

# Comeback or evolution? Examining organizational resilience literature in pre and during COVID-19

Thea Paeffgen, Tine Lehmann and Mareike Feseker  
*HTW Berlin University of Applied Sciences, Berlin, Germany*

Resilience  
literature in  
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times

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## Abstract

**Purpose** – The ability of companies to develop organizational resilience before, during and after crises is crucial for their development and growth. The future forecasts increasingly more crises, thus this paper aims at identifying key topics around organizational resilience in COVID-19 times, differentiating them of pre-crisis literature and synthesizing them into a research framework.

**Design/methodology/approach** – Based on Web of Science and Scopus, the authors analysed the content of the only twenty-seven VHB-ranked primary studies discussing organizational resilience during COVID-19, providing a complete survey of this research area.

**Findings** – Following a content analysis, the authors identified main topics of interest for researchers at the moment of COVID-19, how it differed from before this adversity and provide an outlook on future research. The results presented include in the COVID-19 context: an adapted definition of organizational resilience, key theoretical framework, insights for future research. Some topics have been found to be increasingly more important during COVID-19 (i.e. digitalization, partnerships and learning) while others have been less explored although present in pre-COVID-19 research on organizational resilience (i.e. dynamic capabilities, anticipation and preparedness).

**Originality/value** – Understanding key issues in global disruptions could help practitioners in fostering resilience as much as researchers in identifying new ways to advance and maintain resilience. This paper differs from other reviews by providing a full text analysis, based on qualitative content analysis, of all ranked published papers in the considered period.

**Keywords** Organizational resilience, Business resilience, COVID-19 pandemic, Corona virus, Crisis, Global disruption, Literature review

**Paper type** Research paper

## 1. Introduction

COVID-19 has shaken crisis literature (Beech and Anseel, 2020; Karlsson *et al.*, 2023) and challenged many ideas about resilience (Paeffgen, 2023). Due to its inter-disciplinarity (Desjardine *et al.*, 2019), it might seem difficult to assess organizational resilience in its entirety with this new global crisis; how understandings differ from disciplines is discussed by Hillmann (2021). Duchek (2020) proposes a conceptualization based on capabilities but no review assesses these perspectives of past literature onto this current unique challenge. In addition, discussions in academics arose long ago warning that crises would become increasingly different (Mithani, 2020), complex and frequent in the future (Boin and Lagadec, 2000). Crises generally vary in nature; however, the COVID-19 crisis stays unprecedented and drove a lot of organizations out of business (Kumar, 2020), which poses a significant new obstacle.

COVID-19 significantly impacted all levels of businesses, representing a unique adversity in its extensive impact and enduring nature (Kumar, 2020), which makes this recent challenge

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specifically concerning. Nevertheless, organizational resilience has as its ultimate objective to avoid the failure of an organization. Given the inevitability of future crises and the likelihood of more medical crises (World Economic Forum, 2023), an understanding of how to handle resilience during COVID-19 is called for. This unprecedented global crisis offers a common lens to analyse current literature; taking advantage of this unique perspective, we can gain novel insights and deepen our understanding of the many facets of organizational resilience during this crisis and how the literature evolved around it.

Hence, we asked: How has the literature on organizational resilience evolved in response to the COVID-19 pandemic? To address this concern, we take a combination of critical realist and interpretivist view of the literature and systematically review all 27 recent quality journal articles about organizational resilience analysed in the spotlight of the pandemic. Our understanding of this crisis can be enhanced by leveraging this unique perspective. As a result of adopting an exceptional full textual analysis, this paper provides an extended and deeper analysis of the literature regarding organizational resilience during COVID-19. The review followed a set of strict criteria presented in the method.

This paper contributes to the literature by clarifying the meaning of organizational resilience during the pandemic, synthesizing an overview of the theoretical output of main studies, as well as discussing future research outlooks from different inter-disciplinary points of view.

## 2. Literature review organizational resilience pre-COVID-19

Research in the past has shown the inter-disciplinarity of “organizational resilience” as a concept (DesJardine *et al.*, 2019) while highlighting the inconsistency in the definitions of the term even before COVID-19 (Linnenluecke, 2017; Duchek, 2020; DesJardine *et al.*, 2019). While resilience on an individual level is important, this paper will only address main concepts on the organizational level and aims to contextualize this research within past literature on organizational resilience in a pre-COVID-19 area.

Organizational resilience has usually been defined in a context of *disruptions, crises* or an uncommon kind of disturbing and intermittent circumstance (Linnenluecke, 2017). If not referring to a specific crisis or system, organizational resilience is regularly discussed in the context of *uncertainty* (Burnard and Bhamra, 2011). That is an unforeseeable future or lack of future security (i.e. that would lead to insecure planning); which are hallmarks of crises (Bundy and Pfarrer, 2015). By nature, crises are intrinsically changing in today’s world, leading to more impact and complexity (Boin and Lagadic, 2000).

### 2.1 Characteristics of organizational resilience

Organizational resilience is often assessed in different attributes or characteristics. We summarize these in seven main characteristics: anticipation, response, survival, recovery, adapt, absorb and maintaining stability.

First, literature repeatedly considers *preparedness and anticipation* when discussing organizational resilience (Duchek, 2020). That is any proactive measures taken to anticipate and prepare for potential challenges or disasters. Certainly, Somers (2009) sees planning and preparedness of an organization as an essential part of being resilient, while Boin and van Eeten (2013) argue these are preparation and anticipation. In contrast, Wildavsky (1988) argues that both anticipation and resilience are necessary, while seeing a clear distinction in these two terms.

Secondly, organizational resilience is sometimes seen as a *response* strategy, or more specifically the response to crises or uncertainties (Burnard and Bhamra, 2011), where a resilient response to a crisis includes business continuity planning and disaster recovery procedures. Similarly, Sutcliffe and Vogus (2003) argue that organizational resilience is what organizations do to cope, stating that they intrinsically respond to adversities differently.

One specific crisis response is often mentioned as an outcome of resilience: *survival*; namely, resilient organizations are able to withstand and overcome a crisis (Sutcliffe and Vogus, 2003). Authors discuss that to survive (e.g. building resilience) is not something that one organization can do on their own (Seville *et al.*, 2008). However, while still being at the centre of first response (i.e. resilience), organizational survival is not enough to be focused on and could restrict one's view of the opportunities of circumstances (Mithani, 2020). In contrast, others see an adequate response strategy not as part of being resilient but as leading to the resilience of an organization (Meyer, 1982).

Accompanying survival, authors also discuss the aspect of *recovery*, i.e. restoration after being partially damaged. Being considered in the context of organizational resilience and in crisis management perspectives (Pearson and Clair, 1998), the term of recovery is linking both streams of literature (Williams *et al.*, 2017). Some researchers see organizational resilience as the detection and recovery from problems (Macrae, 2019); others state a bouncing back to pre-crisis situations (Ray *et al.*, 2011).

The concept of *adaptation* or adjusting to new circumstances is discussed from two different perspectives in resilience literature. On the one hand, literature repeatedly refers to organizational resilience as the ability of organizations to adapt and adjust to changing circumstances in a positive manner (Vogus and Sutcliffe, 2007). Burnard and Bhamra (2011) discuss adaptive capacity as a main organizational resilience characteristic and argue that it, in turn, means better preparedness (discussed as a separate characteristic earlier). On the other hand different streams of literature see a clear difference in resilience from flexibility, agility and adaptability (Lengnick-Hall *et al.*, 2011) by arguing that adaptation theories focus on significantly different uncertainties and threats than those to be faced in the future (Mithani, 2020).

Similarly, resilience literature often refers to *absorbing* changes, meaning organizations are taking in a current situation. Lengnick-Hall *et al.* (2011) for instance define resilience as “a firm's ability to effectively *absorb*, develop situation-specific responses to, and ultimately engage in transformative activities” (Lengnick-Hall *et al.*, 2011, p. 244). Conversely, Mithani (2020) refer to absorption as one model of resilience; including also avoidance, elasticity, learning and rejuvenation.

The characteristic of *maintaining stability* is frequently mentioned in organizational resilience literature; including referring to resilience as maintaining desirable functions (Gittell *et al.*, 2006) and positive adjustments (Sutcliffe and Vogus, 2003; Gittell *et al.*, 2006). DesJardine *et al.* (2019) distinguish between two strategies; flexibility and stability, i.e. the interdependencies among stakeholders leading to stability and the encouragement of interdependencies among diverse actors fostering flexibility. According to some crisis literature, responding to crises with flexibility has proven effective (Barnett and Pratt, 2000; Kahn *et al.*, 2013), and could thus be seen as a resilient response. Lengnick-Hall *et al.* (2011) however argue that flexibility among others should be clearly distinguished from organizational resilience.

## 2.2 How organizations build resilience

Resilience is often defined in terms of how it is enacted, rather than its characteristics. We identified in pre-COVID-19 literature five main perspectives: rapidity, resources, development, capacities and capabilities.

First, there is a time perspective of resilience; more specifically the *rapidity* of actions taken by the organization (Macrae, 2019). Often resilient organizations are referred to as organizations that have faster response and recovery mechanisms (Sutcliffe and Vogus, 2003; Weick and Sutcliffe, 2007; Linnenluecke, 2017). Similarly, Tierney (2003) sees resilience in four dimensions: robustness, redundancy, resourcefulness and rapidity. In contrast,

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DesJardine *et al.* (2019) see two measuring tools for the resiliency of an organization; i.e. the severity of loss and the time to recovery.

This severity of loss (DesJardine *et al.*, 2019), refers to another characteristic of how resilience might be impacted by or built, *resource* availability. Some researchers have a resource based approach to resilience, such as Sutcliffe and Vogus (2003), arguing that resilience is the result of processes and dynamics that create or maintain various resources within an organization. These resources can be cognitive, emotional, relational or structural and need to be flexible, storable, convertible and malleable to be effective (Sutcliffe and Vogus, 2003).

Some authors see resilience as a *development*, sometimes seeing threats as opportunity for organizations to develop further (Lengnick-Hall and Beck, 2016). Two main beliefs attract attention, first resilient organizations do not take success for granted and see opportunities in unexpected events (Weick and Sutcliffe, 2001); and secondly, resilient organizations continuously enhance their capabilities and believe they are ready to manage adversities (Vogus and Sutcliffe, 2007). Authors argue that learning is part of being resilient as an organization (Boin and van Eeten, 2013) or can be seen as input and output of resilience (Sutcliffe and Vogus, 2003). Indeed, Weick and Sutcliffe (2001) argue that resilient organizations believe that their understanding of risks needs to be updated regularly. Similarly, Sutcliffe and Vogus (2003) argue that resilience depends on processes, structures and practices that promote competence, restore efficacy and encourage growth within organizations.

Furthermore, literature already defines organizational resilience with regard to organizations' *capacities*, i.e. the capacity to deal with unanticipated events (Wildavsky, 1988). Theoretical constructs as such might be measured at individual level and generalized at the organizational level, since individual actions and interactions shape an organization's collective resilience (Lengnick-Hall *et al.*, 2011; Morgeson and Hofmann, 1999). Lengnick-Hall *et al.* (2011) state that organizational resilience capacity mainly comes from strategic human resources (HR) management, i.e. that creating and enhancing specific competences and resilient practices on core employees, develops and fosters organizational resilience capacity (Lengnick-Hall *et al.*, 2011). Some researchers argue that individual resilience might influence team resilience (West *et al.*, 2009) and as such organizational resilience.

The term of *capabilities* (Weick and Sutcliffe, 2001) (or sometimes dynamic capabilities (Duchek, 2020; Burnard and Bhamra, 2019)) is used to explain resiliency of an organization. Altogether, Duchek (2020) is seeing resilience as a meta capability, highlighting underlying capabilities such as anticipation capabilities (observation and identification, preparation), coping capabilities (accepting, developing and implementing solutions) and adaptation capabilities (reflection and learning, organizational change).

While the term resilience originated in psychology (Lengnick-Hall *et al.*, 2011) yet, a lot of questions remain (Paeffgen, 2023). How understandings differ from disciplines is discussed by Hillmann (2021) and Linnenluecke (2017). Duchek (2020) proposes a conceptualization based on capabilities but no review to this day assesses these perspectives with the lens of this new global COVID-19 challenge. Certainly, crises are becoming increasingly complex and frequent (Boin and Lagadec, 2000) and organizational resilience aims for the survival of organizations during crises (Sutcliffe and Vogus, 2003). This calls for an understanding of lessons learned and resilience of organizations from the handling of COVID-19. This COVID-19 focused review will thus answer the following question: How has the literature on organizational resilience evolved in response to the COVID-19 pandemic? Addressing first, main theories developed by recent literature in this context, then, analysing future research possibilities and the main learnings from the pandemic in this field.

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### 3. Method

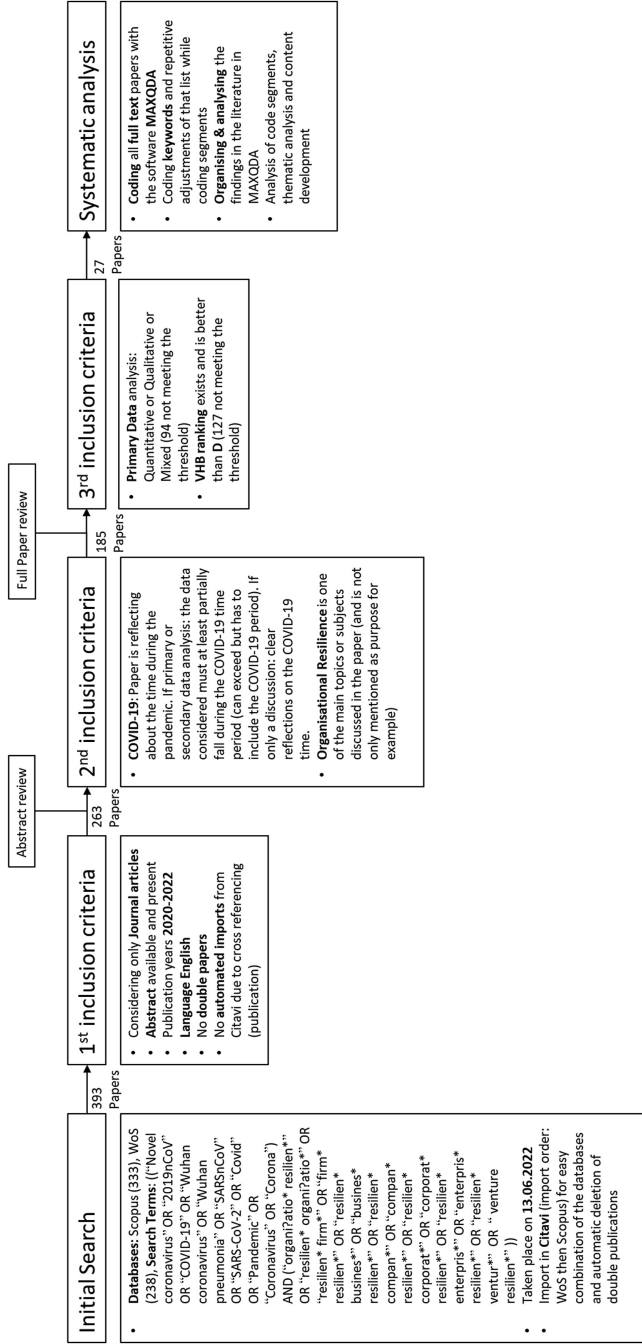
To address the research question of this study, the authors adopted a pragmatist perspective, engaging on the lines between critical realism and interpretivism (Saunders *et al.*, 2009). We realized that most systematic literature reviews do not detail their full text analysis and their approach seems to follow a limited systematic approach in collecting methods, abstracts, results etc (Markoulli *et al.*, 2017; Aristovnik *et al.*, 2020). Inspired by qualitative text analysis approaches commonly used in document and interview analysis, we adopt a full textual analysis, thereby providing an extended and deeper analysis of the literature around organizational resilience during COVID-19 times. The data collection and selection criteria are as shown in Figure 1.

#### 3.1 Data collection methods, sampling and justifications

In a first step, we conducted a common systematic literature review, following the suggestions of Tranfield *et al.* (2003). After an initial search resulting in 393 papers, the first set of inclusion criteria is established (see Figure 1). The second set of inclusion criteria was chosen since, in many cases, COVID-19 or resilience was merely mentioned as a study purpose, highlighting the significance of the study but not its actual focus and 185 papers remained. Finally, our review only analysed primary data as sources in order to find studies that were reporting on novelties, instead of doing a review of reviews. The VHB ranking (VHB-JOURQUAL3, 2015) has been used as a proxy for quality in this case as it is an established institution in Germany. We also compared our sample with other established rankings such as the Academic Journal Guide (ABJ) and found a notable overlap. For the discussion of the reliability and validity of this measure, we would refer to the extensive discussions in Eisend (2011) and Schrader and Hennig-Thurau (2009). Of the 185 relevant papers found, we analysed all 27 primary data contributions in VHB-ranked journals and conducted a full text analysis with an extensive coding process.

#### 3.2 Coding

The papers in the sample have been coded qualitatively and analysed using MAXQDA (Kuckartz and Rädiker, 2019). To identify relationships, trends and new perspectives, it is important to create classes of categories and codes, which in the end will reveal the interrelationships of themes within the sample. Coding was done through deductive, structured coding and corresponds to a systematic approach. Essentially, the results of the co-word analysis of Paeffgen (2023) were used for the development of the initial code structure. We followed this deductive approach as we wanted to understand the context of the keywords derived by VOSviewer in more detail (Miles *et al.*, 2018; Skjott Linneberg and Korsgaard, 2019). This initial code structure was discussed, reflected and adapted within the research teams in several rounds, which led to the codes being re-clustered into higher categories and thematically associated subcategories. A regular exchange of individually coded documents created opportunities to address potential uncertainties of applying fitting codes for certain paper segments. The authors completed several coding rounds. This review differs from other reviews in the sense that more than 100 codes have been used in the first round of coding and more than 3,000 segments coded. The coding of papers was stopped when thematic saturation was achieved. That is accomplished according to Charmaz and Thornberg (2021) when seeking “more data while theoretical sampling, but find[ing] no new properties or characteristics of their categories”. We ensured consistent coding through specific definition of codes and verified intercoder reliability with a kappa over 71% (Kuckartz and Rädiker, 2019). Despite this rate, the constant discussion at several stages of the coding process suggests that priority is given to the researchers’ aim to uncover the underlying arguments and findings of the papers.



Source(s): Figure created by author; Based on Paeffigen (2023)

Figure 1. General methodology

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### 3.3 Content analysis

The data analysis focused on recognizing patterns and discovering theoretical qualities in the data, which was aided by the constant comparative method (Glaser and Strauss, 1967; Bowen, 2009). Qualitative and quantitative comparisons were made also by using visualizations to do case and group comparisons (Kuckartz and Rädiker, 2019). As for an interpretive textual analysis, using a software supports with “systematically, comprehensively, and exhaustively analyz[ing] a corpus of data” (Gephart, 2004), the same software MAXQDA (Kuckartz and Rädiker, 2019) was used as a support for the analysis.

To develop the synthesis of the theoretical framework, we first focused on our codes for theoretical frameworks derived in our 27 papers. Some papers, however, focused on very specific fields that are crucial for specific types of organizations but seem not to be transferable to all organization types. We tried to summarize the provided research frameworks that we found in the reviewed literature and compare it to pre-COVID-19 literature. Following our original research philosophy, our results are subjective in a sense, as the included causal relations discussed in the following are based on our impression of most prominent issues.

## 4. Results and discussion

### 4.1 Definition of organizational resilience during the COVID-19 pandemic

Given the absence of consensus on how organizational resilience is defined in the literature before COVID-19 (Linnenluecke, 2017; Duchek, 2020; DesJardine *et al.*, 2019), it is necessary to examine how the concept is understood in this context. Within our 27 papers, a clearly formulated definition on organizational resilience has been presented in 24 papers. For a deeper understanding, a short review of definitions used in this sample is presented in the supplementary material and how exactly they are different from pre-COVID-19 literature is provided in the following.

By extracting key terms used in formulating definitions, it becomes noticeable that most authors (22 out of 23 papers) continuously focus on disruptions or crises faced by the organization. Adapting to emerging circumstances is an essential process (Lin and Wen, 2021; Sarkar and Clegg, 2021), according to more than half of the papers analysed. However, different from the pre-COVID era, preparedness and anticipation no longer constitute a major part in the literature. Instead, organizational resilience is often observed as a response to disruption (Hajishirzi *et al.*, 2022; Rodríguez-Sánchez *et al.*, 2021) or more specifically “to quickly adapt to disruptions” (Aldianto *et al.*, 2021, p. 3). The rapidity of organizational actions taken is emphasized in other papers of this sample (Cui *et al.*, 2022; Baral *et al.*, 2022). Hence, organizational resilience is observed when organizations facing disruptive circumstances extemporaneously perform fast adjustments. Since the start of COVID-19, rather than pro-active measurements taken, literature mostly views resilience as a reaction of the organization. A persisting feature mentioned in the literature is that organizational resilience conduces to the survival of the organization through crisis (Hajishirzi *et al.*, 2022; Sutcliffe and Vogus, 2003). Similarly, the view on organizational resilience as an organization’s capacity remains applicable (cf. Suppl Table S1). Though, it is striking that only one-quarter of the given sample includes capabilities in their definitions. Whilst frequently considered in pre-COVID-19 literature, only one paper within the sample, namely (Ozanne *et al.*, 2022) notes dynamic capabilities as an attribute for organizational resilience.

Another shift in perspectives becomes noticeable in the category of resources. While in pre-COVID-19 literature, the availability of resources within organizations leads to its level of resilience (Sutcliffe and Vogus, 2003), at present only a small number of authors consider this factor (cf. Suppl Table S1). The same applies to maintaining stability which is only

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considered as secondary in organizational resilience publications within the timeframe of the COVID-19 pandemic.

Considering the current situation, we propose an adapted definition of organizational resilience in COVID-19 times: *The ability of organizations to quickly respond to unanticipated disruptions, reacting with fast adaptations, utilizing capacities to ensure organizational survival.*

#### 4.2 A synthesis of theoretical constructs

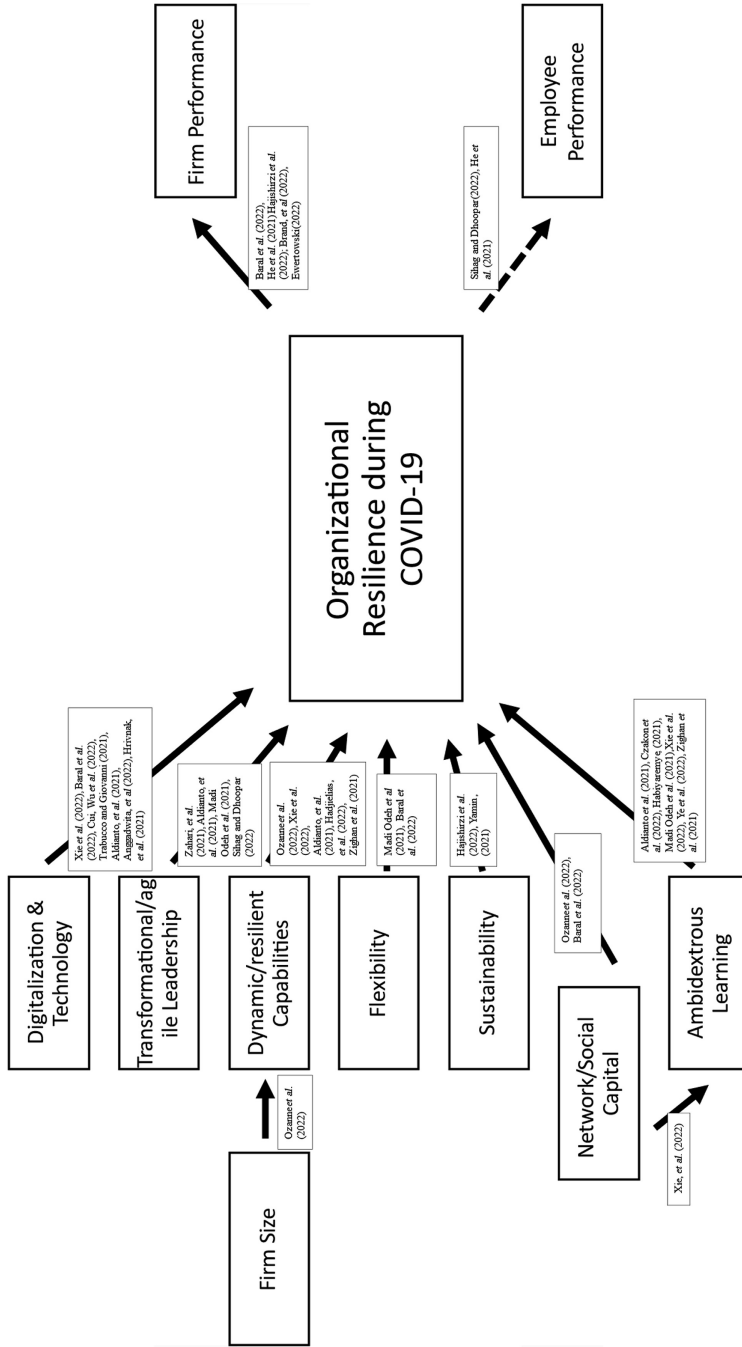
In this part we synthesize the results from the qualitative analysis and combine it into a general research framework. [Figure 2](#) provides a general research framework that summarizes connections and relations in the field of organizational resilience and hence demonstrates the body of knowledge at the status quo, i.e. during the COVID-19 pandemic. We distinguish between influencing elements and elements resulting from organizational resilience in COVID-19 times. We start in the following with the influencing elements.

*4.2.1 Influencing factors.* First, technology and digitalization are not only the most looked at industry, but also a key element of resilience in these uncertain times. Indeed, [Xie et al. \(2022\)](#) show that the use of digital tools has a moderating effect on business networks' influence on resilient capabilities. [Baral et al. \(2022\)](#), [Cui et al. \(2022\)](#), as well as [Trabucco and Giovanni \(2021\)](#), show a direct positive influence of digitalization in companies on organizational resilience. This was demonstrated especially in supply chain integration and information complexity ([Cui et al., 2022](#)), startup business resilience mediated by innovation ambidexterity ([Aldianto et al., 2021](#)) and more generally supported by [Anggadwita et al. \(2022\)](#) and [Hrivnak et al. \(2021\)](#). This was made most visible by the COVID-19 crisis as more remote strategies than ever before were to be utilized. While digitalization is present in literature and gets more and more widespread attention also in management literature, the extensive connection to organizational resilience here is novel, as only very few niche studies reflected that in the past ([Bayuk and Silverstein, 2007](#); [Vakilzadeh and Haase, 2021](#)).

Another factor discussed in different facets is the role of leadership on organizational resilience. [Zahari et al. \(2021\)](#) show that leadership appears to have a mediating effect on organizational resilience, while [Aldianto et al. \(2021\)](#) postulate an influence of agile leadership on organizational resilience. [Madi Odeh et al. \(2021\)](#) could demonstrate a clearer positive influence of transformational and transactional leadership styles on adaptive capacity and on organizational resilience. [Lee et al. \(2022\)](#) demonstrate a positive relationship between global talent management in general and organizational resilience for Korean companies, while [Sarkar and Clegg \(2021\)](#) demonstrate which steps leaders can take to activate resilience. [Sihag and Dhoopar \(2022\)](#) show that perceived organizational support, which entails supervisor support and fairness, positively influences organizational resilience. Hence, literature has established the connection between leadership styles and organizations resilience, however, a clear understanding of which leadership style has a positive influence on organizational resilience under which condition, seems to be still missing.

A factor often mentioned, but not researched as extensively as pre-COVID-19, are dynamic capabilities. In our sample, 55% of the papers seem to have a capabilities approach or have been discussing capabilities regarding resilience. [Ozanne et al. \(2022\)](#) demonstrate that dynamic capabilities are a mediating factor for the influence of social capital on organizational resilience, which seemed to be related to firm size. Similarly, [Xie et al. \(2022\)](#) show that business network breadth and depth has as positive influence on resilience capacity among their sample of Chinese companies. [Aldianto et al. \(2021\)](#) show in their small qualitative study that dynamic capabilities are positively linked to organizational resilience via innovation ambidexterity. Based on a qualitative study from [Zighan et al. \(2021\)](#) the





Source(s): Figure created by author

Figure 2. Generalised theoretical framework

different types of dynamic capabilities that business owners need to enhance organizational resilience are demonstrated. Nevertheless, the connection between dynamic capabilities and organizational resilience has been discussed in literature before 2020 sufficiently (Duchek, 2020).

While 60% of the papers analysed topics around “adaptation” and “crisis response” and “flexibility” and “opportunity” were used in more than 62% of the papers, we do not see these factors much in the research frameworks. Only Baral *et al.* (2022) showed a direct influence of flexibility on organizational resilience and Madi Odeh *et al.* (2021) demonstrated the influence of adaptive culture on organizational resilience. Indeed, recent literature such as Gölgeci *et al.* (2020) also discusses that volatility creates opportunities for success and that agile and resilient approaches are essential for positive developments despite adversities. This suggests that researchers in this sample found evidence that turning the crisis into an opportunity and keeping flexible in uncertain times might be the key to resilience, which relates to pre-COVID-19 literature (Lengnick-Hall and Beck, 2016; Weick and Sutcliffe, 2001).

Sustainability was often discussed in connection with resilience and partially when addressing specifically organizational resilience. There is often an emphasis that to be more resilient, adaptation and transformation, especially considering sustainable goals or practices, are necessary. While Hajishirzi *et al.* (2022) show the direct impact of business resilience on sustainability, another paper discusses that environmental or social sustainability are not impacting business resilience (Trabucco and Giovanni, 2021, p. 13). In addition, Yamin (2021) claims, that supply chain resilience positively influences the sustainable performances of supply chains. In this regard, literature flourished during COVID-19, despite limited prior discussion (Verma and Gustafsson, 2020).

External partnerships, co-operations and networking seem to also influence resilience during the pandemic. Indeed, Baral *et al.* (2022) could show a positive influence of collaboration on organizational resilience. They did not differentiate between external and internal collaboration in their paper on Indian manufacturing Small and medium-sized enterprises (SMEs). In contrast Ozanne *et al.* (2022) differentiate between internal and external social capital. They show that internal social capital has a positive effect on external social capital and on organizational resilience. Interestingly, their hypothesis that external social capital has a positive influence on organizational resilience was not supported by their data from SMEs in Oceania. This connection also seems new to the discourse on organizational resilience.

*4.2.2 Outcomes.* Analysing the outcomes of resilience, we have found two main levels of analysis. First, the influence of organizational resilience on firm performance seems straight forward. Looking at code frequencies per document, one can see that performance and effectiveness are important current issues, discussed in more than 81% of the papers. The influence of organizational resilience on firm performance has been shown by Baral *et al.* (2022) for Indian manufacturing SMEs and by He *et al.* (2022) for the United States (US) service SMEs. Hajishirzi *et al.* (2022) show a positive effect of organizational resilience on economic sustainability, which relates to growth and productivity of companies, based on a sample from Iranian companies. From a broader viewpoint, organizational resilience could also be defined in relation to financial performance (Huang *et al.*, 2020), as used in our sample by Brand *et al.* (2022). On a different perspective, Ewertowski (2022) is arguing that there is a clear link to performance even if seeing organizational resilience as a concept on how organizations adapt to crises. Finally, this confirms results in more recent research (Beuren *et al.*, 2022) and that performance is a key topic to tackle when talking about resilience and is well established in the current literature (Hillmann, 2021).

Secondly, the connection of organizational resilience to employee performance while discussed before the pandemic (Lengnick-Hall and Beck, 2016) seems to be less researched during COVID-19. We included it here (and demonstrated a weaker line in Figure 2) also to

spur further research. [Sihag and Dhoopar \(2022\)](#) demonstrate that in Indian higher education institutes, organizational resilience positively influences employee performance. Moreover, [He et al. \(2022\)](#) showed that organizational resilience positively influences employee's state optimism, which in turn is related to employee performance.

Finally, learning from crises has also been a recurrent topic around organizational resilience and was already discussed in the past as discussed ([Duchek, 2020](#)) and that concept was stressed in many papers as part of the organizational resilience processes (income, outcome or part of it). There seems to be different type of learnings in our sample (i.e. cultivation of a knowledge stock ([Aldianto et al., 2021](#)), experiences ([Rodrigues et al., 2021](#)) memories ([Czakov et al., 2022](#)) or connecting it with collaboration with business partners ([Habiyaemye, 2021](#)). We acknowledge the need to understand what we can learn from the pandemic and what main learnings are called for in the past literature as well ([Barton and Sutcliffe, 2023](#)).

#### 4.3 Future research – moving forward from COVID-19

A summary and categorization of all suggestions for future research during COVID-19 was done in MAXQDA and put in context of previous literature. The need for both qualitative and quantitative research has been addressed in specific areas and results are summarized in [Table S2](#) in the supplementary material.

First, several authors recognize the need to extend the scope of their very specific studies to different countries ([Baral et al., 2022](#); [Hadjielias et al., 2022](#); [Lee et al., 2022](#); [Madi Odeh et al., 2021](#); [Yamin, 2021](#); [Cui et al., 2022](#); [Sihag and Dhoopar, 2022](#); [Xie et al., 2022](#)), other types of firms, stakeholders or specific industries or companies ([Anggadwita et al., 2022](#); [Hadjielias et al., 2022](#); [Lee et al., 2022](#); [Ozanne et al., 2022](#); [Czakov et al., 2022](#); [Ewertowski, 2022](#)). We would like to see how larger multinational enterprises (MNEs) from the productive industries have dealt with the crisis and managed their organizational resilience across countries, coping very differently with the pandemic and in line with previous calls of more primary data in the context of organizational resilience ([Linnenluecke, 2017](#)). Similarly, authors suggest extending the scope to other mediating variables or factors ([Madi Odeh et al., 2021](#); [Yamin, 2021](#); [Xie et al., 2022](#)), or to other context such as different crises or including other stakeholders ([He et al., 2022](#)).

While empirical approaches are recommended prior to COVID-19, only a few authors are advocating for larger time analyses ([DesJardine et al., 2019](#)). Following the pandemic there was an even greater emphasis on using more empirical analysis, especially calling for analysing larger time frames around COVID-19 ([Anggadwita et al., 2022](#); [Hadjielias et al., 2022](#); [Madi Odeh et al., 2021](#); [Ozanne et al., 2022](#); [Yamin, 2021](#); [Zighan et al., 2021](#); [Sarkar and Clegg, 2021](#); [Sihag and Dhoopar, 2022](#); [He et al., 2022](#)) and analysing the recovery in the long run ([Sobczak, 2022](#)) to support the claims made in these papers.

More research is needed to understand the specific relationship between leadership and organizational resilience. [Lee et al. \(2022\)](#) found a positive statistically significant impact of talent management on resilience. However, their sample might have been restricted and biased as they focused on business groups affiliated. Thus, further research is necessary. Similarly, [Madi Odeh et al. \(2021\)](#) were analysing the relationship of a transformational leadership style on organizational resilience, and making significant discoveries, suggesting that the extension of their analysis to other leadership styles might be beneficial. Likewise, the connection of employee performance, leadership style and organizational resilience seems under researched.

[Ozanne et al. \(2022\)](#) analysed, if the social capital has an influence on organizational resilience. They are connecting to theories such as learning from crises in their paper and suggest that one should “investigat[e] the role of organizational learning in building SMEs' resilience capability” ([Ozanne et al., 2022](#), p. 128). More research could investigate the

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connection of different types of social capital with organizational resilience, such as the recent study of [Tiwari and Shastri \(2023\)](#).

## 5. Conclusion

It is evident that COVID-19 has shaken the literature and in view of the recent pandemic, as it has become increasingly important for organizations to be resilient to survive ([Hajishirzi et al., 2022](#); [Sutcliffe and Vogus, 2003](#)). Academics and practitioners alike have been paying increasing attention to the topic of organizational resilience, especially in new data collected during COVID-19 ([Paeffgen, 2023](#)). To advance research on these issues, this paper answered the following question: How has the literature on organizational resilience evolved in response to the COVID-19 pandemic? Our findings suggest that organizational resilience during COVID-19 is focused similarly to traditional literature on response ([Burnard and Bhamra, 2011](#); [Sutcliffe and Vogus, 2003](#)), survival ([Sutcliffe and Vogus, 2003](#)), recovery ([Macrae, 2019](#); [Gittell et al., 2006](#)), adaptation ([Vogus and Sutcliffe, 2007](#)), absorption ([Mithani, 2020](#)) and on maintaining stability ([Sutcliffe and Vogus, 2003](#); [Desjardine et al., 2019](#)). On the other hand, anticipation, preparedness and capabilities discussed before COVID-19 ([Somers, 2009](#); [Boin and van Eeten, 2013](#)) is not a topic extensively discussed.

Referring to new contributions in VHB-ranked journals only, we analysed important topics around organizational resilience during the COVID-19 pandemic and saw clear changes from before this crisis. Considering the current situation, we proposed an adapted definition of organizational resilience in COVID-19 times: *The ability of organizations to quickly respond to unanticipated disruptions, reacting with fast adaptations, utilizing capacities to ensure organizational survival*. Further, this analysis found that main topics around resilience seem to be adaptation, innovation, capabilities, performance and the use of new technologies.

According to our research framework, during COVID-19, digitalization, partnerships, leadership and sustainability are important for organizational resilience. Dynamic capabilities seemed researched pre-COVID-19 but not discussed as much in COVID-19 related research. Topics around adaptation, response and flexibility are examined but not found relevant for the research framework. Outcomes of organizational resilience during COVID-19 can be observed as firm and employee performance. In addition, a recurring statement before and during COVID-19 is that organizational learning is key for resilience of an organization.

Future research suggestions would be taking a more longitudinal approach in addition to new primary data collections including both qualitative and quantitative methods in specific settings. This includes analysing the resilience of non-family businesses or different organization types, talent management in relation to organizational resilience in different organizational settings, different leadership styles and organizational resilience, social capital and organizational resilience, as well as the effectiveness of government measures designed to support firm resilience during the COVID-19 pandemic.

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Supplementary material

Keywords* Authors*	Absorb	Adaptation	Capabilities based	Capacity- Development	Crisis	Disruption/ Maintaining (stability)	Rapidity	Recovery based	Resource-	Response	Survival	Uncertainty
Aldianto <i>et al.</i> (2021)	✓		✓	✓	✓	✓	✓			✓		
Anggadwita <i>et al.</i> (2022)					✓			✓				✓
Baral <i>et al.</i> (2022)				✓	✓		✓		✓			✓
Brand <i>et al.</i> (2022)					✓	✓						
Cui <i>et al.</i> (2022)					✓		✓		✓			
Czakon <i>et al.</i> (2022)					✓	✓						
Ewertowski (2022)				✓	✓		✓					✓
Habiyaremye (2021)				✓	✓				✓			
Hadjelias <i>et al.</i> (2022)			✓		✓				✓			✓
Hajishirzi <i>et al.</i> (2022)					✓				✓			✓
He <i>et al.</i> (2022)					✓		✓					✓
Lee <i>et al.</i> (2022)			✓		✓		✓		✓			✓
Lin and Wen (2021)			✓		✓							
Madi Odeh <i>et al.</i> (2021)			✓				✓					
Ozanne <i>et al.</i> (2022)			✓		✓		✓					✓
Rodrigues <i>et al.</i> (2021)			✓		✓				✓			✓

(continued)

**Table S1.**  
Definition of resilience – categorized by keywords (Keyword definitions below)

Keywords* Authors*	Absorb	Adaptation	Capacity- Capabilities based	Development	Disruption/ Crisis (stability)	Maintaining (stability)	Rapidity	Recovery based	Resource- Recovery based	Response	Survival	Uncertainty
Sarkar and Clegg (2021)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sihag and Dhooopar (2022)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sobczak (2022)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trabucco and Giovanni (2021)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Xie <i>et al.</i> (2022)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ye <i>et al.</i> (2022)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Zighan <i>et al.</i> (2021)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Note(s): *In alphabetical order												
Keyword definitions	Definition											
Keyword	to take in a current situation, i.e. an organization taking in changes adjustments done in accordance with new circumstances available within an organization (i.e. Individuals capabilities) the scope of an organizations' capacities in relation to its resilience something is developed, to be developed or developable within the organization (also developing individuals' skills) any kind of disturbing and intermitting circumstances keeping an (important) area strong throughout difficult circumstances fast occurrence of actions taken by the organization restoration after being (partially) damaged/destroyed resource availability, i.e. within organization, impacting resilience level the response to crisis (situations)/threats or similar i.e. an organization withstands/overcomes a crisis Unforeseeable future/lack of security in presence or future, i.e. leading to insecure planning											
Absorb												
Adaptation												
Capabilities												
Capacity-based												
Development												
Disruption/Crisis												
Maintaining (stability)												
Rapidity												
Recovery												
Resource-based												
Response												
Survival												
Uncertainty												
<b>Source(s):</b>	Table created by author											

Table S1.

Theme	Sub-theme	More information	Exemplary quotes	Authors
<i>Extend the scope/context of the research</i>				
	To other countries (geographically)		“Our sample was limited to participants from the emirate of Dubai, although perceptions might vary significantly between different emirates, and other countries in the gulf region. Future research can consider this limitation for an enhanced generalizability” (Madi Odeh <i>et al.</i> , 2021, p. 23)	Baral <i>et al.</i> (2022), Hadjeliias <i>et al.</i> (2022), Lee <i>et al.</i> (2022), Madi Odeh <i>et al.</i> (2021), Yamin (2021), Cui <i>et al.</i> (2022), Sihag and Dhoopar (2022), Xie <i>et al.</i> (2022)
	To other types of firms/other industries	non-family businesses	“So future studies can further explore and compare by examining the resilience of non-family businesses” (Anggadwita <i>et al.</i> , 2022, p. 18)	Anggadwita <i>et al.</i> (2022)
		managerial teams	“Future research could replicate our study or test our model by drawing on managerial teams within smaller firms. This could provide insights on managerial-team psychological resilience and on the ways in which this can influence business resilience” (Hadjeliias <i>et al.</i> , 2022, p. 25)	Hadjeliias <i>et al.</i> (2022)
		MNE subsidiaries	“Future research in the area of GTM and organizational resilience should explore these likely variations to deepen the understanding of MNE subsidiaries’ resilience during global crises and external shocks” (Lee <i>et al.</i> , 2022, p. 368)	Lee <i>et al.</i> (2022)
		larger firms, different types of disruptions and relationships with final consumers	“Future research could explore larger firms, different types of disruptions, and relationships with final consumers” (Ozanne <i>et al.</i> , 2022, p. 128)	Ozanne <i>et al.</i> (2022)
		old firms (in relation to younger firms)	“This opens promising avenues for the scrutiny of old and very old firms in order to compare their characteristics with those of younger firms” (Czakov <i>et al.</i> , 2022, p. 11)	Czakov <i>et al.</i> (2022)

**Table S2.**  
Summary of future  
research  
recommendations

(continued)

Theme	Sub-theme	More information	Exemplary quotes	Authors
		different industries	“That is why further surveys should be taken in more enterprises, as well as in other industries, to eventually validate the concept” (Ewertowski, 2022, p. 17)	Ewertowski (2022)
	to failed firms		“Future research could draw upon diverse samples or carry out various studies among survivor and failed firms to understand whether the underlying circumstances concerning resilient capabilities and processes are fundamentally different between the two samples” (Hadjielias <i>et al.</i> , 2022, p. 25)	Hadjielias <i>et al.</i> (2022), Madi Odeh <i>et al.</i> (2021), Zighan <i>et al.</i> (2021), Czakon <i>et al.</i> (2022)
	to longer timeframe (e.g. longitudinal approaches)		“Longitudinal studies are required to elucidate the post-COVID-19 process” (Anggadwita <i>et al.</i> , 2022, p. 18)	Anggadwita <i>et al.</i> (2022), Hadjielias <i>et al.</i> (2022), Madi Odeh <i>et al.</i> (2021), Ozanne <i>et al.</i> (2022), Yamin (2021), Zighan <i>et al.</i> (2021), Sarkar and Clegg (2021), Sihag and Dhoopar (2022), He <i>et al.</i> (2022)
	to other mediating variables/factors	organizational learning, contextual moderators (e.g. unlearning context, managerial discretion, or environmental turbulence) or firm size	“Additional variables can be incorporated in the research model to generate deeper insights, like mediators (e.g. organizational learning (Akgün <i>et al.</i> , 2003), contextual moderators (e.g. unlearning context (Martelo-Landroguez <i>et al.</i> , 2018); managerial discretion (Hambrick and Finkelstein, 1987); or environmental turbulence) as they are expected to reflect better on the context of the Dubai Emirate. Other non-contextual variables like firm size (Lyu <i>et al.</i> , 2020) can be utilized as well in future research” (Madi Odeh <i>et al.</i> , 2021, p. 21)	Madi Odeh <i>et al.</i> (2021)

(continued)

Table S2.

Theme	Sub-theme	More information	Exemplary quotes	Authors
		supplier relationship, uncertainty and inter departmental coordination	“Nevertheless, there are some other factors that could impact supply chain resilience such as supplier relationship, uncertainty and inter departmental coordination. Thus, extending the current research model with some additional factors could reveal interesting findings” (Yamin, 2021, p. 13)	Yamin (2021)
		corporate social responsibility activities, business models, disaster management, social and environmental practices and leadership	“Future re-searchers are encouraged to explore other factors that may be at play, such as corporate social responsibility (CSR) activities (e.g. Huang <i>et al.</i> , 2020), business models (e.g. Neumann <i>et al.</i> , 2021), disaster management (e.g. Gimenez <i>et al.</i> , 2017), social and environmental practices (SEPs) (e.g. Ortiz-de-Mandojana and Bansal, 2016), and leadership (e.g. Teo <i>et al.</i> , 2017), as these might also affect this relationship” (Xie <i>et al.</i> , 2022, p. 13)	Xie <i>et al.</i> (2022)
	to other context		“Future qualitative work should be carried out in other contexts in order to enable the drawing of definite conclusions on the relevance of the person-role-organization nexus in studies on organizational resilience” (Hadjielias <i>et al.</i> , 2022, p. 25)	Hadjielias <i>et al.</i> (2022), Ye <i>et al.</i> (2022)
		to other crises	“Future research could investigate and validate the role of OR in enabling an organization to survive and thrive against other external crises (e.g. economic recession, political turmoil etc.)” (He <i>et al.</i> , 2022, p. 20)	He <i>et al.</i> (2022)

Table S2.

(continued)

Theme	Sub-theme	More information	Exemplary quotes	Authors
		to other stakeholders	“Future research might adopt the views of other stakeholders, such as managers, board members and customers to investigate and validate the proposed theoretical relationships” (He <i>et al.</i> , 2022, p. 20)	He <i>et al.</i> (2022)
		to specific industry/company	“In future, by considering the same variables, and applying suitable multi-criteria decision making (MCDM) technique or other simulation or modelling techniques for industry specific case studies can be carried out” (Baral <i>et al.</i> , 2022, p. 17)	Baral <i>et al.</i> (2022), Khurana <i>et al.</i> (2021)
		to other genders	“Results may differ between gender, and future studies may be relevant for both men and women to understand this subject better” (Anggadwita <i>et al.</i> , 2022, p. 18)	Anggadwita <i>et al.</i> (2022), Lin and Wen (2021)
<i>Empirical approach related</i>		empirical studies to validate theoretical constructs	“There is a lack of critical discussion about how systems, such as organizations, can achieve higher resilience levels” (Aldianto <i>et al.</i> , 2021, p. 13)	Aldianto <i>et al.</i> (2021)
		simulation model for startups	“Develop a simulation model to represent the actual startup conditions” (Aldianto <i>et al.</i> , 2021, p. 15)	Aldianto <i>et al.</i> (2021)
		change the approach of data collection/analysis	“Moreover, the findings of this investigation can be better supported if multiple data sources in addition to the questionnaire were incorporated” (Madi Odeh <i>et al.</i> , 2021, p. 23)	Madi Odeh <i>et al.</i> (2021), Khurana <i>et al.</i> (2021), Yamin (2021), Lee <i>et al.</i> (2022), Czakon <i>et al.</i> (2022), Alshater <i>et al.</i> (2022), Czakon <i>et al.</i> (2022)
		to qualitative methods	“Future studies should use qualitative methods to develop a deeper and local understanding of how MNE subsidiaries are impacted by the crisis and what specific challenges they face in GTM to develop organizational resilience” (Lee <i>et al.</i> , 2022, p. 369)	Lee <i>et al.</i> (2022)

(continued)

Table S2.

Theme	Sub-theme	More information	Exemplary quotes	Authors
		to quantitative methods	“Further research can develop this research by empirically testing the conceptual framework using quantitative methods” (Anggadwita <i>et al.</i> , 2022, p. 18)	Anggadwita <i>et al.</i> (2022)
	bigger sample		“After the crisis is over, opportunity will be afforded for future research not only to enlarge the scope of the study to include more businesses but also to allow for a more longitudinal analysis” (Sarkar and Clegg, 2021, p. 262)	Sarkar and Clegg (2021)
	how resilience affects the recovery of SMEs from economic shock		“Concerning implications for further research, we recommend, in particular, to examine the recovery of SMEs from economic shock on the basis of resilience or public policies . . .” (Hrivnak <i>et al.</i> , 2021, p. 17)	Hrivnak <i>et al.</i> (2021)
	investigate the relationship between other leadership style and organizational resilience		“Other leadership styles (e.g. transactional (Bass, 1985), charismatic (Conger, 1989), participative (Huang <i>et al.</i> , 2010)) can be investigated in relation to adaptive culture and organizational resilience for an enhanced understanding, utilizing comparative analysis to find which style can serve the best in such situations” (Madi Odeh <i>et al.</i> , 2021, p. 23)	Madi Odeh <i>et al.</i> (2021)
	how can organizational resilience enhance the competitiveness of SME		“As the pandemic continues to evolve, future research can address the competitiveness of resilience-building practices during pandemic times, particularly with a lens toward understanding SME competitiveness in the post-pandemic period” (Ozanne <i>et al.</i> , 2022, p. 128)	Ozanne <i>et al.</i> (2022)
	role of organizational learning in building resilience		“Future research could build upon our results by investigating the role of organizational learning in building SMEs’ resilience capability” (Ozanne <i>et al.</i> , 2022, p. 128)	Ozanne <i>et al.</i> (2022)



Theme	Sub-theme	More information	Exemplary quotes	Authors
how social capital generated from the pandemic can facilitate SMEs			“Future research can consider SC that emanates specifically from the pandemic and how this might be leveraged to facilitate SMEs building mitigation, response and recovery strategies” (Ozanne <i>et al.</i> , 2022, p. 128)	Ozanne <i>et al.</i> (2022)
swift resilience			“The proposed concept of swift resilience can offer guidance to future research on resilience literature” (Ye <i>et al.</i> , 2022, p. 18)	Ye <i>et al.</i> (2022)
short-term vs long-term survival and growth capabilities			“How capabilities that assisted in survival and growth in the short term are different from those required or adopted in the long term” (Zighan <i>et al.</i> , 2021, p. 32)	Zighan <i>et al.</i> (2021)
explore other technologies/theories related to digital technologies and firm resilience			“Hence, we recommend that future studies update their scale and include all of the latest technologies” (Cui <i>et al.</i> , 2022, p. 21)	Cui <i>et al.</i> (2022)
explore the role of commitment and emotion in engaging resilient behaviour			“Future work can pay greater attention to factors such as the role of commitment and emotion in engaging resilient behaviour” (Sarkar and Clegg, 2021, p. 262)	Sarkar and Clegg (2021)

Source(s): Table created by author

Table S2.

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**Corresponding author**

Thea Paeffgen can be contacted at: [Thea.Paeffgen@htw-berlin.de](mailto:Thea.Paeffgen@htw-berlin.de)

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