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# Corporate venturing in times of crisis: securing resources through legitimacy

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## Abstract

Accelerating innovation and creating new businesses have become a top priority for today's firms. Various corporate venturing (CV) modes have helped them achieve this goal. Yet, scholars and practitioners have noted the dynamic nature of CV initiatives that compete with other strategic initiatives for organizational resources and top management support. The fear that CV units face drastic cuts in times of crisis seems reasonable. To shed light on the resource dynamics and the CV units' responsive actions, we conducted an abductive study with 16 CV units to analyze the CV units' response to the COVID-19 crisis that transformed the world in the spring of 2020. Our findings show that an external crisis can unsettle a CV unit's internal legitimacy. In the adaption processes observed, we identify four different legitimacy-seeking mechanisms—*adjusting*, *sensing*, *focusing*, and *mobilizing*—used by the CV units to secure resources, support, and goodwill from relevant internal stakeholders. The mechanisms uncovered differ from previously studied strategies as they emphasize the dynamic nature of legitimation efforts. The mechanisms used are affected by the perceived organizational distress caused by the crisis and the CV unit's pre-crisis legitimacy. Drawing on the critical role played by legitimacy in resource allocation decisions, this study allows us to better understand theoretically and practically how CV is embedded in organizational settings and how CV units can preserve internal (financial) resources.

**Keywords** Corporate venturing · Crisis response · Legitimacy · Resource allocation

**JEL Classification** L26 · O31 · O32

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## 1 Introduction

Faced with a rapidly changing business environment, more and more corporations have adopted corporate venturing (CV) practices with the goal “to accelerate innovation and business creation” (Gutmann 2019, p. 123). However, CV practices are bound to change over time. Internal and external influences such as technological and demand factors, top management support, or corporate culture affect the CV units’ configuration and survival (Narayanan et al. 2009). In the extensively studied corporate venture capital (CVC) field, observations have highlighted significant dynamics. Key examples are the occurrence of different CVC waves (e.g., Dushnitsky 2012) or dynamics in isomorphism within CVC units that shift their focus from internal to external or back (Souitaris and Zerbini 2014). To explain these dynamics, researchers have commonly referred to the CV units’ dependence on internal resources for funding and supporting their activities (Zu Knyphausen-Aufseß 2005). Compared to business areas legitimized through their mere necessity, i.e., a controlling department, CV practices will have to continuously strive for acceptance and compete with other strategic initiatives for organizational resources and top management support (Reihlen et al. 2021). The internal dependencies become especially pronounced in times of crisis (Brem et al. 2023) when adverse internal and external conditions require the company to focus its resources and the CV units to adapt to survive in the long run. We thus investigate how CV units adapt and secure their internal resources during times of crisis.

We document CV units’ response to the COVID-19 crisis as part of an abductive study. We collected data from CV units of large corporations through interviews and supplementary material. In line with institutional and resource dependence theory (Bitektine 2011), we find that legitimacy judgments greatly influence internal resource allocation decisions regarding CV units. Emerging from our data, we thus take up the concept of legitimacy to analyze the crisis response strategies of CV managers. In the competition for internal resources and support, CV units strive to be perceived as meaningful and trustworthy by aligning with and contributing to the short- and long-term corporate strategy (Göcke et al. 2022). While CV units’ general legitimacy-seeking behavior has been documented, the literature lacks an understanding of the crisis-induced dynamics.

As crisis response, we identify four new legitimacy-seeking mechanisms used by the CV units to secure resources, support, and goodwill from the relevant stakeholders—*adjusting*, *sensing*, *focusing*, and *mobilizing*. The degree of adaption is thereby affected by the perceived organizational distress caused by the crisis and the CV unit’s pre-crisis legitimacy.

We add to the literature on CV strategies and their role in securing internal resources (for an overview, see Göcke et al. 2022). In addition, conceptualizing adaption processes as legitimacy-seeking mechanisms allows us to better understand theoretically and practically how CV is embedded in organizational settings and how these initiatives can preserve internal (financial) resources. Also, we reveal an interplay of a reduction in slack resources, the CV unit’s pre-crisis

legitimacy, and the purposeful legitimacy-seeking mechanisms CV unit managers use. This interplay serves as an explanation for dynamics in CV over time, as previously observed in the CVC waves (e.g., Dushnitsky 2012). Thus, we capture and highlight the effect of environmental changes on business activities (Davidsson 2020) and answer calls to investigate the temporal aspects of CV activities (e.g., Souitaris and Zerbini 2014).

## 2 Background: corporate venturing

CV is embedded in the larger scholarly and practical discussion around the entrepreneurial abilities of corporations, subsumed under the term corporate entrepreneurship (CE). CE is an umbrella term for entrepreneurial activities of established firms that strive to facilitate the realization of new ideas as part of their organization, including “a company’s innovation, renewal, and venturing efforts” (Zahra 1995, p. 227). CV activities represent one manifestation of CE (Kuratko and Morris 2018) that evolves explicitly around creating an organizational unit by a corporation aimed at creating new businesses within or outside of an organization (Narayanan et al. 2009). New businesses might “follow from or lead to innovations that exploit new markets, new product offerings, or both” (Sharma and Chrisman 1999, p. 19). Corporations use CV as a strategic instrument to tap into and capture ideas, knowledge, and insights outside or inside the organization to deliver innovation for the parent company (Birkinshaw and Hill 2005).

In contrast to other CE activities that take the form of strategic entrepreneurship, for example, strategic renewal or business model reconstruction (Kuratko and Morris 2018), CV activities are relatively comparable within different corporate settings. Common CV modes include internal hackathons, corporate incubators (Kruft et al. 2018), or spin-off activities, as well as corporate accelerators (e.g., Shankar and Shepherd 2019), CVC (e.g., Dushnitsky and Lenox 2005; Hill et al. 2009), or other forms of strategic partnerships with startups (e.g., Weiblen and Chesbrough 2015). Companies may pursue different objectives through their CV activities. Most importantly, they can have either a primarily strategic, a primarily financial, or a balanced goal orientation (see, for example, Miles and Covin 2002; Battistini et al. 2013; Gutmann 2019). CV modes share an association with a parent corporation providing financial, social, human, and symbolic capital and setting the course for the CV activities (Biniari et al. 2015). The type and configuration chosen for a CV unit are influenced by contextual factors (Narayanan et al. 2009; Biniari et al. 2015). First, there are environmental factors outside the organization’s control, such as technological change or changing customer needs. Second, CV characteristics are shaped by intra-organizational factors, including support from top management and corporate culture. Thus, CV also reflects corporate strategy in terms of “corporate goals, resources, skills, and priorities” (Narayanan et al. 2009, p. 63).

Due to contextual factors, CV activities could be more stable in terms of funding and are subject to change or closure over time. Scholars have addressed the evolving nature of CV activities based on different observations, especially in the CVC context. In the early 2000s, researchers focused on the funding volatility of CVC

programs that missed long-term commitment from their parent corporations (Birkinshaw et al. 2002; Gompers 2002)—due to the dot-com bubble, a quarter of firms investing in CVC programs stopped investing in 2001 (Birkinshaw et al. 2002). The notion of different CVC waves has been expressed later, with CVC investments rapidly growing and then reducing (e.g., Dushnitsky 2012). Corporations might change their activities by following market trends or free cash flow (Zu Knyphausen-Aufseß 2005). Further internal dynamics were observed within CVC units that shift their focus from internal to external isomorphism or back, which might be motivated by the pursuit of legitimacy towards different stakeholders (Souitaris and Zerbinati 2014). Although these dynamics have been observed mainly in the CVC context, the dynamics are transferable to other CV modes, which all depend on the resources provided by their parent organization (Biniari et al. 2015). Researchers seem to agree that challenging market conditions and reduction in slack resources are often detrimental to CV efforts (Narayanan et al. 2009). However, the dynamics that help CV units to secure resources remain poorly understood.

### 3 Theoretical foundations

#### 3.1 Securing CV resources through (internal) legitimacy

To explore new business opportunities through CV, CV units need to be equipped with the necessary financial, intellectual, and relational resources (Garrett and Neubaum 2013; Ma et al. 2016). Gaining and securing these resources requires CV units to reach legitimacy in their stakeholder's eyes (Zimmerman and Zeitz 2002; Wang and Wang 2017). Legitimacy is “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman 1995, p. 574). Although many different definitions and typologies exist that highlight specific elements of the concept of legitimacy, all definitions include the formation of a social judgment that affects people's actions toward an organizational entity (Bitektine 2011).

The importance of legitimacy in resource allocation decisions has long been acknowledged by scholars in organizational ecology (Hannan and Freeman 1977), resource dependence theory (Pfeffer and Salancik 1978), or institutional theory (Meyer and Rowan 1977). In the last years, various studies addressed the role of new venture legitimacy in attracting resources from different stakeholders such as investors, governmental institutions, or the broader ecosystem (Zimmerman and Zeitz 2002; Wang et al. 2017; Kuratko et al. 2017; Bouncken and Kraus 2022). A recent study by Göcke et al. (2022) applies the concept of legitimacy to structure research on resource allocation decisions associated with CE. For CV, internal legitimacy is of particular importance. In contrast to external legitimacy, internal legitimacy refers to the perceptions and judgments of an organization's insiders (Kostova and Zaheer 1999; Drori and Honig 2013). Thereby, organizational entities such as strategic programs (Frandsen and Johansen 2020), subsidiaries (Kostova and Roth 2002), or departments (Park et al. 2012) strive to be perceived as appropriate within

the organization's socially constructed norms and beliefs. Internal stakeholders are resource-holding audiences whose judgment is essential for the success of the organizational entity (Reihlen et al. 2021). The audience focus is essential because different institutional logics across audiences lead to different legitimacy judgments (Fisher et al. 2017). An audience's "shared system of meaning" (Reihlen et al. 2021, p. 4) shapes the interpretation of organizational practices in terms of their appropriateness and validity (Fisher et al. 2017). Contextual factors, such as the corporation's entrepreneurial orientation (EO), shape legitimacy judgments (Göcke et al. 2022).

In one of the most popular typologies of legitimacy judgments, Suchman (1995) differentiates between (1) pragmatic legitimacy—creating benefits for the stakeholders—, (2) moral legitimacy—aligning with the moral values of stakeholders—, and (3) cognitive legitimacy—behaving rationally and meaningful in the eyes of the stakeholders. The different dimensions again put the audiences' perception at the center of discussion, who then serve as gatekeepers for different types of resources, including financial, political, social, or organizational resources (Göcke et al. 2022).

### 3.2 Building and maintaining legitimacy

While the perceptionist's view focuses on how legitimacy occurs through the perception and judgment of the audience, one can also take an actor-centered perspective. Thereby, legitimacy occurs due to "purposive efforts of change agents" (Suddaby et al. 2017, p. 453) involved in a continuous process of social negotiation with diverse audiences (Scott et al. 2022). This perspective thereby assumes "that legitimacy can be mobilized deliberately through various mechanisms" (Reihlen et al. 2021, p. 5), which are under the control of the management (Suchman 1995). Process-oriented research thus focuses on identifying mechanisms by which actors strive to gain and preserve legitimacy. Göcke et al. (2022) identified legitimization mechanisms for CE entities to influence resource allocation decisions in their literature review. Similarly, Reihlen et al. (2021) build on literature in the field of new venture legitimization to identify legitimization mechanisms in the context of strategic venturing. Three overarching categories that come up in previous legitimization research include (1) identity, (2) associative, and (3) organizational mechanisms that can be broken down into different practices (see review by Fisher et al. 2017): Identity mechanisms (1) refer to the use of identity claims to gain legitimacy. Symbols, stories, and statements portray the impression of aligning with the stakeholder's identity expectations. Associative mechanisms (2) describe the use of relationships and connections to demonstrate approval by other relevant persons (e.g., top management ties) or organizations and thus establish legitimacy. Last, organizational mechanisms (3) refer to organizational structures and processes aligned with the standard expectations of those in the field. Exemplary mechanisms include external validation or internal milestones. Göcke et al. (2022) find mechanisms such as storytelling, certification, adherence to corporate norms and values, and others aimed at creating regulative, cognitive, normative, and pragmatic legitimacy in the eyes of corporate stakeholders. Reihlen et al. (2021) add time to their analysis and identify different legitimization

mechanisms relevant to advancing a strategic initiative from its definition stage to being integrated into corporate strategy through subsequent legitimation efforts of seeding, energizing, and prospering.

Following the inherent dynamism of this process view, legitimacy is not stable but needs to be continuously created or recreated (Suddaby et al. 2017). This is especially relevant for the crisis context of this study, as a crisis can unsettle previously taken-for-granted support and validity of existence. Besides gaining legitimacy, the purpose of legitimation can also be to maintain or regain legitimacy (Überbacher 2014). In the discussion around the dynamics of legitimacy, the concept of “legitimacy thresholds” is frequently referred to (e.g., Fisher et al. 2016; Nagy et al. 2017). Legitimacy thresholds embody distinctive milestones in the perception of influential audiences that, if passed, unlock further access to resources and growth, while if not passed, the existence is at stake (Zimmerman and Zeitz 2002). Depending on the conceptualization, previous researchers argue that there is only one (Zimmerman and Zeitz 2002; Nagy et al. 2017) or several (Fisher et al. 2016; Tracey et al. 2018) legitimacy thresholds in the development process of an organizational entity. The concept of thresholds assumes that legitimacy, the organization, and its environment are stable properties; thus, legitimacy is understood as a “commodity that can be possessed” (Suddaby et al. 2017, p. 458). However, when looking at it from the dynamic process view, in which legitimacy is continuously constructed between diverse social actors, legitimacy might diminish, and organizational entities might fall below a threshold. So far, however, research lacks a closer look at drawbacks or discontinuities in the legitimation process (Überbacher 2014; Reihlen et al. 2021).

At the same time, contextual factors can challenge the legitimacy of an organization (Überbacher 2014) as it occurs “as the outcome of mechanisms of contingency between the legitimacy object and its external environment” (Suddaby et al. 2017, p. 452). High-velocity environments that are shaped by dynamics in the market context, such as the emergence of new market categories, technological change, new regulations, or changes in the competitive environment, give rise to legitimation challenges of organizations (Navis and Glynn 2010, 2011; Überbacher 2014). For the setting of our study, we infer that a macro-level event such as an external crisis constitutes a challenge to the pursuit of internal legitimacy by CV unit managers as it impacts the internal audiences’ judgment of the CV activities’ cognitive, moral, and pragmatic validity.

## 4 Context and methodology

To find out how CV activities change in times of crisis, we conducted a qualitative study with 16 CV units by triangulating interviews and complementary information during spring 2021—one year after the COVID-19 crisis had its first major impact on the business world. While our setting is the COVID-19 crisis, our analyses and results emphasize generalized mechanisms transferable to other crisis-like situations of company distress.



## 4.1 Setting: the COVID-19 crisis

The emergence of SARS-CoV-2 in late 2019 caused enormous pressure on health systems, and the economic consequences resulting from measures to combat the virus led to an unprecedented major exogenous shock to people and companies worldwide (Baker et al. 2020; Bouncken et al. 2022). This led to high uncertainty for all business activity and intense financial pressure for the most affected sectors and companies (Evans 2020). The shock required companies to rapidly respond to changes in nearly all business activities, such as changing customer demand, frictions in supply chains, different policy measures to slow the spread of infections or turmoil in the public stock markets.

At the beginning of the crisis, many actors reacted by protecting the status quo, e.g., venture capital investors protecting existing portfolios (Brown et al. 2020) and firms cutting their spending (Salamzadeh and Dana 2021). Practitioners such as Pradeep Tagare (head of the \$250 million CV fund of National Grid) confirm the challenges for CV activities: "In that hunker-down scenario, all spending goes through a rigorous review, obviously, (...). One of the first things that gets hit is the venture capital part of it because that's an easy thing to step back on" (Davis 2020). Similar rationalization efforts have also been described in other crisis settings, such as the financial crisis of 2008 (Laperche et al. 2011). In addition, the pandemic challenged old business models and positively pushed innovations in the health sector (Kuckertz et al. 2020; Ebersberger and Kuckertz 2021). An opportunity-focused research perspective characterizes the COVID-19 crisis as an enabler of innovation (Sultan and Sultan 2020; Ferrigno and Cucino 2021) and new venture creation (Davidsson et al. 2020). First studies show that this is not only true for innovative startups that strove to exploit entrepreneurial opportunities in the crisis (Kuckertz et al. 2020; Manolova et al. 2020) but also for established firms adapting their business models (Kraus et al. 2020; Breier et al. 2021). This is especially relevant, as studies have found that in times of crisis, innovation promotes firm recovery (Hausman and Johnston 2014) and firm performance after the crisis (Devece et al. 2016). Accelerating innovation through CV activities might thus not only be a fruitful strategy in times of economic expansion and positive cash flow. However, it might also be highly relevant to overcoming an economic crisis. Yet, the financial distress during the COVID-19 crisis also limits the free cash flow invested in CV activities.

## 4.2 Data sources

This study is based on qualitative and quantitative data from spring 2021 collected from CV units of large corporations one year after the first major economic shock of the COVID-19 crisis.

The crisis has hit the countries and industry sectors to varying extents (Evans 2020). While travel had almost completely stopped, digital services (e.g., digital communication, online retail, online training, and learning) saw a major surge worldwide. We followed a purposeful sampling approach to account for these



**Table 1** Overview sample of CV units

Company pseudonym	Interview partner	CV type	Parent industry	Private/publicly listed
Alpha	Investment director	Corporate venture capital	Financial services	Public
Alpha	Manager platforms & acquisitions	Corporate venture capital	Financial services	Public
Beta	Lead for disruptive technology segment at CVC	corporate venture capital and other CV modes (non-traditional partnerships, new markets)	Transportation	Public
Gamma	Senior investment manager	Corporate venture capital	multinational conglomerate with a focus on electronics	Public
Delta1*	Head of marketing of incubator	Incubator	Multinational conglomerate with a focus on engineering and technology	Private
Delta2*	Senior manager CVC unit & co-founder startup partnerships	Corporate venture capital and venture partnerships	Multinational conglomerate with a focus on engineering and technology	Private
Delta3*	Venture partner	Venture partnerships	Electronics	Private
Epsilon	Principal CVC	Corporate venture capital	Mobility	Public
Zeta	Investment manager	Corporate venture capital	Mobility services	Private
Eta	Director partnerships	CV unit including partnerships, investments, trend scouting	Mobility services	Public
Theta	Director venture client platform	Venture partnerships	Construction	Public
Iota	Senior associate	Corporate venture capital	Energy & engineering	Private
Kappa	Investment manager	Corporate venture capital	Electronics	Public
Lambda	Lead CVC unit	Corporate venture capital	Mobility	Public
My	Investment manager	Corporate venture capital	Engineering	Private
Ny	Managing director	Corporate venture capital	Food and beverage	Private
Xi	Investment manager	Corporate PE-like majority acquisitions in startups	Media	Public

differences, selecting cases that fill different conceptual categories (Eisenhardt 1989). In our case, we specifically focused on incorporating globally active corporations from various industries more or less affected by the crisis. The resulting sample includes corporations active in the field of mobility that saw a drastic decline in revenues during the observation period, as well as electronics companies that even profited from people's changing lifestyles during the crisis. We also focused on incorporating different CV types (i.e., CVC, incubators, and others) and even different CV units within one larger corporation to make sure to take advantage of potential variations in their reactions. Furthermore, we included publicly listed and private companies as they might experience varying pressure from their shareholders. Additionally, we considered the age of the CV units (long-established, newly established) as this might impact their resources and expertise. We added cases until a large enough variety had been covered, and the interviews stopped to provide significant new information. For an overview of corporations and interview partners, see Table 1. Corporations and interview partners are anonymized and referenced in the paper following the Greek alphabet.

#### 4.2.1 Interviews

For each CV unit, we interviewed at least one program manager in their preferred language via ZOOM or Microsoft Teams and recorded the interviews with the interviewee's approval. The interviews took between 30 and 90 min and were transcribed afterward.

To capture the immediate adaption processes and changes that evolved throughout the first year after the beginning of the crisis, we interviewed the CV managers roughly one year after the first major economic shock of the crisis. We deliberately chose that point in time to ensure our interview partners can easily recollect the events and to allow for diverse dynamics to emerge and settle.

The conversation followed a semi-structured interview approach (Myers 2009). The content of the interview was thereby inspired by previous research in the field of CV, such as research on ambidexterity (e.g., Hill and Birkinshaw 2014), CV modes (e.g., Gutmann 2019), CV practices (e.g., Souitaris and Zerbinati 2014), or the role of external factors (Narayanan et al. 2009). The theoretical perspective of legitimacy theory was not revealed upfront or during the interviews, as we matched the theoretical perspective with our data not until after the second round of coding. Each interview began with a short introduction of the study's goal, which was also communicated upfront. In the next step, the interviewee was asked to briefly introduce his person and role in the CV unit. Afterward, we discussed the goal and motivation of the CV unit and its parent, the unit's general structure, and its embeddedness in the corporation. We also touched on more sensitive topics, such as the internal perception and support of the unit in general. In the interview's second half, we focused on adaptation processes resulting from the COVID-19 crisis. We covered both—the reaction of the parent company in general and the CV unit more specifically. It was differentiated between short-term and medium- to long-term adaption processes. Ultimately, we also asked for their outlook on the next few months. In general, we

found that with the help of some guiding questions, the interviewees could easily retrospect the last 12 months.

#### 4.2.2 Open-access data

Before and after the interviews, the interviewers collected additional open-access data about the company and the CV unit specifically to get a broader picture of the cases under analysis. The qualitative data from the interviews was triangulated with written quantitative and qualitative artifacts (Flick 2014) about the companies and their CV unit activities. The written artifacts include annual reports, statistics, and press releases from the companies and their CV units' web pages. We additionally collected stock market data on the economic development of the companies.

### 4.3 Data analysis

Given our goal to explore this empirical phenomenon and the general temporal embeddedness of CV activities, we followed an abductive approach. Moving “between induction and deduction while practicing the constant comparative method (Suddaby 2006, p. 639), abductive research focuses on “generating new conceptual views of the empirical world” (Suddaby 2006, p. 639). In general, abduction strives to generate and evaluate an explanation to understand an empirical phenomenon by applying existing theory to a new domain, thereby discovering the phenomenon more fully (Sætre and Van de Ven 2021). Therefore, it is especially suitable to address empirical phenomena not adequately explained by existing research and develop new explanations for the observations (Rigtering and Behrens 2021). The paper accordingly builds on existing literature in the field of CV, as well as internal legitimacy, to guide our analysis and better understand the observed responses of CV units to the crisis.

For the analysis of the interviews, we used the MAXQDA software to document and structure the coding process. We thereby combined inductive and deductive coding procedures to generate new insights in an abductive manner. We first started with a within-case analysis to ensure every case and its context is deeply understood (Eisenhardt 1989). Then, we started the first manual coding cycle following an inductive approach. As suggested by Corbin and Strauss (2014) and Gioia et al. (2012), we began with open coding and generated codes covering the observations in our cases and coding all transcripts accordingly. The open coding resulted in the first-order codes. Next, we used axial coding to arrange the codes into categories by linking and structuring them hierarchically. In the third step, the selective coding, we then went back to the existing theory and searched for a match with the observations from our study. From the data and the theoretical work, it emerged that legitimacy theory fits well to explain the observed empirical phenomenon. We then repeated the cycle and iteratively adapted our coding scheme until theoretical saturation was achieved and our most relevant categories could be integrated into the theoretical framework. The coding scheme is illustrated in Fig. 1. We follow prior

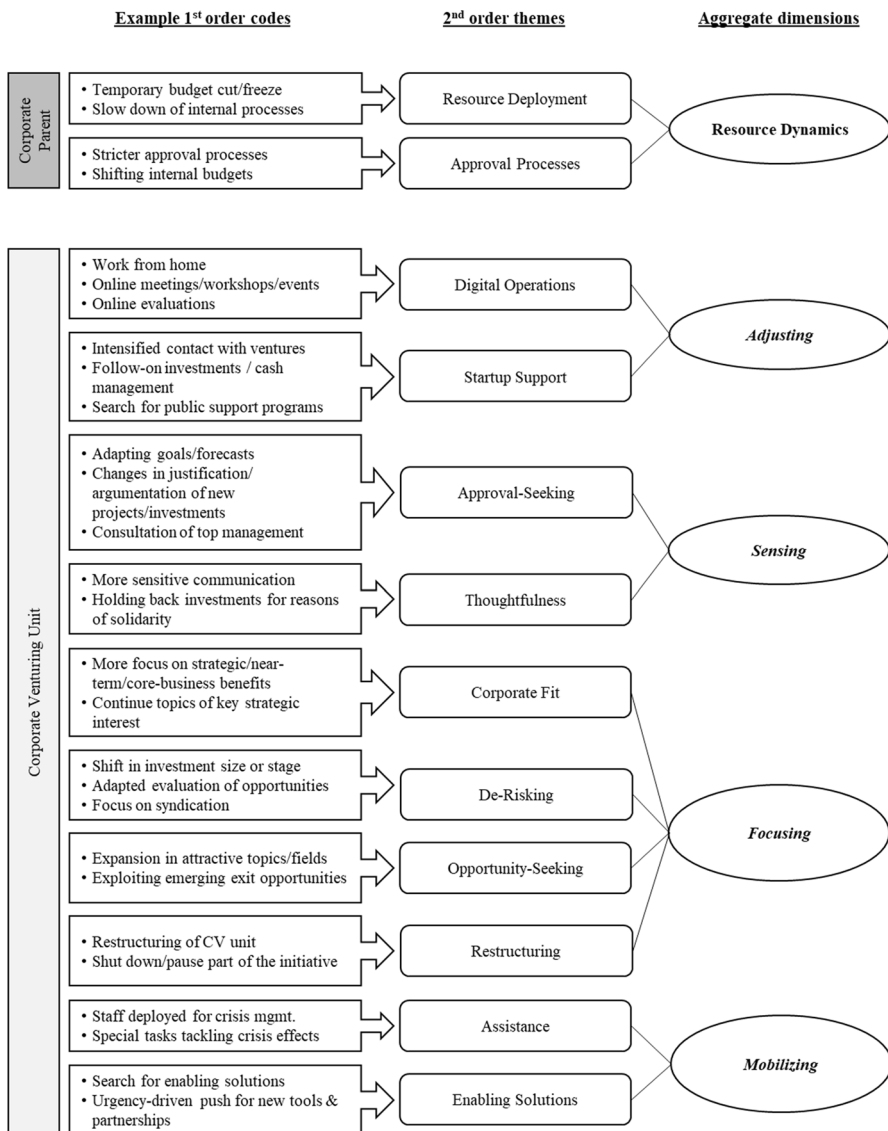
studies in their approach to presenting the findings (for example, Souitaris and Zerbini 2014). In the text, we use “power quotes” to illustrate our results (Pratt 2008). (Where necessary, quotes have been translated from the original language to English for this paper.)

This study follows a triangulation approach integrating qualitative and quantitative data, providing insights beyond what a qualitative or quantitative approach alone could achieve (Bazeley 2018). To explore the role of contextual factors in explaining the variety of crisis response strategies amongst the CV units, we consulted additional data we had collected. Subsequent to the coding, we conducted intensive cross-case analysis and integrated the findings from the quantitative analysis described below to refine emerging “themes, concepts, and possibly even relationships between variables” (Eisenhardt 1989, p. 541). The available quantitative data was used to generate valuable insights into how strongly the parent company was affected by the crisis. To do so, we collected data from annual and quarterly reports complementing the interviewees’ statements regarding the economic impact COVID-19 had on their business. Based on the combination of the interviews and the financial statements, we assigned the companies a category that best reflects the financial distress of the parent organizations: “profited”, “not seriously affected”, “affected”, “suffering”, and “extremely suffering”.

Analogous to the content analysis approach (Krippendorff 2012) used by Wang et al. (2017) to construct measurements for new venture legitimacy we further used the information from the interviews and publicly available data on the CV units to compile measures of the CV unit’s pre-crisis legitimacy: (1) The parent organization’s motivation to start the CV unit, (2) the parent organization’s dependence on innovation, (3) the CV unit’s resource autonomy, (4) the CV unit’s support by top management, (5) the CV unit’s internal promoter score. The findings section describes the argumentation for selecting these five factors in more detail. We then use the five factors to build a simple informative score ranging from zero to five by assigning one point each if (1) the parent organization pursues a strategic benefit through the CV activities (beyond a purely financial benefit), (2) the parent organization’s business model is highly dependent on innovative products or services, (3) the CV unit has a high degree of autonomy regarding the use of resources, (4) the CV unit’s perceived support by the top management is high, and (5) if it perceives strong internal support from diverse business units. The assignment of scores can be viewed in Table A1 in the appendix. Table A2 provides illustrative quotes substantiating the score assignment for each CV unit.

## 5 Findings

We describe the observed resource dynamics affecting CV activities during the crisis. We then focus on illustrating the patterns in CV units’ responses to the crisis, seeking legitimacy and securing resources within the parent organization. Figure 1 presents the coding system of the CV units’ crisis response. (Illustrative quotes representing first-order codes can be found in Table A3 in the appendix.) Next, we



**Fig. 1** Overview of the coding system and aggregate dimensions of CV units' crisis response

integrate the findings from the quantitative analysis and explain observed variation across the CV units' responses based on the impact the crisis had on the parent organization. In the last step, we present pre-crisis factors that (positively or negatively) influence the response mechanisms observed.

## 5.1 Resource dynamics during the crisis

The COVID-19 crisis came with a sudden exogenous shock that disrupted supply chains, changed customer demand, and led to a sudden stock market crash (Kuckertz and Brändle 2022). Consequently, companies introduced measures to face the (financial) uncertainty during the crisis. Before investigating closely how the CV managers responded to the crisis, the resource dynamics within the parent organizations are illustrated. In our sample, we found two aspects that changed regarding resource dynamics within corporations that affected CV units' activities: First, the resource deployment to CV units and, second, changes in approval processes for the activities. Regarding changes in resource deployment, we saw several parent companies that reacted by cutting or temporarily freezing budgets for CV unit activities. *"We found a good startup with a good fit, but because of COVID / because we didn't know what was going to happen in the coming months, we had to be careful with the money and since we are a strategic investor and not a financial VC, the value of holding it and making more deals is less than the value for the corporate of staying alive."* (Kappa). This type of cost-cutting also had indirect effects on the work of CV units, as several parent organizations reduced further business activities, which led to an overall slowdown of internal processes the CV units were dependent on.

In terms of approval processes, interviewees reported stricter budget limits and extended approval processes. *"[With COVID], we have to pay even more attention to costs and cash flows. As a result, many thresholds suddenly dropped to zero. And since then, we've had to suddenly approach the finance department, even with smaller amounts, and then you have to actually start again and explain to them: why are we doing this?"* (Theta). Similarly, interviewees reported shifts in internal budgets and, thus, the question of which unit has to pay for a new project.

The duration of changes in resource deployment and approval process highly varied between the cases. At the time of the interviews, roughly one year after the start of the COVID-19 crisis, most resource dynamics had settled and seemed better predictable in terms of future developments. Others had even returned to business as usual with their CV units.

## 5.2 CV units' legitimacy-seeking mechanisms in times of crisis

As the core of this study, we investigated how CV units adapted their operational and strategic business activities in response to the COVID-19 crisis to secure internal resources for their initiatives. We thereby reveal how CV managers engage in activities to create and maintain their units' internal legitimacy by influencing perceptions of appropriateness within their parent organizations. As illustrated by the second-order themes in our coding scheme (see Fig. 1), we identified several recurring strategies to preserve or gain internal legitimacy. We further aggregated these legitimacy-seeking strategies to identify different mechanisms CV units use in times

of crisis. The activities observed thereby illustrate that legitimacy is a central concern to CV managers in times of crisis.

During the data analysis, four main mechanisms emerged that resemble legitimization efforts to secure internal resources: (1) *adjusting*, (2) *sensing*, (3) *focusing*, (4) *mobilizing*. The exogenous shock of the COVID-19 crisis and the resulting (financial) uncertainty within the CV units' parent organizations triggered the legitimacy-seeking efforts.

### 5.2.1 Adjusting

What we found for all CV units under analysis were immediate reactions to the crisis that concerned the daily business operations of CV units: Transfer of daily operational activities to the digital space, working from home, canceling events and business trips, and shifting their activities into the online space (e.g., venture evaluation or due diligence). Additionally, in the short term, the priorities in their daily work shifted to protecting and securing current projects and startups they cooperated with. This was ensured through intensified contact with the teams and different kinds of support to help them navigate the crisis financially and strategically.

### 5.2.2 Sensing

To align with the parent companies, CV units altered and/or intensified their communication with their internal stakeholder in the top management. This included reassuring their plan with top management in regular meetings and presenting new forecasts and goals that needed approval. We further observed changes in the argumentation for CV projects: *"We did our first investment committee in September, [...] when the books all looked so bad. But what has helped is when we showed them very clearly, okay, the financial matters, [...] we clearly show the benefits for the Zeta group."* (Zeta).

Our interview partners also showed a high awareness that in a situation when people are laid off or working only reduced hours, companies are getting public loans to ensure survival, and everyone had to cut back their interests for the health and safety of others, the communication to the public needs to be adapted. The senior manager of Delta2 clearly expressed this sentiment in the following statement: *"We did not want to give the signal to the business units during this Corona crisis, and in Delta, so to speak, the belts are tightened everywhere here, and we are still walking around with loads of money. And that's why we restricted our communication [...]."* (Delta2).

### 5.2.3 Focusing

What stood out in the analysis was that nearly all CV units actively introduced changes to their CV practices to adapt to the new situation and align with their parent companies. With adaptations in venturing practices, the CV units strive to de-risk



their activities (e.g., smaller investments, focus on strong syndication partners, shifting priorities away from certain crisis-related fields), at the same time exploiting new opportunities (in new fields that profited from the crisis) in close coordination with the parent company, and focusing on the strategic benefit the parent company can derive from the activities (e.g., near-term rather than long term opportunities, closer relation to the core business, or high strategic relevance): *“So really, a lot of our focus over the last year has been okay, we can’t stop investing, but it’s just we can’t invest at the same levels that we historically had through this. So how do we prioritize and get the most bang for our buck in terms of, you know, not just return on investment, but really, what are the critical things we need to be investing in to be successful in the future.”* (Beta). Altogether, the fit to the strategic aims of the corporate parent became more pronounced while new opportunities were evaluated against relevant emerging new topics and close fit to the overall parent strategy.

Besides the resource provision, CV units such as Eta or Beta also reported restructuring efforts by their CV unit as a reaction to the crisis and the financial strain it had put on their parent company: *“The sub-unit ‘investments’ is no longer an issue. So we had always worked towards our own fund beforehand, that also looked very good, but the crisis has ruled the topic off the table.”* (Eta). By changing their organizational structure, they actively adapted to the internal resource scarcity: *“And also because we lost this growth perspective [...], our structure was basically a bit over-engineered. [...] And as a result, we have now adjusted the structure or are in the process of adjusting it.”* (Eta).

The restructuring effort was not led by corporate headquarters but followed a self-inflicted realignment of priorities. *“So, [...] with business unit N, we ended up deciding to shut down N, or hit pause on that, and that was a really significant investment for the company.”* (Beta). *“But I’ll say, you know, like the decision to stop business unit N was actually our decision because we’re at the corporate level, we understand what’s going on in the company.”* (Beta).

## 5.2.4 Mobilizing

CV units can also be of help to corporations during times of crisis. The entrepreneurial mindset of CV units that comes with agility and speed has proven useful in crisis management. We documented that CV unit staff had been deployed for crisis management tasks, as well as CV units assigned to come up with solutions tackling key business challenges during the crisis: *“We did a different type of project immediately after the crisis last year. So, we did projects that were much closer to the core business. For example, we very quickly, [...] built and developed a platform, which has led to [the cash flow of Eta being stabilized]. [...] We did that in a few weeks, for example. That would be something we would not have done before because it is actually a core business topic.”* (Eta). Our interview partner from Theta described a similar situation as the CV unit immediately started looking for solutions to address new challenges that came up during the crisis (e.g., shift scheduling, working from home, or paperless ordering). Digital solutions that had been out there already

and were discussed by the CV unit before thus received heightened relevance and quickly made their way into the company.

The occurrence with which we found the documented legitimacy-seeking mechanisms in the data set varies highly. *Mobilizing* mechanisms were only used by four CV units, while the occurrence of *adjusting*, *sensing*, and *focusing* mechanisms was very prevalent in the sample. Table 2 provides a first overview of the documented occurrence.

When comparing the four legitimacy-seeking mechanisms, we find different levels of invasiveness concerning the CV units' pre-crisis practices (see Fig. 2). The documented *adjusting* mechanisms focus on the changes in the work mode of CV units.

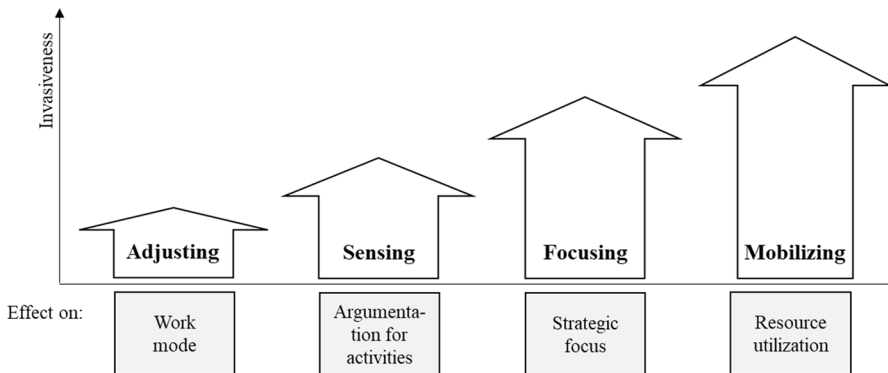
While *sensing* mechanisms require adapting the argumentation for certain activities, the described *focusing* mechanisms changed the CV units' strategic focus in what they do. Lastly, *mobilizing* mechanisms transform activities the CV units are carrying out, considering the available resources. To a certain degree, the invasiveness resembles the findings of Göcke et al. (2022). The authors' regulative legitimacy is a necessary baseline, similar to the *adjusting* mechanism. The *sensing* mechanism is related to normative legitimacy while *focusing* and *mobilizing* mechanisms resemble cognitive and pragmatic legitimacy aspects. Yet, previous literature, although describing parts of invasiveness aspects, has not used the terms so far.

### 5.3 The role of financial distress during the crisis

By using additional publicly available quantitative data, we were able to approximate and rank the financial impact the crisis had on the parent organizations' business. During the COVID-19 crisis, not all industries faced the same economic challenges, and some even profited from the crisis and its impact on consumer behavior (Evans 2020). Our results support the line of argumentation of previous studies that especially challenging market conditions and the consequential reduction in slack resources strain CV activities (Narayanan et al. 2009). Table 3 integrates the crisis response patterns of the CV units under consideration with the crisis impact categorization. Empty fields indicate that the interview partners did not explicitly mention this topic by. All CV units studied underwent operational adaptations because of the COVID-19 crisis (*adjusting*). CV units of companies under (extreme) financial constraints show more adaptations induced by the parent company regarding resource dynamics. However, they are also adopted by the CV units themselves as legitimacy-seeking mechanisms. In terms of our *mobilizing* mechanism, companies Beta and Eta were the only ones we found to employ assistance as a mechanism, and Theta and Delta3 offered enabling solutions to their parent organizations. *Focusing* mechanisms could be found vastly in all CV units that were (extremely) suffering from the crisis. We also find adaptations of CV units' activities in those companies that have profited from or have not been significantly affected by the crisis. However, these adaptations have an increasingly opportunity-driven character, such as focusing on new attractive fields. The *sensing* aspect has especially shown to be a concern for those CV units whose parent organizations were more affected by the crisis. For company Gamma, for example, we find numerous legitimacy-seeking mechanisms,

**Table 2** Quantitative occurrence of the documented legitimacy-seeking mechanisms in the sample

Number of CV units using the legitimacy-seeking mechanisms	
Adjusting	16
Sensing	11
Focusing	11
Mobilizing	4

**Fig. 2** Invasiveness of legitimacy-seeking mechanisms observed during the crisis

although the parent organization had benefitted from the crisis. Thus, there seem to be further (non-crisis related) factors influencing the CV units' response in times of crisis.

Considering the resource constraints of the parent organization also leads us to reflect on the resource demand of different CV modes. While partnerships with startups, for example, in the form of buyer–seller relationships, might entail smaller ticket sizes, CVC investments or PE-like investments typically require larger amounts of capital and a longer capital commitment. In contrast, an incubator program supports internal ventures, which means that the corporate parent is typically the sole or at least majority owner of the ventures. Depending on the stage of the ventures, the amount of resources required thus varies. However, when analyzing the response patterns, we do not find that the extent of legitimacy mechanisms used varies between the CV types. Some mechanisms might be easier to apply for certain CV units than others. Looking for enabling solutions during the crisis is prevalent in CV units focusing on partnerships with startups while offering assistance requires a more flexible organization of the CV unit, including employees with diverse know-how.

**Table 3** Overview of CV units' response patterns

Company Pseudonym	CV mode	Resource Dynamics		Mobilizing		Focusing				Sensing		Adjusting		Crisis Impact on Parent	Pre-Crisis Legitimacy
		Resource Deployment	Approval Processes	Assistance	Enabling Solutions	Re-structuring	Corporate Fit	De-Risking	Opportunity-Seeking	Approval-Seeking	Thoughtfulness	Digital Operations	Startup Support	Rating Category	Score: 1="low", 5="high"
Beta	CVC + Other	✓		✓		✓					✓	(✓)	✓	extremely suffering	3
Eta	Partnerships + Other	✓		✓		✓					✓	(✓)		extremely suffering	1
Zeta	CVC	✓	✓				✓	✓		✓	✓	(✓)	✓	extremely suffering	1
Ny	CVC	✓					✓	✓	✓	✓	✓	(✓)	✓	suffering	2
Theta	Partnerships	✓	✓		✓			✓		✓		✓		suffering	2
Lambda	CVC	✓							✓	✓		✓	✓	suffering	2
Kappa	CVC	✓					✓	✓				(✓)	✓	suffering	2
Delta2	CVC + Other	✓									✓	(✓)	✓	affected	5
Delta1	Incubator								✓			✓	✓	affected	3
Epsilon	CVC							✓			✓	(✓)	✓	affected	4
Alpha	CVC								✓	✓		✓	✓	not seriously affected	2
Mj	CVC								✓		✓	✓	✓	not seriously affected	4
Iota	CVC											(✓)	✓	not seriously affected	5
Ni	PE-like investments								✓			✓	✓	not seriously affected	1
Gamma	CVC						✓	✓	✓			(✓)	✓	profited	5
Delta3	Partnerships	✓			✓				✓			✓		profited	2

(20) The interviewees did not explicitly mention changes to their daily operations such as working from home in the interview, but based on the location of their offices we can assume that they were forced to switch their operations into the digital space due to local COVID19-restrictions.

Color coding in different shades according to the pre-crisis legitimacy score. The darker the lower the pre-crisis legitimacy score.

## 5.4 The role of CV units' pre-crisis legitimacy

The observed differences in the usage of legitimacy-seeking mechanisms the crisis effect cannot explain led us to look for additional patterns in our data. For this purpose, we examined additional information gathered during the interviews and from publicly available data sources, such as the motivation of the CV unit, its general setup, the venturing practices it implemented, etc. Drawing on previous literature in the context of CV, we identified several factors that are indicators of whether a CV unit is highly established within their parent organization or instead questioned: (1) The parent organization's motivation to start the CV unit, (2) the parent organization's dependence on innovation, (3) the CV unit's resource autonomy, (4) the CV unit's support by top management, (5) the CV unit's internal promoter score.

These factors draw on the view that legitimacy constitutes an asset of an organizational entity and thereby reflects a certain fit with environmental expectations, which is gained through structures, symbols, or practices (Suddaby et al. 2017). We chose the factors as indicators reflecting this fit with environmental expectations. The first indicator, the parent organization's motivation to start the CV unit (1), refers to the objectives prioritized by the chosen CV mode in financial, strategic, or a combination of both (see Gutmann 2019). While hybrid approaches are widespread (Battistini et al. 2013; Röhm et al. 2018), it is especially the prioritization of strategic benefits that provides a unique way for organizations to gain a competitive advantage as it offers insights into emerging technologies, opportunities for strategic partnerships, and a shift in the entrepreneurial climate within the organization (Birkinshaw and Hill 2005; Benson and Ziedonis 2009; Narayanan et al. 2009; Battistini et al. 2013). The parent organization's dependence on innovation (2) is closely linked, as especially in an ever-changing complex environment organizations need to strategically renew themselves to keep their competitive advantage by exploiting internal ideas and exploring external opportunities (Weiss and Kanbach 2022). It can thus be inferred that the relevance of CV is especially elevated in innovation-dependent environments. The third factor, a CV unit's resource autonomy (3), has a reflective nature, as the resource autonomy, both in terms of financial resources allocated as well as the decision rights that are assigned to the CV unit's management, implies a high faith in the CV activities performed. Under high degrees of autonomy, the CV units bear full accountability for achieving the mandate given by their parent organization (Birkinshaw and Hill 2005). CV is also highly sensitive toward intra-organizational support. Especially top management support (4) has been found to play a crucial role in CV (Narayanan et al. 2009; Göcke et al. 2022). Top management support determines the financial and social resources available to the CV unit, thus controlling the organizational conditions in which CV can thrive (De Bettignies and Chemla 2008; Hornsby et al. 2009; Garrett and Neubaum 2013). A similar effect was found for the support by middle management (5). Middle managers help internally promote CV activities and even organize scarce resources (Hornsby et al. 2002, 2009; Halme et al. 2012). We thus argue that by assessing the mentioned five factors for the CV units under observation, we can gain some insights into how

legitimate the CV units are perceived internally absent any impact from the COVID-19 crisis.

The scoring inferred based on these five factors (see data analysis) implies a high degree of simplification and thus needs to be interpreted as a tendency regarding CV units' pre-crisis legitimacy rather than a measuring scale. The assumption follows the understanding that legitimacy is a "commodity that can be possessed" (Suddaby et al. 2017, p. 458) and is linked to certain thresholds that are achieved when a fit with environmental expectations is reached (Suddaby et al. 2017).

Combining the CV units' response patterns and the score we derived indicates a positive relationship between the extent of legitimacy-seeking response mechanisms used by the CV units and their pre-crisis legitimacy. The pre-crisis legitimacy score is thereby indicated by the color coding in Table 3, from low (dark) to high (light).

The resulting table provides more information to explain why some CV units, although the crisis had no major effect on the parent organization, nevertheless chose to pursue a range of legitimacy-seeking response mechanisms, while others showed less response despite a relatively high crisis impact. A very illustrative example is CV unit Delta3, which responded to the crisis on several levels (*sensing* and *focusing* mechanisms), although the parent organization increased its revenues remarkably. A key issue here might be that the CV unit faced a newly appointed CEO and thus had to prove its relevance to gain internal legitimacy within the top management's perception. Interestingly, CV units Delta1 and Delta2 (part of the same corporate conglomerate as Delta3 but a different organizational entity) made only minor use of legitimacy-seeking mechanisms despite their parent organization being affected by the crisis. Both CV units, however, report a higher degree of internal legitimacy (pre-crisis) and thus have a lower need to prove their legitimacy during the crisis.

CV units Xi and Alpha did not see the necessity to employ manifold legitimacy-seeking mechanisms, although their pre-crisis legitimacy seems relatively low, probably because their parent organizations were not seriously affected by the crisis.

Theta, Zeta, and Eta faced a twofold challenge: a high crisis impact on their parent organizations and a low level of pre-crisis legitimacy. This is also reflected in some very drastic statements: "*And we really thought at first in March, April: Well, maybe that was it for CVC-Zeta, because with such a large [financial] gap and with what is being shown to us right now as an outlook, then something like Ventures is very first, which is somehow at least greatly reduced or restructured or whatever. It didn't come to that. [...] We felt that we were not wanted. This is a development that existed before COVID-19.*" (Zeta).

Further, other additional factors might affect the pre-crisis legitimacy and the legitimacy-seeking mechanisms, respectively. While Gamma is a CV unit that is highly established within a multinational organization that had profited financially during the crisis, Gamma's CV unit still performed a variety of legitimacy-seeking mechanisms. Thus, there might be other internal factors, such as corporate culture, that we could not control for with the information we had available and were considering. On the contrary, Lambda did not report many legitimacy-seeking mechanisms, although the parent organization was distressed during the crisis. Drawing on Reihlen et al. (2021)s sequential model of strategic venture legitimation, we assume that the relatively young

history of the CV unit, which was started just one year before the crisis, might have shaped the legitimacy-seeking mechanisms used by the CV unit.

## 6 Discussion and conclusion

Our study illustrates how, during times of crisis, CV units turn toward their intra-organizational stakeholders and try to secure resources and support for their activities. With our unique sample of 16 CV units, we identified four legitimacy-seeking mechanisms internally used by CV units in response to the crisis. We further discovered contextual factors internal and external to the organization that shape the CV unit's crisis response. In the following discussion, we will link our findings to existing perspectives in legitimacy literature and present generalized propositions for CV in times of crisis. The propositions we infer from our findings are summarized in a conceptual framework (see Fig. 3).

### 6.1 Mechanisms to maintain legitimacy

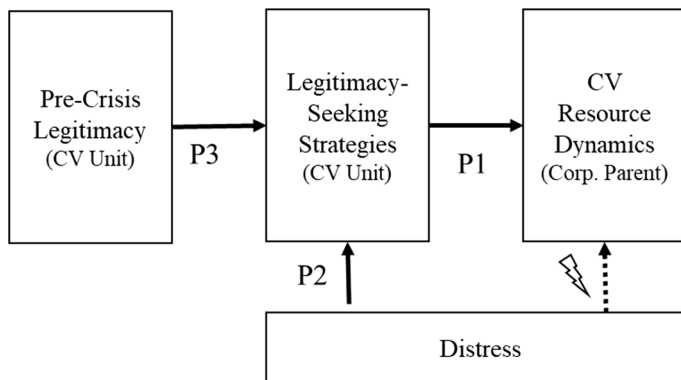
The impact of the external crisis triggered the CV units' management to take purposeful action to mobilize legitimacy and secure resources. Our study shows that due to the external shock, previously taken-for-granted internal support and validity of existence had become unsettled or at least uncertain. The purposeful action of CV managers is thus geared towards maintaining their CV units' legitimacy in light of the environmental turbulences the parent organization faces.

Grounded in the dynamic view, in which legitimacy needs to be created but also continuously recreated, our study identifies four mechanisms CV managers use in times of crisis to secure their unit's internal legitimacy. The mechanisms described highlight the social negotiation between several actors and levels of analysis inherent to the legitimacy-as-process perspective (Suddaby et al. 2017). The legitimacy-seeking activities described thereby constitute deliberate deviations from pre-crisis CV practices. The CV units resort to these legitimacy-seeking mechanisms as a response to the perceived uncertainty regarding the parent organization's resource commitment.

**Proposition 1** *In times of crisis, CV units employ specific legitimacy-seeking mechanisms to maintain or (re-)gain resources from their parent organization.*

The four identified legitimacy-seeking mechanisms—*adjusting*, *sensing*, *focusing*, and *mobilizing*—vary with regard to the extent they differ from pre-crisis practices. The *adjusting* mechanism depicts adaptations in the CV units' operative work mode triggered by the crisis. The *sensing* mechanism portrays the deliberate communication efforts of CV units with internal stakeholders and external audiences aimed at shaping the internal perception of their activities. The discourse thereby focuses on rationalizing their activities in light of the crisis towards the parent organization but also preventing the loss of internal support by not showing solidarity and alignment





**Fig. 3** Conceptual framework for CV in times of crisis

with the parent organization. The *focusing* mechanism portrays strategic rethinking performed by the CV units in which they question previous practices and structures considering the changed environment. Consequentially, we find practices aimed at reducing risks, increasing corporate benefits, pursuing new opportunities, and prioritizing core activities. The deviation from pre-crisis CV practices becomes even more pronounced in the *mobilizing* mechanism identified. Here, CV units become part of the internal crisis management, using their resources to assist the parent organization in maneuvering through the storm or providing solutions to emerging problems. The observed legitimacy-seeking mechanisms all serve to realign the moral, normative, and cognitive appropriateness of the CV unit within the parent organization. Induced by the crisis context, the mechanisms extend previous literature on internal legitimation mechanisms.

Existing literature has already highlighted different legitimacy-seeking strategies. An often-used categorization hereby draws on identity, associative, and organizational mechanisms (review by Fisher et al. 2017), which serve to gain regulative, cognitive, normative, and pragmatic legitimacy (Suchman 1995; Göcke et al. 2022). While this study focused on identifying adaptation processes during times of crisis, we find that mechanisms described in our findings resemble previous literature. For example, reporting is broadly accepted as a mechanism to secure internal support (Sykes 1990; Miller et al. 1991; McGrath 1995) and thus gain cognitive legitimacy (Göcke et al. 2022). As a first step the *adjusting* mechanism, is similar to mechanisms described as regulative, but also pragmatic legitimacy and benefit creation in a very simplified sense (Göcke et al. 2022). Yet, as especially the changes in work mode were driven through external regulatory changes, the *adjusting* mechanisms add to, but cannot be the core of legitimacy seeking mechanisms. The *sensing* mechanism described includes reporting processes. When seeking approval, CV managers use reporting mechanisms to portray their activities favorably or justify deviations from the expectations of internal stakeholders. However, the reporting does not establish legitimacy in the crisis but the swift change in how the activities are portrayed, which we subsumed under the *sensing* mechanism. Similarly, previous

literature identified compliance with the norms and values of a corporation (Binari 2012; O’Kane et al. 2015; Suchman 1995) as a mechanism to gain normative legitimacy (Göcke et al. 2022). Legitimacy-seeking behavior, we termed thoughtfulness, echoes aspects of this compliance. However, what sets the *sensing* mechanisms apart is the sensitivity toward changes in the external environment and an immediate adaptation in evaluating previously established practices. In particular, we show that CV managers follow their inner sense of what is appropriate in the new situation and quickly adjust to the changed sentiment within the organization, anticipating a potentially damaging effect if communication stays unadjusted.

Similarly, corporate fit or strategic direction is widely established in the context of CV (e.g., DeSarbo et al. 1987; Sykes 1990; Hill and Birkinshaw 2008; Behrens and Patzelt 2016). Previous research showed that CV activities more or less emphasize strategic fit depending on which objectives are prioritized—financial, strategic, or a mix of both (for an overview, see, for example, Gutmann 2019). Our *focusing* mechanism describes a dynamic version of previous legitimization efforts subsumed under a corporate fit or strategic direction that strive to build cognitive legitimacy (Göcke et al. 2022). It demonstrates how the core interests of the parent organization regain center stage in CV activities—be it de-risking, opportunity-seeking, or concentrating on core activities—and thereby constitutes a rejection of earlier, more explorative activities.

Lastly, our *mobilizing* mechanism offers new insights into how supportive behavior within an organization is employed as a legitimacy-seeking strategy. The assistance behavior found in our study demonstrates how the willingness to completely shift the scope of activities to an area that requires immediate support can strengthen the internal reputation. This finds resemblance in the concept of pragmatic legitimacy (Suchman 1995). The CV units’ willingness to help, for example, through enabling solutions to maneuver through the crisis, depicts social action within the parent organization. While social is a legitimacy-creating strategy for social enterprises (Moizer and Tracey 2010), our *mobilizing* mechanism echoes this perspective in the intra-organizational environment. The support offered creates awareness for the CV unit and appreciation by internal (resource-holding) stakeholders, which in turn helps secure the CV initiative’s internal survival. CV units might thereby strive to create pragmatic legitimacy in the eyes of internal stakeholders.

Overall, the four mechanisms—*adjusting*, *sensing*, *focusing*, and *mobilizing*—emphasize immediate shifts in the CV units’ internal legitimization efforts as a response to the crisis. Thereby, they act upon different types of legitimacy judgments.

## 6.2 The interplay of legitimacy, distress, and pre-crisis legitimacy

Our study also has implications for understanding the role of contextual factors on legitimacy dynamics. It supports prior research highlighting external factors as a frame of reference for legitimacy (Navis and Glynn 2010, e.g., 2011; Überbacher 2014). For internal legitimacy, the frame of reference is twofold: First, the external environment of the organization and, second, the internal environment within the

parent organization. Our study thereby adds to previous findings by showing that an economic shock in the extra-organizational context also raises internal legitimization challenges in the intra-organizational context. The findings suggest that the higher the perceived distress of the parent organization, the higher the internal legitimization challenge and the more effort CV units put into seeking legitimacy. CV units with parent organizations facing high distress during the crisis have shown a greater variety and intensity in legitimization efforts. We, thus, infer a proposition emphasizing the impact of distress on internal legitimization processes.

**Proposition 2:** *The crisis-induced distress on the parent organization affects the extent to which legitimacy-seeking mechanisms are employed by the CV unit.*

However, our study also shows that despite facing enormous economic turbulences, corporations showed commitment to their CV units. This does not mean that no CV unit was closed as a consequence of the COVID-19 crisis, but it might be due to a survivor bias in the sample of this qualitative study. Drawing on the concept of legitimacy thresholds (e.g., Zimmerman and Zeitz 2002; Fisher et al. 2016; Nagy et al. 2017), there seems to be a threshold of existence that none of the CV units in our sample had fallen short of. The concept of legitimacy, nevertheless, appears to be a fruitful perspective to explain, for example, the observation of different CVC waves (e.g., Dushnitsky 2012). Up until now, researchers have mainly argued about the detrimental effect of challenging market conditions and a reduction in slack resources on CV efforts (Narayanan et al. 2009). We illustrate that in fact financial distress (as triggered by an exogenous crisis) comes with legitimization challenges for CV units. However, we also show that other factors can counteract these forces, namely the purposeful usage of legitimacy-seeking mechanisms employed by the CV unit managers as well as certain pre-crisis factors. In their literature review on the legitimacy of CE, Göcke et al. (2022) refer to the “foundations” of CE legitimacy and raise the question of what psychological and sociological factors come into play in the dynamics of CE legitimacy. Our findings suggest that several crisis-unrelated factors establish a certain level of pre-crisis legitimacy for the CV unit, which takes effect in times in which the CV legitimacy is challenged. This is to some extent in line with the work of Reihlen et al. (2021) who also points towards different stages of legitimization. The five factors we evaluated to gain an insightful assessment of the pre-crisis legitimacy are of formative and reflective nature. This means that in part CV managers can actively strive to influence the unit’s internal legitimacy, such as the support from top and middle management. Other factors additionally relate to the establishment of the CV unit and its context, for example the parent organization’s motivation to start the CV unit or its dependence on innovation. This is in

line with seeding and energizing before a prospering relationship can be established (Reihlen et al. 2021). From what we were able to observe, we infer that a CV unit's internal legitimacy before the crisis shapes the crisis response of the CV unit. The analysis suggests that a lower pre-crisis legitimacy comes with a higher uncertainty regarding the internal resource commitment and thus requires more extensive legitimation efforts.

**Proposition 3:** *The legitimacy-seeking mechanisms employed in response to a crisis are affected by the CV unit's internal pre-crisis legitimacy.*

### 6.3 Theoretical contributions

Our study makes three main contributions to the theory. First, by underlining the interplay between the reduction in slack resources, the pre-crisis legitimacy of the CV unit, and the intentional actions taken by CV unit managers to seek legitimacy, we provide an explanation for the dynamics observed in CV over time, such as the CVC waves discussed in prior literature (e.g., Dushnitsky 2012). While research on entrepreneurship and strategy often tends to be inward-looking, changes in the external environment can have an extensive impact on businesses and entrepreneurial opportunities (Davidsson 2020). The exogenous shock of the COVID-19 crisis enabled us to observe how CV managers quickly adapt to changing internal and external circumstances. Thus, we were able to address the need to investigate the temporal aspects of CV activities, as Souitaris and Zerbinati (2014) suggested.

Secondly, despite the widespread application of legitimacy in the context of entrepreneurial ventures (e.g., Fisher et al. 2017; Kuratko et al. 2017; Fisher 2020), the concept has received limited attention in the CV literature. In this regard, our study aligns with recent papers that adopt a legitimacy perspective in related fields, including CE (Göcke et al. 2022) and strategic venturing (Reihlen et al. 2021). By conceptualizing CV managers' adaptation processes as behavior driven by the pursuit of legitimacy, we enhance our theoretical and practical understanding of how CV is integrated into organizational settings. Exogenous factors such as a crisis can erode legitimacy, and in certain circumstances, it can fall below a threshold of existence that questions the survival of the organizational entity. Yet, our findings show that legitimacy is an asset that can be gained, maintained, and re-gained through the purposeful efforts of organizational actors.

Thirdly, we contribute to the legitimacy-as-a-process perspective by identifying four mechanisms through which legitimacy-seeking behaviors emerge in response to

the crisis: *adjusting*, *sensing*, *focusing*, and *mobilizing*. These mechanisms expand upon existing studies that explore CV strategies and their role in securing internal resources (for an overview, see Göcke et al. 2022). The identified mechanisms thereby act upon different types of legitimacy. What sets these mechanisms apart from previously examined strategies is that they emphasize the dynamic nature of legitimation efforts (see chapter 6.1). In light of the crisis, established practices are questioned or rejected as organizations anticipate adjusted expectations from internal (resource-holding) audiences.

## 6.4 Managerial implications

Our study's findings provide valuable implications for CV unit managers and supporters. They illustrate different techniques to increase the internal CV legitimacy in times of crisis and offer a deeper understanding of how resource uncertainty, pre-crisis legitimacy, and the level of distress affect the response required from the CV unit. Legitimacy thereby provides a valuable lens for CV unit managers to analyze their internal standing in the light of external turbulences and plan their internal response strategy. The results also highlight the CV managers' need to continuously work on their units' internal legitimacy, thereby counteracting the risk of falling below a legitimacy threshold in times of turbulence. The *mobilizing* mechanism described also provides an additional line of argumentation as the flexibility of CV units can become an asset for corporations in times of crisis, helping them to tackle and overcome crisis-induced challenges. Top-level management can also explicitly use the flexibility with which CV units are equipped. At the same time, we advise top-level management to consider potential future financial constraints when setting up a CV unit: What are the expectations towards the CV unit? What resources and processes are needed so that the CV unit can fulfill the expectations? What are the top priorities that require continuous funding? What parts can be stepped back from or reduced in times of crisis?

Overall, our interviews show that CV units have become established throughout the business world, and even in times of crisis, corporations show their commitment to CV as an essential tool to spur innovation or even overcome a crisis.

## 6.5 Limitations and future research

With our study, we provide insights into of how CV units strive to secure resources in times of crisis. As our insights are bound to the specific context of the COVID-19 crisis, we invite scholars to validate and expand our model in other settings that evoke CV units to adapt their legitimacy-seeking behavior. The COVID-19 crisis was a unique crisis with the suddenness it hit the world, its varying effect on sectors, and the fast recovery many sectors saw. Especially the start-up world saw record-breaking investment volumes in the second half of 2020 and the following year, 2021. Trends that had been prevalent before were accelerated enormously during the COVID-19 crisis. The topics of innovation,

technological advancement, and digitization thus became an even bigger priority for many corporations. Other types of crises with different characteristics might thus evoke a different reaction from CV units and their corporate parents.

Since the interviews took place one year after the start of the crisis, we also cannot conclude the mechanisms' usefulness and the crisis's long-term impact on CV activities. A longitudinal study could thereby test our findings in times of crisis and document the long-term dynamics of CV activities.

We further invite researchers to take up the concept of internal legitimacy in the context of CV. Our study showed that legitimacy theory provides a useful theoretical perspective for future research that strives to understand the organizational embeddedness of CV units. One avenue for future research is to analyze CV units closing down explicitly. Although our sample included companies that faced enormous distress during the COVID-19 crisis, all CV units were still running at the time of our data collection. To counter this survivor bias, it would be valuable to verify whether legitimacy theory serves to explain the closing down of CV activities, including the role of legitimacy-seeking mechanisms. Studies in this field could also relate to the question of how the foundation of a CV unit is created in the first place versus maintained, shedding light on the exceptions described in chapter 5.4. The initial setup of a CV unit (resource autonomy, resources committed, personnel selected, etc.) already represents a manifestation of its initial legitimacy. While such factors are specified in the beginning, other legitimacy elements, such as support from management, are created throughout the unit's existence. To advance research in this field, scholars need to establish a common understanding of what encompasses or reflects internal CV legitimacy, allowing them to also measure the effect of various legitimacy-seeking mechanisms on legitimacy in general and the different legitimacy types more specifically. The scoring model used in our study to assess the CV unit's pre-crisis legitimacy could build a starting point to develop further assessment tools. In this context, we also want to highlight the importance of the firm's EO, representing "a frame of mind and a perspective about entrepreneurship that is reflected in a firm's ongoing processes and corporate culture" (Dess and Lumpkin 2005, p. 147). For example, Miao et al. (2017) showed that a firm's EO affects resource allocation decisions. This raises the question of how the construct of CV legitimacy and the larger organizational strategy-making practices reflected in a firm's EO interact. For example, Göcke et al. (2022) suggest that EO mediates the legitimacy of CE. Thus, we invite future researchers to shed light on EO's role and, more broadly, corporate culture's role in CV units' efforts to create and maintain internal legitimacy.

## 7 Conclusion

Our qualitative explorative study of 16 CV units and their adaptation process during the COVID-19 crisis suggests that an external crisis can unsettle CV units' internal legitimacy. Thus, the CV units use different mechanisms to

maintain their legitimacy and succeed in the internal fight for resources. The mechanisms used are affected by the perceived organizational distress caused by the crisis as well as the CV unit's pre-crisis legitimacy. Conceptualizing adaptation processes as legitimacy-seeking behavior allows us to better understand theoretically and practically how CV is embedded in organizational settings and how it can secure internal resources. The uncovered interplay of a reduction in slack resources, the CV unit's pre-crisis legitimacy, and the purposeful legitimacy-seeking actions of CV managers ultimately serve as an explanation for dynamics in CV activities over time, such as the CVC waves observed in previous literature (e.g., Dushnitsky 2012).

## Appendix

See Tables 4, 5 and 6

**Table 4** Pre-crisis legitimacy score assignment

CV unit pseudonym	Strategic motivation	Innovation-dependence	Resource autonomy	Top management support	Strong internal support	Pre-crisis legitimacy score
Xi					+ 1	1
Eta	+1					1
Zeta	+1	1				
Theta	+1			+1		2
Delta3		+1			+1	2
Ny	+1			+1		2
Kappa	+1	+1				2
Lambda	+1	+1				2
Alpha	+1			+1		2
Delta1	+1	+1		+1		3
Beta	+1	+1		+1		3
Epsilon	+1	+1	+1	+1		4
My	+1	+1	+1	+1		4
Jota	+1	+1	+1	+1	+1	5
Delta2	+1	+1	+1	+1	+1	5
Gamma	+1	+1	+1	+1	+1	5

### Assignment of points

- (1) The parent organization pursues a strategic benefit through the CV activities
- (2) The parent organizations business model is highly dependent on innovative products or services
- (3) The CV unit has a high degree of flexibility regarding the use of resources
- (4) The CV unit's perceived support by the top management is high
- (5) If it perceives a strong internal support from diverse business units.



**Table 5** Quotes illustrating the pre-crisis legitimacy score

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Alpha	<i>"On the one hand, all of our investments that we make and all of the projects that we carry out have to have some relation to the business areas, because those are simply the core interests of Group Alpha, of the value chain, of the business areas. Nevertheless, it goes beyond the classic strategic fields of the Alpha Group. [...] It's slowly changing beyond the core business. It's not the blatant disruptive stuff now because we always have to make sure we still have some connection to Grupe Alpha."</i>	<i>Industry: financial services</i>	<i>"And if it went beyond a [certain] volume, [the investment committee] was expanded by further board members from the parent company Alpha. So I think except for 1 or 2 members of the Alpha board we had to ask all board members for approval for each deal in addition to legal, compliance, tax, risk, accounting, etc..."</i>	<i>"We also had an incredible amount of attention from the entire holding board. We were then also embedded in the actual control process with a strategic dialogue and a planning dialogue."</i>	<i>"Well, I do believe that we had a coolness factor and that everyone was curious at first. [...] Well, when it was new and the [money committed] was announced and so on, we had a lot of attention. [...] Yes. But somehow I think this spillover, it didn't work out somehow, and I think there were sometimes more expectations than we could really achieve in a small team. And I think it's more the case now that there has been a shift towards [other topics]."</i>
Beta	<i>"And then, you know, we have a specific value proposition to our portfolio companies on the back end, which is to really using the resources of company Beta to help accelerate them, and then vice versa. So we play an active role in helping realize those kinds of strategic hypotheses related to the investment."</i>	<i>Industry: transportation</i>		<i>"Yeah. I mean, the corporate policy before making an equity investment requires pretty high-level approvals. I guess I don't know if I can get into all the details, but, yeah, it's pretty high executive type, executive council type level of approvals. A lot of it was, you know, unless it was something really controversial. A lot of it was pretty, you know, rubber-stamped. You know, you have thought of the deal thesis deeply at that point."</i>	<i>"So we collaborate with the business units, but we're not beholden to the business units in any way. And that was important, to allow us to be disruptive or even come up with ideas that might cannibalize existing core businesses or future growth."</i>

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
Gamma	<i>"What we want is really to—and now I will sound like everyone else -to foster innovation in areas that are adjacent to Gamma business, of course, we don't invest in startups that might be exactly the same area of Gamma because we don't need to invest in that but in technologies and startups that might create some synergy with us in the next two or three years."</i>	<i>Industry: multi-national conglomerate with a focus on electronics</i>	<i>"[We invest] off the balance sheet.[...] It is a pot of money already allocated. [...] When we finished this pot there will be another pot or another solution."</i>	<i>"[The CEO] is really committed to this activity. When we finished this pot there will be another pot or another solution."</i>	<i>"Ok this is quite difficult because we have twice a year, we have internal meetings [...] where the business units present to us their really confidential mid-range plan. [...] And that is really useful information for us because then we know they are going that direction or another direction and then we can decide if we want to invest in that area or not. At the same time especially in the country of our headquarter, there are a lot of conversations between the CVC fund people and the business units, as I said they are focused on their own development, on their own P&amp;L. They want to know from us what is happening in the wider market. They don't have the time to look at all the different subcategories. [...] So there is a lot of exchange of information, [...]."</i>
CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score

**Table 5** (continued)

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Delta1	<p><i>"I think we are a very important building block because we can bring together new business across all business areas or enable new products and services that are beyond the horizon of existing business units. And you mentioned it earlier: Of course, there are a lot of units, but they are often located directly in the business units, in the business areas and mainly take care of adjacent business, i.e. topics that are very close to the core. And we can afford to think three steps ahead for Delta and do things that a business unit may not be able to afford due to its strategy or its financial resources. And we actually see ourselves as an important link between the developing units, i.e. whether it is corporate research or the development department from a business unit, from a subsidiary and the market, in order to build this bridge there."</i></p>	<p><b>Industry:</b></p> <p><i>multi-national conglomerate with a focus on engineering and technology</i></p>	<p><i>"So for us it works like this: We calculate with a certain number of startups per year. Unfortunately, it is still the case that we are funded annually. We register our budget in advance and get our budget from a so-called growth measures pot, the incubator. [...] So everything comes from one pot, which is always very well filled for a corporate, I would say. And we register a number x, which is of course based on what we know from the past, but also from the needs that the current startups see, and then always reserve a certain part for new teams. [...]. And then again, we are very fortunate that we have a relatively high level of trust in Delta, that we usually get the budget that we register paid out without major cuts. And that has to be enough for a year."</i></p>	<p><i>"We have a steering committee with three Delta managing directors twice a year. But that's more of a dialogue. So it's not the case that they have to give us tough targets. They then tend to ask: "Can you somehow use more financial resources?" Or "What is your strategy? Shall we or can we support you somehow?" Well, they really reach out to us. Regarding the decision, we actually decide ourselves during the process whether a startup goes into spin-out. It is of course the case that the entire Delta management has to give the go."</i></p>	<p><i>"We are now actually doing a baseline measurement [of our net promoter score] in the group for the first time, which means that this is my subjective opinion: because I came from headquarters, I think I can assess it quite well. It was really bad for a long time, I have to tell you honestly. It was more like this: They have a colorful hall in X with lots of cool furnishings. But what are they actually doing? And that was also completely correct in my opinion because the results just didn't add up. So before 2019, it was very difficult. So if you now take these two target groups, I'd say senior management, [...]. So we're not where we want to be yet, but something is happening; we slowly go up the ladder. And when it comes to employees, we're also trying to clean up this playground image and "you can try it out and do it" and say it's tough business and if you have a startup with us, you can achieve a lot. It's good for you personally, it's good for your career."</i></p>

**Table 5** (continued)

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
	<p><i>"We have a few search fields that we are exploring for Delta, so we always work very closely with Delta's headquarters. As I said, it is important for us that the products and the technology do not have to be completely reinvented, but that there are touchpoints to the group [...]."</i></p>	<p><i>"And yes, based on our DNA, I would also say that Delta has always been brave in the sense that when I came to Delta, IoT and the Internet of Things were mentioned for the first time, nobody knew what that was at that time. And that was already being done back then. So I see this courage, now also with regard to the incubator, very strong and it is present in the management, even if we are very conservative in one way or another."</i></p>		<p><i>"There again we are very fortunate that we have a relatively high level of trust in Delta, that we usually get the budget that we ask for paid out without major cuts."</i></p>	
Delta2	<p><i>"Yes, we are a classic strategic [CVC], absolutely. Although, I would say [we invest] maybe not in a classically strategic way because the classically strategic CVC makes investments that are often very, very clear, very, very close to the core business. Sometimes we are financially driven. And are therefore, I would say, perhaps not purely strategic, but we still have such a financial component."</i></p>	<p><i>Industry: multi-national conglomerate with a focus on engineering and technology</i></p>	<p><i>"So we are fund-organized and we have to set up a new fund from the balance sheet once every three years, and this money is then put aside, allocated and we can dispose of it."</i></p>	<p><i>"But I think, as I said, our CVC unit is very old, very well-established, and is, so to speak, no longer an experiment."</i></p>	<p><i>"[...] so part of our KPI consists of asking the business units how big our impact on the innovation roadmap is. This is a part from which our salary is derived, so to speak. So of course not from all of them, but we get top marks from 80%/90% of the business units. [...] But I think as I said, our CVC unit is very old, very well-established, and is, so to speak, no longer an experimental field."</i></p>

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
				<p><i>"We have an Advisory Board above us, which is the steering committee of the CVC unit and this steering committee consists, among other things, of the C-Level of our group. So the CTO and CDO are in there, but sometimes there are also other management levels on the second level, top down."</i></p>	
CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Sup- port	Internal Support /
Delta3	<p><i>"So in a very classic way, I would say [we have] the role of an enabler. So when the innovation strategy is in place and it is clear what needs to be done, we can help implement it through intelligent search and sourcing of startups. It is very implementation-heavy, so to speak. But life is never black and white, which means that we ourselves see gaps in the innovation strategy or certain topics that are perhaps under-represented. [...] And that in turn informs the innovation strategy enormously and offers input."</i></p>	<p><b>Industry:</b> <b>electronics</b></p>	<p><i>"We just support the projects that are currently running and that is also reflected in the fact that we don't have a central budget, for example. So we have one for the unit and also for external support partners, for example, we have enough budget for that. But we don't finance pilot projects, we say that his department has to do it himself, a venture clienting unit of group B, for example, does it differently."</i></p>	<p><i>"We defined the [strategic fields], we presented them and they fit. That's already with on-board level backing and support in the sense of: "Look here, these are the fields on which we focus when it comes to startups or collaboration."</i></p>	<p><i>"So we've already [assessed] a net promoter score, of course. So actually internally, because we see ourselves as an internal service unit. That means that one of our biggest currencies, in addition to the business case, [...] is actually: How are we perceived internally? And is our support, what we do, and how we do it, appreciated, is it well received, will it be recommended? And so we did an NPS last year because we didn't know what would come of it either. It came out as NPS 63, which made us happy at first."</i></p>

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
				<p>"And now tomorrow, for example, we'll talk with the CEO / introduce her to two startups in detail, getting deeper into it because she wanted that. She just wanted to know: what exactly are you doing there? She has only recently joined the company, has inherited the topic a bit from the predecessor, so to speak, but is interested in it and just wanted to understand it better."</p>	
Epsilon	<p>"So actually really [we define success] exactly on the two dimensions: strategy and financial. So we need a good financial return and it should be venture-like. So if we do our 10x, then of course it's fantastic. [...] If, in the meantime, while we hold this company, we also manage to enable exciting partnerships with Epsilon, such as bringing the product into an Epsilon product, improving service with it, then that's actually the sweet spot."</p>	<p><b>Industry:</b> mobility</p>	<p>"We now have a classic GP-LP setup with Epsilon and a [...] fund. Epsilon is the only LP in this fund and the CVC unit is just a separate management company, (...). We are headquartered in Silicon Valley and have now created the flexibility to act really quickly and like a classic VC. This means that we no longer need a corporate decision in order to spend money, but we can decide within the venture group what our investments are like."</p>	<p>"We managed to raise a new fund during the crisis and to get the stamp 'approved' from the current board of directors. And we will get our follow-up fund approved next year, so you can definitely say that I think we have a good standing at the top management level."</p>	<p>"And in general, I would also say that our net promoter score is also largely good. There is, of course, always: We are not a tool for a business unit to achieve a very specific, strategic goal that a business unit can have: 'Oh, I like this company, I want you to invest in this because then I have a lever to improve my business contract.' We don't do something like that, we can't do that, it doesn't work in a venture [investing] either; [...] Long story. But I think the honest answer is, that of course you can't be friends with everyone if you make your own decisions."</p>

**Table 5** (continued)

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Zeta	<i>"It is very important to us that we have this market-driven position. That means we have our own deal flow and we look for things that we think could fit well strategically with Zeta and then we first approach the business units with them."</i>	<i>Industry: mobility services</i>	<i>"We don't have our own fund, which means we invest from Zeta's balance sheet. As soon as we agree internally on a startup, CVC internally, we go to an investment committee (IC) that has to approve the investment. They then do a capital increase with us, and we in turn do a capital increase with the start-up for the investment. That's how it works."</i>	<i>"At [the beginning] we had a CEO who was very supportive and as is always the case in a corporate: you have someone who acts as a patron."</i>	<i>"We are the ones who, in their eyes, are wasting millions in Silicon Valley, to put it bluntly. And also the hypothesis, this idea in general, that we do something like this, is already for many / so very critical questions sometimes come from very high up and so on. We always have to face that. [...] Yes, the other dimension is that we as a CVC and I think actually all CVCs have this problem more or less that at some point the question always comes up: "Okay, we accept that you do that. That's okay. But how does it pay into the group? We still haven't understood that." And that's a topic that's haunted us for a long time. And many CVCs do the development, so they are always in such a pendulum that they are sometimes a bit more strategic, sometimes more financial. And as a response, we have now aligned ourselves more and more strategically [...]."</i>

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
			<p><i>"Yes, exactly, the [budget] is allocated annually. It is allocated to the entire T-unit, i.e. technology unit, and we are entitled to a part of it."</i></p>	<p><i>"And the investment committee, [...] actually consists exclusively of internal Zeta stakeholders, in the beginning, there was even a very strong top management, so even the CEO was there, the CFO, CTO. So a very high line-up for some small investments in their eyes [...]. In the meantime it's a little bit / It's honestly said, maybe that's also a bit part of this change process, it's always a bit in flux. We sometimes don't know in front of each IC how precise the lineup will be at the end."</i></p>	
CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Sup- port	Internal Support/ Promoter Score



**Table 5** (continued)

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Eta	<p><i>"We are basically the unit for the visionary topics that are further away from the core business. There used to be a framework that was used a lot until recently, and that's McKinsey's horizons framework. [...] Basically, there is a distinction between innovation topics that digitize operational processes, the first horizon. We explicitly don't do that at all, i.e. we don't introduce or optimize any new IT tool. Then there's H2, which is basically an evolution of existing products and services, the second horizon. We're doing that to some extent, but actually, we're strategically located in the third horizon and that means building up completely new products and services, completely new business."</i></p>	<p><i>Industry: mobility services</i></p>	<p><i>"We have our own budget, which isn't particularly generous. But that's basically how we build MVPs and push the projects forward. And then there are different pots within the group which have also changed fundamentally in the context of the crisis. There used to be large pots that you could apply for in stages, and basically, we always got the funding in the past. This means that the project is being developed further, for example in the direction of a spin-off, and similar to a start-up, you get internal financing rounds."</i></p>	<p><i>"We are explicitly very free, which means we design our project agenda independently. Of course, there are inquiries about specific problems or projects, which we can then accept or not. In the end, of course, we depend on the board and when the board says, "You have to work on this or that topic now," then it becomes very difficult to get out of something like that. That doesn't actually happen, but in principle, it is of course conceivable. What is already happening is that issues that we think make sense are not being supported, so they are being shot down. It happens, but I think that's normal."</i></p>	<p><i>"Well, I think in the past we had a lot of fans within Eta who always thought it was great how fast we work, how differently we work. But there were also many who didn't take us seriously. There's a bit of the nasty word [German contest for young scientists] that's been circulating. That means there are the classic clichés, which cannot be completely dismissed, of innovation circus, colorful sneakers, hip appearance, but a lot of hot air and little competence behind it."</i></p>

**Table 5** (continued)

CV unit pseudo-nym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Theta	<p><i>"[What we are doing] is absolutely strategic because it's really about discovering new business models; new ways in which we interact with our customers. So absolutely strategic and innovative. And I mean, we also have different platforms now, where on the one hand we make more than a billion sales in the emerging market via such quasi-e-commerce platforms or in mature markets where we are used almost daily in 10,000 locations and more there too than a billion sales orders about something like this going on. Well, I mean, you can tell that we're achieving a certain degree of penetration in the Group and something where you really have leverage so that you can just somehow move up a gear."</i></p>	<p><i>Industry: construction</i></p>	<p><i>"Because in our industry you don't have a huge innovation budget; it's not pharmaceuticals or whatever or any other innovative company. That means you watch every penny."</i></p>	<p><i>"Exactly, we have the support [from our CEO]. I mean, he brought this CDO (Chief Digital Officer) in because he has a very high level of trust there. He also gave him a lot of freedom. But freedom and trust are great, it's important, but that's not always everything. Because if you want to penetrate the organization, then somehow you have to have the commitment, not only that he supports you with a glass of wine and a one-to-one, but that he also stands up and says: 'Guys, I mean, now everyone has to cooperate in this undertaking and not just our digital department.'"</i></p>	<p><i>"I would call [the internal support] mixed."</i></p>

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
		"So, historically, of course, we are a company that works in a very traditional way and where you probably don't have the greatest possible innovative mindset"	<p>"With such a venture client approach, where you can buy and test a solution or a service so to speak for a limited time, for two to four months, we have projects that cost us between maybe a few thousand euros maybe 40/50,000 somehow."</p> <p>"So somehow we have the requirement that it should somehow, as you said before, have a certain connection to the existing business. It should also have a certain short-term nature in terms of impact generation. Moonshots that are totally five years out or something now that we have a lot less backing left. At the same time, we actually got a free pass over the budget when it comes to pilots. That they just say we don't question every time you spend 10 or 20,000."</p>		"And of course, there's also a bit of frustration when you say: I mean, we've explained it to them three times and they still haven't understood it. Where you then have to say: Yes, fine, but we've explained it to the Head of Engineering seven times and he doesn't want to understand it. Why do we expect them to do it differently?"

**Table 5** (continued)

CV unit pseudo- nym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
Jota	<i>"Our investment area is of course clearly defined, it is strategically defined, so nothing will change about that. But we are financially driven there, so of course that also ensures that the added value is there."</i>	<i>Industry: energy &amp; engineering</i>	<i>"But we are a dedicated fund, I may say so. So we're not off the balance sheet. So that's not off the balance sheet, but we are a fund and that's just incredibly important that you have an allocated budget, otherwise, the discussion will start again with follow-up investments; [...]. Of course, at the end of the day that doesn't mean that if we didn't have any exits, that we have to go hungry at the end of the day, but of course, there is certain support. But the goal is to be financially driven and economically independent of it. So not economically independent, but earning your own money."</i>	<i>"It actually started with our Co-CEO, who returned to the group in 2017 and devoted himself to the topics of innovation and found that the business world, our economic world, is changing insanely: fourth industrial revolution, blablabla. And he has to make the company fit for it." "Well, organizationally we are perhaps in the second row, but the e-mails actually always go directly to the first row, so it has to be said that they are relatively high up. So of course, close to the board of directors. And valued too."</i>	<i>"[The internal support] varies a lot. It depends on who you're dealing with. [...] But at its core, it varies a lot. There are people who think it's super great and then there are people, who think: "What do these guys want, these quacks?" It's totally different, you can't pinpoint that. But actually, all people who are a bit open are actually super interested. You can also see that people in management positions, who work in the individual sub-units, who have contact with startups, who have contact with new products, very often bring us on board before they source any service from a startup because they want our eyes on it because they are afraid that they are now putting their trust in a company that cannot do what they actually promise them. And when in doubt, you don't even know whether the company will still exist in a year's time. And then we're happily approached to do a bit of DD, and that happens quite often"</i>

**Table 5** (continued)

CV unit pseudonym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Manage- ment Support	Internal Support/Promoter Score
Kappa	<b><i>"The criteria are still: It has to be a VC deal, it has to have a certain multiple or a certain return. And it has to fit strategically just as well. This means that we are not a VC or CVC that really only looks at the strategic fit, but we really have to assess both, i.e. both must be given, otherwise, we will not invest."</i></b>	<b><i>Industry: electronics</i></b>	<i>"[We invest] off the balance sheet. It still is."  "We don't have budget discussions. The budget is actually always there when the fit is strong enough. That was stupid in this case because it's just three deals at once. You have to prioritize and make decisions."</i>	<i>"And we are also a very young CVC. We've been around for about four or five years and[...] we are now facing a big change, because about a year ago, let me say, our partner company offered to buy Kappa and has now taken over Kappa. [...] That means we are now acting as a VC arm for both companies, or it is one company, but there are still two brands and this integration just takes time. They're just very, very large companies and that's why we're also in the middle of the big shift last year."</i>	<i>"Yes, well, in the beginning, I wasn't part of the VC, it was an incubator at the beginning, which means they actually wanted to support startups internally and then spin them off themselves. And they noticed relatively quickly that it doesn't work that easily, because people from the group have a different approach to such topics and also have a different mentality. And then transformed this arm into a VC. [...] And I would also say that the CVC unit has become more professional over the years because it just / It just took a while until, I would say, the setup fits in such a way that you even know: Okay, what do you actually want? Where do you want to go? What kind of investment do you want to make?"</i>

**Table 5** (continued)

CV unit pseudonym	Strategic Motivation	Innovation- Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Lambda	<p><i>"With our transactions, [...], we have a requirement that we always need an operational department that supports the transaction from a technical perspective and thinks it is good. So we don't make purely financial investments"</i></p> <p><i>"Of course, we work very closely with our business units in order to find solutions to problems and then to give startups a share in the core business, to find new technologies so that we can then, as I just said, develop our core business further. But that's not the only thing, we really try to look a bit beyond it; try to participate in other startups beyond our core business, with the background that the customer is still the focus. Because I think we want to try to offer the customer the best possible service, the best possible support. And ultimately we look beyond and don't just invest in our core business."</i></p>	<p><b>Industry:</b> <i>"We have mobility"</i></p>	<p><i>"We have an annual budget, which is replenished almost every year and the CFO himself published the number at the balance sheet press conference. We can for M&amp;A and venturing, but that is not divided, we can currently draw on &gt; XXX million annually for investments. So theoretically we have &gt; XXX million euros available for venturing activities."</i></p>	<p><i>"We actually still have the feeling that we are always in defensive mode when we present topics due to this committee situation. We always have to justify the investments. We have the feeling that, precisely because there are six people there, two of whom are in favor per se, we as the process owner, otherwise we wouldn't even join this body and the business owner, but then we actually have four critical questioners, who we then have to try to convince. [...]. And it's also difficult, maybe that's specific to us and that's why we're in the defense mode: It's not discussed in relation to function, but everyone gives their opinion on the business model and the potential of the startup. And that, in my view, is the wrong approach. [...]. And that's why we say yes, it's a long process, and I think we're developing well because I don't want to hide that either: it's more the overall organization that limits us and slows us down a bit."</i></p>	<p><i>"It's still an issue, venture capital in particular, which is still relatively young and fresh in Germany. In other words, many people at Lambda don't really know what venture capital actually means. From that, it is quite difficult to position such topics at Lambda. But I would say that we have already learned from the past that we are really willing to learn now and are really on the right track to position venture capital a bit better within Lambda. Of course, it was always quite difficult at first, as it is, because we actually had to repeat to ourselves what it actually means every day. And that is still quite difficult."</i></p>

Table 5 (continued)

CV unit pseudonym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
My	<i>"We see ourselves as part of the innovation strategy. It is essentially about learning things and actually learning about how markets or environments could change in the future. So what can be positive or negative for [My]. And accordingly to derive for us how we will have to position ourselves in the future or how [My] may have to position itself in the future or what new business opportunities there are. That is essentially the strategic pillar. So as I said, actually based on learning. Our VC arm itself has two goals that we combine and that is of course financial and strategic on the one hand. So, we are financially incentivized. At the end of the day, that's the only KPI that's really hard to measure. And in principle, we are trying to generate returns with this instrument, naturally in the top quartiles. But at the same time investing in fields that allow this strategic added value."</i>	<i>Industry: engineering</i>	<i>"We started the first fund a few years ago; it has a size of XX million euros. In terms of setup, we are our own GmbH, our own team, with really dedicated resources and actually with a great deal of independence." "There are no specifications. There is this XX million euro fund. Since it is linked to a term, there is of course an expectation that we will also invest in it."</i>	<i>"I think by now the management, the entire management team, i.e. the top 20%, have understood very, very well what we are doing, why we are doing it, and what the benefit is."</i>	<i>"I think it was actually critical at the beginning, because of course we take money, which every employee with sweat and blood also helps to generate and really put that into high-risk investments. And not every investment and not with every investment is immediately obvious why we are doing it or where the strategic benefit could lie. And of course, not all of these strategic bets work out. [...] With the employees it is actually still very mixed. But I think that's a process that every corporate VC has to go through because there's a lot of explaining to do as to why that makes sense. Or then just explain the topics that you do well and try to explain this strategic link again and again. But meanwhile, we are actually there / So we get incredibly broad support, get a lot of deal flow or more and more deal flow, also from departments that are on the road at pretty much every trade fair in the world and are incredibly well networked."</i>

**Table 5** (continued)

CV unit pseudonym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Ny	<p><i>"But knowing full well that our mission is not based in a humanitarian mission or something, but that we also know that we also believe in the business opportunities of this mission, because we know that it's a basic consumer need, what tends to get bigger in the future"</i></p> <p><i>"So we almost always have one or two synergy managers who make sure that our startups, our portfolio, and our core business do projects together. [...] And that is, so to speak, the only role where we really see added value, so to speak, based on the core business."</i></p>	<p><i>Industry: food and beverage</i></p>	<p><i>"Exactly, it's just a 100% subsidiary of NY. But because Ny is also 100% family-owned (...), it's a very informal construct, so to speak, since you basically just reinvest the company's profits and use the money from the balance sheet, so to speak, to position the company for the future."</i></p>	<p><i>"For all people who have already understood, so to speak, that we are not really differentiated with our product or do not have an eternal product-market fit, but rather have to focus on lifestyle and these are probably the leading personalities in the company, so to speak, of course, they understand the value add very much. Especially those who then have to stand out with this story, who also have to show, so to speak, and then quickly list what else we offer in addition to the product. Of course, they need us very much or are very happy that we exist."</i></p>	<p><i>"So there are certainly some people / maybe you could say all people who still think that company Ny essentially sells a product and not a lifestyle, naturally have an extreme difficulty in bridging what company Ny does and that that we might invest in a lifestyle."</i></p>



**Table 5** (continued)

CV unit pseudonym	Strategic Motivation	Innovation-Dependence	Resource Autonomy	Top Management Support	Internal Support/Promoter Score
Xi	"So we're really focused on maximizing value, focused on value and ultimately making money."	<i>Industry: media</i>	"We invest from the balance sheet, correct."	"And what I also have to say, the share price has already suffered significantly [before COVID]. We also had a CEO change in the group. And I do believe that it has gotten a little worse with COVID. [...] and that's why I might have to show on the capital market that we can [make a financial return through an exit], for example, because the share price has fallen again. And that worked."	<b>"No, that's actually a good relationship [with the internal business units]. So historically we are also a young company. [in our industry], the people who work here tend to be rather young. The whole group is young, quite dynamic. The group has also received several awards for this. That's why you don't have the classic core business thinking in any way, which then also separates itself in terms of content and somehow has the feeling: We are the gang and you are outside. It's always been a bit mixed and actually quite open."</b>

Bold text: a point is assigned (see Table A1 Pre-Crisis Legitimacy Score Assignment)

**Table 6** Quotes illustrating 1st order codes

Themes	Representative Quotes
<b>Resource Dynamics</b>	
Resource Deployment	
<i>Temporary budget cut/freeze</i>	<i>"In any case, there was a budget cut for the T department, for the technology department, which also affected us. That was a significant budget cut." (Zeta)</i>
<i>Slow down of internal processes</i>	<i>"We just noticed that Delta had shifted down a gear and that many resources for partnerships were not available at first. Then there was short-time work in many areas and accordingly many projects were parked for the time being. They were not terminated but parked. At first, there was a bit of a stalemate, so to speak, when it came to partnerships." (Delta3)</i>
Approval Processes	
<i>Stricter approval processes</i>	<i>"At the same time, we actually had a free pass over the budget, especially when it comes to pilots. That you just say we don't question every time you spend 10 or 20,000.[...] That changed a bit 12 months ago when we took a look internally and recognized with COVID we have to pay even more attention to costs and cash flows. As a result, many thresholds suddenly dropped to zero. And since then we've had to suddenly approach the finance department, even with smaller amounts, and then you have to actually start again and explain to them: why are we doing this? [...] But that's the kind of tension you have between the purchasing department, finance, and controlling." (Theta)</i>
<i>Shifting internal budgets</i>	<i>"Yes. So what we did is because we're really there / in the middle of the year I would have had to go to the CFO for every proof of concept and then I said to [the regional organizations]: "Hey, sorry, you have to fund these proofs of concept yourself. You just have to get the budget internally yourself." (Theta)</i>
<b>Adjusting</b>	
Digital Operations	
<i>Work from home</i>	<i>"And here it is also the case that, generally speaking, Alpha Group dealt with the situation very conservatively, leaving everyone working from home and only going to the office if it is unavoidable. And CVC unit Alpha has also completely followed the policy of the Alpha Group here, even though it is a separate unit." (Alpha)</i>
<i>Online meetings/workshops/events</i>	<i>"Ultimately, we realized relatively quickly that we had to completely rethink digital. Then we really sat down with the marketing team and tried to translate everything that we had planned to do in our change process, including change communication, into the digital world. Because we also quickly noticed: Now, simply doing an online team meeting doesn't work after all. And we have started to test: How does a two-day on-site workshop work if you split it up for two hours a day over a whole week [...]." (Delta1)</i>

**Table 6** (continued)

Themes	Representative Quotes
<i>Online evaluations</i>	<i>"Of course, certain things had also changed: You couldn't visit companies, you couldn't get to know the founders personally. Of course, there are other ways of assessing such a company. Ultimately what has shown is that within the last six months, we have had, I would argue, a significantly higher deal rate than we had before. Because things simply run much more efficiently. [...] at the end of the day, there is digitalization, which is now almost inevitably running through everything from signing contracts to "I just make calls with all sorts of people that I consider important", has just become infinitely easier." (My)</i>
<b>Startup Support</b>	
<i>Intensified contact with ventures</i>	<i>"And with our portfolio companies, [...], we tried to work a little more closely with them, which of course we've already done. But then, concerning the current crisis at the time, we just tried to provide a little more help with the network that the colleagues we brought on board then brought. And then we tried to put our companies, which were about to start a round of financing, in touch with the other VCs. Because it was already the case back then that capital was still flowing and VCs were still interested in participating in financing rounds, in exciting companies, of course." (Lambda)</i>
<i>Follow-on investments/cash management</i>	<i>"Some of them, they needed extra cash. You know we gave them some extra cash, made some follow-on investments to help them." (Gamma)</i>
<i>Search for public support programs</i>	<i>"Interviewer: So you did a bit of a check: How are the startups doing? [...]. Interviewee: Yes, exactly. And where do we have to take action? And what funding programs are there? What makes sense for the respective startup? And then we also took these measures and yes, in one case, for example, successfully and that was really very good." (Kappa)</i>
<b>Sensing</b>	
<b>Approval-Seeking</b>	
<i>Adapting goals/forecasts</i>	<i>"In fact, we adopted target figures a year ago, which we corrected slightly downwards again at the end of last year. [...] Because we simply noticed that in the current situation they cannot be reached. That means they got a little bigger. [...] Of course, our controlling takes very large risks into account, that's clear. I can't really say too much right now, but of course, they report that we are also very cautious, very conservative at the moment: What can we really implement?" (Delta1)</i>
<i>Changes in justification/ argumentation of new projects/investments</i>	<i>"We did our first investment committee in September, basically in the middle of the COVID-19 crisis. I think just before the second wave in the middle of 2020 when the books all looked so bad. But what has helped is when we showed them very clearly, okay, the financial matters, but what has now become very important again, what was already crucial before, but now more or less clearly stated is that we clearly show the benefits for the Zeta group." (Zeta)</i>

**Table 6** (continued)

Themes	Representative Quotes
<i>Consultation of top management</i>	"And then there was a relatively hard stop, basically in mid-March, [...], so that we were informed that our budget had been reduced a bit. [...] But then also the hint a...] not to make any new, active investments. So in Q2 we were basically on hold as far as new investments were concerned. [...] But then at the end of June, we were back in the executive board committee with new topics, 2020. And from then on things went quite normally as far as investment activities were concerned. We then had to [...] position ourselves again in the group so that we can say we'll continue with the support, but from both the CEO and the CFO." (Lambda)
Thoughtfulness	
<i>More sensitive communication</i>	"Yeah. I mean, everybody knew people that were getting laid off. So it was, you know, there's a personal connection there too. So I would say it wasn't like a corporate mandate related to new investments, but just being sensitive to the things that people were going through.[...] So you know, when you make investments there's kind of this exuberance and kind of there's like a lot of enthusiasm about it, and there's kind of a tone that is made in these announcements about investments. And so part of that, too, is, and this was, I would say, applies to ventures, but applies that a lot of other things in the company where maybe we're doing cool stuff in other parts of the company that was maybe downplayed a little, because of [...] people losing their lives because of the global pandemic and our customers, you know, really struggling. So, you know, it was really I'm sure, you know, corporate communications overall, that was kind of that's been the overall posture, and that certainly applies to us. And so, you know, being cognizant of whatever our customers or passengers, or employees, you know, everyone was struggling. So, you know, continuing to innovate, but maybe not necessarily having the public-facing posture have the same tone." (Beta)
<i>Holding back investments for reasons of solidarity</i>	"And of course also by immediately sending a sign of solidarity towards the organization, so that we too, so to speak, reduce our investments at the time." (Ny)
<b>Focusing</b>	
Corporate Fit	
<i>More focus on strategic/near-term/core-business benefits</i>	"So really, a lot of our focus over the last year has been okay, we can't stop investing, but it's just we can't invest at the same levels that we historically had through this. So how do we prioritize and get the most bang for our buck in terms of, you know, not just return on investment, but really, what are the critical things we need to be investing in to be successful in the future? So I would say that that thesis kind of applied in the CVC unit Beta sense as well." (Beta)

**Table 6** (continued)

Themes	Representative Quotes
<i>Continue topics of key strategic interest</i>	<i>"We then made a decision in the summer [of 2020] to make a very, very large deal in the double-digit million range. That was then done, after practically two deals had been canceled, two maybe smaller deals, somehow two or three million each, to then making a deal with a very, very large volume, which fitted even better strategically, so it was then decided, we absolutely have to do it. That means that there were other considerations: how big is the risk? That's why it's hard for me to always say: black or white, or hard to say all deals were canceled, because in the end, if you find an investment and you see it is such a good match and that startup performs extremely well, then you can make investments even in times of crisis, even from a corporate point of view. [...] So it really depends on the deal, the type of deal, the size of the deal, and the importance for the corporate to go into this field now." (Kappa)</i>
<b>De-Risking</b>	
<i>Shift in investment size or stage</i>	<i>"We simply made fewer investments in 2020 and we also made early-stage, earlier-stage deals because that was of course the better strategy for us overall, simply minimizing the dollar risk. But we have a lot of topics where we can then do a double-down in later years. And finally, so to speak, balanced out the risk a bit from this phase." (Epsilon)</i>
<i>Adapted evaluation of opportunities</i>	<i>"Yeah, so one of the key points that we emphasized after Covid was we don't know how the investment environment is going to be in the short term. So we don't invest if the company after the investment round has a cash runway of at least worst case 18 months. So before we could accept shorter-term runways of six months because the runway was there anyway. We had no visibility of what was going to happen so we can only invest if the company can survive 18 months, better 24 months without an extra cash injection. That was a clear change in our investment strategy besides the focus areas." (Gamma)</i>
<i>Focus on syndication</i>	<i>"Another thing that has changed, that is very important, we now focus a lot on who is the lead investor. So since we are only a follower, when Covid struck we gave a much higher weight in our analysis on who is going to be the lead investor, because in very difficult times you need a very experienced pair of hands to actually drive the company. So startups and VCs that have a track record in successfully managing the companies even more, they have always been an asset, but in difficult times they've become a survival asset. So a VC that has a clear track record of exiting and making money, they are our go-to. Companies like Lakestar, Atomic, Atlantic Bridge, they can partner with people that are so experienced, so we know if they make the investment in a startup they will help them out until ...if they can not save a company it means the company cannot be saved by anyone else. [...] So the lead investor has become together with the cash runway the two big topics in our decision making." (Gamma)</i>

**Table 6** (continued)

Themes	Representative Quotes
<b>Opportunity-Seeking</b>	
<i>Expansion in attractive topics/fields</i>	<i>"Thematically, a few new things have actually opened up. So actually in the area of hygiene concepts, i.e. worker safety: How can you ensure that the distances are maintained in the factories, that the shift planning is adjusted accordingly, and that employees are also informed better, faster, and more transparently if, for example, a shift is canceled? That they don't have to drive there first to find out on the spot: Oh, the factory is closed! So communication and such, blue-collar communication in particular is an important topic. And everything to do with New Work. So digital whiteboard collaboration and multimedia tools, all the engagement tools, and so on. So many software topics now too, which have gained a lot of momentum thanks to the adapted working conditions that all employees also have." (Delta3)</i>
<i>Exploiting emerging exit opportunities</i>	<i>"So the speed with which we have now also sold [one of our portfolio companies] was of course also driven by the fact that the company benefited to some extent from Corona. If you sell [hygiene-related products] in a corona situation, it tends not to be a bad idea. But the speed with which we then sold it was probably a bit faster than if that weren't the case." (Xi)</i>
<b>Restructuring</b>	
<i>Restructuring of CV unit</i>	<i>"Basically because of the changed project portfolio, because we did these projects closer to the core business and sometimes actually acted a bit like an in-house consultancy, it just showed that we have more of a project portfolio made up of different projects, some of which are very close to the corporation that our structure may not be the best. And also because we lost this growth perspective for the time being, our structure was basically a bit over-engineered. Because it was designed for a larger structure. And as a result, we have now adjusted the structure or are in the process of adjusting it." (Eta)</i>
<i>Shut down/pause part of the initiative</i>	<i>"So, you know, kind of long-term with, you know, with business unit N, we ended up deciding to shut down N, or hit pause on that, and that was a really significant investment for the company. So that was all our work in this specific new segment. [...] We really had obligations to other parties, but a lot of the internal-only stuff stopped or slowed down." (Beta)</i>
<b>Mobilizing</b>	
<b>Assistance</b>	
<i>Staff deployed for crisis mgmt</i>	<i>"But then I say, when Covid really hit and the industry basically got shut down, you know, kind of immediately, I would say a large part of the team was immediately redirected into Covid-response initiatives. Actually, some of the group went to immediate, like, Covid-response. How do we 3D print, you know, face shields and that kind of things. So there is already there is a disruption in kind of our normal flow just from that, and then some of the team immediately, you know, was more focused on Covid-response. How do we, you know, so company Beta, actually, we just license some technology we built for, anti-virus measures and stuff like that. So some of that work came out of the team as well. So that was kind of some of the immediate shock waves." (Beta)</i>

**Table 6** (continued)

Themes	Representative Quotes
<i>Special tasks tackling crisis effects</i>	<i>"We did a different type of project immediately after the crisis last year. So we did projects that were much closer to the core business. For example, we very quickly, because we are simply much faster than other areas, we built and developed a platform, which has led to [the cash flow of Eta being stabilized]. There wasn't that before, the possibility. We did that in a few weeks, for example. That would be something we would not have done before because it is actually a core business topic." (Eta)</i>
Enabling Solutions	
<i>Search for enabling solutions</i>	<i>"And our reaction was actually and the trigger was somehow from a business area, where they said: 'We now have a lot of new challenges with COVID. We have much higher uncertainties, planning uncertainties regarding supply-chain, and logistics. We don't know which employees actually come to work or the employees work from home and we don't know how well that works.' And then we said: 'We actually have completely new challenges, new problem statements out there. Let's create a COVID search field for startups.' And we launched this COVID program very quickly, actually within a few days with our partner. We had the idea, they launched it, let's put it that way. And have generated an incredible amount of new attraction internally." (Theta)</i>
<i>Urgency-driven push for new tools &amp; partnerships</i>	<i>"So what on the software aspect and tool aspect, what I called business enablers at the beginning because we were definitely able to do a few projects that would otherwise probably not have come so quickly due to this urgency and the situation. [...] The business enablers, that was just urgent. They were probably kind of five years behind others or behind where you could be." (Delta3)</i>

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**Data availability** The datasets generated and analyzed during the current study are not publicly available to secure the anonymity of our interview partners but are available from the corresponding author upon reasonable request.

## Declarations

**Conflict of interest** The authors have no competing interests to declare that are relevant to the content of this article.

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