

Identifying entrepreneurial opportunities during crises: a qualitative study of Italian firms

A process model of opportunity recognition

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Received 6 April 2023
Revised 19 August 2023
31 October 2023
Accepted 9 December 2023

Abstract

Purpose – Recognizing novel entrepreneurial opportunities arising from a crisis is of paramount importance for firms. Hence, understanding the pivotal factors that facilitate firms in this endeavor holds significant value. This study delves into such factors within a representative empirical context impacted by a crisis, drawing insights from existing literature on opportunity recognition during such tumultuous periods.

Design/methodology/approach – The authors conducted a qualitative inspection of 14 Italian firms during the COVID-19 pandemic crisis. The authors collected a rich body of multi-source qualitative data, including 34 interviews (with senior managers and entrepreneurs) and secondary data (press releases, videos, web interviews, newspapers, reports and academic articles) in two phases (March–August 2020 and September–December 2020).

Findings – The results suggest the existence of a process model of opportunity recognition during crises based on five entrepreneurial influencing factors (entrepreneurial knowledge, entrepreneurial alertness, entrepreneurial proclivity, entrepreneurial personality and entrepreneurial purpose).

Originality/value – Various scholars have highlighted that, in times of crises, it is not easy and indeed very challenging for entrepreneurs to identify novel entrepreneurial opportunities. However, recent research has shown that crises can also positively impact entrepreneurs and their capacity to identify new entrepreneurial opportunities. Given these findings, not much research has analyzed the process by which entrepreneurs identify novel entrepreneurial opportunities during crises. This study shows that some entrepreneurial influencing factors are very important to identify new entrepreneurial opportunities during crises.

Keywords Opportunity recognition, Small firms, Qualitative techniques, Crises, Purpose-driven organizations, Alertness

Paper type Research paper

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For offering developmental feedback and constructive guidance on previous versions of this paper, the authors acknowledge JSBED Associate Editor Frances Fabian, Editor-in-Chief Patrick J. Murphy and two anonymous reviewers. Along this path, the paper benefited from advice and feedback from other authors and colleagues. More concretely, the authors are particularly grateful to Fabian Eggers, James Fiet, Enrico Marazzan, Rocco Palumbo, Pankaj Patel and Pasquale Massimo Picone for their invaluable support. The authors are also grateful to the participants of the SIMA 2021 Conference in Palermo (Italy). All defects remain with the authors.



Introduction

The recognition of entrepreneurial opportunities has been extensively studied in the entrepreneurship literature (Kuckertz *et al.*, 2017; Monllor and Altay, 2016). The literature highlights that in times of crises, when entrepreneurs suffer the loss of sales, earnings, clients and even key employees, it is not easy and indeed very challenging to recognize novel entrepreneurial opportunities (Liguori and Pittz, 2020). It is also argued that crises such as COVID-19 pandemic crisis do impact negatively entrepreneurs (Belitski *et al.*, 2022; Chesbrough, 2020), but can as well favor the emergence of a number of entrepreneurial influencing factors (Bressan *et al.*, 2021; Dahlke *et al.*, 2021).

However, not much research has studied how entrepreneurs identify novel entrepreneurial opportunities during the COVID-19 pandemic crisis (Dahlke *et al.*, 2021; Di Gregorio *et al.*, 2022; Eggers, 2020; Kraus *et al.*, 2020) and many scholars have advocated that deeper investigation on this issue is highly required (Di Gregorio *et al.*, 2022; Eggers, 2020). More specifically, Di Gregorio *et al.* (2022) argued that it could be interesting to observe “opportunity recognition and development in alternative contexts with alternative sources of environmental uncertainty, such as disruptive technologies or the emergence of the COVID-19 pandemic crisis” (Di Gregorio *et al.*, 2022, p. 645). Similar arguments, albeit with a specific attention for SMEs contexts, have been suggested by Eggers (2020) when it was claimed that “a time of crisis can create market opportunities that can best be addressed with innovative and proactive postures. An SME’s potential for more flexible decision-making and closeness to its customer base is beneficial in this regard” (Eggers, 2020, p. 206).

Drawing on these observations, the authors argue that an important theoretical element of entrepreneurship literature that deserves supplementary consideration is how entrepreneurial opportunities can be recognized during an alternative source of environmental uncertainty such as the COVID-19 pandemic crisis. In so doing, the authors first investigated extant literature on opportunity recognition during crises (Eggers, 2020; Gur *et al.*, 2020; Williams and Shepherd, 2016a); then, they conducted a qualitative analysis of 14 Italian firms that responded to the COVID-19 pandemic crisis by provisionally changing their manufacturing activities to produce medical devices that were needed. The qualitative analysis was performed during the pandemic crisis and mainly relied on 34 qualitative interviews with entrepreneurs and key executives, plus a substantial sample of secondary data. Following Gioia *et al.* (2013) and using the suggested coding practices, the authors analyzed the material collected to identify the entrepreneurial influencing factors of opportunity recognition.

Drawing on these analyses, three contributions to the entrepreneurship literature on opportunity recognition emerge (Gur *et al.*, 2020). First, albeit opportunity recognition during crises has been already studied in the literature (Eggers, 2020; Gur *et al.*, 2020), only a few studies have analyzed how firms identify novel entrepreneurial opportunities during the COVID-19 crisis (Kraus *et al.*, 2020). Nonetheless, this issue seems to be particularly important according to recent literature (Di Gregorio *et al.*, 2022; Eggers, 2020). Thus, the study makes a contribution to the existing literature by delineating a model of opportunity recognition amid crises. To be more specific, the study elucidates the manner in which five dimensions of entrepreneurial influencing factors (*entrepreneurial knowledge*, *entrepreneurial readiness*, *entrepreneurial propensity*, *entrepreneurial personality* and *entrepreneurial purpose*) lead firms to recognize novel entrepreneurial opportunities also during a challenging context of crisis. Moreover, *entrepreneurial purpose* deserves particular attention as it allows us to offer a possible contribution to the entrepreneurship research on crises (Bendickson *et al.*, 2020; Williams and Shepherd, 2016a).

Second, the results suggest that speed has been a key ingredient that has characterized the impact of the identified factors on the discovery of novel entrepreneurial opportunities during

the COVID-19 pandemic crisis. This finding seems to resonate with what has emerged from previous studies about the COVID-19 pandemic crisis have found from different literature and fields of research (Bressan *et al.*, 2021; Ferrigno and Cucino, 2021).

Third, another contribution that emerges from this study is that it is possible to observe firms' entrepreneurial behaviors over time (Maran *et al.*, 2021; Wójcik-Karpacz *et al.*, 2022; Yeganegi *et al.*, 2021). Indeed, the authors build a process model of opportunity recognition during crises that may help innovators and entrepreneurs to move toward achieving a systemic reaction to such crises (Bouman *et al.*, 2021; Dahlke *et al.*, 2021).

The article is organized as follows. First, the authors review firms' opportunity recognition literature during tumultuous periods. Second, the authors describe the qualitative analysis of 14 Italian firms that did recognize novel entrepreneurial opportunities during the COVID-19 crisis. Third, the authors present results that emerged from the qualitative analysis. Fourth, the authors discuss the findings and propose some theoretical contributions and managerial implications.

Opportunity recognition and entrepreneurial influencing factors during crises

Various definitions of "crisis" have been used in the management literature. Most of them define a crisis as an extreme, sudden, or unforeseen event that implies a prompt response from firms as it interferes with their activities, generates ambiguity in decision-making processes and impacts on their goals, values and their reputation (Doern *et al.*, 2018). This study follows the work by Pearson and Clair (1998, p. 66), who conceived a crisis as "a low probability, high-impact situation that is perceived by critical stakeholders to threaten the viability of the organization".

The negative consequences caused by a crisis have been largely discussed in the entrepreneurship literature (Liguori and Pittz, 2020). However, crises can also determine new opportunities for change and growth (Alvarez *et al.*, 2013) and some management scholars have documented this important issue (Devece *et al.*, 2016; Eggers, 2020; Williams and Shepherd, 2016a). For example, Devece *et al.* (2016) identified the business characteristics that increase the likelihood of success for new businesses during recessions. Moreover, Eggers (2020) conducted a literature review of 69 articles about firms during crises and proposed collaborative opportunities as a way to deal with the economic downturns associated with the crises. Finally, Williams and Shepherd (2016a) analyzed how local firms are generated in the aftermath of a crisis to reduce suffering by focusing on the use of internal resources. Collectively, these studies point to the importance of how business characteristics, external partnerships and internal resources enable firms to effectively deal with a crisis.

Nonetheless, an important response that leads firms to successfully react to a crisis seems to reside in the concept of entrepreneurial influencing factors, which relate to the capability to begin and to maintain entrepreneurial dynamism in the organization and to spur entrepreneurs' learning (Conz and Magnani, 2020; St-Pierre *et al.*, 2023). However, albeit important, extant studies have not explored yet which are the specific entrepreneurial influencing factors lead firms to identify new entrepreneurial opportunities during a crisis.

The COVID-19 pandemic crisis led to business reduction, financial stringency and staffing problems (Bressan *et al.*, 2021; Protogerou *et al.*, 2022). These implications are similar to the ones caused by previous financial crises and natural disasters (Lee *et al.*, 2015; Shepherd, 2020).

However, the COVID-19 pandemic crisis has also fostered firms' innovation efforts (Chesbrough, 2020; Ferrigno and Cucino, 2021). In general, some firms are particularly oriented to identify, assess and take advantage of novel opportunities that stem from the crises (Giones *et al.*, 2020). A few studies have examined how firms recognized such

opportunities during the COVID-19 pandemic crisis (Cucino *et al.*, 2021c; Dahlke *et al.*, 2021; Di Gregorio *et al.*, 2022; Eggers, 2020; Kraus *et al.*, 2020). However, during COVID-19 pandemic crisis, many firms have recognized new entrepreneurial opportunities relying on the influencing factors of their entrepreneurs.

In Italy, one of the most affected countries at the beginning of the pandemic in March 2020 (Cucino *et al.*, 2023a; La Rosa and Bernini, 2023), COVID-19 pandemic crisis has determined conditions which have spurred many Italian entrepreneurs to try and identify novel opportunities. For example, some Italian entrepreneurs have provisionally transformed their manufacturing labs and started to furnish new medical devices (Ferrigno and Cucino, 2021; Cucino, 2023). Hence, the authors develop the following research question:

RQ. How could entrepreneurs identify novel entrepreneurial opportunities during crisis?

This article tries to contribute to this relatively unexplored research area by studying the entrepreneurial influencing factors that allow firms to identify new entrepreneurial opportunities during crises (Di Gregorio *et al.*, 2022; Eggers, 2020; Crick *et al.*, 2022).

Research methodology

Given the novelty of the context (i.e. how could entrepreneurs identify novel entrepreneurial opportunities during crisis), the authors adopted an exploratory research approach. An exploratory approach is indeed considered appropriate when the research problem is difficult to identify or quantify and scholars aim to build new theoretical insights (Lee *et al.*, 1999). Since entrepreneurial opportunities are hard to observe or quantify (Renko *et al.*, 2012), the authors used a qualitative methodology (Dana and Dana, 2005; Gioia *et al.*, 2013). To obtain methodological rigor, the authors based the qualitative analysis on a multitude of data sources (Gioia *et al.*, 2013), encompassing in-depth interviews and secondary data in two phases of data collection: (1) March–August 2020 and (2) September–December 2020. Such a qualitative approach was considered a rigorous, rich and informative research process to explore the entrepreneurial opportunities during COVID-19 pandemic crisis in-depth and to build theoretical development from the case studies (Crick *et al.*, 2022; Ekanem, 2007).

Moreover, to achieve a deeper understanding of entrepreneurial opportunities, this research benefited from the stories revealing entrepreneurs' views and experiences of managing crises during COVID-19 pandemic crisis (Ferrigno and Cucino, 2021). Thus, the authors employed the theory-building approach by Eisenhardt (2021) plus the methodological best practices indicated in the work of Yin (2003) to build theory from 14 Italian firms (Table 1) that have immediately responded to COVID-19 pandemic crisis by partly changing their manufacturing activities to offer new products [1].

Case studies selection

The cases have been selected on the basis of theoretical sampling (Mason, 2002). More specifically, the authors chose and studied these firms according to three reasons. First, they are all paradigmatic examples of Italian firms that have reacted immediately (during the first fifteen days of the pandemic), identified opportunities and temporarily converted their business activities to offer novel products to satisfy societal needs (Ferrigno and Cucino, 2021). These firms share some common features but are also different in terms of a variety of items, such as business sector, size, location, response time, employees involved and entrepreneurial opportunities (in terms of products) (Table 1).

Given the commonalities and also the differences (Eisenhardt and Graebner, 2007) that epitomize their response to the COVID-19 pandemic crisis, the selected cases seemed

Companies	Business description	Size (employees)	Location	Industry	Response time	Employees involved	Entrepreneurial opportunities (in terms of products)
Angelo Carrillo	Founded in 1952, Angelo Carrillo Spa is a historic home textile company that operates in the Campania region	50-250	Naples	Textile	1 week	Undeclared number	Masks
Baby2	Baby 2 is a converter company located in Novara that works actively for famous fashion brands in the fields of underwear, swimwear, and sportswear (t-shirts, polo, sweatshirts, tracksuits) for men and women, since 1984	11-50	Novara	Textile	Less than 1 week	12	Masks
Bc Boncar	Bc Boncar is a luxury packaging company for the fashion, clothing, leather goods, and footwear industries	11-50	Varese	Packaging	Less than 1 week	13	Masks
Cifra	Cifra is a manufacturing company better known as "the warp knit center of excellence" that produces garments for private brands with an exclusive technology. It was founded in Northern Italy in the late 70's	85	Monza	Textile	2 weeks	24	Masks, sports suits with mask
Erbolario	Erbolario is an artisan herbalist's shop and produces natural cosmetic products. Founded in 1978, today it has 5,500 sales points in Italy and exports products to 42 countries worldwide	50-250	Lodi	Cosmetics	2 weeks	35	Gel sanitizers
Gruppo Canepa	Canepa Group is a world leader producer of textiles made in Italy. Founded in 1966, today the group has one subsidiary in Puglia region	>250	Como	Textile	Less than 1 week	24	Masks
Kontessa	Kontessa is a family firm, set up in 1989, that produces accessories in the Tuscany region	18	Pisa	Fashion	1 week	13	Masks
Licofarma	Licofarma is a private high-tech company that in the last ten years developed research and development for the production of natural antioxidants free of chemical solvents	11-50	Lecce	Cosmetics	2 weeks	9	Gel sanitizers, spray sanitizers

(continued)

Table 1.
A comparison among the Italian companies selected

Companies	Business description	Size (employees)	Location	Industry	Response time	Employees involved	Entrepreneurial opportunities (in terms of products)
Miroglio	Miroglio Group is an Italian firm, founded in 1947, that is specialized in the manufacture and distribution for sale of ready-to-wear clothing and fabrics. Incorporated in Alba, Cuneo, Italy, the Group has 37 business operations in 22 countries	>250	Cuneo	Fashion	1 week	400	Masks
ModalImpresa	ModalImpresa is a textile company which offers outsourcing services to fashion companies in the Molise region since 2015	35	Isernia	Fashion	1 week	20	Masks, gowns, medical suits
Pellemoda	Pellemoda is a company specialized in the production of top-level leather clothing items. It is a family business founded in 1979	>250	Empoli	Fashion	1 week	40	Masks
Roncato	Roncato is a family firm that designs, manufactures, and markets a wide range of products intended for travel. Founded in 1956 today it sells its products in more than 100 countries worldwide on 5 continents	90	Padova	Luggage	2 weeks	20	Masks, gel sanitizers, spray sanitizers, front visors
Toscana Alta Sartoria	Toscana Alta Sartoria is an ancient tailoring company. It was born in 1957 in the Tuscan region	32	Grosseto	Fashion	1 week	46 (14 were hired)	Masks
Waycap	Waycap is an international leader in the manufacturing of men, women and kids fashion accessories. With over 3,000 models made per year, Waycap places itself in the market as the international leader in. Made in Italy production, working in partnership with more than 80 world-class brands	>250	Venezia	Fashion	1 week	300	Masks

Source(s): Table created by authors

particularly interesting for developing a better comprehension of the entrepreneurial influencing factors leading to opportunity recognition during the COVID-19 pandemic crisis.

Second, these firms had no previous knowledge of the new product that they have developed during the crisis. This aspect is important since our research exercise aims at developing a better understanding of how firms recognize entrepreneurial opportunities during a crisis such as COVID-19 pandemic crisis.

Third, these firms were also selected because of data access (Yin, 2003). Several Italian newspapers, web interviews and reports, published in March 2020 – which was the first real month of the crisis–documented the entrepreneurial opportunities recognized by these firms during the COVID-19 pandemic crisis. The significant amount of information which was immediately available provides an important opportunity to dig deeper in the understanding of the key entrepreneurial influencing factors that enabled these firms to identify novel entrepreneurial opportunities during the pandemic crisis.

Data collection

Given the explorative nature of our research question, the authors used the approach proposed by Gioia *et al.* (2013), which enabled us to build theory from the substantial corpus of collected data (Eisenhardt, 2021). The authors organized the search of data in two sequential phases (as shown in Table 2): March–August 2020 and September–December 2020.

- (1) Phase 1: in March 2020, the authors have collected material from press releases, reports, interviews on the web, videos and official websites of the 14 firms. These data were analyzed to build the case studies. In April 2020, two of the authors contacted the firms and shared with senior managers or entrepreneurs their initial understanding about opportunity recognition. In May 2020, they conducted the first round of 21 semi-structured interviews by Zoom or phone with top managers or entrepreneurs. These interviews, whose length varied from 30 to 40 min, were registered and manually transcribed. The authors built our interviews questions on previous works on opportunity recognition during crises (McCline *et al.*, 2000) and adapted them to COVID-19 pandemic crisis. The questions used in the interviews revolved around the actions that were implemented during the COVID-19 pandemic crisis [2]. More importantly, the interviews enabled the authors to comprehend the first steps that have been taken to discover new entrepreneurial opportunities. In August 2020, the authors shared the key insights that emerged from the interviews with the analyzed firms in order to obtain their validation as well as to be sure we had not missed any other important aspect of the opportunities they identified during the COVID-19 pandemic crisis.
- (2) Phase 2: in September 2020, when the request for medical devices was being satisfied by different government actions, many firms had to discover new entrepreneurial opportunities in order to survive on the market and possibly even grow. Thus, from September to December 2020, the authors collected further material to understand how the business of the 14 Italian firms had changed (and if, for example, they had permanently introduced new product lines). In particular, the authors collected press releases, videos, web interviews, newspapers, reports and academic articles that demonstrated the evolution of how firms operated during COVID-19 pandemic crisis. In this phase, the authors also conducted a second round of 13 additional interviews with senior executives of the firms (Appendix). The necessity to conduct this second round of interviews stems from the nature of the fast-changing phenomenon. In particular, from March to December 2020, various developments in the pandemic and in the market needs have led many firms to rethink their businesses and identify new entrepreneurial opportunities.

Table 2.
A snapshot of the
collected data

	Details		Purpose	
	Phase 1 March 2020–August 2020	Phase 2 September 2020–December 2020	Phase 1 March 2020–August 2020	Phase 2 September 2020–December 2020
Interviews with senior managers	The transcripts (almost 20 pages) of interviews with 7 managers involved in COVID-19 initiatives from March 2020 to August 2020, conducted over the phone with managers	The transcripts (almost 15 pages) of interviews with 5 managers involved in COVID-19 initiatives from March 2020 to August 2020, conducted over the phone with managers	Identify managers' views on how the company responded to the pandemic in terms of strategy; identify and refine theoretical themes	Keep track of changes in the company's strategy; identify and refine theoretical themes Identify the official plans and the history and progress of the plans to recognize business opportunities; verify the data from the observations and facts based on the content of the information collected on the web
Interviews with entrepreneurs	The transcripts (almost 40 pages) of interviews with 14 entrepreneurs involved in COVID-19 initiatives from March 2020 to August 2020, conducted over the phone with entrepreneurs	The transcripts (almost 23 pages) of interviews with 8 entrepreneurs involved in COVID-19 initiatives from September 2020 to December 2020, conducted over the phone with entrepreneurs	Identify the purpose of the company's actions in response to the pandemic in terms of strategy Identify the elements that prompted action by identifying new business opportunities Identify and refine theoretical themes	Identify the purpose of the company's actions in response to the pandemic in terms of strategy Identify the elements that prompted action by identifying new business opportunities Identify and refine theoretical themes
			Identify the official plans and the history and progress of the plans to recognize business opportunities; verify the data from the observations and facts based on the content of the information collected on the web	Identify the official plans and the history and progress of the plans to recognize business opportunities; verify the data from the observations and facts based on the content of the information collected on the web

(continued)

Data sources	Details	Purpose
Press releases, videos, web interviews, newspaper pages, reports, academic articles	<p>Phase 1 March 2020–August 2020</p> <p>Company reports, publicly available stories of key events associated with companies, including manager appearances in the media</p> <p>National reports on the economic and market consequences of the pandemic (approximately 230 pages) and analyst reports on the consequences accessible via Google searches (approximately 210 pages)</p> <p>Press releases, videos, web interviews, newspaper pages (approximately 160 pages) on the activities of the 14 companies during COVID-19</p> <p>International academic articles on the economic and market consequences of the pandemic (approximately 30 studies)</p>	<p>Phase 1 March 2020–August 2020</p> <p>Collect complementary data on the strategy and structure of companies while developing a response strategy to COVID-19</p> <p>Gain a greater understanding of the context and ensure an external view of the evolution of companies; triangular observations and facts</p>
	<p>Phase 2 September 2020–December 2020</p> <p>Company reports, publicly available stories of key events associated with companies, including manager appearances in the media</p> <p>National reports on the economic and market consequences of the pandemic (approximately 200 pages) and analyst reports on the consequences accessible via Google searches (approximately 320 pages)</p> <p>Press releases, videos, web interviews, newspaper pages (approximately 100 pages) on the activities of the 14 companies during COVID-19</p> <p>International academic articles on the economic and market consequences of the pandemic (approximately 150 studies)</p>	<p>Phase 2 September 2020–December 2020</p> <p>Collect complementary data on the strategy and structure of companies while developing a response strategy to COVID-19</p> <p>Gain a greater understanding of the context and ensure an external view of the evolution of companies; triangular observations and facts</p> <p>Demonstrate the evolution of the pandemic</p>

Note(s): Two phases of the COVID-19 pandemic have occurred in Italy. The two phases have been identified by the President of the Council of Ministers and named by the National Health Ministry as Phase 1 and Phase 2. In the first phase, which took place between March 2020 and August 2020, the need for medical devices (e.g. masks, gloves, respirators) led Italian companies to act immediately by converting part of their production. In the second phase, which occurred between September 2020 and December 2020, when the availability of these medical devices was filled by various companies and government actions, Italian companies had to discover new entrepreneurial opportunities to stay competitive in the market

Source(s): Table created by author

Table 2.

Methodology of data analysis

The authors examined the stories that emerged from the interviews in order to comprehend which entrepreneurial influencing factors enabled the firms to identify new entrepreneurial opportunities during the pandemic crisis. To achieve this aim, the authors firstly engaged in manual coding the data (Sinkovics and Alfoldi, 2012), relying as much as possible on the words of the informants (Strauss and Corbin, 1998). This approach enabled us to identify and refine the first-order results. More concretely, the authors started by independently scanning press releases, reports, interviews from the web, videos, and the websites of the 14 firms in order to build a preliminary understanding of their entrepreneurial opportunities (conceived as products) during the COVID-19 pandemic crisis. By doing so, the authors built case studies and this preliminary understanding was used to prepare the interviews. Then, they analyzed the transcriptions of the interviews collected in the first round. More specifically, two of the authors separately wrote and jointly built a common interpretation of the main motives that led the firms to identify new entrepreneurial opportunities [3].

By analyzing the 21 interviews, the authors realized that, at the very beginning of the lockdown, the entrepreneurs of the 14 firms were so focused on saving their employees' jobs and solving local communities' needs through the discovery of novel entrepreneurial opportunities. Then, the authors used the secondary data to enrich our understanding with details about the various actions they were implementing. The primary and secondary data which were scrutinized related to the Phase 1 data collection.

Subsequently, the authors began by writing the individual case studies from secondary data collected in Phase 2. The authors analyzed data to map the main facts that epitomized firms' reactions to the pandemic and accordingly their exploitation of entrepreneurial opportunities. Moreover, the authors employed the 13 transcripts generated from the second-round interview to study in depth (Phase 2) each individual case study and the key factors that allowed each firm to identify novel entrepreneurial opportunities. The authors dissected data through the use of within-case and cross-case techniques (Eisenhardt, 2021; Miles and Huberman, 1984) and ongoing understanding of firms' opportunities recognition during crises (Eisenhardt and Graebner, 2007). As a check, two of the authors re-read the first 21 interviews once again and formed an independent view of each case. The authors then conducted a cross-case analysis to explore the existence of any consistent patterns of relationships across the cases (Eisenhardt, 2021). The authors first made a comparison among the cases to rattle off common issues in entrepreneurial opportunities recognition and to unpack the elements that made each case study unique. Following the approach proposed by Miles and Huberman (1984) and relying on the literature on opportunities recognition during crises (Gur *et al.*, 2020; Williams and Shepherd, 2016a, b), the authors then elaborated tables and graphs to enable comparisons among the cases. For each entrepreneurial opportunity, the authors compared random case pairings and those with similar organizational characteristics (e.g. firm age, size, industry) and pandemic reactions (e.g. time of conversion, products, percentage of employees involved) to search for patterns. As the analysis evolved, the authors raised the level of abstraction on the factors that led the firms to identify entrepreneurial opportunities during the COVID-19 pandemic crisis. As conceptual insights emerged, and in particular the differences in the factors leading to entrepreneurial opportunities recognition among the 14 firms, the authors debated these insights through a devil's advocacy method (Eisenhardt, 2021) to eliminate other explanations. Moreover, the authors also examined data by iteratively moving back and forth between the theory, data and literature to refine emerging theoretical relationships using a replication logic.

The comparison between the two different phases allowed the authors to unveil the themes that enable firms to identify new entrepreneurial opportunities during crises. Next,

the authors made use of second-order coding to commute first-order themes into higher-order categories (Glaser and Strauss, 2017). In doing so, the authors confronted and opposed first-order codes, trying to find constructs that reflected observations but that emerged from the specific context (Gioia et al., 2013). In this research process, the authors looked for similarities and differences between emerging constructs and existing models (Morrow, 2005; Schilke and Cook, 2013). In this way, the authors have developed a data structure composed of five aggregate themes (Gioia et al., 2013) (Figure A1). Lastly, drawing on the chronology of events and the analysis of the theme, the authors engaged in building a process model (Figure 1), which captures the dynamic relationships between emerging concepts (Gioia et al., 2013; Jaskiewicz et al., 2015; Suddaby, 2006).

Analysis of the case studies: opportunity recognition during crises

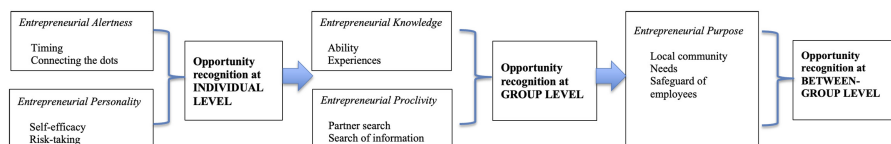
Through the qualitative approach has allowed authors to analyze the entrepreneurial influencing factors that led some Italian firms to recognize novel entrepreneurial opportunities during COVID-19 pandemic crisis. These influencing factors—entrepreneurial alertness, entrepreneurial personality, entrepreneurial knowledge, entrepreneurial proclivity and entrepreneurial purpose—have been identified on the basis of the literature about opportunity recognition during crises (Baron, 2006; Bendickson et al., 2020). In the following sections the authors will provide an exhaustive discussion of how these five influencing factors enabled the firms to identify novel opportunities during the COVID-19 pandemic crisis.

Entrepreneurial alertness

When firms are faced with uncertain scenarios, rapid action by decision-makers is required regarding the active development of contingent responses (Williams and Shepherd, 2016a). This first relevant factor in these situations can be defined *entrepreneurial alertness* (Chavoushi et al., 2020; Urban, 2020), which refers to the capacity to possess keen insights about the identification of entrepreneurial opportunities (Gaglio and Katz, 2001).

During a crises, some entrepreneurs, moved by the need to help their firms and employees, react by “connecting the dots” that the market and the context offer (Chavoushi et al., 2020). More concretely, although many entrepreneurs are exposed to the same events, only a few of them are “alert” enough to identify entrepreneurial opportunities (Tang, 2016), which in a number of cases are not distant from the normal offer and achievable in a very short time to satisfy the demand from the market.

Among the selected case studies, the concept of entrepreneurial alertness was evident in six firms. As a matter of fact, at the beginning of March 2020, Modalmpresa, like all fashion firms, was engaged with the deliveries of summer clothing. In addition, the order-taking phase for autumn-winter 2021 was starting. However, the lockdown has stopped all its deliveries, orders included. At that time, Romolo D’Orazio, chief executive officer (CEO) of Modalmpresa, realized that there was a lack of Personal Protective Equipment (masks) and together with an employee of a nursing home in Isernia began to test the prototypes they started to produce.



Source(s): Figure created by authors

Figure 1. A process model of opportunity recognition during crises

It was a moment of emergency. A friend of mine from Isernia, who works with nursing homes for the elderly, told me that there were no masks available. So, the light bulb went on. I made the prototypes with my firm's tailor shop and he made himself available to test them. Within a week we had the product CEO of ModaImpresa.

In crisis contexts, time for action is essential. In fact, the surveyed firms not only had the capability to connect the dots but also to do it quickly (Dahlke *et al.*, 2021). *"The intuition was to choose a fabric that was immediate and fast, with a low economic impact in order to be able to immediately enter the market and give an immediate service"* says Paolo Bonsignore, CEO of BC Boncar.

However, while in Phase 1 the need was to deal with the shortage of Personal Protective Equipment, in Phase 2, when the COVID-19 virus spread widely on a large scale in Italy, the need was ensuring Personal Protective Equipment which met higher level requirements. The masks which had been produced so far were no longer good enough and other Personal Protective Equipment were needed. ModaImpresa perceived the rapid change in the market and, "by connecting the various changes", invested its time and resources in a novel project that would take care of the medical part only. *"We are trying to launch a business unit dedicated to the production of specific products whose name will be ModaImpresa Care. ModaImpresa Care will not only deal with the marketing of products but will become a research center, a study center to innovate and to design new types of products"*, says Romolo D'Orazio, CEO of ModaImpresa.

Thus, there are several firms that have invested despite the moment of emergency. *"We will open a factory in Colletto that will produce masks as medical devices. We have purchased the machinery that is on the way and we will start the production of medical devices with an excellent facility within our firm"* says Stefano Mulasso of Miroglio.

From the above discussion, we can conclude that some of the selected case studies were alert to react at different times and in different ways during the crises. Indeed, during a time of collective crises, firms have organized their resources in order to support the community. These novel initiatives can also materialize in novel businesses and novel individual projects (Lamine *et al.*, 2014; Williams and Shepherd, 2016a).

Entrepreneurial personality

The second influencing factor that leads entrepreneurs to discover new strategic opportunities during crises refers to *entrepreneurial personality*, which affects entrepreneurs' perception about the opportunities that exist in the markets (Williams and Shepherd, 2016a, b). Entrepreneurial personality usually includes creativity, self-efficacy and the propensity to assume risks (Baron, 2006; Williams and Shepherd, 2016a). For instance, self-efficacy motivates entrepreneurs to set higher goals and achieve them (Camelo-Ordaz *et al.*, 2020). Moreover, entrepreneurs who take risks and show less fear of failure are prone to seeing a novel business as an opportunity (Baron, 2006; George *et al.*, 2016).

According to studies by Eggers (2020) the firms that reacted faster during specific crises were those led by entrepreneurs who accepted the risk of failing and implemented solutions different from those that were previously adopted (Eggers, 2020). This kind of entrepreneurs exploited several opportunities with a keen eye on clients' needs and desires (Liguori and Pittz, 2020) and still being focused on their goal. This was evident in five of the firms we studied. For example, during the lockdown, Cristiano Roncato, CEO of Roncato, one of the leading Italian firms that produce suitcases, sensed that in a short time all production activities would pause for a prolonged time. Accordingly, he realized that producing printed masks through collaboration with a partner was the only solution to deal with the lockdown. However, the technology that was required to produce these masks was consistently different from the one the firm possessed. Despite this, the masks were produced in the first months of the pandemic.

Later, Roncato evolved its concept of mask into a different mask that was very innovative as it was able to remove up to 99% of viruses that might on it. The new mask could be also washed once a week with the consequent reduction of waste and pollution. Moreover, Roncato developed a kit for travelers that also included the disinfectant gel in order to make the travels of customers safe. In recognizing such opportunities, the entrepreneur's self-efficacy was a pivotal driver for the business strategy. Self-efficacy is often conceptualized as entrepreneurs' belief to take control over specific tasks (Tumasjan and Braun, 2012). Roncato was far from producing Personal Protective Equipment and such an activity was certainly risky for them. However, the determination of being able to have control of the management and the ability to guide the team towards the achievement of a common goal enabled the firm to manage a situation of crisis.

The entrepreneur is a leader who guides others towards an idea that he considers a winning one. If the entrepreneur identifies a winning idea, he must be able to make everyone else believe in it. It is the team that works, not a person, Chief Marketing Manager of Roncato.

In the same way, the personality of the entrepreneur is also capable of influencing subjects external to the firm, creating new business opportunities. "*We asked our external groups that usually produce the garments for us to reconvert for that period and add capacity. We have created a new supply chain*", says Pellemoda a firm specialized in the production of top-level leather clothing items.

Only two of the analyzed case studies (i.e. Kontessa and Roncato) showed that entrepreneurial personality was a key influencing factor leading to the recognition of new entrepreneurial opportunities during the COVID-19 pandemic crisis.

Entrepreneurial knowledge

The third influencing factor that allows entrepreneurs to discover new entrepreneurial opportunities during crises is *entrepreneurial knowledge* and it relates to prior knowledge (Arentz *et al.*, 2013). More specifically, the prior knowledge that comes from experience (e.g. school experiences) influences entrepreneurs' ability to perceive, deduce and apply novel information differently from the others (Ramos-Rodriguez *et al.*, 2010; Williams and Shepherd, 2016b).

During a crisis, firms have to quickly exploit their previous knowledge in order to identify new ways of operating in the market. Moreover, developing new knowledge often requires investments in R&D that some firms may not be able to financially sustain (Ferrigno and Cucino, 2021; Ferrigno *et al.*, 2023). Rather, many firms recognize novel entrepreneurial opportunities and ways of operating on the market (Arentz *et al.*, 2013; Williams and Shepherd, 2016b) by relying on existing knowledge about a specific sector and/or technology. As a result, consolidated knowledge, experiences and routines on product development and sectors made some firms able to identify novel entrepreneurial opportunities that could be rapidly exploited.

The concept of entrepreneurial knowledge emerged from five of the selected case studies. For instance, in March 2020, Cifra, a sector leader in the production of sporting goods, noticed the rapid market changes that were taking place. Thus, Cesare Citterio, CEO of Cifra, thanks to his deep knowledge of human competencies and technologies available within the firm – built up in more than twenty years of activity in the sportswear sector – put forward the idea to convert part of the business activity into masks. More concretely, the consciousness of skillfully mastering technological competencies has enabled the firm to discover and recognize novel entrepreneurial opportunities quickly (Bianchi *et al.*, 2017). "*We used our looms and technologies that we know very well and with which we generally produce sports jerseys or leggings. We changed the way the yarn is woven. Thus, we have created an original*

shape and structure", Cesare Citterio, CEO of Cifra. Similarly, Miroglio exploited its knowledge: *"we looked at what we had in the production process that could, let's say, look like using in a moment of emergency. We used the same technological skills we had in the firm to create a new product"*, says Stefano Mulasso, supply chain director of Miroglio, an Italian clothing firm in the province of Cuneo.

In addition to the technological skills, the firms took advantage of the skills and abilities of their team, such as those of production managers. *"We are able to calculate how much a certain product could weigh even without doing it, on the basis of our experience. Experience is essential especially in this sector"*, says Mario Radaelli, production manager of Cifra, with twenty years of experience in the sportswear sector.

In other cases, firms have relied on codified knowledge (Smith *et al.*, 2009), as in the case of Erbolario. *"We had already produced hand sanitizing gels at the time of SARS, 10 years ago, and therefore we have done nothing but take an already tested formula and adapt it; we had a hectic job in the laboratory and we made it even more performing"* says Franco Bergamaschi, CEO of the Erbolario.

Despite the fact that a number of entrepreneurial opportunities were promptly recognized by the analyzed firms during Phase 1, the market demand changed rapidly in Phase 2. Indeed, in Phase 2, the necessity of the medical devices was no longer so observable, but further needs emerged shortly after. At that moment, the entrepreneur Cesare Citterio understood that many other competitors would soon enter the market to produce masks. Thus, he had the idea of using antiviral technology into sportswear products, anticipating a new market need. *"Now our sportswear will also become antiviral. We have moved from masks to our business, that of sportswear, because it is the one in which we have strong skills"*, says CEO of Cifra.

During the COVID-19 pandemic crisis, many firms did not have much time to structure novel strategies. Only those with solid competencies and experience (Ramos-Rodríguez *et al.*, 2010) were able to identify new entrepreneurial opportunities and configure timely responses to seize them. In fact, by exploiting their prior knowledge in terms of sector and technological skills, they were able to recognize new kinds of entrepreneurial opportunities in Phase 1 and Phase 2.

Entrepreneurial proclivity

The fourth influencing factor that allows entrepreneurs to discover new entrepreneurial opportunities during crises relates to *entrepreneurial proclivity* (Gur *et al.*, 2020). Information search refers to discovering opportunities by actively searching for them from a known information domain (Baron, 2006). During a crisis, some entrepreneurs actively start to search for new information, not on their products but on the raw materials which are necessary to manufacture the products that were scarce on the market.

Entrepreneurial proclivity drives the accumulation of knowledge and the development of entrepreneurial skills. In this way, four of the observed firms have deepened their knowledge by generating a new product (Crick *et al.*, 2022). For instance, *"the production was certainly possible and started from our strong know-how in the processing of fabrics, with the conversion of the first production line from sheets to masks. But we had to work a lot on the prototype, which obviously did not fall within our specific skills, especially in the careful selection of the materials to be used"* says Angelo Carrillo, CEO of a historic home textile firm.

During a crisis, in a situation of strong market instability, the search for information has become a key driver for firm survival (Williams and Shepherd, 2016b). Simona Buti, CEO of Kontessa, when the national lockdown occurred, reflected on the experience she had gained abroad. Thus, moved by the primary scope of protecting the jobs of her employees, she tried to figure out the necessary information to start producing masks. Shortly after, Simona Buti understood that the material employed to produce the bags (the main product manufactured by her company) was mainly constituted by the same micro/small holes that made the bag

breathable. More importantly, that material possessed the characteristics that were needed to produce the prototype of the mask.

If I have to launch a project about a new product, I look for information to be able to do it in a certain way, I look for information to do it well. We didn't know where to look for the materials; this was the main difficulty; plus, we were looking for certified materials, CEO of Kontessa.

Navigating through this scenario, the firm found itself in need of additional information. However, if the information for the correct production of Personal Protective Equipment was fragmented and not adequately disseminated, by the contrast, the lockdown had determined the closure of many suppliers of raw materials. The *non-woven fabric* used for the production of the bags was too thick. Thus, it was probably necessary to look for a new supplier in another industry, since the firm knew its suppliers had a different product. Thus, Kontessa decided to contact some tapestries.

In general, searching for the right furnisher was crucial for firms during crises (Crick *et al.*, 2022). As previously discussed, the firms we analyzed had no previous experience in producing masks and to make a useable mask it was necessary to “act quickly” also in the search of materials that were distant from their normal offer.

We worked quickly to find rubber bands, certain small products that we were not used to looking for in the production of ties, says Michele Canepa, owner of Canepa Group.

Ultimately, during the COVID-19 pandemic crisis, many of the selected firms did not have much information to engage in new entrepreneurial thinking. Only those with strong entrepreneurial proclivity were able to recognize new entrepreneurial opportunities.

Entrepreneurial purpose

An additional influencing factor that emerged from the analysis is *entrepreneurial purpose*. More concretely, all the 14 Italian firms have reacted to COVID-19 pandemic crisis by taking care of their communities' needs. This finding appears to stimulate current research suggesting that COVID-19 crisis can be also viewed as an opportunity for firms to promote the sustainability of organizations, compatibly with their profit-making objectives (Rey *et al.*, 2019).

However, considering the flourishing literature on purpose organizations (Henderson, 2020; Mayer, 2020), it was not a surprise for us that analyzed firms acted to achieve prosocial goals (Bacq and Lumpkin, 2021; Cucino *et al.*, 2023b; Kosmynin, 2022) and social gain (Birkinshaw *et al.*, 2014), trying to simultaneously pursue financial and social objectives (Battilana *et al.*, 2022). In general, purpose-driven firms attempt to create a voluntary commitment to promote responsible entrepreneurship and respond to societal challenges (Cucino *et al.*, 2023c; Levillain *et al.*, 2019; Vedula *et al.*, 2022). Such firms pay remarkable attention to their commitment to society by including broader goals, namely “making a difference”, “improving lives” or “reducing harm”, in their business strategy (Rey *et al.*, 2019). Therefore, albeit with diverse intensity and actions, the analyzed Italian firms that immediately responded to COVID-19 pandemic crisis responded (Cucino *et al.*, 2021c; Ferrigno and Cucino, 2021), possess the characteristics of purpose-driven organizations because they were moved by the intent to support the communities (Rey *et al.*, 2019). The authors define this emerging factor with the term *entrepreneurial purpose* understood as a set of prosocial entrepreneurial actions in favor of solving collective problems (Abebe *et al.*, 2020; Dahlke *et al.*, 2021). This study reveals that the entrepreneurial purpose might be pursued through two prosocial entrepreneurial actions described below.

Safeguard the jobs of firms' employees

The COVID-19 pandemic crisis has triggered significant business implications. First, the prolonged exposure to lockdown measures determined a decrease of the employees' working

hours [4]. Thus, entrepreneurs have started to pay attention to saving the jobs of their employees' jobs. *"Our goal was to do something useful while safeguarding the workplace of the employees. Surely the sale of masks does not allow us to face the emergency we are experiencing, but it has avoided the redundancy of employees"*, says Francesca Revelant, Chief Marketing Officer of Roncato.

More concretely, none of the interviewed firms acted only for profit. *"We produced a few million pieces. During this activity, none in our supply chain became rich . . . but all the actors paid the rents and the employees were producing something useful for the firm"*, says Manuel Faleschini, CEO of WAYCAP.

In addition, firms that have operated for the benefit of their employees and the communities have also taken rigorous employee protection actions. *"We immediately set up a committee composed of representatives for safety and prevention, representatives for safety laboratories, competent doctors, internal emergency managers and then the board of directors and then this committee adopted a shared protocol for the adoption of measures to combat and contain the spread of the COVID-19 pandemic crisis"* says Daniela Villa, CEO of Erbolario, a cosmetics firm active in Lodi, a city which was severely hit by the crisis.

In some cases, new employees were hired to ensure the continuation of the projects. In particular, the recruitment of personnel who had been fired by other firms, as in the case of Toscana Alta Sartoria. *"14 employees were hired because we had an important request for the masks we had started to make"* says Marco Berti, owner of Toscano Alta Sartoria, a well-known brand of handmade clothes in Tuscany.

Contributing to local communities' needs

The COVID-19 pandemic crisis has caused a massive and unexpected request for medical devices. In various countries the demand for these products was not met promptly by institutions (WHO, 2020) and this has favored firms' prosocial actions. In particular, some firms have tried to meet the needs of local communities. *"We have skills and people, but we also want to overcome this moment to give opportunities to different people to move forward. We want to do it to help our community; emotionally, but also socially"*, Chief Executive Officer of Kontessa.

Furthermore, during crises there is a strong perception of the social contribution of firms driven by the desire to help the community. In fact, in a context of crisis, business orientation towards purpose is so evident that it arouses reactions within the firm and within the community. Furthermore, the prosocial actions activated by the firm have generated a greater identification of the employees with the firm, activating a process of prosocial adaptation (Cha *et al.*, 2014). In particular, in some of our cases, employees themselves have promoted prosocial activities, going well beyond an ordinary commitment. *"There was maximum availability on the part of the employees. Some even worked on Saturdays and Sundays, because they believed a lot in the project"*, says Consiglio Rescio, CFO of Licofarma, a private high-tech firm engaged in research and development for the production of natural antioxidants free of chemical solvents.

Prosocial activities for the benefit of others, such as donations to community groups or employee support, can be mechanisms to improve and alleviate community suffering (Bacq and Lumpkin, 2021; Dahlke *et al.*, 2021). Thus, outside the firm, these prosocial business activities have had such a strong impact that has aroused prosocial behavior even among citizens. *"A person wrote us that he was used to work at night and that, if we wanted to work night shifts, he was available to do it for free"* says Francesca D'Auria of Baby 2, a transformation firms based in Novara that actively works for famous fashion brands in the sectors of underwear, swimwear and sportswear.

Discussion

The primary objective of this study centers around the examination of entrepreneurs' adeptness in discerning viable business prospects in the wake of adverse events, as exemplified by the COVID-19 pandemic crisis. To this end, the research question is:

RQ. How could entrepreneurs identify novel entrepreneurial opportunities during crisis?

With a qualitative analysis of congruences and divergences across cases and informed by existing insights into firms' opportunity identification during crises (Gur *et al.*, 2020; Williams and Shepherd, 2017; Williams and Shepherd, 2016a), the authors glean three pivotal insights that illuminate the terrain of discovering novel entrepreneurial prospects amid crisis scenarios.

First, within the context of the COVID-19 pandemic crisis, a quartet of entrepreneurial influencing factors—namely *entrepreneurial knowledge*, *entrepreneurial alertness*, *entrepreneurial proclivity* and *entrepreneurial personality*—emerge as noteworthy drivers in the cases under examination. Notably, these factors exhibit varying degrees of prominence and involvement within the selected cases, each wielding significance in the pursuit of identifying new entrepreneurial opportunities. In this regard, the study not only underscores the presence of these factors but also discerns their nuanced interplay within the dynamics of crisis-induced entrepreneurial pursuits.

Yet, the depth of insight garnered from this study extends beyond the mere enumeration of these factors. A pivotal observation lies in the interrelationship between the salience of each entrepreneurial influencing factor and the velocity at which firms find themselves constrained to unearth novel entrepreneurial openings. The swiftness with which firms are compelled to adapt to crisis conditions wields a profound impact on how these influencing factors manifest and influence the recognition of entrepreneurial prospects. In essence, the urgency inherent to crisis situations serves as a potent catalyst, shaping the potency and relevance of these entrepreneurial drivers.

Second, the authors found a fifth entrepreneurial influential factor, labeled “entrepreneurial purpose”, that seems particularly important during the COVID-19 pandemic crisis. In particular, differently from the other four factors, this one was relevant for all the 14 selected, which have responded to the crisis by safeguarding their employees' jobs and contributing to the needs of their local communities. Moreover, *entrepreneurial purpose* deserves a specific attention as it allows us to offer a possible contribution to the literature about entrepreneurship during crises (Bendickson *et al.*, 2020; Cucino *et al.*, 2023a; Williams and Shepherd, 2016a). Indeed, this study expands the research by Thorgren and Williams (2020) by showing how in a crisis situation firms take immediate action by deferring investments but not necessarily reducing labor costs, reducing expenses and negotiating contracts and conditions. Thus, a key insight of this article is that, in times of crisis, new entrepreneurial opportunities can be identified by firms are moved by purpose-led-actions (Ferrigno and Cucino, 2021; Hollensbe *et al.*, 2014; Rey *et al.*, 2019). The authors define this emerging influential factor with the term *entrepreneurial purpose* understood as a set of prosocial entrepreneurial actions in favor of solving collective problems (Bacq and Lumpkin, 2021; Dahlke *et al.*, 2021; Kosmyrin, 2022; Urban, 2020). More concretely, the study identifies several prosocial entrepreneurial actions that can come in the form of (1) safeguarding the jobs of firms' employees; (2) contributing to the needs of the local communities they interact with. Therefore, the study extends prior research on crises by showing that entrepreneurial opportunities can be identified when firms take care of societal issues emerging during an unexpected situation, such as the COVID-19 pandemic crisis (Bacq and Lumpkin, 2021; Ferrigno and Cucino, 2021). This study also extends previous research by Williams and Shepherd (2017) by trying to explain how efforts to recognize, feel and respond to collective suffering create entrepreneurial and social benefits. Indeed, the analyzed firms have not only

recognized and felt the collective suffering caused by the COVID-19 pandemic crisis, but—although with different intensity—they have also have undertaken prosocial actions in order to alleviate the suffering of their communities (Bacq and Lumpkin, 2021; Mayer, 2020). Moreover, the results of this analysis enable us to enrich the state-of-the-art on social entrepreneurship by unraveling two dimensions of entrepreneurial purpose that were not yet considered (Kosmynin, 2022): safeguard the jobs of firms' employees; contributing to the needs of the local communities they interact with.

Third, another insight from the study was observing firm's entrepreneurial behaviors over time (Maran *et al.*, 2021; Wójcik-Karpacz *et al.*, 2022; Yeganegi *et al.*, 2021). Previous research has widely examined firms' entrepreneurial responses during crises (Conz and Magnani, 2020; Devece *et al.*, 2016; Williams and Shepherd, 2016a) but this study shows that a process model of opportunity recognition during crises and their latent drivers may help innovators and entrepreneurs to move toward achieving a systemic reaction to such crises. More concretely, the authors built a process model of opportunity recognitions during crises (see Figure 1). This model starts from a first level, defined "individual level", that mainly involves the entrepreneur and his key managers through personality elements such as risk-taking, self-efficacy (entrepreneurial personality) and the ability to swiftly establish connections among disparate factors within a constrained timeframe (entrepreneurial alertness) enable entrepreneurs and select key managers to discern potential business prospects; a second level, defined "group level", which mainly involves the work team and the ability of the group to collect information relevant to the project (entrepreneurial proclivity) and the ability to field previous or new skills and experiences (entrepreneurial knowledge). More concretely, entrepreneurs and key managers effectively trigger a process that draws in other members of the organization; the third level of the system, defined "between-group level", which involves the entrepreneur who manages to share and engage with his/her team in internal (safeguards employees) and external (local community) prosocial entrepreneurial actions in favor of solving collective problems (Abebe *et al.*, 2020; Dahlke *et al.*, 2021).

More concretely, in line with Dahlke *et al.* (2021), this study highlights the importance of and the opportunity for more collaborative and prosocial action (Bouman *et al.*, 2021; Crick *et al.*, 2021). Similarly to Kraus *et al.* (2020), this study observes a broad multi-directional solidarity among firms, communities and people, which is typical of non-profit firms' entrepreneurial behavior. This suggests that crises make firms more vulnerable but that firms themselves, during crises, can make important contributions in terms of entrepreneurial innovation. Thus, this study shows how entrepreneurial influencing factors enabled firms' reactions both in Phase 1 and Phase 2, thereby contributing to the flourishing entrepreneurial research on the consequences of the COVID-19 pandemic crisis which emphasizes the importance of more collaborative and purpose-driven actions during crises (Bouman *et al.*, 2021).

Furthermore, a distinctive angle of exploration pursued by this research pertains to entrepreneurial motives as potent prognosticators. This facet not only addresses the need, as articulated by Maran *et al.* (2021, p. 1071), for "longitudinal designs to solidly establish entrepreneurial motives as forecasters of opportunity identification", but also delves into uncharted territory by offering novel insights into this intersection. By doing so, it augments the understanding of how underlying motives act as harbingers of opportunity identification within the entrepreneurial landscape.

Additionally, the findings of this study reverberate in resonance with Wegner *et al.* (2023), substantiating how perceptions of environmental uncertainties, shared both among managers and entrepreneurs, wield a favorable influence on their capacity to initiate and nurture relationships. This, in turn, translates into enhanced business performance amidst crises. As a practical manifestation of this phenomenon, certain companies adroitly navigate

uncertainties by forging strategic partnerships, fostering an ecosystem conducive to the creation of tailor-made products or services that meet evolving demands.

In summation, the study's contributions are multifaceted, spanning collaborative actions (Crick *et al.*, 2023; Ferrigno and Cucino, 2021), purpose-driven behavior (Battilana *et al.*, 2022; Cucino and Ferrigno, 2023), the prognostic potential of entrepreneurial motives and the dynamics of environmental uncertainties. By situating itself within the evolving landscape of crisis-driven entrepreneurial research, the study advances nuanced understandings that not only enrich academic discourse but also extend actionable insights for managers and practitioners navigating the challenging terrains of crises.

Conclusion

In conclusion, this study offers three theoretical contributions to the entrepreneurship literature on opportunity identification during crises (Devece *et al.*, 2016; Gur *et al.*, 2020; Monllor and Altay, 2016). First, albeit opportunity identification during crises has been well studied in the literature (Eggers, 2020; Gur *et al.*, 2020), only a few studies have analyzed how firms can identify novel entrepreneurial opportunities during the pandemic crisis COVID-19 pandemic crisis (Di Gregorio *et al.*, 2022; Kraus *et al.*, 2020). This issue seems to be particularly important according to recent literature (Di Gregorio *et al.*, 2022; Eggers, 2020), and this is why we tried to provide a contribution in this field. Thus, this study contributes to this literature by offering an answer to this unexplored research question. More specifically, this study shows that five entrepreneurial influencing factors (entrepreneurial knowledge, entrepreneurial alertness, entrepreneurial proclivity, entrepreneurial personality and entrepreneurial purpose) lead firms to identify novel entrepreneurial opportunities during the pandemic crisis COVID-19 pandemic crisis.

Second, the results of the qualitative inspection on 14 representative cases of Italian firms that reacted to the COVID-19 pandemic crisis also suggest that speed to change has been a pivotal driver that has configured the importance of entrepreneurial knowledge, entrepreneurial alertness, entrepreneurial proclivity and entrepreneurial personality in discovering novel entrepreneurial opportunities during the COVID-19 pandemic crisis. As a matter of fact, the analysis shows that entrepreneurial alertness requires the capability to link elements that could be altered over time. More concretely, during the COVID-19 pandemic crisis, firms went through two different phases. The capacity to rapidly identify changes in future market needs allowed entrepreneurs to safeguard employment and contribute to the local community they interact with. Furthermore, entrepreneurial knowledge was related to machinery and people's experience. The products launched in the market were completely new for the firms interviewed, but only through the awareness of their technological and professional skills they were able to identify new market opportunities (Bianchi *et al.*, 2017). Additionally, the COVID-19 pandemic crisis has represented an unprecedented situation for everyone and there was a lack of information about masks, whose market had been always dominated by Chinese firms. Thus, fragmented information and new markets have characterized information search. Last but not least, entrepreneurial personality implies that elements such as self-efficacy, measured as entrepreneurs' belief to monitor specific tasks (Tumasjan and Braun, 2012), can allow entrepreneurs to overcome setbacks, hitches and obstacles and more concretely, the adequate recognition of the entrepreneurial opportunities (McMullen *et al.*, 2007).

Third, this study makes a valuable contribution to the existing body of literature on purpose-driven organizations (Battilana *et al.*, 2022; Henderson, 2020; Hollensbe *et al.*, 2014; Rey *et al.*, 2019). By delving into the intricate dynamics of firms that harmonize their economic and social objectives (Gionfriddo *et al.*, 2021), this research sheds new light on the mechanisms through which such organizations not only resist but thrive in the face of adversities (Birkinshaw *et al.*, 2014).

By elucidating the strategies and practices employed by these companies to strike a delicate equilibrium between financial goals and societal well-being, this study enriches our understanding of the pivotal role that purpose-driven approaches can play in navigating turbulent environments. These insights hold significant implications for organizational sustainability and resilience, offering practical insights for businesses seeking to navigate the complexities of challenging circumstances while upholding their dual commitment to profitability and societal betterment.

Looking beyond the theoretical implications outlined earlier, the study's findings offer noteworthy managerial insights that bear relevance for organizational leaders. Within this context, several key points emerge for consideration within the realm of practical application.

Firstly, the study underscores the significance of enterprises formulating comprehensive crisis action plans. Drawing from the observations of [Morais-Storz et al. \(2018\)](#), the study posits that the business environment is inherently susceptible to continual and often unforeseeable shifts. Rather than adopting a reactive stance towards such changes, entrepreneurs and organizations are encouraged to adopt a proactive posture – consistently redefining themselves and preemptively anticipating forthcoming transformations ([Cucino et al., 2022](#)). This strategic responsiveness forms the bedrock of resilience, enabling firms not only to weather crises but to leverage them as springboards for renewed growth ([Cucino et al., 2023a](#)).

Secondly, the study's findings cast a spotlight on the pivotal role of team composition, particularly the diversity and cultivation of creative skill sets within the entrepreneurial team. Echoing the sentiment expressed by [Protogerou et al. \(2022\)](#), the study underscores that heterogeneous skill sets within the entrepreneurial team serve as a cornerstone for navigating crisis conditions. Particularly within the context of small and medium-sized enterprises (SMEs), these creative proficiencies align harmoniously with the individual capabilities of the entrepreneurial team ([Protogerou et al., 2017](#)). Consequently, adeptly navigating a company through the turbulent waters of crisis pivots upon nurturing what are commonly known as soft skills – attributes that meld creativity with managerial adeptness ([Cucino et al., 2021a, b](#)). This could manifest as either fostering creative and managerial competencies within the existing team or judiciously recruiting managers endowed with a creative background ([Peltoniemi, 2015](#)).

Central to the study's narrative is the triumph of firms endowed with a resilient identity, a cohesive sense of community and an unwavering orientation towards a clearly defined purpose. These attributes collectively empower firms to discern and capitalize upon emerging business opportunities. Notably, the cultivation of trust among the members of the entrepreneurial team emerges as a prevailing theme. Building upon the insights of [Francis and Sandberg \(2000\)](#) and [Cucino et al. \(2021a\)](#), it becomes evident that trust not only enhances organizational resilience but also bolsters overall firm performance. In view of these findings, entrepreneurs are counseled to undertake consistent measures aimed at fostering a robust sense of camaraderie and community within the organization. In doing so, they lay the groundwork for a unified and adaptable entrepreneurial team, poised to collectively and proactively tackle challenges that arise.

Ultimately, this study reveals certain limitations that, interestingly, also present themselves as fertile ground for future research endeavors. Firstly, the study aligns itself with a specific qualitative methodology, merely one of the myriad approaches available in existing literature. This opens avenues for subsequent investigations to not only corroborate the theoretical constructs postulated herein but also to enrich them by embracing alternative research frameworks that might offer diverse perspectives and dimensions.

Secondly, the exceptional nature of the COVID-19 pandemic crisis, singular in its impact, ushered in financial challenges spanning an array of organizations with varying sizes and profiles. Nevertheless, the intricacies of how entrepreneurial opportunities have influenced

the financial contours of these entities remain largely unexplored, primarily due to the temporal context. Engaging with this temporal dimension, prospective research could delve into this domain, probing how the identified entrepreneurial opportunities catalyze financial performance over time. This endeavor could potentially unearth invaluable insights into the dynamic interplay between entrepreneurial endeavors and financial outcomes during moments of crisis.

Furthermore, the study has been closely examining the entrepreneurial behaviors exhibited by Italian firms. While the insights gleaned from this vantage point are undoubtedly enlightening, the global nature of the pandemic crisis invites a broader comparative perspective. As various nations grapple with the far-reaching consequences in their distinct ways, there exists a compelling impetus for future research to undertake cross-country analyses. By encompassing countries that experienced the reverberations of the COVID-19 pandemic crisis, such research endeavors can illuminate the contextual nuances that shape entrepreneurial responses and opportunities across diverse socio-economic landscapes.

Notes

1. Different approaches that are available for case study research. These are guided by different epistemological perspectives (Welch *et al.*, 2011). In this article, we largely followed Eisenhardt's (2021) and Yin's (2003) styles, considering them most suited to achieving the purpose of the study.
2. The list of questions is available upon request.
3. An inter-coder analysis shows a highly satisfactory level of agreement (Cohen's Kappa = 0.823). This, in turn, led us to conclude that agreement among the two authors involved in the content analysis was not due to chance (Cohen, 1960). In a few cases of minor disagreement, they jointly re-examined the transcripts to resolve potential misunderstandings.
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Further reading

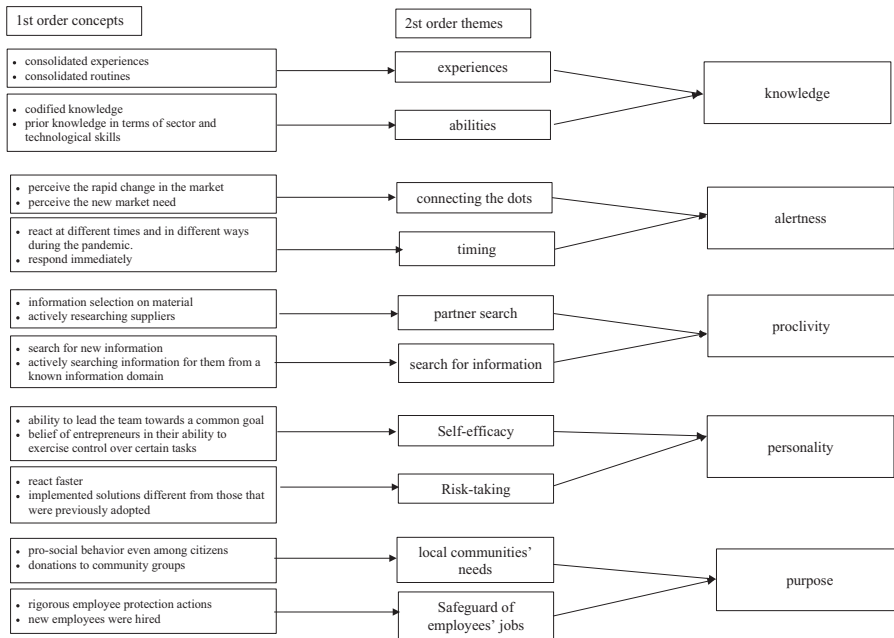
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(The Appendix follows overleaf)

ID	Interview method employed	Roles within the company
1	Phone	Entrepreneur
2	Phone	Entrepreneur
3	Videocall	Entrepreneur
4	Videocall	Entrepreneur
5	Phone	Senior manager
6	Videocall	Senior manager
7	Videocall	Entrepreneur
8	Videocall	Senior manager
9	Videocall	Senior manager
10	Phone	Senior manager
11	Phone	Entrepreneur
12	Phone	Entrepreneur
13	Videocall	Entrepreneur
14	Videocall	Entrepreneur
15	Videocall	Entrepreneur
16	Videocall	Entrepreneur
17	Videocall	Entrepreneur
18	Videocall	Entrepreneur
19	Videocall	Senior manager
20	Videocall	Senior manager
21	Videocall	Senior manager
22	Videocall	Senior manager
23	Phone	Entrepreneur
24	Phone	Senior manager
25	Phone	Senior manager
26	Videocall	Entrepreneur
27	Videocall	Senior manager
28	Phone	Entrepreneur
29	Phone	Entrepreneur
30	Phone	Senior manager
31	Phone	Entrepreneur
32	Videocall	Senior manager
33	Phone	Senior manager
34	Videocall	Entrepreneur

Table A1.
An overview of the
interviewees

Source(s): Table created by authors



Source(s): Figure created by authors

Figure A1. Data structure: entrepreneurial influencing factors

About the authors

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