



Pivots as strategic responses to crises: Evidence from Italian companies navigating Covid-19

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Abstract

The Covid-19 outbreak in 2019 and beyond severely threatened global supply chains and markets. Firms worldwide saw their operations limited by governmental restrictions, compromising the viability of their business models and challenging previously established assumptions. This situation offered an opportunity to investigate new ventures' processes of business model transformation (or pivoting) during a major crisis. Specifically, adopting a multiple case study design, we investigated how four Italian firms operating throughout the Covid-19 emergency pivoted in response to the crisis. We develop a conceptual model of pivots-as-process that comprises three stages: reaction to shock, response, and retrospection, leading to longer-term strategic reorientation. Our findings suggest that pivots play out across the three distinct layers of *enactment*, *reflection*, and *awareness*. Our study contributes to the ongoing debate on strategic responses to crises, borrowing from the entrepreneurship literature to investigate how pivots can support firms when they are faced with a need for swift responses, while coping with the temporariness that characterizes crisis situations.

Keywords

business model, Covid-19, experimentation, lean startup, pivot, strategic responses to crises

Introduction

The impacts of global crises, from the 2008 Lehman Brothers bankruptcy, to 9/11, and the Covid-19 pandemic, are often devastating and affect markets, organizations, and individuals all over the world. In particular, the outbreak of Covid-19 posed an unprecedented strain on society in all its dimensions. Ever since the World Health Organization acknowledged it as an international public health concern on January 30, 2020, the countermeasures undertaken by governments to limit Covid-19 outbreaks have included extensive lockdowns in wide areas like cities or entire regions.

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These measures suddenly paralyzed local and global markets, putting global supply chains and economies at substantial risk. Furthermore, the halts in activities for several businesses and institutions were of unforeseeable duration: local governments were therefore forced to quickly and continuously adapt their measures as the pandemic unfolded, with little or no possibility of predicting the trend. At the time of writing, these conditions appear so crosscutting, deep, and potentially long-lasting that some suggest that they may become the “new normal” for years to come. The economic impact on several sectors has been incalculable, revolutionizing the dynamics of established markets. These paradigm-shifting phenomena experienced in the short run seem likely to leave their mark in the long run (Foss, 2020).

In other words, the Covid-19 pandemic embodies a once-in-a-generation instance of a global crisis (Shepherd and Williams, 2020), ticking all the boxes posed by extant management literature on organizational crises. Specifically, according to the extant literature, a crisis caused by an exogenous shock is “a low-probability, high-impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly” (Pearson and Claire, 1998: 60). Crises put organizations into conditions of distress for unspecified periods of time (De Carolis et al., 2009) as they lead to situations where outcomes cannot be forecasted, and neither can their probability of realization.

As this crisis threatened the survival of firms across the globe (Wenzel et al., 2021), multiple authors called for a revision of some of the current assumptions in management research (De Massis and Rondi, 2020; Shepherd, 2020) as well as the investigation of newly emerging research questions (e.g. Dushnitsky et al., 2020; Shepherd and Williams, 2020). Strategic management and entrepreneurship scholars have been urged to investigate ways to contain the enormous consequences of the Covid-19 crisis, affecting both new and established ventures (e.g. Björklund et al., 2020; Dushnitsky et al., 2020; Foss and Klein, 2020; Giones et al., 2020; Klein, 2020; Kuckertz et al., 2020; Shepherd, 2020; Thorgren and Williams, 2020). The exogenous shocks brought about by crises, such as Covid-19, suddenly compromise the viability of the business models of both new and established firms and require them to formulate swift responses (Pearson and Claire, 1998). In this context, firms coping with situations of crisis need to recombine the resources they have at hand to face rising uncertainty (Klein, 2020; Rindova and Courtney, 2020).

In a different context, the prior literature in entrepreneurship has documented the way in which new ventures engage in extensive experimentation with the purpose of gathering information about the viability of their business models and reducing the uncertainty connected to them (Andries and Debackere, 2007). When the assumptions underlying the new venture’s business model are not validated by experiments, or when the business model’s viability is compromised by an unexpected event, new ventures are said to “pivot” (Berends et al., 2021; Kirtley and O’Mahony, 2020). Pivots embody the recombination of existing resources to accomplish a new strategic orientation (Hampel et al., 2020; McDonald and Gao, 2019). In this sense, transposing the concept of pivot to the context of crises can inform current understandings of how firms might enact strategic responses to crises.

Specifically, pivots can support firms with a device specifically designed to cope with the emergence of unexpected events that compromised the viability of their business models (Berends et al., 2021), by reorienting their strategy through limited resource commitments (Hampel et al., 2020). In this sense, pivots promote the reduction of the uncertainty brought about by crises (Klein, 2020), and may allow firms undergoing crises to turn adversity into opportunity (Andries et al., 2020; Salvato et al., 2020). To better understand how the concept of pivot can be transposed from the context of “ordinary” circumstances in entrepreneurship to that of strategic responses to crises, in this paper, we therefore ask: *How can firms deploy pivots as a strategic response to crises?*

To this purpose, we investigated four Italian firms that pivoted in response to the exogenous shock of the Covid-19 crisis in Italy, one of the hardest-hit areas in the early phases of the pandemic. Our study presents a comparative multiple-case study that followed the ventures from spring 2020—that is, when the Italian government started enforcing lockdowns to prevent the virus from spreading—to fall 2021.

Building on our empirical findings, we present an original process model that describes how firms enact pivots as strategic responses to crises. Our study shows how firms leverage pivots as vehicles of experimentation, that enable them to cope with both the intense time pressure created by the crisis and the uncertainty about its persistence. We also reveal that pivots as strategic responses to crises take place as processes, rather than one-time events, and that they unfold over three stages. These stages consist of (1) the initial *reaction* to the exogenous shock brought about by the crisis, (2) a *response* put in place to address the crisis, and (3) a stage of *retrospection*, involving evaluation of the persistence of the pivot. We distinguish between three separate layers of development, characterizing, respectively, the behaviors, cognitions, and perceptions firms experience as they pivot: the layer of *enactment*, the layer of *reflection*, and the layer of *awareness*.

Our perspective on pivots as strategic responses to crises and pivots-as-process responds to the ongoing debate about management in the context of crises which, as discussed in the earlier paragraphs of this introduction, has been intensified by the context of the Covid-19 emergency. First, we shed light on how pivots can support firms in coping with the time pressure posed by crises and the uncertainty related to the crisis' persistence through time. This view allows us to address recent calls for research that investigates how firms may manage the tensions between cost-cutting for survival and capturing opportunities to change and grow (Dushnitsky et al., 2020). We also contribute to the ongoing scholarly discourse around management in the midst of the Covid-19 crisis by extending insights provided by several recent rapid response studies (e.g. Giones et al., 2020; Klein, 2020; Kuckertz et al., 2020). Second, our study also advances the growing literature on pivots (e.g. Berends et al., 2021; Kirtley and O'Mahony, 2020; Pillai et al., 2020), by characterizing their emergence in situations of crisis and contrasting the view of pivots as isolated events with our perspective on pivots-as-process.

Theoretical background

Crises require firms to act quickly (Hermann, 1963; Pearson and Claire, 1998) by rethinking the resources they have at hand (Ehrig and Foss, 2022; Giones et al., 2020; Kuckertz et al., 2020) to create opportunities from within (Agarwal and Audretsch, 2020). This way, they force all types of firms to act in an entrepreneurial manner—that is, weathering the uncertainty they are navigating in while “making do” with the scarce resources at their disposal (Baker and Nelson, 2005; Katila and Shane, 2005; Klein, 2020). Mitigating uncertainty requires firms to collect information that enables them to anticipate the potential returns of pursuing a given strategic alternative before committing to it. However, the assessment of an alternative's viability requires in itself some degree of resource commitment—previous studies have referred to this trade-off as the *paradox of entrepreneurship* (Gans et al., 2019). In this sense, recent literature has reported that entrepreneurs cope with the uncertainty of the unfolding context they operate in by pivoting (Berends et al., 2021; Flechas Chaparro and de Vasconcelos Gomes, 2021). A pivot represents a strategic reorientation that enables firms to probe new hypotheses about their business model (Frederiksen and Brem, 2017), rapidly collecting information about its potential viability (Contigiani and Levinthal, 2019; Eisenmann et al., 2013; McDonald and Eisenhardt, 2020).

Pivots are one of the most common strategic decisions made by entrepreneurial ventures (Flechas Chaparro and de Vasconcelos Gomes, 2021). The experimental nature of pivots, in fact, guarantees new ventures the flexibility they need to cope with the uncertainty they experience (Zuzul and Tripsas, 2020), enabling them to gather information about the otherwise unknown prospects of strategic reorientations without significant resource commitments and in short amounts of time (Andries et al., 2020; Hampel et al., 2020; McDonald and Gao, 2019). Indeed, previous research on the aftermath of an exogenous shock demonstrated that resource reconfiguration aimed at regaining environmental fit led entrepreneurial ventures to perform better (Colombo et al., 2021).

By allowing firms to reduce uncertainty through rapid information gathering while committing limited amounts of resources to the endeavor, we suggest that pivots might enable them to make swift decisions under time pressure during crises. Specifically, pivots may enable firms to address the fundamental tension between resource constraints needed to survive during situations of crisis, and the change opportunities arising from it (Dushnitsky et al., 2020). The next sections delve deeper into the current scholarly literature on pivots, and then shed light on research gaps related to the investigation of pivots as strategic responses to crises.

Strategic reorientation through pivots

The term “pivot”—originally coined to define the basketball move where a player changes direction while keeping one leg steady to avoid wasting precious steps—was revamped by Eric Ries (2011), author of the book *The Lean Startup*. Ries (2011) transposed the term to the management jargon to indicate a reorientation of the firm’s strategy despite maintaining its long-term vision. Pivots are one of the central elements of the Lean Startup method (Contigiani and Levinthal, 2019; Frederiksen and Brem, 2017); they constitute one of the potential decisions to be made as a result of the process of experimentation on the firm’s business model, as opposed to the decisions to persevere with the business model as-is, or alternatively perish and abandon the endeavor completely (Blank, 2013; Eisenmann et al., 2013; Ries, 2011). In particular, the decision to pivot leverages the learnings produced by the firm through experimentation to drive shifts in trajectory from the firm’s current business model (Contigiani and Levinthal, 2019) destined to probe new business model hypotheses (Frederiksen and Brem, 2017). As the Lean Startup method has been gaining increasing legitimacy and attention among management scholars, several studies have adopted the term pivot to investigate the nature, occurrence, and implications of pivots in both new and established ventures (e.g. Grimes, 2018; Hampel et al., 2020; Kirtley and O’Mahony, 2020; McDonald and Gao, 2019; Pillai et al., 2020; Snihur and Clarysse, 2022; Yoo et al., 2021).

Previous studies agree that the nature of pivots is inherently experimental (Pillai et al., 2020). Pivots enable firms to learn when their business model is no longer viable (Hampel et al., 2020; McDonald and Gao, 2019), or when problems or new possibilities arise (Berends et al., 2021; Kirtley and O’Mahony, 2020), suggesting a need for fundamental alterations in strategy, goals, technological applications, market focus, or identity (Berends et al., 2021; Camuffo et al., 2020; Contigiani and Levinthal, 2019; Hampel et al., 2020; McDonald and Gao, 2019) to preserve competitive advantage (Snihur and Clarysse, 2022). Because of their nature, pivots ensure the flexibility that is fundamental to cope with environmental uncertainty characterizing nascent markets and new ventures (Flechas Chaparro and de Vasconcelos Gomes, 2021; Zuzul and Tripsas, 2020).

Prior literature has also associated pivoting with a better likelihood of success (Pillai et al., 2020), as compared with blind perseverance in the face of negative feedback (Camuffo et al., 2020). Indeed, pivots occur as a response to unexpected events that compromise the viability of

the firm's current business model—such as when new opportunities or problems emerge (Berends et al., 2021; Kirtley and O'Mahony, 2020), or when entrepreneurs are faced with negative expert (Cohen et al., 2019; Grimes, 2018) or market feedback (Camuffo et al., 2020; McDonald and Gao, 2019)—so that, the firm can no longer guarantee the commitments it has made in terms of timing and relationships with key stakeholders (Berends et al., 2021). However, some views on pivots report them to unfold as the accumulation of a series of incremental strategic changes (Kirtley and O'Mahony, 2020), which are the product of multiple strategic decisions made to cope with emerging problems or take advantage of opportunities arising over time. According to this view, pivots are not the result of a single strategic change in response to new information coming from the outside of the firm, but are rather a significant strategic reorientation built up over time through knowledge gathered from smaller strategic decisions. Previous studies have also reported that pivots are only deployed in the context of severe resource constraints and thus only concern new ventures (Hampel et al., 2020), that are forced to focus on short-term objectives (Berends et al., 2021).

On the other hand, other scholars have argued that pivoting firms engage in paradoxical behavior (Gans et al., 2019) as pivoting requires them to irreversibly commit significant resources to the new strategic orientation (Pillai et al., 2020), missing out on the experimental nature of the pivot itself. Several authors have also underlined the identity shifts that may arise from the strategic reorientation entailed by pivots, potentially disrupting relations with external stakeholders, such as customers (Hampel et al., 2020; McDonald and Gao, 2019), investors and the media (McDonald and Gao, 2019), the firm's own employees (Snihur and Clarysse, 2022), as well as the entrepreneur's own identification with their entrepreneurial ideas (Crilly, 2018; Grimes, 2018).

Since pivots promise to enable firms to probe new hypotheses about their business models and restore their viability, pivots may prove to be an important element in their responses to crises. Yet, crisis situations may create a somewhat different context for pivoting that has not been directly addressed so far by the broader entrepreneurship literature on this phenomenon. We now examine the particular features of crisis situations that might influence the potential role of pivots as strategic responses to crises.

Pivots as a strategic response to crises

According to Ries (2011: 269), “the word pivot sometimes is used incorrectly as a synonym for change. A pivot is a special kind of change designed to test a new fundamental hypothesis about the product, business model, and engine of growth.” Indeed, we suggest pivots may provide a suitable device for firms navigating global crises, such as that of Covid-19. Their experimental nature may prove fundamental in resource-constrained settings, where flexibility is key for survival (Zuzul and Tripsas, 2020). However, deploying pivots as strategic responses to crises may require some adjustments compared to the traditional view of pivots as investigated by previous research (e.g. Hampel et al., 2020; Kirtley and O'Mahony, 2020; McDonald and Gao, 2019), that saw them exclusively as decisions made following the falsification of hypotheses through a process of experimentation. The current scholarly understanding of pivots presents two main gaps when thinking of pivots as strategic responses to crises.

First, the current body of literature has not considered how pivots may occur when firms experience intense temporal pressure to act. Crises are the result of a sudden and exogenous shock, requiring firms to respond in a limited amount of time (Hermann, 1963) with swift decisions (Pearson and Claire, 1998). In such a context, firms have no time to accumulate incremental strategic changes over time to perform pivots, contrary to what has been reported in previous accounts (Kirtley and O'Mahony, 2020). Building on previous studies that identified pivots as reactions to

unexpected events (Berends et al., 2021), we argue that firms experiencing the impact of a crisis may employ pivots to formulate an immediate response to the crisis and respond to temporal pressures to act.

Second, some recent scholarly accounts have argued that pivots involve irreversible resource commitments, such as those required when establishing new product lines in manufacturing firms and reorienting their long-term strategy (Pillai et al., 2020). However, this view tends to contradict the experimental nature of pivots, meant to rapidly and cheaply probe the viability of business model hypotheses in response to unexpected events (Andries et al., 2020; Frederiksen and Brem, 2017). In the context of crises, such as that of Covid-19, the exogenous shock is accompanied by unpredictability about longer-term persistence (Shepherd and Williams, 2020). Building on previous accounts that recognize pivots as devices that allow firms to shift focus in the short-term (Berends et al., 2021), we argue that there is a need to investigate how pivots in situations of crisis may deal with the possible temporariness of the crisis that requires firms to balance the tension between immediate survival and long-term consistency. With our study, we therefore aim to investigate the way firms can enact pivots as strategic responses to crises, focusing more specifically on how the experimental nature of pivots can support firms in balancing the tension between the constraints posed by the crisis and the uncertainty of its persistence.

Methods

This study is designed as a comparative multiple-case study (Eisenhardt, 1989, 1991, 2021; Eisenhardt and Graebner, 2007) with the aim of generating theory (Eisenhardt, 1989; Glaser and Strauss, 1967; Strauss and Corbin, 1990). To tackle our research question of how firms can enact pivots to strategically respond to crises, we examined four Italian firms trading basic necessities during the Covid-19 crisis, which reoriented their strategies in response to the crisis. We collected data through semi-structured interviews with informants involved in the pivots with the aim of giving voice to the informants (Clark et al., 2010), which we deemed as knowledgeable agents (Gioia et al., 2013), supplementing the interview data with secondary sources (Eisenhardt, 1989). We followed an interpretive approach to data analysis, iteratively coding and analyzing the data to develop our categories and organize them along relevant dimensions (Strauss and Corbin, 1990). The following sections explain in detail the methodology employed to carry out our study.

Empirical setting

During the first phases of the pandemic, several global economies, including the United States, the United Kingdom, Italy, Spain, France, Germany, and China were particularly hard-hit. Among these, the Italian government was one of the first to enforce several presidential decrees that identified “red zones,” namely, areas where a lockdown was imposed on most businesses and private activities to ensure social distancing and to try to prevent the virus from spreading further. While initially confined to some small areas in the northern regions of Lombardy, Emilia Romagna, Veneto and Piedmont, on March 9, 2020, the lockdown was extended to the country level. In the following months, sporadic periods of lockdown were enforced by authorities following the evolution of the virus, imposing tighter or looser measures for social distancing according to ongoing trends. As a result of these lockdowns, both established firms and startups operating in Italy strove to reorganize their business to cope with the unprecedented challenges of Covid-19. In particular, the crisis began with a sudden exogenous shock, which was followed by continuous uncertainty about the unfolding situation, posing dramatic stress on certain industries while jeopardizing the

survival of others. We decided to select representative cases of firms operating in the Italian territory to observe the phenomenon in a particularly stressful environment.

Case selection

We employed purposeful sampling as a means to ensure the investigation of information-rich cases that would facilitate theoretical inference (Eisenhardt and Graebner, 2007; Patton, 2002) and share common antecedents (Eisenhardt, 2021), which would support our aim of extending theory about business model pivoting. In particular, we identified four firms that reoriented their strategy as a response to the Covid-19 crisis and were frequently cited by the Italian press among the most paradigmatic cases in the Italian emergency. Table 1 summarizes the four paradigmatic cases selected (three of which have been anonymized due to the presence of sensitive data). Each of the firms selected was involved in trading basic necessities during the Covid-19 crisis, which had become particularly critical during the peak lockdown weeks: supermarkets had hour-long queues, personal protective equipment was lacking all around Northern Italy, and sanctions were skyrocketing for citizens who did not comply with social distancing rules and travel limitations. As a consequence, home delivery services saw unprecedented demand and had to be organized rapidly.

The four firms display different sizes and development stages in order to provide the heterogeneity needed for a compelling cross-case analysis (Eisenhardt, 1989, 2021) of different firms facing the same stimulus. At the same time, the limited number of firms included in the sample allowed us to retain the positive properties of a single case study methodology—that is, the possibility to providing in-depth analysis—which would be difficult to replicate on a larger sample (Eisenhardt, 1989).

Data gathering

Our data gathering process integrated multiple sources of evidence to allow triangulation (Yin, 1984) and enhance trustworthiness. As a primary source of data, we carried out a total of thirty-seven in-depth interviews. We favored rapid data gathering with selected “elite” informants (Aguinis and Solarino, 2019), with a particular focus on the decision-makers involved in the Covid-19 emergency, to gather real-time information as events unfolded, thus preventing recollection and hindsight biases.

In light of the Covid-19 situation, most of the interviews were performed through videoconference, while two were performed face-to-face. The interviews were semi-structured, which enabled the interviewers to orient respondents toward our research questions, while allowing the informant’s perspective to emerge from the ensuing open discussion (Yin, 1984). We first conducted three pilot interviews with three startup founders that were not included in the sample. The pilot interviews determined led to some slight adjustments to our research question and sub-questions to ensure they would lead to insightful discussions. Then, according to the informants’ availability, we performed the first round of interviews between spring and summer 2020, in the midst of the most intense period of emergency. We then supplemented the case analysis with an additional round of interviews carried out between the summer and fall 2021, to add a longitudinal perspective and evaluate the persistence of business model pivots. Table 2 summarizes the data gathering process.

The interviews lasted from 60 to 90 minutes each, averaging 79 minutes. The interview protocol followed the study’s research question: the informants were asked to describe the motivations and process which led them to change their business model as a response to the Covid-19 emergency and governmental restrictions. In particular, the informants were asked to detail the process and

Table 1. Case description.

Case	Description	Strategic reorientation to cope with the Covid-19 crisis
Glovo	Glovo is a delivery app active in more than 1,000 cities worldwide. Founded in 2015 as an “anything delivery” app, Glovo progressively focused on food delivery to match global competitors	Glovo saw most of their business customers, that is, restaurants, close down because of governmental restrictions. Furthermore, the restrictions on individual movement led several consumers to employ at-home delivery as the primary purchase method for most goods. Staying true to its original vision, Glovo thus explored new product categories, such as pharmaceutical products and groceries, and opened proprietary small warehouses with the most requested basic goods. Now, these “urban warehouses” are one of the pillars of Glovo’s new “quick commerce” value proposition
Money	Money is one of Europe’s main providers for prepaid corporate cards for employee expenses and accounting. Since its foundation in 2014, Money has received a over €200 M in equity funding	As most of corporate travel expenses were halted due to the emergency restrictions introduced during the first phases of the pandemic, Money had most of its customers almost completely deactivated. However, Money reinvented its service to leverage the national emergency funds to be provided to citizens in need. Money thereby introduced a service that provides public administrations with prepaid cards to dispose emergency funds for their citizens. After the emergency phase, the service has been expanded to not-for-profits and care homes
Taxiapp	Taxiapp is a startup founded in 2017 that operates as a taxi service aggregator, active in 20 different cities across Italy	Due to the restrictions on individual movement, the taxi fleet managed by Taxiapp was almost fully idle. Taxiapp then repurposed its fleet to provide delivery and courier services for both individuals and companies, focusing specifically on the areas of the city, such as the outskirts, that were hardly reached by other last-mile couriers. Although the delivery service has been discontinued, the experience enabled Taxiapp to develop a shared taxi service leveraging the same algorithm as that developed for multiple goods delivery during the emergency
Superstore	Superstore is the one of the biggest supermarket chains in Italy, counting 159 stores spread from Northern to Central Italy	Social distancing measures forced grocery stores to allow limited numbers of visitors in store, creating long queues and fear of contagion, and ultimately threatening sale volumes from in-store shopping. Superstore hence rethought and substantially improved its delivery service, offering a new contact-free pick-up option, and developed a partnership with a queue-management startup. Now, the delivery and pick-up systems constitute a substantial part of Superstore’s distribution channels, whereas the queue-management system has been rethought to control access to employee canteens

Table 2. Interviews conducted for data gathering.

Case	Data gathering period	Informant
Glovo	April 2020–September 2021	Head of marketing and growth, Italy (three interviews) Head of public affairs (two interviews) Community manager (three interviews) Public affairs manager, Italy and Albania (three interviews)
Money	April 2020–October 2021	Country manager, Italy (five interviews) Marketing manager (three interviews) Growth manager (two interviews)
Taxiapp	April 2020–October 2021	Chief executive officer (three interviews) Head of growth and business development (three interviews)
Superstore	February 2020–September 2021	Project manager delivery service (five interviews) Project manager pickup service (three interviews) Chief information officer (one interview) Chief operating officer partner startup (one interview)

steps that led them to decide what would be the measures they would implement to face the crisis. The interviews, as a result, included an introductory set of questions related to the change itself (e.g. “What are the motivations behind the change of your business model?” “How did you change your business model to face the crisis?” “What elements were most affected by the change and how?” “How did this change fit with the previous business model configuration?” “Can you elaborate on the difficulties in implementing the change?”) followed by a second set of questions, related to the process undergone to identify the business model change to be completed (e.g. “How did you identify this as the right alternative to pursue?” “What led you to understand this was the right decision?” “How did you know this was the right solution to face the crisis?” “Did you employ an approach, model, methodology or tool to support this process?”). The additional round of interviews was centered upon questions related to the persistence of the pivot (e.g. “How did the solution implemented in the Covid-19 emergency unfold in the past months?”; “How did you evaluate the persistence of the changes introduced?”). We consulted multiple complementary sources of data to supplement the interview data, enhancing our understanding of the cases (Siggelkow, 2007). Table 3 summarizes the sources of evidence employed. The data gathering process was iterative, assembling primary and secondary sources both collected independently and provided by the informants. The case study methodology employed enabled us to go back to the informants, even months after the first round of interviews, to gather additional data about the pivot and its unfolding. As “practices are continually questioned and reinterpreted, even as they are performed” (Langley et al., 2013: 10), this process led us to reconsider several of our initial considerations regarding how firms in our sample carried out a pivot.

Data analysis

All interviews were fully transcribed. Whenever it appeared that data were incomplete, we returned to the informants to ask for clarification. First, we conducted a within-case analysis combining the data gathered after each interview and producing narrative descriptions related to each case; this

Table 3. Data sources.

Data type	Quantity	Original data source	Purpose in the analysis
Semi-structured Interviews	Three pilot interviews	Entrepreneurs (not included in the sample)	Probing the interview protocol
	37 in-depth interviews (10 for Superstore; 10 for Money; 11 for Glovo; 6 for Taxiapp)	Informants (managers and employees involved in the pivot)	Coding of the pivoting process
Asynchronous communication	53 informal emails	Informants	Data validation and coordination
Documentation	10 strategic reports	Corporate websites (publicly available)/ informants	Data triangulation
	18 internet pages	Corporate websites (publicly available)	Data triangulation
	51 news articles	Online news outlets (publicly available)	Data triangulation
	11 public interviews	Informants/other firm representatives	Coding of the pivoting process
Unstructured interviews	14 informal conversations	Informants	Data validation and coordination

process enabled us to integrate the large volume of data collected (Eisenhardt, 1989). Adopting a grounded theory perspective, we then carried out our cross-case analysis, analyzing each piece of data in detail, meticulously reading transcripts and secondary sources—a necessary step to generate initial categories and unveil the relationships between concepts (Strauss and Corbin, 1990)—selecting all the relevant excerpts and representative quotes.

We adopted an interpretive stance in our data analysis. To do so, following Cloutier and Ravasi (2021), we leveraged tables to condense and organize the data, analyzing it from various perspectives, and present our evidence succinctly. We conceptualized similar items from interview and secondary source data, and then employed axial coding to relate and organize the concepts we found around axes that described their properties and dimensions (Strauss and Corbin, 1990). In this process, we grouped quotes from the informants and secondary sources into a table, where we clustered the relevant quotes by stage of the pivoting process, iteratively adapting the concepts and their relationships as we handled and condensed the data at hand (Cloutier and Ravasi, 2021; Glaser and Strauss, 1967) to progressively generate more abstract conceptualizations (Eisenhardt, 2021). As our data analysis unfolded, we recognized three different layers across which the data could be classified, namely a layer describing (1) how the pivot was *enacted* by the firms, in terms of explicit actions taken, (2) how the firm *reflected* upon the actions it deployed through the pivoting process, and (3) the *awareness* gained by perceptions and feelings throughout the pivot. As a consequence, we organized our data along these two dimensions: on one hand, we clustered the data according to three stages through which pivot unfolded (i.e. reaction, response, retrospection), and we then articulated the data across the three layers (i.e. enactment, reflection, awareness). The final data structure is illustrated in Figure 1, whereas, Table 4 offers a selection of representative quotations to support the categories and dimensions described above. The combination of these findings led us to organize our findings in an original process model (Figure 2). We opted for an inductive composition of the process narrative to describe our findings (Berends and Deken, 2021), though also

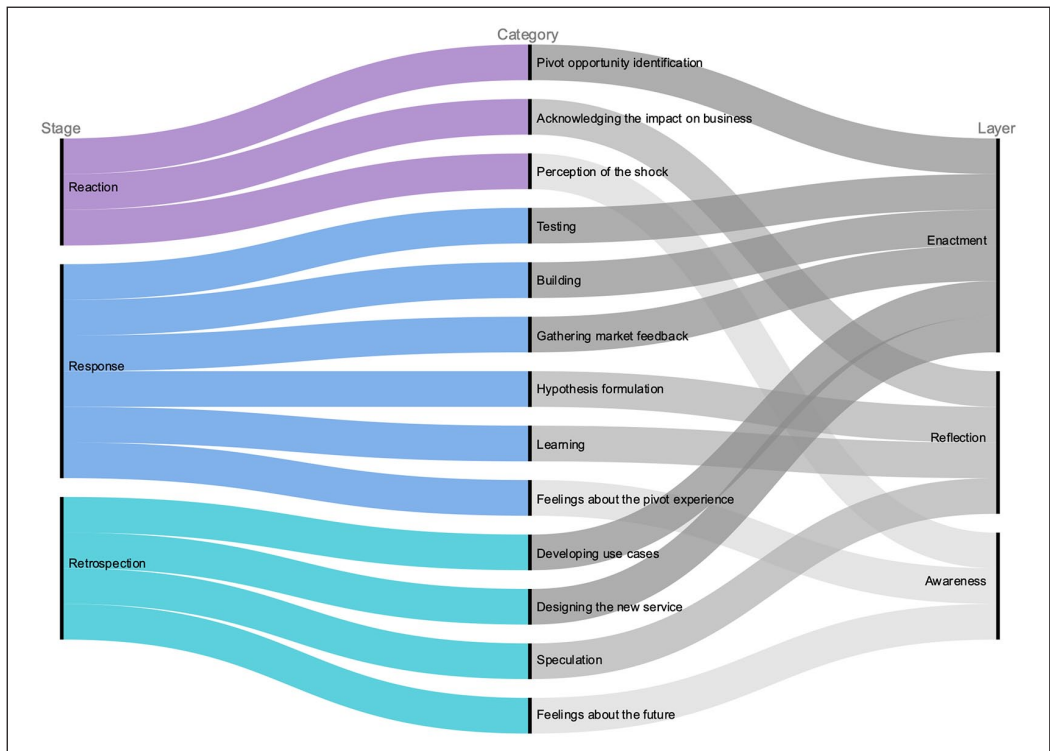


Figure 1. Relation between stages, analytical categories, and layers in the data.

borrowing from the conceptualized composition style to strengthen the link between data and constructs that constitute the model.

The following sections are narrated and organized following the three stages of the pivot to maintain temporal consistency. Within each stage, however, we also guide the reader by connecting each piece of the findings to the layer they belong to. The stages are thus split into the three different layers of reflection, enactment, and awareness. Our findings are then condensed and presented in Table 5 and Figure 2.

Findings

Our analysis reveals that firms attempt to strategically respond to the Covid-19 crisis through a strategic reorientation embodied by a pivot. In fact, our findings suggest that pivots embody a useful tool in situations of crisis. Just as when new ventures discover that some of the core assumptions underlying their business model are falsified through experimentation, crises act as exogenous shocks that suddenly challenge previously verified assumptions. In the face of such unexpected events, firms try to turn adversity into opportunity and reorient their strategy in either a temporary or permanent way.

We also find that firms deploy pivots as a process to strategically deal with crises. In particular, we can distinguish three different stages of the pivot (represented by the horizontal axis of Figure 2): the first stage of (1) *reaction*, as the firm acknowledges the shock and attempts to turn adversity into opportunity; soon followed by a (2) *response*, where the firm engages in strategic

Table 4. Representative supporting data for the categories presented.

Category	Selected evidence on categories	Layer
<p>Stage of the pivot: REACTION Pivot opportunity identification</p>	<p>“During the first wave, the first lockdown, but also now, the entire Italian population was prevented from accessing services—not just restaurants, but also stores of any product category, from stationery stores to pharmacies. There was a spike in demand that Glovo found itself able to satisfy thanks to its capability to deliver not just food, but also other product categories.”—Head of Marketing and Growth, Glovo</p> <p>“As soon as we realized the acceleration of grocery delivery, Glovo had to rethink itself.—Head of Public Affairs, Glovo</p> <p>“Our solution was crucial because it doesn’t require making specific agreements with individual merchants. Each municipality can choose which businesses they want to make available to spend the funds in—something you cannot do with vouchers—such as paying the bills or the local smiths.”—Country Manager, Money</p> <p>“We started considering delivery as there were some emergency measures, ruled by some Regions, that allowed taxi drivers to transport goods. Otherwise, taxi drivers would not have been allowed to carry goods.”—CEO, Taxiapp</p> <p>“We noticed the growing trend towards delivery, which we were generally monitoring, and we decided to follow based on the decrees released.”—Head of Growth and Business Development, Taxiapp</p> <p>“This crisis basically forced us to something we’ve had in mind for a long time but never actually carried out to the bottom, that is, optimize and rethink some of our processes.”—CIO, Superstore</p>	<p><i>Enactment</i></p>
<p>Acknowledging the impact on business</p>	<p>“Shutting down a city would mean taking 1-2 months to get back there. We would need to change the riders, as they would not automatically reactivate, since they are not our employees.”—Head of Public Affairs, Glovo</p> <p>“We manage [corporate] travel expenses, so you can imagine, in the last 1-1.5 years travel expenses basically reached zero. People didn’t travel, people stayed at home to work without even going to the office, thus the travel expenses became a disaster for us.”—Sales Country Manager, Money</p> <p>“When, in October 2020, we found ourselves back to the start—as it happened in several industries—we had to restart with a plan B.”—CEO, Taxiapp</p> <p>“Despite what one may believe, we realized we were going to experience significant losses. Our stores could no longer host the same number of people, and that was a huge loss for us. Some customers would end up shopping from their local business to avoid queues, some could no longer reach our stores. Some were just too scared to leave their homes.”—Project Manager pickup service, Superstore</p>	<p><i>Reflection</i></p>

(Continued)

Table 4. (Continued)

Category	Selected evidence on categories	Layer
Perception of the shock	<p>“It was no bed of roses, despite what one can think by looking from the outside.”—Public Affairs Manager, Glovo</p> <p>“Italy was the first country to enter in a state of emergency and we, as one of our headquarters is located in Milan, we lived the social impact of the crisis first-hand.”—Country Manager, Money</p> <p>“We suffered the Covid-19 crisis quite a lot, as a company. We went from a team of 15 to 25 people—we also had to make this kind of decisions.”—CEO, Taxiapp</p> <p>“We were just completely overwhelmed with the number of orders we started getting. We wanted to satisfy our customers, but at a certain point we realized it was going to be a challenge.”—Project Manager delivery service, Superstore</p>	Awareness
Stage of the pivot: Building	<p>RESPONSE</p> <p>“We transformed what was an emergency channel into a supermarket. [. . .] It was more immediate to manage because it was ours, directly. [. . .] We invested a lot on this structure, and we tried to sell a bit of everything.”—Head of Public Affairs, Glovo</p> <p>“We zeroed the monthly premium for municipalities so, from 9 euros a month, we gave out free cards and platform access.”—Country Manager, Money</p> <p>“We started immediately, where we would be fastest. That was surely mobile—the app—where we immediately released a function inside the app that is a little button with a box that therefore indicates the distinction between a ride and the delivery of a good.”—Head of Growth and Business Development, Taxiapp</p> <p>“We decided to go for delivery, because it was completely adjacent—from a technological standpoint—to our shared taxi.”—CEO, Taxiapp</p> <p>“We provided free deliveries for customers over 65 years of age.”—Project Manager delivery service, Superstore</p>	Enactment
Testing	<p>“We administered surveys, to better understand questions such as ‘what makes people feel uneasy?’”—Head of Public Affairs, Glovo</p> <p>“We set up a team of 30 people to understand what this new type of customers wanted. As opposed to firms, municipalities do not have a structure inside of them that is used for this type of activities.”—Country Manager, Money</p> <p>“We tested all alternatives we generated, with different levels of priority and commitment.”—Head of Growth and Business Development, Taxiapp</p> <p>“We decided to commit to delivery 100%, but first we tested it. Obviously, you have to test every choice you make when you decide to do something like this. We could not just decide to do deliveries and see what happened. We had to monitor every choice, day by day, week by week, and always have a plan B.”—Head of Growth and Business Development, Taxiapp</p>	

(Continued)

Table 4. (Continued)

Category	Selected evidence on categories	Layer
Gathering market feedback	<p>“We could quickly come up with alternative matching that were introduced in different stores to measure results and decide whether to roll the changes out on our overall network or go back to check another alternative.”—Project Manager delivery service, Superstore</p> <p>“In a couple of months, we assisted to our service’s penetration into Italian homes that went well beyond simple pizza delivery.”—Head of Marketing and Growth, Glovo</p> <p>“Milan, for example, already received 9,000 cards in two days. I can assure you, these are big numbers.”—Country Manager, Money</p> <p>“For the delivery service, I have to say, the customers’ and operators’ feedback was incredible. We had very high retention on that service.”—CEO, Taxiapp</p> <p>“Now 95% of our customers are fidelity card holders, thus a very personal relationship with customers and an almost automatic CRM. But we can always do better.”—CIO, Superstore</p>	<i>Reflection</i>
Hypothesis formulation	<p>“Next to the food delivery, we decided to add what previously we just called—maybe a bit hastily—“non-food”. It also acquired its own dignity, because here e-commerce or quick commerce became split on three layers.”—Public Affairs Manager, Glovo</p> <p>“Traditional food stamps and regular prepaid cards are often too slow and cumbersome to be effective during a crisis such as this.”—Country Manager, Money</p> <p>“When the Covid-19 crisis exploded, we obviously asked ourselves what to do. [...] We sat down to understand how our technology could be applied to other situations, in which conditions, and which scenarios of change we were facing. Therefore, we hypothesized different scenarios, among which delivery.”—Head of Growth and Business Development, Taxiapp</p>	<i>Reflection</i>
Learning	<p>“We came up with a set of scenarios on how to cope with the crisis. Scenario-related assumptions combined emerging information coming from our stores, our customer service and our eCommerce analytics, and matched them with the current status of our resources like people, warehouses, lockers and pickup trucks.”—Project Manager pickup service, Superstore</p> <p>“This understanding is extremely important to us, because this ‘quick commerce’ is a completely different channel than e-commerce. [...] Now delivery in the retail world poses itself as a way to respond to the user’s emergency, more impulsive needs.”—Head of Marketing and Growth, Glovo</p> <p>“One of the heritages from the pandemic was not as much about the number of orders we got, but rather being able to communicate with players we wouldn’t have been able to, enforcing our experience and the requests we got through the periods of peak emergency.”—Public Affairs Manager, Glovo</p>	<i>Reflection</i>

(Continued)

Table 4. (Continued)

Category	Selected evidence on categories	Layer
Feelings about the pivot experience	<p>“We learned that what is needed is a quick and reliable method, in a situation where speed of provision is everything. People need the funds immediately, and most of all, municipalities need to make sure these funds are not wasted.”—Country Manager, Money</p>	Awareness
	<p>“The delivery enabled us to develop and improve—for one year and a half—our technology. The technology we use for delivering multiple products through the same taxi—I know it’s not romantic to say—is the same algorithm we use to put multiple passengers on the same taxi, to create a shared taxi service.”—CEO, Taxiapp</p>	
	<p>“We realized delivery, and in general food delivery, follows seasonality. Demand lowers significantly in summer, with the re-openings.”—CEO, Taxiapp</p>	
	<p>“We understood what our customers really needed, and that it was not going to change.”—Project Manager delivery service, Superstore</p>	
	<p>“It is actually a thrilling moment. For the first time, we see Italy progress together with the rest of Europe—even the rest of the world such as the US or Asia—in the development of its users (or better citizens) in the use of digital means in general and, more specific, delivery. We aren’t late in this sense. We are actually at the forefront of innovation.”—Head of Marketing & Growth, Glovo</p>	
	<p>“Imagine a commercial powerhouse, having to do everything by looking at their customers through a screen. Unfortunately, it was a lot more complicated than whatever we could have imagined. But, in the end, we made it quite well.”—Country Manager, Money</p>	
	<p>“I think, honestly, that was really the most positive aspect. Our company worked well, we were very compact, also because—I have to say—we are a team, there are a lot of employees now. But seeing that enthusiasm again, as in the beginning, as when you are launching something; it was very, very rewarding.”—CEO, Taxiapp</p>	
	<p>“It was a very educational moment because, in the business development part, creating a strategy is always very cognitive. However, when you confront the real problem it’s always a bit more—as they say—‘skin-in-the-game’. You get a bit more into it and you suffer together with them [the customers/ partners].”—Head of Growth and Business Development, Taxiapp</p>	
<p>“It was a unique and exciting moment for us. We appreciated adopting such an agile approach so much we are now introducing it to other projects as well.”—CIO, Superstore</p>		

(Continued)

Table 4. (Continued)

Category	Selected evidence on categories	Layer
Stage of the pivot: RETROSPECTION		
Developing use cases	<p>“The Glovo user is not deciding whether they want to go out for dinner or stay at home, they are deciding whether they want to cook something they have in the fridge or order takeout.”—Head of Public Affairs, Glovo</p> <p>“We’ve noticed a real increase in the number of care homes that have started using our product recently [. . .] so the first thing we tried to do was try to understand why it is that care homes are suddenly being attracted to our product and what exactly it is that we’re solving for them.”—Head of Marketing, Money</p> <p>“The delivery enabled us to develop and improve—for one year and a half—our technology. The technology we use for delivering multiple products through the same taxi—I know it’s not romantic to say—is the same algorithm we use to put multiple passengers on the same taxi, to create a shared taxi service.”—CEO, Taxiapp</p> <p>“If there needs to be one person every 4 meters, basically almost every store or space will need to measure accesses and limit the number of visitors in the near future.”—CIO, Superstore</p>	<i>Enactment</i>
Designing the new service	<p>“We opened the second and third [urban warehouses] in Milan and the first in Turin, and we are willing to continue opening them to expand the network.”—Public Affairs Manager, Glovo</p> <p>“What we have tried to do is put together a solution that could be useful and at least ease some of the burdens that care homes are facing at the moment.”—Head of Marketing, Money</p> <p>“We had the technology and the service, but we could not create the demand and we would have had to invest on marketing. [. . .] We realized that, to create a system like that we would need too big of an effort, and we decided not to do it today, because we don’t have the strength to do it.”—CEO, Taxiapp</p> <p>“Once we managed to get back to acceptable visitor numbers in our stores, we decided to move the queueing service to our internal canteen to count accesses.”—CIO, Superstore</p>	
Speculation	<p>“The reopening of restaurants, we believe, will have its incidence. We expect the demand to lower a bit with time, maybe not to the levels we had before, but at least for the functions that go beyond food delivery.”—Public Affairs Manager, Glovo</p> <p>“As the pandemic continues to unfold, and hits other nations hard, we want to use our technology in every way possible to support authorities to assist those most in need.”—Country Manager, Money</p> <p>“With time, I started to believe that there was no willingness to make [the delivery through taxis] measure structural. And for us, starting to deal with couriers would mean develop a new service, new technology, and rebuild our user base completely.”—CEO, Taxiapp</p>	<i>Reflection</i>

(Continued)

Table 4. (Continued)

Category	Selected evidence on categories	Layer
Feelings about the future	<p>“People will not be going back to traditional shopping with the same attitude as before.”—Project Manager pickup service, Superstore</p> <p>“The pandemic hasn’t changed the service itself; it has only highlighted its value. It provided us with an acceleration, where the trend was already positive.”—General manager, Glovo</p> <p>“The business world has gone through an incredible period. The impact of the pandemic has blown us off our feet and forced companies to face unprecedented challenges—but something is changing.”—Chairman, Money</p> <p>“What’s going to happen in the future, I am not sure about. What is going to drive our choices in the future is the strength we will have once we are finally out of this crisis. What I know is that, right now, we don’t have the strength to shift our focus away from our core business.”—CEO, Taxiapp</p> <p>“This is a very hot moment [for innovation in in-store shopping].”—COO partner startup, Superstore</p>	Awareness

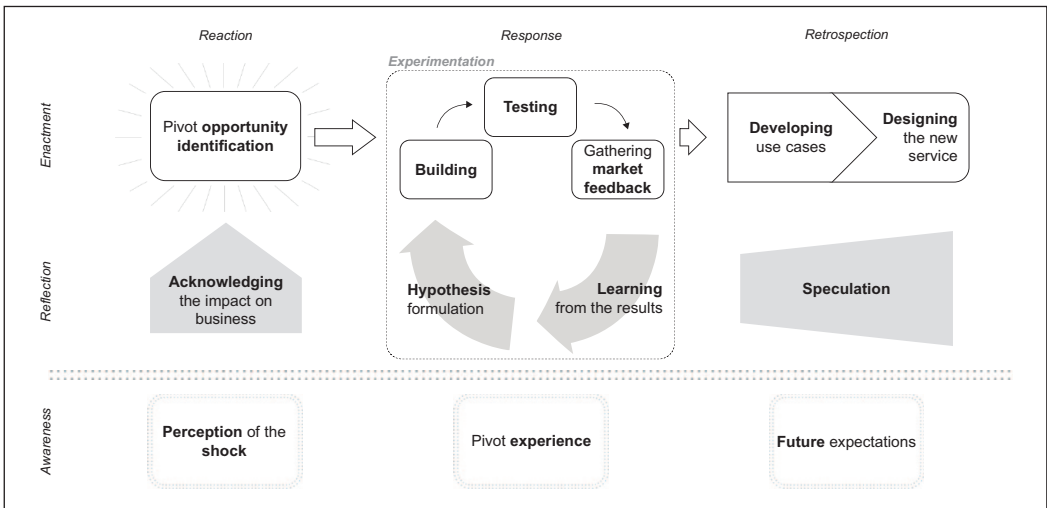


Figure 2. Pivot-as-process as a strategic response to crises.

reorientation through experimentation, probing new business model hypotheses by leveraging the resources at hand; and, finally, firms experience a stage of (3) *retrospection*, as the firm looks back to the pivot and evaluates whether and how to let the reorientation unfold in the future.

However, our empirical findings also led us to realize that the process data we gathered and analyzed was complex and covered different, although interconnected, layers of analysis. We could not describe pivots by simply reporting the explicit and concrete actions that firms deployed at each individual stage. Building on the words of our informants, we concluded that pivots also encompass cognitive processes and emotional responses, and that disregarding them may lead us

Table 5. Relationships between categories and dimensions that build the pivot process as a strategic response to crises.

Stage	Reaction	Response	Retrospection
Layer			
Enactment	<p>Pivot opportunity identification. Firms try to match internal resources with the new external setting. They try to identify the direction for their reorientation to try to turn problems into opportunities</p>	<p>Building. Firms embody hypotheses they formulate into fast and provisional solutions that can be used for probing the pivot opportunity identified</p> <p>Testing. Firms perform testing with users and other stakeholders to assess the viability and feasibility of the hypotheses they formulated</p> <p>Gathering market feedback. Firms gather feedback from users and other stakeholders to base their decisions on</p>	<p>Developing use cases. Based on their learning from the response stage and their speculation, firms identify emerging stakeholder needs and develop use cases they can use to segment relevant stakeholders</p> <p>Designing the new service. Based on the use cases developed and their speculation about the unfolding scenario, firms embody new functionalities into their new service</p>
Reflection	<p>Acknowledging the impact on business. Firms cognitively re-elaborate the potential impacts of the shock on their business, in terms of loss of customers/partners and the consequent loss of performance, strain on existing resources, and shifting customer needs</p>	<p>Hypothesis formulation. Firms cognitively translate the pivot opportunity into alternative scenarios and their underlying assumptions. This way, they formulate hypotheses about their new endeavor so that they are easier to be probed individually</p> <p>Learning. Firms cognitively assimilate the results of the market feedback gathered from users and other stakeholders. They translate the resulting insights into learning that they will build on to weigh their commitment for the tested hypothesis or for formulating new hypotheses</p>	<p>Speculation. Firms reflect on the potential future evolutions of the unfolding scenario, as well as their repercussions on their hypotheses and the reorientation set in place with the pivot. They make speculations about potential future scenarios upon which they base key decisions, evaluating and revising the persistency of the decisions made in the response stage</p>
Awareness	<p>Perception of the shock. As firms gain awareness of the shock, they perceive the daunting uncertainty related to the crisis's unfolding</p>	<p>Pivot experience. Firms develop unintentional perceptions about the pivot experience. Being exposed to the direct consequences of their efforts, they feel involved in the endeavor and develop a sense of ownership toward the reorientation</p>	<p>Future expectations. After the pivot experience, firms develop underlying feelings and expectations about the future</p>

to miss out on important aspects about the way firms strategically respond to crises through pivots. We therefore structured our data analysis around three distinct layers along which pivots are articulated (represented by the vertical axis of Figure 2). This multi-layer interpretation of our process data enabled us to unveil previously uncharted nuances of the phenomenon under scrutiny.

As firms embark on a process of pivoting to cope with the adversities of a crisis, they not only enact concrete and explicit *behavioral* responses to the ongoing crisis at each stage—which we named layer of *enactment*, but they also deliberately reflect upon their actions, cognitively anticipating each of their moves before they unfold or contemplating them after they occur. Findings related to this latter layer have been grouped into what we call the layer of *reflection and* represent the concretization of cognitions and beliefs about the reaction, response, and retrospection of the crisis. Finally, firms also experience different states of awareness, which involve spontaneous (unintended) feelings and perceptions related to the unfolding situation of crisis—the findings belonging to this realm have been grouped in what we call the layer of *awareness*. This layer differs from the previous two as it does not encompass deliberate behaviors or purposeful cognitions on the pivot, but rather represents the almost physiological or affective experiences the firm goes through at different stages of the pivot.

Table 5 illustrates the key findings from our empirical analysis and their subsequent classification following the dimensions identified through the data analysis process described in Figure 1 and Table 4. Finally, we organized the findings of our cross-case analysis visually: Figure 2 displays the pivoting process as a strategic response to the Covid-19 crisis based on our empirical findings.

Reaction

The first stage of the pivot represents the reaction firms experience when first facing the exogenous shock brought about by the crisis. As firms perceive the crisis' jolt, they gain awareness of the situation. This affective reaction to the shock stimulates, as well as accompanies, reflection on and enactment of the firms' reaction. Soon, in fact, awareness of the shock turns into the cognitive re-elaboration of its consequences, acknowledging the potential impacts on their business. The realization drives firms to identify the course of action they want to pursue and its enactment, finding ways to turn problems into opportunities. The following sections provide an account of the reaction stage by leveraging the informants' voices. Starting from the cognitive processes that lead firms to acknowledge the impact of the crisis on their business (i.e. what we call the layer of reflection), we then present the way they enact their reaction (i.e. layer of enactment), followed by a recollection of the perceptions connected to this stage (i.e. layer of awareness).

Reflection on the shock. At this stage, firms realize they are being threatened and, in reaction, they begin their cognitive re-elaboration of the potential impacts of the new setting on their business. This process of re-elaboration takes place at a cognitive level, where firms have the opportunity to reflect and form beliefs about how the exogenous shock brought about by the crisis hit their business. For instance, a Project Manager from *Superstore* reported that “We found ourselves experiencing a significant loss in demand, due to the limitations of in-store customers.” In fact, the restrictions set in place by the Italian government to cope with the sanitary risks related to social proximity caused congestion in most stores selling basic necessities—such as *Superstore*—and long queues outside, which significantly limited the stores' revenue-generation potential despite keeping the same fixed costs. Acknowledging the impact of the restrictions introduced to the retail category to ensure social distancing led the management of *Superstore* to reflect on the shock during their initial reaction to the crisis. On a similar note, the CEO of *Taxiapp* reported, “Despite a

drastic fall in the demand for personal movement, you have a fleet on the road that has to incur in costs, and which is exposed to high sanitary risk.” Thus, the *Taxiapp* team acknowledged the impact of the limitations in personal movement on their business in terms of idle resources. In fact, the crisis’s impact can also translate into significant strain on the resources needed to sustain the business. In the case of *Superstore*, several customers started to request grocery delivery, previously considered as an ancillary and luxury solution for a niche of customers and requiring the complex management of last-mile logistics. In the words of an informant from *Superstore*: “Having to boost e-commerce brought a series of significant fixed costs. In particular, delivery is the ‘bete noir’ of e-commerce.”

Besides strain on resources, firms acknowledged the crisis’s impact on business in terms of the loss of customers and, thus, of performance. As reported by our informants: “We were forced to shut several cities, not just because we did not have end users, but because our partners—restaurants—were forced to close because of the restrictions” (Head of Public Affairs, Glovo) and, similarly, “Our customers are currently almost deactivated” (Country Manager Italy, *Money*). In fact, Glovo’s primary customer segment—restaurants—had to face severe sanitary restrictions, whereas *Money*’s management of travel expenses was rendered almost useless by the limitations on individual movement and the sudden transition to remote work.

Recognizing shifting customer habits and the connected emerging needs was also a crucial part of acknowledging the crisis’s impact on business. For example, the long queues outside pharmacies and supermarkets to buy basic necessities urged several users to resort to Glovo’s “anything delivery” solution to avoid leaving their homes. As an informant from Glovo reported,

We realized that users needed grocery delivery at a time when e-commerce was slowing down, and we were caught off guard by the sudden increase in volumes of requests.

This realization led Glovo to contemplate how to translate shifting customer needs into a pivot opportunity for the firm.

Enactment of the reaction to the shock. Building on the reflections on how to match their internal resources with the new external setting, firms enact their reaction to the shock by turning emerging problems into opportunities through deliberate action. Considering their available resources and strengths, such as their unsaturated fleet of riders on the streets, Glovo saw the shortcomings of traditional e-commerce as an opportunity to expand their offering to new business customers. As reported by their Head of Marketing and Growth:

E-commerce cannot yet respond to emergency needs. We are able to deliver any kind of product—whatever it is—in 30 minutes. And most of all, we have extreme territorial coverage within cities, because we can collaborate with any kind of store, from big chains to individual businesses.

Similarly, *Money* and *Taxiapp* considered how to leverage their idle resources and infrastructure to serve emerging needs, while *Superstore* needed to overcome the hurdles of in-store social distancing while limiting the need for complex and capillary last-mile delivery.¹

When enacting their reaction to crises, our findings suggest that firms’ transition from the cognitive acknowledgment of the crisis’s impact on their business to the active search for an opportunity to pivot. In this attempt, firms capitalize on their internal resources and seek external opportunities arising from the crisis due to shifting customer needs or idiosyncratic scenarios. For example, as illustrated by an informant at *Money*,

The national government had given municipalities the guideline to provide the emergency funds to families in need to buy basic necessities, namely only for specific product categories such as food, from local stores or supermarkets, but also considering other basic product categories... We immediately understood that they had needs that would not be met by other solutions. We could basically cover them all, as their needs were really close to what we could offer.

In fact, *Money* put its infrastructure to the service of Italian municipalities, which had received emergency funding to support families and citizens in need. However, the access to the funds was limited to the purchase of basic necessities (“Somebody tried to buy cigarettes or gamble online”—an informant from *Money* reported), while at the same time minimizing interpersonal contact and providing funds quickly and continuously. Similarly, Glovo started interacting with different stores, as well as pharmacies and legal experts, to integrate their products on the Glovo app; *Taxiapp* started thinking about possible customers for their delivery services, while *Superstore* looked at the solutions of worldwide logistics giants to identify new opportunities to continue distributing their goods other than physical stores.

In this sense, our findings illustrate that firms actively identify opportunities to pivot as they react to the exogenous shock brought about by the crisis. They seek ways to repurpose, reallocate, and restructure idle and untapped existing resources to satisfy shifting user needs or unserved customer segments, finding a new rationale for translating the negative impacts of the crisis into opportunities that can be quickly seized.

Awareness of the shock. When the crisis hits, firms not only reflect on the shock from a cognitive perspective—as occurs in the layer of reflection—or take action to cope with it—as the layer of enactment illustrates. In addition, and simultaneously, firms acquire awareness of the situation as they come to realize they are facing a crisis and react affectively to it. As an informant from Glovo reported, “in the first two-three weeks of March [2020] we were in a very complex situation,” The informant added, “the number [of orders] was worrying.” In fact, as firms gain awareness of the shock, they perceive the daunting uncertainty related to the crisis’s unfolding. As *Money*’s Country Manager reported, “I have to be honest: at first we also got a bit scared, because our resources are finite.” The firms’ initial perceptions of the shock characterize their awareness of the situation and constitute an important aspect of their reaction to the crisis. The combination of awareness, reflection, and enactment in reaction to the shock enables firms to pursue a response to the crisis.

Response

Once firms react to the exogenous shock by identifying the pivot opportunity, based on their reflection on the impact on business and their perception of the shock, they proceed to develop a response. The second stage of the pivot represents the response firms deploy to face the adversities posed by the crisis. At this stage, firms need to elaborate the inputs coming from the reaction stage and transform them into actions under significant time pressure. For this reason, firms make use of experimentation to alternate between reflection and enactment of the response to the crisis. Although the response to a crisis may encompass traumatic experiences, enthusiasm seems to spark as the firms and their employees experience the pivot. The following sections provide an account of the deployment of a response by leveraging the informants’ direct recollection. We start from the reflective processes triggered by the opportunity identified in the reaction stage, illustrating how firms elaborate a response at a cognitive level, and how they then move to its enactment. Finally, we provide an account of the spontaneous perceptions taking place at this stage—that is, at the layer of awareness—that accompany firms throughout this stage.

Reflection on the response. During the response stage, firms cognitively re-elaborate the inputs gathered during the reaction stage of the pivot to reflect on how to set a response in place to cope with the situation of crisis. In particular, our findings suggest that the firms began to set out a response by hypothesizing about scenarios they might envision to match the opportunity identified. They might then decompose the pivot opportunity identified into hypotheses that they could then test empirically to assess their value for the market. In the words of an informant from *Taxiapp*:

We always weighted alternatives. We created scenarios, we created options. Many could be navigated in parallel. The one that we decided to invest in the most was the one we believed in the most.

In fact, both *Taxiapp* and *Superstore* explicitly referred to the generation of multiple scenarios which they characterized and then proceeded to test, whereas, the others hypothesized about specific aspects of their new service which they would then have to assess (e.g. an informant from *Glovo* specified “If we manage to put in people’s minds that they can open the *Glovo* app not just when they want to order a pizza, but also when they do their groceries, it is an investment worth pursuing”). Similarly, *Money* also proceeded to generate alternative requirements they might need to comply with to provide their services to public administrations for the management of emergency funds, reflecting on their competitive advantage as compared to similar solutions, such as traditional food stamps.

Our observations about how the firms formulated and tested hypotheses about multiple scenarios suggest that they employ an experimental approach to enacting their response to the crisis. In this sense, the actions and behaviors associated with building and running experiments have been grouped in the layer of enactment and are presented in the following section. Looking at the cognitive perspective on the process, our findings suggest that the experimental approach the firms adopted to deploy their responses to the crisis gave them the agility they needed to quickly gather significant insights upon which they could base their decision-making. As they experimented their way through the pivot, firms reflected on the implications of their strategic reorientation as a response to the ongoing crisis, leveraging the learnings they gathered. While the learnings often led the firms to sharpen their strategic reorientation toward the most promising strategic alternative, experimenting sometimes led them to realizations about the sustainability of the pivot. As *Taxiapp*’s CEO observed,

We realized that, based on the stage of growth we are at, enlarging the offer to new adjacent businesses—even if they are very close from a technological standpoint, or even commercial because they are the same user—was very challenging.

Building on their learnings, in fact, firms were then observed to conduct their retrospection on the pivot, evaluating the potential endurance of the strategic reorientation. Although the retrospection stage will be discussed in later sections, all four firms nevertheless reported having learned from their experimentation efforts, basing their decisions on the understandings gained throughout their response to the crisis.

Enactment of the response. Building on the cognitive re-elaboration happening at the layer of reflection, firms developed actions and behaviors to enact their response to the crisis. To account for the severe time pressure posed by the crisis, the urgency of response led to a supremacy of action over accurate goal setting for firms. As an informant from *Taxiapp* reported: “we started

immediately, where we would be fastest.” In this sense, firms did not rely on traditional business plans, which informants considered “unfit for the job” in an environment where most traditional business assumptions had been wiped out by the crisis; yet, nor did they move in a purely random unstructured fashion “[...] like a fish out of the water shaking its tail” (as a *Superstore* Project Manager argued), as this could dissipate resources which were already under pressure or scarce, while hindering the analysis and interiorization of valuable learning. Rather, they performed structured experimentation to enact the pivot: setting multiple scenarios and concurring hypotheses, building fast and low-cost local experiments, and running them to gather and analyze feedback from the market. In the words of *Taxiapp’s Head of Growth and Business Development*:

We decided to commit to delivery 100%, but first we tested it. You have to test every choice you make when you decide to do something like this. We could not just decide to do deliveries and see what happened. We had to monitor every choice, day by day, week by week, and always have a Plan B.

To ensure the necessary speed in the process, tests were run in parallel whenever resources allowed, and cross-functional teams were quickly created where the people involved in operations who ran the test were tightly coupled with those analyzing its results. From time to time, the results brought new and unexpected insights to the table (as in the words of an informant at *Glovo*: “One big question mark for people was doubts about the preparation of meals”). In case, the alternative was deemed infeasible or not promising, they hurried back to formulating new hypotheses that would again undergo the experimentation loop. For instance, in the words of *Taxiapp’s* CEO:

Little by little, we ended up in a specific area of the delivery which was delivering with taxis to the outskirts of the city. It made us able to leverage the unique offerings from the city center and, on the other hand, the features of our transport vector. Differently from existing competitors who had a radius of 2 kilometers, we could reach 25 kilometers away from the restaurant... We understood we had to target restaurants with a strong brand and a product that would not perish in one hour. We realized we could provide a very attractive service to a wide target audience which was normally not served.

In fact, the continuous testing efforts and the market feedback gathered led *Taxiapp* to design a value proposition they had not initially sharply envisioned. Similarly, the other three firms also enacted their response to the crisis by building provisional solutions and testing them to gather market feedback.

Awareness through the response. Looking at the unintentional perceptions related to the response stage of the pivot, our findings disclose that the experience of experimenting with the purpose of probing multiple strategic alternatives that underlay the enactment of the pivot, although challenging, exposed the firms to the direct consequences and rewards of their efforts. As an informant from *Taxiapp* noted,

It was good exercise. It was really interesting: as an older startup, you are 4 years old and have a bigger team. Actually, you realize you got somehow good at being a startup and you became good at measuring what users want, what works and what not in what you are doing. We got back some of the enthusiasm of the initial launch. It was great.

In this sense, as the firms gained awareness of their developing response to the crisis as a joint effort for survival, they developed an even stronger and inherent sense of belonging to the team. The act of

deploying a response to the crisis through experimentation drove teams at both established and young firms to feel strongly involved in the endeavor, developing a sense of identification with the reorientation efforts, and sparking enthusiasm during a period of strain. Our findings suggest that such a strong sense of belonging may have been partly due to the liberties taken to probe new strategic alternatives as compared to business-as-usual. A Project Manager at *Superstore* reported: “We have never been this fast in making decisions and executing them as we were in the last weeks [...] Partly foregoing quality control ‘censorship’ definitely has its own advantages!” Despite the perils and uncertainty of the pandemic, in fact, our findings suggest that experimentation seemingly revives the excitement of navigating in uncharted waters. As an informant from Glovo admitted, “It is actually a thrilling moment.” In this sense, the unintentional perceptions related to the response stage play an important role in the experience of the pivot itself, bringing teams closer together in times of adversity.

Retrospection

The third and last stage encompasses the retrospection on the pivot. At this stage, firms reflect on the learnings produced in the previous stage and on the future, while simultaneously enacting the retrospection by developing new use cases and designing services to serve them. As they speculate about the future, firms develop expectations and hopes about what the next steps of their strategic reorientation might look like. The following sections provide an account of the retrospection stage, building on the informants’ firsthand experiences. The first section presents the layer of reflection, reporting about the speculation that firms undergo in retrospection. The following section provides an account of how, building on the learning produced through experimentation and the speculation over the future, firms enact this stage in practice. Finally, the third section delves deeper into the affective experiences that take place along the stage of retrospection, embodying the layer of awareness.

Reflection in retrospection. As exemplified by the *Taxiapp* example, as firms learn from the results of their experiments and their implications in the long haul, once the crisis is waning, firms look back and evaluate the sustainability of the pivot to decide its persistence. Whether the reorientation will endure depends on the firm’s capability to envision future scenarios and identify potential developments for the changes introduced. This activity of speculation is included in the layer of reflection that characterizes the stage of retrospection. At this stage, firms purposefully reflected on the future to cognitively envision scenarios and their match with the reorientation brought about by the pivot. As a Project Manager at *Superstore* reported, “We learned a lot from the delivery and pick-up experience and we don’t think there will be a trend backwards.” The possibility of speculating about the future gives firms the chance to evaluate the persistence of the pivot in the post-crisis scenario and to decide whether to pursue the reorientation or revert back to the original business.

Enactment of the retrospection. From an enactment perspective, our findings suggest that this process translates into the identification and development of use cases for the products/services introduced. For example, to start serving new customer segments, Glovo established delivery services for different retail players. As the team recognized that the most promising product category for their final users was grocery delivery, they recognized different use cases of the service. As reported by informants at Glovo and *Money*, respectively:

According to our evidence, the kind of shopping is different. I [the user] may be baking a cake at home and ran out of baking soda. I visit the app’s grocery shopping function and I am only interested in getting the

baking soda I need. The brand may not even matter to me. I will get it in a limited amount of time, probably from the closest urban warehouse if I am in Milan, Turin, or another city. Completely different scenario: I [the user] am a professional, a housewife, a home-office worker but I do not have the chance to leave home. I need to fill my fridge—it probably isn't an emergency, but also not the monthly big grocery shopping—let's say it's some supplementary grocery shopping. At that point, why not? I may want to choose the usual MMR chain I visit in the weekends, anyway. There, I am much more comfortable finding the products I usually buy. This may also happen for quick grocery shopping getting back from the office. Thus, this is a win-win situation for both supermarkets, us, and the users. (Public Affairs Manager Italy & Albania, Glovo)

Municipalities can now also use the cards for other types of funds on the cards, such as the funding destined to people with physical disabilities provided by the national government to provinces and metropolitan areas to be spent on taxis and with an expense cap on the single transaction. (Country Manager Italy, Money)

By actively developing use cases about how users may use their service in the future, firms enacted their retrospection on the reorientation. This process enabled them to probe their pivot's applicability to the new unfolding setting, while simultaneously adapting it for future use.

Once they developed use cases based on their underlying speculations about the unfolding scenario, firms needed to crystallize the insights from the use cases into the permanent offering of the firm through the design and consolidation of products and services. For example, Glovo distinguished their offering to start serving both segments of grocery delivery end users and retail businesses in the consolidated version of their service. On one hand, they offered users located in urban areas the possibility to receive the products they need in very limited time spans from a warehouse located close to them (as reported by an informant from Glovo "We opened the second and third [urban warehouses] in Milan and the first in Turin, and we are willing to continue opening them to expand the network."), whereas on the other they offer supermarkets the possibility to build their quick commerce page on the Glovo app and deliver the products to end users. Through this realization, they started offering the same service to any type of retail service that may be suitable for quick commerce solutions. In this sense, Glovo acted upon the learning produced through the initial stages of the pivot and the use cases it developed during the retrospection to design new value propositions that reshaped their strategy in the longer run.

Similarly, *Money* consolidated its "MoneyCares" product, offering the service with advantageous pricing not just to municipalities, expanding the types of funds that could be loaded on the cards, but also to care homes and eventually any type of non-profit organization. Although *Superstore* decided to maintain the delivery and pickup services, they decided to repurpose the queue management system to control access to corporate canteens as they envisioned the retraction of social distancing measures in supermarkets. Similarly, *Taxiapp* capitalized on the learning from the pivot experience in terms of technological knowledge, and repurposed the algorithm developed for the logistics of multiple deliveries to their envisioned future shared taxi service. In the words of *Taxiapp*'s CEO:

Now—thanks to our experience with delivery—we are starting up with a new shared taxi service, that is much stronger thanks to all the experimentation and development we carried out in the last one and a half year.

As in basketball, pivoting does not always translate into the player's commitment toward the new direction. As our findings suggest, some or even the most crucial elements of the reorientation, although useful to navigate the crisis, may turn out to be imperfect or even dangerous in the long haul.

Awareness through retrospection. Retrospection about the pivot does not only encompass cognitive re-elaborations on the unfolding context and deliberate actions taken by firms to cope with it. On the contrary, our findings suggest that the stage of retrospection is often accompanied by underlying feelings about the future. When looking back on the pivot and evaluating its persistence (or temporariness), the informants, in fact, manifested some discouragement in relation to the return to full normality and a generally negative feeling about the crisis. As an informant from *Taxiapp* suggested, "The Covid emergency is lasting a bit longer than we had forecasted." These feelings seem to accompany firms as they experience the final stage of the pivot, producing an almost physiological reaction to the unfolding crisis.

The retrospection stage does not have a sharp ending as, although crises, such as Covid-19 hit with stark and sudden shocks, they rarely end in the same fashion. Given their unforeseeable duration, it is hard to establish a temporal boundary on the pivot process and, in particular, to the retrospection stage. However, our findings inform current understandings of how pivots unfold, and how they may be enacted by firms as strategic responses to crises. The following sections build on this newfound understanding to extend to the current scholarly discourse and articulate our contributions in relation to previous literature.

Discussion

In this study, we investigated how firms can enact pivots to embody strategic responses to crises. In particular, our investigation recognized how pivots can support firms facing a very narrow time span to enact a strategic response to a crisis and to cope with its uncertain persistence throughout time. We addressed this objective by investigating the way in which four Italian firms navigated the Covid-19 crisis by reorienting their strategy through a pivot.

Our study revealed that pivots are enacted as processes, rather than events, that enable firms to strategically respond to crises in a very limited time span, by repurposing existing resources in the pursuit of new emerging opportunities. Given the uncertain persistence of the situation of crisis, pivots have the objective of maintaining the viability of the firm's business in the short-term, thus without compromising the firm's survival possibilities in the longer term. To this extent, they enable firms to probe the assumptions underlying their intended strategic reorientation before significantly committing resources to it. On the other hand, although pivots in this context are enacted to cope with short-term conditions of adversity, our findings showed that the strategic reorientation resulting from the pivot may also persist in the longer run or evolve and integrate into the firm's strategy differently than as initially designed.

To document our perspective on pivots-as-process, we present a process model that depicts three distinct stages along which pivots take place, namely, *reaction* to the shock, the *response* put in place, and *retrospection* to evaluate the persistence of the strategic reorientation. Furthermore, we recognized that the pivot process occurs across three distinct layers in terms of *enactment*, including the actions and behaviors staged to enact the pivot, *reflection*, describing the cognitions about the reorientation, and *awareness*, encompassing the unintentional perceptions about the pivot experience.

We believe our findings provide a significant contribution to the ongoing debate on strategic responses to crises, transposing the concept of pivot from entrepreneurship to this domain.

Furthermore, we believe our study provides important insights that contribute to extending the notion of pivot, overcoming some of the limitations in its current understanding.

Pivots as strategic responses to crises

Our study contributes to the ongoing debate on strategic responses to crises (Wenzel et al., 2021) by transposing the notion of pivot to address current research gaps and empirically investigating its enactment in the context of an unprecedented crisis, such as that of Covid-19. Our findings respond to recent calls from strategic management and entrepreneurship scholars about the need to review some of the assumptions of current management research (Shepherd, 2020), as well as the call to investigate newly emerging research questions (Dushnitsky et al., 2020; Klein, 2020; Shepherd and Williams, 2020) sparked by the Covid-19 crisis.

In particular, our results advance the current understanding of how firms may tackle the uncertainty and complexity brought about by crises, when previously established assumptions no longer apply (Andries et al., 2020; Klein, 2020; Shepherd, 2020). In fact, similar to new ventures in search of a viable business model through experimentation for assumption validation (Andries et al., 2013; Eisenmann et al., 2013), crises challenge proven assumptions and compromise the viability of established business models (Andries et al., 2020; Wenzel et al., 2021). Our findings suggest that ventures facing a crisis identify new emerging opportunities (Alvarez and Barney, 2020) to reorient their strategy through a pivot (McDonald and Gao, 2019) by making do with their finite and strained resources at hand (Baker and Nelson, 2005) just like new ventures do (Katila and Shane, 2005). In this sense, pivots provide fast and low-cost means to probe the assumptions underlying reorientations (Eisenmann et al., 2013; Ries, 2011) by adopting a parsimonious approach to resource allocation that is fundamental in times of crises (Klein, 2020). Our findings thus extend the notion of pivot as an experimental approach to coping with the limited time available to react, as well as the uncertainty characterizing the persistence of crises. This view is consistent with the perspective suggested by recent research essays (Andries et al., 2020; Klein, 2020) and rapid response studies (Giones et al., 2020; Kuckertz et al., 2020) developed to inquire into different firm reactions to the Covid-19 crisis.

Our contribution builds on the recent need for research to identify how firms navigating a crisis may manage the tension between the need to act swiftly (Hermann, 1963; Pearson and Claire, 1998) to capture potential growth opportunities, while simultaneously sparing valuable resources to guarantee survival of and beyond the crisis (Dushnitsky et al., 2020). Our study led us to identify how pivots can provide firms with the means to manage the trade-off between resource commitment and opportunity exploitation in narrow spans of time. In fact, by supporting firms in shifting focus to the short term (Berends et al., 2021), pivots meet the need for producing swift responses to situations of crisis (Hermann, 1963; Pearson and Claire, 1998).

Furthermore, our study also addresses the uncertainty surrounding the persistence (or temporariness) of situations of crisis. In particular, our findings illustrate how pivots take place as processes, rather than events, that play out through three stages of formulating a strategic response to the ongoing crisis. Indeed, our study responds to Shepherd and Williams (2020) call for research documenting entrepreneurial actions in response to the Covid-19 crisis. We believe our study provides important insights into how firms may cope with *crises-as-a-process* (Williams et al., 2017) through the deployment of pivots-as-process to enact strategic responses that evolve over time throughout the crisis's unfolding. Our perspective also speaks to the importance of timing and sequencing emphasized in previous accounts (Pettus et al., 2018) when investigating firms' strategic responses to industry disruption caused by exogenous stimuli.

Our investigation also contributes with some novel insights to the stream of research on decision-making under the extreme uncertainty that characterizes crises (Ehrig and Foss, 2022; Klein, 2020), extending this with finer-grained insights into the concept of experimentation in the face of “unknown unknowns” (Loch et al., 2008) and approaches to coping with them by testing implicit assumptions (Clarke, 2017). In particular, we believe our study’s perspective on pivots as strategic responses to crises can contribute to Ehrig and Foss’s (2022) discussion on the role of reordering and relieving organizational beliefs and reconfiguring resources when facing unknown unknowns brought about by crises. This approach is consistent with the findings of Colombo et al. (2021), who illustrated how resource reconfiguration aimed at gaining back fit with the external environment in the aftermath of an exogenous shock leads firms to higher performance outcomes.

Our findings also speak to Klein’s (2020) question of how to employ entrepreneurship to cope with the uncertainty that is inherent in both crises and entrepreneurial endeavors. In this sense, our study provides important insights to research on experimentation during crises (e.g. Andries et al., 2020; Björklund et al., 2020), by characterizing three stages of the pivot process, and framing experimentation within a clear set of antecedents and consequences that embody the firm’s strategic response to the crisis. In line with previous research (Berends et al., 2016), this process of experimentation on the firm’s business model takes place as a continuous interplay between cognition—through hypothesis formulation and learning that takes place at the layer of reflection—and action—through building, testing, and gathering market feedback, taking place at the layer of enactment. Experimentation can also provide fertile ground for overcoming the inertia toward identity-challenging innovation (Garud and Karunakaran, 2018) that can encumber pivots, by sparking enthusiasm and fostering employee identification with the reorientation (Snihur and Clarysse, 2022) as documented by our findings regarding the awareness of the pivot experience in the response stage.

Finally, our study sheds light on the important matter of opportunity identification during crises (Alvarez and Barney, 2020). Despite the uncertainty surrounding any kind of business endeavor in times of crisis (Alvarez and Barney, 2020; Klein, 2020; Shepherd and Williams, 2020), our findings provide interesting insights into how firms, as they pivot, try to translate adversity into opportunities (Salvato et al., 2020) that match shifting market preferences with internal available resources. Previous studies reported that pivots may arise from unexpected events materializing in terms of either problems or opportunities (Berends et al., 2021; Kirtley and O’Mahony, 2020); however, our findings suggest that firms translate emerging problems into opportunities, matching internal resources with external needs, as they pivot to formulate strategic responses to crises. Building on Agarwal and Audretsch’s (2020) essay, by supporting firms to form opportunities from within, pivots may pave the road to recovery from crises, such as Covid-19.

Extending the current understanding of pivots

Our study documented the use of pivots in four firms that employed them as devices to strategically respond to the Covid-19 crisis. Our original perspective on pivots as strategic responses to crises can also offer novel insights into the emerging scholarly debate on pivots, by contrasting as well as consolidating some of the existing perspectives on the notion of pivot.

As mentioned in the early sections of this article, prior literature on pivots from the traditional Lean Startup approach (Ries, 2011) and the following sedimentation of the notion of pivot in the management literature (e.g. Kirtley and O’Mahony, 2020) falls short of considering two idiosyncratic aspects that characterize pivots during crises. These include the narrow time span available to firms to formulate a reaction to the crisis, and the uncertainty connected to the persistence of the situation of crisis. We believe our study contributes to extending the notion of pivots to situations

of crisis by providing relevant insights into how pivots, as strategic responses to crises, may overcome these two limitations. We also believe our study can enrich the current debate with original insights on pivots as a process.

The original Lean Startup approach (Ries, 2011) presents pivots as a major revision of the business model's underlying assumptions (Blank, 2013; Frederiksen and Brem, 2017; Ries, 2011) as the consequence of the falsification of a core hypothesis for the functioning of the business model itself. Emerging studies have consolidated the notion of pivot (Berends et al., 2021; Kirtley and O'Mahony, 2020) but also assimilated the decision to pivot to a reaction to unexpected events that have introduced discontinuities. In this sense, the Covid-19 crisis provided an example of how exogenous shocks brought about by crises can cause previously validated business models to no longer be viable (Andries et al., 2020), creating the need to act swiftly to identify alternative courses of action (Hermann, 1963; Pearson and Claire, 1998). However, previous studies assumed that firms could modulate the timing of their response when faced with unexpected events that lead to a pivot (Berends et al., 2021), or that firms pivot as the result of multiple and incremental strategic changes over time (Kirtley and O'Mahony, 2020). Through our study, we contend that pivots can provide a useful tool for any firm coping with the unexpected falsification of previously verified assumptions, such as crises, by enabling firms to move particularly quickly, repurposing existing resources (Contigiani and Levinthal, 2019) to seek new opportunities (Snihur and Clarysse, 2022), thus changing their course of action in a short amount of time. This view is also consistent with other previous accounts (Camuffo et al., 2020; Contigiani and Levinthal, 2019; Eisenmann et al., 2013; Ries, 2011), that recognize pivots as vehicles of experimentation that allow firms to learn about the outcomes of otherwise unknowable endeavors (Pillai et al., 2020). This definition suits well the need to quickly and cheaply probe the viability of given business model alternatives (Hampel et al., 2020; McDonald and Gao, 2019) in situations of crisis.

On the other hand, crises place firms in conditions of distress for unspecified periods of time (De Carolis et al., 2009; Feldman et al., 2022; Williams et al., 2017). In this sense, our representation of pivots-as-process, that encompasses a stage of retrospection meant to evaluate the persistence of the reorientation as the crisis unfolds, challenges Pillai et al. (2020) strict view on the irreversibility of the decision to pivot. Our perspective is consistent with the original formulation of pivots from the Lean Startup approach (Blank, 2013; Ries, 2011). In fact, viewing pivots as irreversible strategic decisions would compromise the flexibility they grant firms to probe their business model's fundamental assumptions. Our view is also consistent with Berends et al.' (2021) study, that describes how the decision to pivot supports firms in focusing on the short term to recalibrate temporal and relational commitments they can no longer meet.

The present study also complements previous research on the study of the link between business model experimentation and firm identity (Bojovic et al., 2020) and firm reputation (Sanasi et al., 2021). Our findings add to the array of contexts where firms may find themselves experiencing a discontinuity and face a need to experiment with their business model under idiosyncratic conditions. In particular, in situations of crisis, experimentation may lead to a sudden and profound strategic reorientation; the consequences of which may in fact lead to identity or reputational issues. In this sense, we lay a first stone for a connection between the experimentation-identity nexus, and the study of how firms may manage such profound transitions during pivots with employees (Snihur and Clarysse, 2022) and external stakeholders (Hampel et al., 2020; McDonald and Gao, 2019).

Finally, our study also provides novel insights for the inquiry of pivots-as-process. In particular, our study builds on the idea that it is virtually impossible to investigate such processes at one univocal level, as process data is complex and often includes multiple layers of analysis that are hard to disentangle (Langley, 1999). As a consequence, our findings suggest that pivots play out across

three distinct layers—that is, enactment, reflection, and awareness—that include separate, although co-existing, mechanisms that build the pivot-as-process across behaviors, cognitions, and emotions. In contrast, though ranging across a variety of different stakeholder groups and important issues, previous studies (Berends et al., 2021; Bojovic et al., 2020; Grimes, 2018; Hampel et al., 2020; Kirtley and O’Mahony, 2020; McDonald and Gao, 2019; Snihur and Clarysse, 2022) mainly considered pivots as processes taking place on one unique layer. In this sense, our study provides a novel lens to look at pivots, setting the groundwork for greater awareness in the inquiry of the micro-foundations of the pivot process from a behavioral, cognitive, and affective perspective.

Implications for practice

Our original conceptualization of the pivoting process also holds important implications for practice. Our representation of the pivot-as-process provides managers and entrepreneurs navigating crises with an actionable guideline on how to employ pivots to reorient their strategy and cope with adversity. When facing the exogenous shock brought about by a crisis, the firms we investigated employed pivots by repurposing and reallocating internal resources to match external emerging opportunities and ensure their survival. We suggest that approaching the crisis in an unstructured fashion and moving frantically from one option to another or, on the contrary, carefully planning to achieve the best possible results, may be inadvisable in the face of crises. Instead, carefully structuring pivots can provide firms with low-cost and fast vehicles of experimentation able to assess the viability of strategic reorientations that could guarantee firm survival during a crisis, or even sustained renewal.

Our distinction between the three stages of the pivot may also serve as a reference point for managers and entrepreneurs to articulate pivots-as-process. This process spans from the reaction to the shock and identification of a promising pivot opportunity, followed by developing the response to the crisis by conducting experiments on the newly found opportunity and learning from them, and ending in the evaluation of whether to maintain the strategic reorientation based on the unfolding events. Our findings can also provide insights to managers and entrepreneurs about the articulation of their response across the actions and behaviors, their cognitions and decision-making, as well as their perceptions and emotions.

Boundary conditions, limitations, and future research directions

The study contributes to the understanding of how firms use pivots-as-process as strategic responses to crises. However, the transferability of our findings is subject to certain boundary conditions. In particular, the unique though unfortunate setting of the Covid-19 crisis provided a “natural experiment” for empirical studies, with high potential for extension to situations of crises given its entity and breadth. However, crises, such as Covid-19, have an exogenous and unpredictable nature. Firms finding themselves in such crises experience the inability to calculate probabilities of occurrence of the unfolding events, “as these events are inconceivable, unscheduled, and unexpected” (Williams et al., 2017: 735). In this sense, the individual firm’s response to the crisis acquires particular significance, as opposed to the nature and trail of events that led to the crisis itself, and the firm’s capability to predict it. In contrast, some crises may also arise from an endogenous source, sometimes developing over time (Williams et al., 2017). This setting may make it easier for firms to prepare for when the crisis hits, preventing them from having to react swiftly to an exogenous shock and thus enabling them to set up their strategic responses to the crisis at its different stages.

We also cannot generalize our findings to all types of pivots. For instance, in the absence of time constraints, such as those provided by the necessity to rapidly respond to the exogenous shock brought about by the crisis, firms may decide to incrementally build up pivots to reach significant strategic decisions, as documented by Kirtley and O'Mahony (2020). In this sense, such pivots may not have to consider the possibility of reversing conditions. Thus, firms pivoting in non-crisis situations may decide to make more irreversible resource commitments (Pillai et al., 2020).

We believe our study's boundary conditions may also be the source of opportunities for future research. In particular, future studies might examine whether and how pivots may be employed in situations of more predictable and endogenous crises. On the other hand, while previous studies looked at pivots in the context of entrepreneurial endeavors that encompass distinguishing features compared to pivots as strategic responses to crises, future research may find it insightful to compare how pivots perform as a strategic response to different types of situations, including crises and "ordinary" circumstances of hypothesis falsification through experimentation.

Our study also presents limitations related to its research design. First, our data are mostly based on informant recollection, and it has been gathered in periodic milestones that spanned from the early stages of the pandemic to about 1.5 years after its beginning. Despite the efforts to build a longitudinal database that documents the unfolding of the crisis, how long the ongoing Covid-19 crisis will last is still unknown. Future studies may address this limitation by, on one hand, employing continuous datasets of primary and secondary information to overcome recollection biases, as well as monitoring the crisis until after it has ended. Second, while our multiple-case study research design enabled us to collect in-depth information about the cases analyzed, future studies may incorporate larger samples of firms under circumstances that required them to pivot and address the determinants of pivot performance during crises. Finally, our study is mostly based on for-profit firms. Although business model viability and firm survival are major concerns in for-profit firms, crises can have severe impacts on not-for-profit organizations as well, that transcend their business viability and may impact idiosyncratic types of stakeholders, such as beneficiaries, in multiple ways. Future studies may address how these kinds of organizations strategically respond to crises to sustain their operational viability.

Conclusion

The Covid-19 crisis provided an unfortunate—though unique—empirical context for investigating strategic responses to crises. Leveraging this unique setting, our study extends the current understanding of strategic responses to crises, transposing the concept of pivot from the entrepreneurship domain to embody a key device for coping with adversity. In fact, as new ventures experiment to discover that the core assumptions underlying their business model are falsified when confronting the market, crises act as exogenous shocks that suddenly compromise the viability of established business models, causing the falsification of previously verified assumptions. They require firms to act swiftly, under severe time constraints, although providing no information about the persistence of the conditions caused by the crisis. In the face of such unexpected events, our findings show how firms may try to turn adversity into opportunity through pivots and reorient their strategy either temporarily or permanently.

Our findings suggest that firms deploy pivots as a process, rather than as isolated events, as a response to the crisis. Such processes play out in three distinct stages: (1) the *reaction* to the exogenous shock, (2) the *response* to adversity, and (3) *retrospection*, to evaluate the results of the pivot and the persistence of the strategic reorientation. Our findings also showed that this process cannot be observed from a univocal perspective but needs to be considered as occurring across three different layers: the *enactment* of the pivot through actions and behaviors, *reflection* through

cognitions required to conceptualize the pivot, and *awareness that* describes the perceptual and affective dimensions of the pivot. Our study advances current understandings of strategic responses to crises and contributes to the emerging debate on pivots by extending the concept of pivot as a useful device to cope with the extreme uncertainty posed by crises.

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Note

1. The expression “last-mile delivery” indicates the final leg (or segment) in the transportation of goods, normally comprised between a distribution hub and the final destination of the shipment (Lim et al., 2018).

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