

RESEARCH ARTICLE

Enhancing social responsibility and resilience through entrepreneurship and digital environment

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Abstract

Following the COVID-19 pandemic, organisational resilience is key, especially for small and medium-sized enterprises (SMEs), which must face crises and overcome the handicap of today's digital markets. We explore how corporate social responsibility (CSR), digital technologies (DTs) and corporate entrepreneurship synergistically enhance SMEs' organisational resilience, employing dynamic capabilities theory to reveal mechanisms underlying CSR, DTs and organisational resilience. We assess this synergy empirically by surveying 259 participants from Andalusia's business landscape. Theoretical and practical implications illuminate SMEs' strategic DT use to amplify CSR and resilience. Finally, we outline practical guidelines for policymakers, business leaders and entrepreneurs to foster sustainable innovative practices. Embracing CSR and entrepreneurship cultivates resilience, enabling enterprises to thrive amidst challenges and stay competitive. Our paper advances knowledge by combining CSR's and DTs' roles in developing resilience in entrepreneurship. Ultimately, recognising and harnessing CSR, DTs and entrepreneurship synergy empowers SMEs to forge resilient business environments for lasting success.

KEYWORDS

corporate social responsibility, digital technologies, dynamic capabilities theory, entrepreneurial resilience, responsible digitalization, small and medium-sized enterprises

1 | INTRODUCTION

In the dynamic and rapidly evolving landscape of contemporary business, small and medium-sized enterprises (SMEs) in Spain are grappling with multiple complex hurdles (Pfajfar et al., 2022). These include mounting stakeholder expectations, the rapid pace of technological advancements and increasing recognition of the broader societal and environmental repercussions of their activities (Xiaotian et al., 2021). These demands underscore the imperative for SMEs to prioritise innovation, digital transformation and entrepreneurship, as well as the unwavering commitment to social responsibility (Marchese et al., 2011). Such measures are pivotal for ensuring resilience and sustainability amidst these formidable challenges in the province of Andalusia, Spain.

Against this complex backdrop, the concept of organisational resilience (OR) has emerged as a pivotal determinant within the current business milieu, particularly due to heightened uncertainties, market volatility and intricacies in the current complex and ambiguous environment (Martín-Rojas et al., 2023). Organisations' capacity to adapt swiftly and effectively to shifting conditions, coupled with their ability to anticipate and brace for potential disruptions, is now paramount (Duchek, 2020). Establishing agility requires proactive risk management strategies, including formulation of contingency plans and adeptness to respond promptly and resolutely to crises (Yuan et al., 2022).

Despite recognising the significance of OR, many companies adopt a reactive rather than proactive stance to strengthen it (Jia et al., 2020). This prevailing approach generates dissonance between



the perceived importance of resilience and companies' actual level of preparedness in the face of potential disruptions (Kim, 2021). Some companies are, however, taking affirmative steps to augment their resilience by incorporating resilience into their overarching business strategies, devising robust emergency response protocols and making investments in technological solutions to enhance operational efficiency and agility (Roffia & Dabić, 2023).

Still, comprehensive integration of resilience into organisational strategies and operations remains an ongoing challenge, highlighting the need to bridge the chasm between perceived significance and tangible readiness (Do et al., 2021). The cornerstone of OR is cultivating robust relationships with stakeholders—ranging from customers and employees to suppliers and partners. Companies that prioritise active engagement and transparent communication with stakeholders are inherently better positioned to navigate crises, foster trust and cultivate loyalty (Ho et al., 2022; Xiaotian et al., 2021).

The concept of corporate social responsibility (CSR) has emerged as a strategic imperative compelling organisations to integrate ethical, social and environmental considerations into their business practices rapidly changing (Pfajfar et al., 2022). In its essence, CSR embodies a company's commitment to discerning the societal and environmental repercussions of its business activities. This complex, multidimensional notion transcends conventional business paradigms, warranting a holistic approach (Agudo-Valiente et al., 2015). CSR seeks not only to maximise profit, but also to stress creation of shared value and contributions to sustainable development (Matten & Moon, 2008). Moreover, sustainability and social responsibility are increasingly recognised as integral components of OR.

Organisations can fortify their resilience by strengthening relationships with stakeholders, enhancing brand reputation and fostering a sense of purpose and shared values throughout the organisation (DiBella et al., 2022; George & Schillebeeckx, 2022). This holistic convergence of CSR and resilience is pivotal for Spanish companies as they navigate the complex contemporary business challenges. Furthermore, it is imperative to recognise that CSR initiatives, which include endeavours such as fostering employee well-being and championing environmental sustainability, have the potential not only to bolster a company's reputation but also to garner steadfast stakeholder support and augment resilience (Low & Bu, 2021).

In parallel, the concept of corporate entrepreneurship (CE) signifies an organisation's propensity to embrace risk and drive innovation. This strategic inclination has been shown to correlate with heightened OR and attributed to OR's influence on companies' adaptive and strategic decision-making capabilities (Kim et al., 2021). This study focuses on four facets of CE: pursuit of new business ventures, innovation, self-renewal and proactive approaches. These dimensions have been previously identified in the literature (Knight, 1997; Martín-Rojas et al., 2017; Nambisan et al., 2019; Zahra, 1993) and are used widely to analyse firms' entrepreneurial endeavours. In the context of commercialisation of disruptive technologies, SME in Spain confronts interconnected challenges (Cennamo & Santaló, 2019). The advent of Industry 4.0, coupled with the unforeseen global upheaval of the COVID-19 pandemic, has produced a transformative business environment.

This unprecedented scenario has invited contemplation about SME owners' ongoing pivotal role in this burgeoning business landscape (Santos et al., 2023). Entrepreneurs face a multifaceted array of challenges in this environment, but the process of implementing digital technologies (DTs) can heighten resilience by infusing innovation and responsiveness. Integrating novel technologies such as digital tools and data analytics can give companies insights into consumer behaviour and market dynamics, facilitating swift adaptations to shifting circumstances (Do et al., 2021). In this context, technology management emerges as a decisive factor in fostering resilience.

To adopt such ground-breaking technologies, SME entrepreneurship requires managerial, financial and technological competencies (Chatterjee et al., 2022; Giotopoulos et al., 2017). SMEs must adjust and localise existing skill sets and expertise in a fast-paced environment. Rapid acceptance and use of new technology can frustrate SME entrepreneurs, hindering their motivation to take technological initiatives (Ayyagari et al., 2011; Chatterjee et al., 2022). Although digital platform ecosystems are emerging rapidly, SMEs lag behind other types of firms in developing them. (Cennamo & Santaló, 2019; Chatterjee et al., 2022; Wang & Wang, 2020).

Irrespective of contemporary challenges, SMEs have reaped the benefits of a plethora of emerging DTs, from the Internet of Things (IoT), blockchain and artificial intelligence (AI) to social media and additive manufacturing processes, among others (Giotopoulos et al., 2017). Digital platforms are pivotal technological conduits, helping companies to curate, standardise and disseminate data on a large scale (Wang & Wang, 2020). Digital platforms have enabled SME entrepreneurs to venture into domains traditionally dominated by larger enterprises and to compete asymmetrically (Brownell et al., 2021; Chatterjee, 2022). DT integration has empowered SME entrepreneurs to forge direct connections with suppliers and buyers, attract suitable investors via crowdsourcing and crowdfunding, engage more intimately with potential clientele and harness data more effectively (Elia et al., 2020).

Nonetheless, critical gaps persist in our understanding of intricate interplay between DT and entrepreneurship, and their role in amplifying OR refracted through social responsibility. While DTs have demonstrated their potential to augment OR and adaptive capabilities, further exploration is needed to unravel how they underpin business continuity and resilience. Recent investigations have begun to reveal how innovation in DT and processes could help bolster OR (Ciasullo et al., 2022; Feiyang et al., 2022). Moreover, while some studies have analysed the nexus of specific DTs, CE and OR (Martín-Rojas et al., 2023), much remains to be learned about the intricate mechanisms through which these dynamics collectively shape and fortify resilience.

The existing literature shows a conspicuous gap in knowledge of the interplay between DTs and CE, and their combined influence on CSR remains largely unexplored. The reciprocal relationship by which CSR, in turn, impacts OR is similarly uncharted. This study addresses this significant gap to illuminate their intricate nexus, furnishing invaluable insights for enterprises striving to fortify their resilience in a dynamic landscape.

The survey findings reveal DTs' twofold impact. Beyond merely facilitating CSR, DTs are catalysts that elevate the CE. Furthermore, cultivating CE not only grows but also enhances CSR, fostering heightened OR. Taken together, these empirical outcomes underscore the premise that the synergy between nurturing DT and fostering CE improves CSR, culminating in increased OR. Such insights powerfully reinforce the indispensability of a holistic framework when sculpting OR.

The contribution of this paper is thus to highlight the combined role of CSR and DT in new business ventures, innovativeness, proactiveness and self-renewal of SMEs in Andalusia to leverage SMEs' resilience to overcome current and possible future crises.

Focusing on the province of Andalusia, Spain, this study conducts meticulous examination of 259 SMEs. Spain is in a region of Europe that has received relatively little attention from organisational researchers in resilience and digitisation. We selected Spain for 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 focus on Andalusia because it has been actively investing in digital innovation (Andalusia – Smart Specialisation Platform, 2022) and has a rich tradition of social responsibility, through environmental sustainability, social inclusion and economic development. Additionally, the province has a diversified economy that relies heavily on SMEs. It had over 650,000 SMEs in 2019 (Instituto de Estadística y Cartografía de Andalucía, 2019) and shows a trend of growth.

In pursuing these scholarly objectives, this paper is structured as follows. Section 2 examines in depth the theoretical underpinnings grounding our exploration of dynamic abilities. It also provides thorough, comprehensive review of pertinent literature and presents the hypotheses to be tested. Section 3 details our data collection protocols. Section 4 analyses the experimental results and discusses their significance. Finally, Section 5 explains and assesses the study's limitations, while indicating important paths for future exploratory endeavours.

2 | THEORETICAL BACKGROUND AND HYPOTHESES

2.1 | Dynamic capability theory

The discourse on the role of CSR in the interplay of dynamic capabilities theory (DCT), DT, CE and OR needs strengthening. DCT is an important strategic management methodology that explains the mechanisms by which organisations attain and preserve competitive advantage. Developed as an extension of the static resource-based view (RBV), DCT addresses the RBV's deficiency in determining how entities blend resources and capabilities in a dynamic context (Helfat & Peteraf, 2009; Kraaijenbrink et al., 2010; Pavlou & Sawy, 2011; Winter, 2003).

DCT focuses on the dynamic nature of organisational capabilities and resources (Teece et al., 1997). It is defined as a company's ability

to 'integrate, build, and reshape internal and external competencies to deal with rapidly changing environments' (Teece et al., 1997). DCT stresses the importance of OR and the ability to adapt in a changing environment, positing that the ability to reconfigure resources and capabilities in response to environmental changes is critical to achieving and maintaining competitive advantage. Specifically, DCT argues that organisations should focus on building dynamic capabilities that allow them to sense, capture and transform resources and capabilities to meet changing market conditions (Ambrosini & Bowman, 2009; Teece, 2014).

Dynamic capabilities go beyond the core collection of valuable, rare, unique and irreplaceable resources that the RBV emphasises by addressing a company's ability to continually adapt and innovate while leveraging the RBV's core resources. Such adaptation and innovation enable firms to adjust their strategies and resources to maintain and sustain competitive advantage (Wade & Hulland, 2004). DCT also involves the organisation's ability to adapt and respond to changing environments by integrating and coordinating internal and external resources, processes and procedures.

These frameworks have greatly contributed to the strategic management literature and our understanding of how organisations achieve and maintain competitive advantage. By recognising the importance of organisational resources, capabilities and resilience, these theories provide valuable insights for managers and researchers by enhancing organisational performance in a rapidly evolving business environment.

This study uses dynamic capabilities to explain how DT and CE contribute to enhancing OR through CSR. Advanced DT and platforms contribute to sustainability and risk management, a strong reputation for ethical business practices, a culture of innovation and the ability to adapt and collaborate with businesses and other stakeholders to create value. In addition, DTs enable entrepreneurship by providing new opportunities for creativity and collaboration, such as online platforms for investing in social and environmental impact, crowdfunding and social innovation (Holzmann & Gregori, 2023; Si et al., 2022).

By leveraging digital resources and capabilities and being resilient and adaptable in response to changing social and environmental challenges, organisations can become more resilient and responsible in today's rapidly evolving business environment. By adopting an entrepreneurial mindset towards CSR and leveraging DT to create shared value, companies can enhance their reputation, competitiveness and long-term sustainability (Holzmann & Gregori, 2023).

Nevertheless, it becomes evident that the positive impact of CE on OR is intrinsically intertwined with the multidimensional spectrum of social responsibility, spanning its economic, environmental and social dimensions. This symbiosis is further contingent on internal and external factors. In an expanded trajectory, our study model introduces DTs to elucidate how integration of information and communication technology advances CSR.

In general, DT use can create a win-win situation for both businesses and society. We summarise the foregoing evidence in the conceptual model (Figure 1).

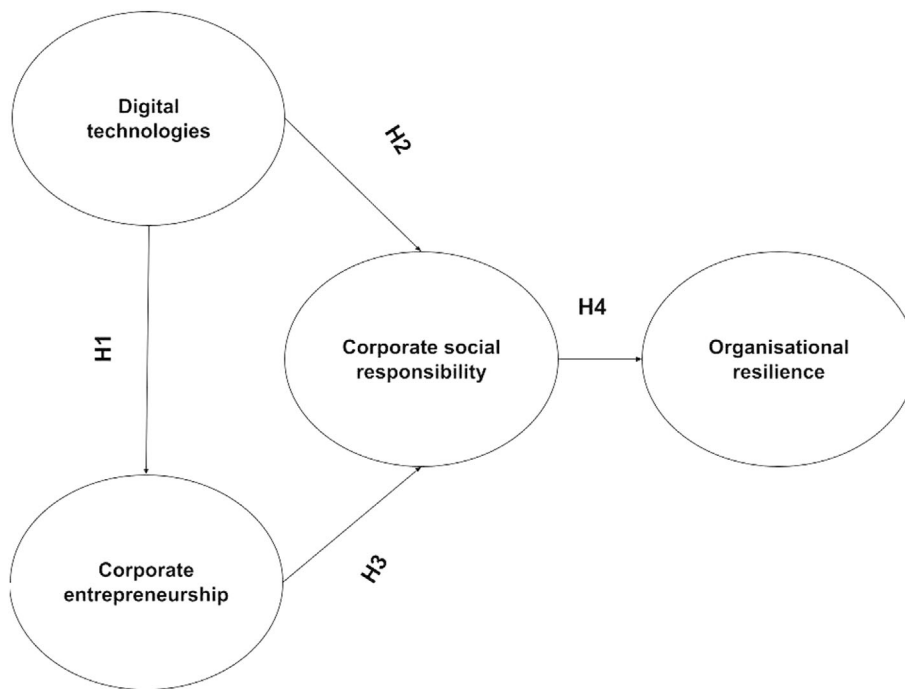


FIGURE 1 Conceptual framework and hypotheses.

2.2 | Hypotheses

2.2.1 | DT and CE

The utilisation of DT use is recognised as a crucial factor in enhancing CE, providing diverse resources and tools to aid entrepreneurs in various ways. According to Bharadwaj et al. (2013), DT can assist entrepreneurs in identifying opportunities, developing new products or services, expanding market reach and managing business operations. DTs encompass social media, big data, mobile solution technologies, the cloud, AI, the IoT and big data blockchain (Berman, 2012; Martín-Rojas et al., 2023; Nambisan, 2017; Si et al., 2022). It is essential, however, to recognise that, despite DTs' potential, their integration does not always produce uniformly positive outcomes. While DTs provide avenues for innovation and connectivity, they can also introduce complexities and resource burdens. Excessive reliance on digital platforms can lead inadvertently to information overload or communication breakdowns, potentially impeding entrepreneurs' agility and adaptability. Additionally, not all ventures can incorporate DT seamlessly into their operations, due to resource limitations, regulatory obstacles or industry-specific challenges (Engås et al., 2023).

In this context, we highlight the significance of innovative processes, strategic resilience and a risk-taking attitude in attaining entrepreneurial success. Moreover, decision-making processes play a crucial role in enabling firms to identify and exploit profitable opportunities. This perspective suggests that CE is not a fixed set of attitudes or behaviours but a continuous process of strategic adaptation and experimentation (Rauch et al., 2018). Along these lines, and based on DCT, DTs can significantly enhance CE by enabling companies to identify and exploit new market opportunities, develop innovative products and services, and build stronger relationships with

customers, suppliers and other stakeholders (Singh et al., 2021; Teece, 2018). By investing in DT infrastructure and building dynamic capabilities, companies can achieve sustainable competitive advantage and enhance CE. For example, using social media and other digital platforms can enable entrepreneurs to connect with potential customers, partners, and suppliers, and gather feedback on their products or services, allowing them to identify and exploit new market opportunities (Martín-Rojas et al., 2023; Miocevic & Morgan, 2018).

Moreover, DT facilitates access to information on competitors' offerings, pricing strategies and service provision, giving entrepreneurs a compass to steer their competitive strategies and secure an edge (Liu & Yang, 2021). DT can also provide entrepreneurs with information about their competitors' products, services and pricing strategies, guiding their competitive strategies and giving them a competitive advantage (Liu & Yang, 2021). Furthermore, big data analytics have been found to help entrepreneurs identify patterns and trends in consumer behaviour and market demand that can orient their innovation strategies and improve their product development processes (Wang & Wang, 2020).

DTs can also enhance CE by providing entrepreneurs with greater resilience and agility in their business operations. For instance, cloud computing and mobile technologies enable entrepreneurs to work remotely and access their business data and applications from anywhere, potentially improving operational efficiency and effectiveness (Nandi et al., 2016). DT can help entrepreneurs expand their customer base by providing access to broader markets through e-commerce platforms, and increased market reach and their sales revenue (Shemi & Procter, 2018). DT use is thus essential for entrepreneurs seeking to enhance their orientation and attain entrepreneurial success. This path may not be equally viable for all industries, however,

and competition in the online marketplace can be fierce, making it challenging for every entrepreneur to secure a significant foothold.

Effective fusion of DT and entrepreneurship places substantial responsibility on entrepreneurs seeking to enrich their orientation and chart a trajectory to entrepreneurial success (Martens et al., 2018). Combining DT and entrepreneurship is not, however, a panacea, and its impact can be shaped by many contextual and situational factors. Additionally, DTs emerged as catalysts for fostering entrepreneurs' risk-taking attitude by extending access to novel sources of information and resources. For instance, Zhang et al. (2022) found that online crowdfunding platforms can help entrepreneurs raise capital for their projects, while also allowing them to test market demand for their products or services. Furthermore, DT is a wellspring for proactive entrepreneurial initiatives, equipping entrepreneurs with essential tools and resources to orchestrate business operations seamlessly. Integration of cloud-based accounting software, for example, streamlines financial management processes, empowering entrepreneurs to make informed decisions about business operations (Ross & Blumenstein, 2015).

Collectively, the body of literature outlined above demonstrates that symbiotic union between DT and entrepreneurship opens avenues of transformative potential, charting a trajectory towards enhanced organisational orientation and entrepreneurial triumph. It is imperative, however, to recognise that DT's impact on entrepreneurship can be multifaceted, contingent on an intricate interplay of myriad contextual variables. All the literature above leads us to affirm that:

H1. *DTs have a positive impact on CE.*

2.2.2 | DT and CSR

The concept of CSR has become increasingly important in today's business world. At its core, CSR refers to a company's obligation to consider the impact of its actions on society and the environment. CSR is measured by the triple bottom line (TBL), which includes economic, environmental and social performance. The concept of TBL, first introduced by Elkington (1998), has been widely adopted as a framework for sustainability reporting and management. In recent years, there has been increasing recognition of the importance of incorporating social and environmental considerations into business decisions. Although researchers have identified a lack of consistency in how TBL is defined and applied, they generally agree on the importance of including social and environmental influences as well as economic ones.

Recent research has highlighted the importance of collaboration and partnerships in addressing social and environmental challenges. Companies are increasingly collaborating with governments, non-governmental organisations (NGOs) and other stakeholders to achieve common goals and create collective impact (Grayson & Hodges, 2017). Such collaboration requires a shift from the traditional transactional approach to CSR to a more collaborative and systematic

approach. DCT provides a framework for understanding how DTs such as social media, websites, blogs and blockchain help improve many aspects of CSR (Neri et al., 2023). Social media can be an effective tool for SMEs to communicate CSR initiatives to stakeholders. Cardinali and De Giovanni (2022) argue that DT can help companies enhance their social responsibility by improving their ability to collect and analyse data, enhance stakeholder engagement and promote sustainability.

DT offers the ability to further CSR goals, but companies must engage in responsible digitalisation by identifying and implementing DTs that align with TBL and CSR goals. For example, social media can help companies reach a wider audience and engage with stakeholders more effectively, potentially enhancing CSR efforts (Troise & Camilleri, 2021). DTs such as AI and the IoT can reduce resource consumption and enhance social responsibility (Zhao, 2018). They can also help retailers communicate their CSR efforts to consumers and increase their awareness of sustainable practices (Bai et al., 2021). Additionally, blockchain technology can enable companies to share data about their supply chain operations in a transparent and secure manner, improving accountability and reducing the risk of unethical practices (Saberli et al., 2019; Upadhyay et al., 2021). DTs such as data analytics and sensors can help companies identify opportunities to improve resource efficiency and reduce waste. Digital transformation ultimately enables companies to achieve their sustainability goals by enabling them to monitor and improve resource use (Kunkel & Matthes, 2020).

SMEs can exploit DT to achieve their CSR goals and create more sustainable, socially responsible business practices. First, DT can support development of sensing capabilities by enabling companies to collect and analyse data on CSR issues (Schilke et al., 2018). For example, companies can use social media monitoring tools to track customer sentiment about CSR initiatives or use data analytics to assess their operations' environmental impact. These data can inform companies' decisions about their CSR strategies and help them identify areas where they can improve performance. Second, DT can facilitate development of capture capabilities by enabling companies to collaborate with stakeholders and respond to social and environmental challenges in real time (Lee et al., 2018; Schilke et al., 2018). For example, companies can use digital platforms to interact with customers, employees and suppliers and collect feedback on their CSR initiatives (Manetti & Bellucci, 2016). Such feedback can help companies identify areas where they can improve their performance and respond to emerging social and environmental challenges (Nayal et al., 2021).

Finally, DT can support development of transformative capabilities by enabling companies to innovate and develop new products and services that address social and environmental challenges (Bharadwaj et al., 2013). For example, companies can use DT to develop new products made with sustainable materials or reduce their operations' environmental impact. These innovations can create new opportunities for companies to create value while addressing social and environmental challenges.

In sum, integration of DT aligns well with the principles of DCT. These technologies advance sensing, capture and transformation



capabilities, enabling companies to better address CSR challenges and opportunities in a rapidly changing digital landscape. Responsible digitalisation ensures that DTs are harnessed strategically to achieve CSR and TBL goals.

H2. DTs have a positive impact on CSR.

2.2.3 | CE and CSR

CE is a strategic and organisational approach that enables companies to identify and exploit new opportunities, innovate and take calculated risks (Kreiser et al., 2021). CE has been widely studied in the literature as critical in helping companies adapt to changes in the market environment and the industry (García-Sánchez et al., 2018; Sturm et al., 2023). Studies have shown that companies with high levels of entrepreneurship can better identify and respond to market opportunities and challenges. They are more innovative, flexible and adaptable to changes in the environment, which enables them to remain competitive and sustain growth over time (Hitt et al., 2001; Wiklund & Shepherd, 2005).

From the perspective of DCT, CE has been recognised as a critical factor in enhancing CSR. By fostering a culture of innovation, risk-taking, and social and environmental responsibility, CE can encourage companies to develop and implement proactive CSR strategies that create value for both the company and its stakeholders (Shepherd & Patzelt, 2011) while maintaining its current capabilities and resources (Shepherd & Patzelt, 2011; Teece, 2014). For example, a CE-focused company may seek out partnerships with social and environmental organisations to develop new products or services that address critical social and environmental issues. It may also invest in sustainable practices and technologies that reduce its environmental impact and promote responsible business practices (Iyigün, 2015). In doing so, the company can build a positive reputation and enhance stakeholder trust, which can translate into increased customer loyalty, employee satisfaction and investor confidence.

CE can thus be a critical factor in enhancing CSR by enabling companies to develop and implement proactive strategies that create value for both company and stakeholders. By fostering a culture of innovation, risk-taking and social and environmental responsibility, companies build a more sustainable and prosperous future for all (Bouguerra et al., 2022). Such improvement occurs because entrepreneurially oriented firms view CSR initiatives as a process of developing dynamic capabilities to create value, not just a cost incurred. They view these activities as a way to create value for stakeholders and enhance their reputation, leading in turn to improved financial performance (Kraus et al., 2020). This mentality is consistent with the proactive orientation and search for opportunities that characterise entrepreneurial companies. (Dess & Lumpkin, 2001). As a dynamic capability, CE facilitates development of social and environmental innovations (Frare & Beuren, 2021) such as sustainable innovations and green products and services, which improve companies' ability to sense and respond to market opportunities (Qiu et al., 2020).

Entrepreneurial companies also participate in CSR initiatives to enhance competitive advantage and build long-term value (Kraus et al., 2020).

By participating in CSR initiatives, companies can enhance their reputation, build trust with stakeholders and create new opportunities for growth and innovation (Nguyen et al., 2019). Moreover, entrepreneurial companies are more likely to engage in partnerships and collaborations with other organisations to promote CSR (Kraus et al., 2020). Such collaborations help companies leverage their strengths and capabilities to achieve common social and environmental goals, create social value and enhance corporate reputation (Arora et al., 2020).

Entrepreneurially oriented companies that adopt a proactive attitude towards CSR in their business model are more likely to pursue 'shared value' strategies that create economic value while also addressing social and environmental issues (Font et al., 2016; Torugsa et al., 2013). Similarly, Lepoutre and Heene (2006) suggest that firms with high levels of employer organisation are more likely to adopt 'hybrid business models' that is, to combine social, environmental and financial goals. Additionally, entrepreneurial companies can use resilience and resilience to respond to emerging social and environmental problems (Kraus et al., 2020; Settembre-Blundo et al., 2021). Companies with a strong entrepreneurial streak are more likely to adapt to changes in their external environment and respond quickly and effectively to emerging social and environmental challenges. Marshall et al. (2015) and Jansson et al. (2017) found that companies with a strong employer were more likely to adopt sustainable practices in response to changing customer preferences and regulatory pressures.

Therefore, entrepreneurial mentoring can enhance CSR by enabling companies to identify and exploit new opportunities to create social and environmental value, develop the resilience and adaptability needed to respond to changing stakeholder expectations and organisational pressures, and mobilise networks and resources to drive social and environmental change. Thus, the following hypothesis argues that:

H3. CE has a positive impact on CSRs.

2.2.4 | CSR and OR

CSR indicates a company's commitment to conducting business in an ethical, socially responsible, sustainable manner. In recent years, recognition has grown of CSR's potential to enhance OR and a company's ability to adapt and recover from disruptive events. OR refers to an organisation's ability to adapt, survive and thrive in the face of disruption, uncertainty and adversity. This multifaceted concept includes different dimensions, such as risk management, agility, innovation, learning and sustainability (Lengnick-Hall et al., 2011). Based on DCT, CSR can help develop sustainable business models that enhance OR by enhancing stakeholder engagement, resource efficiency, building reputation and branding, risk management and innovation (Mattera et al., 2021; Rai et al., 2021; Sajko et al., 2021). Moreover, CSR

enhances the company's ability to attract and retain talented employees, in turn enhancing OR (Bhattacharya et al., 2008).

CSR contributes to crisis management; companies with strong CSR programmes are better equipped to respond to and recover from crises (Adekola & Clelland, 2020; Wei & Kim, 2021). A strong culture of sustainability, often promoted through CSR initiatives, can enhance OR by fostering a culture of innovation, adaptability and risk-taking (Linnenluecke & Griffiths, 2010). By developing new products or services that meet consumers' needs, companies can diversify their revenue sources and reduce their dependence on traditional markets, potentially enhancing their resilience in the face of market fluctuations (Belás et al., 2021). Based on DCT, CSR as a socio-technical element focusing on environmental sustainability, ethical behaviour and social responsibility, enhances a company's reputation and brand value, assets it can leverage in times of crisis (Brammer et al., 2012). Companies with a strong reputation for social responsibility may be more trusted by stakeholders and better able to withstand reputational damage during a crisis. In addition, CSR that focuses on promoting innovation and resilience can enhance a company's ability to adapt and respond to changes in the environment (Linnenluecke & Griffiths, 2010). For example, companies that have developed innovative CSR initiatives may be better able to adapt to changes in consumer preferences or regulations.

DT can play an important role in building stakeholder engagement and communication, which are essential to developing trust and reputation. CE encourages innovation and experimentation, which drives companies to explore new business opportunities and models (Hristov & Appolloni, 2021), helping to diversify sources of income, reduce dependence on specific markets or products and create value for society and the company. This flexibility, in turn, enhances social responsibility's contribution to building reputation, stakeholder engagement and risk management.

DT and CE complement and enhance CSR, enabling companies to leverage social and environmental performance for business innovation and growth (Cardinali & De Giovanni, 2022). In this context, companies' develop dynamic capabilities that allow them to respond to digital disruptions, market fluctuations and stakeholder demands. These abilities can include strategic agility, innovation, collaboration and learning. By integrating DT and channelling entrepreneurship and social responsibility into their organisational culture and strategy, companies can develop a shared vision and purpose that inspires and motivates stakeholders. Based on the foregoing, we assert that:

H4. *CSR has a positive impact on OR.*

3 | RESEARCH METHOD

3.1 | Sample and data collection

We collected the data from the province of Andalusia in Spain, a country little analysed in the research on digitalisation and OR. We chose Spain 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 due to its strong and growing technology sector, supported by various initiatives and programmes to promote innovation and entrepreneurship. Andalusia is recognised as one of the best regions in Spain for investing in R&D. In 2020, the province received an inward investment of €1,627,247, a 5.8% increase compared to the previous year and the largest increase in the past decade, according to the Regional Government of Andalusia (Asensio, 2022).

Furthermore, Andalusia has been investing actively in digital innovation, especially to promote entrepreneurship and innovation in the digital sector. This investment has resulted in the establishment of innovation centres and technology parks in the region, including the Andalusian Technology Park (PTA) and the Andalusian Digital Content Centre (CDAN), (Andalusia – Smart Specialisation Platform, 2022; Marchese et al., 2011). Moreover, Andalusia has a rich tradition of social responsibility, evident in its CSR initiatives related to environmental sustainability, social inclusion and economic development, as reported by the Andalusian Council of Chambers of Commerce. The province also has a diversified economy that relies heavily on SMEs, which are often more flexible and adaptable to changes in the market. According to data from the Andalusian Institute of Statistics and Mapping, there were over 650,000 SMEs in the region in 2019, accounting for over 99% of all companies in the province (Instituto de Estadística y Cartografía de Andalucía, 2019).

Our sampling strategy employed a stratified approach, studying 259 SMEs in the province of Andalusia, Spain. The SMEs were selected from February to September 2020, during the early stages of the COVID-19 crisis. At this time, companies were making determined efforts to survive and support their communities. Many companies used social media to communicate with their customers, and many transformed their operations by relying on DTs. The primary data for this study were collected through a survey questionnaire that underwent a thorough review process. Various general managers, academics and consultants knowledgeable about complexity, information systems and social media reviewed the survey measures for content, wording and comprehension. Based on their feedback, the questionnaire was revised to ensure validity and reliability. After testing the revised questionnaire with professionals, we sent the questionnaire to a sample of 376 participants. We obtained 259 responses, resulting in a response rate of 68.88% (Table 1). Business owners were the primary informants, accounting

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

for 57.1% of the sample, as they possess comprehensive knowledge about their companies and their actions and plans related to information systems and social media to achieve corporate goals and improve performance (Baer & Frese, 2003).

To increase the response rate, participants were given a report summarising the study results. All individual responses were kept strictly confidential, and the information was presented at aggregate level to reduce potential desirability bias. Non-response bias was assessed by examining potential differences between early and late responders. The results indicated that there were no significant differences between first and late responders in terms of terminology, suggesting that non-response bias did not significantly impact the findings of the study.

Finally, to ensure that the questionnaire was sound, several experts (academics, consultants, managers) on the topic assessed the items' clarity, comprehensibility and content. Their comments led us to revise the questionnaire and run a pilot test with 20 general managers. Changes were incorporated into the final questionnaire.

3.2 | Measures

3.2.1 | Digital technologies

We measured DTs using five items from Li et al. (2020) and Cardinali and De Giovanni (2022). CFA ($\chi^2_5 = 5.390$, NFI = 0.99, NNFI = 0.99, GFI = 0.99, CFI = 0.99) showed that the scale was one-dimensional, valid and reliable ($\alpha = 0.908$).

3.2.2 | Corporate entrepreneurship

We measured CE as a four-dimensional structure (Knight, 1997; Zahra, 1993), thus designing a four-item scale (1 'Totally disagree', 7 'Totally agree') to measure the construct. CE was measured by innovativeness (4 items), proactiveness (5 items), self-renewal (5 items) and new business venturing (4 items) (22 = 2881, NFI = 0.99, NNFI = 0.98, GFI = 0.99, CFI = 0.98, IFI = 0.99). The four-dimensional scale has been shown to possess satisfactory levels of validity and reliability ($\alpha = 0.939$) based on the results of numerous studies conducted on the scale, which consistently found high levels of internal consistency and test-retest reliability.

3.2.3 | Corporate social responsibility

Many researchers analyse CSR using reliable and valid metrics. We relied on a scale with 12 elements and four dimensions (Carroll, 1991; Clarkson, 1995; Dowell et al., 2000). We performed CFA to validate the scales (84 = 50,113, NFI = 0.98, NNFI = 0.98, GFI = 0.99, CFI = 0.99, IFI = 0.99). The results show that the scale is four-dimensional and has good validity and reliability ($\alpha = 0.896$).

TABLE 2 Validity, reliability and internal consistency.

	λ^*	R^2	A.M.		
Digital technologies					
DT1	0.878	0.771	0.229		0.908
DT2	0.886	0.785	0.215		
DT3	0.875	0.766	0.234	s.v	0.721
DT4	0.865	0.748	0.252	c	0.947
DT5	0.732	0.536	0.464		
Corporate entrepreneurship					
Proactiveness	0.961	0.924	0.076		
Innovativeness	0.935	0.874	0.126	a	0.939
New business	0.939	0.882	0.118	s.v	0.878
Self-renewal	0.913	0.834	0.166	cr	0.970
Corporate social responsibility					
Economic	0.961	0.924	0.076		
Environmental	0.985	0.970	0.030	a	0.896
Social	0.971	0.943	0.057	s.v	0.938
Governance	0.957	0.916	0.084	cr	0.985
Organisational resilience					
LOR1	0.719	0.517	0.483		
LOR2	0.742	0.551	0.449	a	0.917
LOR3	0.810	0.656	0.344	s.v	0.665
LOR4	0.879	0.773	0.227	cr	0.954
LOR5	0.898	0.806	0.194		
LOR6	0.839	0.704	0.296		
LOR7	0.805	0.648	0.352		

Abbreviations: A.M., adjustment measurements; cr, compound reliability; R^2 , reliability; S.V., shared variance; α , cronbach alpha; λ^* , standardised structural coefficient.

3.2.4 | Organisational resilience

The study uses a 12-item scale developed by Blanco et al. (2017) and Notario-Pacheco et al. (2011), based on the original scale designed by Connor and Davidson (2003) (1 'totally disagree', 7 'totally agree'). These items are duly adapted to the present study. The authors performed CFA to validate the scales (112 = 12,602, NFI = 0.99, NNFI = 0.98, GFI = 0.99, CFI = 0.99, IFI = 0.99) and show that the scale is one-dimensional, with good validity and reliability ($\alpha = 0.917$).

3.3 | Common method bias, validity and reliability

To address common method bias in our data, we utilised three models following Cote and Buckley (1987). The first model was the 'traits-only' model, in which a factor was loaded initially. This model indicated that the observed pattern of bias was due to a common latent variable that drove the relationship between predictor and criterion variables. The cofactor acted as a confounding variable that explained the spurious relationship between the variables of interest. The

TABLE 3 Results of confirmatory factor analysis.

	χ^2/df	CFI	IFI	RMSEA	SRMR
Recommended values	≤ 3	≥ 0.9	≥ 0.9	≤ 0.08	≤ 0.08
Full model CFA	1.41	0.97	0.97	0.052	0.046
One-factor model CFA	1.43	0.68	0.68	0.159	0.175

Abbreviations: CFA, confirmatory factor analysis; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual.

TABLE 4 Means, standard deviations and correlations.

Descriptive statistics									
	Mean	SD	Job position	Business owner	Years working	DT	EO	CSR	OR
Job position	0.254	1.005	1						
Business owner	1.170	0.376	-0.273**	1					
Years working	0.316	0.945	-0.163**	0.207**	1				
DT	0.322	1.993	0.021	-0.034	-0.095	1			
CE	0.386	0.892	0.225**	-0.002	-0.158*	0.327**	1		
CSR	0.319	0.488	0.124*	-0.038	-0.136*	0.115	0.280**	1	
OR	1	1	-0.032	-0.030	-0.035	0.129*	0.149*	0.271**	1

Note: Correlation is significant at the 0.01 level (2-tailed).

Abbreviations: CSR, corporate social responsibility; DT, digital technologies; EO, entrepreneurial orientation; OR, organisational resilience; SD, standard deviation.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

second model was the 'style factor' attribute method model. In this model, each intrinsic variable was assumed to have its own latent attribute factor and a unique style factor. Every indicator was loaded on a latent factor, and the observed variance among intrinsic variables was assumed to be due to covariance among trait factors, as well as covariance among method factors. The third model we used was the interrelated attributes method model, which combined the first and second models. This model was similar to the attributes method model but allowed for a common factor that affected both objective and method variables, in addition to unique attribute and method factors for each intrinsic variable. These three models enabled us to assess and address the potential influence of common method bias in our data.

The three models provide different explanations for the presence of common method bias in the data, and none showed a significant effect of common method bias on our data.

In addition to the aforementioned methods, we conducted Harman's one-factor test (1960) to further assess the presence of common method bias. This test involved performing a principal component analysis (PCA) on all items used in the study and examining the variance explained by the first factor. If a single factor explains a majority of the variance (e.g., more than 50%), common method bias may be present. However, this method has been criticised for its simplicity and potential limitations.

As the results of the Harman's one-factor test showed no evidence of a single factor explaining the majority of the variance, bias is unlikely to explain the differences in the measures (Table 2). Furthermore, we evaluated reliability and validity of the multicomponent formulations (Table 2), which provided support for convergent validity. The psychometric properties of the measurements used in the study were also

analysed (Table 2) and showed satisfactory levels of reliability, with composite dependencies ranging from 0.93 to 0.95, and coefficients of variation ranging from 0.66 to 0.77, higher than the recommended minimum value of 0.50 (Fornell & Larcker, 1981). All factor loadings were significant ($t > 13.71$) and above the recommended limit ($\lambda > 0.70$).

Furthermore, exploratory factor analysis (EFA) was conducted to examine loading factors and structural factors for possible common method bias. The results showed that one factor appeared for each construct proposed, supporting evidence of one-dimensionality. Additionally, CFA was performed to assess combined method bias, testing a specific measurement model that included separate factors for each construct as well as a common method factor that captured any variance due to the method used to obtain the data set. By comparing the fit of the measurement model with and without the co-method factor, researchers can assess the effect of co-method bias on the measurement model (Table 3).

Overall, the findings from the various analyses conducted—including PCA, EFA and CFA—did not indicate significant evidence of common method bias in our data. This result suggests that the results obtained are less likely to be influenced by such bias (Podsakoff et al., 2003).

4 | RESULTS

Table 4 presents the descriptive statistics including the means, standard deviations and multifactorial correlation matrix for the study variables. Prior to analysis, we assessed the data for normality and outliers and identified no significant violations.

TABLE 5 Regression analysis.

Dependent variables	Independent variables	Entrepreneurial orientation		Corporate social responsibility				Organisational resilience	
		Model 2		Model 3		Model 4		Model 5	
		Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)	Coefficients (t statistics)	TOL (VIF)
Constant	3.522 (11.396)	2.972 (9.601)		2.983 (17.500)		2.632 (13.086)		2.577 (6.648)	
Job position	0.201 (3.582)	0.200 (3.770)		0.063 (2.156)		0.021 (0.705)		-0.007 (-0.158)	
Business owner	0.211 (1.398)	0.222 (1.553)		0.030 (0.383)		-0.022 (-0.271)		-0.161 (-1.360)	
Years working	-0.132 (-2.256)	-0.105 (-1.886)		-0.069 (-2.257)		-0.061 (-1.934)		0.017 (0.374)	
DT		0.141 (5.488)	0.991 (1.009)	0.099 (6.984)	0.991 (1.009)			0.127 (2.775)	0.791 (1.264)
CE						0.209 (6.311)	0.927 (1.078)	0.319 (5.902)	0.758 (1.320)
CSR								0.371 (3.833)	0.747 (1.339)
R^2	0.073	0.171		0.202		0.178		0.333	
Adjusted R^2	0.062	0.158		0.189		0.165		0.318	
F	6.671	13.103		16.076		13.726		21.011	
Standard error	0.863	0.818		0.450		0.457		0.672	

Abbreviations: TOL, tolerance; VIF, variance inflation factor.

To test the hypotheses, hierarchical regression analysis (Table 5) was conducted using a stepwise approach. Control variables were included in the first model (Form 1), followed by introduction of DT as an independent variable in Model 2. The results supported H1, which proposed that DT enhanced CE ($\beta = 0.14$, $p < 0.01$), accounting for 17.1% of the variance in CE.

The H2 suggested that DT contribute to CSR. Model 3 examined the role of this relationship and found a significant positive association ($\beta = 0.09$, $p < 0.05$), explaining 20.2% of the variance in CSR. Additionally, Model 4 tested whether CE was a predictor of CSR and found CE to have a significant positive effect ($\beta = 0.209$, $p < 0.01$), accounting for 17.1% of the variance in CSR.

Model 5 tested the last hypothesis, proposing that companies' commitment to CSR would positively impact corporate OR. The results revealed a significant positive association ($\beta = 0.371$, $p < 0.01$), explaining 33.3% of the variance in OR.

5 | CONCLUSIONS

5.1 | Discussion

The results of the study showed that DT enhances SMEs' entrepreneurial orientation (EO) by providing organisations with opportunities

for innovation, proactivity and risk-taking. For example, DT enables organisations to access and analyse large amounts of data and thus to identify emerging market trends, customer preferences and competitor activities (Brynjolfsson & McAfee, 2015). This data-driven approach enables organisations to proactively identify and capitalise on new business opportunities, fostering an entrepreneurial mindset. DT facilitates communication and collaboration within organisations, activities essential for guiding entrepreneurship. Moreover, DT enables organisations to try and test new ideas and concepts at a faster pace and lower cost, as we establish in the practical implications (Elia et al., 2020).

DT also enables organisations to implement sustainable practices and contribute to CSR based on dynamic capabilities (Holzmann & Gregori, 2023). This ability enables organisations to integrate sustainability into their operations, products and services; contribute to environmental and social well-being; and enhance OR (Brammer et al., 2012). When organisations integrate CSR initiatives into their EO, they may obtain several benefits that enrich OR by driving innovation, enhancing stakeholder relationships, fostering a culture of learning and enhancing reputation and brand image. Organisations that effectively integrate CSR initiatives into their EO are likely to be more adaptable, innovative and socially responsible, positioning themselves as resilient and sustainable in today's dynamic business environment (Kraus et al., 2020).

This study drew on DCT (Teece, 2007; Teece et al., 1997) to explore how CSR enhanced by DT and CE contributes to enhancing OR. This theory underscores the significance of firms' capacity to adapt and innovate in response to the rapidly evolving external environment, facilitated by DT (Martín-Rojas et al., 2023; Nambisan et al., 2019; Teece, 2007). As to the role of CSR, DCT suggests that companies with a strong manager are better able to adapt to changing social and environmental pressures and develop new capabilities related to CSR (Neri et al., 2023). Finally, focusing on entrepreneurship and resilience and DCT, we assert that developing strong relationships with different agents (such as suppliers) and promoting sustainable practices throughout the supply chain enables companies to reduce the risk of supply chain disruptions and ensure continuity of operations in times of crisis to remain competitive and be resilient (Brammer et al., 2012; Rojas et al., 2021).

5.2 | Theoretical contribution

This article uses DCT to shed light on the field of strategic management. DCT theorises a company's ability to cultivate and deploy the essential capabilities essential for sustaining competitive advantage and achieving long-term success (Teece, 2017). According to DCT, organisations can enhance their dynamic capabilities by establishing processes, routines and organisational structures that enable them to sense environmental changes, seize opportunities and reconfigure their resources and capabilities (Teece, 2007). In the realm of DT, companies can foster dynamic capabilities through investments in digital infrastructure, partnerships with DT firms and cultivation of a culture that embraces innovation and experimentation (Teece, 2018).

These capabilities enable firms to sense, seize and transform opportunities and threats in their environments (Teece et al., 1997). In the context of CSR, dynamic capabilities can help companies identify, create and gain value by engaging with stakeholders and responding to social and environmental challenges (Dentoni et al., 2016; Santa-Maria et al., 2021). DT has emerged as a critical enabler of dynamic capabilities, particularly in CSR. DT provides new opportunities for companies to collect and analyse data, collaborate with stakeholders and innovate to address social and environmental challenges (Bharadwaj et al., 2013).

DCT focuses on a company's ability to adapt to changing environments and develop new capabilities over time. In the context of EO and CSR, DCT suggests that an entrepreneurial company may be more likely to develop new capabilities related to social or environmental sustainability in response to changing stakeholder expectations for improved environmental and financial performance (Shafique et al., 2021). Overall, DCT suggests that an employer's organisation can be a powerful driver of CSR by enabling companies to develop dynamic capabilities aligned with social and environmental objectives. By leveraging EO, a company can create long-term value for its stakeholders, while enhancing its reputation, competitive advantage and overall sustainability (Valdez-Juárez et al., 2021).

According to DCT, CSR can enhance OR by building the company's ability to adapt and respond to changes in the environment (Karman & Savanevičienė, 2021). This is done in several ways, as CSR initiatives that focus on building strong relationships with stakeholders (e.g., customers, employees, suppliers, local communities) can enhance a company's resilience by creating a network of support to draw on in times of crisis (Baolong & Cao, 2022; Linnenluecke & Griffiths, 2010). For example, companies that have established strong relationships with local communities may be better able to access resources and support during a natural disaster. Additionally, CSR that focuses on promoting employee development, knowledge sharing and learning can enhance a company's ability to adapt to changes in the environment (Baolong & Cao, 2022). By creating a culture of continuous learning, companies can build their knowledge and skill base, which can be leveraged to develop new products, services or business models that enhance their agility (Battistella et al., 2017).

5.3 | Managerial implications

Digital tools such as project management platforms, virtual communication tools and collaboration software enable employees to work together seamlessly, share ideas and contribute to new product or service development (McDougall et al., 2020). This collaborative approach promotes innovation and proactivity among employees, generating entrepreneurial direction faster and at lower cost. For instance, organisations can use digital marketing and e-commerce platforms quickly to launch and test new products or services in the market, collect customer feedback and iterate their offering accordingly (Sjödin et al., 2020; Srinivasan & Venkatraman, 2018). This iterative approach enables organisations to learn from failures, make necessary adjustments and continue to enhance their CE. CSR is based on dynamic capabilities. DT facilitates organisations in enhancing transparency and accountability to their stakeholders (Mackey & Cuomo, 2020). Through digital platforms such as social media and corporate websites, organisations can communicate their CSR initiatives, share progress and results, and engage with stakeholders in a transparent interactive way. Integrating DT fosters the increase of CSR, through enhancement of employee development and motivation and alleviation of duplicative efforts in specific tasks.

In addition, organisations can use DT to engage in social innovation and address social challenges through CSR. Organisations can use DT to develop innovative products or services that address social issues such as poverty, inequality, health or education (George et al., 2021). These social innovation initiatives not only better society, but enhance the organisation's reputation and resilience by demonstrating its commitment to CSR and dynamic capabilities. Mackey and Cuomo (2020) indicate that DT enables organisations to enhance stakeholders' transparency, accountability and engagement, in turn contributing to OR through CSR. That is to say, SMEs should work on responsible digitisation. Further, Sodhi and Tang (2019) confirm that digital tools for supply chain management can support sustainable practices and enhance CSR.



Organisations' integration of CSR initiatives into their CE can lead to several benefits that enhance OR: Firstly, CSR initiatives that align with EO of organisations can drive innovation. For instance, organisations that prioritise CSR may invest in R&D to create innovative solutions that address social or environmental issues (Asongu, 2007). This innovation may not only benefit society but also enhance the organisation's competitive advantage and ability to adapt to changing market dynamics, contributing to OR. Secondly, CSR initiatives that align with CE can enhance stakeholder relationships. Organisations that engage in CSR activities demonstrate their commitment to social and environmental concerns, which can foster trust and goodwill among stakeholders such as customers, employees, investors and communities (Xiaotian et al., 2021). Strong stakeholder relationships can provide organisations with support and resources during challenging times, such as crises or disruptions, enhancing OR. Resilience must thus follow entrepreneurship accomplishments, which in turn foster entrepreneurial resilience in SMEs (Duchek, 2020).

Thirdly, CSR initiatives that align with CE can contribute to organisational learning and organisational culture. Organisations that prioritise CSR may establish a culture of learning, experimentation and continuous improvement, fostering entrepreneurial mindset and agility (Jalilvand et al., 2018). Such organisations can better adapt to changing circumstances, learn from failures and proactively respond to challenges, enhancing OR. Responsible digitisation is thus needed to improve entrepreneurship and subsequently resilience in organisations, especially SMEs. Finally, CSR initiatives that align with CE can also enhance organisations' reputation and brand image. Organisations that demonstrate commitment to social responsibility and EO are likely to be perceived as socially responsible, ethical and trustworthy by stakeholders and society (De Roeck & Farooq, 2018). A positive reputation and brand image can contribute to OR by safeguarding the organisation's market share, customer loyalty and stakeholder support, even during turbulent times.

In conclusion, alignment between CSR initiatives and CE, while seemingly primary, is an effective way to enhance OR. This dynamic interaction drives innovation, fosters strong stakeholder relationships, fosters a culture of lifelong learning, and amplifies reputation and brand equity. By weaving CSR endeavours seamlessly into the fabric of entrepreneurial endeavours, companies empower themselves to embrace adaptability, foster innovation and fulfil their social responsibilities. This strategic synergy not only enhances resilience but also positions companies as sustainable players, capable of dealing with changes in the contemporary business landscape.

5.4 | Limitations and future research

Some limitations must be considered when interpreting the study results. The results are not generalisable to all types of organisations or industries. Research may need to focus on specific contexts and settings and on a larger sample; we focused on SMEs in one province, Andalusia, hindering generalisation of our results to all countries and sectors, as well as to large companies. We encourage future studies to

analyse various types and levels of DTs and their role in promoting EO and social responsibility in broader sectors and large multinational companies.

Second, the study uses cross-sectional design, limiting ability to establish causal relationships between variables. Longitudinal studies may be required to investigate changes in social responsibility, DT, CE and OR over time (Xu et al., 2023; Yang & Han, 2023). Third, OR is a complex construct that may take time to emerge. Longitudinal studies examining the long-term effects of social responsibility enhanced by DT and entrepreneurial mentoring on OR are therefore necessary and would provide more robust evidence. Moreover, other variables may mediate or mitigate the relationship between social responsibility, DT, CE and OR. Future research can explore these variants to better understand the underlying mechanisms.

Third, future studies could investigate the mechanisms through which social responsibility, DT and entrepreneurial mentoring enhance OR (Cardinali & De Giovanni, 2022; Esposito & Ricci, 2020; Xu et al., 2023). It would also be beneficial to examine the role of leadership in promoting social responsibility, DT and entrepreneurial direction in enhancing OR (Ciasullo et al., 2022; Feiyang et al., 2022). In addition, future research could investigate cultural and contextual factors that influence adoption and effectiveness of social responsibility, DT and CE in enhancing OR (Bai et al., 2021; Martín-Rojas et al., 2023; Santos et al., 2023). Finally, research could explore the moderating effects of organisational size, industry and geographic location on the relationship between social responsibility, DT, CE and OR.

All in all, further research is needed to fully understand the complex process within which the direct and indirect relationships occur between CSR, DT, CE and OR in SMEs. Future research should address the limitations and consider the future research directions outlined in this paper to provide a more comprehensive understanding of the role these factors play in enhancing SME resilience.

6 | CONCLUSION

The current study sheds new light on the relationship between social responsibility and OR. Growing evidence suggests that CSR bolstered by DT and CE can positively influence OR in SMEs (Martín-Rojas et al., 2023). By integrating social responsibility initiatives and DT into their operations, SMEs can improve their responsible digitisation to increase their ability to adapt and respond to changes in the business environment, enhancing their overall resilience (Chatterjee et al., 2022). Additionally, CE can help SMEs identify and pursue new opportunities, further bolstering their resilience and accomplish entrepreneurial resilience in the current volatile, uncertain, complex, ambiguous environment (Brownell et al., 2021).

SMEs can benefit from integrating social responsibility and DT into their operations while fostering an entrepreneurial mindset to enhance their resilience in an increasingly competitive and rapidly changing business landscape.

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