

# **Responding to unexpected crises: The roles of slack resources and entrepreneurial attitude to build resilience**

## **ABSTRACT**

This study explores how entrepreneurial firms responded to - and displayed resilience in coping with - the uncertainty generated by an unexpected crisis. We examine how entrepreneurs leverage slack resources to build organizational resilience and, thanks to their entrepreneurial attitude, could eventually turn adversities into opportunities. Through a multiple case study, four key entrepreneurial responses emerge about the type of slack resources – business or family – and extent of entrepreneurial attitude – favourable or unfavourable – leveraged: “*waiting while seeding*”, “*keeping business as usual*”, “*striving to resist*” and “*surfing the pandemic*”. Slack resources, both business and family, can enable the absorption of a shock –contributing to building absorptive resilience – or the adaptation to the shock –contributing to building adaptive resilience. Yet, they are not sufficient to turn adversities into opportunities because firms also require a favourable entrepreneurial attitude to activate slack.

**Keywords:** resilience; entrepreneurship; slack resources; entrepreneurial attitude; uncertainty.

## **1. Introduction**

Unexpected shocks generate uncertainty and represent a threat for the continuity of businesses (Belitski et al., 2022; De Massis and Rondi, 2020; Kark et al., 2020; Kuratko and Audretsch, 2021). Coping with extreme events like a global pandemic is especially challenging for those entrepreneurs who do not have relevant prior experience in facing such unexpected events. Nonetheless, shocks represent a unique opportunity to build and test their entrepreneurial abilities in a context of true Knightian uncertainty (Knight, 1921), i.e., a lack of any quantifiable knowledge about potential occurrences, and future scenarios. As mentioned in previous studies (e.g., Bullough and Renko, 2013), some entrepreneurs respond to external shocks by being discouraged because they perceive a great sense of adversity, and by showing an unfavourable attitude towards capturing entrepreneurial opportunities. Conversely, other entrepreneurs develop a more positive reaction, by seeing – and enacting – opportunities out of uncertain environments (ibid).

This research builds on entrepreneurship studies of entrepreneurial action under Knightian uncertainty (Dimov, 2018; Leyden and Link, 2015; Miller, 2007) and the strategic management literature on slack resources (i.e., Barney, 2001; George 2005; Peteraf, 1993) and resilience (i.e., Bhamra et al., 2011; Hamel and Välikangas, 2003; Reinmoeller and van Baardwijk, 2005). It explores how entrepreneurs respond and develop organizational resilience, i.e., the organizational ability essential to face unexpended events (Chrisman et al., 2011; Danes et al., 2009; Korber and McNaughton, 2018; Linnenluecke, 2017), to preserve business continuity by leveraging slack resources and entrepreneurial attitude. The latter are critical for firms to overcome uncertainty and react to crises also by generating value (Campopiano et al., 2018; Koudstaal et al., 2016; Tognazzo et al., 2016). First, slack resources, i.e., the excess resource stock of human, social, family, and financial capital (Danes, Lee, et al., 2009), are key to build organizational resilience. Even though most studies about slack resources are devoted to explaining firm performance and/or firm growth in “normal” business times (Baker and Nelson, 2005; George, 2005; Minola et al. 2021), overlooking the leveraging of slack under conditions of uncertainty. Second, entrepreneurial attitude, the tendency to react positively or negatively to entrepreneurship (Kusmintarti et al., 2014), also plays an important role in contributing to organizational resilience (Leipold and Greve, 2009) because it may foster action thanks for example to proactiveness, and lower risk/uncertainty aversion (Koudstaal et al., 2016).

In this study we aim to answer the following research question “*how do entrepreneurs respond and build organizational resilience in a crisis environment?*” by employing as empirical setting the uncertainty generated by the spread of the Covid-19 pandemic. We adopt a grounded theory approach and select nine firms located in one of the most affected regions in Europe, i.e., the Northwest of Italy.

Results reveal that entrepreneurs developed four responses to the crisis that we labelled: “*waiting while seeding*”, “*keeping business as usual*”, “*surfing the pandemic*” and “*striving to resist*”. Such responses vary along two dimensions: the type of slack resources leveraged to build resilience – business *vs* family slack – and the entrepreneurial attitude towards opportunities – favourable *vs* unfavourable. Business slack is the surplus of financial, technological, and human resources that allow an organization to adapt to internal and external pressures (Bourgeois III; 1981). Family slack is an excess of resources proper of the family businesses and deriving from the long-term orientation and trust which characterises a family-owned and managed organisation, such as tacit knowledge, reputation, relationships (Le Breton–Miller and Miller, 2015).

For all the firms in our sample, slack resources enabled organizational resilience, whether in the form of the absorption of a shock – absorptive resilience, i.e., the ability of the firm to resist disturbance and to quickly return to a phase of equilibrium after the shock (Conz and Magnani 2020), or in the form of the adaptation to the shock – adaptive resilience, i.e. the ability to cope with and to adjust to shocks by recombining existing resources (ibid).

Yet, slack resources *per se* have not been sufficient to turn adversities into opportunities, as a strong entrepreneurial attitude is needed. We also observed that in contrast to extant studies providing evidence for the superior ability of family firms – compared to non-family ones – in surviving and thriving in the aftermath of unexpected events (Salvato et al., 2020), both types of firms show similarities in how they build resilience and entrepreneurially respond to unexpected shocks.

By answering the call of George (2005, p. 674) to further investigate “the multiple forms of slack resources and entrepreneurial firms' ability to leverage and deploy slack across potential alternate applications for a specific resource”, this qualitative research contributes to the entrepreneurship and resilience literatures by reconsidering the notion of slack, and its

relationships with entrepreneurship and resilience. Specifically, we identify that – although in different degrees – slack resources are a key antecedent for building resilience at the organizational level and argue that a strong entrepreneurial attitude is a necessary condition to activate the former in order to capture business opportunities during crises. The paper is structured as follows: we first introduce the concepts of organizational resilience, slack resources, and entrepreneurial attitude. Second, we describe the research design, data collection and analysis methods. Third, we illustrate the study’s findings by advancing four entrepreneurial responses. Last, we address our contribution to theory and practice and provide avenues for future research.

## **2. Theoretical framework**

### ***2.1 Building resilience by leveraging resources***

According to the process perspective (Hamel and Välikangas, 2003; Reinmoeller and van Baardwijk, 2005; Teixeira and Werther, 2013), resilience is a dynamic process by which firms build and use their resources to positively adjust and continue to operate before, during and after adversity (Williams et al., 2017; Conz and Magnani, 2020). This conceptualization implies a dynamic adaptation to a shock, practised by anticipating, withstanding, coping with the change, specifically by recombining and leveraging existing resources to get out from the crisis more strengthened and resourceful (Hamel and Välikangas, 2003; Reinmoeller and van Baardwijk, 2005; Teixeira and Werther, 2013).

To explain the resilience of firms, resources are critical: organizations can continue to operate under uncertainty not only because they possess the necessary and/or distinctive resources, but also thanks to the proactive management of resources, including relational ones – customers, suppliers, and more in general actors of the external environment (Dyer and Singh, 1998). Addressing the quest for resilience, Hamel and Välikangas (2003) suggested that liberating

resources is one of the few but critical starting points for building a resilient organization. According to the authors, a firm is going nowhere if it is not able to free up its resources opening to an array of experiments within and aside from the core business. Liberating and reallocating resources is not an easy process, as it is perceived as uncertain. In the same vein, Bingham and Eisenhardt (2008, p. 243) asserted that resources are key to understanding a firm response to change as they are "fundamental to strategy because they shape many of the possible strategies that executives can undertake". In their seminal work on the strategic logics linking resources to competitive advantage, they defined resources "as the tangible assets (e.g., location, plant, equipment), intangible assets (e.g., patents, brands, technical knowledge), and organizational processes (e.g., product development, country entry, partnering) from which managers can develop value-creating strategies" (ibid, p.243). They also explain that resources are crucial to define the competitive advantage and strategic logic of firms, but how a firm gains a competitive advantage stems from the nature of resources and the linkages among specific resources rather than from a specific resource per se.

## ***2.2 Resilience and slack resources***

Among resources, we pay attention to those resources accumulated in excess, i.e., slack resources (Christianson et al., 2009; Sutcliffe and Vogus, 2003) which emerge as critical for firms to overcome environmental jolts and react to crises also by generating value (Tognazzo et al., 2016). The notion of slack rests on the seminal works by Cyert and March (1963) and Penrose (1959): among other resources, she mentioned the role of underutilized resources that she defined as "unused productive services [that] are, for the enterprising firm, at the same time a challenge to innovate, an incentive to expand, and a source of competitive advantage" (Penrose 2009 (1959 fourth edition), p. 76). Slack represents free resources that could be invested in new ideas or to adjust to changing pressure rising from the external environment

(Bourgeois III; 1981). In Penrose's work, underutilized resources support innovation and growth; slack can also be used to counter threats (Bourgeois III, 1981) and/or to exploit and explore opportunities (Weinzimmer, 2000). Cyert and March (1963) consider that an excess of resources allows companies to cope with uncertainty, enabling response to unexpected changes in markets. Penrose (1959) establishes that slack resources, in excess of those strictly needed for normal company operation, represent an opportunity for managers, as these resources can be employed to pursue growth. Slack resources thus constitute a special type of resources, among the more general resources endowment of the firm. They are "idle" resources, suitable for different uses - fungibility - to address unexpected needs and new growth opportunities. Consistent with Penrose's conceptualization, slack has been found to enable decision-makers to pursue innovative opportunities (Wiklund and Shepherd, 2005) and has been associated with increased experimentation and proactivity in organizations (Fadol et al., 2015; Garrett et al., 2020). A study by Wang et al. (2017) found that unabsorbed slack provides flexibility and confidence to explore and exploit new opportunities (Garret et al., 2020).

Against the traditional view that slack resources are desirable (Cohen and Cyert, 1965), the concept of organizational inefficiency arises (Leibenstein, 1969). In the last decades, the strategic management and entrepreneurship literatures have been largely dominated by the "efficiency paradigm". While acknowledging the importance of resources for firm competitive advantage, increasingly resources have been deemed to be deployed "efficiently", aiming at full exploitation. This seems implicit in some seminal works about the Resource-Based View - RBV - (Barney, 2001). Peteraf (1993) - in setting some foundations of the RBV- relates efficiency and rent generation to resources in use. At the same time, efficiency may come at the expense of adaptability to fast moving environmental conditions and market disruptions. Can slack contribute to address these changes and to pursue novel growth opportunities, as originally suggested by both Cyert and March and Penrose? If so, is it a necessary or a sufficient

condition? Bradley, Wicklund and Shepherd (2011) in their empirical study found that “slack has a positive direct effect on growth but a negative effect on entrepreneurial management, and entrepreneurial management has a positive effect on growth” (ibid. p.537). Especially during severe crises, slack may represent a type of resources that can be liberated, reallocated and/or redeployed for the achievement of organizational goals (George, 2005).

Concerning the relationship with resilience, some authors (e.g., Gittell et al., 2006; Tognazzo et al., 2016) have argued that slack resources are essential to absorb the impact of the shock (Ismail et al., 2011), i.e., maintaining the course of action by building absorptive resilience. Conversely, other authors (e.g. Fama, 1980; Leibenstein 1969) contend that slack resources are too costly, ultimately adding rigidity and limiting a quick and adaptive response of the organization. Building adaptive resilience means deviating from planned routines, recombining extant or novel resources and prompting internal changes to adapt to varying circumstances (Andres and Round, 2015; Bhamra et al., 2011; Dahles and Susilowati, 2015).

Slack resources vary in type: financial, human, and technological. These three types refer to either excess resources and stock, or to the excess time utilized to use them (Grandori and Soda, 2006). The financial one is argued to improve firm performance and helps avoid the high level of debts and to face and recover when something "unexpected" alters the equilibrium of the firm like terroristic attacks (Gittell et al., 2006) and floods (DiFrancesco and Tullios, 2014).

Human resources (HR) slack refers to the excess of employees (Mishina et al., 2004). The definition includes redundancy of employees with relatively high expertise (e.g., R&D personnel) or relatively low expertise (e.g., workers engaging in labour-intensive jobs). Mishina et al. (2004) defined HR slack as the ratio between firm employees and firm sales. The larger is the ratio (compared to a target level selected among companies within the same industry), the greater is the level of HR slack. The relation between human resources slack and growth is controversial: the excess of human resources can sometimes inhibit growth and firms

need to find a trade-off between decreasing slack down to the minimum level pursuing efficiency and, conversely, accumulating slack till the hedge to be ready in case of uncertainties of expansion (ibid). Also, Sgourev and van Lent (2017) confirm the dual nature of slack and the need to find the right balance between the effectiveness of HR slack – that for instance can mitigate the negative effect of skill shortage – and the efficiency in the use of slack in situations of uncertainty and constraints.

Technological slack refers to the pool of technological resources in an organization that exceeds the minimum necessary to produce a given level of output (Bueno et al., 2010). For instance, unused technological capacity and abundant and modern equipment are included in technological slack. The existence of technological slack stimulates organizational learning, for instance by creating a positive climate that allows employees to research and experiment thanks to the availability of technological resources (ibid).

### ***2.3 Entrepreneurial attitude and resilience***

Entrepreneurial attitude allows entrepreneurs to create and capture business opportunities in dynamic, uncertain, and fast-moving environments (Bullough and Renko, 2013; McMullen and Shepherd, 2006; Sarasvathy, 2001; Shane and Venkataraman, 2000), as it helps to cope with uncertainty (Lunnan et al., 2006) – as well as failure. Entrepreneurial attitude thus provides a ground for building organizational resilience in the face of adverse events (Leipold and Greve, 2009) and for acting upon uncertainty, creating and capturing opportunities.

The meaning of “attitude” (Covin and Slevin, 1991; Lumpkin and Dess, 1996) is associated with attributes of risk-taking, innovativeness, and proactiveness (Miller, 1983). Overall, the literature refers to various factors influencing entrepreneurial attitude: motivation (Schwarz et al., 2009), as mentioned, risk-taking capacity (Olson and Bosserman, 1984), need for achievement, personal control and self-confidence (Robinson et al., 1991), self-efficacy,

creativity, leadership and intuition (Athayde, 2009), attitude focused on earning money (Robinson et al., 1991).

The creation and capture of opportunities in uncertain and resource-constrained environments have been studied by the action-based stream of research in entrepreneurship (Dimov, 2018; Leyden and Link, 2015; Miller, 2007). Effectuation theory (McKelvie et al., 2011; Sarasvathy, 2001) suggests the use of flexible approaches and, in particular, the reliance on non-predictive control strategies involving exercising control over what can be done with the available resources, instead of making a decision based on a given set of predictions and plans (Dew et al., 2009; Sarasvathy and Dew, 2005; Venkataraman et al., 2012). According to this approach, adopting a flexible and adaptive posture allows entrepreneurs to improvise appropriate strategies as needed (Yang and Gabrielsson, 2017). This logic is in contrast with classical approaches about the problem of choice under uncertainty that suggest a more "motionless", less flexible view, according to which uncertainty can be tackled just by increasing the amount of available information (Baker et al., 2003; Becker and Knudsen, 2005; Delmar and Shane, 2003). Similarly, bricolage (Fisher, 2012) is an approach based on creative uses of what is available, in resource-constrained and uncertain contexts, involving an adaptive posture based on improvisation and experimentation.

### **3. Research approach and design**

We adopted a qualitative approach based on a grounded theory research design (Eisenhardt and Graeber, 2007). Qualitative methods have been recently strongly suggested to understand the dynamics of unexpected phenomena, the *how* of management processes (Chrisman et al., 2016; De Massis and Kammerlander, 2020), as they allow to fully explore the current situation in all its peculiarities and plurality of actors and perspectives involved (Teti et al., 2020). They have been also applied to learn more about the psychological foundations of organizations, for

instance how psychological resilience fosters the resilience of small businesses (Hadjielias et al., 2022).

### ***3.1 Research context***

This study's temporal and spatial context can be seen as one of Knightian uncertainty: the spread of Covid-19 in Northern Italy. This is a particularly suitable setting because this region was the first epicentre of the Covid-19 infection (February, 2020) in Europe, as well as the first to impose restrictions on people and economic activities, including complete lockdowns, and one of the most hit areas in the world with 156,000 deaths (as of 9 March 2022 – OMS, Health Emergency Dashboard, 2022). As a figure representing the extent of the crisis, Italian active firms were respectively 14 thousand in 2020 and 24 thousand less compared to 2019 (Infocamere, 2022).

### ***3.2 Case selection***

We started collecting data from a proprietary database of 25 firms that we knew thanks to previous research projects, and whose entrepreneurial behaviours we had been observing since 2019. We first contacted all the 25 firms to inquire about the chance of doing interviews and accessing information. 15 firms agreed to be interviewed; reluctant firms were not yet ready to speak with us as they were too occupied during the emergency. We followed the logic of purposeful sampling (Patton 2002, p.30), which is about “selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry”. We adopted a theoretical sampling approach, and we stopped interviewing firms when getting no further variations in the theoretical concepts and emerging relationships (Eisenhardt and Graebner, 2007).

We ensured that the interviewed firms matched the following theoretical sampling criteria (Patton, 2014): (a) being independent – i.e., an autonomous organization in terms of ownership and management; (b) being an entrepreneurial venture, i.e. an innovative, risk-taking and proactive (Covin and Slevin, 1991) venture able to maintain a “positive adjustment, or adaptability, under challenging conditions” (Sutcliffe and Vogus, 2003, p. 99); c) being non-managerial controlled, i.e. non-managerial controls are not purposefully created by managers, but are “represented in the norms, values, trust and mutual commitments that become embedded amongst organisational groups and/or individuals through day-to-day interaction, communication and dialogue” (Nyland et al., 2017, p. 473); (d) being available for repeated interviews during and after the first peak of the pandemic (started in March 2020).

Table 1 provides a summary of the final 9 cases in this study. In our final sample, there are 5 family and 4 non-family firms. Family firms in the sample are defined “[...] by a family's involvement in ownership and governance and a vision for how the firm will benefit the family, potentially over generation” (Chrisman and Patel, 2012, p. 976; Kotlar et al., 2018).

\*\*\* Table 1 about here\*\*\*

### ***3.3 Data collection***

Data collection involved multiple data sources including interviews, internal documents, and publicly available data such as press articles, firms' websites, blog entries, internal reports, presentation slides (see Table 2). Primary data were collected in three rounds: pre, during and post the outbreak of the pandemic by interviewing the key informant, i.e., an expert source of information (Marshall, 1996). This longitudinal observation adds depth and richness to our findings. We adhered to Gioia's suggestion (Gioia et al., 2013) of approaching knowledgeable informants, namely people at work that “know what they are trying to do and that they can explain to us quite knowledgeably what their thoughts, emotions, intentions, and actions are”

(Gehman et al., 2018, p. 291), thus selecting as an informant who was really the one in charge of entrepreneurial decisions.

All cases were part of a longitudinal observation started in 2019. We interviewed the firms through 29 semi-structured interviews (three/four for each case except for Miscusi that we interviewed one time and Grandinote that we interviewed two times) with the entrepreneurs, who are the most knowledgeable informants available (Marshall, 1996) — namely, individuals involved in the process of preserving the continuity of the business in a context of Knightian uncertainty. All the interviews were conducted by at least two authors, in Italian, lasting approximately 40-60 minutes and then digitally recorded and verbatim transcribed within 24 hours. The most representative quotes used in this paper have been translated into English.

The first round of interviews took place during the 12 months before February 2020 (i.e., at time  $t-1$  with respect to the crisis), to get insights about the “state of the art” about supply chain structure, future investments, and forecasts for 2020. Interviewees were also asked to describe how the firm was structured before the shock, which resources were accumulated, in which ways and through which investments. The second round of interviews took place in the period 21 February - 21 April 2020 – the pandemic peak phase in Lombardy – to capture real-time data at time  $t$ , during the shock, coupled with retrospective questions about time ( $t-1$ ) before the shock, to further complement our understanding of the pre-shock phase. These interviews were particularly helpful to understand how companies were defining the way they were going to use slack and capture new entrepreneurial opportunities, without knowing the length of the crisis in advance. In this round, we specifically dedicated questions to understand: (i) which slacks entrepreneurs were already using or planning to use, and those that turn out to be critical during the shock to build resilience; (ii) whether and how they were approaching the shock, and whether the latter enable the capture of any opportunities. When interviewing family

businesses in our sample, we also asked about the role of the family and of family-specific resources in facing the shock.

The third round of interviews was carried out one year after the outbreak, during the period March 2021-April 2021. We went back to informants to gather feedbacks at the time  $(t+1)$  after the shock and to understand, in case they were shown to be resilient to the crisis, which slack resources were revealed to be critical in building resilience. We also observed whether they could turn adversities into entrepreneurial opportunities.

Secondary data, such as those mentioned at the beginning of this section, were used to triangulate our findings of which further details are given in the following section.

\*\*\* Table 2 about here\*\*\*

### ***3.4 Data analysis***

We analysed data by following a two-step abductive process (Mayring, 2008; Gioia et al., 2013), by systematically combining empirical evidence and existing literature (Dubois and Gadde, 2002, 2014).

In the first step, we started drafting single case analyses by developing a narrative of each case. Secondary data comprised around 10-12 pages per firm. The authors have independently read and coded the interviews' transcripts, highlighting the emergent themes reflecting slack leveraged by entrepreneurs to build resilient responses and the entrepreneurial attitude of entrepreneurs in facing Knightian uncertainty (Reay, 2014).

Second, we identified the types of slacks leveraged by entrepreneurs to build resilience and prepare for unexpected shocks at  $(t-1)$ . Specifically, we coded slack according to the type, i.e., business slack (technological, financial, human resources) or family slack (specific accumulated resources of a long-term oriented family-business as tacit knowledge, family intra relationships, social capital, family human capital) (Danes et al., 2009). Financial slack

including cash and patient capital, human resources, general human capital, the collective knowledge of the top management team (TMT), its diversity and size, have been coded as generic business slack. Also, previous TMT experiences accumulated in previous firms and industries were considered business slack, as well as technology slack (i.e., patents, R&D intensity, and technological competencies). The reputation of non-family businesses has been coded as business slack. Conversely, the family corporate and brand reputation have been evaluated as family slack. The personal financial capital of the family, despite being a financial slack, has been specifically coded as family slack, as proper of family businesses. Family specific human capital, in particular the knowledge that has been handed over across generations, has been coded as family slack. Strong family ties, strong customer relationships and the family organizational culture have been classified as family slack.

Third, we focused on the entrepreneurial attitude, being either favourable or unfavourable. We coded as “favourable” the entrepreneurial attitude of the entrepreneurs showing, for instance, personal traits like risk-taking, proactiveness, flexibility, self-efficacy or competencies and skills proper of an entrepreneurial mindset (Tognazzo et al., 2020). Conversely, we labelled “unfavourable” the attitude of entrepreneurs displaying – for instance – negative emotions and feelings like immobilism, negative thinking, distrust (Foo, 2011; Wolfe and Shepherd, 2015).

In a third step, we moved from data to theory collapsing first-order codes into two abstract second-order themes: i) type of leveraged slack – business slack or family slack– and ii) entrepreneurial attitude towards opportunities during the pandemic outbreak – favourable vs unfavourable. Finally, we collapsed our second order themes into four aggregate dimensions that represent four different entrepreneurial responses to unexpected shocks: *surfing the pandemic, keeping business as usual, waiting while seeding, striving to resist*. The four groups vary according to the type of slack leveraged and type of entrepreneurial attitude. Figure 1 shows the final data structure.

\*\*\* Figure 1 about here\*\*\*

## 4. Findings

### 4.1 *Surfing the pandemic* (Miscusi, Guffanti)

Two firms have been able not only to withstand the lockdown but also to provide a remarkable entrepreneurial response to the shock, in a sense, they have been able to do what we label as “*surfing the pandemic*”. Miscusi (non-family) and Guffanti (family) both leveraged primarily non-family slack (i.e., financial, technological and HR) to adapt to the new market conditions and build adaptive resilience. As Guffanti’s entrepreneur mentions, stressing the importance of entrepreneurial attitude:

*“I think that to survive this crisis we need adaptability, elasticity and readiness. Or you change or you are going to disappear”.*

Miscusi – a firm in the restaurant and food industry - was founded in 2016 and nowadays operates with 12 restaurants in 7 Italian cities and is looking for accessing new foreign markets. Before the pandemic, the firm had in the pipeline ten new openings in Italy by the end of the year, as well as the first international restaurant in Spain. Furthermore, in spring 2020 the company was supposed to unveil the Miscusi Farm, a homestead nestled in 4,200 acres outside Milan that serves as an innovation centre dedicated to sustainability and agricultural experimentation. It was thought also of as a social meeting point with panels and training courses for future Miscusi’s employees. The pandemic postponed but did not stop the entrepreneurial projects of the two founders. As stated by Miscusi’s entrepreneur, showing his favourable entrepreneurial attitude:

*“We are currently experiencing a crisis and we are influenced by what we are going to do in these months, in which I see an opportunity, a new opportunity, as each time that the market changes so disruptively”.*

The Miscusi farm started its research activity in the summer of 2021 and the company opened its first restaurant outside Italy in London in November 2021, after a €20 million investment from venture capital funds MIP and Kitchen Fund.

A different story is that of Guffanti, a century-old family business, cheese refiner and seller, 100% owned and managed by the Guffanti's family. The outbreak of the pandemic did not stop the production activity of the firm, rather it represented the push to offer new services such as home delivery as well as the kick-off of the firm's brand-new e-commerce.

Before the shock, both firms – Miscusi and Guffanti – were financially sound and with excess liquidity (financial slack) that guaranteed the payment of employees' salaries during the lockdown, but also allowed the TMT to think and develop new projects freely. When restaurants were forced to close, Miscusi's founders and their team were worried, nonetheless, they immediately understood they needed to quickly understand what to do and so they started to develop new projects, with long-term vision. As in the founder's words: "We have to think to the now and then to the after". For instance, both cases kicked off – during the first wave of contagion in 2020 - the e-shop to exploit the opportunities of food delivery which were spreading during the lockdown. As asserted by Miscusi's entrepreneur, showing his strong entrepreneurial attitude while explaining the effect of the Covid push on the company:

*"This forced stop is an opportunity for a strategic reorganization and why not also to takeover some old restaurants and activities that won't survive to the crisis".*

Overall, TMT's human resource slack was highly important to capture emerging opportunities and develop new projects for Miscusi.

Miscusi – as well as Guffanti – was also able to quickly re-organize its human resources across the different business units as the human capital was in excess in size and diversity. Miscusi reallocated employees from restaurants to the "Bottega", grocery stores of their products close to the restaurants that were forced to closure. Similarly, Guffanti leveraged human resources slack as it quickly reacted to organize delivery to its B2C customers, by reallocating employees from the packaging area to the delivery activities. They did not experience problems in re-organizing, as they already had smaller packaged cheese and employees showed a flexible approach.

*“It was not difficult to open this new business line because we had already everything to package cheese in small pieces. We demanded our employees to be flexible and to adapt. The admin staff is smart working. I asked those employees that were working in preparing big orders for the export, and now have nothing to do, to become bellboys and deliver. Till now we received orders by mail or telephone, but we are planning to open an e-shop and to maintain the delivery also after the pandemic”.*

Both firms also exploited the shock to capitalize their intangibles (corporate and brand reputation, but also organizational culture among employees), further strengthening their brand reputation for the introduction and promotion of new services and activities. Both companies were accumulating reserve of intangibles before February 2020: for instance, Guffanti invested quite extensively in its marketing and communication strategy to build a positive reputation that we can consider in “excess” as at the time of the outbreak Guffanti, as well as Miscusi, had already a high level of brand awareness. For instance, Miscusi prepared an Easter lunch for doctors and nurses in one of the biggest Covid-hospitals in Milan. The firm also organized a platform for its staff online training. According to the founder:

*“This will enhance the sense of belonging of our employees to the organization, allowing them to “live the brand” and to feel to be useful and to be part of a family – the Miscusi family – that has some values and a purpose”.*

Guffanti’s entrepreneur also stressed that being a family business allowed the firm to be more solid because family and business are overlapped and interchanged. The business does not exist without the family and vice versa. In this case, family socioemotional wealth, especially the emotional attachment of family members to the business, can be considered as intangible family slack to build organizational resilience. In fact, during the outbreak, it helped in managing the crisis:

*“Family is quite relevant especially to “not give up”, it represents a hint emotionally and psychologically. It allows to feel safer and not alone in dealing with the shock”.*

Nevertheless, this was the only family slack that emerged within this group as critical to surviving the crisis by building resilience: as described above, business slack was prevailing

over the family's one. Specifically, financial slack, human resources slack and the intangible slack of reputation – that in the case of Guffanti's brand, even though being a family firm does not build its brand identity on family-related attributes – coupled with a favourable entrepreneurial attitude, fostered the adaptation to the new environmental conditions.

#### ***4.2 Keeping business as usual (Ecotehno; Julight)***

Two firms in our sample – Ecotehno and Julight – both nonfamily businesses, reacted to the pandemic by easily adapting their routines to the “New Normal”, providing an entrepreneurial response that we labelled “*keeping business as usual*”. These firms did not change their production, they just adapted their working conditions to the new government rules, i.e., transitioning to smart working when needed and building adaptive resilience to *keeping business as usual*. Here the entrepreneurs exclusively leveraged business slack, in particular human resources and cash and showed an unfavourable entrepreneurial attitude. They did not try to exploit the crisis as an entrepreneurial opportunity, despite operating in an industry that was allowed to remain open and did not experience significant shocks, at least compared to other industries.

Both Julight's and Ecotehno's entrepreneurs faced the lockdown and the related economic downturn without worrying too much, despite their organizations could have been indirectly affected by the economic crisis, for example by decreasing orders from clients and, more in general, by the uncertain economic outlooks. As asserted by Ecotehno's entrepreneur:

*“We won't have particular problems. Of course, we can foresee a lower income in the next 2-3 months, but if you are a structured firm, even though small, it means that you have to be able to confront with this type of slowdowns”.*

In the same vein, Julight's founder and entrepreneur said: “The future seems, for now, pretty good”. He foresaw that their sector may have slowed down in terms of volumes because of the crisis, shifting some orders ahead of some weeks. But, overall, looking ahead, for the type of

client they have, i.e., the microelectronics, automotive, aerospace sectors – their activities had not been so much affected.

Despite the possibility to remain open, both firms decided to reduce their activities and shift to smart working as much as they could, R&D activity included, showing a high level of flexibility, i.e. capability to quickly adapt routines and strategies to changing conditions (Pal et al., 2014). Their employees neither changed their functions nor developed specific new skills, they simply adapted their daily activities to smart-working conditions. As in the words of Ecotechno's and Julight's entrepreneurs:

*“We while remaining fully operational remotely to give customers maximum support, as long as the situation will not allow us to start again in place with serenity.”*

*“We do the same things as before, we are managing them a little differently, doing smart working and maintaining 1 or 2 people on-site”.*

Both firms were financially sound (financial slack) and with a solid organizational structure before the crisis outbreak. According to Ecotechno's entrepreneur even a smaller firm must be ready to confront a crisis and to develop a flexible and stable organizational structure which, in his opinion, is more able to adapt to slowdowns:

*“[...] the lockdown cannot last forever, but if it entails a few months, you have to be structured to withstand the impact of a crisis like this one”.*

Just before the pandemic outbreak, Julight earned two European funding projects and a few regional ones (financial slack). Similar to the Ecotechno's entrepreneur, Julight's CEO stresses the importance of being an experienced and structured firm to survive the crisis and adapt to changing conditions:

*“If the crisis would have hit us when the business was a start-up it would have been destroyed because we were much more financially exposed. Now we have been able to adapt. We have evolved, now we are no longer in the start-up phase”.*

Before the shock, the firm developed consolidated relationships with leading suppliers in all production sectors relevant to the energy sector, “to guarantee our customers quality standards

at the highest market levels”. According to the entrepreneur, a positive brand reputation built over the years represented a key business intangible slack to face the lockdown:

*“Building strong relationships with clients and suppliers means that you will find them again when activities will start. There is no incentive for both parties to change [...]. It is important to consolidate habits and build trust with customers and suppliers so that after the crisis you will find them again and they won't change”.*

Also, Julight had established tight partnerships with distributors and clients, by maintaining close contact and being proactive in providing customized solutions. This was mentioned by Julight as an important factor to keep R&D in place during the crisis.

In both cases, we could argue that firm’s reputation and customer relationship helped the firm during the crisis to be resilient, but what has been critical for these cases to maintain operational continuity had been financial slack and commodities (business slack). We also observed that no specific business opportunity was captured during 2020: entrepreneurs showed an unfavourable entrepreneurial attitude, characterized by immobilism and indifference towards opportunities. Julight continued the processes of improvements and changes that were already planned, for instance a new product launch that took place as it was planned.

*“We were working on an internal project for improving the quality of our products. This R&D internal activity allowed to launch a new version of an old product at the end of 2020. Nevertheless, this was a “business as usual”, because this activity was planned since far and it was not interrupted, conversely, it continued quietly”.*

#### **4.3 Striving to resist (Lanificio, Grandinote)**

Lanificio di Sordevolo and Grandinote have been the most affected firms in the sample by the pandemic as they were forced to completely stop their production. These two firms provided an entrepreneurial response characterized by leveraging both business and family slack and the unfavourable entrepreneurial attitude of their entrepreneurs. Neither of the two cases exploited the “Covid push” to capture new opportunities. They deployed financial slack to build

absorptive resilience thanks to which they strived and resisted hoping the lockdown and the restrictions would have ended soon.

Both firms operate in niche markets, respectively producing wool luxury fabrics – Lanificio – and laser and photonic technologies applied to the automotive, mechanical, aerospace and energy industries – Grandinote. Both ventures were growing and performing well before the shock:

*“We were doing well, though the business is small (a niche in the niche) and I am the key resource, I have witnessed a good increase in sales in the last ten years. The brand got appreciated in a niche of customers and distributors worldwide. High-performance sound and craftsman abilities, the capacity to reposed to customers”.*

The two firms have different governance types and ages: the first is a 60 years-old family business and the second a new start-up, yet they reacted in the same way to the pandemic. No emergency plans were available before the shock. Entrepreneurs felt that something was starting to go wrong in December, talking with clients in China, even if they did not understand immediately the impact of the pandemic on their business. Once the pandemic started spreading in Italy, these firms’ entrepreneurs reacted showing distrust and pessimism. They thought the only way to face the outbreak would have been to “strive to resist” by leveraging their businesses’ financial slack. These two firms did not leverage other types of slack resources such as human and technological resources, and they were not able to capture opportunities out of the crisis. As Lanificio’s entrepreneur mentioned:

*“We operate in a highly risky industry, so is essential for us to have liquidity and to amortize the costs of all the new equipment. We do not have loans”.*

Despite the availability of financial slacks, as both cases were financial sounds before the shock and made several investments in R&D and innovation and technology, slacks reviled to be useless in facing what Grandinote entrepreneur called a “supply chain and human resources” disaster. Both entrepreneurs were scarred and worried, especially because they were operating in industrial sectors like fashion and music industries that have been strongly affected by the

collateral effects of the pandemic restrictions. The entrepreneur of Lanificio also manifested his concerns regarding smart working and did not see it as an option:

*“You lose your productivity and what you can do if you are producing luxury fabrics and your plant is closed?”*

Also, Grandinote’s entrepreneur was sceptical about remote working as personal interaction with his customers is essential. He asserted:

*“Rely on trade fairs because my product needs to be seen and tested and I need to get in personal touch with distributors and the most demanding customers”.*

These entrepreneurs did not see opportunities stemming from the outbreak: the only way to survive would have been to “go back to normal as soon as possible”. They also perceived increasing competition from foreign competitors:

*“Other countries did not stop manufacturing like here, my competitors are all doing business, I am running a risk of being left behind”.*

Even if these firms could leverage the business’ financial slack, they did not pursue new business goals, nor they invested in new activities. They simply stopped the production that, after the restrictions, started exactly as it was before the shock. Within this group, financial slack was an enabler of absorptive organizational resilience but did not foster the turn of adversities into entrepreneurial opportunities. As stated by the Lanificio’s entrepreneur:

*“We do what we do, we can’t convert our production, we are producing luxury fabrics for a niche market, and we can’t convert our production as Armani or Calzedonia [clothing manufacturing companies] because they are “assembling” fabrics components while we produce them. And we can’t convert our business. It could be quite risky because you can lose your brand identity and your clients within the niche”.*

In the case of Lanificio, relying on family slack did not play a key role in capturing new opportunities but “being a family firm” allowed to build absorptive resilience and resist the shock. Lanificio’s entrepreneur asserts that it was thanks to the “non-debt” policy of the family that the firm has been able to resist the shock through its financial slack. The strong ties with customers that daily interacted with family members allowed them to maintain the orders and

not lose clients. Being a small and flexible family business also accelerated the decision-making process and the communication among the members of the top management team that are all family members, nevertheless family slack alone did not allow to capture new business opportunities stemming from the crisis:

*“As a family we don’t get too much trouble in catching up, deciding what to do and acting very quickly, but if you ask me if we are going to exploit some opportunities, I don’t think that once the pandemic will end the Lanificio will have a new business unit or will start to produce tablecloths instead of fabrics”.*

#### **4.4 Waiting while seeding (Icss; Vistarino; Gresmalt)**

Firms within this group are long-established organizations, leaders in niche markets, and they can rely on the long-time experience of the entrepreneurs within the respective specific industries. They have been mildly affected by Covid restrictions as they were allowed to stop their production only partially. Entrepreneurs showed a favourable entrepreneurial attitude: they exploited the forced stop of the business activity for the outbreak of Covid-19 to design new business ideas to be realized after the peak of the pandemic. As mentioned by our informants, during the peak they were *waiting* for better times to come, while developing new projects and *seeding* business ideas. They did not immediately capture opportunities during the crisis but designed projects to be developed after the shock. Ventures that adopted a *waiting while seeding* entrepreneurial response are all family firms, market leaders in their business and built absorptive resilience during the pandemic by leveraging mainly family slack resources, and whose entrepreneurs showed a favourable entrepreneurial attitude towards capturing opportunities. Despite having been partially affected by the closure of certain productive units and by the instability of the supply chain, these cases showed to be “like trees, agile and robust, to resist to market storms” (Gresmalt head of technical division).

ICSS and Gresmalt have a consolidated experience in their sector and a differentiated portfolio of business activities. Like ICSS, Gresmalt operates in diversified markets with multiple

targets; as stated by the head of innovation: “a good diversification is key to reduce the impact”.

The third case is Vistarino, a century-old wine company: the business is mainly focused on wine production, but the firm has revenues also from diversified activities such as cropping farming, or the rent of the land and farms.

The combination of leveraging family slack and favourable entrepreneurial resources allowed them to positively respond to the crisis by absorbing the shock, namely by persisting in the face of change remaining stable while waiting for better times. These entrepreneurs recognized that being “a family business” had been an advantage in absorbing the shock. Gresmalt’s informant, specifically, emphasised that long-term orientation, trusting long-lasting relationships with local external actors and distinctive social capital contributed to protecting the business from turbulences and promoting stability. He also underlined the role of agility, i.e., capability to quickly respond to a shock, in building absorptive resilience under conditions of severe uncertainty:

*“A family governance and management can be a constraint or an enabler. In my professional career, I have experienced both cases. In this company I see the family as an enabler, particularly in the actual crisis, for the following reasons: the fast decision making (quick responsiveness), long term orientation (they think of the firm survival over time), connection with the local territory and social responsibility towards the local community.”*

All the firms within this group were financially sound at the time of the outbreak:

*“We felt financially sound, thanks to a portfolio of lead customers (mainly large multinationals) which are used to pay their suppliers punctually. This permitted us to get short term credit from banks.*

Financial slack allowed them to “freeze” production and to wait for better times. Nevertheless, the entrepreneurs thought their main sources to survive the crisis have been mostly family slack as family firm reputation, customer trust and task-specific human resources. As in the words of Icass’ entrepreneur:

*“Only the best will survive, that is the strongest, those who can rely on the intangible capital of good reputation, excellent human resources and strong suppliers/customers ties will be able to resist and develop new projects”.*

*"We were used to see somehow these customers as a problem because they can be very demanding and putting a lot of pressure on our prices: now we realize they are our main asset".*

The three cases invested in firm-specific projects related to R&D and innovation before the shock (technological slack). Since 2012, Gresmalt has pioneered Industry 4.0 technologies in their plants as well as in a sustainability assessment of all the processes. The leverage of business-specific slack, like human resources and technologies, also contributed to resisting the crisis and preparing for new entrepreneurial activities in the aftermath of the pandemic, despite family slack having been predominant in building resilience.

The interviews undertaken during phase  $(t+1)$  also confirmed that the entrepreneurial projects seeded in the first lockdown have been implemented, confirming the favourable entrepreneurial attitude of these entrepreneurs. For instance, the Vistarino's entrepreneur was foreseeing going back to normality in one year, but she also thought that the key to getting out from the crisis would be to “invent something new”. As described in her words:

*"From here to six months I see us as a business that has to work to be excellent, perfect with a fluid management of costs you have to be very good at not wasting resources, total cutting of marketing and promotion expenses, even if I kept the press office alive because I don't want to leave the work on the brand, but I had to completely review the consultancy, in my opinion, we must try to cut as much as possible, to keep tough six months and start again after the pandemic with new projects".*

Overall, family slack revealed to be key for the firms in this group: especially the excess of family-specific and inimitable resources and the experience of entrepreneurs in recognizing and exploiting opportunities, allowed them to withstand the shock during the pandemic.

*“Quality, efficiency, excellence are stronger than any crisis. We are the pioneers in investments in sustainability in our field and now we have a full sustainability assessment of our processes that represents a strong competitive advantage”.*

## 5. Discussion

This study aimed at explaining how entrepreneurs respond and build resilience by leveraging slack resources and entrepreneurial attitude in a context of uncertainty.

First, our findings show that the responses of entrepreneurial firms to a crisis are not homogeneous but vary in terms of slack resources leveraged – business *vs* family – and entrepreneurial attitude, favourable *vs* unfavourable. The four types of entrepreneurial responses enabled organizational resilience, either in the form of an adaptive or absorptive reaction: in the first case, the firm maintains the course of action in the face of persistent adversity – thus displaying absorptive resilience – in the second case, it deviates from planned routines – thus displaying adaptive resilience (see Figure 2).

\*\*\* Figure 2 about here\*\*\*

In all cases studies, the role of slack resources is key: our findings provide evidence that slack buffers firms from environmental turbulence allowing them to survive and thrive in the face of the aftermath. This is consistent with the perspective of organization theory on slack (George, 2005) arguing that slack facilitates the organisation's capacity to adapt by innovating and experimenting. This result also fits the literature on organizational resilience asserting that a high level of slack is fundamental to build resilience (Vogus and Sutcliffe, 2007; Tognazzo et al., 2016) and “weather the storm” by overcoming unexpected challenges (De Carolis et al., 2009). First, we identified the role slack played in the organizational response to a major crisis, as theorized by Cheng and Kesner (1997). *Surfers* and *keepers* showed a proactive approach to slack, meaning that slack resources provided the organization with the potential for adapting and innovating when an adverse event occurred. In this case, as already argued by Penrose in her seminal contribution (Penrose, 1959), slack represented an incentive to expand and invest in new ideas aiming to adjust to the changing environments, as *surfers* and *waiters* did. Conversely, *strivers* and *waiters* displayed a reactive approach to slack by leveraging slack to

protect the organization from the shock and allowing the smooth functioning of the firm in times of severe crisis. This means that, in contexts characterized by Knightian uncertainty, the availability of slack resources – either business and/or family slack – positively influences the ability of entrepreneurs to build absorptive or adaptive resilience.

Second, we find that the combination of slack and entrepreneurial attitude promotes different entrepreneurial responses. Slack resources allowed all firms to cope with uncertainty and all the cases displayed resilience, as mentioned, by either absorbing or adapting to the shock. Yet, leveraging slack resources is a necessary condition for the exploration and exploitation of opportunities only when the entrepreneur has a favourable entrepreneurial attitude. This result is consistent with previous works on the cognitive and behavioural response of individuals to a major disturbance: individuals that show a positive response enable organizational resilience by shaping firm's strategic responses to adversity (Linnenluecke et al., 2013, Powell and Baker, 2014; Williams et al., 2017; Anwar et al., 2021). Conversely, organizations whose entrepreneurs owned limited entrepreneurial resources demonstrated to be resilient only by leveraging slack resources to absorb or to adapt to the shock. In all, we can propose the following theoretical insights. The different combinations of slack resources (business and/or family) leveraged, and the degree of entrepreneurial attitude (favourable vs unfavourable), determine different entrepreneurial responses. Furthermore, owning slack resources *per se* does not imply the ability of entrepreneurs to turn adversities into opportunities, as a favourable entrepreneurial attitude is needed to activate slack resources to explore and exploit opportunities.

Third, our findings highlight that the family nature of an organization characterizes the entrepreneurial response of *waiters*, i.e., entrepreneurs operating in a family firm displaying a “waiting while seeding” entrepreneurial response. Yet, being a family firm is not a key determinant of the entrepreneurial response of the family firms in our sample. Our results

suggest that not all the family firms reacted in the same way to adversity. Being a family firm is essential for a *waiter* response in weathering mass emergencies and transforming threats into entrepreneurial opportunities, but not for a *striver* (a response that we observed in both family and non-family organizations). For the family firms belonging to the “waiting while seeding” group – who did not only survive during the pandemic but were also able to adapt to the new competitive scenario by exploring and exploiting opportunities, the involvement of the family in the business and family slack represented the key resource for preserving the business continuity. This result complements the literature on the continuity of family organisations (Brewton et al. 2010; Chrisman et al., 2011; Danes et al. 2009) and on entrepreneurship in family firms (Lumpkin et al. 2011) confirming that the socioemotional wealth – especially close bonds among members of the family and social ties hold by family members – play a positive role in building the resilient response of the organization while facing adversity (Gomez-Mejia et al., 2011; Alonso-Dos-Santos and Llanos-Contreras, 2019). Especially the distinctive relational “locality” of family businesses, revealed to be an advantage to sustain the business in the face of the pandemic (De Massis and Rondi, 2020). It also offers the psychological and emotional support necessary to transform a threat into an entrepreneurial opportunity. Nevertheless, what represents a novel contribution of our work is that non-family firms emerged from our qualitative account as equally and successfully capable of capturing opportunities and displaying resilience as family firms (see the case of Miscusi, a non-family *surfer* organization). Therefore, our findings suggest that family firms are neither in a better position in turning threats into opportunities nor demonstrate superior resilient performance, see the case of Lanificio, a family *striver*. This result contrasts with Salvato et al.’s (2020) findings that during times of adversities family firms perform better than non-family firms in terms of resilience and opportunities. The endowment of family slack is not sufficient to turn adversities into opportunities and, more generally, owning either business or family slack does

not necessarily mean the firm can capture opportunities while facing adversities. For instance, *strivers* mitigated the effects of the outbreak by resisting the shock thanks to leveraging financial, technological, and human slack resources but did not turn adversities into opportunities. For the family firms within this group, family slack was necessary to display resilience, but not sufficient to be able to capture opportunities out of the crisis. This supports the theoretical insight that family slack may not lead to a superior resilient and/or entrepreneurial response of family firms compared to non-family firms.

Finally, we observed that *Keepers* (i.e., entrepreneurs who keep doing business as usual), have been weakly hit by the crisis. This is because they could operate in industries that were not affected by the lockdown working restrictions. The firms in this group leveraged both family and business slack to adapt to the New Normal. Nonetheless, despite the more favourable operating conditions – compared to *Surfers* – these firms did not show any entrepreneurial attitude, contradicting existing results revealing that industry specificity is key in explaining the likelihood of capturing post-disaster entrepreneurial opportunities (Salvato et al., 2020). In this case, an advantageous industry – i.e., the industry that was not affected by lockdowns did not foster the entrepreneurial action. *Keepers'* entrepreneurs showed relatively limited entrepreneurial resources and this – despite the more advantageous industry conditions – did not lead to fruitfully leveraging slack resources to explore opportunities out of the crisis. This finding supports the argument that an advantageous industry may not necessarily lead to capturing opportunities if the former is not sustained by a favourable entrepreneurial attitude.

## **6. Contribution to theory and practice**

Our study makes four theoretical contributions. First, it contributes to the entrepreneurship literature on firms coping with conditions of Knightian uncertainty (Dimov, 2018; Leyden and Link, 2015; Miller, 2007) and to the management (Linnenluecke, 2017; Williams et al., 2017;

Williams and Shepherd, 2016) and family business literatures on organizational responses to adversities (Campopiano et al., 2018; Darnhofer et al., 2016; Salvato et al., 2020; Smith et al., 2021). As argued by Shepherd (2020), studies in entrepreneurship – yet this is also the case for the other two streams mentioned – do not describe the multiple ways by which entrepreneurs leverage slack resources under the extreme uncertainty caused by the pandemic and do not explore how entrepreneurs could foster entrepreneurial action so *rapidly* – hours and days rather than months or years – in the chaos generated by a pandemic. With this study, we have responded to this call by contributing to explaining the role of leveraging slack resources in firms challenged by the Covid-19 pandemic (Shepherd, 2020). We also contribute to crisis management literature about the responses of organisations (e.g., Tang et al., 2021) by providing a multi-level perspective on organizational resilience through the lens of interpretive qualitative enquiry. We contribute to the mentioned streams thanks to a multi-level qualitative research that links personal traits and organizational outcomes (e.g. Kuratko et al., 2021; Santoro et al., 2021), thereby providing a more nuanced and fine-grained knowledge through the narratives of entrepreneurs who experience and manage crises.

Second, in contrast with most studies that analyse resilience at the supply chain level of analysis and mainly look at what happened *after* the crisis (i.e., Brewton et al., 2010; Pal et al., 2014), – thanks to the mentioned multi-level approach – we focused on *ongoing* entrepreneurial behaviours at both the firm level and the individual levels, in particular how entrepreneurs leveraged slack resources and whether their entrepreneurial attitude supported them in turning adversities into opportunities. This answers the call of Giones et al. (2020) about exploring how entrepreneurs are *currently* balancing resilience and acting entrepreneurially. It also addresses Shepherd’s (2020) call to grasp how firms deployed resources to face the Covid-19 outbreak. Furthermore, we focused on resource slack as we agree with Christianson et al. (2009) and Campopiano et al. (2018) who argued that slack is among the critical factors for a

successful recovery from critical events. We do so, by providing a more nuanced understanding of which types of slack resources are leveraged by entrepreneurial firms during a crisis and which entrepreneurial traits activate slack resources.

Third, we contribute to the literature on family firms by responding to the call by Campopiano et al. (2018) and Smith et al. (2021) who emphasized the need for exploring how family firms absorb and react to environmental jolts, developing specific responses to external threats. We observed that family slack is a key resource to build resilience, but it is not a key determinant of the “supposed” superior resilience and entrepreneurial performance of family firms (e.g., Salvato et al 2020) – in conditions of severe uncertainty – compared to non-family.

Fourth, we advance knowledge on the performance consequences of slack resources in family firms, observing how entrepreneurs leverage slack *while* the crisis is taking place, and not during times of equilibrium (pre-shock), as argued by De Massis et al. (2018). Furthermore, our results show that in times of crisis, slack – especially financial slack– is the key resource to leverage in order to build resilience and preserve the continuity of the family firm.

Our findings also contribute to business practice. They highlight that owning an excess of resources, either financial, human, or technological, can be an enabling factor to develop resilience, thus surviving severe crises. Yet, slack resources *per se* do not lead to the exploration and exploitation of opportunities, nor to performing well during a crisis. To face a disruptive event – not only aiming at surviving but also to profit from it – slack resources need to be activated and orchestrated by an entrepreneur with a favourable entrepreneurial attitude, in a way they do not only serve as a "cushion" to absorb the shock but to adapt the business to now environmental conditions. We also add two main considerations to Anwar et al. (2021), which suggest that to develop organizational resilience firms need to work on the individual resilience of the top management team. First, both family and non-family to thrive in the “new normal” era might also develop the entrepreneurial resources of the team. Second, they have

to invest in workplace training programmes on how to face unexpected crises. If, on the one hand, it is known that individuals are endowed with different degrees of entrepreneurial attitude, on the other hand it may be advantageous to develop and disseminate knowledge – also via learning programs – about how to foster entrepreneurial traits such as flexibility, tendency towards continual improvement, close interaction with distributors and clients, innovativeness, leadership, creativity etc.

More widely, the (post, hopefully) pandemic world is teaching entrepreneurs how to manage increased pressure to build more resilient organizations. In the “new normal”, entrepreneurs must be able to deploy the best practices learned in the Covid era to quickly adapt to future crises and be ready to exploit opportunities out of the adversity. In the same way, policymakers need to facilitate the process of adaption/absorption of possible further unexpected shocks, by stimulating smaller firms to be more resilient and entrepreneurial. Among others, policymakers must be attentive about how firms' accumulated resources are deployed during times of crisis. Our study has revealed that financial slack resources played a role both in family and non-family firms in absorbing the shock. Accumulating slack resources during a period of calm allows firms to operate “debt-free”, not only to survive the crisis but also to innovate. Compared to Leppäaho et al. (2021), we observed that the ability to survive and be innovative during times of crisis can be attributed to the use of slack not only in traditional family firms but also in non-family. According to our findings, it seems that for entrepreneurs it is advantageous to accumulate financial resources during stable periods. Nevertheless, the deployment of financial resources during a time of crisis might be at the detriment of further stable conditions, leading to contracting debts that could curb growth and profit after the crisis. Policymakers will need to proactively develop specific financial tools to help smaller businesses develop resilience – before the crisis – and not only sustain firms when the crisis has already occurred.

## **7. Conclusions, limitations and future steps**

Like any study, ours presents some limitations. First, our study is context-dependent and provides findings that are the results of “local interpretations” (Williams and Shepherd, 2016). Our framework could represent the basis to expand the analytical replicability of our “situated knowledge” to other comparable contexts and settings (Carminati, 2018).

Second, because of the key informant technique (Marshall 1996), the chosen informants unlikely represent the various points of view of all the individuals working in a venture. Nonetheless, as mentioned in the methods section, all organizations are entrepreneurial firms, thus it is reasonable to assume that the informants are representative of the firm’s strategizing as they are those in charge of taking key strategic decisions. Also, the principal advantage of the key informant technique lies in the quality of data that can be obtained by interviewing an ideal key informant in a very short period. Further studies might collect multiple sources of information, considering different informants’ viewpoints and exploring whether the informant’s role in the organisation has a relationship with the entrepreneurial attitude and the resilient response of the firm.

Third, as per its design and methodology, this research was deemed at capturing the different resilient responses of firms in relation to two key variables, i.e., slack resources and their activation through entrepreneurial attitude. The study was in fact designed as a “variance” study and not a “process” one. Therefore, future studies can adopt a processual approach to uncover the dynamics about the “how” slack and entrepreneurial attitude determine resilience responses from smaller firms.

Future studies might also explore how independent variables such as industry, size, number of employees, the country in which the firm operates, may affect the slack-resilience and entrepreneurial attitude-resilience relationships, but also family-related variables such as the

level of involvement of family members in the management of the organization or the age of the firm.

Finally, future research could also investigate how entrepreneurs understand adversities and how their understandings, i.e., the meaning they give to a certain phenomenon, influence the way they leverage slack to turn adversities into opportunities in conditions of Knightian uncertainty. Previous studies suggested that resource perceptions (Williams and Shepherd, 2016) and understanding of resilience (Conz et al., 2020) influence how entrepreneurs respond to the crisis. A phenomenographic inquiry (Angel et al., 2018) might explain why *keepers* and why *strivers* did not perceive the outbreak as a chance to capture new opportunities.

## References

- Alonso-Dos-Santos, M., & Llanos-Contreras, O. (2019). Family business performance in a post-disaster scenario: The influence of socioemotional wealth importance and entrepreneurial orientation. *Journal of Business Research*, 101, 492-498.
- Andres, L., & Round, J. (2015). The creative economy in a context of transition: A review of the mechanisms of micro-resilience. *Cities*, 45, 1-6.
- Angel, P., Jenkins, A., & Stephens, A. (2018). Understanding entrepreneurial success: A phenomenographic approach. *International Small Business Journal*, 36(6), 611–636.
- Anwar, A., Coviello, N., & Rouziou, M. (2021). Weathering a Crisis: A Multi-Level Analysis of Resilience in Young Ventures. *Entrepreneurship Theory and Practice*, 10422587211046545.
- Athayde, R. (2009). Measuring enterprise potential in young people. *Entrepreneurship Theory and Practice*, 33(2), 481–500.
- Baker, T., Miner, A. S., & Eesley, D. T. (2003). Improvising firms: Bricolage, account giving and improvisational competencies in the founding process. *Research Policy*, 32(2), 255–276.
- Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative science quarterly*, 50(3), 329–366.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650.
- Becker, M., & Knudsen, T. (2005). The role of routines in reducing pervasive uncertainty. *Journal of business research*, 58(6), 746-757.
- Belitski, M., Guenther, C., Kritikos, A. S., & Thurik, R. (2022). Economic effects of the COVID-19 pandemic on entrepreneurship and small businesses. *Small Business Economics*, 58(2), 593-609.
- Bingham, C. B., & Eisenhardt, K. M. (2008). Position, leverage and opportunity: a typology of strategic logics linking resources with competitive advantage. *Managerial and Decision Economics*, 29(2-3), 241-256.
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and

- future directions. *International Journal of Production Research*, 49(18), 5375–5393.
- Bourgeois III, L. J. (1981). On the measurement of organizational slack. *Academy of Management Review*, 6(1), 29–39.
- Brewton, K. E., Danes, S. M., Stafford, K., & Haynes, G. W. (2010). Determinants of rural and urban family firm resilience. *Journal of Family Business Strategy*, 1(3), 155–166.
- Bueno, E., Aragón, J. A., Paz Salmador, M., & García, V. J. (2010). Tangible slack versus intangible resources: The influence of technology slack and tacit knowledge on the capability of organisational learning to generate innovation and performance. *International Journal of Technology Management*, 49(4), 314–337.
- Bullough, A., & Renko, M. (2013). Entrepreneurial resilience during challenging times. *Business Horizons*, 56(3), 343–350.
- Campopiano, G., De Massis, A., & Kotlar, J. (2018). *Environmental jolts, family-centered non-economic goals and innovation: Toward a framework of family firm resilience*. Palgrave Macmillan.
- Carminati, L. (2018). Generalizability in qualitative research: A tale of two traditions. *Qualitative health research*, 28(13), 2094–2101.
- Cheng JLC, Kesner IF. (1997). Organizational slack and response to environmental shifts: the impact of resource allocation patterns. *Journal of Management*, 23(1), 1–18.
- Chrisman, J. J., Chua, J. H., & Steier, L. P. (2011). Resilience of Family Firms: An Introduction. *Entrepreneurship Theory and Practice*, 35(6), 1107–1119. <https://doi.org/10.1111/j.1540-6520.2011.00493.x>
- Chrisman, J. J., Chua, J. H., De Massis, A., Minola, T., & Vismara, S. (2016). Management processes and strategy execution in family firms: From “what” to “how”. *Small Business Economics*, 47(3), 719–734.
- Chrisman, J. J., & Patel, P. C. (2012). Variations in R&D investments of family and nonfamily firms: Behavioral agency and myopic loss aversion perspectives. *Academy of Management Journal*, 55(4), 976–997.
- Christianson, M. K., Farkas, M. T., Sutcliffe, K. M., & Weick, K. E. (2009). Learning through rare events: Significant interruptions at the Baltimore & Ohio Railroad Museum. *Organization Science*, 20(5), 846–860.
- Cohen, K. J., & Cyert, R. M. (1965). *Theory of the firm; resource allocation in a market economy*. Prentice-Hall International Series in Management (EUA).
- Conz, E., Lamb, P. W., & De Massis, A. (2020). Practicing resilience in family firms: An investigation through phenomenography. *Journal of Family Business Strategy*, 11(2), 100355.
- Conz, E., & Magnani, G. (2020). A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research. *European Management Journal*, 38(3), 400–412.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship: Critical Perspectives on Business and Management*, 3, 5–28.
- Cyert, R. M., J. G. March. 1963/1992. A Behavioral Theory of the Firm. 2nd ed. *Prentice Hall, Englewood Cliffs, NJ*.
- Dahles, H., & Susilowati, T. P. (2015). Business resilience in times of growth and crisis. *Annals of Tourism Research*, 51, 34–50.
- Danes, S. M., Lee, J., Amarapurkar, S., Stafford, K., Haynes, G., & Brewton, K. E. (2009). Determinants of family business resilience after a natural disaster by gender of business owner. *Journal of Developmental Entrepreneurship*, 14(04), 333–354.
- Darnhofer, I., Lamine, C., Strauss, A., & Navarrete, M. (2016). The resilience of family farms: Towards a relational approach. *Journal of Rural Studies*, 44, 111–122.
- De Carolis, D. M., Yang, Y., Deeds, D. L., & Nelling, E. (2009). Weathering the storm: the

- benefit of resources to high-technology ventures navigating adverse events. *Strategic Entrepreneurship Journal*, 3(2), 147-160.
- De Massis, A., & Kammerlander N. (2020). *Handbook of Qualitative Research Methods for Family Business*. Edward Elgar, Cheltenham Glos, UK. ISBN: 978-1-78811-644-2.
- De Massis, A., Kotlar, J., Mazzola, P., Minola, T., & Sciascia, S. (2018). Conflicting selves: Family owners' multiple goals and self-control agency problems in private firms. *Entrepreneurship Theory and Practice*, 42(3), 362-389.
- De Massis, A. D., & Rondi, E. (2020). Covid-19 and the Future of Family Business Research. *Journal of Management Studies*, 57(8), 1727–1731.
- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165–1185.
- Dew, N., Read, S., Sarasvathy, S., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, 24(4), 287-309.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- DiFrancesco, K. N., & Tullos, D. D. (2014). Flexibility in water resources management: Review of concepts and development of assessment measures for flood management systems. *JAWRA Journal of the American Water Resources Association*, 50(6), 1527–1539.
- Dimov, D. (2018). Uncertainty under entrepreneurship. *Philosophical Reflexivity and Entrepreneurship Research*, 184–196.
- Dubois, A., & Gadde, L.-E. (2002). Systematic combining: An abductive approach to case research. *Journal of business research*, 55(7), 553–560.
- Dubois, A., & Gadde, L.-E. (2014). “Systematic combining”—A decade later. *Journal of Business Research*, 67(6), 1277–1284.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, 50(1), 25–32.
- Fadol, Y., Barhem, B., & Elbanna, S. (2015). The mediating role of the extensiveness of strategic planning on the relationship between slack resources and organizational performance. *Management Decision*, 53(5), 1023-1044.
- Fama E.F. (1980) Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2):288–307.
- Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36(5), 1019–1051.
- Foo, M. D. (2011). Emotions and entrepreneurial opportunity evaluation. *Entrepreneurship Theory and Practice*, 35(2), 375-393.
- Garrett, R., Mattingly, S., Hornsby, J., & Aghaey, A. (2020). Impact of relatedness, uncertainty and slack on corporate entrepreneurship decisions. *Management Decision* 59(5), 1114-1131.
- George, G. (2005). Slack resources and the performance of privately held firms. *Academy of Management Journal*, 48(4), 661–676.
- Gehman, J., Glaser, V. L., Eisenhardt, K. M., Gioia, D., Langley, A., & Corley, K. G. (2018). Finding theory–method fit: A comparison of three qualitative approaches to theory building. *Journal of Management Inquiry*, 27(3), 284-300.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, 16(1), 15-31.

- Giones, F., Brem, A., Pollack, J. M., Michaelis, T. L., Klyver, K., & Brinckmann, J. (2020). Revising entrepreneurial action in response to exogenous shocks: Considering the COVID-19 pandemic. *Journal of Business Venturing Insights*, 14, e00186.
- Gittell, J. H., Cameron, K., Lim, S., & Rivas, V. (2006). Relationships, layoffs, and organizational resilience: Airline industry responses to September 11. *The Journal of Applied Behavioral Science*, 42(3), 300–329.
- Gomez-Mejia, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals*, 5(1), 653-707.
- Grandori, A., & Soda, G. (2006). A relational approach to organization design. *Industry and Innovation*, 13(2), 151–172.
- Hadjielias, E., Christofi, M., & Tarba, S. (2022). Contextualizing small business resilience during the COVID-19 pandemic: evidence from small business owner-managers. *Small Business Economics*, 1-30.
- Hamel, G., & Välikangas, L. (2003). The quest for resilience. *Harvard Business Review*, 81(9), 52–63, 131.
- Kark, K., Philips, A., Lillie, M., Kilpatrick, J., & Ciaramella, J. (2020). *People, technology, and the path to organizational resilience: COVID-19* | Deloitte Global. Deloitte. <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/people--technology--and-the-path-to-organizational-resilience.html>
- Knight, F. (1921). *Risk, uncertainty and profit*. Hart, Schaffner & Marx, Boston, MA.
- Korber, S., & McNaughton, R. B. (2018). Resilience and entrepreneurship: A systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, 24(7), 1129–1154.
- Kotlar, J., Signori, A., De Massis, A., & Vismara, S. (2018). Financial wealth, socioemotional wealth and IPO underpricing in family firms: A two-stage gamble model. *Academy of Management Journal*, 61(3), 1073-1099.
- Koudstaal, M., Sloof, R., & Van Praag, M. (2016). Risk, uncertainty, and entrepreneurship: Evidence from a lab-in-the-field experiment. *Management Science*, 62(10), 2897–2915.
- Kuratko, D. F., & Audretsch, D. B. (2021). The future of entrepreneurship: the few or the many?. *Small Business Economics*, 1-10.
- Kuratko, D. F., Fisher, G., & Audretsch, D. B. (2021). Unraveling the entrepreneurial mindset. *Small Business Economics*, 57(4), 1681-1691.
- Infocamere (2022), *Movinprese*, <https://www.infocamere.it/movimprese>.
- Kusmintarti, A., Thoyib, A., Ashar, K., & Maskie, G. (2014). The relationships among entrepreneurial characteristics, entrepreneurial attitude, and entrepreneurial intention. *IOSR Journal of Business and Management*, 16(6), 25-32.
- Ismail, H. S., Poolton, J., & Sharifi, H. (2011). The role of agile strategic capabilities in achieving resilience in manufacturing-based small companies. *International Journal of Production Research*, 49(18), 5469-5487.
- Le Breton–Miller, I., & Miller, D. (2015). Article Commentary: The Arts and Family Business: Linking Family Business Resources and Performance to Industry Characteristics. *Entrepreneurship Theory and Practice*, 39(6), 1349–1370.
- Leibenstein H (1969) Organizational or frictional equilibria, X-efficiency, and the rate of innovation. *Quarterly Journal of Economics*, 83(4), 600–623.
- Leipold, B., & Greve, W. (2009). Resilience: A conceptual bridge between coping and development. *European Psychologist*, 14(1), 40–50.
- Leppäaho, T., & Ritala, P. (2021). Surviving the coronavirus pandemic and beyond: Unlocking family firms’ innovation potential across crises. *Journal of Family Business Strategy*, 100440.

- Leyden, D. P., & Link, A. N. (2015). *Public sector entrepreneurship: US technology and innovation policy*. Oxford University Press, USA.
- Linnenluecke, M. K., Griffiths, A., & Winn, M. I. (2013). Firm and industry adaptation to climate change: a review of climate adaptation studies in the business and management field. *Wiley Interdisciplinary Reviews: Climate Change*, 4(5), 397-416.
- Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, 19(1), 4–30.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management Review*, 21(1), 135–172.
- Lumpkin, G. T., & Brigham, K. H. (2011). Long-Term Orientation and Intertemporal Choice in Family Firms. *Entrepreneurship Theory and Practice*, 35(6), 1149–1169.
- Lunnan, A., Nybakk, E., & Vennesland, B. (2006). Entrepreneurial attitudes and probability for start-ups—An investigation of Norwegian non-industrial private forest owners. *Forest Policy and Economics*, 8(7), 683–690.
- Marshall, M. N. (1996). The key informant technique. *Family Practice*, 13(1), 92–97.
- Mayring, P. (2008). Qualitative content analysis. Basics and techniques. *Beltz, Weinheim*.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152.
- McKelvie, A., Haynie, J. M., & Gustavsson, V. (2011). Unpacking the uncertainty construct: Implications for entrepreneurial action. *Journal of Business Venturing*, 26(3), 273–292.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, K. D. (2007). Risk and rationality in entrepreneurial processes. *Strategic Entrepreneurship Journal*, 1(1–2), 57–74.
- Minola, T., Bau', M., Sieger, P., De Massis, A., & Chirico, F. (2021). Slack and Performance in Family Owned SMEs: An Agency Theory Perspective. In *Academy of Management Proceedings* (Vol. 2021, No. 1, p. 10298). Briarcliff Manor, NY 10510: Academy of Management.
- Mishina, Y., Pollock, T., & Porac, J. (2004). Are more resources always better for growth? Resource stickiness in market and product expansion. *Strategic Management Journal*, 25(12), 1179–1197.
- Nyland, K., Morland, C., & Burns, J. (2017). The interplay of managerial and non-managerial controls, institutional work, and the coordination of laterally dependent hospital activities. *Qualitative Research in Accounting & Management*, 14(4), 467-495.
- Olson, P. D., & Bosserman, D. A. (1984). Attributes of the entrepreneurial type. *Business Horizons*, 27(3), 53–56.
- Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in economic crises—An empirical study of Swedish textile and clothing SMEs. *International Journal of Production Economics*, 147, 410–428.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods (3rd ed.)*. Thousand Oaks, CA: Sage.
- Patton, M. Q. (2014). *Qualitative Research & Evaluation Methods*. Sage Publication Inc.
- Penrose E.T. 2009 [1959]. *The Theory of Growth of the Firm*, 4<sup>th</sup> edition, Blackwell: Oxford University Press.
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3), 179-191.
- Powell, E. E., & Baker, T. (2014). It's what you make of it: Founder identity and enacting

- strategic responses to adversity. *Academy of Management Journal*, 57(5): 1406–1433.
- Reay, T. (2014). *Publishing qualitative research*. Sage Publications Sage CA: Los Angeles, CA.
- Reinmoeller, P., & van Baardwijk, N. (2005). The Link Between Diversity and Resilience. *MIT Sloan Management Review*, 46(4), 60–65.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4), 13–32.
- Salvato, C., Sargiacomo, M., Amore, M. D., & Minichilli, A. (2020). Natural disasters as a source of entrepreneurial opportunity: Family business resilience after an earthquake. *Strategic Entrepreneurship Journal*, 14(4), 594–615.
- Santoro, G., Messeni-Petruzzelli, A., and Del Giudice, M. (2021). Searching for resilience: the impact of employee-level and entrepreneur-level resilience on firm performance in small family firms." *Small Business Economics*, 57(1), 455-471.
- Sarasvathy, S. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243-263.
- Sarasvathy, S. D., & Dew, N. (2005). Entrepreneurial logics for a technology of foolishness. *Scandinavian Journal of Management*, 21(4), 385–406.
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenacker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent. *Education+ Training*, 51(4), 272-291.
- Sgourev, S. V., & van Lent, W. (2017). When too many are not enough: Human resource slack and performance at the Dutch East India Company (1700–1795). *Human Relations*, 70(11), 1293–1315.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226.
- Shepherd, D. A. (2020). COVID 19 and entrepreneurship: Time to pivot? *Journal of Management Studies*, 57(8), 1750-1753.
- Smith, C., Nordqvist, M., De Massis, A., & Miller, D. (2021). When so much is at stake: Understanding organizational brinkmanship in family business. *Journal of Family Business Strategy*, 12(4), 100425.
- Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. *Positive organizational scholarship*, 94–110.
- Tang, J., Zhang, S. X., & Lin, S. (2021). To reopen or not to reopen? How entrepreneurial alertness influences small business reopening after the COVID-19 lockdown. *Journal of Business Venturing Insights*, 16, e00275.
- Teti, M., Schatz, E., & Liebenberg, L. (2020). *Methods in the Time of COVID-19: The Vital Role of Qualitative Inquiries*. SAGE Publications Sage CA: Los Angeles, CA.
- Teixeira, E., & Werther Jr, W. B. (2013). Resilience: Continuous renewal of competitive advantages. *Business Horizons*, 56(3), 333-342.
- Tognazzo, A., Gubitta, P., & Favaron, S. D. (2016). Does slack always affect resilience? A study of quasi-medium-sized Italian firms. *Entrepreneurship & Regional Development*, 28(9–10), 768–790.
- Tognazzo, A., Sasseti, S., Caputo, A., & Pellegrini, M. M. (2020). Editorial special issue entrepreneurial decision-making and behavior. *Journal of Small Business & Entrepreneurship*, 32(1), 1-7.
- Venkataraman, S., Sarasvathy, S. D., Dew, N., & Forster, W. R. (2012). Reflections on the 2010 AMR decade award: Whither the promise? Moving forward with entrepreneurship as a science of the artificial. *Academy of management review*, 37(1), 21–33.

- Vogus, T. J., & Sutcliffe, K. M. (2007). Organizational resilience: towards a theory and research agenda. In 2007 IEEE International Conference on Systems, Man and Cybernetics (pp. 3418-3422). IEEE.
- Wang, Y., Guo, B., & Yin, Y. (2017). Open innovation search in manufacturing firms: the role of organizational slack and absorptive capacity. *Journal of Knowledge Management*, 21(3), 656-674.
- Weinzimmer, L. G. (2000). A replication and extension of organizational growth determinants. *Journal of Business Research*, 48(1), 35–41.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71–91.
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2), 733–769.
- Williams, T. A., & Shepherd, D. A. (2016). Building resilience or providing sustenance: Different paths of emergent ventures in the aftermath of the Haiti earthquake. *Academy of Management Journal*, 59(6), 2069–2102.
- Wolfe, M. T., & Shepherd, D. A. (2015). “Bouncing back” from a loss: Entrepreneurial orientation, emotions, and failure narratives. *Entrepreneurship Theory and Practice*, 39(3), 675-700.
- Yang, M., & Gabrielsson, P. (2017). Entrepreneurial marketing of international high-tech business-to-business new ventures: A decision-making process perspective. *Industrial Marketing Management*, 64, 147-160.

## 7. Tables and Figures

Table 1. Case description.

Case	A	B	C	D	E	F	G	H	I
Name	<i>Ecotechno</i>	<i>Julight</i>	<i>Gresmalt</i>	<i>ICSS</i>	<i>Vistarino</i>	<i>Lanificio di Sordevolo</i>	<i>Grandinote</i>	<i>Miscusi</i>	<i>Guffanti</i>
<b>Business</b>	Photovoltaic systems.	Photonic technologies and laser light.	Ceramic tiles, three brands, different productive lines.	Plastic packaging (polystyrene) for home appliances, pharma, food and components for the construction industry.	Wine production, bottling, farming and land renting.	Yarns and fabrics, dyeing of yards on third party account.	Amplifiers made with a craftsman approach.	Pasta restaurant chain and ready-to-eat products delivery.	Cheese refiner and seller.
<b>Short description</b>	The firm designs and builds plants to produce energy from renewable sources and provide a wide range of services aimed at improving and guaranteeing over time the efficiency of the systems that generate it and the devices that use it.	Julight promotes smart use of photonic technologies and laser light, by combining optoelectronic integration, miniaturization, and cost-effectiveness. It offers a new class of contactless devices and instruments, enabling accurate control and monitoring of industrial processes and product quality.	Five active plants that produce ceramic tiles for floors and walls. It is currently testing a tool for real-time environmental, economic, and social impact assessment of production processes, thanks to the digital technologies of IoT and Industry 4.0.	5 active plants and one holding company, three in Italy, one in Turkey and one in the UK. The main business are packaging (mainly for food, pharma and domestic appliances) in polystyrene.	Century-old winery. The business is mainly focused on wine production, but they have revenues also from diversified activities such as cropping and farming, plus the rent of the land and some farms. Vistarino is both a B2B and B2C business.	Third-generation mill weaving Australian-sourced wool into jacquard and tweed. Il Lanificio is also responding to the increasing demand for sustainable fabrics, buying certificated wool and producing fabrics following all the "sustainable" production requirements.	One-man band enterprise founded in 1998 by Massimiliano Magri, who is both the owner and the craftsmen. The firm owns an innovative technology named 'Magnetosolid' which combines the advantages of solid-state and tube amplifiers overcoming their respective limitations.	Italian brand entirely dedicated to pasta and the Mediterranean lifestyle. The concept traces to the roots of Italian culinary traditions, promoting fresh ingredients and old-school recipes and favouring conviviality at popular prices.	Established business in the cheese industry. It selects, ages and resells the best cheese from Italian and European dairy traditions. BeeB and B2C business. Highly international. It exports almost all over the world.
<b>Foundation year</b>	2004	2011	1969	1969	1850	1965	2005	2016	1876
<b>Number of employees</b>	15	6	378	170	15 (excepted for seasonal workers during the vintage)	60 (among which 10 are family members)	0 + 7 collaborators	300	13 (among which 3 family members)

<b>Location of headquarter</b>	Torricella Verzate, Pavia, Italy	Pavia, Italy	Casalgrande, Reggio Emilia, Italy	Gropello Cairoli, Pavia, Italy	Rocca de Giorgi, Pavia, Italy	Sordevolo, Biella, Italy	Bressana Bottarone, Pavia, Italy	Milano, Italy	Arona, Italy
<b>Turnover (euro, 2021)</b>	1,78 mln	410.000	132 mln	30 mln	1,4 mln	8 mln	300.000	11 mln	8 mln
<b>Export intensity and markets (2021)</b>	0%: they only sell to B2B and B2C customers in the North-West of Italy	50%, China is the main market, then they sell to European customers	80% France, Germany and the rest of the world. France, Germany and the rest of the world.	No direct export from Italy, but foreign sales through their foreign plants in Turkey and UK.	25%	30%	100% export in 26 countries	0%	70%
<b>Governance</b>	Non-family business	Non-family business	Family business	Family Business	Family business	Family business	Non-family business	Non-family business	Family business
<b>Suppliers</b>	Materials and intermediate products plus some additional workforce needed for ad hoc installations.	Julight internally develops the design of the optical, electronic and mechanical parts. External suppliers produce the individual parts, which Julight then assembles.	Raw materials (clay), diverse countries, technologies (machinery) all suppliers are in the district.	Raw materials (basic chemicals to produce polystyrene) from large multinational firms (like ENI, BASF etc)	Bottles and packaging, machinery	Wool and dyes	Internalized productive cycle, no outsourcing, Massimiliano assembles the amplifiers from basic components and materials.	Food raw materials	cheese producers and packaging materials (i.e. plastic envelops)
<b>Competitors</b>	Bigger producers of photovoltaic systems	Two main German competitors.	Mostly located in the Spanish cluster	Italian Plastic packaging producers in the North of Italy	Italian producers of premium wines (especially Tuscany and Piedmont)	Italian luxury wool factories	Amplifier and pre-amplifier worldwide producers for the most demanding audiophiles.	Monothematic restaurant brands with a fair quality/price ratio (e.g. Obica, Panino Giusto, Rosso Pomodoro, hamburger bars).	Italian and French cheese producers and exporters

Table 2. Data sources.

	<b>Ecotechno</b>	<b>Julight</b>	<b>Gresmalt</b>	<b>ICSS</b>	<b>Vistarino</b>	<b>Lanificio di Sordevolo</b>	<b>Grandinote</b>	<b>Miscusi</b>	<b>Guffanti</b>
<b>Informants (role) 9 in total</b>	Founder	Founder	Head of Innovation	Owner and CEO	Owner and CEO	Production manager	Founder	Founder, owner and CEO	Owner and production manager
<b>Relationship with the family</b>	/	/	Non-family member	Family member	Family member	Family member	/	/	Family member
<b>Number of interviews (21 in total and 240 transcript pages)</b>	3 1 at t-1 1 at time t 1 at time t+1	4 2 at t-1 1 at time t 1 at time t+1	3 1 at t-1 1 at time t 1 at time t+1	4 2 at t-1 1 at time t 1 at time t+1	4 2 at t-1 1 at time t 1 at time t+1	3 1 at t-1 1 at time t 1 at time t+1	4 2 at t-1 1 at time t 1 at time t+1	1 1 at time t	3 1 at t-1 1 at time t 1 at time t+1
<b>Other sources (200 pages)</b>	Venture reports (3) News articles (3) Email correspondences (20) Following-up emails and discussion (1) Other files (PowerPoint, etc.) (3) Pre-interview mail exchange (1 page) Field notes (4 pages)	Venture reports (1) News articles (3) Email correspondences (5) Following-up emails and discussion (1) Pre-interview mail exchange (1 page) Field notes (5 pages)	Venture reports (1) News articles (3) Email correspondences (3) Following-up emails and discussion (1) Other files (PowerPoint, etc.) (1) Pre-interview mail exchange (2 pages) Field notes (4 pages)	Venture reports (1) News articles (10) Email correspondences (10) Following-up emails and discussion (1) Other files (PowerPoint, etc.) (2) Pre-interview mail exchange (1 page) Field notes (7 pages)	Market reports (1) News articles (5) Email correspondences (10) Following-up emails and discussion (2) Pre-interview mail exchange (1 page) Field notes (5 pages)	News articles (2) Email correspondences (12) Following-up emails and discussion (3) Pre-interview mail exchange (1 page) Field notes (5 pages)	Venture reports (1) News articles (5) Email correspondences (10) Following-up emails and discussion (2) Pre-interview mail exchange (1 page) Field notes (5 pages)	News articles (10) Email correspondences (10) Following-up emails and discussion (2) Pre-interview mail exchange (1 page) Field notes (4 pages)	News articles (7) Email correspondences (20) Following-up emails and discussion (2) Pre-interview mail exchange (2 pages) Field notes (3 pages)
<b>Other data</b>									

Figure 1. Data structure.

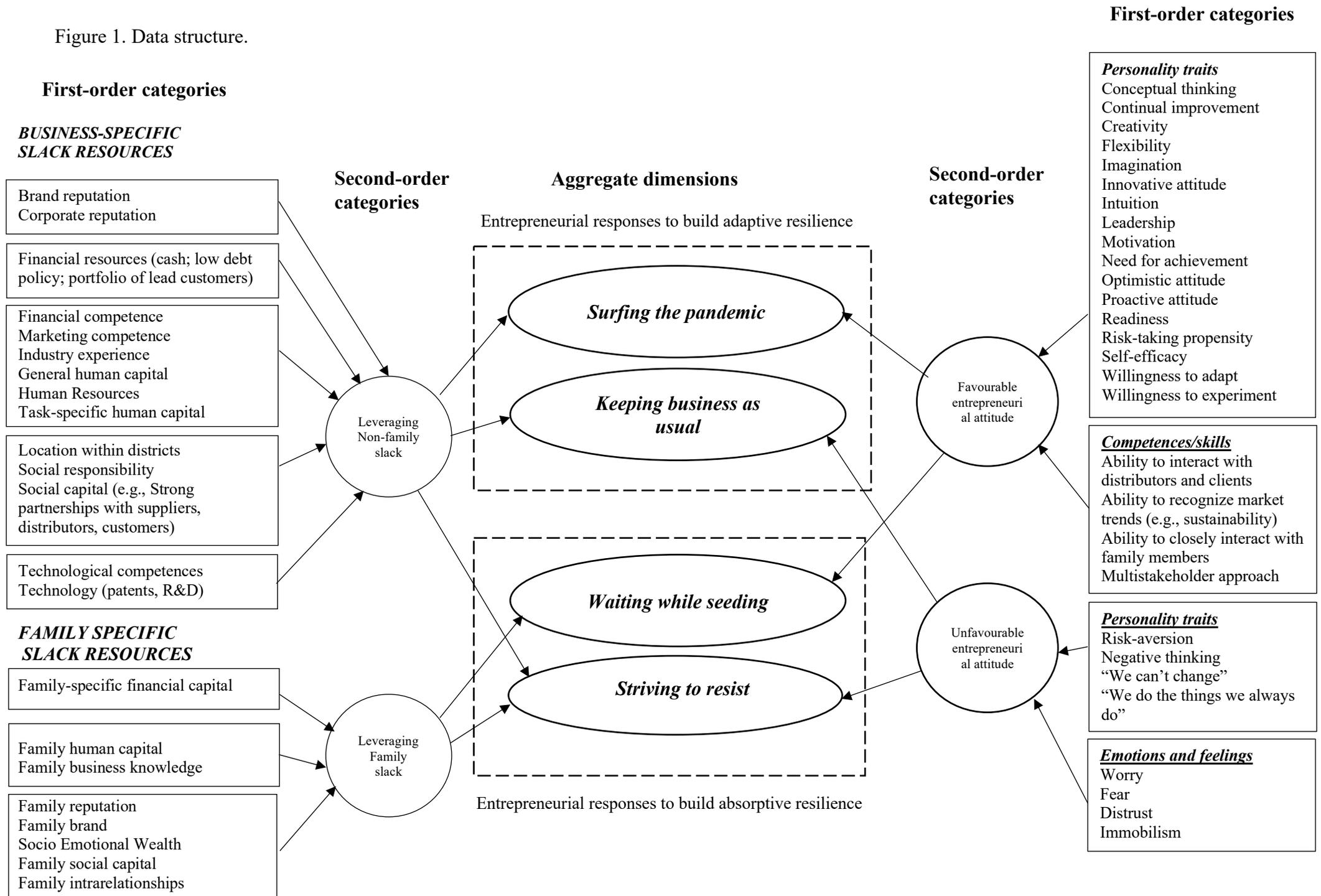


Figure 2. Entrepreneurial responses to Covid-19 crisis: the combination of slack and entrepreneurial attitude.

