Received: 16 June 2016 | Revised: 8 September 2020 | Accepted: 12 September 2020 | Published on: 28 September 2020

DOI: 10.1002/sej.1368

RESEARCH ARTICLE

STRATEGIC ENTREPRENEURSHIP JOURNAL WILEY

Natural disasters as a source of entrepreneurial opportunity: Family business resilience after an earthquake

Carlo Salvato[1] | Massimo Sargiacomo[2] | Mario Daniele Amore[1] | Alessandro Minichilli[1]

[1]Bocconi University, Department of Management and Technology, ICRIOS Research Center, SDA Bocconi School of Management, Milan, Italy

[2]Universitá G. D'Annunzio Chietí-Pescara, Department of Management and Business Administration, Pescara, Italy

Correspondence
Carlo Salvato, Bocconi University, Department of Management and Technology, ICRIOS Research Center, Röntgen 1, 20136 Milan, Italy.
Email: carlo.salvato@unibocconi.it

[Correction added on 12 October 2020, after first online publication: 'SDA Bocconi School of Management' has been inserted to the first affiliation.]

Abstract

Research Summary: What type of firms are more likely to survive or even thrive in disaster events such as earthquakes, wildfires, and the COVID-19 pandemic? We investigate whether family ownership and industry positioning affect firms' ability to capture opportunities for business recovery after a natural disaster. We analyze the performance of Italian family and nonfamily firms around a disastrous earthquake in 2009. Following the earthquake, family firms performed better than nonfamily firms, especially when multiple family members were involved as owners. Moreover, family ownership is beneficial in industries highly dependent on the public sector. Our findings provide evidence on the superior resilience of family firms by illustrating the characteristics that allow firms hit by disaster events to seize posttraumatic entrepreneurial opportunities for recovery and growth.

Managerial Summary: The purpose of this study was to understand whether a possible explanation of family firms' superior longevity is their resilience to mass emergencies and their ability to transform post-crisis threats into entrepreneurial opportunities. We found that family firms performed better than their nonfamily peers after the earthquake that hit Central Italy, and especially the area

around L'Aquila, in 2009. During disaster events, family ownership resources—focused on the long term and the desire to transfer the business to future generations—provide the firm with the social and emotional capital needed to address the hardship. Moreover, family firms that operated in industries closer to the public demand leveraged the family proximity to politics, further enhancing the processes of recovery and opportunity identification.

KEYWORDS

entrepreneurial opportunities, family firms, natural disasters, resilience, social capital

There is continuing interest in understanding the longevity of family firms across generations and their ability to perpetuate an entrepreneurial orientation (Ciravegna, Kano, Rattalino, & Verbeke, 2020; Fernandez Perez & Colli, 2013; Sharma & Salvato, 2013). A recurring explanation is grounded on family firms' superior ability to respond to adversities such as disaster events and mass emergencies, often referred to as their resilience (Chrisman, Chua, & Steier, 2011; Danes et al., 2009; Memili, Welsh, & Luthans, 2013; Minichilli, Brogi, & Calabrò, 2016). These events disrupt entrepreneurial resources, but long-lasting family firms seem to be capable of turning adversities into opportunities (Roux-Dufort, 2007; Williams & Shepherd, 2018). How controlling families behave and perform in post-disaster entrepreneurship may thus be an overlooked manifestation of their resilience.

To explain the resilience of family firms, some authors focused on the importance of family social capital (Arrègle, Hitt, Sirmon, & Very, 2007; Carr, Cole, Ring, & Blettner, 2011), and on the enduring interpersonal relationships among family members sharing coherent goals (Lim, Lubatkin, & Wiseman, 2010), which shape decision-making (Chua, Chrisman, & Sharma, 1999). Others have focused on the close collaboration of family members to keep transgenerational control (Zellweger, Kellermanns, Chrisman, & Chua, 2012), which contributes to preserving the common family-centered socioemotional wealth endowment (Gómez-Mejía, Cruz, Berrone, & De Castro, 2011; Gómez-Mejía, Haynes, Nunez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Finally, yet other authors have focused on how the connections among family, firm, local community, and government systems support family firm responses to adversity (Danes et al., 2009). Taken as a whole, this work—whether focused on family social capital, socioemotional wealth preservation, or family connections—has generated important insights into why firms that successfully survive and thrive across centuries are often family owned and controlled. These insights revolve around the unique role of the relationships among members of the controlling family, and between the family and external stakeholders, in facing hardship.

However, these explanations have not been unambiguously conceptualized and empirically tested. Conceptually, prior literature paradoxically reveals both positive and negative effects of family social capital and socioemotional wealth. Strong family ties provide essential affective and economic resources (Chirico & Salvato, 2008; Salvato & Melin, 2008), but they may also be redundant, thus limiting the quantity and variety of resources to face adversity, and the family firm's ability to capture postcrisis entrepreneurial opportunities (Mariotti & Delbridge, 2012; Maurer & Ebers, 2006). The desire to preserve socioemotional wealth prompts family members to endure exceptional sacrifice when facing adversity (Minichilli et al., 2016), but it may also induce conservative entrepreneurial decisions (Kellermanns, Eddleston, & Zellweger, 2012).

Empirically, the longevity of family firms is not proof of their ability to face adversity because it may result from alternative explanations (Chang, Chrisman, Chua, & Kellermanns, 2008; Nicholson, 2008). Existing empirical studies are often cross-sectional, tracing resilience (a firm's ability to capitalize on adversities that may threaten its survival;

Lengnick-Hall, Beck, & Lengnick-Hall, 2011) to the characteristics exhibited by long-lived family firms, rather than investigating performance of family and nonfamily firms before and after an shock (Linnenluecke, 2017; Smith, 2016). Thus, while informative about the determinants of longevity, much of this prior work does not provide final explanations as to whether family firms are more likely to suffer or thrive when facing adversity, and why.

The purpose of this paper is to provide a rigorous empirical test of the superior ability of family firms to survive and thrive in the aftermath of disaster events. A natural disaster is an exogenous and traumatic event that offers a powerful instrument to resolve the paradox of the potentially positive and negative effects of family firms' heterogeneity on facing adversity, and to identify possible alternative explanations. We thus test our predictions in the context of the disastrous earthquake that devastated the Abruzzo region in central Italy on April 6, 2009. The earthquake caused more than 300 victims, about 1,600 injured, 65,000 homeless, and economic damages estimated in 10.2 billion euros (Sargiacomo, 2015; Sargiacomo, Ianni, & Everett, 2014). The seismic catastrophe involved 56 municipalities collectively labeled as the "earthquake crater" (Sargiacomo & Walker, 2020)—the focal context of our study. Many firms struggled to preserve their supply chains and to maintain business relationships with other actors. Economic and personal disruption also caused widespread psychological and emotional distress (Costa & Simeone, 2009; Dante, Laurenzi, & Nanni, 2009; Pitari, 2009).

Our empirical test compares the pre- and post-event performance of all family and nonfamily firms located in the area affected by the earthquake, and of a control sample. The findings of this natural experiment suggest that after the earthquake family firms performed significantly better. This result is attributable to a mix of support from family social capital—close bonds among members of the owner family—, industry positioning, and family business proximity to the public sector. We contribute to resolving the paradox of the positive and negative effects of family social capital and socioemotional wealth—which provide unique resources, yet risk being redundant and inducing conservative decisions—by showing that these dynamics both support resilience in adversity. Our study contributes to strategic entrepreneurship in family firms (Lumpkin, Steier, & Wright, 2011) by suggesting that through a combination of internal and external bonds, and industry positioning, family firms can turn adversities into entrepreneurial opportunities. We describe this capability as an overlooked dimension of family firms' resilience.

1 | THEORY AND HYPOTHESES

Research on resilience is fragmented across several research streams. The different conceptualizations can be traced back to two main perspectives (Lengnick-Hall et al., 2011; Linnenluecke, 2017; Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). A first perspective sees organizational resilience as an ability to rebound from unexpected, stressful, adverse situations and to resume prior activities and performance levels. It comprises early conceptualizations of resilience as a response to external threats (Meyer, 1982; Staw, Sandelands, & Dutton, 1981), and subsequent research on resilience as reliability in Normal Accident Theory (Wildavsky, 1988) and in High Reliability Organizing (Weick & Roberts, 1993).

A second perspective looks beyond restoration to include the development of new capabilities and an ability to capture new opportunities under duress. This perspective is grounded in research in positive organizational behavior and psychological capital in adverse events (e.g., Coutu, 2002; Luthans, 2002), and in research in the adaptability of business models to adverse conditions (e.g., Hamel & Valikangas, 2003; Sutcliffe & Vogus, 2003). To capture both views, we define *organizational resilience* as "a firm's ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize on disruptive surprises that potentially threaten organization survival" (Lengnick-Hall et al., 2011, p. 244; see also Williams & Shepherd, 2016a, 2016b; Williams et al., 2017).

Gittell, Cameron, Lim, and Rivas (2006) argue that a firm's positive response to exogenous shocks is shaped by the interpersonal relationships among group members, who provide moral, social, and emotional support to each other (Carver, Scheier, & Weintraub, 1989). This point is further argued in a recent study on entrepreneurial venturing following natural disasters, where the knowledge and goals shared by actors and the recognition by others of the increased

achievement of desired outcomes in local communities represent a strong foundation of resilience (Shepherd & Williams, 2014). In family firms, the ability to seize recovery opportunities and effectively organize in the aftermath of sudden negative shocks is thus likely dependent on the *family firm's social capital*—the network of relationships possessed by a controlling family, and the sum of resources embedded within, available through, and derived from such a network (Adler & Kwon, 2002; Arrègle et al., 2007; Burt, 2005; Carr et al., 2011; Nahapiet & Ghoshal, 1998).

Despite this evidence, the role of social capital in allowing family firms to address adverse external shocks presents conceptual and empirical challenges. These are due to the contrasting contributions offered by the different relationships that shape social capital. Scholars conceptualize it as a set of resources embedded in two types of relationships (Burt, 1992, 2005). First, the strong ties individuals develop by interacting with members in a close-knit community such as a family are a source of "internal" or "bonding" social capital (Adler & Kwon, 2002) and are characterized by closeness and "emotional intensity" (Marsden & Campbell, 1984, p. 498). The presence of strong ties within a highly interconnected network is defined as *redundancy* by network scholars (Mariotti & Delbridge, 2012; Rowley, Behrens, & Krackhardt, 2000) because actors in a network tend to interact with each other multiple times and in multiple roles. Within entrepreneurial families, the redundancy of internal social capital is a source of psychological and emotional support, trust and cohesiveness, reciprocity, and the sharing of highly contextual and tacit knowledge (Chirico & Salvato, 2008; Salvato & Melin, 2008).

The second type of relationships shaping social capital are the relatively weaker ties that individuals develop through the more distant and sporadic contacts with people outside their closer community, which are a source of "external" or "bridging" social capital (Burt, 1992). For controlling families, external contacts with other firms and organizations, banks, and public and political institutions are a source of novel information, access to power or better positions within the industry, and new entrepreneurial opportunities (Patel & Fiet, 2011).

Bonding and bridging social relationships are related in family firms, where family members are embedded in a multiplicity of connections resulting from their simultaneous roles as family members, managers, members of the local community, and members of multiple institutions such as charities, entrepreneurial associations, and political parties (Aldrich & Cliff, 2003). The multiplicity of social ties in which members of the controlling family are embedded determines a paradox in explaining family firms' resilience. *Network closure*, which results from dense clusters of strong connections, eases the exchange of resources by leveraging the high levels of trust characterizing bonding social capital (Nahapiet & Ghoshal, 1998). However, the strengthening of a few network ties among interconnected actors leads to increased redundancy, which is usually seen as a negative feature of a network due to the limited access to new information and resources it allows, and the potentially negative implications on innovation and entrepreneurial behavior (Mariotti & Delbridge, 2012; Maurer & Ebers, 2006; Rowley et al., 2000). Conversely, the opportunity that controlling families have to bridge *structural holes*—the gaps between non-redundant contacts (Burt, 1992, 2004)—is essential in accessing the multiplicity of resources needed to face adversity (Williams & Shepherd, 2018). However, extending the network to an increasing number of new actors to avoid the negative effect of redundancy, and to reap the benefits of bridging structural holes, is costly in terms of search. Moreover, it can lead to *network overload*, which results from the difficulties faced by actors in managing and sustaining a large number of contacts (Elfring & Hulsink, 2007). Therefore, our understanding of how the challenges of family network redundancy and overload play out in the context of disaster events remains limited and contradictory, limiting our understanding of how family firms may improve their entrepreneurial potential after environmental shocks. In this study we address this paradox by comparing how both the internal and external ties of family firms affect their ability to capture recovery opportunities and thus their resilience in the wake of adverse events.

1.1 | Family firms' resilience: The absorption of natural disasters

As compared with nonfamily firms, family firms are characterized by greater longevity, spanning several generations and, sometimes, even centuries (Fernandez Perez & Colli, 2013; Miller & Le Breton-Miller, 2005). One explanation

for this longevity may lie in an inherent ability of family firms to deal with unexpected shocks such as financial crises, disaster events, mass emergencies, and other adverse events, which allows them to traverse long spans of time without losing their functionality (Chrisman et al., 2011). The evidence provided by the existence of firms such as *Les Henokiens* (Bennedsen & Van der Heyden, 2010), with over 200 years of history and still dependent on their founding families, is not conclusive. For example, as Chrisman et al. (2011, p. 1108) suggest: "family firms may continue to exist in large numbers because family involvement provides temporary advantages in early stages of venture development (Chang et al., 2008) or because human beings just naturally prefer to organize economic activity around the family unit (Nicholson, 2008)." To fill this empirical gap, the first baseline prediction we test is that financial performance after a disastrous event that affected both family and nonfamily firms is higher in family firms, as a manifestation of their superior resilience. We ground this prediction in the central role that social capital plays in these organizations.

The importance of enduring family interpersonal relationships in confronting exogenous shocks suggests that family firms could be among the most resilient organizations. A unique feature of family firms is that their corporate decision-making processes are largely shaped by the desire to transfer the business to future generations (Chua et al., 1999), as well as by intense and enduring interactions between individuals that belong to the same family, and who often share the same or coherent material and immaterial goals (Lim et al., 2010). Being involved in different levels of a firm's ownership, governance, and management, family members collaborate closely with each other to contribute to and preserve a common family-centered socioemotional wealth endowment (Gómez-Mejía et al., 2007, 2011), which results from the preservation of the benefits of transgenerational control (Zellweger et al., 2012). This endowment includes economic and noneconomic utilities related to family presence in the firm, characterized along five dimensions (the so-called FIBER components of socioemotional wealth), i.e., *Family* control and influence, family members' *Identification* with the firm, *Binding* social ties, *Emotional* attachment, and *Renewal* of family bonds to the firm through succession (Berrone, Cruz, & Gómez-Mejía, 2012).

Mass emergencies, such as the severe earthquake that we investigate or the more recent COVID-19 pandemics, are natural disasters that represent a major threat to the FIBER dimensions (Berrone et al., 2012). First, continued *family* control and influence over the firm is severely threatened by exogenous shocks that may force the controlling family out of business, either by having to shut the business down, or by being compelled to relinquish control to other firms (De Mel, McKenzie, & Woodruff, 2012). Second, natural disasters severely affect the close *identification* of family members with the firm by disrupting the external image of business effectiveness that family members strive to project to their customers, suppliers, and other external stakeholders (Nolen-Hoeksema & Morrow, 1991). Third, the casualties and the disruptions that natural disasters engender often truncate the *binding* social ties that members of the controlling family develop with each other, and that they often extend to a wide set of external constituencies such as long-term suppliers and customers (Miller, Le Breton-Miller, & Lester, 2011). Fourth, natural disasters often affect the family's *emotional* attachment to the business, since the loss or radical downsizing of the firm represents a highly emotional event for most owners (Shepherd & Williams, 2014). Finally, adverse events threaten the *renewal* of family bonds through dynastic succession either because of the possible death or physical injuries of successors, or because of the reduced financial viability of intra-family succession compared with allowing outside investors or selling the firm (Kets de Vries, 1993; Zellweger et al., 2012).

Most firms in the earthquake area suffered huge losses along the five dimensions of SEW. As one of the family entrepreneurs in our data set told us: "It was excruciating, from a personal, family, and business standpoint. The world collapsed on us, due to the death of our brother in L'Aquila, and the risk of having to shut the business down after we lost most of our potential suppliers and clients." Given their keen interest in maintaining firm survival and protecting socioemotional wealth (Gómez-Mejía et al., 2007), we expect family members to be particularly motivated and effective at building and leveraging resilience.

To preserve their socioemotional wealth endowment amidst adversity, family firms make extraordinary efforts that give them a unique advantage in recovering. Scholars identified several possible mechanisms allowing family firms to display greater resilience when faced with external hazards. These mechanisms involve effort expended to

preserve and dynamically adjust supporting factors within and outside the family business system. For instance, in their review of the positive aspects associated with family ownership, Gómez-Mejía et al. (2011) pointed at patient capital, affective commitment of owners and employees, and accumulation of social capital, as well as lower leadership turnover, as the most recurrent advantages of family involvement in the firm during crises. Preserving strong internal and external factors allows family firms to retain a longer-term orientation (Lumpkin et al., 2011; Lumpkin & Brigham, 2011; Yu, Lumpkin, Sorenson, & Brigham, 2012) and to make decisions more quickly in times of hardship (Kets de Vries, 1993). Based on these arguments, our baseline hypothesis is that the higher post-shock profitability of family firms as compared with nonfamily firms is evidence of their superior resilience. Hence:

Hypothesis (H1). After the earthquake, family firms will demonstrate higher levels of resilience to the disaster than their nonfamily counterparts as manifest by higher profitability.

1.2 | Family bonding and natural disasters: Sustaining trauma, avoiding distress

We have thus far argued that family firms should be more resilient than nonfamily firms because they are typically characterized by intense family interactions. There is increasing conceptual and empirical attention to the role played by family interactions in determining the behavior and performance of family firms (e.g., Aldrich & Cliff, 2003; Eddleston & Kellermanns, 2007). In particular, family relationships have emerged as one of the most important drivers of a reduced vulnerability to adversity. Research on psychological resilience has shown that family adjustment to an aversive event is more than a collective aggregate of the adaptation of individual family members (Miller, Ryan, Keitner, Bishop, & Epstein, 2000). The capability of an entrepreneurial family to successfully address a crisis is collectively constructed and emerges from interactions between members (Hawley & DeHaan, 1996; Simon, Murphy, & Smith, 2005).

The greater emotional carrying capacity of family relationships is a crucial source of individual and team resilience in family firms (Danes et al., 2009; Stephens, Heaphy, Carmeli, Spreitzer, & Dutton, 2013). Family relationships foster cohesion, encourage cooperation, ease coordination, and promote moral and psychological interpersonal support. Key support processes activated by family relationships "enable the family system to rally in times of crisis, to buffer stress, reduce the risk of dysfunction, and support optimal adaptation" (Walsh, 2003, p. 3). Scholars have also argued that family membership fosters resilience because family members develop a belief in the family's ability to collectively attain its desired goals, which has a very positive effect on their assessment of the family's likelihood to thrive amidst adverse events (Bandura, 1998).

Elaborating on the specific role played by the interactions among family members in confronting adverse events, we suggest that family firms' ability to capitalize on exogenous shocks relies on the internal (or bonding) social capital of the controlling family, which depends on how prevalent and articulated is the presence of family members in key corporate positions (Carr et al., 2011). One such position is that of corporate owners. Within family firms, especially those of small and medium size, family owners are usually also actively involved in managing the business and in making key strategic decisions, regardless of their formal role as managers. Therefore, a higher number of family owners endows the controlling family with psychological and emotional resources that may enhance the resilience to adverse events and business performance. As one of the family entrepreneurs we interviewed reported: "Working in a business we own enhanced our responsibility even further. It helped us overcome the shock from a psychological standpoint. Having to manage something that we own together, in those disastrous conditions, was truly important: either everything would fall to pieces, or, united in desperation, we should have done better after the collective drama."

A higher number of family members as owners implies that the family concentrates more human and financial resources in the business. A study by Miller, Le Breton-Miller, Minichilli, Corbetta, and Pittino (2014), for instance, showed the benefits for family firms of having multiple major owners as opposed to a single owner not only in terms

of monitoring and expertise, but also in terms of stronger commitment and social connections. Similarly, Miller et al. (2011) discuss how multiple family owners increase the salience of the family's social context and promote strategies of conservation. Taken together, these factors are expected to magnify the ability of family members in control positions to function efficiently before, during, and after a natural disaster, with positive effects on firm performance.

Family firms structurally rely on a limited pool of human resources drawn from the family itself (Bennedsen, Nielsen, Perez-Gonzalez, & Wolfenzon, 2007; Mehrotra, Morck, Shim, & Wiwattanakantang, 2013). Yet the presence of family-based ownership resources establishes a unique advantage in terms of stronger internal social capital (Gedajlovic & Carney, 2010; Miller, Le Breton-Miller, & Scholnick, 2008; Sirmon & Hitt, 2003), which in turn fosters resilient behavior and can thus prove to be essential in facing a negative shock.

Consistent with field studies on disaster events, according to which local, nonphysical resources (values, positive emotions, and relationships) may even increase during and after the shock (Shepherd & Williams, 2014; Yamamura, 2016), we argue that this increase will be especially high for family firms that have a redundant and structurally embedded network of relations among members of the controlling family (Berrone, Cruz, Gómez-Mejía, & Lazzara-Kintana, 2010). Family internal social capital and connections among family members will thus strengthen the advantages of family ownership during shocks in restoring entrepreneurial behavior and returning to positive financial results (Chirico, Sirmon, Sciascia, & Mazzola, 2011; Rogoff & Heck, 2003). Specifically, we posit that the higher post-shock profitability of family firms, as compared with nonfamily firms, will be even higher when there are more family members in ownership. Hence:

Hypothesis (H2). The superior profitability of family firms after the earthquake will be stronger for those firms whose resilience is enhanced by greater family involvement in ownership.

1.3 | Family-bridging social capital, political proximity, and natural disasters: Providing opportunities, restoring growth

Scholars tend to see resilience as resulting from inner characteristics of the firm, such as relationships among family members. However, resilience from bonding social capital may not be the only reason why family firms thrive after a natural disaster. By leveraging industry positioning and the proximity to external constituencies—which may provide entrepreneurial opportunities and support after a traumatic event—some firms prosper in the aftermath of an exogenous shock. This possibility is often confused with crisis management—the capability that is needed to react to adversity (Williams et al., 2017). However, scholars in trauma research have identified *posttraumatic growth* as the identification and exploitation of new possibilities following trauma (Calhoun & Tedeschi, 2006). Although there is a lively debate as to whether posttraumatic growth is a separate concept (Levine, Laufer, Stein, Hamama-Raz, & Solomon, 2009; Westphal & Bonanno, 2007) some scholars see it as possible evidence of resilience (Calhoun & Tedeschi, 2006; Hobfoll et al., 2007).

Not all firms affected by a natural disaster are equally capable of thriving by capturing growth and recovery opportunities. The contexts in which actors perform opportunity discovery and creation activities significantly shape the outcomes of the entrepreneurial process. The likelihood of experiencing posttraumatic growth is thus heavily dependent on the industry context in which the firm is embedded, which includes the relationships, resources, motivations, and behaviors among the different actors in the industry (Zahra, 2008).

Following disasters, local governments experience severe interruptions of their services, as well as damages to buildings and public properties (Zhang, Lindell, & Prater, 2009). Therefore, in the aftermath of an earthquake, municipalities hit by the shock undertake major investments and reconstruction activities, which in our case were financed by a windfall from the Italian Central Government and the EU: "Around € 3BL were spent for emergency relief and an additional € 8BL have been allocated for the reconstruction of private and public buildings" (OECD, 2013). As one

of the family entrepreneurs we interviewed told us: "The earthquake brought us a number of opportunities in the construction business. We even grew our turnover, as many others did […] At least one-third of such additional growth resulted from contracts with the public administration."

These opportunities, backed by public money, generated heterogeneous benefits to companies depending on the connections determined by their ownership structures and industry positioning (Miller & Le Breton-Miller, 2005). Elaborating on the role played by the interactions between the controlling family and external stakeholders in confronting adverse events, we suggest that a family firm's response to exogenous shocks relies on the external (or bridging) social capital of the controlling family, as well as on internal (or bonding) social capital. We argue that family firms are in a stronger position to benefit from the entrepreneurial opportunities resulting from posttraumatic growth due to the features of their social capital and the interactions it allows with external constituencies bringing valuable opportunities and resources to the business.

There is an increasing attention to the proximity between firms and governments, as well as to nonmarket strategies and the political activities of organizations (e.g., Doh, Lawton, & Rajwani, 2012; Hillman, Keim, & Schuler, 2004). Existing work indicates that political connections, often attained through family ties (Amore & Bennedsen, 2013), have a positive effect on firms' profitability and stock market performance (Fisman, 2001), especially in industries that rely heavily on public demand (Cingano & Pinotti, 2013). Family firms have long been considered to be in the best position to engage in political exchange with the public sector. Because of their long-term orientation in investment behavior, family firms will be less likely than nonfamily firms to violate implicit contracts with politicians, who anticipate this and thus prefer to engage with family firms (Bertrand & Schoar, 2006). Moreover, the personal identification of the family and of its physical owners with the firm, along with the possibility for the political and social community to recognize the identity of the owners (Thomsen, Pedersen, & Kvist, 2006), facilitates the establishment of strong ties within public-sector industries. These dynamics point to an overlooked relationship between internal and external social capital in determining a firm's resilience. In particular, family firms' structural closeness to the public sector may provide key resources useful to spur a firm's resilience.

In the specific regional context of our research, we conjecture that the affinity between family firms and the public sector may have made a particularly relevant difference during the reconstruction stage that followed the earthquake, for instance in the allocation of procurement and reconstruction contracts, a typical channel through which companies receive benefits from the political sector (Goldman, Rocholl, & So, 2013). Building on these insights, we argue that family firms operating in industries that rely more upon public demand will be better able to capture entrepreneurial opportunities from the political sector in the aftermath of a natural disaster. These conditions should translate into better financial performance. Hence, we hypothesize that:

Hypothesis (H3). The superior profitability of family firms after the earthquake will be stronger for those whose resilience is enhanced by operating in industries that rely more upon public demand.

2 | THE CONTEXT OF THE STUDY

We examine our hypotheses in the empirical context of the disastrous earthquake that devastated the Abruzzo region in central Italy on April 6, 2009, which caused more than 300 deaths, injured ~1,600 people, left 65,000 homeless, and resulted in economic damages estimated at €10.2 billion (Costa & Simeone, 2009; Dante et al., 2009; Pitari, 2009; Sargiacomo, 2015; Sargiacomo, Ianni, & Everett, 2014). Although the epicenter was in L'Aquila, two provinces, Teramo and Pescara, and several municipalities were also affected (Costa & Simeone, 2009; Dante et al., 2009; Pitari, 2009).

In L'Aquila and the surrounding area, the local university and hospital, as well as schools, public buildings, churches, monuments, and private houses, were severely damaged, as was essential infrastructure such as power stations, water distribution networks, and roads. The Italian government immediately declared a national "state of

emergency" (Decrees of the President of the Council of Minister, April 6 and 7, 2009), thereby launching the first temporary urgent measures for post-disaster management. The head of the Civil Defense Department appointed a "Commissioner" to guide the post-disaster operations. A subsequent decree, issued for post-disaster management and humanitarian assistance and interventions, classified the municipalities and populations affected by the earthquake. These ordinances initially marked the boundaries of 49 municipalities in the provinces of L'Aquila, Teramo, and Pescara, to which funds and personnel were quickly allocated (Sargiacomo & Walker, 2020). Once the areas affected by the earthquake became better known, the number of towns listed as affected rose to 56. These towns were collectively labeled as the "earthquake crater"—a technical term used to demarcate the boundaries of the outer ring of a seism (Galli et al., 2009; Italian Government, 2009)—and are the focal context of our study.

Like tsunamis, hurricanes, wildfires, and pandemics, earthquakes have catastrophic consequences (Seymour, 2006). These natural disasters have dramatic effects not only in terms of death tolls, but also of structural and infrastructural damage and impact on regional and national economies. In our case, the first estimates of the affected population, as well as of the loss of jobs and productive activities, was reported to the European Union by Italy's Undersecretary of State on June 1, 2009. Due to the ancient origin of L'Aquila (Centofanti, 2003), and the concentration of activities and houses inside its historical urban area, the city was the focus of reported damages related to the earthquake, despite the fact that the larger "crater" area was also affected. Additionally, the earthquake struck a geographic area which "was already penalized in terms of the local and regional economy for which the most recent statistics—for 2009—indicated a shrinking GDP by 0.6% in real terms, one of the worst rates in Italy" (Report of the Undersecretary of State, 2009, p. 62). Table 1 summarizes the main damages determined by the earthquake.

This naturally occurring shock created a rare opportunity to investigate the role of family ownership in mass emergencies. Compared with outside threats such as an economic crisis (Amore, 2015; Linz, Volpin, & Wagner, 2013; Minichilli et al., 2016), our setting offers an ideal approach to unambiguously test the effect of family ownership on firm resilience: it exploits an unexpected, localized, and exogenous distress to the economic environment where a firm operates. Economics and management scholars are thus increasingly using environmental events such as earthquakes, storms, and climate change to overcome endogeneity concerns in empirical analyses (e.g., Hsiang & Jina, 2014; Madsen & Rodgers, 2015; Tilcsik & Marquis, 2013).

3 | METHODS

3.1 | Data sources and sample

Our empirical test is based on differences-in-differences analyses that compare the pre- and post-event performance of family and nonfamily firms located in the area affected by the earthquake, with a propensity-score matched

TABLE 1 General estimate of the damages caused by the 2009 earthquake

	Municipality of L'Aquila	Other municipalities
Total affected population	148,992	186,999
% population affected by the event	85%	85%
% loss of goods	85%	75%
% loss of jobs	70%	40%
Destroyed or damaged productive activities	85%	70%
Population living in temporary shelters or with relatives	60%	50%

Source: Report by the Undersecretary of the State, 2009, p. 49.

sample of companies located in a different Italian region unaffected by this event. We complemented these results with evidence from multiple interviews with entrepreneurs whose firms were affected by the earthquake.

To test our hypotheses, we collected data on 180 Italian industrial companies, excluding banks and other financial and utility firms. This exclusion is common in the empirical literature on family firms (see, e.g., Cucculelli & Micucci, 2008; Perez-Gonzalez, 2006) and makes accounting items more easily comparable across firms. Our longitudinal data set spans from 2004 to 2012, in order to have a wide temporal window before and after the April 2009 earthquake. Specifically, we collected data on 5 years pre-event and 4 years post-event.

To build our sample, we first identified all the "treatment" firms located in the geographic areas subject to the event (the "earthquake crater"). We retained 89 firms headquartered in this area that had sales above €3 million in 2009. This size restriction is needed to guarantee accuracy, availability, and comparability of accounting and ownership data, as small and micro firms tend to report this information in a simplified and less accurate way. Moreover, small and micro firms often represent instances of lifestyle entrepreneurship and thus may follow a different logic from that of larger firms when making decisions about business continuity (Marcketti, Niehm, & Fuloria, 2006). The 89 retained firms therefore constitute a sample of companies that, although quite small, are of sufficient size to have political visibility in the local community, to have articulated ownership structures, and to accurately report accounting and ownership data.

Second, we identified a matched sample of "control" firms located in Milan, a city in northern Italy that was not hit by natural disasters over the focal period. Milan is a city that contains a relevant number of firms in various size classes operating in a large array of industries. Thus, this choice has the advantage of easing the identification of control units to be matched with firms in the earthquake area. "Treatment" and "control" firms were assembled using a propensity-score matching procedure to minimize observable differences in size, profitability, and other main characteristics between the two groups. Specifically, within the common support, we matched each treatment firm with the nearest control firm based on propensity score, estimated using a Logit regression including as explanatory variables the pre-earthquake 3-year average of the logarithm of total assets, debt-to-assets ratio, return on assets, and industry dummies defined as the three-digit ATECO level (the Italian equivalent of the Standard Industrial Classification of US industries). These variables capture different aspects of a firm's degree of development, profitability, and capital structure, enabling us to construct reliable counterfactuals for each firm hit by the earthquake. A comparison of summary statistics for treatment and control firms displays no significant differences and thus confirms the accuracy of the matching procedure.

Finally, for each company we collected ownership, leadership, governance, and other company and financial data from public sources (Chamber of Commerce and Digital databases) for all 9 years considered in our research. Data on ownership, governance, and performance were collected from official company filings in the Italian Chamber of Commerce, in which all Italian companies are legally required to annually deposit distinct filings regarding: (a) ownership structure and its evolution over time, with full information on owners' names, individual shares held, and characteristics (name, gender, age, family affiliation, etc.); (b) governance structures, including information on the leadership model in place. Financial data, including information on financial rations from balance sheet and income statements, were collected through AIDA (*Italian Digital Database of Companies*), a data set provided by the Bureau van Dijk that provides comprehensive accounting information for all Italian private firms. In addition, to gain first-hand qualitative knowledge of the phenomenon and sensitivity in interpreting results, we performed in-depth interviews in four companies in the earthquake area characterized by different levels of family control and post-event performance.

We followed the existing literature to define as family controlled those private firms in which a family owned an absolute majority (i.e., >50%) of equity shares. Due to the large blockholdings characterizing Italian privately controlled firms, 50% of ownership is typically required to control the board of directors (Bennedsen & Wolfenzon, 2000). This approach is in line with existing work on the Italian context (e.g., Amore, Minichilli, & Corbetta, 2011; Miller et al., 2014; Miller, Minichilli, & Corbetta, 2013) and is also appropriate given our focus on private SMEs. To detect the family nature of owners and other company actors, we primarily relied on surname affinity

with that of the controlling family as recorded in the company's Chamber of Commerce filings (Amore, Garofalo, & Minichilli, 2014; Miller et al., 2013, 2014) and cohabitation (to classify spouses as family members). Albeit imperfect, this measure is apt to capture blood ties and close family relationships. In addition to these data, we used public information collected through company websites, executives and directors' profiles on their webpages, and social networks (such as LinkedIn). These criteria were combined to reduce the potential number of inaccuracies (e.g., due to the fact that the owner is an in-law with a different family name). After excluding observations with missing data, and the few firms which changed ownership status (which may be endogenous to the shock), the final sample includes 145 unique firms for a total of 1,033 observations.

3.2 | Variables

The dependent variable is *ROA* (Return on Assets), computed as the ratio of operating income to total assets. ROA has been commonly used to assess the impact of ownership and governance characteristics on firm performance as well as in family business research (Anderson & Reeb, 2003; Perez-Gonzalez, 2006) and to measure the profitability of privately held firms (e.g., Amore et al., 2014; Bennedsen et al., 2007; Miller et al., 2013, 2014; Minichilli, Corbetta, & MacMillan, 2010). Profitability is also a suitable measure to capture the outcomes of entrepreneurial activity following adversity. To understand whether changes in *ROA* are driven by different patterns in operating profits or in a firm's asset base (e.g., due to investment or divestment activities), we performed a robustness check by employing the logarithm of total assets as a dependent variable.

Among the key independent variables, our baseline variable is the family or nonfamily nature of ownership (*Family firm*), coded 1 if ownership by one or two controlling families is 50% or larger (for unlisted companies) and 0 otherwise. We adopt a variable called *Earthquake* computed as a dummy equal to 1 for firms located in the natural disaster area and 0 otherwise (i.e., for the matched sample of "control" firms). Similarly, the variable Post-earthquake *(Post)* is computed as a dummy coded 1 for the years following the disaster (hence, coded 1 for 2009, 2010, 2011, or 2012) and 0 otherwise. All the interaction variables needed for our difference-in-differences model were created as the product term of the originating variables.

Based on prior studies, our models included as controls the logarithm of firm size and firm age (Anderson & Reeb, 2003; Miller et al., 2013; Miller, Le Breton-Miller, Lester, & Cannella Jr., 2007), as well as the ratio of trade credit and cash holdings to short-term debt, to absorb the effect of financial strength on firm performance. Furthermore, we included company-level fixed effects (to control for firm-specific unobserved heterogeneity), year dummies (to control for overall time effects), and, depending on the specification, the interaction between industry and post-earthquake dummies (to control for sectoral heterogeneity in the exposure to the shock).

To study the effect of family social capital and public-sector proximity on firms' *ROA* in the wake of the earthquake, we constructed two additional variables. The first, *Multiple family owners*, is a dummy equal to 1 if a firm has a number of family shareholders above the median value in the sample (corresponding to 2) and 0 otherwise. This variable is apt to measure the level and articulation of family social capital, conceived as a proxy for the intensity of interpersonal interactions within the controlling family and the family business, and the saliency of family social context (Miller et al., 2011). The second variable, *Industry proximity to politics*, is apt to capture the distance of a firm's economic activities from the public political sector. To operationalize this variable, we follow existing studies (Amore & Bennedsen, 2013; Amore & Minichilli, 2018; Cingano & Pinotti, 2013) and employ data provided by the Italian National Statistical Office (ISTAT) on the distribution of output that each sector provides to the public administration (as of 2008, i.e., right before the earthquake). Higher values of this variable correspond to higher proximity to the public political sector in terms of industry specialization. Since we are interested in how multiple family owners and industry proximity to politics affected firm performance in the aftermath of the earthquake, we interact the above dummies with the post-earthquake indicator.

Finally, we singled out alternative explanations by performing additional analyses aimed at capturing the heterogeneity of family firms and its possible effects on post-disaster performance. First, we checked for possible differences in how firms suffered casualties among the owners and/or administrators (members of the board of directors or sole administrators), which may result in different reactions to the crisis, with firms not suffering casualties being better disposed to capture post-event entrepreneurial opportunities. However, we could not trace casualties among company leaders. Second, we checked whether post-event performance was affected by the damages suffered by companies, proxied with the intensity of the seismic effect in each affected town, calculated by governmental authorities (Galli et al., 2009: Table 1). Lacking data on the monetary damages suffered by each company, we could not trace any significant effect. Third, we controlled for skill heterogeneity by testing three-way interactions including the presence of a Board of directors (vs. leadership by a Sole administrator, which is most common in these small firms), again without significant results.

4 | EMPIRICAL ANALYSES AND RESULTS

Table 2, Panel A, provides averages and standard deviations for our main variables (excluding the interaction terms). *ROA*, our key profitability measure, is on average 5.5%. The table further presents the correlations between all variables, which, as shown, display acceptable levels of correlation and do not raise multicollinearity concerns.

At the descriptive level, we also conduct a *t* test comparison of *ROA* in the subsamples of family and nonfamily firms hit by the earthquake in the years before and after the event. Results in Panel B show that nonfamily firms have a slightly lower performance than family firms (amounting to 2.4 percentage points). However, after the earthquake we observe a much larger difference (equal to 5.7 percentage points) suggesting that around the shock family firms performed better than their nonfamily counterparts. We further used *t* tests to compare the firm characteristics of "treated" firms hit by the earthquake and "control" firms unaffected by the earthquake as of 2008, that is, 1 year prior to the earthquake. In Panel C of Table 2 we found that none of the main firm characteristics display significant differences. Finally, in Panel D of Table 2 we report the five most represented 2-digit ATECO industries for family firms (Column 1) and report the equivalent percentage for nonfamily firms (Column 2). As shown, there are slight differences in the industry distribution of family and nonfamily firms.

To test our hypotheses, we estimated OLS regressions on the effect of family firms on performance before and after the earthquake. Our baseline model, reported in column 1 of Table 3, includes the relevant interactions (*Earthquake×Post*, *Family firm×Post*, and the three-way interaction *Earthquake×Family firm×Post*), together with company-level fixed effects, to mitigate unobserved time-invariant heterogeneity constant at the firm level and year dummies to control for overall time trends that may have affected both control and treatment firms. Notice that the term *Earthquake×Family firm* is not included in the model since it does not vary over time and is thus perfectly correlated with firm fixed effects. In Models 2 through 4 we sequentially augment the specification with firm-level controls, whereas in Model 5 we further include an interaction between two-digit industry dummies and the *Post* dummy in order to absorb the heterogeneous effect of the earthquake across industries. Standard errors are clustered by firm to adjust for both heteroskedasticity and serial autocorrelation at the company level.

Taken together, results in Table 3 provide full support for our first hypothesis. Specifically, results of the full model indicate that, while the earthquake represented a negative and generally significant shock to firm profitability (β = 8.14, p < .1), family firms exhibited superior post-earthquake performance. This is clear from the statistically significant coefficient (β = 13.19, p < .01) of the three-way interaction in all the different analytical specifications that we described above. Therefore, Hypothesis H1 is supported.

One challenge facing the present interpretation of our results is the possibility that family firms did not perform better as a result of higher profits (the *ROA* numerator) (i.e., because they were more resilient) but rather because they had a greater propensity to divest assets (the *ROA* denominator) after the earthquake (i.e., because they diminished their asset base). In untabulated regressions, we verified that this is not the case by using the logarithm of total

TABLE 2 Descriptive statistics

Panel A: Summary statistics and correlations (main variables)

	Summary statistics		Correlations					
	Mean	*SD*	ROA	Ln age	Ln assets	Liquidity	Family firm	Earthquake
ROA	5.523	16.982						
Ln age	2.606	0.757	0.103					
Ln assets	8.500	1.291	0.049	0.191				
Liquidity	1.058	0.956	−0.002	0.072	0.086			
Family firm	0.820	0.384	0.061	0.258	−0.118	−0.059		
Earthquake	0.503	0.500	0.004	−0.045	−0.043	−0.076	−0.132	
Post	0.444	0.497	−0.001	0.219	0.165	0.156	0.008	−0.044

Panel B: T-test comparison of ROA in family and nonfamily firms before and after the earthquake

	Family (1)	Nonfamily (2)	Difference (2)–(1)
Pre	5.781	3.307	−2.413*
			(1.369)
Post	7.534	1.866	−5.668*
			(2.169)

Panel C: T-test comparison of main firm characteristics before the earthquake

	Earthquake	Non-earthquake	Difference
	(1)	(2)	(2)–(1)
ROA	5.078	6.406	1.327
			(2.123)
Ln age	2.584	2.629	0.045
			(0.113)
Ln assets	8.482	8.676	0.194
			(0.203)
Liquidity	0.956	1.166	0.210
			(0.173)

Panel D: Most represented industries

	Family firms	Nonfamily firms
Buildings construction	21%	11%
Retail (excluding cars)	12%	12%
Motor vehicle wholesale and retail trade	8%	–
Special constructions	7%	4%
Non-metallic mineral products	7%	4%

Note: Panel A uses the full sample. Panel B uses only firms in the earthquake area. *SE* (allowing for unequal variance) in parentheses; ***p < .01, **p < .05, *p < .10. Panel C uses the subsample of firms in 2008, that is, 1 year prior to the shock. *SE* (allowing for unequal variance) in parentheses; ***p < .01, **p < .05, *p < .10. Panel D illustrates the five most represented industries for family firms and shows the equivalent percentage for nonfamily firms.

TABLE 3 Family firms, earthquake, and profitability

Dependent variable: ROA					
	(1)	(2)	(3)	(4)	(5)
Earthquake×post	−6.335*	−6.569*	−6.577*	−6.108	−8.145*
	(3.623)	(3.639)	(3.546)	(3.733)	(4.131)
Family firm×post	−5.321**	−4.012	−3.670	−1.954	−7.315***
	(2.626)	(2.539)	(2.752)	(3.235)	(2.459)
Earthquake×family firm×post	9.771**	10.162**	9.746**	8.826**	13.191***
	(4.184)	(3.981)	(4.056)	(4.050)	(4.417)
Ln age		5.301	4.555*	3.519*	0.871
		(3.367)	(2.711)	(2.094)	(2.096)
Ln assets			1.223	1.932	1.561
			(1.655)	(2.311)	(1.994)
Liquidity				−2.511	−1.368
				(2.985)	(1.713)
Observations	1,046	1,042	1,042	1,033	1,033
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Industry×post	No	No	No	No	Yes
Adjusted R^2	0.002	0.005	0.005	0.017	0.226

Note: Firm-clustered *SE* in parentheses; ***$p < .01$, **$p < .05$, *$p < .10$.

assets as the dependent variable. We found no significant effect for our key interaction terms. Moreover, we assessed the robustness of results in Table 3 in a number of different ways (untabulated to save space). For example, we adopted a random effect specification; we re-estimated the model only including the post dummy without year dummies; we used a symmetric time window before and after the event (e.g., 4 years prior and 4 years after the shock); we dropped 1% observations in the extreme right and left tails of the *ROA* distribution to reduce the effect of possible outliers; we used *ROA* 1 year ahead, rather than in its contemporaneous format, to mitigate simultaneity concerns; and we employed the return on sales (ROS) as alternative measure of firm profitability.

We proceeded by testing Hypotheses H2 and H3. To this end, we restricted the analysis to family firms hit by the earthquake, and, within this sample, we assessed the heterogeneity in the performance reaction to the earthquake depending on the number of family owners and political proximity. Results are reported in Table 4, which adopts similar specifications to the ones in Table 3 in terms of controls but includes the interactions between the *Post* dummy and our proxies for political proximity and family social capital. As shown in model 1, the interaction between the post-earthquake dummy and the indicator for multiple family owners is positive and statistically significant. Similarly, Model 2 shows a positive coefficient and 10% significant coefficient for the interaction between the *Post* dummy and the political proximity variable at the industry level. Model 3 estimates these two effects together. Results confirm the outperformance of family firms with multiple family owners ($\beta = 3.73$, $p < .05$) and of family firms active in industries that are proximate to the public administration ($\beta = 1.63$, $p < .05$). Collectively, these results confirm our predictions that the family businesses that were best equipped to capture recovery opportunities after the earthquake were those with a high involvement of family members in ownership positions (thus supporting Hypothesis H2) and those that operated in industries closer to the public demand (thus supporting Hypothesis H3), a context where family resources are particularly valuable (e.g., Amore & Bennedsen, 2013; Amore & Minichilli, 2018).

TABLE 4 The effects of political proximity and family owners

Dependent variable: ROA			
	(1)	(2)	(3)
Post×multiple family owners	3.011*		3.729**
	(1.630)		(1.595)
Post×industry proximity to politics		1.343*	1.631**
		(0.696)	(0.680)
Ln age	1.670	0.667	0.973
	(3.090)	(3.144)	(3.124)
Ln assets	1.695	1.666	1.627
	(2.302)	(2.308)	(2.281)
Liquidity	4.608***	4.723***	4.711***
	(1.370)	(1.400)	(1.298)
Observations	385	396	385
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Adjusted R^2	0.086	0.084	0.095

Note: Firm-clustered *SE* in parentheses; ***$p < .01$, **$p < .05$, *$p < .10$.

5 | DISCUSSION

Several authors suggest that family leadership and control are not always beneficial (Miller et al., 2013). Yet family firms are among the most enduring types of organizations (Fernandez Perez & Colli, 2013). In this study we suggest that family firms' superior longevity is significantly shaped by their resilience—the ability to absorb, respond to, and capitalize on adversity. Existing research has often interpreted family firms' resilience as a beneficial yet passive attitude toward preserving their socioemotional wealth endowment by enduring hardship through their close family bonds (Chrisman et al., 2011; Danes et al., 2009; Memili et al., 2013). While confirming this view, our data offer a complementary perspective on family firms' resilience and longevity. The extreme contingency of a violent earthquake reveals that resilience has two facets in family firms. First, in line with existing views, internal social capital binds family members among themselves and to the firm, thus allowing them to endure the hardship that follows a natural disaster and to organize for recovery. Besides this standard view of resilience as the ability to "whether the storm," the second dimension emerging from our data is the complementary ability that family firms display to turn adversities into entrepreneurial opportunities by exploiting their industry positioning and connections. The two dimensions are tightly coupled. Local communities and governments prefer to build ties with the firms they see as more trustworthy due to their stronger and longer-lasting internal bonds.

The external validity of our results is partially limited by the uniqueness of the investigated setting and by lack of more fine-grained data. The size and managerial sophistication of firms in the earthquake area is, on average, very limited. Therefore, we could not effectively test the effects of heterogeneous managerial and governance frameworks and skills. Moreover, although firms were differently affected by the earthquake, our data did not allow us to investigate the effects of monetary damages and of losses in the extended family and social network on firms' ability to capture post-event opportunities. Despite these limitations, our study sheds new light on a number of important phenomena. First, our natural experiment offers conclusive empirical evidence of the superior resilience of family firms in post-disaster recovery. Second, we show that, in the context of a natural disaster, strong family ties and more distant industry and political relationships are complementary in determining the superior resilience of family

firms. Third, our data reveal that amidst destruction, mass emergencies offer entrepreneurial opportunities that family firms are in a better position to capture given their superior resilience, thus being less vulnerable to adversity.

5.1 | Family ownership and the resilience of the family business

We contribute to the growing literature on the longevity of family firms (Chrisman et al., 2011; Danes et al., 2009; Memili et al., 2013; Minichilli et al., 2016) as resulting from their capability to address perturbations in their environment. Extant theory suggests that a resilient firm can take situation-specific, robust, and transformative actions when confronted with unexpected and disruptive events such as earthquakes, wildfires, and pandemics (Lengnick-Hall & Beck, 2005). As our empirical investigation reveals, family ownership is an essential determinant of such ability, since it provides the social bonds and the affective resources that are necessary to thrive amidst mass emergencies.

This evidence contributes to the ongoing debate on the effectiveness of family firms' ownership configurations. While recent research has shown that multiple family owners can be a source of conflicts, especially in large and listed family firms (Miller et al., 2013), our results extend evidence in Minichilli et al. (2016) that more ownership resources can be pivotal in allowing a firm to successfully address a crisis. Existing evidence suggests that the performance effect of the number of family owners seems to be contingent upon the size and the administrative complexity of the firm in steady-state situations (Miller et al., 2013). Our study complements this literature by suggesting that the performance effects of family ownership may also depend on the specific contingencies faced by family firms. During disaster events, family ownership resources have a positive role in providing the firm with the social and emotional capital needed to address the hardship. Future research my explore additional contingencies—such as political or legal turmoil, industry or technological revolutions—which would allow to contrast post-traumatic performance of both smaller and private firms with larger and listed ones.

Although this is supportive of the continuity of family firms, we make no claims in relation to the economic efficiency of this enhanced longevity. Family bonds and external ties facilitate survival and prosperity immediately after the shock. Further extending the observed post-event period may allow researchers to ascertain whether the family firms that display better performance due to their social capital endowment are also competitively efficient in the long run.

5.2 | The effects of bonding and bridging social capital on strategic entrepreneurship in posttraumatic contexts

Our study contributes to strategic entrepreneurship in family firms (Lumpkin et al., 2011) by identifying the role of different types of social capital as a source of advantage in specific contexts that family firms face. In their framework of family business strategic entrepreneurship, Lumpkin et al. (2011) describe the general contextual conditions and family resources that enable and constrain strategic entrepreneurship outputs in family firms. We extend their framework by showing that local and more specific contextual conditions—for example, family structure, industry positioning, political networks—determine how family social capital resources shape the processes of recovery and opportunity identification after a mass emergency.

The structure and strength of the web of relationships of an individual or collective determine their access to multiple types of resources, such as information and trust. There is wide consensus among social capital scholars that holding multiple redundant connections is detrimental to an individual or a collective, because redundant relationships do not bring new, additional resources (Mariotti & Delbridge, 2012; Maurer & Ebers, 2006; Rowley et al., 2000). By simultaneously testing the reliance of the controlling family on both internal and external factors within the specific context of a negative exogenous shock, we show that the redundancy of the social ties held by members of the controlling family has a positive effect in facing an adverse exogenous event. In particular, bonding

social capital offered by the strong and close ties of family members involved in controlling the business brings the psychological and emotional support that is necessary to capture recovery opportunities. The bridging social capital offered by industry positioning and the connections that those same family members have within their industry brings the entrepreneurial opportunities that are essential for business recovery.

These results allow us to extend theory on network configurations in the context of disaster response by showing that, in the context of a natural disaster, the superior effectiveness of family firms in restoring their performance results from leveraging both close family connections and more distant industry relationships. Future research can build on this finding to further explore the different roles of bonding and bridging social capital in building resilience. For example, the emotional support provided by different levels of family social capital may explain "what motivates some victims to act while others do not" (Williams & Shepherd, 2018, p. 933) and the different models of motivation to act entrepreneurially that family and nonfamily firms follow in disaster settings. More fine-grained data on casualties within the extended family and social network may further extend knowledge on the effects of social bonds on resilience and posttraumatic growth.

5.3 | Turning natural disasters into entrepreneurial opportunities: The benefit of industry positioning and connections

Natural disasters, such as the 2009 earthquake we investigated, are temporally exogenous shocks to a community's resources and relationships (Dutta, 2017). As resource shocks, they involve asset depletion and damage to public services and infrastructures, to private property such as homes, and to entrepreneurial opportunities and activities (Kaniasty & Norris, 1993). As traumatic incidents, they have lasting impacts on the people involved—including entrepreneurs and firm stakeholders—and result in high levels of physical and psychological suffering (Shepherd & Williams, 2014; Williams & Shepherd, 2018). They can thus be appraised as traumatic events with severe negative consequences for the performance of the firms involved.

However, our data reveal that, amidst destruction and suffering, natural disasters may also engender entrepreneurial opportunities that take the form of entrepreneurial initiatives supporting the reconstruction of infrastructures, goods, and services (Drabek & McEntire, 2002, 2003), and of new ventures created to alleviate suffering (Shepherd & Williams, 2014; Williams & Shepherd, 2016a, 2016b, 2018). The material destruction wreaked by a natural disaster typically exceeds individuals' or families' capacity for reconstruction, thus determining opportunities for the provision of private and collective goods over and above those that were produced by the affected community before the shock (Dutta, 2017). Capturing these opportunities allows affected businesses to look beyond restoration to engage in posttraumatic growth (Calhoun & Tedeschi, 2006) enhancing their entrepreneurial and financial performance (Meyer, 1982).

Relationships among actors disrupted by the event are important in explaining how actors (individuals or organizations) face adversity because they provide the setting in which adversity is anticipated, experienced, and resolved (Lengnick-Hall & Beck, 2005; Williams et al., 2017). Connections are a key dimension of the entrepreneurial context following natural disasters. In crisis situations, the networks of social capital that connect actors, both within and outside the firm, are essential in shaping entrepreneurial behaviors within that context (Aldrich & Meyer, 2014; Kim, 1998; Williams & Shepherd, 2018). Given the unique characteristics of family firms' social capital, we contend that they are in a better position to capture the opportunities for posttraumatic growth and are, thus, less vulnerable to adversity. This ability to capture opportunities under challenging conditions is often referred to as resilience (Lengnick-Hall et al., 2011). The superior resilience that family firms display may be one of the main reasons for their comparatively greater longevity—the continuity of a family firm beyond the career span of its founders (Sharma & Salvato, 2011, 2013)—which contributes to explaining why family firms constitute the dominant organizational form worldwide (La Porta, Lopez-De-Silanes, & Shleifer, 1999).

However, our data also reveal that industry positioning and business and political connections—combined with the owner family's social capital—are key in explaining the likelihood of identifying and capturing post-traumatic

entrepreneurial opportunities. To confirm and extend these insights, future research may explore the post-traumatic performance of family and nonfamily firms in different contexts. For example, comparing firms' performance before and after the Novel Coronavirus (COVID-19) pandemic across geographical areas may reveal additional nuances of how resilience, industry positioning, and connections affect performance. Unlike earthquakes, pandemics determine more diffused social and economic effects. For instance, pandemics affect both industries that are heavily influenced by political decision making (e.g., hospitals, health equipment, and pharmaceutical), and industries with a smaller influence of governments (e.g., food, large-scale retailing, and logistics).

6 | CONCLUSION

Recent natural disasters and pandemics, and related research on the social impact of mass emergencies and other exogenous shocks, have raised a number of important questions as to how different types of organizations cope with unfavorable events. We contribute to this line of inquiry by analyzing the performance of Italian family and nonfamily firms before and after the 2009 earthquake that affected central Italy, comparing it with a matched sample of firms that were not affected by the event. As our data reveal, family firms performed significantly better than nonfamily firms after the earthquake. We attribute the greater resilience of family firms to a combination of two factors: family social resources and support from political constituencies. Family ownership is particularly beneficial to performance when a firm operates in industries highly dependent on the public sector and when multiple family members are involved as owners. These findings extend the existing evidence on what makes organizations resilient to external shocks and on the determinants of firms' longevity.

ORCID

Carlo Salvato https://orcid.org/0000-0003-1873-5796
Mario Daniele Amore https://orcid.org/0000-0003-4107-6979

REFERENCES

Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, *27*, 17–40.
Aldrich, D. P., & Meyer, M. A. (2014). Social capital and community resilience. *American Behavioral Scientist*, *59*, 254–269.
Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, *18*, 573–596.
Amore, M. D. (2015). Companies learning to innovate in recessions. *Research Policy*, *44*, 1574–1583.
Amore, M. D., & Bennedsen, M. (2013). The value of local political connections in a low-corruption environment. *Journal of Financial Economics*, *110*, 387–402.
Amore, M. D., Garofalo, O., & Minichilli, A. (2014). Gender interactions within the family firm. *Management Science*, *60*, 1083–1097.
Amore, M. D., & Minichilli, A. (2018). Local political uncertainty, family control and investment behavior. *Journal of Financial and Quantitative Analysis*, *53*, 1781–1804.
Amore, M. D., Minichilli, A., & Corbetta, G. (2011). How do managerial successions shape corporate financial policies in family firms? *Journal of Corporate Finance*, *17*, 1016–1027.
Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, *58*, 1301–1327.
Arrègle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, *44*, 73–95.
Bandura, A. (1998). *Self-efficacy: The exercise of control*. New York: W.H. Freeman & Co.
Bennedsen, M., Nielsen, K., Perez-Gonzalez, F., & Wolfenzon, D. (2007). Inside the family firm: The role of families in succession decisions and performance. *Quarterly Journal of Economics*, *122*, 647–691.
Bennedsen, M., & Van der Heyden, L. (2010). When MBAs meet Henokiens: What can we learn from long-lived family firms? INSEAD Working Paper, 81.
Bennedsen, M., & Wolfenzon, D. (2000). The balance of power in closely-held corporations. *Journal of Financial Economics*, *58*, 113–139.

Berrone, P., Cruz, C., & Gómez-Mejía, L. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, *25*, 258–279.

Berrone, P., Cruz, C., Gómez-Mejía, L., & Lazzara-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family controlled firms pollute less? *Administrative Science Quarterly*, *55*, 82–113.

Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *Journal of Economic Perspectives*, *20*, 73–96.

Burt, R. S. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.

Burt, R. S. (2004). Structural holes and good ideas. *American Journal of Sociology*, *110*, 349–399.

Burt, R. S. (2005). *Brokerage and closure: An introduction to social capital*. New York: Oxford University Press.

Calhoun, L. G., & Tedeschi, R. G. (2006). *Handbook of posttraumatic growth: Research and practice*. Mahwah, NJ: Erlbaum.

Carr, J. C., Cole, M. S., Ring, J. K., & Blettner, D. P. (2011). A measure of variations in internal social capital among family firms. *Entrepreneurship Theory and Practice*, *35*, 1207–1227.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology*, *56*, 267–283.

Centofanti, E. (2003). La festa crudele: 2 febbraio 1703: Il terremoto che rovesciò L'Aquila. In *Dopo tre secoli: che accadde? Che ne resta?* L'Aquila: Gruppo Tipografico Editoriale.

Chang, E., Chrisman, J. J., Chua, J. H., & Kellermanns, F. (2008). Regional economy as a determinant of the prevalence of family firms in the United States: A preliminary report. *Entrepreneurship Theory and Practice*, *32*, 559–573.

Chirico, F., & Salvato, C. (2008). Knowledge integration and dynamic organizational adaptation in family firms. *Family Business Review*, *21*, 169–181.

Chirico, F., Sirmon, D. G., Sciascia, S., & Mazzola, P. (2011). Resource orchestration in family firms: Investigating how entrepreneurial orientation, generational involvement, and participative strategy affect performance. *Strategic Entrepreneurship Journal*, *5*, 307–326.

Chrisman, J. J., Chua, J. H., & Steier, L. P. (2011). Resilience of family firms: An introduction. *Entrepreneurship Theory and Practice*, *35*, 1107–1119.

Chua, J. J., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, *23*, 19–39.

Cingano, F., & Pinotti, P. (2013). Politicians at work: The private returns and social costs of political connections. *Journal of the European Economic Association*, *11*, 433–465.

Ciravegna, L., Kano, L., Rattalino, F., & Verbeke, A. (2020). Corporate diplomacy and family firm longevity. *Entrepreneurship Theory and Practice*, *44*, 109–133.

Costa, E., & Simeone, V. (2009). *L'Aquila*. Teramo: La Cassandra.

Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, *80*, 46–55.

Cucculelli, M., & Micucci, G. (2008). Family succession and firm performance: Evidence from Italian family firms. *Journal of Corporate Finance*, *14*, 17–31.

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*, 333–354.

Dante, E., Laurenzi, M., & Nanni, V. (2009). *Terremoto zeronove*. Textus Edizioni: L'Aquila.

De Mel, S., McKenzie, D., & Woodruff, C. (2012). Enterprise recovery following natural disasters. *Economic Journal*, *122*, 64–91.

Doh, J. P., Lawton, T. C., & Rajwani, T. (2012). Advancing nonmarket strategy research: Institutional perspectives in a changing world. *Academy of Management Perspectives*, *26*, 22–39.

Drabek, T. E., & McEntire, D. A. (2002). Emergent phenomena and multiorganizational coordination in disasters: Lessons from the research literature. *International Journal of Mass Emergencies and Disasters*, *20*, 197–224.

Drabek, T. E., & McEntire, D. A. (2003). Emergent phenomena and the sociology of disaster: Lessons, trends and opportunities from the research literature. *Disaster Prevention and Management*, *12*, 97–112.

Dutta, S. (2017). Creating in the crucibles of nature's fury: Associational diversity and local social entrepreneurship after natural disasters in California, 1991–2010. *Administrative Science Quarterly*, *62*, 443–483.

Eddleston, K. A., & Kellermanns, F. W. (2007). Destructive and productive family relationships: A stewardship theory perspective. *Journal of Business Venturing*, *22*, 545–565.

Elfring, T., & Hulsink, W. (2007). Networking by entrepreneurs: Patterns of tie–formation in emerging organizations. *Organization Studies*, *28*, 1849–1872.

Fernandez Perez, P., & Colli, A. (Eds.). (2013). *The endurance of family businesses. A global overview*. Cambridge, UK: Cambridge University Press.

Fisman, R. (2001). Estimating the value of political connections. *American Economic Review*, *91*, 1095–1102.

Galli, P., Camassi, R., Azzaro, R., Bernardini, F., Castenetto, S., Molin, D., … Tertulliani, A. (2009). Il terremoto aquilano del 6 aprile 2009: Rilievo macrosismico, effetti di superficie ed implicazioni sismotettoniche. *Il Quaternario. Italian Journal of Quaternary Sciences*, *22*, 235–246.

Gedajlovic, E., & Carney, M. (2010). Markets, hierarchies, and families: Toward a transaction costs theory of the family firm. *Entrepreneurship Theory and Practice*, *34*, 1145–1172.

Gittell, J. H., Cameron, K., Lim, S., & Rivas, V. (2006). Relationships, layoffs, and organizational resilience. *The Journal of Applied Behavioral Science*, *42*, 300–329.

Goldman, E., Rocholl, J., & So, J. (2013). Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance*, *17*, 1617–1648.

Gómez-Mejía, 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*, 653–707.

Gómez-Mejía, L. R., Haynes, K. T., Nunez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family controlled firms. *Administrative Science Quarterly*, *52*, 106–137.

Hamel, G., & Valikangas, L. (2003). The quest for resilience. *Harvard Business Review*, *81*, 52–65.

Hawley, D. R., & DeHaan, L. (1996). Toward a definition of family resilience: Integrating life-span and family perspectives. *Family Process*, *35*, 283–298.

Hillman, A. J., Keim, G. D., & Schuler, D. (2004). Corporate political activity: A review and research agenda. *Journal of Management*, *30*, 837–857.

Hobfoll, S. E., Hall, B. J., Canetti-Nisim, D., Galea, S., Johnson, R. J., & Palmieri, P. (2007). Refining our understanding of traumatic growth in the face of terrorism: Moving from meaning cognitions to doing what is meaningful. *Applied Psychology. An International Review*, *56*, 345–366.

Hsiang, S. M., & Jina, A. S. (2014). The causal effect of environmental catastrophe on long-run economic growth. Evidence from 6,700 cyclones. NBER Working Paper, 20352.

Italian Government. (2009). Spotting the municipalities damaged by the earthquake which struck the Province of L'Aquila and other municipalities of the Abruzzo Region on 6th April 2009. http://www.gazzettaufficiale.it/gunewsletter/dettaglio.jsp?service=1&datagu=2009-04-17&task=dettaglio&numgu=89&redaz=09A04535&tmstp=1240211407577

Kaniasty, K., & Norris, F. H. (1993). A test of the social support deterioration model in the context of natural disaster. *Journal of Personality and Social Psychology*, *64*, 395–408.

Kellermanns, F. W., Eddleston, K. A., & Zellweger, T. M. (2012). Extending the socioemotional wealth perspective: A look at the dark side. *Entrepreneurship Theory and Practice*, *36*, 1175–1182.

Kets de Vries, M. (1993). The dynamics of family controlled firms: The good and the bad news. *Organizational Dynamics*, *21*, 59–71.

Kim, L. (1998). Crisis construction and organizational learning: Capability building in catching-up at Hyundai motor. *Organization Science*, *9*, 506–521.

La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, *54*, 471–517.

Lengnick-Hall, C. A., & Beck, T. E. (2005). Adaptive fit versus robust transformation: How organizations respond to environmental change. *Journal of Management*, *31*, 738–757.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, *21*, 243–255.

Levine, S. Z., Laufer, A., Stein, E., Hamama-Raz, Y., & Solomon, Z. (2009). Examining the relationship between resilience and posttraumatic growth. *Journal of Traumatic Stress*, *22*, 282–286.

Lim, E. N. K., Lubatkin, M. H., & Wiseman, R. M. (2010). A family firm variant of the behavioral agency theory. *Strategic Entrepreneurship Journal*, *4*, 197–211.

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*, 4–30.

Linz, K., Volpin, P., & Wagner, H. (2013). Does family control matter? Evidence from the 2008-2009 financial crisis. *Review of Financial Studies*, *26*, 2583–2619.

Lumpkin, G. T., & Brigham, K. H. (2011). Long-term orientation and intertemporal choice in family firms. *Entrepreneurship Theory and Practice*, *35*, 1149–1169.

Lumpkin, G. T., Steier, L., & Wright, M. (2011). Strategic entrepreneurship in family business. *Strategic Entrepreneurship Journal*, *5*, 285–306.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive*, *16*, 57–72.

Madsen, P. M., & Rodgers, Z. J. (2015). Looking good by doing good: The antecedents and consequences of stakeholder attention to corporate disaster relief. *Strategic Management Journal*, *36*, 776–794.

Marcketti, S. B., Niehm, L. S., & Fuloria, R. (2006). An exploratory study of lifestyle entrepreneurship and its relationship to life quality. *Family and Consumer Sciences Research Journal*, *34*, 241–259.

Mariotti, F., & Delbridge, R. (2012). Overcoming network overload and redundancy in interorganizational networks: The roles of potential and latent ties. *Organization Science*, *23*, 511–528.

Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Sociological Forces*, *63*, 482–501.

Maurer, I., & Ebers, M. (2006). Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, *51*, 262–292.

Mehrotra, V., Morck, R., Shim, J., & Wiwattanakantang, Y. (2013). Adopting expectations: Rising sons in Japanese family firms. *Journal of Financial Economics*, *108*, 840–854.

Memili, E., Welsh, D. H., & Luthans, F. (2013). Going beyond research on goal setting: A proposed role for organizational psychological capital of family firms. *Entrepreneurship Theory and Practice*, *37*, 1289–1296.

Meyer, A. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, *27*, 515–537.

Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run*. Boston: Harvard Business School Press.

Miller, D., Le Breton-Miller, I., & Lester, R. H. (2011). Family and lone founder ownership and strategic behaviours: Social context, identity, and institutional logics. *Journal of Management Studies*, *48*, 1–25.

Miller, D., Le Breton-Miller, I., Lester, R. H., & Cannella, A. A., Jr. (2007). Are family firms really superior performers? *Journal of Corporate Finance*, *13*, 829–858.

Miller, D., Le Breton-Miller, I., Minichilli, A., Corbetta, G., & Pittino, D. (2014). When do non-family CEOs outperform in family firms? Agency and behavioral agency perspectives. *Journal of Management Studies*, *51*, 547–572.

Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. stagnation. *Journal of Management Studies*, *45*, 50–78.

Miller, D., Minichilli, A., & Corbetta, G. (2013). Is family leadership always beneficial? *Strategic Management Journal*, *34*, 553–571.

Miller, I. W., Ryan, C. E., Keitner, G. I., Bishop, D. S., & Epstein, N. B. (2000). The McMaster approach to families: Theory, assessment, treatment and research. *Journal of Family Therapy*, *22*, 168–189.

Minichilli, A., Brogi, M., & Calabrò, A. (2016). Weathering the storm: Family ownership, governance, and performance through the financial and economic crisis. *Corporate Governance: An International Review*, *26*, 552–568.

Minichilli, A., Corbetta, G., & MacMillan, I. C. (2010). Top management team in family controlled companies: 'Familiness', 'faultlines', and the impact on financial performance. *Journal of Management Studies*, *47*, 207–222.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, *23*, 242–266.

Nicholson, N. (2008). Evolutionary psychology and family business: A new synthesis for theory, research and practice. *Family Business Review*, *21*, 103–118.

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and distress following a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology*, *61*, 105–121.

OECD. 2013. Policy making after disasters: Helping regions become resilient – The case of post-earthquake Abruzzo. https://doi.org/10.1787/9789264189577-en

Patel, P. C., & Fiet, J. O. (2011). Knowledge combination and the potential advantages of family firms in searching for opportunities. *Entrepreneurship Theory and Practice*, *35*, 1179–1197.

Perez-Gonzalez, F. (2006). Inherited control and firm performance. *American Economic Review*, *96*, 1559–1588.

Pitari, G. (2009). Trentotto Secondi. L'Aquila, Italy: L'Una.

Report of the Undersecretary of the State. 2009. *Summary application form to mobilize the European Union Solidarity Fund* (EUSF).

Rogoff, E. G., & Heck, R. K. Z. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship. *Journal of Business Venturing*, *18*, 559–566.

Roux-Dufort, C. (2007). Is crisis management (only) a management of exceptions? *Contingencies Crisis Management*, *15*, 105–114.

Rowley, T. J., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: An analysis of structural and relational embeddedness in the steel and semiconductor industries. *Strategic Management Journal*, *21*, 369–386.

Salvato, C., & Melin, L. (2008). Creating value across generations in family-controlled businesses: The role of family social capital. *Family Business Review*, *21*, 259–276.

Sargiacomo, M. (2015). Earthquakes, exceptional government and extraordinary accounting. *Accounting, Organizations and Society*, *42*, 67–89.

Sargiacomo, M., Ianni, L., & Everett, J. (2014). Accounting for suffering: Calculative practices in the field of disaster relief. *Critical Perspectives on Accounting*, *25*, 652–669.

Sargiacomo, M., & Walker, S. P. (2020). Disaster governance and hybrid organizations: Accounting, performance challenges and evacuee housing. *Accounting, Auditing and Accountability Journal*, Forthcoming. https://doi.org/10.1108/AAAJ-12-2019-4323.

Seymour, S. (2006). *Earthquakes*. New York: Collins.

Sharma, P., & Salvato, C. (2011). Exploiting and exploring new opportunities over life cycle stages of family firms. *Entrepreneurship Theory and Practice*, *35*, 1199–1205.

Sharma, P., & Salvato, C. (2013). Family firm longevity: A balancing act between continuity and change. In P. Fernandez Perez & A. Colli (Eds.), *The endurance of family businesses. A global overview* (pp. 34–56). Cambridge, UK: Cambridge University Press.

Shepherd, D. A., & Williams, T. A. (2014). Local venturing as compassion organizing in the aftermath of a natural disaster: The role of localness and community in reducing suffering. *Journal of Management Studies*, *51*, 952–994.

Simon, J. B., Murphy, J. J., & Smith, S. M. (2005). Understanding and fostering family resilience. *The Family Journal*, *13*, 427–436.

Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, *27*, 339–358.

Smith, C. (2016). Environmental jolts: Understanding how family firms respond and why. *Family Business Review*, *29*, 401–423.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, *26*, 501–524.

Stephens, J. P., Heaphy, E. D., Carmeli, A., Spreitzer, G. M., & Dutton, J. E. (2013). Relationship quality and virtuousness: Emotional carrying capacity as a source of individual and team resilience. *The Journal of Applied Behavioral Science*, *49*, 13–41.

Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 94–110). San Francisco, CA: Berrett-Koehler.

Thomsen, S., Pedersen, T., & Kvist, H. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance*, *12*, 246–269.

Tilcsik, A., & Marquis, C. (2013). Punctuated generosity: How mega-events and natural disasters affect corporate philanthropy in US. communities. *Administrative Science Quarterly*, *20*, 1–38.

Walsh, F. (2003). Family resilience: A framework for clinical practice. *Family Process*, *42*, 1–18.

Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, *38*, 357–381.

Westphal, M., & Bonanno, G. A. (2007). Posttraumatic growth and resilience to trauma: Different sides of the same coin or different coins? *Applied Psychology. An International Review*, *56*, 417–427.

Wildavsky, A. B. (1988). *Searching for safety*. Piscataway, NJ: Transaction Publishers.

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*, 733–769.

Williams, T. A., & Shepherd, D. A. (2016a). Building resilience or providing sustenance: Different paths of emergent ventures in the aftermath of the Haiti earthquake. *Academy of Management Journal*, *59*, 2069–2102.

Williams, T. A., & Shepherd, D. A. (2016b). Victim entrepreneurs doing well by doing good: Venture creation and well-being in the aftermath of a resource shock. *Journal of Business Venturing*, *31*, 365–387.

Williams, T. A., & Shepherd, D. A. (2018). To the rescue!? Brokering a rapid, scaled and customized compassionate response to suffering after disaster. *Journal of Management Studies*, *55*, 910–942.

Yamamura, E. (2016). Natural disasters and social capital formation: The impact of the great Hanshin-Awaji earthquake. *Papers in Regional Science*, *95*, S143–S164.

Yu, A., Lumpkin, G. T., Sorenson, R. L., & Brigham, K. H. (2012). The landscape of family business outcomes: A summary and numerical taxonomy of dependent variables. *Family Business Review*, *25*, 33–57.

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

Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, *23*, 851–868.

Zhang, Y., Lindell, M. K., & Prater, C. S. (2009). Vulnerability of community businesses to environmental disasters. *Disasters*, *33*, 38–57.

How to cite this article: Salvato C, Sargiacomo M, Amore MD, Minichilli A. Natural disasters as a source of entrepreneurial opportunity: Family business resilience after an earthquake. *Strategic Entrepreneurship Journal*. 2020;14:594–615. https://doi.org/10.1002/sej.1368