

Entrepreneurs' preference for corporate venture capital – The influence of exit strategies and resource requirements

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Abstract

Purpose – Literature on entrepreneurial finance has long overcome the view of an investor as a sole provider of financial capital. Entrepreneurs need to consider more aspects when deciding on an investor. Especially the depiction of corporate venture capital (CVC) investors has long highlighted advantages and disadvantages compared to independent VC (IVC) investors. The authors investigate what drives entrepreneurs' preferences for CVC relative to IVC and thereby focus on two key issues in the entrepreneur's consideration – the role of resource requirements and exit strategies.

Design/methodology/approach – The data were collected in an online survey that gathered information on several characteristics of entrepreneurs and their ventures. The resulting data set of 105 German entrepreneurs was analyzed using logistic regression and revealed important drivers for entrepreneurs' investor preferences.

Findings – The study's findings confirm that the venture's resource needs, specifically the need for marketing resources and access to the corporate network, which play a significant role in the decision on whether a CVC or IVC investor is preferred. Moreover, the analysis debunks the hypothesis that entrepreneurs view a CVC investment as the first step toward acquisition. However, those entrepreneurs striving for an IPO are less likely to prefer CVC.

Originality/value – The study expands the literature on CVC attractiveness and specifically considers the entrepreneurs' intentions and needs. The results confirm but also debunk some widespread perceptions about why entrepreneurs choose to pursue financing from a CVC investor.

Keywords Corporate venture capital, Investor attractiveness, Entrepreneurial decision-making, Resource requirements, Exit intention, Entrepreneurial finance

Paper type Research paper

Introduction

Equity financing is the number one type of financing for high-growth ventures (Paul *et al.*, 2007). The most money is thereby invested by independent venture capital (IVC) funds that invest money from limited partners in exchange for equity (CB Insights, 2022a). However, corporations investing assets directly in privately held start-ups as corporate venture capital (CVC) has become the second-largest source of funding for entrepreneurs (CB Insights, 2022a;

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Dushnitsky and Lavie, 2010). From Intel Capital, Novartis Venture Fund, to GE Ventures, CVC has become a common form of financing start-ups in all industries and through all stages (CB Insights, 2022b).

While both types of financing—IVC and CVC—provide large amounts of financing, CVC is commonly rated as less attractive when compared to IVC (Bengtsson and Wang, 2010) and CVC investors often struggle to get the investments they want (Gompers, 2002; Katila *et al.*, 2008; Santos and Eisenhardt, 2009). As a reason for this, previous literature has highlighted the investment motivation of CVC investors which often goes beyond the generation of financial return but also includes realizing strategic benefits for the corporation such as securing technological know-how (Dushnitsky and Lenox, 2006; Katila *et al.*, 2008; Maula *et al.*, 2009). Most if not all growth-oriented start-ups will at some point face the question of whether to resort to CVC financing. This choice might not be random but linked to characteristics within the firm and the entrepreneur (Ivanov and Xie, 2010; Talaia *et al.*, 2016). In this decision common preconceptions about CVC investors and the derived “*balance of risk and rewards*” (Maula *et al.*, 2009, p. 274) become essential. Despite CVC investments’ prevalence and rising importance, little research has examined the attractiveness of (CVC) investors from an entrepreneur’s perspective (Simon *et al.*, 2019). The central research question is therefore concerned with what shapes entrepreneurs’ preference for CVC investors relative to IVC investors.

To answer the research question, we designed an online survey capturing different venture characteristics as well as the investor preferences of entrepreneurs. The survey was completed by 105 entrepreneurs of which 30% evaluated CVC as more attractive than IVC. We used this as a dummy variable in a logistic regression for identifying drivers that make it more likely that CVC is preferred over IVC. The study thereby focuses on two of the most prominent and widely discussed aspects of CVC financing: the venture’s resource need (e.g., Dushnitsky, 2004; Katila *et al.*, 2008; Maula *et al.*, 2009; Zu Knyphausen-Aufseß, 2005), as well as the entrepreneur’s exit intention (DeTienne *et al.*, 2015; Hohen and Schweizer, 2021). Our results confirm that specific resources as well as the aspired exit path, influence entrepreneurs’ preference for CVC.

The study adds to a research stream that acknowledges the entrepreneurs’ influential role in financing decisions (Fairchild, 2011; Hallen and Eisenhardt, 2012; Katila *et al.*, 2008; Maula *et al.*, 2009). By asking entrepreneurs for their preferences, we can exclude confounding effects that are prevalent in ex-post investment data (e.g., Bengtsson and Wang, 2010; Zheng, 2011) or deal terms (e.g., Smith, 2001; Valliere and Peterson, 2007). Being able to break down the CVC preference in terms of resources needed and aspired exit paths, we further advance the literature on CVC attractiveness (e.g., Colombo and Shafi, 2016; Katila *et al.*, 2008). We thereby specify the often-highlighted notion that CVC investors’ complementary resources add value to the venture beyond what IVC investors can provide (Katila *et al.*, 2008; Maula *et al.*, 2005; Park and Steensma, 2012). Additionally, we show that the entrepreneur’s exit intention does not only influence the final exit path (DeTienne *et al.*, 2015; Hohen and Schweizer, 2021) but also the investor choice.

Theory and hypotheses

Weighing the pros and cons of CVC

Finding the right investor is critical for start-up companies (Bengtsson and Wang, 2010; Sapienza, 1992). Entrepreneurs take into consideration the potential rewards that come with being associated with an investor as well as the risks (Drover *et al.*, 2014; Katila *et al.*, 2008; Maula *et al.*, 2009; Zheng, 2011). On the one hand, corporate investors are rich in valuable complementary resources such as access to manufacturing resources, technological expertise, or sales channels (Gompers and Lerner, 2000a; Maula *et al.*, 2005; Park and Steensma, 2012; Zu Knyphausen-Aufseß, 2005). Moreover, they come with an endorsement value of being associated with an established corporation (Maula, 2001). These advantages also enable CVC investors to enter into syndication networks with other investors (Keil *et al.*, 2010). On the other

hand, entrepreneurs might be deterred by a CVC investor's competing strategic interest in the company (Hellmann, 2002; Katila *et al.*, 2008; Maula *et al.*, 2009). This is because CVC units are set up by incumbent companies which are oftentimes not only looking for financial return but also strategic benefits for the incumbent in the form of entry to new markets, access to complementary products and services, or exposure to novel technologies (Dushnitsky and Lenox, 2005; Dushnitsky and Shaver, 2009; Keil *et al.*, 2008). Thus, CVC investors might also be interested in start-ups' unique intellectual property and therefore pose the risk of know-how misappropriation (i.e. Katila *et al.*, 2008; Maula *et al.*, 2009). This is supported by previous studies which found that investment relationships with CVC investors are more likely if the venture has certain safeguards or defense mechanisms to minimize the risk of knowhow misappropriation, such as secrecy, the timing of the investment at a later stage, choosing corporates with complementary products instead of substitutes, or patent protection (Dushnitsky, 2004; Katila *et al.*, 2008). However, protecting against risks must be balanced with the ability to realize the potential benefits. Whether the promised resource transfer will be realized is uncertain (Henderson and Leleux, 2005; Pahnke *et al.*, 2015), and according to Maula *et al.*, 2009 depends on the intensity of social interaction and openness with the investor.

While there is abundant literature on how investors evaluate entrepreneurs and their ventures (e.g., Carlos Nunes *et al.*, 2014; Dimov and Shepherd, 2005; Franke *et al.*, 2006; Petty and Gruber, 2011) there is only limited research on entrepreneurs evaluating investors before approaching an investment relationship. Few exceptions have analyzed VC investments from the entrepreneur's perspective (Drover *et al.*, 2014; Smith, 2001; Valliere and Peterson, 2007; Zheng, 2011). These studies thereby focus on investor attributes that increase the investor attractiveness such as VC reputation, terms and conditions of a VC deal, and post-investment assistance. In the following, we analyze the entrepreneurs' evaluation of the attractiveness of investor types focusing on characteristics inherent to the entrepreneurs and their start-ups. We thus deliberately exclude factors that impact the formation of an investment relationship in the evaluation and deal structuring phase (De Clercq *et al.*, 2006) such as the actual deal terms (Smith, 2001; Valliere and Peterson, 2007), the formation of an investment syndicate (Bygrave, 1987; Sorenson and Stuart, 2001; Ter Wal *et al.*, 2016) or the assessment of the investment opportunity (Petty and Gruber, 2011).

With more than 30% of global investor deal share (CB Insights, 2022a) an IVC investment is the most likely equity investment for a high-growth venture. With about 11% deal share (CB Insights, 2022a) CVC investors are the second biggest source of equity funding and thus a relevant alternative or addition to IVC financing. "(...) *Obtaining CVC financing is a choice that an entrepreneurial firm faces at some point in its life cycle and this choice may not be random. Some firm-specific characteristics could affect a start-up's decision to resort to CVC financing.*" (Ivanov and Xie, 2010, p. 139). To shed light on the choice to approach a CVC investor, this paper focuses on two of the most prominent and widely discussed aspects of CVC financing: First, we draw on existing studies that have highlighted the importance of complementary resources in the formation of a CVC investment relationship (e.g., Dushnitsky, 2004; Katila *et al.*, 2008; Maula *et al.*, 2009; Zu Knyphausen-Aufseß, 2005). Second, we discuss the role of exit intention on the appeal of CVC investors. There is a long debate in the field of entrepreneurial finance with inconsistent results on whether IVC or CVC investors are better at facilitating a successful exit via IPO or acquisition (Bottazzi *et al.*, 2008; Gompers and Lerner, 1998, 2000b; Gompers, 2002; Huang and Madhavan, 2021; Kim and Park, 2017). However, the entrepreneur's exit intention influences the venture's exit trajectory (DeTienne *et al.*, 2015; Hohen and Schweizer, 2021). This raises the question of whether the entrepreneur's foreseen exit has implications on the choice between IVC and CVC investors. We will therefore not only look at immediate resource needs but also the entrepreneurs' long-term planning as a driving factor of investor choice.

Resource requirements

Young high-growth ventures depend on their external environment to access additional resources. These resources are needed to sustain their growth and become mature companies competing with large established firms. This resource dependence, first described by Pfeffer and Salancik (1978), has become the prevailing theoretical explanation for why ventures enter into relationships with equity investors (see, for example, Granz *et al.*, 2021; Hallen *et al.*, 2014; Katila *et al.*, 2008). Alternatively, different modes of establishing inter-organizational relationships such as joint ventures, vertical integration, or executive succession can be used to manage environmental interdependencies (Hillman *et al.*, 2009). Within an uncertain, dynamic environment the effective use of resources is key to venture survival (Bradley *et al.*, 2011). In line with resource dependence theory, entrepreneurs purposefully seek investors that provide the most benefit to their venture beyond the financial capital itself (Saetre, 2003). Equity investors, be they business angels, IVC investors, CVC investors, or private equity (PE) investors, provide financial resources in exchange for an equity share typically in the form of preferred shares. As shareholders of the firm these investors are interested in the success of the venture and thus not only provide financial resources but also perform additional value-adding activities (Granz *et al.*, 2021; Gutmann *et al.*, 2019; Hellmann and Puri, 2002; Katila *et al.*, 2008; Large and Muegge, 2008; Maula *et al.*, 2005; Proksch *et al.*, 2017; Sapienza, 1992; Zu Knyphausen-Aufseß, 2005). The additional value an investor can provide to its portfolio company is rooted in its ability to contribute additional resources, knowledge and social capital owned by the investor (Maula, 2001; Maula *et al.*, 2005). Depending on their resource and knowledge bases as well as social networks, investors can provide different value-added services to their portfolio companies (Maula *et al.*, 2005).

The provision of additional resources and value-adding activities is considered to be a major differentiator between IVC and CVC investors (Gompers and Lerner, 2000b; Maula *et al.*, 2005; Park and Steensma, 2012; Zu Knyphausen-Aufseß, 2005). Previous studies have demonstrated that IVC investors mainly draw on their knowledge base and social networks within the financial industry to create additional value for their portfolio companies. They provide financing in the first place and then help to raise additional financing, recruit management personnel and support strategic planning processes (Gorman and Sahlman, 1989; Hellmann and Puri, 2002; Maula *et al.*, 2005). Maula *et al.* (2005) summarize the IVC investors' contribution as "*enterprise nurturing*" as they strive to rapidly grow their portfolio companies. Due to their different resource and knowledge bases as well as social networks CVC investors are in a better position to provide crucial strategic "*commerce building*" resources to their portfolio companies such as industry know-how, as well as market access (Maula *et al.*, 2005). Which CVC contribution is most relevant for new ventures is somewhat unclear (for an overview, see Large and Muegge, 2008; or Zu Knyphausen-Aufseß, 2005). However, ventures profit most if there is a fit between the resources required and what the CVC investor can offer (Alvarez-Garrido and Dushnitsky, 2016; Ivanov and Xie, 2010). As mentioned before, the potential upside associated with additional resources also needs to counterbalance the perceived risk and uncertainty associated with a CVC investment (Dushnitsky, 2004; Katila *et al.*, 2008). Disregarding defense mechanisms and safeguards that might be in place, we argue that the higher the need for specific resources a CVC investor can provide the higher its attractiveness. In this line of argumentation, it is irrelevant whether the venture has enough absorptive capacity to benefit from the investment relationship (Lane and Lubatkin, 1998) or whether CVC investors are able to provide the promised resources in light of their institutional logic (Pahnke *et al.*, 2015). Instead, the focus is on entrepreneurial preconceptions and how the resource need impacts their evaluation of CVC versus IVC.

Unfortunately, previous studies do not build on a consistent set of resources when analyzing complementary resources and the value-add of CVC investors (see for example Large and Muegge, 2008). While some focus on value-adding activities or services

(e.g. recruiting, legitimation, monitoring, strategizing) performed by the investor (see for example [Gutmann et al., 2019](#); [Large and Muegge, 2008](#); or [Proksch et al., 2017](#)), others focus on the contribution of CVC investors (e.g. entrepreneurial orientation, strategic development, technological capabilities, or social capital) ([Zu Knyphausen-Aufseß, 2005](#)). However, because the goal of the study is to shed light on the perspective of entrepreneurs and their ventures, we follow the resource-oriented approach of Maula and Katila ([Katila et al., 2008](#); [Keil et al., 2010](#); [Maula, 2001](#); [Maula et al., 2005](#)). We thereby combine and aggregate the resource categories of their previous studies and derive our hypotheses for the resource categories: finance, marketing, manufacturing, technology and network.

The main reason to approach an investor is the need for financial resources. Both IVC and CVC investors are foremost providers of financial capital. While IVC investors receive the capital they invest from limited partners, CVC investors receive the necessary means from the parent corporation. Both types of investors are accountable for their investments and the resulting return. Yet, it has been shown, that IVC investors are better able to help attract follow-up financing ([Maula et al., 2005](#); [Proksch et al., 2017](#)). Especially growth-oriented ventures might therefore consider the long-term need for financial resources.

H1a. A venture's need for financial resources decreases the likelihood that CVC is preferred over IVC.

On the other side, when ventures have a strong need for operational resources CVC investors have more to offer. Through an investment relationship with the CVC arm of an established corporation, start-ups can potentially harness complementary resources the corporate parent possesses ([Katila et al., 2008](#)).

By virtue of their market positioning, CVC investors' corporate parents have an enormous market knowledge and operational resources in terms of market access. Previously discussed marketing resources include customer data, market research results, sales capacity, or distribution channels ([Katila et al., 2008](#); [Maula et al., 2005](#)). IVC investors in contrast can also build marketing resources through their experience with market entry strategies, contacts to marketing agencies, or purchased market reports ([Proksch et al., 2017](#)). However, [Proksch et al. \(2017\)](#) find that this is a minor field of activity for IVC investors as they are more involved in financial, human capital and governance issues. The marketing resources a CVC investor is potentially able to provide should therefore exceed the marketing resources of IVC investors.

H1b. A venture's need for marketing resources increases the likelihood that CVC is preferred over IVC.

The know-how that evolves around manufacturing processes, as well as access to manufacturing sites, can only be provided by established manufacturing firms. [Katila et al. \(2008\)](#) found that start-ups in highly capital-intensive industries that respectively require greater manufacturing assets have a higher likelihood to form an investment relationship with a CVC investor. Their result can be driven by the interest of corporations to invest in these types of start-ups but also by the increasing attractiveness of CVC investors for start-ups with a high need for manufacturing resources, especially as these types of resources are "often expensive and slow to create, important to operational success, and uniquely available from corporations." ([Katila et al., 2008](#), p. 203).

H1c. A venture's need for manufacturing resources increases the likelihood that CVC is preferred over IVC.

Moreover, CVC investors have shown to be more effective in terms of providing technological know-how ([Maula et al., 2005](#)). Keeping up with the latest technological trends is one of the major concerns of corporations which is also in their mind when looking for investment

targets (Benson and Ziedonis, 2009). The resources established firms spend on research and development for technological advancement cannot be met by any IVC investor (Maula *et al.*, 2005). IVC investors in general may not focus on providing technical expertise due to the technical background of many founders (Proksch *et al.*, 2017). A higher need for technological resources should thus make a CVC investment more attractive compared to an IVC investment.

H1d. A venture's need for technological resources increases the likelihood that CVC is preferred over IVC.

Social capital and the resources that can be accessed through networks is a key factor for the success of equity-financed firms (Bellavitis *et al.*, 2014; Hochberg *et al.*, 2007). As IVC investors are financial professionals focused on the financial return of their investments their work draws on a deep network in the financial industry as they constantly seek new investment opportunities and try to attract new sponsors for their funds. Due to their experience in working with portfolio companies, they also contribute a network of lawyers and business advisors (Proksch *et al.*, 2017). As financial professionals, they might however have fewer network contacts with potential business partners, customers, or suppliers within the industries of their portfolio companies compared to the broad network of a large corporation. In contrast, CVC investors might not be as versed in the financial industry but enable access to a broad industry network of suppliers, customers and business partners. Overall, we hypothesize that in terms of social resources, CVC investors are potentially more interesting for companies that need access to a broad and diverse network not only in the financial industry but also to other partners in their industry of interest.

H1e. A venture's need for network resources increases the likelihood that CVC is preferred over IVC.

Exit strategies

The resources which are accessible through a CVC investor can massively shape the trajectory of a start-up in the long term when it comes to a possible exit scenario (e.g., Bottazzi *et al.*, 2008; Useche and Pommet, 2021). Literature has defined different exit options or paths that allow shareholders to withdraw their capital: (1) sale to another business or independent part, also called acquisition, (2) sale to employees or the management (buyout), (3) going public, also referred to as initial public offering (IPO), or (4) the liquidation (Birley and Westhead, 1993). The effect of VC investors on business performance and exit routes is long established in the field of entrepreneurial finance. Researchers' line of argumentation thereby draws on three main aspects: First, VC investors are actively involved in strategic business decisions of their portfolio companies through board decisions such as the recruitment of top management positions (Bottazzi *et al.*, 2008; Hellmann and Puri, 2002). Second, investors actively engage in value-adding activities such as sharing their knowledge, providing support for business activities, establishing connections to their professional networks as well as signaling aspects that enhance a company's reputation (Bertoni *et al.*, 2013; Large and Muegge, 2008; Sørensen, 2007). Third, a selection effect comes into play as entrepreneurs and investors with aligned exit objectives are matched (Guo *et al.*, 2015; Sørensen, 2007). The differing effects of IVC and CVC investors have thereby found a lot of attention (i.e., Bertoni *et al.*, 2013; Colombo and Murtinu, 2017; Guo *et al.*, 2015; Ivanov and Xie, 2010).

IVC investors invest with a financial motivation to produce high financial returns for their limited partners in a short period. They invest for higher rates of return than captive VC investors (Manigart *et al.*, 2002). In the entrepreneurial finance literature, both IPO and acquisition are commonly viewed as successful exit scenarios for investors (e.g., Bottazzi *et al.*, 2008). Although the likelihood of an IPO and the generated return is subject to several

external factors such as the timing of the transaction, the industry and information asymmetries (Bayar and Chemmanur, 2011), both entrepreneurs and investors consider IPOs to be the most desirable outcome (Park and Steensma, 2012). IPOs are commonly characterized by higher returns (Braun *et al.*, 2003) and higher valuation multiples (Poulsen and Stegemoller, 2008) when compared to acquisitions. Bayar and Chemmanur (2011) ascribe this premium to differences in firm quality, especially with regard to their long-term growth potential. Due to their governance structure as a limited partnership, IVC investors are prone to taking their portfolio companies public earlier so they can “grandstand” and attract more private money for their upcoming funds (Gompers, 1996). When it comes to exit support, IVC investors can make use of their strong ties to the financial industry and access to their co-investment network (Hochberg *et al.*, 2007).

CVC investors in contrast pursue financial and strategic benefits for their corporation such as gaining a window on technology (Benson and Ziedonis, 2009; Dushnitsky and Lenox, 2006; Wadhwa *et al.*, 2016). As a result, CVC investors are intrinsically more interested and reportedly better at nurturing innovation and technological advancement of their portfolio companies (Alvarez-Garrido and Dushnitsky, 2016; Park and Steensma, 2013). A portfolio company’s innovative capabilities in turn improve its long-term performance and affect a company’s exit strategy (Cefis and Marsili, 2012). In contrast to IVC investors, CVC investors draw on their corporate research, marketing and distribution networks to support the exit of a portfolio company (Ivanov and Xie, 2010). Their industry and technology knowledge enables CVC investors more than other investors to seek potential acquirers and to signal quality to potential buyers (Chemmanur *et al.*, 2014). Additionally, CVC investors can acquire their portfolio companies themselves (Dimitrova, 2015; Guo *et al.*, 2015). From a theoretical perspective, CVC investors are thus more qualified to facilitate an exit via acquisition. Empirical studies concerning the exit events of IVC- and CVC-backed start-ups however show mixed results. On the one hand, CVC-backed start-ups are more likely to exit via acquisition (Chemmanur and Loutschina, 2009; Cumming, 2008). At the same time, studies show that CVC-backed start-ups are more likely to exit via IPO (Chemmanur and Loutschina, 2009; Gompers and Lerner, 2000b). Further, an acquisition by the CVC parent corporation is also uncommon and takes place in only 5% of acquired start-ups with a CVC affiliation (Guo *et al.*, 2015). Newer studies have revealed several influencing factors that moderate the likelihood of a successful exit when a CVC investor is included: Syndication between a CVC investor and a reputable IVC investor (Kang, 2019), the complementarity or strategic overlap between the CVC parent and the start-up (Ivanov and Xie, 2010; Park and Steensma, 2012), the stage of the CVC-investment (Kim and Park, 2017), the strategic benefit for the parent corporation (Koster, 2018). Consequently, a CVC investment, in the end, does not make an acquisition or an IPO more or less likely, but rather the surrounding circumstances of the investment. For the entrepreneur, however, it remains a strategic decision whether to include a CVC investor. For example, Cabral (2018) was able to show that CVC investors tend to be included in an investment syndicate when an acquisition exit becomes more likely.

From the perspective of an entrepreneur, the choice of a CVC or IVC investor thus has an impact on the company’s further development and its exit path. The choice therefore might not be random but follow a logical rationale. Entrepreneurs pursuing an IPO typically do so as it enables them to generate personal funds as most of their personal wealth is tied up in the company and then use these funds to diversify their investment risk or invest in new projects (Park and Steensma, 2012). Another aspect is that an IPO opens growth opportunities for the start-up that would be impossible to finance otherwise (Daily *et al.*, 2003). Likewise, an IPO does not necessarily require the entrepreneur to leave the company, but entrepreneurs oftentimes stay with the company post-IPO for an extended period (Daily *et al.*, 2003). On the other side, founders often leave the company as part of an acquisition (DeTienne and Cardon, 2012). Acquisitions are the second most attractive exit strategy in terms of financial return

(Hohen and Schweizer, 2021). It is also more feasible for companies with lower growth (Hohen and Schweizer, 2021).

Studies on entrepreneurial exit intention (e.g., DeTienne and Cardon, 2012; Hohen and Schweizer, 2021; Wennberg *et al.*, 2010) draw on the theory of planned behavior (Ajzen, 1991, 2011; Ajzen and Fishbein, 1980) that puts forward the argument that an individual can control most of its behavior and therefore the likelihood of the specific behavior can be predicted by the individual's intention to engage in this behavior (Ajzen, 1991, 2011; Ajzen and Fishbein, 1980). In our line of argumentation, we argue that if an entrepreneur aspires a certain exit path this not only affects the likelihood that this exit path is realized but also consequentially affects strategic decisions that in turn increase the likelihood of realizing the aspired exit path. We thereby argue in line with a causation approach to entrepreneurial decision making which is linked to the financial harvesting strategy of most equity-financed ventures (DeTienne *et al.*, 2015). This type of decision-making starts with the objective in mind and then derives and implements a plan to accomplish the objective (Sarasvathy, 2001). Entrepreneurs thereby gather information and select options that maximize their long-term profit and help them achieve their objectives (Sarasvathy, 2001). It has already been shown that the theory of planned behavior holds for exit intentions of equity-financed ventures as they aim for a financial harvest exit strategy [1] and most likely also realize it (Hohen and Schweizer, 2021).

We argue that consequentially an entrepreneur's intended exit path influences the entrepreneur's preference for a CVC investor over an IVC investor and propose two hypotheses.

H2a. An entrepreneur's aspiration to exit investors via IPO decreases the likelihood that CVC is preferred over IVC.

H2b. An entrepreneur's aspiration to exit investors via acquisition increases the likelihood that CVC is preferred over IVC.

Data and methodology

To answer our research question, we designed an online survey analyzing entrepreneurs' generalized perceptions of different investor types. The decision of investors to provide financing or the entrepreneur's decision to accept the investment offer are intentionally excluded. Other researchers such as Katila *et al.* (2008) have approached similar research questions by analyzing high-level investment data including VC affiliation, region, industry, and firm age to assess what factors impact the likelihood of a CVC investment. In contrast, the survey design chosen does not rely on the actual investment decision which is subject to several other confounders (e.g., the venture's attractiveness, current market trends, or the formation of syndicates). Focusing on entrepreneurs' stated preference for different investor types allows us to draw inferences regarding prevailing preconceptions of entrepreneurs about the investor types presented. Thus, we abstract from the actual realization of an investment relationship and its organizational implementation which is shaped by the individual power dynamics between investors and the venture's ability to benefit from non-financial resources provided.

Research design

For our survey, we used a web-based tool to collect the data from the respondents. The online questionnaire captured both entrepreneur-related factors as well as venture-related factors. The survey took place in the summer of 2018, including a pilot test before the start and qualitative interviews with entrepreneurs to ensure the relevance of our research question

and the research design. We performed four in-person interviews with entrepreneurs with and without CVC affiliation, at different startup stages and from different industries. The entrepreneurs depicted how they typically work with a list of potential investors that are prioritized in terms of their attractiveness for the venture and then set out to contact these investors in the respective order. All entrepreneurs expressed some preconceptions toward CVC investors. Those with CVC experience underlined the discrepancy between the expected access to resources and management support and the actual realization thereof. Overall, the interviews lend support to further investigating the drivers of CVC preference and confirmed our variables of interest. Additionally, several research assistants and practitioners experienced in the VC industry involved in a pilot test ensured the technical and conceptual soundness of the survey. We incorporated the feedback from the qualitative interviews and the pilot test into the final version of the online survey.

Participant recruitment and sample

With our survey, we targeted individual entrepreneurs, who occupy managerial positions in which they are involved in the financing decision of their ventures. The survey was sent out to a comprehensive sample of German entrepreneurs from Crunchbase that was complemented with hand-collected contacts of startups with VC funding or accelerator affiliation (as listed on websites of German VC funds and accelerator programs). 1537 entrepreneurs were targeted via email or LinkedIn, 187 responded to the survey, out of which 105 respondents completed the survey and fulfilled the control criteria. The relatively high drop-out rate during the survey can be attributed to an online conjoint experiment that was part of the questionnaire and which is typically perceived as a demanding task (Reibstein *et al.*, 1988). Nevertheless, the sample is comparable to the German start-up landscape as depicted in the German Start-Up Monitor (Kollmann *et al.*, 2018). The sample of the annual online survey of more than 1500 German start-ups is similar in terms of company age (3.9 years), the number of employees (median 12 employees), industry (40% software industry), investors involved (18% CVC funded), and founder age (average 38 years). Only 12% of entrepreneurs in the sample had raised less than €100,000, whereas 31% had raised between €100,000 and €1m. Most had raised €1–5m (37%), 8% €5–10m, and 12% more than €10m.

Variables and measurement

Before the survey started the participants had to confirm that they are actively involved in the fundraising process of their venture. The further questions were then structured into sets of questions.

Dependent variable. When designing the questionnaire, the problem of introspection accuracy as described for example by Valliere and Peterson (2007) in a similar study, needed to be mitigated. Therefore, we asked the entrepreneurs for their preferences without drawing the participant's attention too much to the comparison of CVC and IVC investors. Instead, they were asked to evaluate the attractiveness of five financing options for their venture (public funding, crowdfunding, business angel investments, IVC, and CVC). The evaluation was measured on a seven-point Likert scale (1 = "highly unattractive," 7 = "highly attractive"). In the analysis, we then compared their stated preference for CVC and IVC investors and formed the dummy variable *prefers CVC* that indicates whether a CVC investment was evaluated as more attractive than an IVC investment.

Independent variables. To test our hypotheses, we further captured the entrepreneurs' judgment on the venture's resource need and the aspired exit option.

Drawing on the pre-survey interviews with entrepreneurs and earlier studies (Katila *et al.*, 2008; Maula *et al.*, 2005), the resource need dimensions – financial, marketing, manufacturing,

technological, and network resources – build the basis to assess the resource need of the venture. Respondents rated their resource needs on a seven-point Likert scale: “How important is access to the following resources for your business?” (1 = “highly unimportant,” 7 = “highly important”).

Similarly, we asked the entrepreneurs to assess different exit options for their venture— IPO, and acquisition: “How likely are the following exit options for your start-up?” (1 = “highly unlikely,” 7 = “highly likely”). We further included the exit options merger, employee/ management buy-out and independence as control variables.

Controls. To control for confounding effects and to test for sample biases, we collected further information about the entrepreneurs and their ventures. Analogous to previous studies (Drover *et al.*, 2014; Valliere and Peterson, 2007), we asked questions on start-up attributes: industry, company age, number of employees, existing forms of start-up financing and total funds obtained. Moreover, we collected demographic data on the entrepreneurs including gender, and age.

As a result of our pre-survey interviews, we include two controls in the regression model for whether the entrepreneur’s venture already has experience with IVC or CVC financing. This information was reported by the respondents via checkboxes.

Additionally, we control for whether the ventures offer hardware products, software products, or services, which was also reported by the respondents themselves via checkboxes. The rationale thereof is based on the consideration of further contextual factors related to the offering of the startup that may impact the investor preference. Hardware products and services typically come with different requirements for example when it comes to scaling. Software products in contrast are easier to scale but cannot be protected through patenting.

Moreover, we control for company age and include a variable representing the lifecycle stage a venture is in. To form dummy variables for “seed”-, “early”- and “growth”-stages we build on the previous financing types reported by the respondents. In line with the financial growth lifecycle model (Mac an Bhaird and Lucey, 2011; Berger and Udell, 1998), we assume a sequencing of funding options throughout the lifecycle of a venture as more and more financing options become available. We, thus, coded ventures that exclusively use public funding, crowdfunding, or funding from an accelerator as being in the “seed”-stage. Ventures with previous funding from a business angel (but no IVC or CVC funding) are coded in the category “early”-stage. Those with previous IVC or CVC funding as being in the “growth”-stage [2].

Analysis and results

To test our hypotheses, we use a logistic regression with the dummy variable *prefers CVC* as the dependent variable. The focus is thus shifted to the group of entrepreneurs that evaluated a CVC investment as more attractive than an IVC investment. We deliberately did not use the absolute evaluation as the dependent variable because of the challenges that come with the Likert scale measure. Likert scales are not able to measure true attitudes as the space between options is not equidistant and only provides us with ordinal data. Moreover, every participant might have interpreted the scale differently, so choosing five out of seven might come with a different meaning for different participants. With the variable we use, we assume that absolute evaluations are not comparable among participants but within participants, providing us with ranking data about different funding options for each participant. So, looking at the median of the evaluation of IVC (median = 6) and CVC investments (median = 5) we see a slight overall preference for VC investments. 25.71% of participants evaluated both options equally and 44.76% assessed IVC as more attractive than CVC. This leaves us with 29.52% of participants who assessed CVC as more attractive than IVC. The following analysis investigates what drives those entrepreneurs who prefer CVC over IVC.

Descriptives

Our study encompasses 105 entrepreneurs and their ventures. Table 1 provides summary statistics and correlations for the variables relevant to testing our hypotheses. To rule out multicollinearity problems, we calculated the variance inflation factors (VIFs). The highest VIF was 7.01 and thus below the acceptable threshold of 10 for VIFs (O'Brien, 2007).

Logistic regression

We performed a stepwise logistic regression to estimate the different drivers of an entrepreneur's preference for CVC using z-standardized variables. Table 2 illustrates the regression results.

Both variable categories—*resource need* and *aspired exit*—have a significant influence on the evaluation of CVC compared to IVC. In the **resource category**, we find support for H1. In our full model both the need for marketing resources (H1b: 0.708, $p < 0.1$) and network resources (H1e: 1.455, $p < 0.01$) increase the likelihood that CVC is preferred over VC. In model I without controls, the need for financial resources is negatively associated with the preference for CVC (-0.511 , $p < 0.01$; resource need category only). This, however, becomes insignificant in the full model and therefore does not lend support for H1a. Also, in model I, the need for manufacturing resources is positively related to the preference for CVC (0.479, $p > 0.1$), while the need for marketing resources is not significant. Including the control variables for company age, previous financing of IVC or CVC and the type of offering, leads to a shift in our main variables related to the resource need. The other hypotheses H1c (manufacturing resources) and H1d (technological resources) are thus not supported by our results.

In the **exit category**, the results show entrepreneurs aspiring an IPO are less likely to prefer CVC over IVC (H2a: -0.653 , $p < 0.1$). We do not find significant effects for the other exit types. Yet, it is interesting that entrepreneurs aspiring an acquisition are (non-significantly) less likely to prefer CVC (-0.555). Therefore, we do not find support for H2b which argues that an entrepreneur might view a CVC investment as a starting point for a later acquisition.

Discussion and implications

We set out to examine what makes entrepreneurs more likely to prefer a CVC investor over an IVC investor and specifically focused on the start-up's need for certain resources and the entrepreneur's exit aspiration. The survey results confirmed that both aspects affect the preference for CVC. The types of resources demonstrate varying relevance. Marketing resources, as well as access to the corporate network, were the two dimensions driving the preference for CVC over IVC. In contrast, the need for financial resources did not yield any (positive or negative) explanation for the preference for CVC over IVC in our full model. The study thereby confirms the importance of resource access as a key distinguishing factor for CVC investors, which in contrast to IVC investors have differing expertise, facilities and networks that are attractive for start-ups.

In terms of exit aspirations, we only find support for the negative effect IPO aspirations have on the preference for CVC. Our results further reject the widespread perception that a CVC investment might be viewed as the first step toward an acquisition (see, for example, Dimitrova, 2015; Guo *et al.*, 2015).

Theoretical and practical contribution

With our study, we contribute to the under-researched field of (CVC) investor attractiveness. Literature has long focused on the benefits and risks associated with CVC investment (e.g., Maula, 2001; Park and Steensma, 2012; Zu Knyphausen-Aufseß, 2005). However, it has

N = 105	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Median (mean), %</i>																		
<i>Resource Need (Scale 1-7)</i>																		
(1) Financing 6	1.000																	
(2) Marketing 5	0.117	1.000																
(3) Manufacturing 2	0.063	0.221	1.000															
(4) Technology 3	0.092	0.032	0.316	1.000														
(5) Network 6	0.119	0.009	-0.037	0.171	1.000													
<i>Exit Preferences (Scale 1-7)</i>																		
(6) IPO 3	0.229	-0.008	0.078	0.129	0.005	1.000												
(7) Acquisition 6	0.345	0.125	-0.059	0.017	0.226	-0.027	1.000											
(8) Merger 4	0.134	0.191	-0.007	0.076	0.015	-0.005	0.316	1.000										
(9) Buyout 2	-0.009	0.074	0.149	0.218	-0.065	-0.030	-0.142	0.184	1.000									
(10) Independence 5	-0.203	0.192	-0.064	0.086	-0.013	-0.217	-0.190	-0.024	0.263	1.000								
<i>Previous Financing</i>																		
(11) Ind.Venture Capital 52.38%	0.089	-0.032	-0.013	0.066	-0.028	0.083	0.226	0.072	-0.104	-0.101	1.000							
(12) Corp. Venture Capital 18.10%	0.005	0.018	0.258	0.067	0.037	-0.029	-0.018	0.050	0.002	-0.105	0.101	1.000						
(13) Company Age 3 (3.857)	0.040	-0.114	-0.063	-0.160	-0.120	0.146	0.040	0.050	-0.141	-0.078	0.362	0.076	1.000					
<i>Offering</i>																		
(14) Hardware 29.50%	0.121	0.083	0.444	0.090	0.004	-0.013	0.075	0.040	-0.051	-0.136	0.057	0.164	0.128	1.000				
(15) Software 80.00%	-0.028	-0.007	-0.049	0.058	-0.013	-0.015	0.007	0.132	0.235	-0.024	-0.022	-0.123	-0.224	-0.060	1.000			
(16) Service 46.70%	-0.059	0.124	-0.097	-0.069	-0.016	0.016	-0.027	0.153	-0.004	0.169	0.186	0.065	0.082	-0.208	-0.185	1.000		
<i>Lifecycle Stage</i>																		
(17) Seed 20.95%	-0.068	0.051	0.161	0.062	-0.038	-0.088	-0.192	0.156	0.150	0.102	-0.540	-0.242	-0.277	0.007	0.150	-0.144	1.000	
(18) Early 20.00%	0.047	-0.038	-0.224	-0.149	0.108	0.084	-0.062	-0.232	0.017	0.093	-0.524	-0.235	-0.113	-0.194	-0.035	-0.076	-0.257	1.000

Source(s): Authors own creation

Table 1.
Summary statistics
and correlations

	Model I: Resource need		Model II: Aspired exit		Controls		Full model	
	Coef	Std. Err	Coef	Std. Err	Coef	Std. Err	Coef	Std. Err
Resource Need: Financing	<i>-0.511*</i>	0.233					-0.269	0.341
Resource Need: Marketing	0.269	0.256					<i>0.708*</i>	0.385
Resource Need: Manufacturing	<i>0.479*</i>	0.253					0.533	0.425
Resource Need: Technology	-0.270	0.253					-0.229	0.372
Resource Need: Network	<i>0.551*</i>	0.270					<i>1.455**</i>	0.462
Aspired Exit: IPO			<i>-0.486*</i>	0.238			<i>-0.653*</i>	0.365
Aspired Exit: Acquisition			-0.349	0.242			-0.555	0.354
Aspired Exit: Merger			0.061	0.251			-0.419	0.370
Aspired Exit: Buyout			0.016	0.225			0.180	0.323
Aspired Exit: Independence			0.154	0.248			-0.006	0.363
Previous IVC Financing					<i>-2.466*</i>	1.290	<i>-3.417*</i>	1.681
Previous CVC Financing					-0.311	0.959	-0.872	1.189
Company Age					<i>0.589*</i>	0.278	<i>1.132**</i>	0.393
Offering Hardware					<i>1.557*</i>	0.609	<i>2.192*</i>	0.913
Offering Software					0.771	0.679	1.418	0.897
Offering Service					<i>1.359*</i>	0.571	<i>1.927*</i>	0.764
Seed-Stage					-0.149	1.394	-0.760	1.810
Early-Stage					-0.853	1.422	-1.184	1.834
_cons	<i>-0.993***</i>	0.239	<i>-0.947***</i>	0.230	-1.274	1.477	-2.027	1.914
Pseudo R2	0.102		0.655		0.194		0.387	

Note(s): z-standardized logistic regression coefficients with standard errors; dependent variable is prefers CVC (1 = prefers CVC, 0 = prefers IVC or equally IVC & CVC)

Significant values in italics: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.1$; N = 105

Source(s): Authors own creation

Table 2.
CVC preference logistic regression

neglected the entrepreneur’s perspective. With a rising number of venture capital funds and more money invested in the market than ever (NVCA, 2022) start-ups are not forced to approach the first available investor but can make an informed choice about whom they want to approach. As a result, start-ups will also face the choice of whether to obtain CVC financing at some point. This study highlights two factors inherent to the start-up and its entrepreneur—the specific resource requirements and the intended exit strategy—that take effect in this decision. We thus add to the few studies that have examined VC investments from the entrepreneur’s perspective (Drover *et al.*, 2014; Hsu, 2004; Smith, 2001; Valliere and Peterson, 2007; Zheng, 2011).

Moreover, we provide more detailed insights into what kind of resources make a CVC investor attractive. While Katila *et al.* (2008) suggest that a venture’s need for resources increases its likelihood of CVC investment (Katila *et al.*, 2008), we are able to specify this statement in the sense that specifically marketing resources and access to the corporate

network make a CVC investor attractive for entrepreneurs. These resource categories are distinctive for corporations and difficult to acquire. The already described industry-specific know-how and market expertise of CVC investors may take effect in the minds of entrepreneurs (Katila *et al.*, 2008; Maula *et al.*, 2005). This seems to be relevant for ventures across all lifecycle stages. In contrast, financial resources and the providers thereof are replaceable and do not evoke a differentiation between CVC and IVC investors in the mind of entrepreneurs. Moreover, technological know-how accessible through CVC investors does not matter for the entrepreneurs' preference of CVC over IVC. We can only speculate that either IVC and CVC investors are viewed as similarly equipped with technological know-how, or that entrepreneurs view the technological expertise as a key competence of their own start-up and are not interested in an exchange of technological know-how. The second line of argumentation adds to previous studies on defense mechanisms against IP misappropriation when entering a CVC investment relationship (such as Hallen *et al.*, 2014; Katila *et al.*, 2008). Our hypothesis on manufacturing resources was not supported in the full model. When controlling for the type of offering, the previously revealed effect in model I could not be confirmed. However, we do find a positive significant effect for our dummy variable "Offering Hardware". Due to the correlation measured between these two variables (see Table 1) we argue that both effects are related. The manufacturing know-how and possibly even infrastructure a CVC investor has at hand can be a differentiating factor in the mind of certain entrepreneurs, in particular for those working on offering a hardware product and an associated need for manufacturing-related resources.

Besides the closer look at resource categories, the study also contributes to the literature on exit intentions (e.g., DeTienne and Cardon, 2012; Wennberg *et al.*, 2010) and links it to entrepreneurs' evaluation of financing options. We are thus able to show that the exit intention does not only influence the final exit (as shown by Hohen and Schweizer, 2021) but also the financing decision which in turn potentially affects the final exit. This finding is in line with the causation approach to entrepreneurial decision-making (Saravathy, 2001) and the theory of planned behavior (Ajzen, 1991, 2011; Ajzen and Fishbein, 1980) according to which actions are implemented based on the objectives in mind. In our case, the objective to exit via IPO or acquisition impacts the likelihood to prefer a CVC over an IVC investor. This makes sense as exiting via IPO or acquisition is challenging and requires support from experts in the (financial) industry (Nahata, 2008). Inferring from the results, entrepreneurs seem to perceive a CVC investor to be less able to support the growth needed to go public. The often-discussed scenario of CVC investors and acquisitions does not seem to influence the decision. As mentioned before, an acquisition by the CVC parent corporation takes place in only 5% of acquired start-ups with a CVC affiliation (Guo *et al.*, 2015). Additionally, an acquisition is also a highly likely and successful exit scenario for start-ups with IVC affiliation and not CVC. The entrepreneurs' intention of exiting via an acquisition does not affect their preference for a CVC or IVC investment. However, the intention to exit via IPO does influence their financing preferences. It is important to note that we do not measure the actual likelihood in which a CVC or IVC affiliation leads to an IPO, but rather a preconception in the mind of entrepreneurs that a CVC investor might be less suited to facilitate an exit via IPO.

From a practical perspective, this study sheds light on the preconceptions entrepreneurs hold toward different types of investors. It thereby provides learning opportunities for entrepreneurs and investors to disentangle preconceptions and realities and emphasizes the importance of signaling. Access to marketing resources as well as the corporate partner network is a unique feature IVC investors cannot provide and thus increases a CVC investor's appeal to entrepreneurs. Leveraging their assets provides them with an immediate advantage in the eyes of entrepreneurs but also in the eyes of other investors (as shown by Keil *et al.*, 2010). According to our findings, leveraging their resources should especially include highlighting their corporate assets in terms of marketing expertise as

well as their diverse network of corporate partners to potential portfolio companies. To increase their appeal to start-ups, IVC investors can try to build syndication networks with CVCs that hold these assets or try to expand their expertise and network in these directions for example through partnerships or hiring industry experts. Similarly, communicating the investor's track record in terms of exit paths and their intended exit scenario can help convince start-ups of their appeal. As our results show that CVC investors are less likely to be attractive to IPO-aspiring entrepreneurs, CVC managers should address this concern and point out the ways they support portfolio companies in achieving their aspired exit paths. In a similar vein, entrepreneurs can learn how preconceptions influence their financing decisions. This is important to build an informed decision when approaching investors for fundraising.

Limitations and future research

First, the survey only allows for the assessment of the general preconceptions of entrepreneurs about different financing options with a focus on entrepreneurial characteristics. However, IVC and CVC investors vary in the amount and type of resources they are able and willing to provide. Moreover, other specific investor attributes such as investor reputation (Drover *et al.*, 2014) affect the entrepreneurs' decision to approach an investor. These aspects were disregarded to shed light on important aspects of the financing decision of entrepreneurs with a focus on their needs and aspirations.

Second, the limited number of participants restricts the validity of our findings. Despite the number of respondents, the sample is representative of the German start-up scene in several dimensions (age of entrepreneurs, industry structure, company age and investment stage). The results can thus serve as indicators for future research avenues. It especially opens up the discussion of different resource types that are needed by start-ups as well as the interconnectedness of financing choices and exit aspirations.

Moreover, the study deliberately leaves out the question of whether the start-up can protect its unique intellectual property (IP) through safeguard mechanisms. Several studies have highlighted the role of IP protection in the likelihood that a CVC investment is accepted (Colombo and Shafi, 2016; Dushnitsky and Shaver, 2009; Katila *et al.*, 2008; Maula *et al.*, 2009). The complexity of the topic including the evaluation of key factors such as industry overlap of start-up and incumbent, the complementarity or competition between their products, as well as the IP protection regime (Dushnitsky and Shaver, 2009; Hellmann, 2002) require a separate evaluation.

Besides CVC investments other cooperative models between corporations and start-ups are widespread such as buyer–supplier relationships or innovation consortia (Battistini *et al.*, 2013; Simon *et al.*, 2019). These types of cooperative models might as well be able to provide start-ups with relevant resources such as access to technological expertise, or even network partners. Adding to the resource dependence perspective, future research should take different types of inter-organizational partnerships into account and compare their attractiveness for start-up entrepreneurs.

The reality of financing decisions includes a high degree of syndication between investors (Sorenson and Stuart, 2001). Co-investments of several investors are typically initiated by the investors and not the entrepreneurs throughout different phases of the investment process (De Clercq *et al.*, 2006). The entrepreneurs' view on co-investments and especially the interplay between CVC and IVC investors is so far completely unexplored. We hope our study inspires further research on the academically neglected perspective of entrepreneurs in financing decisions.

We moreover believe that our results regarding the role of potential future acquisitions deserve a deeper investigation. Our study is insofar limited, as it does not evaluate the role of certain CVC investor attributes. Entrepreneurs who are faced with a financing opportunity from a CVC investor that offers a complementary product might evaluate this specific CVC investor differently than a CVC investor with no relation to the product or industry. In general, the interplay of exit intentions and financing decisions deserves further attention not only when it comes to IPOs and acquisitions as exit channels but also further exit channels such as buyouts.

Conclusion

This paper joins earlier studies that view the investment decision as the representation of entrepreneurial strategy beyond the pure access to financial capital. Especially the role of CVC investors and their competition with IVC investors have been of long debate as this financing form comes with benefits and downsides for everyone involved. We contribute a differentiated view on two main distinguishing aspects of CVC investment from an entrepreneurial perspective – resource requirements and the aspired exit strategy. In accordance with the resource dependence theory, we show that resource requirements are a driving factor in the entrepreneurs' preference for different investor types. Our findings point out that hereby the venture's need for marketing resources and access to the corporate network play a significant role in their preference for CVC over IVC. Additionally, we show that the preference for an investors is further affected by the entrepreneur's exit intention. Drawing on the theory of planned behavior, we demonstrate that if an entrepreneur aspires a certain exit path this also affects the entrepreneurs' evaluation of investor options which in turn might increase the likelihood of realizing the aspired exit path. Our results show that entrepreneurs striving for an IPO are less likely to prefer CVC. However, we dispel the myth that CVC is seen as a starting point for a future acquisition. Altogether, we expand literature in CVC attractiveness and add to the differentiated view on resource requirements and exit aspiration. For entrepreneurs and investors the paper highlights the need to disentangle preconceptions and realities and emphasizes the importance of signaling in the investment process.

Notes

1. Since our focus is on high-growth equity-financed ventures, we disregard alternative exit strategies (stewardship or voluntary cessation as defined by [DeTienne and Cardon, 2012](#)) in our research question.
2. Due to considerable differences in the definition of lifecycle stages, our denomination in "seed", "early" and "growth" stage is based upon the maturity of the start-up and the inferred financing order. This is also supported by the correlation with company age.

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