient, and achieve business success in these turbulent times.

Keywords: Social Media; Corporate Entrepreneurship; Organizational Resilience; SMEs.

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Abstract

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1. Introduction

Small and medium-sized enterprises (SMEs) form the backbone of the global economy. In Europe, they represent 99.8% of all enterprises and account for about 65% of total employment (European Commission, 2021). The strategic significance of SMEs is reflected not only in their contribution to the gross domestic product but also to income generation, employment, and new business creation (Nachmias and Hubschmid-Vierheilig, 2021). SME-related issues have thus recently become a prominent research line in management (Susanto et al., 2021).

SMEs are more vulnerable than large firms to the impact of external crisis, due to their limited resources and lack of specialized knowledge (Klein and Kodesko, 2021). As significant transformations occur worldwide, firms today face a competitive landscape with high levels of volatility, uncertainty, complexity, and ambiguity, a context defined as a

VUCA[1] environment (Troise et al., 2022; Xie et al., 2022). The concept of resilience has gained momentum as a key strategic issue in helping firms—especially SMEs—adapt and survive in this challenging context (Ahmed et al., 2022; Zighan et al., 2021).

Organizational resilience has emerged as an important issue in management research (Hillmann and Guenther, 2021). It can be conceptualized as the firm's ability to survive, recover, and even grow after a crisis disrupts its business operations (Huang and Jahromi, 2021). Organizational resilience is the organization's capacity to address major strategic challenges through responsiveness and reinvention to ensure business continuity (Herbane, 2019). Resilience is thus defined as the firm's ability to anticipate and adapt to changing disruptions proactively, even developing new capabilities (Saad et al., 2021). Resilience is more than mere survival; it involves adapting, being proactive, and being able to seize opportunities in a challenging business environment. We need more knowledge to identify the main antecedents or conditions that develop resilient firms (Xie et al., 2022).

Recent literature has highlighted two major factors in the main strategic priorities for building SME resilience (Juergensen et al., 2020; OECD, 2021; Yu et al., 2021): (1) promoting adoption and use of digital technologies, such as social media tools[2] (hereafter, SMTs) and (2) fostering a culture of innovation and entrepreneurship to support entrepreneurial activities inside firms. Our study analyzes both factors as major determinants of organizational resilience.

Digitalization has advanced significantly in recent years and is opening fascinating opportunities for firms (Secundo et al., 2021). The emergence of SMTs has completely transformed the way firms relate to and interact with their stakeholders (Bhimani et al., 2019). SMTs are conceptualized as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of user generated content" (Kaplan and Haenlin, 2010, p. 61). Social media platforms such as Facebook, Instagram, YouTube, and WhatsApp give SMEs channels to increase their competitiveness by enhancing customer relationships, expanding collaboration, and identifying valuable ideas to develop new products (Susanto et al., 2021). These tools also foster the development of entrepreneurial processes inside firms because they foster collaboration, business networking, co-creation, and business innovation (Olanrewaju et al., 2020). Although social media use plays a significant role in fostering entrepreneurship at corporate level (Troise et al., 2021), more research on the topic is needed, especially in the

[1] VUCA: Volatile, Uncertain, Complex and Ambiguous.
[2] SMTs: Social Media Tools.

current digital era, to understand SMTs' full impact as enablers of entrepreneurial activities (Elia et al., 2020; Secundo et al., 2021).

To cope with external turbulence, SMEs must take entrepreneurial initiative, reorienting themselves and refocusing their innovation efforts (Susanto et al., 2021). As a result, the scientific importance of analyzing corporate entrepreneurship has increased, and research on the topic has evolved dramatically in recent years (Castriotta et al., 2021). Corporate entrepreneurship is defined as a process that occurs inside an existing firm and leads to various innovative activities, such as development of new products, services, technologies, competitive strategies, and even business models (Antoncic and Hisrich, 2001; Kuratko and Audretsch, 2013). Corporate entrepreneurship is a strategic behavior or attitude by which individuals inside organizations undertake new activities and are willing to depart from routines to pursue new entrepreneurial opportunities (García-Morales et al., 2014). It is conceptualized as a dynamic capability that allows firms to address changing environments, manage potential uncertainties rapidly, and remain competitive (Rehman et al., 2021).

Our study focuses on internal corporate entrepreneurship, which involves using the firm's extant resources and capabilities to improve business operations, take advantage of new opportunities, and create new products and services (Vanacker et al., 2021). Since SMEs in the post-COVID-19 scenario still suffer from resource constraints, we believe it is best to focus on this type of entrepreneurial process. Following prior literature, we examine internal corporate entrepreneurship as a multidimensional construct including the following dimensions: proactiveness, which reflects the firm's orientation to risk-taking initiatives; innovativeness, which refers to the creation of new products, services, or processes; and self-renewal, which involves strategic reorganization and dynamics of organizational change (Antoncic and Hisrich, 2001; Castriotta et al., 2021).

Corporate entrepreneurship is a decisive antecedent of business transformation and firm performance (Urbano et al., 2022). Although clear evidence exists of the positive relationship between corporate entrepreneurship and performance, we must also examine other organizational factors likely to influence this relationship (Isichei et al., 2020). Our study explores the role of organizational resilience as a possible mediating variable in the relationship. Furthermore, due to the current significance of digital technologies such as social media platforms, more research is needed to examine the impact of fostering SMEs' entrepreneurial activities in the digital environment (Chatterjee et al., 2022). Despite the increased research attention to organizational resilience in recent years, the emergence of new environmental factors has altered the scenario. Such as: the effects of COVID-19 on

organizations, the leverage of emerging technologies, new relationships between the actors in new entrepreneurial ecosystems (Yu et al., 2021; Zighan et al., 2021); innovative business models (Xia et al., 2022); limited resources, limited loan access, a holistic change approach due to constant changes (Zighan and Ruel, 2021), economic crises and the high inflation in many European countries (European Commision, 2022). Further, although organizational resilience has been analyzed extensively in the context of large firms, these new factors affect SMEs differently, making it critical to assess how SMEs can build organizational resilience in the unstable post-Covid scenario (Xie et al., 2022). Finally, such assessments must be based on empirical data to determine the main antecedents and benefits of organizational resilience (Saad et al., 2021; Zighan et al., 2021).

Based on the foregoing, this study aims to fill the research gaps identified above by pursuing the following objectives: (1) to examine the impact of SMT use on SMEs' entrepreneurial activity, (2) to analyze the effect of corporate entrepreneurship behavior on firm performance, and (3) to explore the specific role of organizational resilience in this process, examining its relevance in the current scenario.

This paper makes three important contributions. First, it demonstrates empirically that using SMTs helps SMEs become more entrepreneurial in the current hypercompetitive environment by enhancing their proactiveness, innovativeness, and self-renewal processes. Second, our findings highlight the significance of corporate entrepreneurship for SMEs by describing its determining role as antecedent of organizational resilience. Third, the results support the strategic significance of building organizational resilience for SMEs, as building organizational resilience is positively and directly related to organizational performance. We also show that resilience mediates the impact of self-renewal on performance, confirming the key role of resilience in current uncertain and complex scenarios. The study's untangling of the connections among social media use, corporate entrepreneurship, organizational resilience, and performance has important implications for theory and practice.

The remainder of the paper is organized as follows: the next section proposes the research model, based on the literature review conducted, and describes the research hypotheses. We then explain the methodology, data analysis, and discussion of the results. To close the study, we provide conclusions, implications for theory and practice, and limitations and future research avenues.

2. Literature review

As digital technologies (Montes et al., 2021), SMTs can encourage cooperation between employees and managers in the organization. They can also integrate individuals and their knowledge to develop complex innovative activity (Dominguez Gonzalez, 2022) through collaboration that involves sharing skills and capabilities. Given our goal of complex innovation and SMTs' role as digital technologies (Elia et al., 2020; Montes et al., 2021), complexity theory is a productive theoretical approach.

Numerous emerging organizational studies have built on complexity theory (Gnyawali et al., 2010; McElroy, 2000; McKelvey, 2016), confirming its value for deepening knowledge of digital strategies in increasingly complex co-evolutionary adaptive business ecosystems. Complexity theory is the study of emergent order in what are otherwise very disorderly systems. The theory argues that these systems produce spontaneous systemic bouts of novelty, out of which new patterns of behavior emerge (McElroy, 2000). We argue that new behavior enables organizations to self-renew and generate complex ecosystems from SMT use by impacting self-organized criticality processes, digital platform-based ecosystems, and dissipative structures (McKelvey, 2016; Roundy et al., 2018; Tanriverdi et al., 2010). These impacts influence corporate entrepreneurship, resilience, and organizational performance.

Although our study incorporates complexity theory, our main theoretical focus develops from the resource-based view (RBV) (Barney, 1991), due to the dynamic nature of the variables analyzed in this paper (Antoncic and Hisrich, 2001; Dominguez Gonzalez, 2022; Helfat and Raubitschek, 2018; Kuratko and Audretsch, 2013; Martín Rojas et al., 2017; Nonaka and Takeuchi, 1995; Williams et al., 2017). We also draw on the theory of dynamic capabilities, which complements the RBV, by arguing that only firms that develop dynamic capabilities can generate sustainable competitive advantage (Teece et al., 1997).

Starting from these premises and incorporating strategic management research, the conceptual framework for our study draws mainly on dynamic capabilities theory. Based on this theory, we argue that SMT use helps firms to face the current VUCA environment by driving their development of corporate entrepreneurship, increasing the interaction among the firm's entrepreneurial components, and intensifying organizational resilience to overcome crisis and improve performance in organizations (Huang and Jahromi, 2021; Mention et al., 2019; Troise et al., 2022; Xie et al., 2022).

We thus analyze how the dynamic capabilities of corporate entrepreneurship (innovativeness, proactiveness, and self-renewal) and of resilience are crucial to achieving excellent performance in unstable environments (Antoncic and Hisrich, 2001; Ayala and

Manzano, 2014; Kuratko and Audretsch, 2013; Martín Rojas et al., 2017; Rehman et al., 2021; Rodríguez-Sánchez et al., 2021; Schilke et al., 2018; Sharma and Chrisman, 1999; Urbano et al., 2022; Xie et al., 2022; Zahra, 1993). These dynamic capabilities are strategic assets that connect turbulent environmental changes and ongoing knowledge acquisition promoted by SMTs to develop corporate entrepreneurship and thus strengthen the significance of resilience. Dynamic capabilities seek to integrate, build, and reconfigure internal and external competences to respond quickly to external changes (Dominguez González, 2022; Teece et al., 1997).

Dynamic capabilities attempt to capture the evolutionary nature of resources and capabilities as intrinsically linked to dynamism of the market. They drive firms "continually to adapt, renovate, reconfigure, and recreate their resources and capabilities in line with the competitive environment" (Wang and Ahmed, 2007, p. 31). In fact, dynamic capabilities enable firms both to create and to capture value by focusing on digital ecosystems and continually innovating and redesigning their business models. Dynamic capabilities are thus a subset of capabilities oriented to strategic change (Helfat and Raubitschek, 2018).

Our final reason for grounding this study in the theory of dynamic capabilities, which complements the RBV, is that the variables analyzed (corporate entrepreneurship and organizational resilience) are dynamic capabilities that strengthen entrepreneurial and sustainable organizations.

3. Hypothesis development

3.1 The influence of social media use on dimensions of corporate entrepreneurship

Proactiveness can be defined as a managerial orientation that involves acting to anticipate future problems, needs, or changes (Lumpkin and Dess, 1996). It is a crucial component of corporate entrepreneurship, as it suggests a forward-looking perspective to enhance firm competitiveness. A proactive firm takes the initiative, is inclined to take risks, and is bold and aggressive in pursuing business opportunities (Antoncic and Hisrich, 2001). Proactiveness enables firms to anticipate future demand, introducing products and services ahead of competitors (Vanacker et al., 2021). Proactive firms can thus identify market opportunities quickly, exert influence over them, and achieve better performance through these early mover advantages (Lumpkin and Dess, 1996). Proactive behavior involves active orientation to take initiative and trigger change instead of waiting for change to happen (Zighan et al., 2021). As these authors stress, proactiveness orients firms toward improving their internal capabilities in

business environments marked by dynamism and turbulence, thus fostering innovative practices.

The emergence of digitalization and the massive adoption of social media in business management are impacting dimensions of corporate entrepreneurship directly because they support the processes of entrepreneurial learning, opportunity identification, and stakeholder engagement (Secundo et al., 2021). Further, the use of social media platforms encourages proactiveness because it enables firms to monitor the market quickly and access valuable information immediately so that they can respond boldly and proactively to new trends (Troise et al., 2021). These technologies enable the agile communication processes that are critical in enabling today's firms to sense and respond quickly to emergent market opportunities (Gonzalez-Cruz et al., 2020). In fact, social media affordances have completely modified not only how companies seek and gather information but also how they relate to customers and other key stakeholders (Olanrewaju et al., 2020). Social media are shaping organizational activities, as their use gives firms multiple advantages, enhancing brand value, sales growth, knowledge sharing, and innovation (Tajvidi and Karami, 2021). These platforms grant firms new forms of interaction and communication, facilitate information flows, and provide firms with unprecedented immediate access to valuable external knowledge, such as customer insight and feedback (Bhimani et al., 2019; Lam et al., 2016).

In today's rapidly changing markets, organizations that can leverage digital tools to monitor market trends and demand can achieve a knowledge-based advantage over the competition. As social media are key tools in our digital age, their use constitutes a strategic approach to fostering firm proactiveness and organizational learning, enabling firms to gain a competitive edge (Lam et al., 2016; Troise et al., 2021).

Parveen et al. (2016) empirically confirmed that organizational use of social media directly enhanced firms' entrepreneurial orientation, improving their proactiveness. The information about customers and competitors captured by these platforms helps firms to respond proactively and take measures to resolve strategic issues. In the same vein, Martin-Rojas et al. (2020) analyzed a sample of Spanish technology firms to demonstrate empirically how social media use enhances firms' capabilities to act proactively. Building on all the above, we propose the following hypothesis:

H1: SMT use is positively and significantly related to proactiveness.

Innovativeness or innovation capability is a cornerstone of corporate entrepreneurship, as

no entrepreneurial journey can succeed without large doses of innovation (Zighan et al., 2021). This capability can be defined as the firm's tendency to engage in and support new ideas, experimentation, and creative initiatives that may result in new products, services, or processes (Lumpkin and Dess, 1996). Innovation involves looking for new solutions to solve emerging challenges confronting the firm. It broadly includes developing or enhancing products and services, administrative techniques, or technologies, as well as developing changes in strategy or organizational issues (Antoncic and Hisrich, 2001). Innovation capability can thus enrich firms' products, services, technologies, and operational processes. It is fundamental to improving the firm's competitive position and long-term performance (Vanacker et al., 2021).

Innovation has been considered a key topic in management research for decades. In the current turbulent scenario, innovation capability or innovativeness emerges as a critical factor enabling firms to adapt to changing market conditions and meet customer needs (Gonzalez-Cruz et al., 2020). The adoption and use of SMTs can play a strategic role in fostering firm innovativeness. These technologies facilitate information flow and knowledge sharing within and across organizations, enhance interaction with customers, and improve collaboration processes, producing improved operational efficiency and innovativeness (Lam et al., 2016). The connectivity and openness promoted by social media use enable firms to establish relationships and partnerships with different stakeholders, intensifying firms' exposure to market information and creativity and accelerating organizational processes for new product ideation and development (Troise et al., 2021). In fact, the literature describes social media as valuable tools for creating dynamic capabilities to sense, seize, and reconfigure knowledge during the innovation process, helping firms to achieve competitive advantage in rapidly changing environments (Mention et al., 2019; Olanrewaju et al., 2020).

The foregoing shows that social media and innovation are closely intertwined. Findings from a systematic literature review on the topic (Bhimani et al., 2019) suggest that social media platforms can be seen as both enablers and drivers of innovation strategies. In sum, adopting these technologies represents a paradigm shift for firms, and their use has transformed the various stages of the innovation process by strengthening firm-customer interaction, improving external collaboration, enhancing business intelligence and knowledge capture and sharing, enabling product co-creation, and involving internal and external stakeholders in crowdsourcing activities (Bhimani et al., 2019; Lam et al., 2016; Secundo et al., 2021).

To leverage social media's full potential for innovation purposes, firms must choose the

right combination of platforms, actively engage customers and other actors, foster conversations, and co-create experiences (Mention et al., 2019). In fact, firms used social media platforms such as Facebook, Instagram, and Whatsapp massively during the pandemic to stay connected with their customer base and leverage business interactions (Susanto et al., 2021). These interactions enabled firms to adapt quickly to emergent customer needs by modifying their sales channels or internal processes to better meet those needs.

At the empirical level, diverse studies have confirmed the positive impact of social media use on firms' innovativeness. Analyzing an international sample of SMEs, Scuotto et al. (2017) demonstrate empirically that use of social networking sites influenced firms' innovation performance positively. Also examining SMEs, Gaglio et al. (2022) found that use of digital tools such as social media had a positive effect on firm innovation. Corral de Zubielqui and Jones' (2020) analysis of a sample of Australian start-ups also empirically confirmed the positive relationship between social media and innovation, describing how social media helped these firms to leverage information, knowledge, learning, and other resources to enhance innovativeness. Finally, Rakshit et al. (2022) demonstrated empirically that SMEs' use of SMTs during the pandemic enhanced new product development processes, fostering SMEs' innovation activities. Consequently, it may be asserted that:

H2: *SMT use is positively and significantly related to innovativeness.*

Strategic renewal or self-renewal is defined as entrepreneurial efforts within an existing organization that result in significant changes to its business or corporate strategy or structure (Sharma and Chrisman, 1999). Self-renewal involves system-wide changes that enhance creative organizational learning, increase the firm's attention to its environment, and leverage its ability to detect opportunities and respond creatively to them (Zahra, 1993). Conceptualized as transformation of firms by altering their foundational concepts and rethinking their business orientation, self-renewal contributes directly to organizational change (Rehman et al., 2021). It is thus manifested through sustained regeneration, domain redefinition, organizational rejuvenation, and business model transformation (Castriotta et al., 2021; Urbano et al., 2022). Renewal activities enhance a firm's ability to compete in the market because they entail system-wide changes (new organizational structures or redefinition of the business concept) that enhance innovation, problem solving, and organizational learning (Zahra, 1993).

In the current economic situation, firms must adapt to changing environmental conditions, implementing strategic renewal by altering organizational characteristics such as their

structure or processes (Martin-Rojas et al., 2020). Social capital has thus been highlighted as one of the most significant factors or stimuli promoting strategic renewal (Khan et al., 2021). These authors mention social capital as a valuable organizational resource. Derived from the firm's internal and external interactions and networks, social capital produces valuable knowledge and learning. Social capital can help firms gather information, identify emergent opportunities, or mobilize resources (Olanrewaju et al., 2020). By enabling interaction and networking with diverse stakeholders (customers, suppliers, partners), SMTs are basic enablers for building social capital (Smith et al., 2017; Wang et al., 2020). Through these connections and relationships, firms can access knowledge that is useful for the market and essential to initiating business renewal or changes in organizational core competences (Khan et al., 2021). Social media use thus enhances business networking and social capital building and facilitates strategic renewal processes, acting as a force driving organizational transformation.

Bouwman et al. (2018) observed that social media use in the context of SMEs plays a crucial role as a fundamental component of self-renewal by driving business model innovation. Focusing on SMEs, Rehman et al. (2021) observed that information technology capabilities supported innovation processes, helping firms to foster interdepartmental coordination and knowledge sharing, and facilitating entrepreneurial endeavors by promoting strategic renewal. Moreover, Martin-Rojas et al. (2020) confirmed empirically that SMT use significatively enhanced self-renewal behaviors, helping firms to adapt quickly to current changing markets by renewing themselves internally, altering their organizational characteristics. Building on all the above, we propose the following hypothesis:

H3: *SMT use is positively and significantly related to self-renewal.*

3.2 Interrelationships among dimensions of corporate entrepreneurship

On one hand, the knowledge-based view argues that innovativeness is the organization's capability to develop and introduce innovations in the firm (Joshi et al., 2015). It energizes firms and enhances their probability of survival and continued success (Ruvio et al., 2014). On the other, proactiveness requires focusing on the future and seeking new opportunities, which may or may not be related to the present line of operations, as they involve introducing new products and brands ahead of the competition (Venkatraman, 1989). As an offensive strategy of taking the lead to advance toward the future (Amabile, 1997), organizations' proactive behavior is, in turn, a key component of innovativeness.

By being proactive, or acting in anticipation of future problems, needs, and changes, organizations may seek to identify opportunities in the marketplace and pursue innovative strategies to make the opportunities real (Covin et al., 2016). This behavior encourages innovativeness in organizations and gives them a competitive advantage. Proactiveness facilitates innovativeness or innovation capability in several ways, by: 1) identifying new opportunities, 2) evaluating the complementarity and fit of new opportunities in the organization, 3) providing entrepreneurial skills to access new opportunities, and 4) identifying new value propositions in the marketplace (Inigo et al., 2020).

In studying new alliance opportunities, Iñigo et al. (2020) found that proactiveness enables innovation capability for sustainable networks. They assert that proactiveness enables new or innovative organizational routines, processes, structures, and functions that determine how firms search for and initiate new alliance opportunities. In technology companies, the convergence of computing, communications, and content technologies provides remarkable market opportunities (Sambamurthy et al., 2003). Proactive organizations exploit these opportunities to lead in providing new services, introducing more services than their competitors (Joshi et al., 2015). We could thus argue that proactiveness increases exploration of new market opportunities and the knowledge they involve. Greater knowledge of market opportunities increases the stock of knowledge available to the organization, enabling it to be more innovative and to exploit these opportunities by creating new services (Joshi et al., 2015). Proactiveness thus enhances the organization's capacity to acquire and absorb external knowledge (Cohen and Levinthal, 1989), which results in high levels of innovativeness.

According to Mintzberg's (1979) and Joshi et al.'s (2015) identification of a curvilinear effect of proactiveness on innovativeness with a formal organizational structure, our hypothesis would only be possible in an innovative organization with an organic and dynamic adhocratic structure. Such an organization would adapt to the complex knowledge to be acquired (Mintzberg, 1979), especially in today's change-oriented firms whose culture is open to change (Rehman et al., 2021). That is, processing complex knowledge acquired in a proactive organization achieves innovativeness. We thus hypothesize that, the more proactive an organization is, the more innovativeness it can achieve.

In fact, proactiveness is a capability that stresses initiatives oriented to taking, anticipating, and creating change and predicting evolution towards a critical situation, as well as early preparation prior to impending and risky uncertainty (Pérez-Luño et al., 2011). As such, firms need proactiveness to overcome inertia by taking the initiative to exploit emerging opportunities, experiment with change, and anticipate and act on future needs (Rauch et al.,

2009). We thus view proactiveness as an integral antecedent of innovativeness in organizations. All the literature cited above confirms that:

H4: *Proactiveness is positively and significantly related to innovativeness.*

Proactiveness involves taking initiative by anticipating future needs or changes to pursue emerging opportunities (Lumpkin and Dess, 1996). As proactive firms take control of the current circumstances and challenge the status quo (Rehman et al., 2021), proactiveness includes initiative and risk taking, as well as boldness and competitive aggressiveness manifested in the orientation, decision taking, and activities of the top management team (Antoncic and Hisrich, 2001).

Prior literature has highlighted that firms with high levels of proactiveness are more open and flexible to change and adapt quickly to dynamic environments (Rehman et al., 2021; Zighan et al., 2021). Renewal activities entail system-wide changes such as redefinition of the business concept, reorganization of the firm's procedures, and redefinition of its competitive approach (Zahra, 1993). To detect the need for strategic renewal, firms must be attentive to their external environment, discern forthcoming threats and opportunities, and respond creatively to them. Proactiveness is a basic enabler of entrepreneurial behavior, as it drives firms to make ongoing internal changes to adapt quickly to changing environmental conditions, promoting self-renewal and strategic transformation (Martin-Rojas et al., 2017). In sum, proactiveness helps companies develop a forward-looking perspective and an organizational culture open to change; it increases their ability to adapt and seize new market opportunities. Proactive and change-oriented firms are ready to self-renew strategically in a way that conservative and rigid organizations cannot (Rehman et al., 2021).

Drawing on sample of Spanish firms from the technology sector, Martín-Rojas et al. (2017) demonstrated empirically that proactiveness is positively and significantly related to self-renewal. They confirmed that a proactive orientation enables firms to make strategic changes to revise their business concept, reorganize units and divisions to increase innovation, and increase autonomy and flexibility. Recently, Zighan et al. (2021) analyzed this issue in a sample of Jordanian SMEs during the pandemic. Their findings reveal that the firms analyzed developed proactive behavior and quickly implemented new organizational practices that transformed the established organizational routines. The firms' proactiveness materialized in diverse self-renewal practices: team reorganization, implementation of new communication processes, and new configuration of internal activities fundamental to ensuring business continuity. Thus, we propose that:

H5*: Proactiveness is positively and significantly related to self-renewal*.

Self-renewal or strategic renewal activities include redefinition of a firm's vision, mission, business concept; reorganization of activities; and introduction of system-wide changes from innovation (Agca et al., 2012). Both involve reformulation of strategies, redefinition of business, and reorganization, and both reflect organizational change (Martín-Rojas et al., 2017). Dynamic capabilities can thus play a role in strategic or self-renewal through modification of the organization's resource base (Agarwal and Helfat, 2009).

In the current turbulent environment, innovativeness or innovation capability has become crucial to every organization's strategic renewal (Du and Luu, 2020). The strategic process of self-renewal is especially important due to the recent digital transformation of many sectors (Lichtenthaler, 2018), especially in crisis situations such as that caused by COVID-19. Many companies now focus increasingly on digital innovation to generate completely new solutions to renew firms and find opportunities in the market (Remane et al., 2017; Rometty, 2016). These solutions require greater innovativeness in companies, since environmental complexity requires more dynamic network capital with different agents to promote the company's innovativeness (Martín-Rojas et al., 2020).

Studying complexity in technological companies, Martín-Rojas et al. (2020) found that connections between environmental agents of organizations enhance innovativeness in complex environments via learning through global and local collaborative business processes. This activity enabled these organizations to foster their own renewal to remain competitive. Agarwal and Helfat (2009) reached the same conclusion when studying discontinuous or incremental strategic renewal in several organizations. They affirmed that innovativeness is part of strategic renewal and may present companies with new challenges and opportunities for such renewal.

Now more than ever in our global, technologically connected world, innovativeness and learning capabilities enable strategic processes, specialized technological knowledge, stabilized networks, and patterns of cooperation that drive successful renewal and greater efficiency in company capabilities (Heidenreich, 2005). In fact, the current importance of digital technologies leads firms to encourage innovativeness to support a climate of creativity among employees and generate ideas that enable organizations to renew themselves, in turn promoting new products/services, processes, markets, and technologies (Du and Luu, 2020). Furthermore, innovativeness enables firms to solve myriad problems by enhancing the company's efficiency and renewal (Martín-Rojas et al., 2017).

We stress that social media use—and digital technologies in general—affects not only technology companies but all types of firms. For instance, Du and Luu (2020) stressed the importance of innovativeness in renewing organizations in the hospitality industry. Examining a sample of SMEs from the manufacturing sector, Rehman et al. (2021) confirmed significant impact of proactiveness on self-renewal. Agarwal and Helfat (2009) also observed this relationship in a variety of industries—sport, automobile, pharmaceutical, semiconductor, television receiver, and typesetting, among others. Social media and digital technologies enhance development of innovativeness in firms from a range of industries, and innovativeness fosters self-renewal at a strategic level. Based on the foregoing literature, we posit that:

H6: *Innovativeness is positively and significantly related to self-renewal*.

3.3 The influence of corporate entrepreneurship—self-renewal—on organizational resilience

Organizational resilience enables companies to respond proactively to changing market demand and disruptions, helping them to develop and leverage their capabilities to interact with adverse disruptions (Williams et al., 2017). Furthermore, a new set of capabilities is emerging to respond to new trends, capabilities that facilitate organizations' reaction to unexpected disruptions (Ortiz-de-Mandojana and Bansal, 2016). Firms demonstrate capability for renewal by searching for opportunities and solutions that enable them to surpass their current capacities, creating new strategies and systems and an active innovation policy that cultivate the organization's resilience (Dess and Lumpkin, 2005; Zighan and Ruel, 2021) to face sudden unexpected and turbulent circumstances.

Organizational resilience is crucial in enabling firms to prosper in threatening environments (Lengnick-Hall et al., 2011), such as the current scenario following the COVID-19 disruption. Organizations build resilience when they adopt effective strategic postures, diagnose their environmental conditions with greater accuracy, renew themselves, develop new capabilities, and create new opportunities (Lengnick-Hall et al., 2011) to adapt to change, survive, and achieve sustainable organizational performance. Ultimately, self-renewal enhances organizational resilience.

Self-renewal reflects the organization's systemic ability to create and maintain different knowledge environments in line with the firm's strategically intentional development process (Zighan and Ruel, 2021). Self-renewal capability leads to continuous improvement, which encompasses all processes of change to benefit the organization as a whole. This process is

designed to improve the company's problem solving and ensure effective management and culture (Zighan and Ruel, 2021). It involves shaping and being shaped by the environment and being constrained by market opportunities and challenges, on the one hand, and by technological and institutional constraints and enablers, on the other (Ahen, 2014). It replaces less-dynamic attributes of the organization with attributes with the potential to affect long-term prospects and thus resilience substantially. We can thus conceptualize organizational resilience as an outcome of entrepreneurial processes and self-renewal activities (Herbane, 2019).

A focus on renewal capability argues that the organization can only provide innovative solutions to unusual situations and become resilient by experiencing a crisis (Wastell et al., 2007), mobilizing for change, and attempting to withstand and resist the shock of change (Bristow and Healy, 2020). Strategic self-renewal thus involves adaptation to change through innovative design, transitioning to the future in ways that affect the firm's success (Ahen, 2014).

The recent COVID-19 disruption has forced organizations to face strenuous circumstances to survive. Their capacity to adapt to change, renew themselves, and overcome problems is fostering astonishing self-awareness and self-efficacy to remain active (Bullough and Renko, 2013; Renko et al., 2020). Their adaptability may be due to previously existing resilience in the organizations and to the new challenges that have forced them to change and adjust their operating systems to face the new threats in their markets. These challenges have enabled them to develop new ways of learning and new entrepreneurial capabilities to survive as resilient organizations (Hedner et al., 2011).

According to Dey et al. (2019), self-renewal is one of these basic entrepreneurial capabilities and fosters organizational resilience in four ways: 1) reducing or eliminating transaction costs; 2) ensuring access to scarce significant resources, institutions, and technologies through renewal to obtain the right institutional structure and proper and ethical access to technologies; 3) exploiting the opportunities generated by and available to firms to face a crisis (which requires turning to new forms of business with some institutional support, such as innovation brokers, bridge organizations, business angels, cooperatives, self-help organizations, retailers, public organizations, social movements); and 4) whenever possible, promoting models of social media and technology use in advance of competitors in ways that reflect the role of innovation. Based on the foregoing, we propose that:

H7: *Self-renewal is positively and significantly related to organizational resilience.*

3.4 The influence of self-renewal and organizational resilience on performance

Although resilience has already been studied as a performance outcome or result of developing and combining individual resilience (DesJardine et al., 2019; Legninck-Hall et al., 2011; Ortiz-de-Madojana and Bansal, 2016), and given that individual resilience is directly and positively related to organizational performance (Anwar et al., 2021), this study considers it as an organizational dynamic capability or inter-functional coordination between the organization and its environment that can foster organizational performance.

Bearing in mind that this interaction between organizations and their environment is also a dynamic process, in which entrepreneurs acquire new knowledge and improve their technological skills to face future activities in turbulent environments (Ayala and Manzano, 2014), organizational resilience may be seen as a way of learning and growing from environmental adversity that enables organizations to emerge stronger than they were initially. In fact, resilience helps companies to become more flexible and adaptable and to remain competitive and learn from the past (Rodríguez Sánchez et al., 2021). These changes, in turn, contribute to performance, since people, groups, and/or organizations manage and adapt to uncertainty (Lee et al., 2013).

Adaptive resilient organizations may then aim to do whatever it takes to define their goals and achieve competitive advantages based on new uncertain situations (Ayala and Manzano, 2010). Their resilience capability enables them to take appropriate action and transform themselves in response to unanticipated events that could threaten their continued existence (Lengnick-Hall et al., 2011). Resilience capability enables the organization to reduce the impact of an interruption by proactively activating strategies to react, reformulate processes, and respond properly to new environments while recovering (Beuren et al., 2022). That is, organizational resilience may improve organizations' performance in disruptive situations.

The current post-COVID-19 scenario has produced various global crises (health, economy, financial, etc.), exposing organizations to environmental disruptions that are difficult to anticipate (Anwar et al., 2021) and overcome. This situation has generated rapid efforts to better understand how resilient organizations—and even nations—might cope more effectively with, and recover from, adversity (OECD, 2021; Yu et al., 2021).

We reinforce the idea that organizational resilience is a process rather than an outcome (Williams et al., 2017) because it processes and leverages firm resources to ensure firms' survival and attempts to gain competitive advantages (Teece et al., 1997). In the current uncertain post-pandemic scenario, developing resilience could help firms become less vulnerable to adversity, recover from crises more quickly, and be more likely to survive

disruptions (Anwar et al., 2021; DesJardine et al., 2019; Ortiz-de-Mandojana and Bansal, 2016).

This view of resilience shows it to be adaptability in the context of the firm's ability to rebound from adversity as strengthened and more resourceful. It requires understanding the architecture of resilience through the engineering definition of robustness, as recognition of a single stable state to which a system can return after disruption and usually improve efficiency (Mamouni Limnios et al., 2014). Translated to a managerial perspective, this view argues that the magnitude of disturbance the system can tolerate and survive directly impacts the company's organizational performance.

Organizational resilience has also been defined as a psychological or behavioral attribute applied at the individual or collective level of behavior. This definition implies that it can be developed by capitalizing on the cumulative psychological strengths of the firm's human capital (Lengnick-Hall et al., 2011; Mamouni Limnios et al., 2014).

Based on this view of organizational resilience, we argue that the emergence of a complex system—in a climate of open communication in which employees feel confident of their ability to explore new options while exploiting what they know and to share information and observations in ways that lead to quick and situation-specific responses when novel conditions emerge (Lengnick-Hall et al., 2011)—enables resilient organizations to maintain high levels of performance in complex and competitive environments.

Further, all literature cited above shows that resilience combines complex systems survival, systems adaptation, absorbance of disturbance, robustness, and ability to rebound and recover from adversity (Mamouni Limnios et al., 2014). Whether or not we always approach organizational resilience as a positive and desirable firm competence in terms of distinctive system characteristics (robustness, recovery, efficiency, adaptation, transformation, complexity renewal, maintenance and function of multiple system states), we argue that more entrepreneurial firms with stronger resilience have better chances for survival now and in the long run. In this vein, drawing on a sample of tourism firms, Suryaningtyas et al. (2019) confirmed empirically that organizational resilience was positively and significantly associated with organizational performance, influencing it directly. Based on the theoretical arguments presented above and the empirical evidence introduced, we propose that:

H8: *Organizational resilience is positively and significantly related to organizational performance.*

Crisis requires society to renew itself, albeit in a disruptive way. The pandemic has suddenly and dramatically transformed our ways of working, living, and relating to each other at global level (Garrido-Moreno et al., 2021). Self-renewal includes reformulating strategies to redefine business and reorganize, reflecting organizational change (Martín-Rojas et al., 2017). As an intrapreneurial reconsideration of traditional practices and construction of future practices (Burström and Wilson, 2015), it is critical to development the organization's future strategies, which may enhance the firm's alignment of existing resources with its environment.

Today's organizational environment often requires firms to adapt their business model more frequently than they used to, due fundamentally to uncertainty and ambiguity in the current turbulent situation. Self-renewal leverages core competences and market opportunities to innovate strategies comprehensively, ranging from products and services to operational processes and organizational strategies that increase the organization's competitiveness (Dung and Giang, 2022); it enables new ideas to renovate the firm's products/services by aligning elements strategically. It also anchors the organization's innovation activities (Sahi et al., 2020).

As a strategic variable, self-renewal enables renewal of the firm's operations strategy and access to organizational resources for business-related projects. It establishes structures and processes in the company by identifying and exploring new profitable opportunities for the business (Dung and Giang, 2022). "To inspire self-renewal, companies must develop an inspiring corporate ambition – a shared dream about the future and the company's role in that future – and must embed that ambition within the organization" (Ghoshal and Bartlett, 1995, p. 153). Bearing the current situation in mind, this assertion suggests revitalization of a firm's operations by changing the scope of its business, market moves, or tactical activities at the operational level to achieve flexible adaptability (Bierwerth et al., 2015; Zahra, 1993). Such practice means that managers and workers eliminate old procedures and routines and replace them with novel contemporary ways of making project progress.

Burström and Wilson (2015) support this idea, focusing on five specific renewal processes. They argue that new design management, novel project control, distinctive system engineering, efficient time management, and different decision-making methods stand out in any firm and positively impact organizational performance. Although each of these renewal processes has different characteristics and a unique impact on organizational performance, all are closely related to organizational attempts to find new ways to compete in business and

should thus be seen as part of an organizational self-renewal process (Burström and Wilson, 2015).

This process seeks to perform self-renewal activities and demands dynamic managerial behavior. A strategy of stability is not conducive to intrapreneurial renewal activities (Zahra, 1993), which entail establishing new consistent businesses under different company names or ideas, such as those oriented, for example, to spinoffs or independent firms (Shu et al., 2019). Moreover, constant self-renewal enables better firm performance through more efficient performance of tasks (Rauch et al., 2009) to implement frequent strategic and organizational changes (Smart and Conant, 1994) and introduce new products and process technologies faster and more efficiently to improve the firm's chances of survival in uncertain situations and industries (Martín-Rojas et al., 2017). As part of intrapreneurship (Antoncic and Hisrich, 2001), self-renewal is central to the survival, growth, and profitability of performance to neutralize and overcome the negative implications of the threats to and weaknesses of companies facing uncertain, ambiguous environments (Martín-Rojas et al., 2019). All this evidence suggests that:

H9: *Self-renewal is positively and significantly related to organizational performance.*

Building on our literature review, Figure 1 presents the research framework developed. This framework describes how social media impact the various dimensions of corporate entrepreneurship, enhance organizational resilience, and translate into better organizational performance. The model includes all hypotheses described above.

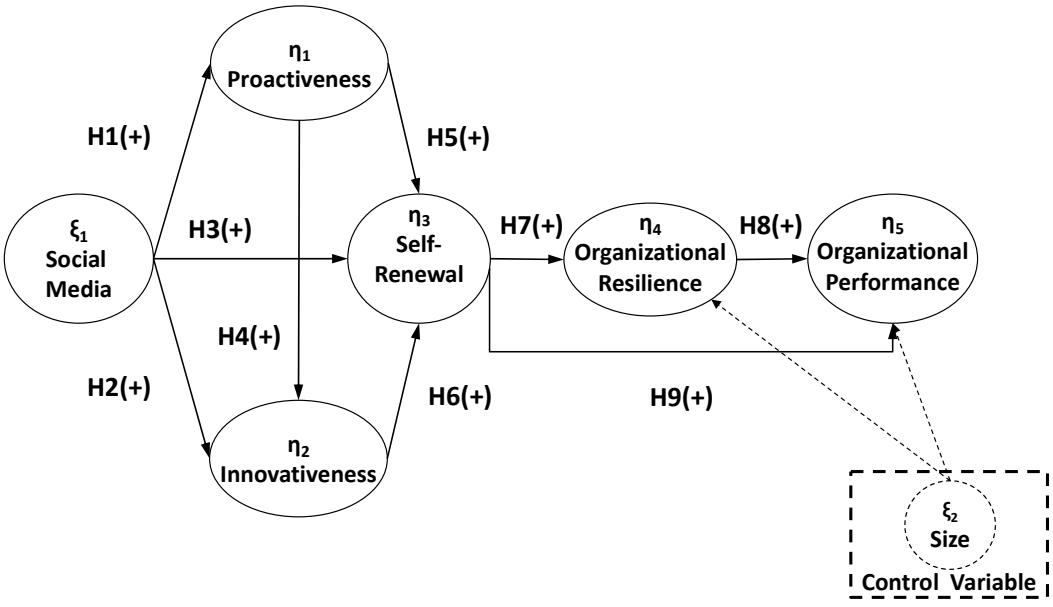

Figure 1: Conceptual Model

4. Methods

4.1 Sample and procedure

Several managers, consultants, and academics with knowledge of the variables analyzed in this study were consulted to analyze the comprehensibility, content, and wording of the items used in the questionnaire. After this feedback was incorporated, the questionnaire was refined and tested in a pilot survey of a random sample of twenty general managers. Their recommendations were also incorporated into the final questionnaire. In the current uncertain environment, it seems crucial to explore the measures SMEs can take to face the challenges emerging through management and strategy in operations, marketing, human resources, R&D, and other key business areas (Garrido-Moreno et al., 2021). Strategic use of social media can leverage the firm's entrepreneurial orientation (innovativeness, proactiveness), providing useful knowledge to find new opportunities for self-renewal (Martín-Rojas et al., 2020). Entrepreneurship is strategic to generating employment and promoting knowledge and research. The pandemic made entrepreneurship more critical to performance (Martín-Rojas et al., 2019), as it brought market stagnation and halted multiple industries, leading companies to seek new business opportunities and requiring them to be more resilient. Resilience reflects the organization's ability to respond quickly, flexibly, and agilely to uncertainty and changing environmental conditions (Ayala and Manzano, 2014; DesJardine et al., 2019; Herbane, 2019; Lengnick-Hall et al., 2011; Renko et al., 2020; Williams et al., 2017).

Spain was selected for the analysis because its economy is one of the most important in Europe. The Spanish market is relatively well developed and fully integrated into the European Union. We chose the region of Andalusia because a homogeneous cultural, legal, and political space makes it possible to reduce the impact of variables that cannot be controlled empirically (Fernández-Pérez et al., 2014). This study used managers responsible for SME management activities (general managers) as key informants. These managers are charged with strategic plans and actions to achieve organizational goals and performance improvements. They obtain information from the firm's departments and establish the staff behaviors expected and supported by the organization (Baer and Frese, 2003). Pretest and prior specific questions determined that the respondents had knowledge of the variables analyzed in the research.

A list of general managers was drawn up with the help of partial funding from the Spanish Ministry of Science and Research and the Ministry of Economy, Innovation and Science of the Junta de Andalucía. Andalusian SMEs with 10-250 employees were selected at random,

following the official standards of the European Commission (2003). SMEs are the engine of the Spanish economy. They represent 99.8% of Spanish businesses and generate 66.4% of employment. At the time of the study, Andalusian companies constituted 15.6% of all companies in Spain. The SABI database provides economic-financial information on more than 1,000,000, companies (940,000 Spanish and 100,000 Portuguese). The Andalusian companies selected from SABI had provided essential economic data (e.g., return on assets, total assets), financial data, and contact information. We contrasted this objective information from the official secondary database (SABI) with the subjective information obtained from the questionnaires. From a population of 15,862 SMEs, we chose 376 companies at random (confidence level of 95%, error of 5% [Table 1]) to which to administer the questionnaires. During September 2020, various computer-assisted interviews were conducted and calls made to companies to increase participation. The number of valid questionnaires obtained was 259 (response rate of 68.88%). To increase the response rate, we offered companies the results of the study and ensured confidentiality and aggregate treatment of the information to reduce possible desirability bias. We found no statistically significant differences between responding and non-responding firms (e.g., comparing number of employees and annual sales) or between early and late responders (Armstrong and Overton, 1977).

Table 1: Technical Details of the Research

Geographical location	Spain (Andalusia)
Methodology	Structured questionnaire
Universe of population	15,862 firms
Sample size (response size)	376 firms (259 firms, 68.88%)
Sample error	5%
Confidence level	95%, p-q=0.50; z=1.96
Period of data collection	September 2020

4.2 Measures

Various multi-item scales with seven-point Likert scales were used to measure the study constructs. These measures had been used in prior research and were adapted to this study.

Social Media: Based on previous scales (Choudhury and Harrigan, 2014; Garrido-Moreno and Lockett, 2016; Martin-Rojas et al., 2020), this construct analyzes frequency of use (1 "*Not very often*," 7 "*Very often*") of the social media platforms most used by SMEs (Facebook, Twitter, Instagram, WhatsApp) to interact with their customers during the pandemic. Confirmatory factor analysis (χ^2_2=21.90; Expected Cross-Validation Index [ECVI]=0.15; Normed Fit Index [NFI]=0.97; Incremental Fit Index [IFI]=0.98; Akaike

Information Criterion [AIC=37.90]; Estimated Non-centrality Parameter [NCP]=19.90; Relative Fit Index [RFI]=0.92; Comparative Fit Index [CFI]=0.98) showed that the scale was valid and reliable (α=0.888). The scales for this variable were adapted to this study (Table 2).

Proactiveness: We used a four-item scale (1 "*Completely disagree*," 7 "*Completely agree*") for proactiveness to measure different aspects of the construct, such as initiative in introducing new products/services, techniques, and technologies; undertaking high-risk projects with high revenue opportunities, acting with courage and daring to achieve the objectives, and adopting an aggressive stance to maximize exploitation of potential business opportunities. These items, developed by Knight (1997), were duly adapted to the present study. Confirmatory factor analysis to validate the scale (χ^2_2=0.90; ECVI=0.07; NFI=0.99; IFI=0.99; AIC=16.90; NCP=1.98; RFI=0.99; CFI=0.99) showed that it had adequate validity and reliability (α= 0.868).

Innovativeness: Drawing on a previous scale (Knight, 1997; Zahra, 1993), we designed a four-item scale (1 "*Has decreased significantly*," 7 "*Has increased significantly*") to measure various aspects of spending on and number of new product/service development activities or development of new technologies, technological innovation, R&D, technological leadership, and innovations. Confirmatory factor analysis (χ^2_2=22.98; ECVI=0.15; NFI=0.96; IFI=0.97; AIC=38.98; NCP=20.98; RFI=0.89; CFI=0.97) demonstrated the scale's validity and reliability (α=0.860).

Self-Renewal: The study used four items developed by Zahra (1993) to measure various aspects of self-renewal, such as reorganization of units and divisions, coordination among business units, flexibility of structures, and training and rewarding of employees for creativity and innovation. These items were duly adapted to the present study. A seven-point Likert scale (1"*Less emphasis*," 7 "*More emphasis*") indicated the emphasis the company gave to different actions related to such co-creation. Confirmatory factor analysis (χ^2_2=3.90; ECVI=0.07; NFI=0.99; IFI=0.99; AIC=19.90; NCP=1.90; RFI=0.99; CFI=0.99) showed that the scale was both valid and reliable (α=0.916).

Organizational Resilience: We used a ten-item scale (1 "*Totally disagree*," 7 "*Totally agree*") to measure resilience. The items, developed by Campbell-Sills and Stein (2007), were duly adapted to the present study. Confirmatory factor analysis led us to eliminate Items 9 and 10. Validation of the resulting scale (χ^2_2=58.13; ECVI=0.35; NFI=0.98; IFI=0.99; AIC=90.13; NCP=38.13; RFI=0.98; CFI=0.99) showed good validity and reliability (α= 0.936).

Organizational Performance: As in prior research, our study evaluated firm performance (García-Morales et al., 2018; Murray and Kotabe, 1999; Venkatraman and Ramunajam, 1986). The managers offered their general opinions on whether ROA, ROE, or ROS had decreased, stayed the same, or increased after the first few months of the pandemic (1 "*Decreased*," 2 "*Stayed the same*," 3 "*Increased*"). These subjective measures were contrasted with available objective measures (e.g., ROA and ROE, obtained from SABI in the following fiscal years) to determine whether the measurement based on managers' perceptions had convergent validity and correlated with the objective measurement. Validity would imply that both objective and subjective measures are valid when calculating a company's performance (Homburg et al., 1999; Palacios-Marques et al., 2015; Venkatraman and Ramanujam, 1986). Like other studies (García-Morales et al., 2018; Palacios-Marques et al., 2015), ours showed convergent validity, obtaining high validity and reliability for the scale (α= 0.817).

Control Variables: Size has been used in previous research on these constructs (Garrido-Moreno et al., 2021), classifying companies by number of employees (1 "*Small enterprises 10-49 employees*," 2 "*Medium-sized enterprises 50-249 employees*").

Table 2: Research Items

Variable	Items	Description	Authors
Social Media (SMED)	SMED1	Facebook	Garrido and Lockett (2016), Martin-Rojas et al. (2020)
	SMED2	Twitter	Choudhury and Harrigan (2014), Garrido-Moreno and Lockett (2016), Martin-Rojas et al. (2020)
	SMED3	Instagram	Choudhury and Harrigan (2014), Garrido-Moreno and Lockett (2016)
	SMED4	WhatsApp	Choudhury and Harrigan (2014), Garrido-Moreno and Lockett (2016)
Proactiveness (PROA)	PROA1	In dealing with competitors, it is very common during the pandemic for our organization to be the first business to introduce new products/services, administrative techniques, and operations technologies to the market.	Knight (1997)
	PROA2	In general, during the pandemic, the top management of our organization had a strong inclination to high-risk projects with high revenue (i.e., with chances of very high returns).	
	PROA3	In general, the top manager of our organization believes that the current health crisis requires bold wide-ranging acts to achieve the organization's objectives.	
	PROA4	When confronted with decision-making situations involving uncertainty resulting from the pandemic, the organization typically adopts a bold and aggressive posture to maximize the probability of exploiting potential opportunities.	
Innovativeness (INNO)	INNO1	The organization's spending on new product/service development activities during the pandemic	Knight (1997), Zahra (1993)
	INNO2	The number of new products/services being developed and introduced by the organization during the pandemic	
	INNO3	The organization's emphasis on developing new technologies and/or technological innovation during the pandemic	
	INNO4	The emphasis of the organization's management on R&D, technological leadership, and innovations during the pandemic	
Self-Renewal (SELF)	SELF1	During the pandemic, the organization is reorganizing units and divisions to increase or maintain organizational innovation.	Zahra (1993)
	SELF2	During the pandemic, the organization is coordinating activities between the business units to deal with the situation, enhancing the organization's innovation.	
	SELF3	During the pandemic, the organization is adopting flexible organizational	

		structures to increase innovation and improve the situation.	
	SELF4	During the pandemic, the organization is training and/or rewarding employees for creativity and innovation.	
Organizational Resilience (RESI)	RESI1	My organization has been able to adapt to change following the COVID-19 disruption.	Campbell-Sills and Stein (2007)
	RESI2	My organization has been able to deal with whatever has followed from the COVID-19 disruption.	
	RESI3	My organization has tried to see humorous side of problems and has taken advantage of them following the COVID-19 disruption.	
	RESI4	Coping with the stress generated by the COVID-19 pandemic has strengthened my organization.	
	RESI5	My organization has tended to bounce back from difficulties or hardships caused by the COVID-19 pandemic.	
	RESI6	My organization has been able to achieve goals despite obstacles generated by the COVID-19 pandemic.	
	RESI7	My organization has been able to stay focused under the pressure caused by COVID-19 pandemic.	
	RESI8	My organization has not been easily discouraged by failures generated by the COVID-19 pandemic and has been able to handle unstable and unpleasant situations.	
	RESI9	My organization has been more successful after the COVID-19 disruption.	
	RESI10	My organization has not succumbed to problems and has remained strong during the pandemic.	
Organizational Performance (PERFOR)	PERFOR1	Return on sales (ROS)	García-Morales et al. (2018), Murray and Kotabe (1999)
	PERFOR2	Return on investment (ROI)	García-Morales et al. (2018), Murray and Kotabe (1999), Venkatraman and Ramunajam (1986)
	PERFOR3	Return on assets (ROA)	Venkatraman and Ramunajam (1986)
Size	SIZE	Number of employees	Garrido-Moreno et al. (2021)

5. Results

LISREL 8.8 software was used to perform structural equation modeling analysis of the proposed research model. Quality of the measurements and hypotheses was evaluated by examining both the measurement and the structural model (Anderson and Gerbing, 1988).

5.1 Measurement model

First, the psychometric properties of the measures used were analyzed using factor analysis (Table 3). The results grouped the 27 items into six factors (principal component analysis method and varimax rotation) that explained 74.72% of the variance. The minimum loading of each item on a factor was 0.617. The resulting factors were organizational resilience (first factor, explains 31.49% of the variance), self-renewal (second factor, 15.30%), social media (third factor, 9.44%), innovativeness (fourth factor, 7.81%), proactiveness (fifth factor, 5.73%), and organizational performance (sixth factor, 4.93%).

Table 3: Rotated Component Matrix for Strategic Measures

Items	1	2	3	4	5	6
SMED1	0.156	0.076	**0.852**	0.126	0.068	0.068
SMED2	0.104	0.104	**0.898**	0.130	0.042	0.076
SMED3	0.123	0.119	**0.810**	0.066	0.062	-0.025
SMED4	0.068	0.081	**0.819**	0.020	0.038	0.018
PROA1	0.076	0.188	0.105	0.377	**0.617**	-0.047
PROA2	-0.003	0.199	0.028	0.300	**0.818**	0.127

PROA3	0.120	0.170	0.040	0.158	**0.840**	0.017
PROA4	0.090	0.186	0.078	0.210	**0.862**	0.001
INNO1	-0.001	0.271	0.204	**0.680**	0.213	0.152
INNO2	0.048	0.037	0.109	**0.829**	0.200	0.147
INNO3	0.063	0.250	0.014	**0.834**	0.211	-0.016
INNO4	0.183	0.219	0.075	**0.772**	0.222	-0.012
SELF1	0.194	**0.785**	0.120	0.276	0.141	0.089
SELF2	0.220	**0.869**	0.111	0.212	0.177	0.087
SELF3	0.232	**0.803**	0.115	0.193	0.233	0.118
SELF4	0.138	**0.792**	0.131	0.120	0.259	-0.053
RESI1	**0.731**	0.184	0.059	0.036	0.003	-0.003
RESI2	**0.758**	0.081	0.142	0.051	0.018	0.216
RESI3	**0.758**	0.196	0.020	0.037	-0.064	0.093
RESI4	**0.810**	0.141	0.120	0.023	0.112	0.033
RESI5	**0.890**	0.098	0.070	0.059	0.017	0.068
RESI6	**0.903**	0.071	0.073	0.090	0.063	0.013
RESI7	**0.881**	0.020	0.047	0.043	0.119	0.043
RESI8	**0.845**	0.065	0.097	0.067	0.124	0.091
PERFOR1	0.152	0.110	-0.028	0.063	-0.015	**0.885**
PERFOR2	0.188	0.061	-0.034	0.072	-0.032	**0.889**
PERFOR3	0.029	-0.003	0.167	0.055	0.124	**0.743**
Good Fit Levels	Resilience	Self-Renewal	Social Media	Innovativeness	Proactiveness	Performance
Cronbach's Alpha (α)**≥0.7**	α=0.936	α=0.916	α=0.888	α=0.860	α=0.868	α=0.817
χ^2 Degrees of Freedom	χ^2_2=58.13	χ^2_2=3.90	χ^2_2=21.90	χ^2_2=22.98	χ^2_2=0.90	---
Expected Cross-Validation Index (ECVI) **Lowest**	ECVI=0.35	ECVI=0.07	ECVI=0.15	ECVI=0.15	ECVI=0.07	---
0.95≤Normed Fit Index (NFI) **≤1.00**	NFI=0.98	NFI=0.99	NFI=0.97	NFI=0.96	NFI=0.99	---
0.95≤Incremental Fit Index (IFI) **≤1.00**	IFI=0.99	IFI=0.99	IFI=0.98	IFI=0.97	IFI=0.99	---
Akaike Information Criterion (AIC) **Lowest**	AIC=90.13	AIC=19.90	AIC=37.90	AIC=38.98	AIC=16.90	---
Estimated Non-Centrality Parameter (NCP) **Lowest**	NCP=38.13	NCP=1.90	NCP=19.90	NCP=20.98	NCP=1.98	---
0.90≤Relative Fit Index (RFI) **close to 1.00**	RFI=0.98	RFI=0.99	RFI=0.92	RFI=0.89	RFI=0.99	---
0.97≤Comparative Fit Index (CFI) **≤1.00**	CFI=0.99	CFI=0.99	CFI=0.98	CFI=0.97	CFI=0.99	---

Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalization. A rotation converged in six iterations.

Table 4 presents the means, standard deviations, and correlation matrices between factors for the study variables. We find positive and significant correlations between the research variables, as well as a positive correlation between size and various study constructs.

Table 4: Means, Standard Deviations, Correlations, and Confidence Intervals

Variable	Mean	Standard Deviations	1	2	3	4	5	6	7
1. Social Media	3.96	1.92	1.000	0.03-0.30	0.11-0.38	0.20-0.45	0.13-0.38	-0.02-0.26	-0.06-0.27
2. Proactiveness	4.53	1.55	0.18**	1.000	0.44-0.70	0.37-0.62	0.06-0.35	-0.06-0.25	0.01-0.35
3. Innovativeness	4.57	1.44	0.23***	0.55***	1.000	0.41-0.66	0.10-0.38	0.02-0.31	-0.01-0.32
4. Self-renewal	4.78	1.65	0.26***	0.49***	0.49***	1.000	0.29-0.56	0.14-0.43	0.04-0.35
5. Organizational Resilience	5.97	0.82	0.24***	0.18**	0.19**	0.36***	1.000	0.16-0.42	0.03-0.33
6. Organizational Performance	1.80	0.64	0.12*	0.10	0.17**	0.15*	0.22***	1.000	0.10-0.45
7. Size	1.35	0.47	0.07	0.09	0.09	0.15*	0.12*	0.14*	1.000

Notes: * p<0.05; ** p<0.01; *** p<0.001; n=259. Numbers above the diagonal represent the confidence interval between each pair of constructs (95%).

Composite reliability ranged from 0.89 to 0.95 (values above the recommended minimums, >0.70), average variance extracted (AVE) from 0.67 to 0.77 (amount of variance

captured by a construct is greater than the amount of measurement error, AVE>0.50), and Cronbach's Alpha from 0.81 to 0.93 (recommended minimum >0.707 [Nunnally and Bernstein, 1994]), indicating satisfactory levels of reliability. Each loading (λ) related significantly to its underlying factor (t-values greater than 11.80). The scales' reliability and internal consistency are supported by composite reliability, AVE, and Cronbach's Alpha (Fornell and Larcker, 1981; Hair et al., 2010), the extent to which different attempts to measure the same concept (convergent validity) are consistent with all multi-item constructs (Table 5).

Table 5: Measurement Model Results

Variable	Items	λ*	R^2	Adjustment Measurement
Social Media	SMED1	0.92*** (36.82)	0.92	α=0.888; Compound Reliability=0.915 Shared Variance=0.731
	SMED2	0.97*** (64.72)	0.97	
	SMED3	0.75*** (17.72)	0.56	
	SMED4	0.76*** (20.72)	0.57	
Proactiveness	PROA1	0.71*** (14.14)	0.50	α=0.868; Compound Reliability=0.898 Shared Variance=0.691
	PROA2	0.80***(22.27)	0.64	
	PROA3	0.87***(31.53)	0.75	
	PROA4	0.93*** (35.57)	0.86	
Innovativeness	INNO1	0.71*** (11.80)	0.50	α=0.860; Compound Reliability=0.890 Shared Variance=0.671
	INNO2	0.75*** (16.92)	0.56	
	INNO3	0.92*** (31.81)	0.84	
	INNO4	0.88*** (27.44)	0.77	
Self-Renewal	SELF1	0.86*** (27.86)	0.72	α=0.916; Compound Reliability=0.931 Shared Variance=0.774
	SELF2	0.97*** (84.17)	0.94	
	SELF3	0.90*** (37.62)	0.79	
	SELF4	0.78*** (19.92)	0.59	
Organizational Resilience	RESI1	0.74***(15.32)	0.54	α=0.936; Compound Reliability=0.955 Shared Variance=0.729
	RESI2	0.78***(18.83)	0.60	
	RESI3	0.81***(15.66)	0.65	
	RESI4	0.85***(21.88)	0.72	
	RESI5	0.93***(47.16)	0.86	
	RESI6	0.94***(59.00)	0.88	
	RESI7	0.90***(35.24)	0.81	
	RESI8	0.86***(26.21)	0.73	
Organizational Performance	PERFOR1	0.94*** (29.19)	0.88	α=0.817; Compound Reliability=0.907 Shared Variance=0.768
	PERFOR2	0.95*** (32.61)	0.90	
	PERFOR3	0.72*** (12.75)	0.51	

Goodness of Fit Statistics	**Good Fit Levels**	**Values**
$\chi^2_{\text{Degrees of Freedom}}$ (Chi-Square significance level)	$p \geq 0.01$	χ^2_{330}=535.95 (p>0.01)
Estimated Non-Centrality Parameter (NCP)	Lowest for comparison model	NCP=205.95
Root Mean Square Error of Approximation (RMSEA)	0≤RMSEA≤0.05	RMSEA=0.04
Expected Cross-Validation Index (ECVI)	Lowest for comparison model	ECVI=2.67
Comparative Fit Index (CFI)	0.97≤CFI≤1.00	CFI=0.98
Incremental Fit Index (IFI)	0.95≤IFI≤1.00	IFI=0.98
Relative Fit Index (RFI)	0.90≤RFI close to 1.00	RFI=0.95
Normed Fit Index (NFI)	0.95≤NFI≤1.00	NFI=0.96
Non-Normed Fit Index (NNFI)	0.97≤NFI≤1.00	NNFI=0.98
Akaike Information Criterion (AIC)	Lowest for comparison model	AIC=687.95
Consistent Akaike Information Criterion (CAIC)	Lowest for comparison model	CAIC=1034.27

Notes: λ*=Standardized Structural Coefficient; R^2=Reliability; α=Alpha Cronbach; f.p. =fixed parameter; * $p<0.05$; ** $p<0.01$; *** $p<0.001$ (two-tailed).

We performed the necessary tests for discriminant validity through chi-square difference tests. Initially, we obtained the chi-square differences between a model that restricts the estimated correlation parameter between each pair of latent constructs to 1.0 (restricted model) and an unconstrained model and found no perfect correlations between the constructs, indicating discriminant validity (Anderson and Gerbing, 1988). Similarly, no confidence interval in the estimations of correlations between each pair of factors contained the value 1 for the key constructs (Table 4), confirming that each construct differed from the others (Anderson and Gerbing, 1988; Fornell and Larcker, 1981). The statistical values' measurement model presented good fit (χ^2_{330}=535.95 (p>0.01); NFI=0.96; NNFI=0.98; CFI=0.98; IFI=0.98; NCP=205.95; RFI=0.95; RMSEA [Root Mean Square Error of Approximation]=0.04; ECVI=2.67; AIC=687.95; CAIC [Consistent Akaike Information Criterion]=1034.27). All modification indices for beta pathways between major variables were small, and additional paths would not significantly improve fit.

Finally, different measures were established to reduce common method bias. First, we ensured anonymity of the surveys, randomized order of the items, communicated the study objectives, and used previously validated scales (Podsakoff et al., 2003; Podsakoff and Organ, 1986). Next, Harman's one-factor test yielded favorable results (a single component did not explain most of the variance, the largest component only explained 30.55%, and several components took eigenvalues>1.0). The fit was worse for the one-dimensional model than for the measurement model (research compared the one-factor model to the measurement model). Finally, a common latent factor (first-order factor) was added to the researchers' theoretical model with all measures as indicators. The differences between the indicator with the common latent factor and the previous indicator were lower than 0.200. Based on all these results, common method bias is not a serious problem in this study.

5.2 Structural model

To test the proposed hypotheses, we used a recursive structural model with an exogenous latent variable (Social Media, ξ_1), a first-grade endogenous latent variable (Proactiveness, η_1), and four second-grade endogenous latent variables (Innovativeness, η_2; Self-Renewal, η_3; Organizational Resilience, η_4; and Organizational Performance, η_5). Size was used as control variable. Covariance and asymptotic covariance matrices were used as input in SEM estimating direct, indirect, and total effects (Table 6). The standardized path coefficients of the structural model (Figure 2) provided evidence of the hypothesized relationships and indicated good overall fit of the structural model (χ^2_{339}=548.57 (p>0.01); NFI=0.96; NNFI=0.98; IFI=0.98; NCP=209.57; RFI=0.95; CFI=0.98; RMSEA=0.04).

Table 6: Results of Proposed Structural Model (Direct, Indirect, and Total Effects)

Effect from	To		Direct Effects[a]	*t*	Indirect Effects[a]	*t*	Total Effects[a]	*t*
Social Media	→	Proactiveness	0.16*	2.29			0.16*	2.29
Social Media	→	Innovativeness	0.16*	2.25	0.09*	2.10	0.25**	3.21
Social Media	→	Self-Renewal	0.20**	3.17	0.13**	3.17	0.33***	4.93
Social Media	→	Organizational Resilience			0.13***	3.40	0.13***	3.40
Social Media	→	Organizational Performance			0.07*	2.54	0.07*	2.54
Proactiveness	→	Innovativeness	0.55***	6.60			0.55***	6.60
Proactiveness	→	Self-Renewal	0.27**	2.80	0.18**	2.87	0.45***	6.81
Proactiveness	→	Organizational Resilience			0.19***	4.56	0.19***	4.56
Proactiveness	→	Organizational Performance			0.10**	2.88	0.10**	2.88
Innovativeness	→	Self-Renewal	0.33***	3.60			0.33***	3.60
Innovativeness	→	Organizational Resilience			0.14**	2.94	0.14**	2.94
Innovativeness	→	Organizational Performance			0.08*	2.40	0.08*	2.40
Self-Renewal	→	Organizational Resilience	0.41***	5.31			0.41***	5.31
Self-Renewal	→	Organizational Performance	0.15	1.78	0.08*	2.31	0.23**	3.00
Organizational Resilience	→	Organizational Performance	0.19*	2.47			0.19*	2.47
Size	→	Organizational Resilience	0.08	1.06			0.08	1.06
Size	→	Organizational Performance	0.21*	2.37	0.02	1.03	0.23**	2.59

Goodness of Fit Statistics	**Good Fit Levels**	**Values**
$\chi^2_{\text{Degrees of Freedom}}$ (Chi-Square significance level)	$p \geq 0.01$	$\chi^2_{339}=548.57$ ($p>0.01$)
Estimated Non-Centrality Parameter (NCP)	Lowest for comparison model	NCP=209.57
Root Mean Square Error of Approximation (RMSEA)	0≤RMSEA≤0.05	RMSEA=0.04
Expected Cross-Validation Index (ECVI)	Lowest for comparison model	ECVI=2.65
Comparative Fit Index (CFI)	0.97≤CFI≤1.00	CFI=0.98
Incremental Fit Index (IFI)	0.95≤IFI≤1.00	IFI=0.98
Relative Fit Index (RFI)	0.90≤RFI close to 1.00	RFI=0.95
Normed Fit Index (NFI)	0.95≤NFI≤1.00	NFI=0.96
Non-Normed Fit Index (NNFI)	0.97≤NFI≤1.00	NNFI=0.98
Akaike Information Criterion (AIC)	Lowest for comparison model	AIC=682.57
Consistent Akaike Information Criterion (CAIC)	Lowest for comparison model	CAIC=987.88

Notes: [a] Standardized Structural Coefficients; *p<.05;**p<.01;***p<.001(two-tailed).

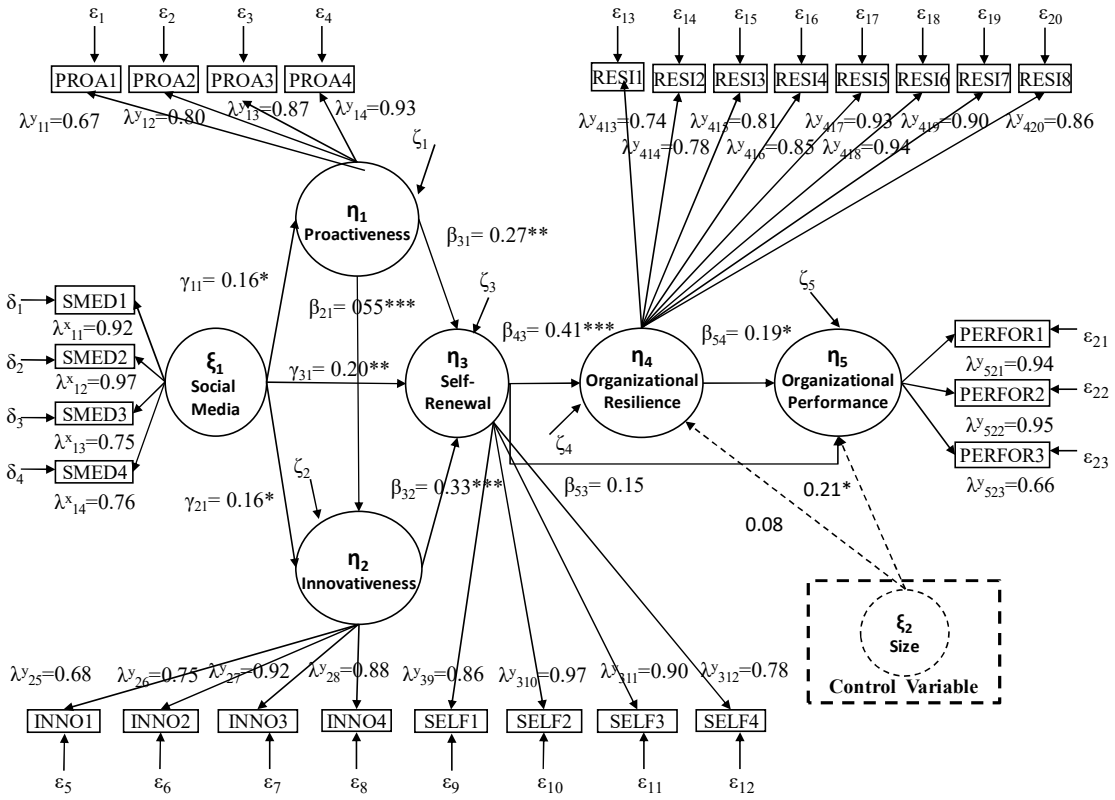

Figure 2: Results of Proposed Structural Model

The structural model enables us to support most of the hypotheses. The data confirmed an effective relationship of social media to proactiveness (H1: γ_{11}=0.16, p<0.05), innovativeness (H2: γ_{21}=0.16, p<0.05), and self-renewal (H3: γ_{31}=0.20, p<0.01). We also obtained a positive impact of proactiveness on innovativeness (H4: β_{21}=0.55, p<0.001) and self-renewal (H5: β_{31}=0.27, p<0.01), and self-renewal is influenced by innovativeness (H6: β_{32}=0.33, p<0.001). Further, the data show an indirect effect of social media on innovativeness (0.09 p<0.05, see Bollen [1989] for calculation rules) through proactiveness (0.16x0.55). The total influence of social media on innovativeness is thus 0.25 (p<0.01). Comparing the magnitudes of these effects, we observe that the global effect of social media on innovativeness is larger than the effect of proactiveness on innovativeness. Similarly, self-renewal is influenced by social media (0.13 p<0.01) indirectly through proactiveness (0.16x0.27), proactiveness/innovativeness (0.16x0.55x0.33), and innovativeness (0.16x0.33). The total influence of social media on self-renewal is thus 0.33 (p<0.001). Proactiveness also indirectly influences self-renewal (0.18 p<0.01) through innovativeness (0.55x0.33). The total influence of proactiveness on self-renewal is thus 0.45 (p<0.001). Comparing the magnitudes of these effects, we observe that the global effect of proactiveness on self-renewal is larger than the effect of social media or innovativeness.

Further results show a positive relationship between self-renewal and organizational resilience (H7: β_{43}=0.41, p<0.001) and between organizational resilience and organizational performance (H8: β_{54}=0.19, p<0.05). The relationship between self-renewal and organizational performance was not significant, indicating lack of support for the last hypothesis (H9: β_{53}=0.15, p>0.05). Other indirect effects on organizational resilience come from social media (0.13, p<0.001) through proactiveness/self-renewal (0.16x0.27x0.41), proactiveness/innovativeness/self-renewal (0.16x0.55x0.33x0.41), innovativeness/self-renewal (0.16x0.33x0.41), and self-renewal (0.20x0.41); proactiveness (0.19, p<0.001) through innovativeness/self-renewal (0.55x0.33x0.41) and self-renewal (0.27x0.41); and innovativeness (0.14, p<0.01) through self-renewal (0.33x0.41). Comparison of the magnitudes of these effects shows that the total effect of self-renewal on organizational resilience is larger than the effect of social media, proactiveness, or innovativeness on organizational resilience. We also obtain significant and indirect effects on organizational performance of social media (0.07, p<0.05), proactiveness (0.10, p<0.01), innovativeness (0.08, p<0.05), and self-renewal (0.08, p<0.05). In the case of self-renewal, the direct effect is not significant, but the sum of the direct and indirect effects generates a total effect of 0.23 (p<0.01). Comparing the magnitudes of these effects shows that the total effect of social media, proactiveness, innovativeness, and self-renewal on organizational performance is significant and positive. Nevertheless, the effect of self-renewal on organizational performance is larger than the effect of social media, proactiveness, or innovativeness on organizational resilience. All effects are displayed in Table 6. As to the effects of the control variables introduced, only the relationship between size and organizational performance was positive and significant (0.23, p<0.01). Overall, the results confirm that the model provides a good explanation of proactiveness (R^2=0.13), innovativeness (R^2=0.35), self-renewal (R^2=0.38), organizational resilience (R^2=0.18), and organizational performance (R^2=0.14).

We then checked to see whether the results fulfilled the conditions defined by Baron and Kenny (1986) for the mediation effect when determining the mediating role of a variable: (1) The independent variable must affect the mediator in the first equation. The results for Hypothesis 7 provide evidence of the impact of self-renewal on organizational resilience. (2) The independent variable must be shown to affect the dependent variable in the second equation. Hypothesis 9, on self-renewal and organizational performance, demonstrates this condition. (3) The mediator must affect the dependent variable in the third equation. Hypothesis 8 shows this significant effect, demonstrating the influence of organizational resilience on performance. (4) The effect of the independent variable on the dependent

variable must be nonsignificant when controlling for the mediator to indicate complete mediation in the fourth equation. All these effects are recorded in Table 4 and Figure 2 of our analysis. If these conditions hold in the predicted direction, the effect of the independent variable on the dependent variable will be smaller in the third than in the second equation; otherwise, mediation is partial. Since perfect mediation (Kearney and Morris, 2015) holds if the independent variable has no effect when the mediator is controlled, perfect mediation of organizational resilience between self-renewal and organizational performance is achieved.

Finally, we compared alternative models to confirm that the hypothesized model best represents the data (Hair et al., 2010). Comparison of the proposed structural model (Model 1) to alternative models shows that Model 1 is the most parsimonious, preferable, and acceptable model, supporting relationships among the constructs analyzed (Table 7). For example, Model 4 had a worse RMSEA (Δ=0.003), ECVI (Δ=0.10), AIC (Δ=27.32), and NCP (Δ=28.32). The results thus confirm that Model 1 is preferred to Model 4 ($\Delta\chi^2$=28.86) and to the other models.

Table 7: Proposed Structural Model against Alternative Statistical Model

Model	Description	χ^2	$\Delta\chi^2$	RMSEA	ECVI	AIC	NCP
1	Structural proposed model	548.57		0.049	2.65	682.57	209.57
2	W.R. Social Media to Innovativeness	552.53	3.96	0.049	2.65	684.53	212.53
3	W.R. Social Media to Self-Renewal	555.52	6.95	0.050	2.66	687.52	215.52
4	W.R. Proactiveness to Innovativeness	577.89	29.32	0.052	2.75	709.89	237.89
5	W.R. Proactiveness to Self-Renewal	553.79	5.22	0.049	2.66	685.79	213.79
6	W.R. Innovativeness to Self-Renewal	560.94	12.37	0.050	2.69	692.94	220.94
7	W.R. Self-Renewal to Organizational Resilience	563.87	15.30	0.051	2.70	695.87	223.87
8	W.R. Organizational Resilience to Organizational Performance	550.86	2.29	0.049	2.65	682.86	210.86
9	W.R. Self-Renewal to Organizational Performance	551.01	2.44	0.049	2.65	683.01	211.01

Notes: W.R. = Without relationship.

6. Discussion, implications, and future research

6.1 Discussion

SMEs are currently facing an extremely turbulent and challenging business landscape. To survive in this VUCA world, they must anticipate external changes and adapt quickly to them (Troise et al., 2022). In this context, organizational resilience emerges as a key capability, enabling firms to handle unexpected events effectively, recover from crisis, and even grow despite adversity (Hillmann and Guenter, 2021). Additionally, innovation and entrepreneurial initiatives, fueled and facilitated by SMT use (Chatterjee et al., 2022), are fundamental variables to adapt and compete successfully in today's digital age. Despite the significance of the phenomena, empirical research on these issues remains scarce, and more knowledge is

needed to better explain how SMEs can develop greater organizational resilience and which factors impact this resilience (Xie et al., 2022). Our study seeks to fill this gap by examining organizational resilience empirically in the context of SMEs, while also analyzing its main antecedents in the current changing scenario. To this end, the proposed research model analyzes how social media use impacts the different dimensions of corporate entrepreneurship, while also enhancing organizational resilience and creating business value.

Our findings are consistent with previous literature but also yield new insights into the impact of organizational resilience on firm performance. First, the results confirm that SMT use significantly and positively impacts the various dimensions of corporate entrepreneurship. This finding is consistent with evidence obtained in prior studies establishing that social media use fosters entrepreneurship initiatives and promotes entrepreneurial orientation at organizational level (Parveen et al., 2016; Martín-Rojas et al., 2020; Troise et al., 2021). Our findings confirm the importance of digital technologies and social media as basic enablers of entrepreneurial activities in SMEs in today's highly dynamic environment (Chatterjee et al., 2022). The results also reveal a positive impact of self-renewal on organizational resilience, highlighting the significance of this entrepreneurial capability. Our study thus empirically supports insights from prior research (Herbane, 2019; Xia et al., 2022; Zighan et al., 2021) and demonstrates that entrepreneurial orientation and strategic renewal contribute to developing SMEs' resilience. In line with recent studies (Suryaningtyas et al., 2019; Beuren et al., 2022), we obtained a positive impact of organizational resilience on firm performance, confirming the crucial significance of this variable in the current competitive context. In fact, our results reveal that organizational resilience also mediates the impact of self-renewal on performance. Contrary to other studies that observed a positive link between self-renewal and performance (Aidoo et al., 2021; Martin-Rojas et al., 2020), our study did not find this relationship to be statistically significant. As explained in the previous section, the data confirm perfect mediation of organizational resilience in the relationship between self-renewal and organizational performance. These findings extend current knowledge of the topic by suggesting that firms must be not only entrepreneurial but also resilient to adapt and survive the challenges of a VUCA environment.

6.2 Theoretical contribution

As previously mentioned, our research model is grounded in dynamic capabilities theory (Teece et al., 1997), since most of the variables studied here (entrepreneurial capabilities and organizational resilience) reflect the capabilities of an organization that aims to be dynamic.

Such capabilities anticipate, seize opportunities, and adapt organizations to their environment in a way that permits them to exploit both internal and external enterprise-specific competences and face the organization's dynamic environment successfully (Augier and Teece, 2009). This paper analyzes proactiveness, innovativeness, and self-renewal as entrepreneurial capabilities. It also studies organizational resilience as a firm capability that fosters rather than results from organizational performance (Anwar et al., 2021). These capabilities are strategic assets that connect novel knowledge from SMTs to corporate entrepreneurship in the context of uncertain environmental changes and thus reinforce the importance of resilience.

Performed in the context of the digital revolution resulting from the COVID-19 disruption, our study also shows that SMTs encourage digital ecosystems and promote dynamic capabilities theory because dynamic capabilities enable firms to create, extend, and modify how they make a living, even when undergoing alterations in their resources, operating capabilities, scale and scope of business, products, customers, ecosystems, and other features of their external environments (Helfat and Raubitschek, 2018; Lardón-López et al., 2022; Troise et al., 2022).

This paper thus extends the literature on digital technologies, entrepreneurship, and strategic management in general by showing that social media impact organizational performance through corporate entrepreneurship, highlighting the mediating role of organizational resilience in the relationship between entrepreneurship and performance. We thus highlight the following contributions to the literature:

Firstly, our findings extend the literature on information technology by confirming how social media use helps firms not only to enhance relationships with customers but also to improve the various dimensions of corporate entrepreneurship, such as proactiveness, innovativeness, and self-renewal. Along the lines of prior studies (Parveen et al., 2016; Martin-Rojas et al., 2020; Troise et al., 2021), results indicate that use of social media platforms enables firms to capture relevant knowledge from the market, enhancing the firm's capabilities to act proactively and develop successful innovations. The findings also confirm that social media use significantly enhances self-renewal behavior, helping firms to transform internally to adapt to changing environments (Martin-Rojas et al., 2020). As these relationships have not been examined in the context of SMEs, the study contributes to the literature by providing significant insights to academics interested in the topic.

Secondly, the findings expand the literature on corporate entrepreneurship, as the paper describes empirically the interrelationships among this variable's main dimensions, as well as

the impact of entrepreneurial behavior on firm performance. Although research on this phenomenon has increased in recent years, we lack knowledge of the specific relations among the dimensions of corporate entrepreneurship (Rehman et al., 2021). Our results advance this knowledge by confirming how proactiveness directly impacts innovation capability. Proactive firms have a forward-looking perspective and are more flexible and open to change, and this perspective helps them to enhance their innovative orientation. Our findings also show the positive impact of proactiveness and innovativeness on self-renewal. They suggest that proactive firms are better able to renew themselves. Because they are aware of changing market needs and involved in innovation, these firms can transform their processes and inner capabilities to exploit new business opportunities (Martin-Rojas et al., 2020)

Finally, the paper provides useful insights for the strategic management literature. In the dynamic business situation recently experienced, resilience has emerged as a key organizational factor to help firms address environmental disruptions (Saad et al., 2021). Since SMEs are especially vulnerable to external shocks, organizational resilience is a key issue not only for their survival but also to enable them to adapt to changing market conditions and transform threats into opportunities (Zighan and Ruel, 2021). Our study confirms that organizational resilience positively impacts firm performance in the SMEs analyzed. Our results also reveal how resilience mediates the effect of self-renewal on organizational performance. Furthermore, we find that organizational resilience is a fundamental prerequisite for SMEs to succeed and create business value in today's uncertain scenario. We not only establish a mediating role of organizational resilience in Spanish SMEs' performance but determine that this mediation is full and perfect (Kearney and Morris, 2015). The results thus indicate that organizational resilience is a major factor in an organization's long-term performance and enables firms to adapt in the face of an unexpected crisis, turbulence, and/or adversity (Beuren et al., 2022) by improving their self-renewal and thus their entrepreneurial vision.

6.3 Managerial implications

Our study has also significant implications for managers and policy makers. As mentioned above, digital technologies enable or enhance unprecedented convergence of computing, communications, content, and networking behaviors (Elia et al., 2020). They are facilitators, mediators, or outcomes of entrepreneurial operations and the overall business model, and they democratize entrepreneurship. Social media technologies are one of the most significant digital technologies globally (Nambisan, 2017) and have become a vital resource for

entrepreneurs (Olanrewaju et al., 2020). Our study findings stress the need for SMEs to make good use of social media for marketing, customer relationship management, and information sourcing to improve their capabilities during the opportunity-seeking stage (Troise et al., 2021). We thus recommend that managers invest more effort in using social media, as these media have remarkable potential as a source of new knowledge for the firm. SME managers must leverage the full potential of these platforms, not only for marketing goals but also as useful tools to promote connectivity and entrepreneurial behavior inside the firm.

These implications can be extended to recommend that policymakers and governments introduce specific policies to increase SMEs' social media use. Such policies could encourage companies to invest in these new digital technologies, improve promotion of social media, or design specific programs to increase appreciation of these media. In the digital era, it is crucial that companies leverage new digital technologies and tools proactively to embrace the digital economy (Lardón-López et al., 2022).

As to entrepreneurship, managers should encourage firms' proactiveness in acquiring entrepreneurial skills to enable them to identify new partners with better knowledge of the technology in greatest demand or to acquire superior tools before their competitors do (Goodman et al., 2017). Managers should also drive innovativeness within the firm by developing an organizational culture that promotes and supports novel ideas, experimentation, and openness to new ideas. We study both variables as central to innovative organizational behavior and as promoting renewal of companies (Lumpkin and Dess, 1996) through pursuit business opportunities to commit and introduce new services while also acquiring knowledge of market opportunities (Joshi et al., 2015; Pérez-Luño et al., 2011).

By strategically renewing their SMEs, managers demand tactical activities, engaging in dynamic managerial behavior and processes that revitalize the firm's operations by promoting professional individual contribution. Managers should seek to achieve organizational renewal by changing the scope of the firm's business activities, making novel market moves, and enhancing the firm's capability exploitation (Zahra, 1993). Such self-renewal will yield high returns in technological industries, as it renews the company's capabilities and increases its capacity to acquire and use new competences that improve performance (Covin and Miles, 2008; Zahra et al., 2000).

As to corporate entrepreneurship, all organizations in today's digital society must face a new global reality that requires increased entrepreneurial leadership (Kuratko and Audretsch, 2013). Organizations must develop and extend their corporate entrepreneurship to be more dynamic and flexible and increase their orientation to organizational change (Martín-Rojas et

al., 2020; Rehman et al., 2021). They must also identify opportunities in the new digital-era market. Managers should exploit these opportunities by creating digital entrepreneurial ecosystems (Elia et al., 2020) and searching for and learning digital strategies that enable development of interorganizational and social collaborative networks (Ritala et al., 2021) to gain competitive advantages.

In a post-COVID-19 scenario, companies must adapt to new technological, regulatory, and competitive changes in the industry (Agarwal and Helfat, 2009). COVID-19 and other macro-level events have shown that external disruptions are inevitable (Anwar et al., 2021). Our findings show that developing organizational resilience as a capability can enable Spanish SMEs not only to survive but to perform well throughout a crisis. The goal of managers in such firms should be to develop organizational resilience, such that functional operations and the flow of daily systems and processes quickly return to normal, even under adversity.

Managers must also ensure that their organizations have the skills and abilities to analyze the maximum diversity of behavioral responses in the face of uncertain and unpredictable conditions. To this end, they must design policies and practices that can actively operationalize organizational resilience to obtain potential benefits from their firm's strategic capability (Lengnick-Hall et al., 2011). This paper recommends operationalizing organizational resilience by adopting a holistic view of the organization's capacity for resilience as embedded in a set of organizational-level knowledge and capabilities, and organizational routines and processes by which the organization orients itself conceptually, acts decisively to move forward, and establishes a setting of diversity and adjustable integration through which to overcome the potentially debilitating consequences of a disruptive shock (Lengnick-Hall et al., 2011; Rodríguez-Sánchez et al., 2021). Operationalizing these learning routines and processes enables the firm to implement profound organizational changes and conscious design in varying degrees when transforming its dynamic capabilities to adapt innovatively and maintain sustained competitive advantage over a long period of time.

Managers could develop values that lead to collaboration routines and habits of flexibility, create open and interpersonal communication channels, provide informal and face-to-face dialogue between individuals, seek multiple sources of information, encourage unlearning of obsolete or dysfunctional heuristics, and promote creativity (Yang and Hsu, 2018). These changes can reduce costs in the long run, enabling organizations to build strong dimensions of economic and financial performance, maintain customer loyalty, and promote learning

processes to achieve organizations' resilience in competitive environments (Beuren et al., 2022).

7. Conclusions, limitations, and future research

This study has examined empirically how SMEs can become more resilient and improve their organizational performance in today's changing markets by enhancing digitalization and promoting entrepreneurial behaviors. Drawing on dynamic capabilities theory, we examined the impact of social media use on the various dimensions of internal corporate entrepreneurship (proactiveness, innovativeness, and self-renewal), while also analyzing the interactions among these dimensions and the role of organizational resilience in the process. The results from analysis of a sample of 259 Spanish SMEs confirm the proposed research model and highlight the crucial role of organizational resilience in value creation through direct impact on firm performance. The findings also have significant implications for theory and practice, providing managers with a guide or "recipe" to adapt their firms, recover business, and succeed in our current changing environmental conditions.

Although this study is one of the first to examine empirically how social media use can help SMEs to become more entrepreneurial and resilient, it is not without limitations. First, the data collected were responses subject to individual interpretation by the respondents (Podsakoff and Organ, 1986). To mitigate social desirability bias of the self-report data, we anonymized the study questionnaires, reducing this bias even on sensitive topics (Konrad and Linnehan, 1995). Further, Harman's single-factor test and other tests confirmed the absence of common method variance (Podsakoff and Organ, 1986). Although our contrast of objective and subjective measures of organizational performance showed no significant differences, we recommend that future research use measures of independent and dependent variables obtained from different sources to reduce any additional effects of response bias (Konrad and Linnehan, 1995; Podsakoff et al., 2003; Podsakoff and Organ, 1986). Future studies might also incorporate new variables to measure organizational performance.

Second, we recommend performing future longitudinal studies to better capture the dynamic nature of the variables analyzed. Our study examined the directions and possibilities of the variables before constructing the research model, building on various prior studies and existing theories. It also integrated temporal considerations into measurement of variables that might be affected by such issues (Hair et al., 2010). Future research could investigate the long-term performance of resilient SMEs after they have had a chance to absorb the pressures of the crisis.

Finally, the proposed hypotheses describe the relationship of social media to proactiveness, innovativeness, and self-renewal; and the latter's direct and indirect influence on organizational resilience and performance. Other constructs, such as organizational learning (García-Morales et al., 2018) or new business creation (Knight, 1997; Zahra, 1993), could be incorporated to enrich the analysis. Our focus on resilience, for example, identified a significant impact on performance, but other potential benefits and antecedents of the concept should be analyzed. Additionally, the current importance of digital tools suggests that additional studies are needed to deepen knowledge of the concept and role of digital entrepreneurship. Finally, future research could focus on other countries to analyze this phenomenon in a different geographical context.

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References

Agarwal, R., Helfat, C. E. 2009. Strategic renewal of organizations. Organization Science, 20(2), 281–293, https://doi.org/10.1287/orsc.1090.0423.

Agca, V., Topal, Y., Kaya, H. 2012. Linking intrapreneurship activities to multidimensional firm performance in Turkish manufacturing firms: An empirical study. International Entrepreneurship & Management Journal, 8, 15–33, https://doi.org/10.1007/s11365-009-0132-5.

Ahen, F. 2014. Ethically constrained optimization of dynamic capabilities: Towards sustainable global health. Social Responsibility Journal, 10(3), 436–454, https://doi.org/10.1108/SRJ-04-2012-0080.

Ahmed, A., Bhatti, S. H., Gölgeci, I., Arslan, A. 2022. Digital platform capability and organizational agility of emerging market manufacturing SMEs: The mediating role of intellectual capital and the moderating role of environmental dynamism. Technological Forecasting and Social Change, 177, 121513, https://doi.org/10.1016/j.techfore.2022.121513.

Aidoo, S. W., Agyapong, A., Acquaah, M. Akomea, S. Y. 2021. The performance implications of strategic responses of SMEs to the covid-19 pandemic: Evidence from an African economy. Africa Journal of Management, 7(1), 74–103, https://doi.org/10.1080/23322373.2021.1878810.

Amabile, T. M. 1997. Motivating creativity in organizations: On doing what you love and loving what you do. California Management Review, 40(1), 39–58, https://doi.org/10.2307/41165921.

Anderson, J., Gerbing, D. 1988. Structural equation modeling in practice: A review and recommended 2-step approach. Psychological Bulletin, 103(3), 411–423, https://doi.org/10.1037/0033-2909.103.3.411.

Antoncic, B., Hisrich, R. D. 2001. Intrapreneurship: Construct refinement and cross-cultural validation. Journal of Business Venturing, 16(5), 495–527, https://doi.org/10.1016/S0883-9026(99)00054-3.

Anwar, Al., Coviello, N., Rouziou, M. 2021. Weathering a crisis: A multi-level analysis of resilience in young ventures. Entrepreneurship Theory and Practice, 0(0), 1–29, https://doi.org/10.1177/104225872110465.

Armstrong, J., Overton, T. 1977. Estimating nonresponse bias in mail surveys. Journal of Marketing Research, 14(3), 396–402, https://doi.org/10.1177/002224377701400320.

Augier, M., Teece, D. J. 2009. Dynamic capabilities and the role of managers in business strategy and economic performance. Organization Science, 20(2), 410–421, https://doi.org/10.1287/orsc.1090.0424.

Ayala, J. C., Manzano, G. 2010. Established business owners' success: Influencing factors. Journal of Developmental Entrepreneurship, 15(3), 263–286, https://doi.org/10.1142/S1084946710001555.

Ayala, J. C., Manzano, G. 2014. The resilience of the entrepreneur: Influence on the success of the business. A longitudinal analysis. Journal of Economic Psychology, 42, 126–135, https://doi.org/10.1016/j.joep.2014.02.004.

Baer, M., Frese, M. 2003. Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. Journal of Organizational Behavior, 24(1), 45–68, https://doi.org/10.1002/job.179.

Baron, R. M., Kenny, D. 1986. The moderator–mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173–1182.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120, https://doi.org/10.1177/014920639101700108.

Beuren, I. M., Dos Santos, V., Theiss, V. 2022. Organizational resilience, job satisfaction and business performance. International Journal of Productivity and Performance Management, 71(6), 2262–2279, https://doi.org/10.1108/IJPPM-03-2021-0158.

Bierwerth, M., Schwens, C., Isidor, R., Kabst, R. 2015. Corporate entrepreneurship and performance: A meta-analysis. Small Business Economics, 45(2), 255–278, https://doi.org/10.1007/s11187-015-9629-1.

Bhimani, H., Mention, A. L., Barlatier, P. J., 2019. Social media and innovation: A systematic literature review and future research directions. Technological Forecasting and Social Change, 144, 251–269, https://doi.org/10.1016/j.techfore.2018.10.007.

Bollen, K. A. 1989. Structural equations with latent variables. Wiley, Hoboken, NJ.

Bouwman, H., Nikou, S., Molina-Castillo, F. J., De Reuver, M., 2018. The impact of digitalization on business models. Digital Policy, Regulation and Governance, 20(2), 105–124, https://doi.org/10.1108/DPRG-07-2017-0039.

Bristow, G., Healy, A. 2020. Regional resilience: An agency perspective. Handbook on Regional Economic Resilience. Edward Elgar Publishing, Camberley.

Bullough, A., Renko, M. 2013. Entrepreneurial resilience during challenging times. Business Horizons, 56(3), 343–350, https://doi.org/10.1016/j.bushor.2013.01.001.

Burström, T., Wilson, T. L. 2015. Exploring the relationship between flagship platform projects and intrapreneurial self-renewal activities: Managing intrapreneurial equivocality. Journal of Engineering and Technology Management, 38, 37–52, http://dx.doi.org/10.1016/j.jengtecman.2015.07.001.

Campbell-Sills, L., Stein, M. B. 2007. Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies, 20(6), 1019–1028, https://doi.org/10.1002/jts.20271.

Castriotta, M., Loi, M., Marku, E., Moi, L., 2021. Disentangling the corporate entrepreneurship construct: Conceptualizing through co-words. Scientometrics, 126, 2821–2863, https://doi.org/10.1007/s11192-020-03846-2.

Chatterjee, S., Chaudhuri, R., Vrontis, D., Thrassou, A. 2022. SME entrepreneurship and digitalization: The potentialities and moderating role of demographic factors. Technological Forecasting and Social Change, 179, 121648, https://doi.org/10.1016/j.techfore.2022.121648.

Choudhury, M., Harrigan, P. 2014. CRM to social CRM: The integration of new technologies into customer relationship management. Journal of Strategic Marketing, 22(2), 149–176, https://doi.org/10.1080/0965254X.2013.876069.

Cohen, W. M., Levinthal, D. A. 1989. Innovation and learning: The two faces of R&D. Economic Journal, 99(397), 569–596, https://doi.org/10.2307/2233763.

Corral de Zubielqui, G. C., Jones, J. 2020. How and when social media affects innovation in startups: A moderated mediation model. Industrial Marketing Management, 85(2), 209–220, https://doi.org/10.1016/j.indmarman.2019.11.006.

Covin, J., Eggers, F., Kraus, S., Cheng, C., Chang, M. 2016. Marketing-related resources and radical innovativeness in family and non-family firms: A configurational approach. Journal of Business Research, 69(12), 5620–5627, https://doi.org/10.1016/j.jbusres.2016.03.069.

Covin, J. G., Miles, M. P. 2008. Strategic use of corporate venturing. Entrepreneurship Theory and Practice, 31(2), 183–207, https://doi.org/10.1111/j.1540-6520.2007.00169.x.

DesJardine, M., Bansal, P., Yang, Y. 2019. Bouncing back: Building resilience through social and environmental practices in the context of the 2008 global financial crisis. Journal of Management, 45(4), 1434–1460, https://doi.org/10.1177/014920631770885.

Dess, G., Lumpkin, G. T. 2005. Entrepreneurial orientation as a source of innovative strategy. Innovating Strategy Process, 1, 3–9, https://www.jstor.org/stable/4166159.

Dey, A., Gupta, A. K., Singh, G. 2019. Innovation, investment and enterprise: Climate resilient entrepreneurial pathways for overcoming poverty. Agricultural Systems, 172, 83–90, https://doi.org/10.1016/j.agsy.2018.07.013.

Do, T. T. P., Luu, D. T. 2020. Origins and consequences of intrapreneurship with behaviour based approach among employees in the hospitality industry. International Journal of Contemporary Hospitality Management, 32(12), 3949–3969, https://doi.org/10.1108/IJCHM-05-2020-0491.

Dominguez Gonzalez, R. V. 2022. Innovative performance of project teams: The role of organizational structure and knowledge-based dynamic capability. Journal of Knowledge Management, 26(5), 1164–1186, https://doi.org/10.1108/JKM-03-2021-0259.

Dung, L. T., Giang, H. T. T. 2022. The effect of international intrapreneurship on firm export performance with driving force of organizational factors. Journal of Business & Industrial Marketing, 37(11), 2185-2204, https://doi.org/10.1Q108/JBIM-01-2021-0018

Elia, G., Margherita, A., Passiante, G., 2020. Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. Technological Forecasting and Social Change, 150, 119791, https://doi.org/10.1016/j.techfore.2019.119791.

European Commission, 2003. Commission Recommendation of 6 May 2003 concerning the defnition of micro, small and medium-sized enterprises. Official Journal of the European Union, http://data.europa.eu/eli/reco/2003/361/oj.

European Commission (EC). 2021. Annual report on European SMEs 2020/2021. Retrieved from: https://ec.europa.eu/docsroom/documents/46062 (accessed 20 January 2022).

European Commission (EC). 2022. Summer 2022 Economic Forecast: Russia´s war worsens the outlook. Retrieved from: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_4511 (accessed 21 November 2022).

Fernández-Pérez, V., Lloréns-Montes, J., García-Morales, V. 2014. Towards strategic flexibility: Social networks, climate and uncertainty. Industrial Management & Data Systems, 114 (6), 858–871, https://doi.org/10.1108/IMDS-11-2013-0483.

Fornell, C., Larcker, D. F. 1981. Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50, https://doi.org/10.1177/002224378101800104.

Gaglio, C., Kraemer-Mbula, E., Lorenz, E. 2022. The effects of digital transformation on innovation and productivity: Firm-level evidence of South African manufacturing micro and small enterprises. Technological Forecasting and Social Change, 182, 121785, https://doi.org/10.1016/j.techfore.2022.121785.

García-Morales, V. J., Bolívar-Ramos, M. T., Martín-Rojas, R., 2014. Technological variables and absorptive capacity's influence on performance through corporate entrepreneurship. Journal of Business Research, 67(7), 1468–1477, https://doi.org/10.1016/j.jbusres.2013.07.019.

Garcia-Morales, V. J., Martin-Rojas, R., Lardon-Lopez, M. E. 2018. Influence of social media technologies on organizational performance through knowledge and innovation. Baltic Journal of Management, 13(3), 345–367, https://doi.org/10.1108/BJM-04-2017-0123.

Garrido Moreno, A., García Morales, V. J., Martín Rojas, R. 2021. Going beyond the curve: Strategic measures to recover hotel activity in times of COVID-19. International Journal of Hospitality Management, 96(102928), 1–12, https://doi.org/10.1016/j.ijhm.2021.102928.

Garrido-Moreno, A., Lockett, N. 2016. Social media use in European hotels: Benefits and main challenges. Tourism & Management Studies, 12(1), 172–179, https://doi.org/10.18089/tms.2016.12118.

Ghoshal, S., Bartlett, C., 1995. Building the entrepreneurial corporation: New organizational processes, new managerial tasks. European Management Journal, 13(2), 139–155.

Goodman, J., Korsunova, A., Halme, M. 2017. Our collaborative future: Activities and roles of stakeholders in sustainability-oriented innovation. Business Strategy and the Environment, 26(6), 731–753, https://doi.org/10.1002/bse.1941.

Gonzalez-Cruz, T. F., Botella-Carrubi, D., Martínez-Fuentes, C. M. 2020. The effect of firm complexity and founding team size on agile internal communication in startups. International Entrepreneurship and Management Journal, 16(3), 1101–1121, https://doi.org/10.1007/s11365-019-00633-1.

Gnyawali, D. R., Fan, W., Penner, J. 2010. Competitive actions and dynamics in the digital age: An empirical investigation of social networking firms. Information Systems Research, 21(3), 594–613, https://doi.org/10.1287/isre.1100.0294.

Hair, J. F., Anderson, R. E., Babin, B. J., Black, W. C. 2010. Multivariate data analysis: A global perspective (Vol. 7). Pearson, Upper Saddle River, NJ.

Hedner, T., Abouzeedan, A., Klofsten, M. 2011. Entrepreneurial resilience. Annals of Innovation & Entrepreneurship, 2(1–4), 7986–7989, https://doi.org/10.3402/aie.v2i1.6002.

Heidenreich, M. 2005. The renewal of regional capabilities experimental regionalism in Germany. Research Policy, 34, 739–757, https://doi.org/10.1016/j.respol.2005.04.004.

Helfat, C. E., Raubitschek, R. S. 2018. Dynamic and integrative capabilities for profiting from innovation in digital platform-based ecosystems. Research Policy, 47(8), 1391–1399, https://doi.org/10.1016/j.respol.2018.01.019.

Herbane, B. 2019. Rethinking organizational resilience and strategic renewal in SMEs. Entrepreneurship and Regional Development, 31(5/6), 476–495, https://doi.org/10.1080/08985626.2018.1541594.

Hillmann, J., Guenther, E. 2021. Organizational resilience: A valuable construct for management research? International Journal of Management Reviews, 23, 7–44, https://doi.org/10.1111/ijmr.12239.

Homburg, C., Krohmer, H., Workman, J. 1999. Strategic consensus and performance: The role of strategy type and market-related dynamism. Strategic Management Journal, 20(4), 339–357, https://www.jstor.org/stable/3094215.

Huang, A., Jahromi, M. F., 2021. Resilience building in service firms during and post COVID-19. The Service Industries Journal, 41(1–2), 138–167, https://doi.org/10.1080/02642069.2020.1862092.

Inigo, E. A., Ritala, P., Albareda, L. 2020. Networking for sustainability: Alliance capabilities and sustainability-oriented Innovation. Industrial Marketing Management, 89, 550–565, https://doi.org/10.1016/j.indmarman.2019.06.010.

Isichei, E., Agbaeze, E., Odiba, M., 2020. Entrepreneurial orientation and performance in SMEs. International Journal of Emerging Markets, 15(6), 1219–1241, https://doi.org/10.1108/IJOEM-08-2019-0671.

Joshi, M. P., Das, S. R., Mouri, N. 2015. Antecedents of innovativeness in technology-based services (TBS): Peering into the black box of entrepreneurial orientation. Decision Sciences, 46(2), 367–402, https://doi.org/10.1287/isre.1100.0298.

Juergensen, J., Guimon, J., Narula, R., 2020. European SMEs amidst the COVID-19 crisis: Assessing impact and policy responses. Journal of Industrial and Business Economics, 47, 499–510, https://doi.org/10.1007/s40812-020-00169-4.

Kaplan A., Haenlin, M., 2010. Users of the world, unite! The challenges and opportunities of social media. Business Horizons, 53, 59–68, https://doi.org/10.1016/j.bushor.2009.09.003.

Kearney, C., Morris, M. H. 2015. Strategic renewal as a mediator of environmental effects on public sector performance. Small Business Economics, 45, 425–445, https://doi.org/10.1007/s11187-015-9639-z.

Khan, S. H., Majid, A., Shah, H. A., 2021. The role of social capital in augmenting strategic renewal of SMEs: Does entrepreneurial orientation and organizational flexibility really matter? World Journal of Entrepreneurship, Management and Sustainable Development, 17(2), 227–245, https://doi.org/10.1108/WJEMSD-04-2020-0029.

Klein, V. B., Todesco, J. L., 2021. COVID-19 crisis and SMEs responses: The role of digital transformation. Knowledge and Process Management, 28(2), 117–133, https://doi.org/10.1002/kpm.1660.

Knight, G. A. 1997. Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. Journal of Business Venturing, 12, 213–225, https://doi.org/10.1016/S0883-9026(96)00065-1.

Konrad, A., Linnehan, F. 1995. Formalized HRM structures: Coordinating equal-employment opportunity or concealing organizational practices. Academy of Management Journal, 38(3), 787–820, https://doi.org/10.2307/256746.

Kuratko, D. F., Audretsch, D. B. 2013. Clarifying the domains of corporate entrepreneurship. International Entrepreneurship and Management Journal, 9(3), 323–335, https://doi.org/10.1007/s11365-013-0257-4.

Lam, H. K. S., Yeung, A. C. L., Cheng, T. C. E., 2016. The impact of firms' social media initiatives on operational efficiency and innovativeness. Journal of Operations Management, 47–48, 28–43, https://doi.org/10.1016/j.jom.2016.06.001.

Lardón-López, M. E., Martín-Rojas, R., García-Morales, V. J., 2022. Social media technologies: A waste of time or a good way to learn and improve technological competences?. Journal of Knowledge Management, 26(11), 348–377, https://doi.org/10.1108/JKM-02-2022-0130.

Lee, A. V., Vargo, J., Seville, E. 2013. Developing a tool to measure and compare organizations' resilience. Natural Hazards Review, 14(1), 29–41, https://doi.org/10.1061/(ASCE)NH.1527-6996.0000075.

Lengnick-Hall, C. A., Beck, T. E., Lengnick-Hall, M. L. 2011. Developing a capacity for organizational resilience through strategic human resource management. Human Resource Management Review, 21(3), 243–255, https://doi.org/10.1016/j.hrmr.2010.07.001.

Lichtenthaler, U., 2018.The world's most innovative companies: A meta-ranking. Journal of Strategy and Management, 11(4), 497–511, https://doi.org/10.1108/JSMA-07-2018-0065.

Lumpkin, G. T., Dess, G. G., 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. The Academy of Management Review, 21(1), 135–172, https://doi.org/10.2307/258632.

Mamouni Limnios, E. A., Mazzarol, T., Ghadouani, A., Schilizzi, S. G. M. 2014. The Resilience Architecture Framework: Four organizational archetypes. European Management Journal, 32, 104–116, https://doi.org/10.1016/j.emj.2012.11.007.

Martín-Rojas, R., Fernández-Pérez, V., García-Sánchez, E., 2017. Encouraging organizational performance through the influence of technological distinctive competencies on components of corporate entrepreneurship. International Entrepreneurship and Management Journal, 13(2), 397–426, http://dx.doi.org/10.1007/s11365-016-0406-7.

Martín-Rojas, R., García-Morales, V. J., González-Álvarez, N. 2019. Technological antecedents of entrepreneurship and its consequences for organizational performance. Technological Forecasting and Social Change, 147, 22–35, https://doi.org/10.1016/j.techfore.2019.06.018.

Martín-Rojas, R., Garrido-Moreno, A., García-Morales, V. J. 2020. Fostering corporate entrepreneurship with the use of social media tools. Journal of Business Research, 112, 396–412, https://doi.org/10.1016/j.jbusres.2019.11.072.

McElroy, M. W. 2000. Integrating complexity theory, knowledge management and organizational learning. Journal of Knowledge Management, 4(3), 195–203, https://doi.org/10.1108/13673270010377652.

McKelvey, B. 2016. Complexity ingredients required for entrepreneurial success. Entrepreneurship Research Journal, 6(1), 53–73, https://doi.org/10.1515/erj-2015-0053.

Mention, A. L., Barlatier, P. J., Josserand, E., 2019. Using social media to leverage and develop dynamic capabilities for innovation. Technological Forecasting and Social Change, 144, 242–250, https://doi.org/10.1016/j.techfore.2019.03.003.

Mintzberg, M. 1979. The structuring of organizations. Prentice Hall.

Montes, R., Melero, F. J., Palomares, I., Alonso, S., Chiachío, J., Chiachío, M., Molina, D., Martínez-Cámara, E., Tabik S., Herrera, F. 2021. Inteligencia artificial y tecnologías digitales para los ODS. Publicación de la Real Academia de Ingeniería. https://issuu.com/raing/docs/ia_y_tecnolog_as_digitales_para_los_ods

Murray, J. Y., Kotabe, M. 1999. Sourcing strategies of U.S. service companies: A modified transaction-cost analysis. Strategic Management Journal, 20, 791–809, https://doi.org/10.1002/(SICI)1097-0266(199909)20:9<791::AID-SMJ49>3.0.CO;2-U.

Nachmias, S., Hubschmid-Vierheilig, E., 2021. We need to learn how to love digital learning 'again': European SMEs response to COVID-19 digital learning needs. Human Resource Development International, 24(2), 123–132, https://doi.org/10.1080/13678868.2021.1893503.

Nambisan, S. 2017. Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. Entrepreneurship Theory and Practice, 41(6), 1029–1055, https://doi.org/10.1111/etap.12254.

Nonaka, I., Takeuchi, H. 1995. The knowledge-creating company. Oxford University Press, Oxford.

Nunnally, J. C., Bernstein, I. H. 1994. The assessment of reliability. Psychometric Theory, 3, 248–292.

OECD, 2021. Policy recommendations for SME recovery and long-term resilience (June, 2021). Retrieved from: https://biac.org/wp-content/uploads/2021/06/Business-at-OECD-policy-paper-for-SME-recovery-and-longer-term-resilience-1.pdf (accessed 22 January, 2022).

Olanrewaju, A. S. T., Hossain, M. A., Whiteside, N., Mercieca, P. 2020. Social media and entrepreneurship research: A literature review. International Journal of Information Management, 50, 90–110, https://doi.org/10.1016/j.ijinfomgt.2019.05.011.

Ortiz-de-Mandojana, N., Bansal, P. 2016. The long-term benefits of organizational resilience through sustainable business practices. Strategic Management Journal, 37(8), 1615–1631, https://doi.org/10.1002/smj.2410.

Palacios-Marques, D., Merigo, J. M., Soto-Acosta, P. 2015. Online social networks as an enabler of innovation in organizations. Management Decision, 53(9), 1906–1920, https://doi.org/10.1108/BIJ-10-2012-0068.

Parveen, F., Ismawati, N. J., Ainin, S. 2016. Social media's impact on organizational performance and entrepreneurial orientation in organizations. Management Decision, 54(9), 2208–2234, https://doi.org/10.1108/MD-08-2015-0336.

Pérez-Luño, A., Wiklund, J., Cabrera, R. V. 2011. The dual nature of innovative activity: How entrepreneurial orientation influences innovation generation and adoption. Journal of Business Venturing, 26(5), 555–571, https://doi.org/10.1016/j.jbusvent.2010.03.001.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88(5), 879–903, https://doi.org/10.1037/0021-9010.88.5.879.

Podsakoff, P. M., Organ, D. W. 1986. Self-reports in organizational research: Problems and prospects. Journal of Management, 12(4), 531–544, https://doi.org/10.1177/014920638601200408.

Rakshit, S., Mondal, S., Islam, N., Jasimuddin, S., Zhang, Z. 2022. Social media and the new product development during COVID-19: An integrated model for SMEs. Technological Forecasting and Social Change, 170, 120869, https://doi.org/10.1016/j.techfore.2021.120869.

Rauch, A., Wiklund, J., Lumpkin, G. T., Frese, M. 2009. Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. Entrepreneurship: Theory and Practice, 33(3), 761–787, https://doi.org/10.1111/j.1540-6520.2009.00308.x.

Rehman, N., Mahmood, A., Ikram, A., Ahmad, A. 2021. Firing on all cylinders: Configuring information technology around the constituents of corporate entrepreneurship to outperform in SME sector. PloS ONE, 16(9), e0256539, https://doi.org/10.1371/journal.pone.0256539.

Remane, G., Hanelt, A., Nickerson, R. C., Kolbe, L. M. 2017. Discovering digital business models in traditional industries. Journal of Business Strategy, 38(2), 41–51, https://doi.org/10.1108/JBS-10-2016-0127.

Renko, M., Bullough, A., Saeed, S. 2020. How do resilience and self-efficacy relate to entrepreneurial intentions in countries with varying degrees of fragility? A six-country study. International Small Business Journal, 39(2), 130–156, https://doi.org/10.1177/026624262096045.

Ritala, P., Baiyere, A., Hughes, M., Kraus, S. 2021. Digital strategy implementation: The role of individual entrepreneurial orientation and relational capital. Technological Forecasting and Social Change, 171, 120961, https://doi.org/10.1016/j.techfore.2021.120961.

Rodríguez-Sánchez, A. M., Guinot, J., Chiva, R., López-Cabrales, Á. 2021. How to emerge stronger: Antecedents and consequences of organizational resilience. Journal of Management & Organization, 27(3), 442–459, https://doi.org/10.1017/jmo.2019.5.

Rometty, G. 2016. Digital today, cognitive tomorrow. MIT Sloan Management Review, 58(1), 168–171, https://doi.org/10.7551/mitpress/11645.003.0004.

Roundy, P. T., Bardshaw, M., Brockman, B. K. 2018. The emergence of entrepreneurial ecosystems: A complex adaptative systems approach. Journal of Business Research, 86, 1–10, https://doi.org/10.1016/j.jbusres.2018.01.032.

Ruvio, A. A., Shoham, A., Vigoda-Gadot, E., Schwabsky, N. 2014. Organizational innovativeness: Construct development and cross-cultural validation. Journal of Product Innovation Management, 31(5), 1004–1022, https://doi.org/10.1111/jpim.12141.

Saad, M. H., Hagelaar, G., Van der Velde, G., Omta, S. W. F. 2021. Conceptualization of SMEs' business resilience: A systematic literature review. Cogent Business & Management, 8, 1938347, https://doi.org/10.1080/23311975.2021.1938347.

Sahi, G. K., Gupta, M. C., Cheng, T. C. E. 2020. The effects of strategic orientation on operational ambidexterity: A study of Indian SMEs in the Industry 4.0 era. International Journal of Production Economics, 220, 107395, https://doi.org/10.1016/j.ijpe.2019.05.014.

Sambamurthy, V., Bharadwaj, A., Grover, V. 2003. Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. MIS Quarterly, 27(2), 237–263, https://doi.org/10.2307/30036530.

Schilke, O., Hu, S., Helfat, C. E. 2018. Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. Academy of Management Annals, 12(1), 390–439, https://doi.org/10.5465/annals.2016.0014.

Scuotto, V., Del Giudice, M., Carayannis, E. G. 2017. The effect of social networking sites and absorptive capacity on SMES' innovation performance. Journal of Technology Transfer, 42, 409–424, https://doi.org/10.1007/s10961-016-9517-0.

Secundo, G., Del Vecchio, P., Mele, G. 2021. Social media for entrepreneurship: Myth or reality? A structured literature review and a future research agenda. International Journal of Entrepreneurial Behavior and Research, 27(1), 149–177, https://doi.org/10.1108/ijebr-07-2020-0453.

Sharma, P., Chrisman, J. J. 1999. Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. Entrepreneurship Theory and Practice, 23(3), 11–27, https://doi.org/10.1177/104225879902300302.

Shu, C., DeClercq, D., Zhou, Y., Liu, C. 2019. Government institutional support, entrepreneurial orientation, strategic renewal, and firm performance in transitional China. International Journal of Entrepreneurial Behavior & Research, 25(3), 433–456, https://doi.org/10.1108/IJEBR-07-2018-0465.

Smart D. T., Conant, J. S. 1994. Entrepreneurial orientation, distinctive marketing competencies and organizational performance. Journal of Applied Business Research, 10(3), 28–38, https://doi.org/10.19030/jabr.v10i3.5921.

Smith, C., Smith, J. B., Shaw, E. 2017. Embracing digital networks: Entrepreneurs' social capital online. Journal of Business Venturing, 32(1), 18–34, https://doi.org/10.1016/j.jbusvent.2016.10.003.

Suryaningtyas, D., Sudiro, A., Eka, A. T., Dodi, W. I. 2019. Organizational resilience and organizational performance: Examining the mediating roles of resilient leadership and organizational culture. Academy of Strategic Management Journal, 18(2), 1–7.

Susanto, P., Hoque, M. E., Shah, N. U., Candra, A. H., Hashim, N. M. H. N., Abdullah, N. L. 2021. Entrepreneurial orientation and performance of SMEs: The roles of marketing capabilities and social media usage. Journal of Entrepreneurship in Emerging Economies, 2063–4604.

Tajvidi, R., Karami, A. 2021. The effect of social media on firm performance. Computers in Human Behavior, 74(9), 1–10, https://doi.org/10.1016/j.chb.2017.09.026.

Tanriverdi, H., Rai, A., Venkatraman, N. 2010. Reframing the dominant quests of information systems strategy research for complex adaptative business systems. Information Systems Research, 21(4), 822–834, https://doi.org/10.1287/isre.1100.0317.

Teece, D. J., Pisano, G., Shuen, A. 1997. Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533, https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

Troise, C., Corvello, V., Ghobadian, A., O'Regan, N. 2022. How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. Technological Forecasting and Social Change, 174, 121227, https://doi.org/10.1016/j.techfore.2021.121227.

Troise, C., Dana, L. P., Tani, M., Lee, K. Y. 2021. Social media and entrepreneurship: Exploring the impact of social media use of start-ups on their entrepreneurial orientation and opportunities. Journal of Small Business and Enterprise Development, 29(1), 47–73, https://dx.doi.org/10.1108/JSBED-01-2021-0041.

Urbano, D., Turro, A., Wright, M., Zahra, S. 2022. Corporate entrepreneurship: A systematic literature review and future research agenda. Small Business Economics, *In press*. https://doi.org/10.1007/s11187-021-00590-6

Vanacker, T., Zahra, S. A., Holmes, R. M. 2021. Corporate entrepreneurship, country institutions and firm financial performance. Journal of World Business, 56(3), 101162, https://doi.org/10.1016/j.jwb.2020.101162.

Venkatraman, M. P. 1989. Involvement and risk. Psychology & Marketing, 6(3), 229–247, https://doi.org/10.5465/amr.1989.4279078.

Venkatraman, N., Ramanujam, V. 1986. Measurement of business performance in strategy research: A comparison of approaches. Academy of Management Review, 11(4), 801–814, https://doi.org/10.5465/amr.1986.4283976.

Wang, C. L., Ahmed, P. K. 2007. Dynamic capabilities: A review and research agenda. International Journal of Management Reviews, 9(1), 31–51, https://doi.org/10.1111/j.1468-2370.2007.00201.x.

Wang, W., Liang, Q., Mahto, R. V., Deng, W., Zhang, S. X. 2020. Entrepreneurial entry: The role of social media. Technological Forecasting and Social Change, 161, 120337, https://doi.org/10.1016/j.techfore.2020.120337.

Wastell, D. G., McMaster, T., Kawalek, P. 2007. The rise of the phoenix: Methodological innovation as a discourse of renewal. Journal of Information Technology, 22(1), 59–68, https://doi.org/10.1057/palgrave.jit.2000086.

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), 1–70, https://doi.org/10.5465/annals.2015.0134.

Xia, Q., Xie, Y., Hu, S., Song, J. 2022. Exploring how entrepreneurial orientation improve firm resilience in digital era: Findings from sequential mediation and FsQCA. European Journal of Innovation Management, *In press*, https://doi.org/10.1108/EJIM-12-2021-0593.

Xie, X., Wu, Y., Palacios-Marques, D., Ribeiro-Navarro, S. 2022. Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. Technological Forecasting and Social Change, 177, 121548, https://doi.org/10.1016/j.techfore.2022.121548.

Yang, C. C., Hsu, W. L. 2018. Evaluating the impact of security management practices on resilience capability in maritime firms: A relational perspective. Transportation Research Part A: Policy and Practice, 110, 220–233, https://doi.org/10.1016/j.tra.2017.06.005.

Yu, J., Pauleen, D. J., Taskin, N., Jafarzadeh, H. 2021. Building social media-based knowledge ecosystems for enhancing business resilience through mass collaboration. International Journal of Organizational Analysis, 1934–8835, https://doi.org/10.1108/IJOA-12-2020-2542.

Zahra, S. A. 1993. Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. Journal of Business Venturing, 8, 319–340, https://doi.org/10.1016/0883-9026(93)90003-N.

Zahra, S. A., Neubaum, D. O., Huse, M. 2000. Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. Journal of Management, 26(5), 947–976, https://doi.org/10.1177/014920630002600509.

Zighan, S., Abualqumboz, M., Dwaikat, N., Alkalha, Z. 2021. The role of entrepreneurial orientation in developing SMEs resilience capabilities throughout COVID-19. The International Journal of Entrepreneurship and Innovation, *In press*. https://doi.org/10.1177/14657503211046849

Zighan, S., Ruel, S. 2021. SMEs' resilience from continuous improvement lenses. Journal of Entrepreneurship in Emerging Economies, *In press*. https://doi.org/10.1108/JEEE-06-2021-0235