Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Economics and Management
Dept. of Industrial Economics and Technology
Management

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Corporate Angels

Shedding light on the phenomenon of SMEs investing Corporate Venture Capital in entrepreneurial ventures

Master's thesis in Entrepreneurship
Supervisor: Puck Hegeman and Prof. Roger Sørheim
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Abstract

Investments made by established non-financial companies in entrepreneurial ventures, referred to as corporate venture capital (CVC), have over the past decades grown to become a significant source of entrepreneurial finance. Following, a body of research on their characteristics, including motivation, governance, and value-added contributions, has been established. Yet, this research has exclusively studied larger corporate investors, and while it has been identified that SMEs also invest CVC, this area remains unexplored. Due to the differences of SMEs and larger firms, we propose that SME CVCs will be distinctly different from their larger CVC counterpart in several areas. Differences in motivation, governance and investment practices can impact these investors' value-added services, which in turn has important implications for the entrepreneurial ventures they invest in. Consequently, the purpose of this paper is to study the characteristics of SME CVCs in an attempt to place them in The Venture Capital Galaxy. Furthermore, we also explore the SME CVCs' value-added services, in comparison to Business Angels (BAs), Independent Venture Capitalists (IVCs) and larger CVCs.

Primary data was collected from Norwegian high-tech SMEs within IT and Aquaculture, with a sample size of 96 SME CVCs. The analysis and results indicate that SME CVCs are active investors that tend to form close relationships with their portfolio companies. They are indeed different from their larger CVC counterparts, both in their motivation for investing and in how their investments are governed. Analogous to traditional CVCs, SME CVCs are also motivated by strategic benefits. However, unlike traditional CVCs, SME CVCs also invest to have fun, which is one of the most prominent motivations of BAs. They also share similarities to BAs in that they almost exclusively invest in early stage ventures, and they manage these investments within the internal structure of the organization. Some SME CVCs are additionally found to obtain shares in their portfolio companies through sweat equity, which is uncommon for the other investors within entrepreneurial finance. Their tendency to resemble a hybrid of BAs and CVCs, while also being distinctively different from both investors in certain areas, builds the argument that SME CVCs should be viewed as an investor type of their own. SME CVCs can be described as *Corporate Angels* - a unique investor type in The Venture Capital Galaxy.

In terms of the value-added services they provide their portfolio companies, these Corporate Angels appear to greatly resemble their larger CVC counterparts. Their greatest contribution is within technology development, and they also provide substantial contributions in areas of value-added that are unique to CVCs. This includes granting their portfolio companies access to the parent corporation's technology, as well as R&D and manufacturing facilities.

Sammendrag

Investeringer fra etablerte ikke-finansielle selskaper i oppstartsbedrifter, referert til som corporate venture capital (CVC), har de siste tiårene vokst til å bli en betydelig og viktig investortype innen risikokapital. Som følge har det blitt utført en betydelig mengde forskning på deres karakteristikker, inkludert motivasjon, styresett og "verdiøkende tjenester". Likevel har denne forskningen utelukkende studert større bedrifter, og selv om det har blitt identifisert at små og mellomstore bedrifter også investerer CVC, har forskning på dette området forblitt utelatt. På grunn av forskjellene mellom SMB-er og større bedrifter, antar vi at SMB CVC-er vil være forskjellig fra de tradisjonelle CVC-ene på flere områder. Forskjeller i investorenes motivasjon og styresett kan påvirke hvilke verdiøkende tjenester de gir, som igjen har stor påvirkning på oppstartsbedriftene som de investerer i. Som følge av dette, er formålet med denne masteroppgaven å studere karakteristikkene til SMB CVC-er og forsøke å plassere dem i risikokapitalverdenen. Videre utforsker vi også SMB CVC-enes verdiøkende tjenester, for å sammenligne dem med Business Angels, Independent Venture Capitalists (IVCs) og større CVC-er.

Gjennom en spørreundersøkelse har data blitt samlet inn fra norske høyteknologiske SMB-er innen IT og havbruk, og inkluderer 96 SME CVC-er. Analysen og resultatene indikerer at SMB CVC-er er aktive investorer som danner nære relasjoner med sine porteføljeselskaper. De er riktignok forskjellige fra de tradisjonelle CVC-ene, både når det kommer til deres motivasjon for å investere, samt hvordan investeringene deres styres. I likhet med tradisjonelle CVC-er, er SMB CVC-er også strategisk motivert. I motsetning til tradisjonelle CVC-er, investerer SMB CVC-er også for å ha det gøy, som er en av de mest vanlige motivasjonene til BA. De deler også likheter med BA ved at de nesten utelukkende investerer i oppstartsbedriftenes tidlige faser og administrerer disse investeringene innenfor den interne strukturen i selskapet. Noen SMB CVC-er skaffer i tillegg aksjer i porteføljeselskapene deres gjennom "sweat equity", noe som er svært uvanlig for de andre investortypene. SMB CVC-er ligner på en hybrid av BA og CVC, men har samtidig unike karakteristikker som er skiller dem ut på visse områder. Dette underbygger at SME CVC-er bør betraktes som en egen investortype. SMB CVC-er kan derfor beskrives som Corporate Angels - en unik investortype i risikokapitalverdenen.

Når det kommer til hvilke verdiøkende tjenester SME CVC-er tilbyr sine porteføljeselskaper, ligner de veldig mye på de tradisjonelle CVC-ene. Deres største bidrag er innen teknologiutvikling, og de gir også betydelige bidrag innen områder som er unike for CVC-er. Dette inkluderer å gi porteføljeselskapene tilgang til morselskapets teknologi, samt FoU og produksjonsanlegg.

Preface

This master thesis is written by three students at the Norwegian University of Science and Technology (NTNU), NTNU School of Entrepreneurship. The authors are all student entrepreneurs and therefore have first-hand experience with working in a company that is dependent on the external environment in order to obtain the resources necessary for survival and growth. Exploring this topic has therefore been very interesting, and it has provided valuable educational and professional experiences.

The authors would like to thank their supervisor Puck Hegeman and Professor Roger Sørheim for valuable discussions and feedback throughout the year. We especially want to thank Puck for her advice and guidance over the past year. Thank you for always being available for discussions, your support has been greatly appreciated.

We also want to thank Erik Andreas Sæther and Lise Aaboen for feedback along the way. Lastly, we would like to thank all the SME executives that took the time to answer our survey.

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1. Introduction

Entrepreneurial ventures' success is dependent on access to the necessary resources for commercialization (Brush, Greene and Hart, 2001). To strengthen chances of survival and growth, entrepreneurial ventures may turn to different sources of entrepreneurial finance, including business angels (BA), independent venture capital (IVC) firms, or corporate venture capital (CVC) (Dushnitsky, 2006). These investors are distinctively different in terms of their motive for investing, governance and subsequently their value-added services. This master thesis is a study exploring the phenomenon of small and medium-sized enterprises (SMEs) investing CVC in entrepreneurial ventures (SME CVCs), which has not been studied in prior venture capital research.

BAs are high net-worth individuals offering risk-capital to entrepreneurial ventures (Mason and Harrison, 1995; Politis, 2008). IVCs, on the other hand, are professionally managed investment funds, investing in high-risk entrepreneurial ventures for equity, with the goal of achieving financial returns (Alvarez-Garrido and Dushnitsky, 2016; Hellmann, 2000). In addition to financial resources, partnering with these investors can entail receiving an array of other resources and services, as they usually possess experience and assets vital for the success of entrepreneurial ventures (Maula, 2001). CVCs are investments made from an established, non-financial company, and distinctly differ from these other two sources of entrepreneurial finance, as CVCs have access to their parent company's unique competencies and assets (Chemmanur, Loutskina and Tian, 2014). CVCs can therefore offer additional resources, including technological competencies, manufacturing resources, distribution channels, marketing knowledge and in-house R&D (Bertoni, Colombo and Grilli, 2013). When CVCs invest in entrepreneurial ventures they can provide access to these resources that may be crucial for the entrepreneurial ventures' success (Gompers and Lerner, 2000; Ivanov and Xie, 2010). In addition, CVC's direct affiliation with a parent corporation can also influence the returns they seek to gain. Compared to IVCs and BAs, which primarily attempt to obtain financial returns, CVCs are mainly motivated by obtaining strategic benefits for their corporate parent (Dushtinsky, 2006; Basu, Phelps and Kotha, 2011; Baldi, Baglieri and Corea, 2015).

There is a large variety of overlapping terms describing these CVC investors (Dushnitsky, 2006). This paper utilizes the definition of Colombo and Murtinu (2017), that Corporate Venture Capital is a minority equity investment by non-financial corporations in external, privately held entrepreneurial ventures. The corporation that is investing is often called the *parent corporation*, who can manage the investment directly, through a wholly owned subsidiary, or together with an Independent Venture Capital fund (Dushnitsky, 2006). The investee is called the *portfolio company* of the CVC.

While there exists an enormous body of literature on venture capital, CVC as a field of research is young, fragmented and underdeveloped (Landström, 2007). There have been five prominent research streams that characterize the different facets of CVC (Röhm, 2018), and one of the most studied facets is the *value-added services* CVCs provide for their entrepreneurial ventures. While the value-added contributions of CVCs are well documented, one of the most pressing issues within this research field is that extant research has only studied the CVC activity of large corporations, neglecting SMEs that invest CVC. SMEs are in many regards distinctively different from larger firms (e.g.

resources, bureaucracy, flexibility) (Carrier, 1994), which is likely to influence the value-added services they provide. This is important, as CVCs' value-added contributions can have substantial implications for the entrepreneurial ventures' performance (Gompers and Lerner, 2000; Ivanov and Xie, 2010). The differences between SMEs and larger firms is also likely to affect their motivation for engaging in CVC activity, as well as their investment practices. This paper addresses this research gap with survey data collected from 96 SME CVC investors. By exploring their characteristics (i.e motivation and governance) and studying the topic of value-added services provided by SME CVCs in Norway, this paper will assess how they compare to the traditional entrepreneurial finance sources such as BAs, IVCs and larger CVCs.

The research scope and design of the thesis is based on interviews conducted through a pilot study in 2019, as well as a literature review on entrepreneurial finance (CVCs, BAs, IVCs) and the value-added services these investors provide. Both of these studies were conducted by authors of this thesis.

1.1 SME CVCs

The motivation, governance and the range of value-added services that are provided by CVCs (Alvarez-Garrido and Dushnitsky, 2016; Maula, Autio and Murrray, 2005; Yang, 2012) depends on the resource-base of the investing firm (zu Knyphausen-Aufsess, 2005). One aspect that is likely to affect the CVC's investment practices and ability to provide value-added services is the corporate parent`s firm size, as determined by its number of employees and annual turnover (Keil, 2004; Kelly, Schaan and Joncas, 2002). Prior research on CVC has exclusively focused on large parent corporations (Maula, Autio and Murray, 2009; Dushnitsky, 2006), which may partly be due to the lack of available data on smaller firms (Van de Vrande, 2013; Keil, Maula, Schildt and Zahra, 2008). Additionally, research often assumes that the firms partaking in CVC investments are large corporations (Dushnitsky, 2006; Chesbrough, 2002; Ivanov and Xie, 2010; Maula et al., 2009), and bring little attention to the possible differences due to the size of the parent company, though some studies do control for firm size (e.g. Basu et al., 2011; Maula et al., 2005). Therefore, another explanation for the lack of focus on SMEs pursuing CVC investments may be that researchers simply assume that they do not have a sufficient resource base to make such discretionary and uncertain investments in entrepreneurial ventures (Basu et al., 2011; Singh, 1986). When conducting the literature review, the only identified prior research on SME CVCs' was a minor section of Coveney and Moore's (1997) study of BAs in the UK, where they identified several companies making angel-type investments. Nonetheless, the authors have not found any research that focuses on SME CVCs and further explores their characteristics. Research focusing on SME CVCs is to the extent of the authors' knowledge, and according to several venture capital scholars at the Norwegian University of Science and Technology, non-existent.

The resource reservoir of the CVC's parent corporation represents a "conceptually distinct aspect of size" (Kimberly, 1976, p. 588), but it is reasonable to assume that larger corporations (in terms of number of employees and turnover) generally have a larger resource reservoir than SMEs (Barney, 1991; Kimberly, 1976). As the size of a firm's workforce and income shapes the firm's resource reservoir, this will in turn affect the value-added contributions SME CVCs are able to provide to entrepreneurial ventures.

Furthermore, larger parent corporations with stronger resource reservoirs are also more likely to have excess capacity in their resources (Basu et al., 2011; Penrose, 1959). This will not only increase the firms' incentives to utilize these resources by engaging in CVC activity, it may also influence its ability to provide value-added services to the entrepreneurial ventures (Keil, 2004; Kelly, Schaan and Joncas, 2000). SME investors, within the topic of CVCs value-added services, is an important aspect of entrepreneurial finance that needs and deserves attention. Without prior research on SME CVCs, we do not know if the characteristics of these investors are most similar to large CVCs as described in prior literature, or if their motivation, governance and value-added services might be more akin to that of IVCs or BAs.

Through a pilot study in the fall of 2019, the authors identified several Norwegian SMEs that invest CVC in entrepreneurial ventures. This demonstrated that it is in fact not only large corporations, with ample resources, who make these investments. However, locating and identifying these SMEs that invest in entrepreneurial ventures was a difficult process. The authors contacted the university's Technology Transfer Office, IVCs, researchers on entrepreneurial finance, and did extensive searches in their network and online to identify SME CVCs. Still, only eight were identified, and two agreed to participate in interviews in the qualitative pilot study. The difficulties in identifying these SME CVCs, paired with the fact that they are rarely registered in the databases that most CVC research is based on (e.g. VentureXpert), may also partly explain the lack of CVC-research focusing on SMEs. Compared to larger firms, SME CVCs are more difficult to identify and study due to their "lack of publicly available, uniform and detailed accounting information" (Van Caneghem and Van Campenhout, 2012, p. 342). The quality of SMEs' financial statements in many countries is also assumed to vary due to the fact that SMEs typically do not require to be audited (Pettit and Singer, 1985; Ortiz-Molina and Penas, 2006; Van Caneghem and Van Campenhout, 2012). This results in less available data to be used in quantitative research, and most CVC-research is quantitative (Röhm, 2018). In addition, of the eight SME CVCs identified in our pilot study, only two of them had information about their investment activity on their company website. This is different from the larger firms, who typically have dedicated sections on their website for their CVC activity. This makes identifying and studying SME CVCs inherently more difficult than their larger counterparts. Therefore, it is still uncertain how common these SME investments are and how they compare to traditional sources of entrepreneurial finance, such as larger CVCs, IVCs and BAs. Norway provides a good setting for conducting research on SMEs, as all Norwegian companies are required to submit their financial statements, including a list of their shareholders, in a prescribed and uniform format. More importantly, this information is publicly available for all Norwegian companies. This makes it easier to identify and assess SMEs' investment activity, making Norway a suitable context for this study. After the initial exploration of the phenomenon of SME CVC in the pilot study, the authors deemed it imperative to get a more comprehensive understanding of the phenomenon of SMEs investing CVC. Therefore, this thesis investigates the topic through a quantitative study based on survey data.

1.2 Importance of topic

The economic importance of venture capital is well established (Samila and Sorenson, 2011; Zider, 1998), and CVC's importance within the industry has increased over time (Maula et al., 2005; Dushnitsky, 2006). In 2018, more than half (51%) of all venture

capital raised in the US had CVCs involved in the deal (NVCA 2019 Yearbook, 2019). Scholars also consider CVC as an important research topic because of its distinct differences to BAs and the more mature research field of IVC (Maula et al., 2005; Bertoni et al., 2013; Chemmanur et al., 2014). They differ in aspects such as the investor's motives, organizational structure, and the value-added services they can offer. The differences in value-added services are of particular importance, as they greatly impact the performance of portfolio companies, which matters for both the entrepreneurial venture and parent corporation (Chemmanur et al., 2014).

Considering the large variations in terms of motivation, governance and value-added contributions of the different venture capital investors, it is unlikely that SMEs investing CVC are identical to the larger CVCs described in prior literature. Considering the distinctiveness of CVCs and their importance within *The Venture Capital Galaxy* (De Clerq, Fried Lehtonen and Sapienza, 2006), exploring SMEs that invest CVC is important. The topic of SME CVCs becomes increasingly important given the fact that SMEs represent more than 99% of all businesses in Europe and make up approximately two-thirds of employment and more than half of all turnover in the EU private sector (Eurostat, n.d.). The same is true in Norway, where 99.9% of companies are SMEs (SSB, 2020). SMEs are the backbone of most economies and key to innovation, economic growth, and job creation (Robu, 2013). The topic of this thesis is also valuable to both SMEs and entrepreneurial ventures. Gaining knowledge about this phenomenon can provide insight to SMEs that consider investing in entrepreneurial ventures. Additionally, entrepreneurs seeking funding can learn the possible benefits and disadvantages of SME CVC investments, in order to compare it to partnerships with large CVCs or other sources of entrepreneurial finance.

1.3 Purpose

The purpose of this paper is to explore and shed light on the *phenomenon of SMEs investing Corporate Venture Capital.*

The different sources of entrepreneurial finance have both distinct and overlapping features regarding their motivation, governance and value-added services. The purpose of this paper is to research the features of SME CVCs in these aspects, and to determine what place SME CVCs hold in The Venture Capital Galaxy. An illustration of this can be found in Figure 1.

Regarding motivation and governance, CVCs are known for often governing through a subsidiary and seeking strategic benefits, IVCs for their high autonomy and motivation of financial returns, while BAs seek intrinsic rewards and personal development (De Clercq et al., 2006; Brettel, 2003, Dushnitsky & Lenox, 2006). It is therefore interesting to investigate if the characteristics of SME CVCs have a tendency to resemble either CVC, IVC or BA, or if they share similarities with several of these investors simultaneously.

Research question 1. *How do SMEs investing CVC (compare to the traditional venture capital sources of CVCs, BAs and IVCs, and) fit into The Venture Capital Galaxy?*

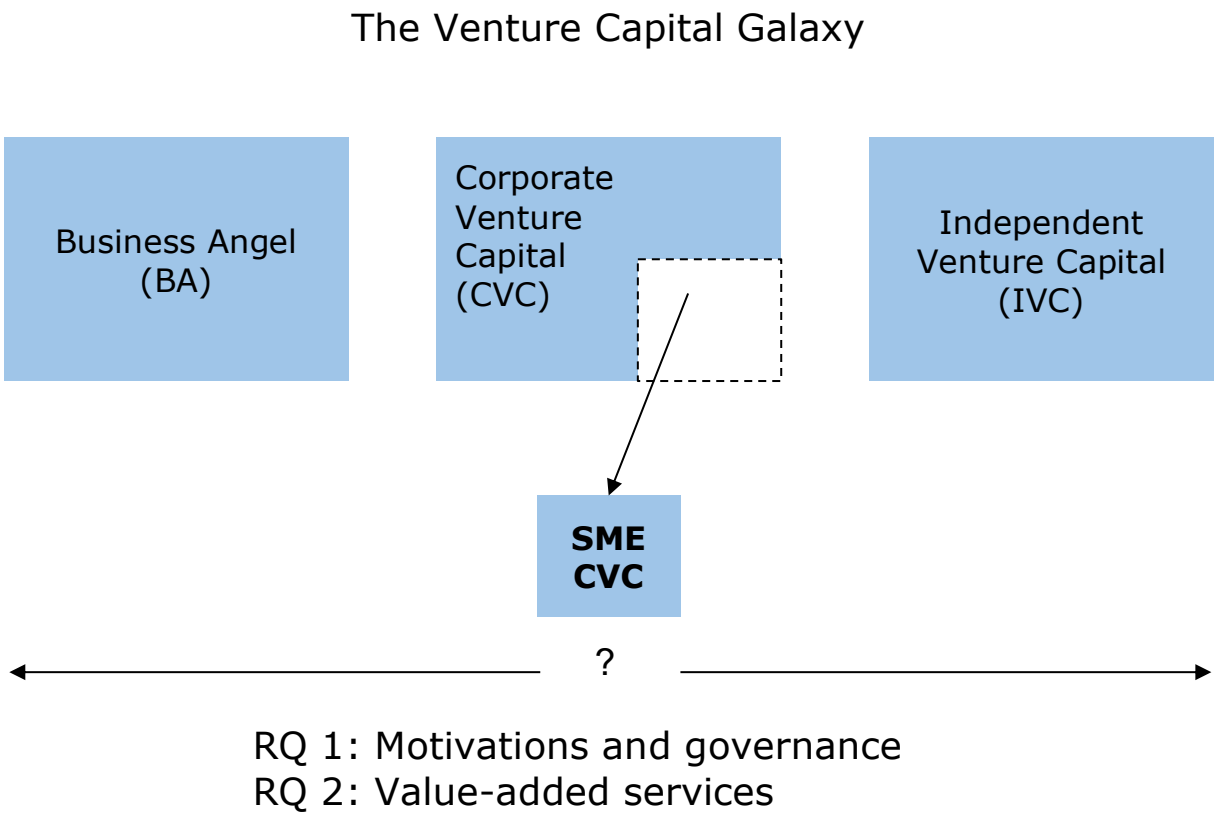
Within venture capital, one of the key distinctions of CVCs compared to IVCs and BAs, are the resources available to them due to their affiliation with a non-financial parent corporation. This affects their potential value-added services greatly. Subsequently, it

becomes interesting to investigate whether SMEs that invest CVC provide value-added contributions that are similar to their larger counterparts in traditional CVCs, or share more similarities with IVCs and BAs.

Research question 2. *How do the value-added services of SMEs investing CVC compare to those of traditional venture capital sources?*

Figure 1

Purpose and research question



1.4 Contribution

This paper contributes to the entrepreneurial finance literature by providing the first study on SMEs that invest CVC. All SMEs in Norway within the IT and aquaculture industries, with a firm age above three years, are included in the sample to provide an estimate of the commonality of SMEs to invest CVC. By comparing SME CVCs motivation, governance and value-added services to those of the traditional sources of entrepreneurial finance (i.e. IVCs, BAs, and larger CVCs), this study contributes to the research by exploring SME CVCs place in The Venture Capital Galaxy. This will move us closer "towards understanding who makes corporate venture capital investments and why" (Basu et al., 2011).

With an emphasis on the research stream on value-added services, this paper can have managerial implications by providing guidelines and useful insight for SMEs investing (or considering investing) Corporate Venture Capital, as well as presenting implications for entrepreneurial ventures seeking to partner with SME CVCs.

1.5 Preliminary research for the paper

Preliminary research was conducted in the fall of 2019, to form a foundation for the master thesis, including a literature review and a qualitative pilot study that consisted of four in-depth interviews. The findings of the literature review and pilot study have assisted in creating the research design for the master thesis, and to identify interesting aspects to investigate.

1.5.1 Literature review

The purpose of the literature review was to distil the literature pertaining to CVCs in order to investigate the value-added services CVCs can provide, and how these differ from associated investor types. Since "SMEs investing CVC" have yet to be explored by scholars, one does not know if they share more similarities to traditional CVC investors, IVCs or BAs. As such, the authors deemed it preferable to investigate all three of these investor types and their value-added services in the literature review.

1.5.2 Pilot study

Rozin (2001) critiques the dominant model of science merely appropriate for mature fields of research, which is based on the assumption that different important phenomena have been identified and invariances have been well documented. This maladaptation has resulted in an overemphasis on hypothesis testing in areas of research where informed curiosity should first lay the theoretical foundation, and thereafter these theories can be statistically investigated. This is especially true within social science, where one can argue that quantitative findings is somewhat of a simplistic and probabilistic representation of reality (Hanson and Grimmer, 2007; Panhwar, Ansari and Shah, 2017). Reversely, the essence of qualitative research is to expose the human part and individual perceptions of a story, making it suitable for investigating topics unfamiliar to prior research (Jacob and Furgeson, 2012), such as SME CVCs.

Aiming to research this phenomena quantitatively, while acknowledging the merit of Rozin's statements, lead the authors to decide to undertake a preliminary, qualitative pilot study of SME CVCs, conducting four in-depth interviews with executives at two SMEs that invest CVC, the CEO of one of the SME CVCs' portfolio company, and a CVC industry expert. The aim of the pilot study was to investigate the contributions SMEs that invest CVC have within the four value-added categories of Bjørgum and Sørheim (2015), namely technology development, business development, investor's outreach and legitimacy. The pilot study laid the foundation of the master thesis by providing the first empirical data of SME CVCs. This helped determine the research topic, methodology and hypotheses for the master thesis. The pilot study provided several interesting findings:

(1) The SME CVCs reported a low contribution in technology development. This directly contradicts prior CVC literature, which describes technological resources as the area

where CVCs contribute most in terms of value-added services (Bjørgum and Sørheim, 2015; Maula et al., 2005; Chemmanur et al., 2014).

(2) The SME CVCs reported a low-to-moderate contribution in business development. This is interesting as both SMEs reported that they invested exclusively in companies operating in the same industry and with whom there was a "strategic fit".

(3) The SME CVCs reported a high contribution in investor's outreach. Similar to the findings of Mackewicz and Partner (1997), we found that the SME CVCs acted as distribution and sales channels for the entrepreneurial ventures, and introduced them to their customers.

(4) The SME CVCs reported a high contribution in legitimacy. Both SME CVCs and the portfolio firm highlighted legitimacy as one of the most important contributions of the SME investor.

In addition to these findings, the study provided several other findings that have been instrumental in the research design of the master thesis. One such example is that both SMEs reported that one of the most important motivational factors to invest in entrepreneurial ventures was "*to have fun*", a motivation rarely found in traditional CVC literature. This motivation is more frequently associated with business angels (Brettel, 2003), and influenced the authors to widen the focus of value-added services from merely CVCs, to also include the similarities SME CVCs might have to BAs and IVCs. Additionally, one of the SME CVCs reported to have invested sweat equity, meaning that the SME exchanged services, rather than financial capital, in return for equity in the entrepreneurial venture.

1.6 Structure of the paper

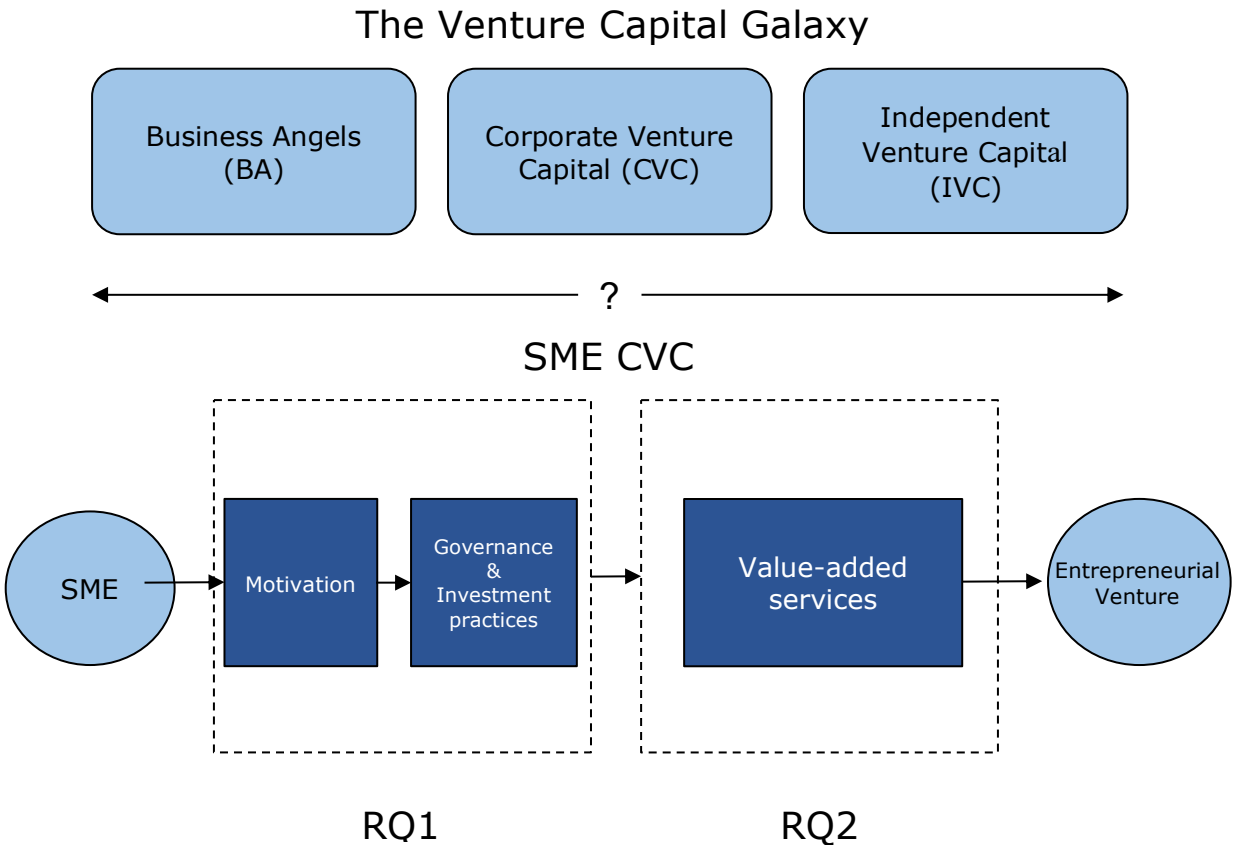
In this introduction, the paper has presented a background on the important research-topic of CVCs, as well as the research-gap on SMEs making these investments. Subsequently, prior literature will be presented in connection with theory and hypothesis development. Following, the chosen method for data collection and analysis will be described, before presenting the result of the quantitative study. Finally, the authors will discuss the results and provide recommendations for future studies.

2. Theory

In the following chapter, the authors will present theory and prior literature in the research field of entrepreneurial finance. Due to the exploratory nature of this study, with the characteristics of SME CVCs as investors being unknown, this chapter will draw on literature of the main three sources of entrepreneurial finance (BA, IVC and CVC) for comparison. Further on, the goal of the study is to get an overall better understanding of SMEs as corporate investors and it therefore requires investigation of different aspects of the CVC partnerships. First, in order to establish where SME CVCs fit in The Venture Capital Galaxy (RQ1), the authors will provide an overview of the traditional investors' typical characteristics in terms of (1) motivation, as well as (2) governance and investment practices. This part will not be rooted in one specific theoretical framework but will draw on literature pertaining to different research streams, such as upper-echelons theory and other SME-specific literature. Following, the authors will present resource dependency theory (RDT) and the theoretical framework that will be used to analyze the value-added services provided by SME CVCs (RQ2). In both parts, literature review of prior research will be included and utilized to present hypotheses. Two types of hypotheses are made use of, where one type is descriptive (these have not been numbered out and are instead highlighted in the body text) and the other type concerns hypotheses that are to be tested through quantitative analysis. The focus and structure of the theory chapter is illustrated in Figure 2.

Figure 2

Framework for exploring SME CVCs



In addition to studying value-added services, this paper also investigates the SME CVCs *motivation*, to provide a better understanding of why these SMEs decide to pursue CVC investments. Governance and investment practices have been included to highlight how these partnerships work in a practical sense. Both motivation and organizational structure will likely have impacts on the nature and level of value-added contributions these SME CVCs are able to provide (Dushnitsky, 2006; and Maula et al., 2005).

2.1 The investors in The Venture Capital Galaxy

This section will look into the investors' motivation, as well as governance and investments practices in The Venture Capital Galaxy. This is meant to provide a theoretical background, present an overview, and highlight similarities and differences between the different investors. Following, this will be used to draw comparisons to SME CVCs and form the foundation of the hypotheses in the analysis pertaining to RQ1.

2.1.1 Motivation

The different investors within entrepreneurial finance greatly vary in their motivation for investing in entrepreneurial ventures, which is known to influence the value-added services they provide (Röhm, Köhn, Kuckertz and Dehnen, 2018). This section is dedicated to understanding the investment motivation of traditional CVCs, BAs and IVCs. Thereafter, the motivations that SMEs may have for investing CVC will be discussed and compared to those of the traditional investor types.

Motivation of IVCs

Given the nature of IVCs and how they manage larger pools of money gathered from several different parties, their sole goal of investing is to achieve financial returns (De Clercq et al., 2006). The value-added services that IVCs provide are therefore purely driven by the incentive to raise the valuation of their portfolio companies as a preparation for trade sales or initial public offerings (IPO) (Chemmanur et al., 2014; De Clercq et al., 2006). IVCs typically have a limited time span of 10 years, making them different from CVCs and BAs in that they have a predetermined time frame on their investments. Given their limited time span and motive of maximizing financial returns, it is paramount that the entrepreneurial ventures that IVCs invest in exhibit a high growth-rate potential (De Clercq et al., 2006).

Motivation of BAs

Business angels commonly have similar motivation for investing as entrepreneurs have for building their own ventures, namely intrinsic motivation and a need for achievement and independence (Politis, 2008). While return on investment and equity growth is important, the intrinsic motivation and personal development is essential. One of the greatest investment motivations for business angels is *to have fun* (Brettel, 2003). BAs do not have a limited time span, and their investment exits are often unplanned (De Clercq et al., 2006). Business angels often have prior experience from starting and working in entrepreneurial ventures themselves (Wetzel, 1981; Mason, Harrison & Chaloner, 1991; Landström, 1993; Hindle & Lee, 2002), which seems to influence their motivation for investing. BAs often want to pass on their professional and entrepreneurial

experience (Stedler and Peters, 2003), and are motivated by giving back to the entrepreneurial community (Sudek, 2006).

Motivation of CVCs

Contrary to the intrinsic motivations at the individual level for BAs, CVCs motivations are linked to objectives at a corporate level. While CVCs are also interested in financial returns on their investment, they differ from BAs and IVCs in that they also commonly seek strategic benefits for their corporate parent (Dushnitsky and Lenox, 2006). Strategic returns comprise all the non-financial performance benefits a parent corporation can obtain through engaging in CVC activity, including corporate learning and increased technological and innovative performance. These strategic benefits are often viewed as more important than financial returns (De Clercq et al., 2006), and in particular, *gaining a window on new technology* is commonly viewed as the most important strategic benefit (Basu et al., 2011; Dushnitsky & Lenox, 2006). Different levels of strategic and financial objectives leads to four possible configurations of CVC investment motivation: *Strategic motivation (*heavy emphasis on strategic benefits); *financial motivation* (heavy emphasis on financial benefits); *analytical motivation* (moderate emphasis on both benefits, with a greater tendency towards strategic benefits); and *unfocused motivation* (moderate emphasis on financial benefits, but greatly underperform on strategic benefits) (Röhm et al., 2018). Contrary to IVCs, and similarly to BAs, CVCs have rarely planned their exits beforehand (De Clercq et al., 2006), and are considered to be "patient investors with long horizons on their investments" (Bjørgum and Sørheim, 2015, p. 263). Differences in the CVC's investment motivation can affect the value-added services they provide, and prior research has found that strategically motivated CVCs are more likely to grant the entrepreneurial venture access to the parent corporations' resource base (Röhm et al., 2018).

Furthermore, within strategic motivations, one often distinguishes between exploration (e.g experimentation, search, and discovery of radical innovations) and exploitation (e.g. refinement, selection, and implementation of incremental innovations), related to either learning or technology (March, 1991; Napp and Minshall, 2011; Lee, Park and Kang, 2018). Many CVC programs aim for explorative learning, through a portfolio diversification that span into markets and technologies that the parent corporation is unfamiliar with (Baldi et al., 2015). This entails potential for high growth, but also high risk (Maula, 2001). The balance of exploration and exploitation is therefore an important consideration for the parent corporation, as activities are competing over a limited resource pool (Lee and Kang, 2015; Uotila, Maula, Keil and Zahra, 2009). Exploration through CVC investments while focusing internally on exploitation can be an effective way to pursue both objectives simultaneously and thus increase the firm's ambidexterity (Raisch, Birkinshaw, Probst and Tushman, 2009).

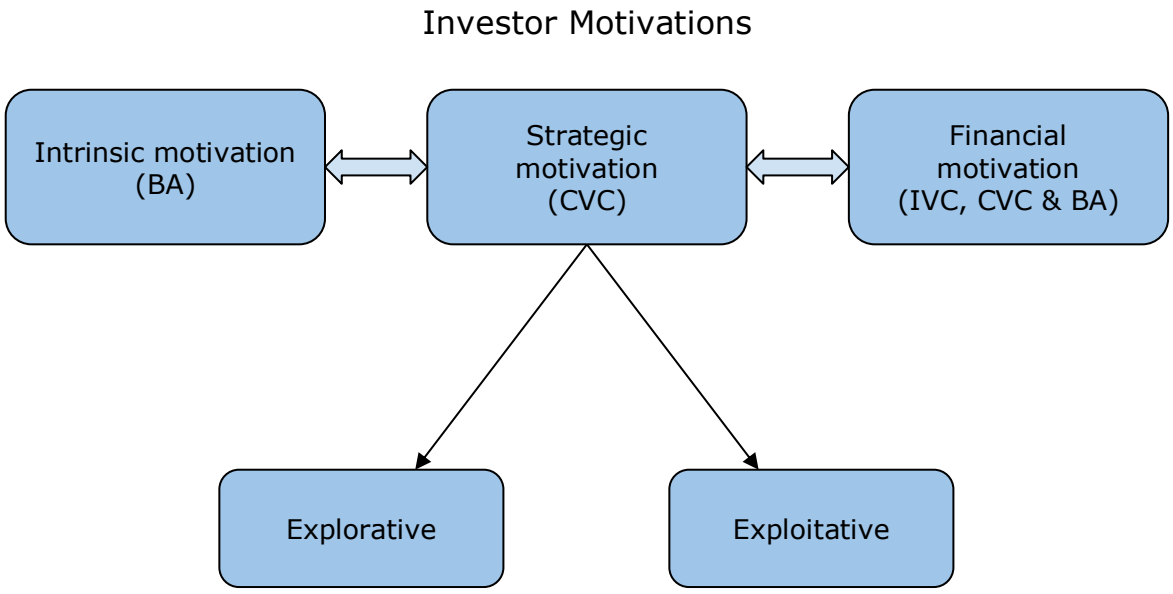
Motivation in The Venture Capital Galaxy

It becomes apparent that all of these investors have similarities and differences in their motivations for investing in entrepreneurial ventures. For IVCs, the sole objective is to obtain financial returns on their investments, either through a trade sale or an IPO. While BAs are motivated by financial returns, they view having fun, giving back to the community, and the intrinsic rewards of investing as more important. While BAs are driven by motivators at an individual level, CVCs are concerned with objectives at a

corporate level, namely strategic benefits. CVCs often regard strategic benefits as more important than direct financial returns, and the most important strategic benefit is commonly regarded as *gaining a window on new technologies*. Furthermore, CVCs' strategic motivations can either be to explore or exploit, see Figure 3.

Figure 3

Entrepreneurial finance investors' motivation



Motivation of SMEs investing CVC

SMEs CVCs are affiliated with a non-financial parent corporation and are therefore expected to aim for strategic returns similarly to larger CVCs. However, SMEs are by definition more resource-constrained than larger firms, likely making them less able to fully disregard financial returns and invest solely for strategic benefits. This is in line with what Röhm et al. (2018) categorizes as an *analytical motivation*. Financial returns are therefore likely to be of substantial importance to SME CVCs, *but we expect that their motives will stretch beyond financial returns, clearly separating them from IVCs.*

SMEs' limited excess capacity is also likely to decrease their ability to pursue both explorative and exploitative innovation strategies simultaneously. Investing in CVC can therefore be a way of exploration while the corporate parent predominantly focuses on exploitation (or vice versa). This way, SMEs are able to utilize their CVC activity to pursue both exploitation and exploration. *As a result, we expect that SMEs investing CVC will be more ambidextrous than SMEs that do not invest CVC.*

Through the interviews conducted in the authors' pilot study in 2019, one finding was that the SMEs invested CVC because it was exciting and fun. This finding is interesting to study further, as having fun is known to be one of the most prominent motivations among business angels (Brettel, 2003; Politis, 2008), but not regarded as important in motivation literature pertaining to IVC and CVC. As mentioned earlier, gaining a *window on new technology* is commonly viewed as the most important strategic objective of

CVCs (Dushnitsky & Lenox, 2006). Building on the notion that SME CVCs might be more motivated by this aspect of BAs that is not reported among traditional CVCs, an interesting question is if the SME CVCs mostly resemble BAs or CVCs in respect to their motivation. These motivations are fundamentally different, as *having fun* reflects motivation on an individual level, while *gaining a window on new technology* concerns motivations on a corporate level. Naturally, BAs cannot be motivated by gaining a window on new technology, as they are not related to a corporation that can take advantage of such strategic benefits. Vice versa, CVCs operate at a corporate level and are unlikely able to engage in CVC investments for fun, due to restrictions by their corporate duties to the companies' shareholders. These two motivations are inherently different from one another and one would expect each motivation to transform the fundamental character and identity of the investor to be less guided by the other motivation. We therefore hypothesize that the SME CVCs' motivation will lean one way or the other.

Hypothesis 1. *The SME CVCs' motivation of investing because it is fun is negatively related to investing to gain a window on new technologies.*

Investing to have fun might also alter the behaviour of the SME CVC. A study by Plester & Hutchison (2016) found that fun is positively related to workplace engagement, which is consistent with the notion that BAs have a high frequency of interaction with the entrepreneurial ventures that they invest in.

Hypothesis 2. The SME CVCs' motivation of *investing because it is fun is positively related to the frequency of interaction between the SME CVC and the entrepreneurial venture.*

2.1.2 Governance, structure and investment practices

In order to better understand SME CVCs' position in the specter of entrepreneurial finance sources, it is also important to investigate their governance, structure and how these SME CVC partnerships work in a practical sense. The structural organization of the CVC triad will impact both the nature and the level of value-added contributions these SMEs provide (De Clercq et al., 2006; Hoyos-Iruarrizaga, Fernández-Sainz and Saiz-Santos, 2017; Keil, 2004; Siegel, Siegel and Macmillan, 1988). It is also likely to have a significant impact on the knowledge transfer and learning of the corporate parent (Maula et al., 2009). This section will therefore present theory and entrepreneurial finance literature related to governance, and highlight the different investors' typical guidelines and practices, as well as the systems they have in place for managing these investments. This includes which stage of the entrepreneurial ventures' development they invest in, the autonomy of the investment unit, and their level of involvement.

In terms of governance in the traditional sources of entrepreneurial finance, BAs differ significantly from IVCs and CVCs, as they are considered to be far more informal investors (De Clercq, 2006; Hoyos-Iruarrizaga et al., 2017). While IVCs and CVCs tend to have a wider selection of resources to contribute with (De Clercq et al., 2006; Bjørgum and Sørheim 2015), BAs are able to take a more active role in the venture's activities, thereby creating a closer relationship that foster the BAs' value-adding abilities (Hoyos-Iruarrizaga et al., 2017). BAs, who often have prior entrepreneurial experience, take a

more hands-on approach, contributing on an operational level, more akin to co-entrepreneurs than investors (Schmidt, Bendig and Brettel, 2018).

The governance of the investment should be a reflection of the investor's motives (Napp and Minshall, 2011). BAs are often motivated by the intrinsic reward from being involved in the management of the entrepreneurial ventures and therefore tend to have a more active role (De Clercq, 2006). IVCs are financially motivated and are therefore most focused on monitoring and having more of a unilateral structure, contributing in activities that help boost growth of the entrepreneurial venture (Maula et al., 2005; Bertoni et al., 2013, Berg-Utby, Sørheim and Widding, 2007). Traditional CVCs on the other hand, are different in that their motives are also strategically rooted, and CVCs therefore must have different structures in place that reflect these goals in order to reap the benefits in their pursuit of innovation (Napp and Minshall, 2011). Learning is especially important to create value for corporate investors, as they operate within a triad where knowledge must be exchanged effectively between the entrepreneurial venture, CVC, and the corporate parent (Keil, 2004). Depending on the balance of strategic and financial goals, and if it aims to achieve explorative or exploitative objectives, the governance and organizational structure of these CVC investments must reflect this (Napp and Minshall, 2011).

Maturity of the entrepreneurial venture at point of investment

One aspect where the traditional investors differ is in what stage of the entrepreneurial ventures' development they invest in (De Clercq et al., 2006). BAs are most able to add value when their knowledge and experience are relevant, and their ability to add value is most apparent for the entrepreneurial ventures' early phase. Therefore, BAs are quite often the first to invest in entrepreneurial ventures (De Clercq et al., 2006). Furthermore, it is in the early stages that BAs are most able to contribute by attracting additional investors, assistinging in negotiations and boosting the venture's legitimacy (Sørheim, 2005). CVCs and IVCs on the other hand, tend to invest in the firm's later stages (De Clercq et al., 2006; Maula, 2001; Sørheim, 2005).

While CVCs invest in all stages of the entrepreneurial ventures (De Clercq, 2006), CVC-backed firms tend to be younger, riskier and less profitable than those backed by IVCs (Chemmanur et al., 2014). A large portion of traditional CVC programs engage in early stage investments in entrepreneurial ventures to probe uncertain, but potentially valuable markets, technologies or business models before competitors. These aim at explorative learning, which is also associated with a high risk (Maula, 2001; Basu et al., 2016). IVCs tend to be more valuable in the later stage, as they contribute to boost the venture's growth (Maula et al., 2005; Bertoni et al., 2013). In short, BAs tend to be the first investors, followed by CVCs and IVCs respectively. Due to SME CVC's less available funds and financial resources for investments compared to larger CVCs (Barney, 1991), we expect them to be more similar to BAs than IVCs and traditional CVCs in terms of their financing stage. Limitations in available funds might also incentivize the SME CVC to procure shares through sweat equity, a method in which an agent (SME CVC) procures ownership through labour for the principal (entrepreneurial venture), rather than through financial investments (Krishna, Lopomo and Taylor, 2013). This was found to be true for one of the SME CVCs in the pilot study. *Taking into account the aforementioned for the analysis, we expect SME CVCs to invest in the entrepreneurial venture's early stage, where the investment amount is typically smaller (De Clercq, 2006).*

Autonomy

In terms of the autonomy of the traditional investors, there is a clear distinction between BAs and IVCs on one hand, and CVCs on the other. BAs and IVCs are considered more autonomous. IVCs invest funds from external partners and operate with a high level of autonomy (De Clercq, 2006). BAs are completely independent as they are investing their own money (De Clercq, 2006; Politis, 2008). This is not the case for CVCs, who invest corporate funds from their parent company.

As mentioned, CVCs may pursue both financial and strategic goals. However, it is the strategic goals that usually dominate (Basu et al., 2009; Dushnitsky, 2006), and there must be an investment management structure in place that reflects these goals (Chesbrough, 2002; Napp and Minshall, 2011). One of the major challenges for corporate investors is to determine how much autonomy the CVC unit should have (Lee et al., 2018). The structural autonomy, meaning the CVC investment unit's level of self-governance, has been found to improve the CVC investment's strategic performance (Simon, Houghton, & Gurney, 1999). High autonomy increases innovation performance of the corporate parent (Yang, 2012), particularly when it comes to explorative innovations (Lee et al., 2018). One might think that effective knowledge-transfer within the CVC triad requires a high degree of control mechanisms and centralization, but prior studies show a positive relationship between autonomy and innovativeness (Yang, 2012). This highlights the complexities of effectively managing knowledge and transferring it into learning and innovation benefits within a CVC triad. It also highlights the importance of governance and managing the CVC investments, and how the autonomy, routines and procedures are related to the CVC's performance (Siegel et al., 1988).

Corporate investors greatly differ in terms of the structure of their CVC program, but it can generally be classified into two levels of autonomy. While some CVC units are governed internally by the parent corporations, others are completely independent subsidiaries that make investments on their own (Gompers and Lerner, 2001; Siegel et al., 1988; Lee et al., 2018). An internal CVC unit is less autonomous and is typically closely aligned with the corporation's business unit and its strategy. On the other hand, when the CVC program is governed through a wholly owned subsidiary, the CVC unit typically operates with more autonomy and can select and manage the investments independently from the parent corporation (Yang, Chen and Zhang, 2016). In a database (primarily from VentureXpert) of 9,000 CVC investments in the US between 1990 to 2004, which included 152 corporate investors and 3,057 portfolio companies, Yang et al. (2016) found that 74 percent of the CVC programs operated with high structural autonomy through a wholly owned subsidiary.

Again pointing to the notion that SMEs have less available resources in support of CVC activities (Yang et al., 2016; Van de Vrande, De Jong, Vanhaverbeke and De Rochemont, 2009), one would expect that many of them are not able to have a dedicated unit to manage their investments. Further on, upper-echelons theory (Hambrick and Mason, 1984; Hambrick, 2007) highlights the importance of top-management and their impact on the company's strategic orientations (Matzler, Schwarz, Deutinger and Harms, 2008). The impact and influence of the top-management is particularly strong for SMEs, where executives often have considerable ownership stakes in the company (Matzler et al., 2008), resulting in an even more centralized decision-making power among a few executives (Willard, Krueger and Feeser, 1992). As opposed to large corporations, SMEs

tend to be managed more informally (Mintzberg, 1979) and the CEO is typically involved in more aspects of the firm. *These elements support the investment activity of SMEs to be integrated with the company's business unit and overseen by top-management, and we therefore expect the majority of SME CVCs to be managed internally.*

Level of involvement

While the structural autonomy relates to how integrated the CVC program is into the parent company's business unit, different investors also differ in how integrated and involved they are with the entrepreneurial ventures they invest in. Interaction with external advisors is one of the most important influences on the entrepreneurial venture's success (Carter, Gartner and Reynolds, 1996). In order to gain a greater understanding of SME CVCs' position in the specter of entrepreneurial finance sources, it is important to investigate their level of involvement. Particularly, one can distinguish the investor's involvement level by assessing how frequently they interact and whether or not they have board seats in the ventures they invest in.

IVCs tend to be quite hands-on investors (Busenitz, Fiet and Moesel, 2004) and use governance mechanisms to control and monitor the entrepreneurial venture's team (Berg-Utby et al., 2007). As IVCs motivations are mostly financial, their interaction involves monitoring the entrepreneurial ventures in order to reduce possible financial losses and prevent future adverse selection (Berg-Utby et al., 2007; Barney, Busenitz, Fiet and Moesel, 1996; Reid, 1996; Reid, 1999). IVCs provide value-added contributions that improve the portfolio companies' performance and act as a boundary spanner that can reach out to external actors and provide knowledge and timely information to the entrepreneurial ventures when it is required (Berg-Utby et al., 2007; Gomez-Mejia, Balkin and Welbourne, 1990). Due to this attribute, IVCs have earlier been nicknamed "firefighters" (Fredriksen, Olofsson and Wahlbin, 1997), as they focus most of their efforts on the portfolio companies in most need of it (Berg-Utby et al., 2007; Fredriksen et al., 1997). While the interaction frequency between IVCs and entrepreneurial ventures can vary, IVCs typically require board seats as a mechanism for monitoring their portfolio companies (De Clerqc, 2006). Furthermore, Botazzi, Da Rin and Hellman (2008) found that IVCs do tend to interact more frequently with their portfolio companies than CVCs. In their study of 119 European IVCs and 1,652 portfolio companies, 69.3% of the IVCs reported to interact with the portfolio company on a monthly basis or more and 66.2% had board representation.

BAs' level of involvement can also vary greatly, but this is more based on the individual investor's motivation for investing in entrepreneurial ventures. While some BAs' primary motivation is to get a return on their investments, others are motivated by the intrinsic reward of being a mentor and taking part in an exciting entrepreneurial venture (De Clercq et al., 2006). If the BA's motivation is purely financial, BAs will resemble IVCs in their interaction and level of involvement (Levratto, Tessier and Fonrouge, 2018), taking a supervision and monitoring role (Politis, 2008; De Clercq, 2006). BAs' ability to provide value-adding contributions is more conditioned by their mentoring role, and it increases with interaction frequency and how often they communicate with the venture (Politis, 2008; Hoyos-Iruarrizaga et al., 2017). With a closer relationship, BAs add value with their hands-on contribution and their entrepreneurial experience can make them set goals for the portfolio company based on their own and the venture's *available means*, as opposed to *predetermined goals* and striving to obtain the means necessary to achieve

them (Schmidt et al., 2018). While BAs may take a board seat in order to take a more active role in the entrepreneurial venture, they typically foster a more informal relationship with lighter reporting requirements (De Clercq, 2006).

A CVC investor's level of involvement is also dependent on the parent company's motivation, and a stronger strategic fit or relatedness between the corporate parent and portfolio company tends to result in more social interaction between them (Maula et al., 2009). Moreover, interaction frequency in the CVC triad has been found to directly affect the value-added services the investors are able to provide (Maula, 2001). In other words, if the know-hows of the entrepreneurial firm and the corporate parent are closely related, the two will interact more, and one would assume, knowledge transfer and value-added contributions will increase (Maula et al., 2009). The relatedness and interaction between the CVC and entrepreneurial venture can affect learning and the ability to efficiently transfer knowledge within the CVC triad. This knowledge transfer is facilitated by conative fit (willingness to collaborate) and having routines in place for sharing knowledge (Weber and Weber, 2007). Nevertheless, prior studies have shown that CVCs typically do not have a strong preference for investing in ventures with close geographical proximity (Gutmann, Schmeiss and Stubner, 2019; De Clercq, 2006), and this could substantially limit CVCs' ability to interact with their portfolio company. As CVC investments tend to be rooted in strategic motivation, CVCs will often have a board seat in the entrepreneurial venture as a mechanism for explorative learning and for transferring knowledge (Dushnitsky and Lenox, 2005; De Clercq, 2006).

Frequent interaction and board seats are common practices in partnership with all three traditional sources of entrepreneurial finance. They are important mechanisms for both monitoring and mentoring, and also facilitate learning and knowledge transfer for the corporate investors. We expect this to also hold true for SME CVCs, and that they will take an active role in the entrepreneurial ventures they invest in. *Hence, we expect SME CVCs to interact frequently with the entrepreneurial venture and that the majority of them will have a board seat.* Furthermore, we hypothesize that SME CVCs will resemble their larger counterparts in using board seats as a mechanism for explorative learning.

Hypothesis 3: *The SME CVCs' explorative motivation for engaging in CVC activity is positively related to having a board seat in the portfolio company.*

Governance, structure and investment practices of SME CVCs

From the presented literature, we see that BAs, IVCs and CVCs display different characteristics both in terms of their motivation for investing, as well as their governance and investment practices. In order to systematically map these characteristics, some of the most central features pertaining to RQ1 have been summarized in Table 1, which has been adapted with changes from De Clercq et al. (2006).

Table 1

Investor characteristics in The Venture Capital Galaxy (adapted from De Clercq et al., 2006)

Characteristics	Independent Venture Capital	Business Angels	Corporate Venture Capital
Type of funding	Funds from external partners	Personal funds	Corporate funds
Resource base	Large	Small	Very large
Motivation	Financial	Financial and intrinsic	Financial and strategic
Financing stages	Later stage	Early stage	All stages
Frequency of interaction	Moderate	Low to very high	Low to moderate
Investment exit strategy	Planned	Often unplanned	Often unplanned

SMEs generally have less resources available compared to their larger counterparts, and thus have less resources that can be dedicated to the company's investment activities (Basu et al., 2011; Yang et al., 2016; Van de Vrande, et al., 2009). The governance, structure and investment practices of SME CVCs are therefore likely to differ from those described in prior CVC literature. As mentioned earlier and to summarize, we expect SME CVCs to invest in the entrepreneurial venture's early stage, be managed internally, have a board seat to promote explorative learning, and interact frequently with the entrepreneurial venture.

2.2 Value-added services in The Venture Capital Galaxy

This section will first present resource dependency theory and the theoretical framework used to cover the value-added services of the investors in The Venture Capital Galaxy. The value-added services will be grouped and presented in overarching categories before discussing how the characteristics of SMEs could have implications for the value-added services they provide.

2.2.1 Theoretical framework: Resource Dependency Theory

Previous research focusing on the post-investment contribution and behavior of venture capital investments has primarily been based on two distinct theoretical frameworks, namely agency theory and resource dependency theory (RDT) (Berg-Utby et al., 2007).

RDT was first developed by Pfeffer and Salancik (1978) and has been widely used by researchers in the field of strategic management (Hillman, Withers, and Collins, 2009),

as well as serving as an important perspective in understanding organizations' external relationships (Delke, 2015). RDT characterizes an organization as an open system that is dependent on the external environment in order to obtain the resources necessary for survival and growth (Pfeffer and Salancik, 1978). Having access to valuable and external resources is important for all organizations, however, this has particular significance for entrepreneurial ventures, who operate in a dynamic and uncertain environment and are often resource constrained (Brush et al., 2001). Since most entrepreneurial ventures lack vital resources, they do not "control all of the conditions necessary for the achievement of an action or for obtaining the outcome desired from the actions'' (Pfeffer and Salancik, 1978, p. 40). Acquiring these valuable resources that are necessary to produce the desired output, is a formidable task for an entrepreneurial venture (Berg-Utby et al, 2007; Brush et al., 2001; Chandler and Hanks, 1994). This relates to the research topic, as the entrepreneurial ventures can potentially reduce their dependence on the external environment (Pfeffer and Salancik, 1978) by obtaining direct access to valuable resources through CVC partnerships with SMEs.

In line with resource dependency theory, an entrepreneurial venture needs to acquire and develop resources, and whether or not it will succeed is greatly dependent on the nature of those resources that the investor is able to provide (Berg-Utby et al., 2007; Dollinger, 1999). For instance, the CVC can provide legitimacy and improved reputation, as a partnership with an established corporation sends positive signals about the quality of the entrepreneurial venture to outsiders (Basu et al, 2011; Ernst, Witt and Brachtendorf, 2005; Stuart, Hoang and Hybels, 1999). Furthermore, marketing resources, such as specific and tacit market knowledge as well as distribution channels, can offer great value to an entrepreneurial venture and help it overcome obstacles to successfully bring its products or services to the market (Basu et al., 2011; Teece, 1986). Lastly, access to these initial resources can enable the entrepreneurial venture to further develop its own resources in order to successfully commercialize its invention (Basu et al., 2011; Kelly et al., 2000). As mentioned, CVCs can provide a wide range of value-added services to entrepreneurial ventures, but these are dependent on the resource-base of the investing firm (zu Knyphausen-Aufsess, 2005). Assessing how the nature of the resources that entrepreneurial ventures are able to acquire from SME CVCs differ from those of larger CVCs is therefore important for entrepreneurial ventures and for the entrepreneurial finance research field.

Following RDT, entrepreneurial ventures are resource constrained and dependent on obtaining both generic and specialized resources from the external environment (Teece, 1986; Park and Steensma, 2012). Prior research has shown that obtaining technological resources is particularly important for entrepreneurial ventures (Basu et al., 2011; Bjørgum and Sørheim, 2015). Although many new technology ventures are found to already possess specialized technological expertise or resources, they often lack the more generic resources such as costly equipment or skilled engineers to further develop their technology (Mitchell and Singh, 1992). Large parent corporations generally have a larger resource reservoir, and it is therefore reasonable to assume that they have more of both generic and specialized resources than SMEs (Kimberly, 1976).

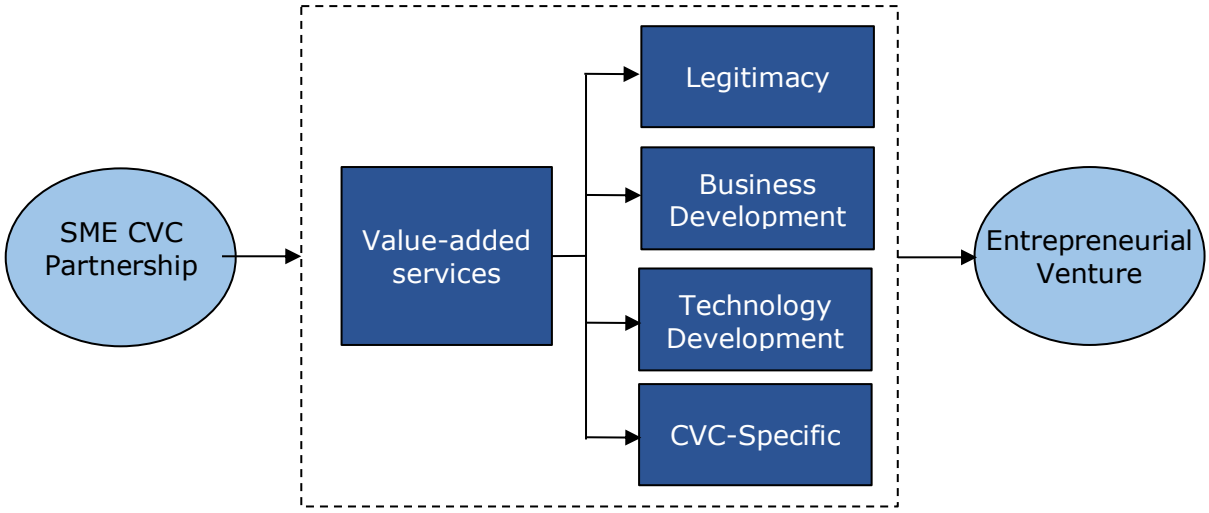
Relating the theoretical framework to the master thesis

By applying the theoretical framework of RDT when exploring this SME CVC phenomenon, the authors attempt to analyze the SME CVC's ability to provide value-

added services by separating them into different categories, allowing a structured overview of the provided resources for comparison to other sources of entrepreneurial finance. Several scholars have categorized the value-added services that different sources of entrepreneurial finance can provide (e.g. Gutman et al., 2019; Kelly et al., 2000; Bjørgum and Sørheim, 2015). Rooted in RDT, the entrepreneurial ventures' dependency on acquiring and developing different types of resources can be described as assembling *business knowledge reservoirs* (Berg-Utby et al., 2007; Widding, 2005; McGrath and Argote, 2001). This multifunctional business knowledge can be divided into several categories of value-added services, such as product development, marketing, strategy, management accounting, and further finance (Berg-Utby et al., 2007; Widding, 2005). In a prior study comparing the different value-added services of BAs, CVCs and IVCs, Bjørgum and Sørheim (2015) categorize value-added service of the investors by *technology development*, *business development*, *investor's outreach* and *legitimacy*. This general categorization of value-added contributions has a breadth that reflects the explorative nature of this study. However, investor's outreach is linked to networking and introduction to investors, partners, technical suppliers and customers (Bjørgum and Sørheim, 2015). As these activities overlap with the other three categories (e.g. network within production and R&D falls under technology development, and further finance under business development), this paper will not regard investor's outreach as a category of its own. As a result, this paper will separate the different value-added services by the categories *legitimacy*, *business development* and *technology development*, allowing the authors to make comparison to the known venture capital investors and analyze what type of resource dependence is most prominent in these SME CVC-partnerships. However, and similar to traditional CVCs, SME CVCs are unique in that they are corporate investors. It is therefore prudent to include the value-added services that are specific to CVC, and that only a corporate investor can provide due to their affiliation with their parent company (e.g. becoming an important customer of the portfolio company). The CVC-specific value-added services have therefore been added to cover a broader set of SME CVC contributions, allowing a clearer comparison to the traditional CVCs. The focus of the research on SME CVCs' value-added services is illustrated in the model below.

Figure 4

Framework for studying the investors' value-added services



This analysis is well suited to explore the SME CVC phenomenon, as it will provide an overview of the value-added services that these SME CVCs are likely to provide. By categorizing the resources that SME CVCs provide to entrepreneurial ventures, we can address the purpose of this research paper and get an indication of whether these partnerships are similar to CVC investments made by large corporations or if they are more akin to IVCs or BAs.

2.2.2 Value-added services

Legitimacy

Legitimacy is the value-added contribution that the investor has on the firm's reputation (Large and Muegge, 2008), and is of particular importance for young entrepreneurial ventures (Bjørgum and Sørheim, 2015). Entrepreneurial ventures' liability of newness is a central challenge in making the company survive and grow (Maula, 2001), and it is vital to increase the venture's legitimacy to succeed. Thus, legitimacy is considered a resource of equal importance to the other, more tangible resources, largely because it can facilitate access to other resources (Zimmerman and Zeitz, 2002). Legitimacy benefits are well documented for IVCs (Luukkonen, Deschryvere and Bertoni, 2013; Large and Muegge, 2008; De Clercq et al., 2006) and CVCs (Bjørgum and Sørheim, 2015; Maula, 2001; Gutmann et al., 2019), with higher benefits for younger ventures, more prominent investors and closer investment relationships (Maula, 2001). CVCs, BAs and IVC all grant legitimacy to a certain extent, but CVCs are particularly strong in terms of providing legitimacy to entrepreneurial ventures that are developing new technology (Bjørgum and Sørheim, 2015). Having a corporate investor can improve the venture's reputation and help it obtain acceptance and trust in the market it is operating in, both of the company itself and the technology it is developing. BAs, on the other hand, stand out as early stage investors, investing smaller amounts than IVCs and CVCs (De Clerq et al., 2006). BAs' knowledge and experience are most relevant in the early stage, and this is the stage where they are most able to add legitimacy. Particularly, BAs' reputational effect can help the entrepreneurs attract further finance to the venture (Sørheim, 2005). In short, the legitimacy benefits from the different investors are quite similar, with BAs standing out as more prominent in an entrepreneurial venture's early stages.

For SMEs investing CVC, we expect legitimacy to play an important role in their value-added contributions as well. However, as SMEs are typically less known outside the region and market in which they operate, the span of their reputational effect may be reduced. Therefore, while still noteworthy, *we expect the SMEs' contribution in legitimacy to be less prominent than the other types of value-added services.*

Business development

Value-added services in the *business development* category involves a broad range of activities related to the entrepreneurial venture's organization and market. They include contributions in areas such as strategic, operational and financial planning, as well as mentoring and mandating the entrepreneurial venture's team (Bjørgum and Sørheim, 2015; De Clercq et al., 2006; Gorman and Sahlman, 1989; Large and Muegge, 2008; Maula et al., 2005; Politis, 2008).

Much of venture capital investors' value-added services pertain to developing the business of entrepreneurial ventures. In general, IVCs are the investors that tend to contribute the most in business development (Bjørgum and Sørheim, 2015), strongly focusing on providing marketing experience, network, recruitment help, further funding assistance (De Clerq et al., 2006), as well as developing and professionalizing the organization of the portfolio venture (Luukkonen et al., 2013). IVCs' contributions are aptly described as *enterprise nurturing* (Maula et al., 2005).

While IVCs utilize their network to help hire highly qualified employees and managers for portfolio ventures (Colombo and Murtinu, 2017), CVCs rather contribute with the knowledge from the highly qualified employees of its parent corporation instead, as such providing the required competence without an increase in salary expenses. In addition, the outreach of CVCs can provide industry-specific resources that are highly beneficial, such as distribution channels, industry network and customer/supplier relations (De Clerq et al., 2006; Maula et al., 2005). However, CVCs' ability to provide high value with these resources is contingent upon strategic fit and a match between the industries of the portfolio venture and the CVC's parent corporation (Ivanov and Xie, 2010; Wang, Zhou, An and Yang, 2019). CVCs' strongest contribution within business development has previously been found to be helping portfolio firms internationalize (Maula et al., 2005).

Lastly, BAs often contribute through the role as a *sounding board* (Politis, 2008), providing business advice and having beneficial discussion with the entrepreneurs based on their industry, business and management knowledge (Madill, Haines and Riding, 2005; Brettel, 2003). In addition, through the role of *resource acquisition* (Politis, 2008) and utilizing their personal network, BAs can grant some of the same benefits as CVCs and IVCs. BAs can provide entrepreneurs access to critical resources from the external environment, such as key employees or connections to vital business partners (Brettel, 2003; Sætre, 2003). While CVCs' industry-specific connections will typically make more of an impact, BA's outreach has been found to be the area where their value-added score is highest (Bjørgum and Sørheim, 2015).

Like the other investors, SME CVCs are also expected to make a substantial contribution in business development and utilize their network to make connections for their portfolio companies. However, SME CVCs have unique characteristics and are likely to differ in certain and more specific areas within this broad categorization. For instance, traditional large CVC are known to excel at helping their portfolio companies internationalize. Although the business environment is being increasingly globalized, there are many SMEs that are unwilling or unable to internationalize due to the high barriers for doing so and their own limited resources (Leonidou, 2004). This is likely to also hold true SMEs investing CVC, which would make these investors less experienced with internationalization. *As a result, we expect SME CVCs to have less contributions in helping portfolio firms internationalize.*

Technology development

The category *technology development* is most relevant for evaluating the contributions of CVCs (Maula et al., 2005), and a value-added service that is particularly important for entrepreneurial ventures with a long and demanding R&D process ahead of them (Bjørgum and Sørheim, 2015).

Much like IVCs excel in business development, CVCs are the primary investors when it comes to adding value in technology development, with their contributions often described as *commerce building* (Maula et al., 2005). CVCs' access to incumbent parent corporations is unique, allowing contributions such as: product development with the ventures (Ivanov and Xie, 2010); advising and giving specific technological input for the ventures' own development (Bjørgum and Sørheim, 2015); or helping with industry- and market-specific knowledge acquisition (Maula, 2001). Another prominent value-adding mechanism is directly relocating some of the parent corporation's technical employees into the portfolio venture (Wang et al., 2019). These employees are useful resources in and of themselves, but they also further enhance the knowledge flow from the corporate parent to the venture (Di Lorenzo and Van de Vrande, 2019). IVCs and BAs are normally unable to provide these mentioned benefits, except for cases where the investor has previous technical experience that may be relevant. As such, CVCs are uniquely strong in their contributions in technology development.

Similar to large corporations, SMEs investing CVC also have prior experience from their own line of business and products, and this can be highly relevant for the portfolio company, particularly if they operate in the same industry or technology field. *We therefore expect SME CVCs to share similarities with their larger counterparts and that most of them will have the greatest contribution in technology development.*

CVC-Specific value-added services

Lastly, when studying the phenomenon of SMEs making corporate investments, it is important to include the category of value-added services that are unique only to CVCs. This includes potential contributions such as forming a joint-venture or providing the portfolio company direct access to the parent company's facilities, including manufacturing, R&D and testing facilities (Bjørgum and Sørheim, 2015; Ivanov and Xie, 2010). In addition, CVCs can give the portfolio company access to the investing firm's customer base or become a customer themselves. Lastly, CVCs can also provide access to equipment and specialized technology resources for free or supply the portfolio firm products or services at a discount. These unique resources make CVCs distinctly differ from the other sources of entrepreneurial finance (Chemmanur et al., 2014; Bertoni et al., 2013). As it can be difficult to find these contributions anywhere else, they can be very impactful and have substantial performance implications for the entrepreneurial ventures (Gompers and Lerner, 2000; Ivanov and Xie, 2010).

SME CVCs are essentially corporate investors and therefore have the ability to provide unique contributions to the portfolio companies. This separates SME CVCs from BAs and IVCs. As a result, *we expect SME CVCs to have considerable contributions in CVC-specific value-added services, similar to their larger CVC counterpart.*

The specter of value-added contributions in The Venture Capital Galaxy

To summarize, entrepreneurial finance investors differ in which value-added services they are most proficient at. Although their contributions overlap, IVCs and BAs typically contribute most to the entrepreneurial ventures in business development. CVCs are unique in their strong ability to contribute in technology development, as well as having certain resources that only a corporate investor can provide. When it comes to legitimacy, all three investors bring a valuable contribution in improving the entrepreneurial venture's reputation, but BAs' ability to provide legitimacy is somewhat

limited to the entrepreneurial venture's early stages. This paper explores what place SMEs investing CVC have in the entrepreneurial finance galaxy, and thus seeks to understand what their value-added services are like compared to the traditional investors.

2.2.3 SMEs investing CVC and their value-added services

The value-added contributions of the SME investors will depend on a specter of different aspects. Not only will they be affected by the motivation of the corporate investor and the characteristics of its investment practices (Dushnitsky, 2006; Maula et al., 2005), it will also be influenced by the resource-base of the investing firm and its ability to contribute past the initial investment funds (zu Knyphausen-Aufsess, 2005; Keil, 2004). Compared to larger corporations, SMEs making corporate investments have less resources in general and are less likely to have substantial excess capacity that can be directed towards the CVC activities (Basu et al., 2011), influencing their ability to provide value-added services to entrepreneurial ventures (Keil, 2004; Kelly et al. 2000).

Directed value-added

Going back to upper-echelon theory, SME top-executives' values, personality and experience greatly influence the strategies and actions of the organization (Hambrick and Mason, 1984; Hambrick, 2007; Matzler et al., 2008). Therefore, and similar to BAs, one could expect that also SME CVCs' value-added services greatly depend on the business knowledge, industry knowledge, personal abilities and network of the individual SME's top-management (Hoyos-Iruarrizaga et al., 2017). As a result, SME CVCs may set goals for their portfolio companies based on their own and the venture's available means, as opposed to predetermining goals and striving to obtain the means necessary for achieving them (Schmidt et al., 2018). Similar to BAs, SMEs' limited size could lead to the investor choosing to focus their contributions on what the investor is best at, be it business development, technology development or utilizing their network to make connections for the entrepreneurial venture. Adopting a means-oriented approach is an added value by itself (Hoyos-Iruarrizaga et al., 2017), but it could also result in each SME CVC providing a narrower range of value-added services.

Arguably, the SME CVC would then exhibit stronger contributions in one category of value-added services, and weaker contributions in the other categories. Thus, we assume that a higher contribution of value-added services in *business development* will result in lower contribution in *technology development*.

Hypothesis 4. *The SME CVCs' value-added contributions in business development is negatively related to the SME CVCs' value-added contributions in technology development.*

Interpersonal roles and value-added

As mentioned earlier, the strength of the social relationship between the investor and its portfolio ventures can increase its ability to add value (Hoyos-Iruarrizaga et al., 2017). This is particularly evident for business angels, as they are informal investors that often are highly involved and create a close relationship with their portfolio companies, which then again helps foster their value-adding abilities (Hoyos-Iruarrizaga et al., 2017). BAs

often contribute through the role as a *mentor*, helping with sensitive issues on a personal level and provide moral support and coaching (Politis, 2008; Brettel, 2003). This close relationship may make the portfolio venture better at absorbing their advice and knowledge, as the entrepreneurs are more trusting and receptive (Politis, 2008). BAs often have prior entrepreneurial experience, and the interpersonal role enables them to contribute operationally, more akin to co-entrepreneurs than investors (Schmidt et al., 2018). Altogether, BAs are the investors in The Venture Capital Galaxy that exhibit the strongest interpersonal role and relationship with portfolio ventures.

Due to SMEs' smaller size, one could assume that the relationship between the investor and portfolio venture is less formal, and more similar to that of BAs and their investees. As is evident from the pilot study, SME CVCs may indeed share this closeness and type of relationship with their portfolio companies. A closer relationship could lower the risk of misappropriation in the eyes of the venture (Yang, 2012), leading to more trust and the portfolio company being more inclined to seek help and receive contributions. More trust may also strengthen the corporate investor's inclination to contribute. Furthermore, increasing the social interaction in the relationship between CVC investors and their portfolio ventures could promote better learning and identification of opportunities for resource sharing (Maula, 2001). As a result, this could lead to more sharing of corporate resources such as manufacturing, R&D and testing facilities.

Hypothesis 5. *The strength of SME CVCs' interpersonal roles is positively related to their contributions in CVC-specific value-added services.*

Interaction and value-added

Related to the closeness of the relationship, the investor's practices and frequency of interaction will also affect the value-added contributions they provide (Carter et al. 1996; Maula et al., 2009). Going back to the prior CVC literature and the importance of governance mechanisms to facilitate knowledge transfer, we recall that interaction frequency directly affects the value-added services the corporate investors are able to provide (Maula, 2001). We can therefore assume that the more the SME investor and the portfolio company interact, the more value-added services the SME CVCs are able to provide. While this could increase contributions in all types of value-added services, we expect this to particularly hold true for contributions in business development. Frequent interaction allows the SME to contribute more with business advice and discussions that benefit the overall strategy and development of the venture.

Hypothesis 6: *The SME CVCs' interaction frequency is positively related to the SME CVCs' contribution in business development.*

Strategic fit and value-added

Similarly to contributions in *technology development, strategic fit* is almost exclusively applicable to CVCs (Thornhill and Amit, 2001) and has been shown to increase their value-added contributions (De Clercq et al., 2006; Ivanov and Xie, 2010; Maula et al., 2009). SME CVCs are also affiliated with a non-financial parent corporation, and it is therefore interesting to examine if this impact from relatedness also holds true for SMEs investing in CVC.

Hypothesis 7: *The degree of strategic fit between the SMEs and the entrepreneurial ventures is positively related to the SME CVCs' value-added contributions in technology development.*

Building on this and recalling (Hypothesis 6) that interaction frequency is likely to affect the value-added services the corporate investors are able to provide (Maula, 2001), another interesting relationship to investigate arises. As mentioned in the section on involvement level in 2.1.2, prior studies have shown that relatedness, interaction and knowledge transfer in the CVC-triad are all connected. One can argue that if the know-hows of the entrepreneurial firm and the corporate parent are closely related, the two will interact more, and one would assume, knowledge transfer will increase (Maula et al., 2009). However, the frequency of interaction and strategic fit are not necessarily correlated, as strategic fit arguably does not increase the frequency of interaction in the investment relationship per se. Rather, a higher frequency of interaction means there are more time and occasions for transferring knowledge and services.

3. Methodology

3.1 Research design

This thesis builds upon the presented pilot study and aims to provide generalizable data, within the population, about the tendency of Norwegian SMEs to invest CVC, and their place within The Venture Capital Galaxy. When attempting to conduct a screening that can be generalized to other populations, the appropriate method of research is quantitative. The authors want to statistically account for and differentiate between important factors that influence the value-added contributions SME CVCs provide their portfolio firms. To strengthen the generalizability of the findings, the study utilized non-manipulated variables (Hopkins, 2008). The data was collected through a survey developed by the authors (see Appendix A), based predominantly on existing measures. A survey with standardized questions ensures high data comparability, appropriate for a quantitative research design. The statistical approach includes both descriptive and inferential analyses.

3.1.1 Sample selection and demographics

To gain in-depth knowledge from respondents concerning the investment activity of the SMEs, the respondents targeted were management at an executive level, preferably the CEO or CFO. As scholars have not researched SMEs that invest CVC, it is not known how large the differences are between different geographical regions concerning their ability to provide value-added services. Studying a single context can therefore reduce the impact of unobserved heterogeneity due to differences in culture (Maula, 2001). As such, the authors deemed it preferable to study this in one specific context, namely Norway, to strengthen the ability to make population-wide generalization within this context. For a firm to be defined as Norwegian, the criterion was that their headquarter is placed in Norway. The EU definition of SMEs was utilized, meaning companies with less than 250 employees and €50M in annual revenue.

The sample of SMEs was identified through Proff Forvalt, a financial database on all companies registered in Norway. Only high-tech industries were included, namely software development, IT, aquaculture (technology-based), and electronics, as prior CVC research tends to focus on high-tech industries (Allen and Hevert, 2007; Benson and Ziedonis, 2009). Only companies founded earlier than 2017 were included. The exclusion based on company age was implemented as it is unlikely that companies younger than three years old engage in CVC activity. SMEs in the included industries counted a total of 3245 firms. Further on, the list of SMEs was cross-referenced with the Norwegian Tax Administration's Shareholder Register, and companies that did not hold shares in other companies were removed, resulting in a sample of 783 firms. These companies were screened manually by the authors, and both the financial information and website of these 783 firms (and the companies they hold shares in) were reviewed. When screening these parent corporations and portfolio companies, the following exclusion criteria were utilized:

- Excluded: The parent corporation and portfolio company were the same legal entity, meaning that the only reported shares held by the parent corporation were its own stock (e.g. from stock buybacks).

- Excluded: The portfolio company did not develop new products and services. Utilized the broad definition of Frederiksen and Brem (2017), that an entrepreneurial venture develops new products or services. Portfolio companies that did not appear to develop new products and services were excluded. Examples are kiosks and property development.

- Excluded: The portfolio company was founded before 2005. Utilized the definition of OECD, that entrepreneurial ventures are commonly regarded as younger than five years. Since our study is only on SMEs that have done CVC investments in the last 10 years, the portfolio companies must be founded before 2005 for it to be considered an entrepreneurial venture at the time of the investment.

- Excluded: The portfolio company was a spin-off from the parent corporation.

- Excluded: The portfolio company was a joint venture. An example is that several companies founded a new company for making collective purchases to increase economies of scale in purchasing.

- Excluded: The portfolio company was a non-profit. Examples are portfolio companies that were state-funded research institutions.

- Excluded: The parent corporation was not an SME, i.e. surpassing 250 employees and/or €50M.

After manually screening these companies based on these exclusion criteria, the sample contained 248 SMEs. All of these SMEs were contacted by phone. The authors aimed to contact the top-executives directly and asked them to fill out the survey. If the contact information of the top-executives was not available, the company's switchboard was contacted. If the person was unavailable, the authors attempted to contact them a total of three times, with one-week intervals between each attempt. As SMEs typically do not have a large amount of information available online, it was difficult to confirm that they had invested CVC without conversing with them. Calling the CEO/CFO allowed the authors to confirm whether or not the SME had actually invested in an entrepreneurial venture and thereby ensured that appropriate SMEs were included in this study. Indeed, many SMEs were excluded after the phone calls. Out of the 248 SMEs contacted, 83 answered and confirmed that they did not conduct investments. 44 SMEs did either not have time to talk or did not answer all three times they were contacted, and these were marked as *uncertain.* That left a total of 121 SMEs that confirmed that they invested CVC and, who were emailed the survey. If they did not answer the survey after one week, they were called with a reminder. Of the 121 SMEs that were confirmed to be relevant and invest CVC, a total of 96 completed the survey. The sample of respondents predominantly came from the IT industry (58), Aquaculture (11) as well as a range of others (27). The two aforementioned industries were the target industries, while the others can be attributed to companies listing a different industry than their publicly listed NACE-industry. The survey was sent out to executives at the SME CVCs, and of the 96 respondents, 50 also listed themselves as board members of the SME, 65 as co-owners and 56 as founders.

Additionally, the authors deemed it interesting to compare the ambidexterity of SMEs that have, and have not, invested CVC. Therefore, a second sample of SMEs in high-tech industries (which had been used in previous research at the Norwegian University of Science and Technology), was utilized. These SMEs were only contacted by email. The largest industries in this sample were software development, IT and production of machinery/equipment. These SMEs had not invested CVC and only answered 11 of the 30 items in the survey, as item 11 controls if the SME has invested CVC or not. A total of 200 SMEs were contacted in this sample, with 60 respondents, leaving a response rate of 30%.

3.1.2 Data collection

Closed-ended survey questions were utilized to collect the primary data, divided into three sections: (1) the characteristics of the investing SME; (2) the history,attitude and motivation of the SME towards investing CVC; and (3) the value-added contributions of the SME. The questionnaire consisted mainly of 5-point scale questions, ranging from (1) very low to (5) very high, and (1) strongly disagree to (5) strongly agree. The survey contained a total of 30 items and took about 15 minutes to complete.

Questions belonging to different theoretical items were randomized to minimize potential issues of answer biases. To increase validity and reliability, the survey mainly utilized measurements employed in prior research (Blair, 2016). These measurements were predominantly gathered from the following two studies:

Maula, M., Autio, E., & Murray, G. (2005). Corporate venture capitalists and independent venture capitalists: What do they know, who do they know and should entrepreneurs care?. Venture Capital: An International Journal of Entrepreneurial Finance, 7(1), 3-21.

Berg-Utby, T., Sørheim, R., & Widding, L. Ø. (2007). Venture capital funds: Do they meet the expectations of portfolio firms?. Venture Capital, 9(1), 23-41.

The surveys used in these two studies were provided by Professor Maula and Professor Sørheim directly. While the respondents of the survey used in this paper are executives of the SME investing CVC, the two papers of Maula, Autio & Murray (2005) and Berg-Utby, Sørheim and Widding (2007) addressed their questionnaire to the portfolio firms. The questions were therefore adjusted to address the investing SME. Additionally, the survey of Maula et al., (2005) was translated from English to Norwegian by the authors of this thesis. Several rounds of review on the questionnaire were done by a range of researchers at NTNU, and consequential iterations were completed. Additionally, pre-testing was conducted to reduce the risk of error in the data collection. Pre-testing is particularly important with Likert-scale questionnaires, to identify the balance and symmetry of the scale (Sreejesh, Mohapatra & Anusree, 2014). The pre-test was conducted with an executive at an SME, who also was a respondent in the in-depth interviews during the pilot-study conducted in the fall of 2019. The pre-test was conducted using video call, where the respondent was asked to complete the survey and highlight questions that were ambiguous, unclear or redundant, and provide general feedback regarding its length and other reflections. These comments resulted in further iterations, before the final questionnaire was completed. The research project and survey were then approved by the Norwegian Centre for Research Data (NSD).

3.2 Key variables

The measurements in this study are predominantly based on prior research, using validated constructs consisting of several items each. In the few cases where we were unable to utilize existing measures, the measurement was developed based on theory and tested for expert validity through several rounds of feedback with scholars. For the items in the questionnaire, please see Appendix A. All constructs were tested for reliability using Cronbach's Alpha (see subsection 3.3.3). Some items within the measures were deleted due to low reliability (Cronbach's Alpha <.6 or item loading<.3). In this section, all original items pertaining to the constructs are included, and section 3.3 explains which items were excluded due to low reliability.

3.2.1 Motivation and governance

Frequency of interaction

Question 15 measures frequency of interaction and is retrieved from Maula et al. (2005). It asks the respondent how often they are in contact with the entrepreneurial venture(s) they have invested in, and to select one of the following alternatives: (1) every day, (2) twice a week, (3) once a week, (4) twice a month, (5) once a month, (6) every quarter, (7) less often than every quarter.

Window on new technology

Question 20 measures the SMEs' motivations for making CVC investments. Using a 3-scale Likert, with a range of (1) not important at all, (2) less important, and (3) highly important, it asks "how important is the following goal when investing in entrepreneurial ventures", followed by several statements. The 5th statement states *learning about groundbreaking technologies*, which is the measure of investing to gain a window on new technology. This is retrieved from Hill and Birkinshaw (2014), along with the rest of the items of question 20 (except *because it is fun*).

Investing because it is fun

On the same 3-scale Likert the last statement in question 20 reads "because it is fun", and it is the measurement of *investing because it is fun*. This item is novel and was assessed for expert validity.

Explorative and exploitative CVC motivations

The measure of explorative and exploitative motivations of the SME is also measured in question 20 in the survey, and uses the following items:

Explorative motivation: (1) learning about groundbreaking technologies, and (2) investing in disruptive technologies that can cannibalize existing technologies.

Exploitative motivation: (1) retaining our employees and increasing their motivation, and (2) better usage of existing company assets

Exploitative and explorative outlook

The measure of the explorative versus exploitative outlook of the SMEs itself (not its motivation for investing CVC) is retrieved from Lubatkin, Simsek, Ling and Veiga (2006), and is question 9 in the survey. It utilizes a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The combination of these two constructs are used to measure the ambidexterity of the SME, and was measured on both SMEs that have, and have not, invested CVC. The questions ask how the company has been oriented the last three years, by indicating to what degree they agree with the following statements:

Explorative outlook: (1) our company searches for new technological ideas by "thinking outside the box"; (2) our company bases its success on its ability to explore new technologies; (3) our company makes new products and services that are innovative for the company; (4) our company looks for creative ways to satisfy its customers' needs; (5) our company actively targets new customer groups; and (6) our company aggressively targets new market segments.

Exploitative outlook: (1) our company increases the level of automation in its operations; (2) our company is continually working to identify its existing customers' satisfaction; (3) our company is continually working to improve the reliability of its products/services; (4) our company fine-tunes its products/services to keep its existing customers' satisfaction; (5) our company continually penetrates deeper into its existing customer base; and (6) our company works on increasing the quality and reducing the costs of its products.

Interpersonal roles

The measurement of *interpersonal roles* is retrieved from Berg-Utby et al. (2007), and it utilizes a 5-point Likert scale ranging from (1) very small to (5) very high. It is measured through the second part of question 23, which asks the respondents how much they have contributed through the role of (1) counselling/mentoring and (2) trusted friend.

3.2.2 Value-added services

Legitimacy

The measure of *legitimacy* is retrieved from Maula et al. (2005), and it is based on question 25 in the survey. It utilizes a 5-point Likert scale ranging from 1 (highly disagree) to 5 (highly agree). The measurement asks the respondents if the entrepreneurial venture have actively used the corporate investor's name and brand when: (1) raising money from other investors; (2) recruiting new employees; (3) trying to attract new partners/suppliers; (4) trying to attract new customers domestically; and (5) trying to attract new customers abroad.

Technology development

The measure of *technology development* is retrieved from Berg-Utby et al. (2007), and it is based on the first headline in question 22 *production and production knowledge*. It utilizes a 5-point Likert scale ranging from 1 (very little) to 5 (very high). It asks the respondents about their contributions to the entrepreneurial venture within: (1) product and technology development; (2) production; and (3) network within product development.

CVC-specific value-added services

CVC-specific value-added services are measured through question 26, retrieved from the survey of Maula et al. (2005). It utilizes a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), and asks the respondents if they have provided value to the entrepreneurial ventures by: (1) becoming one of the entrepreneurial ventures' most important customers; (2) provided them access to our customers; (3) provided them access to our production facilities; (4) provided them access to our R&D and technology; and (5) provided them discounts on our products and services.

Business development

The term business development have been extensively studied within venture capital research, and comprise a wide range of areas such as strategic, operational and financial planning, as well as mentoring and mandating the entrepreneurial venture's team (De Clercq et al.2006; Gorman and Sahlman, 1989; Large and Muegge, 2008; Politis, 2008; Maula et al., 2005; Bjørgum and Sørheim, 2015).

Retrieved from Berg-Utby et al. (2007), *business development* is therefore operationalized and measured in question 22 by asking the respondents about their contributions within (1) marketing, (2) strategy, and (3) management accounting and further finance. A 5-point Likert scale ranging from (1) very little to (5) very high was used. For (2), note that the survey uses the term "organization" and not "strategy". Berg-Utby et al. (2007) also utilized the term "organization" in the survey, but they chose to use the term "strategy" in their paper in order to better identify the nuances within different areas of business development. Therefore, the correlation table (section 4.2) does not have a variable named *business development*, but rather utilizes the variables (1) market knowledge, (2) strategy, and (3) financial management and financing. These three variables make up the SME CVCs' contributions in *business development*.

Strategic fit

Connected with value-added services is strategic fit, which was measured through question 21, and measures the relatedness of the CVC's corporate parent to the entrepreneurial venture(s) they have invested in. The question is retrieved from Maula et al. (2005) and provides statements in which the respondent is asked to rate the degree of which this statement holds true for them, using a 5-scale Likert ranging from (1) strongly disagree to (5) strongly agree. The statements are: (1) the entrepreneurial venture is in the same industry as us; (2) the entrepreneurial venture develops technology that is closely linked to our technology; (3) the product/service that the entrepreneurial venture develops are very complementary to our products and services; (4) the core competencies of the entrepreneurial venture is highly complementary to our core competencies; (5) the entrepreneurial venture sells their products/services to the same market as us, (6) the products and services of the entrepreneurial venture facilitate the use of our own products/services.

3.2.3 Control variables

The control variables of this study are firm age, firm size, and industry. Firm age was answered as an open-ended question, stating the date of foundation. Firm size was measured in intervals of FTEs, namely, 0-9 (1), 10-49 (2), 50-99 (3), 100-249 (4), 250+ (5). The firms' industry contained a list of 11 alternatives, including "other" which provided the respondent with an open-ended question.

3.3 Assessing the data

3.3.1 Screening of cases

A case represents an individual respondent. The dataset was tested for disengagement, by reviewing cases' standard deviation to the Likert-scale variables. This was done by screening for standard deviations being equal to zero, which would mean that the respondent scored all Likert-scale questions equally, a sign of disengagement. No cases were removed due to disengagement, but one was removed due to >20% missing values.

3.3.2 Normality assessment

The data from the survey questions were assessed for normality using kurtosis and skewness, in preparation for parametric testing. Kurtosis refers to the pointiness of a normal distribution, while skewness refers to the symmetry of the distribution, or lack thereof (Ghasemi and Zahediasl, 2012). Z-values (standardized values) were computed by dividing kurtosis and skewness with standard deviations, and if these were below 2 in absolute value the associated variable was considered sufficiently normally distributed (Garson, 2012). Appendix B gives an overview of the survey items and values for assessing normality, including z-values for kurtosis and skewness. A number of items were highly kurtotic and skewed, along with some items that had less severe deviations from normality. This is discussed in section 3.3.4.

3.3.3 Reliability assessment

The measures employed in this paper constitute summed scales (i.e. constructs) that previously have been extensively validated, however, because of the survey translation, assessing the scales' reliability is still important. The constructs presented in 3.2.1 and 3.2.2 were tested using Cronbach's Alpha, which measures internal consistency with values ranging from 0 to 1, with a score above .7 commonly considered the acceptable threshold (Nunally, 1978, as cited in Santos, 1999). However, for exploratory purposes a threshold of .6 can be considered sufficient (Garson, 2012). As a part of the reliability analysis, item loadings were also extracted using the maximum likelihood method. These show the items' correlation to the construct, and should be higher than .3 (Garson, 2012). The results of the reliability analysis can be found in Appendix C.

The majority of constructs had acceptable reliability, but there were a few constructs with reliability issues. Two constructs included low item loadings below .3, namely *exploitativeness of the SME* (items our *company increases the level of automation in its operations* and *our company works on increasing the quality and reducing the costs of its*

products) and *CVC-specific value-added services* (items *our company has contributed value to the invested venture by becoming one of their most important customers* and *our company has contributed value to the invested venture by granting them access to our customers*). The reliability analysis was performed once more for these constructs, but without including the items with low loadings. After this, the item loadings and Cronbach's Alphas were within the required thresholds, and the mentioned items were removed from the variable measurement. Additionally, the construct *exploitative motivation* was found to have an inadequate Cronbach's Alpha. The consequences of these reliability issues are explained in the next section (3.3.4).

3.4 Limitations of the methodology

Similar to most studies, this paper also has methodological limitations. This section highlights the ones deemed most critical.

3.4.1 Sample

The sample of 3245 firms is meant to constitute the whole population of SMEs in Norway within the selected industries (with restrictions related to firm age). For this purpose, the Proff Forvalt database cross-referenced with a shareholder database provides a relatively comprehensive sample of the SMEs that potentially invest CVC. However, as the authors do not know the exact regularity in which these databases are updated, SMEs that made their first investment in 2020 might not have been included in the sample. Additionally, if the SME do not own their shares in the entrepreneurial venture directly, but rather through a holding company which owns both the SME and the portfolio companies, they have not been included in the survey.

3.4.2 Exclusion by the authors

Exclusion by using the website of the SMEs could in some instances be unjustified, as the information on the website might not be up to date. Therefore, errors may have occurred where SMEs that should have been included, were excluded. Additionally, having three authors screen the SMEs also increases the chance of slight differences in the screening process. The authors attempted to reduce the likelihood of unjustified exclusions by implementing a predetermined list of exclusion criteria, as mentioned in section 3.1.1.

3.4.3 Non-response bias

Calling by phone is a method that can be used to increase the response rate, and it was deemed as both appropriate and necessary due to the uncertainty regarding how large the propensity to invest in entrepreneurial ventures is amongst SMEs. A low response rate could reduce the number of respondents to a point where a quantitative study was unfeasible. However, calling potential respondents does not come without challenges. Issues with non-response biases can occur if there are patterns among the potential respondents that answer, and those that do not answer the phone. For instance, this can occur as some do not answer the phone if they do not recognize the number (Lavrakas, 2008). Additionally, the authors screened the SMEs' websites for phone numbers to CEOs and executives, and it is likely that especially larger SMEs did not have phone numbers of executives listed on their website. If the phone numbers were not found through the

website or yellow pages, the call was made to the switch board. Therefore, there are likely patterns among the firms that transferred us to the executive employees, and the ones that did not and whose CVC-activity remains uncertain.

3.4.4 Translation

This questionnaire is predominantly based on the surveys of Berg-Utby et al. (2007) and Maula et al. (2005). The latter had to be translated from English to Norwegian, which can pose challenges to the validity of the measurements. To reduce this challenge, the authors used a Modified Direct Translation technique, where the translations were discussed continuously with experts in the field of venture capital (Behling and Law, 2000).

3.4.5 Reliability & validity issues

This is a cross-sectional study, which excludes the possibilities of measuring test-retest reliability. A longitudinal study would be preferable, and it would improve the reliability of the data and help mitigate some of the issues related to response biases (Dikmen, Heaton, Grant and Temkin, 1999). Three constructs posed reliability issues (see section 3.3.3), where two of these were adjusted by removing items with loadings below .3, and the last consisted of only two items. The constructs with removed items obtained sufficient reliability, but arguably lost some validity, because they came from pre-existing and previously used survey constructs (as explained in 3.2). Nevertheless, this solution can be considered acceptable, because the values for Cronbach's Alpha were below the minimum threshold of 0.6. The "Exploitativeness of the investment motivation" cannot be adjusted without making it into a single-item measure. This was not done, and as such this statistic is only reported as a descriptive, and not being used for inferring any conclusions.

3.4.6 Normality issues

The normality assessment showed that a number of this paper's variables had deviations from normality. The severity of this varied, with items 4, 5, 6, 11, 14, 33, 42 and 59 being highly kurtotic and skewed in particular (see Appendix B). Parametric methods assume that the population from which the sample is collected has normally distributed scores (Pallant, 2013), making this a weakness of the paper's analyses. However, the central limit theorem can somewhat justify the use of parametric methods, given that the sample size is large, defined as above 40 by Elliot and Woodward (2007). The central limit theorem claims that "sample means are approximately normal for sufficiently large sample sizes even when the original populations are nonnormal" (Elliott and Woodward, 2007, p. 26).

3.4.7 Likert scale

The Likert scale is widely employed in this paper's associated survey. Researchers are increasingly becoming aware of the potential problems of assuming that ordinal level ratings like Likert scales approximate interval level scaling, even though they are commonly regarded as such (Pallant, 2013). Likert scales are supposed to represent an underlying continuous measure, and they should ideally only be parametrically analyzed

when they are combined into constructs that fulfill assumptions of normality and reliability, as opposed to analyzing them individually (Allen and Seaman, 2007).

Likert scale mean and standard deviation scores for both combined constructs as well as individual items are reported in this paper, because of the paper's purpose of describing general characteristics of SMEs investing CVC. Arguably, many of the individual items are concretely and clearly defined, and they are considered as *different aspects* of the larger constructs rather than *synonymous items* (e.g. internationalization is a tangible aspect of market knowledge). Do note that caution should be taken in inferring conclusions from these values. In the paper's inferential analysis section, the parametric analysis Pearson's *r* was employed, which can be considered acceptable as most of the included variables are made of constructs of several items, where reliability and normality have been assessed. However, a few of the variables come from individual items/questions, which creates a possible weakness in the conclusions inferred from correlations derived from these variables.

3.4.8 Common method variance

The research design of this paper is a cross-sectional study, where data is collected through a questionnaire at one point in time, which might reduce the quality of the dataset (Chang, van Witteloostuijn & Eden, 2010). This weakness is further enhanced as the exogenous and endogenous variables are gathered from the same respondent through self-reporting, referred to as percept-percept inflation (Crampton and Wagner, 1993). This might create issues of common method variance, where measured correlations and variance is attributable to the method of measurement rather than the constructs the measurement is aimed at. As such, common method variance can be responsible for faulty significant correlations between variables that do not represent reality.

To reduce the risk of common method variance, questions belonging to different variables were randomized within each question. Additionally, the respondents were ensured complete confidentiality, and had the option to stay fully anonymous by not having obligatory questions related to name of company or the respondent's role at the company (Murray, Kotabe and Zhou, 2005).

4. Findings and Analysis

This chapter shows the findings and analysis from the empirical survey data. The first section will provide descriptive statistics of the sample, and the second section attempts to infer properties of the sample's population by testing the presented hypotheses. The sample of non-investors are not included in any of the tables or figures except for the independent samples t-test.

4.1 Descriptive statistics

This section follows the structure of Chapter 2 and will present the descriptive analysis of the empirical survey data. The first subsection covers some general characteristics of the SMEs investing CVC, thereafter, going through descriptive analyses pertaining to (1) motivation, (2) governance, structure and investment practices, and lastly (3) value-added services. This will provide an overview of their attributes and allow the sample of SMEs investing CVCs to be examined. Some of the tables report means from a 1-5 scale, where 2 is considered low, 3 moderate and 4 high, while other tables report on a 1-3 scale, with 1 considered very low and 3 very high.

4.1.1 General characteristics

An overview of some general traits that were measured for SMEs investing CVC is shown in Table 2. The sample firms are all within the definition of an SME with regards to number of employees, and a large majority (80.2%) have less than 50 employees. The majority operates in the IT industry (62.4%), with the rest being more spread out over other industries. In terms of their portfolio size, 33.7% of the SME CVCs had only made 1 investment and 14.7% had made 6 or more.

Table 2

Responses to survey questions about general characteristics of SMEs that invested CVC

Variable	*n*	%
Number of employees (firm size)	91	100.0
0-9	29	31.9
10-49	44	48.4
50-99	13	14.3
100-249	5	5.5
250+	0	0.0
Number of investments	95	100.0
1	32	33.7
2	23	24.2
3	11	11.6
4	7	7.4
5	8	8.4
6 or more	14	14.7
Industry	93	100.0
IT all	58	62.4
Software development	32	34.4
IT consulting	22	23.7
Other IT	4	4.3
Aquaculture	11	11.8
Production of machines/equipment	7	7.5
Industry/chemistry	6	6.5
Management consulting	6	6.5
Other	5	5.4

Note. n = Number of respondents for that item or alternative.

4.1.2 Motivation

The motivations of SMEs investing in entrepreneurial ventures were measured using a list of financial, strategic and intrinsic goals, shown in Table 3.

***Table* 3**

Descriptive statistics about the SMEs' motivation for investing CVC with Means (M) and Standard Deviations (S.D.) on a 1-3 scale (number of respondents = 94)

Variable	*M*	*S.D.*
Financial motivations		
Financial returns	2.62	.51
Instrinsic motivations		
Because it is fun	2.45	.70
Strategic motivations		
Obtaining access to acquisition candidates	1.68	.65
Developing new skills/competence	2.62	.59
Explorative	2.17	.62
Investing in disruptive technologies that can cannibalize existing technologies	1.97	.76
Learning about groundbreaking technologies	2.39	.69
Exploitative	2.36	.53
Retaining our employees and increasing their motivation	2.46	.71
Better usage of existing company assets	2.26	.65

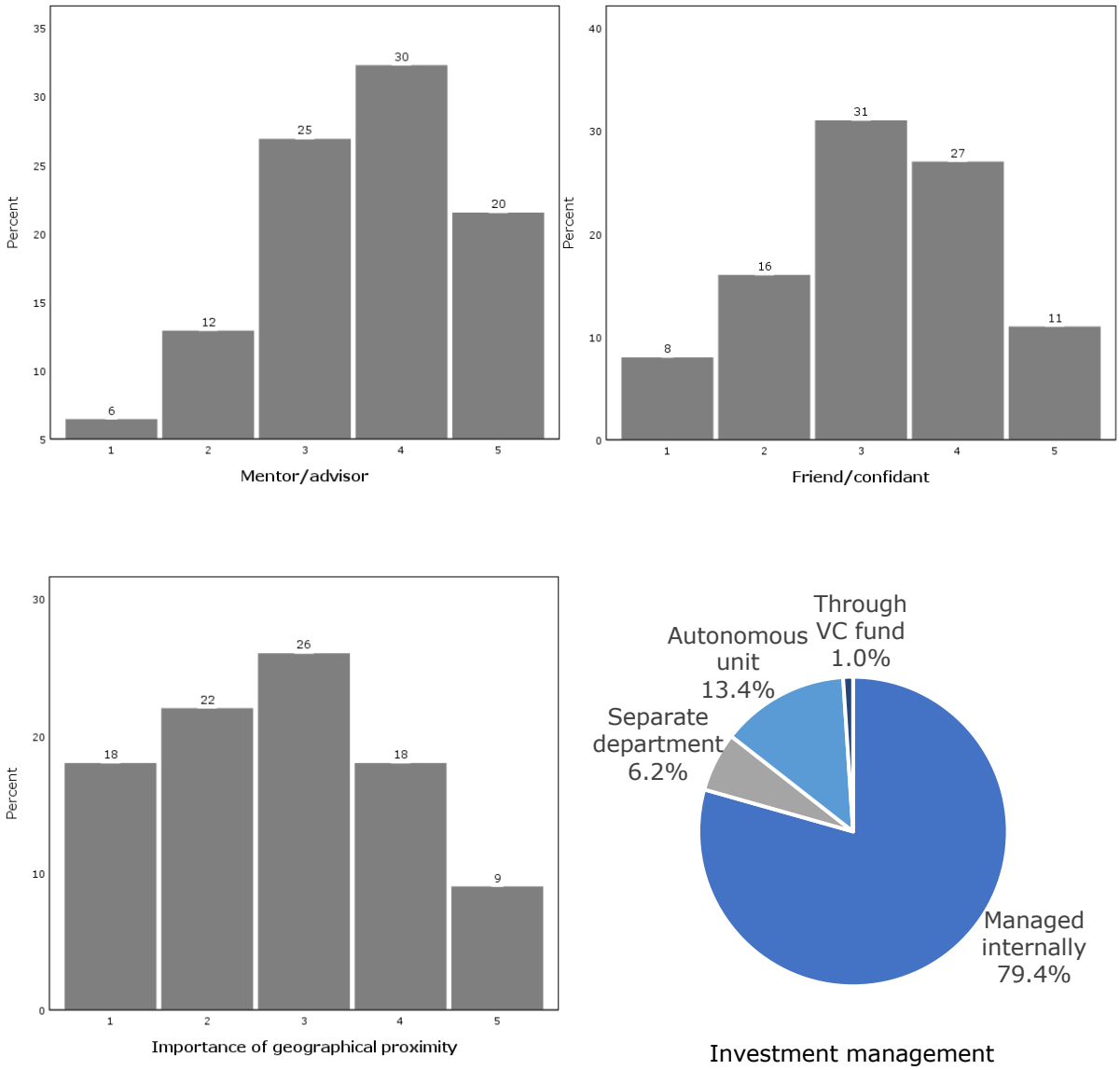
In terms of the SME CVCs' motivations for investing CVC, Table 3 shows that *financial returns* and *developing new skills/competence* are tied for the highest score. While the former is a common motivation for all investor types, the latter is a strategic motivation and demonstrates the corporate nature of SME CVCs. Similarly, the strategic motivation of investing to *learn about groundbreaking technology* also has a high mean. Further on, in terms of their strategic motivations, Table 3 also shows that the SME CVCs score quite high on both the explorative (*M*=2.17, *S.D.*=.62) and exploitative motivations (*M*=2.36, *S.D.*=.53). In other words, the SMEs engage in CVC activity both to explore and to exploit. While the standard deviations of the motivations are rather large, it is worth noting that the means of most of them are in the moderate to high range. *Obtaining access to acquisition candidates* has the lowest motivation score, which could be a reflection of their limited resources and ability to make further investments or do acquisitions. However, with a mean of 2.45, investing *because it is fun* is clearly quite important for the sample firms. This suggests that SME CVCs are not only financially and strategically motivated, they are also intrinsically motivated. Therefore, it is not surprising that the vast majority of sample firms state that they will continue doing CVC investments moving forward (82.6%). Out of these, 77.6% state that they will do a similar number or more investments than earlier, which could indicate that the research field of SME CVCs will only grow in importance. To investigate these motivations further, their histograms were graphed to show the distribution of the responses. A few of the interesting ones are shown in Appendix D. The distributions are found to be quite different from each other.

4.1.3 Governance

This subsection covers the characteristics of SME CVCs pertaining to governance and investment practices. *Interpersonal roles* got a result of a moderate mean value of 3.34 and a standard deviation of 1.03 (on a 1-5 scale), see Figure 5 for its distribution. In terms of how the SMEs manage their investments, the pie chart shows that the vast majority of sample firms manage their firms internally (79.4%). Additionally, the majority of the SME CVCs do not have a strong preference for investing in ventures with close geographical proximity.

Figure 5

Histograms and a pie chart showing the distribution of survey answers on some governance characteristics



Note. Items are rated on a 1-5 scale, from 1=very low contribution/importance to 5=very high contribution/importance.

The rest of the governance characteristics that were measured are shown below in Table 4. The vast majority of sample firms manage their firms internally (79.4%), invest in early stage ventures (97.9%) and occupy a board seat (81.9%). Overall, the SME CVCs are quite often in contact with their portfolio firms, with 86.2% interacting at least once a month. Furthermore, 22.6% have only made investments via sweat equity and 61.3% do not have a planned exit timeline. Interestingly, only 8.7% of the SMEs actively search for ventures to invest in. Instead, ventures often come to them (28.5%) or appear through their network (41.3%).

4.1.4 Value-added services

The value-added services of SME CVCs were scored in terms of their level of contribution. An overview of the value-added services is shown below in Table 5, including the constructs and single items. The means of the value-added constructs do not differ greatly, with the lowest (*financial management and financing*) being closer than one standard deviation away from the highest (*technology development*). This also applies to the single items. However, the single items have somewhat more variability, even within the same constructs, such as *internationalization* (*M*=2.67, *S.D.*=1.28) and *building relations and network* (*M*=3.71, *S.D.*=1.17). We can observe that *selling the venture* (exit), *internationalization*, *recruitment*, *attracting foreign customers* have quite low means, while *product and technology development* and *strategy (item)* are quite high. See Figure 6 for distributions on selling the venture (exit) and selected CVC-specific value-added items.

In terms of the categories of value-added services introduced in the theoretical framework in Chapter 2, we see that the SME CVCs have substantial contributions in all four categories, including *business development* (market knowledge, strategy, and financial management and financing) and *legitimacy*. However, their greatest contribution is in *technology development* (*M*=3.68, *S.D.*= 0.93) and *CVC-specific value added-services* (*M*=3.44, *S.D.*= 1.07), which reflects their affiliation with a parent corporation.

Table 4

Responses to survey questions about governance and investment preferences from SMEs that invested CVC

Variable	*n*	%
Investment stage	94	100.0
Early stage	92	97.9
Under expansion	1	1.1
Later stage	1	1.1
Frequency of interaction	94	100.0
Every day	17	18.1
Twice a week	17	18.1
Once a week	19	20.2
Twice a month	16	17.0
Once a month	12	12.8
Every quarter	4	4.3
Rarer than every quarter	9	9.6
Board seat	94	100.0
Yes	77	81.9
No	17	18.1
Board observer	86	100.0
Yes	18	20.9
No	68	79.1
Exchanged for equity	93	100.0
Only money	24	25.8
Only services	21	22.6
Both	48	51.6
Planned exit	93	100.0
Less than 2 years	5	5.4
Up to 5 years	26	28.0
Up to 10 years	5	5.4
As long as necessary	57	61.3
Preferred ownership share	94	100.0
No preference	24	25.5
1-10%	10	10.6
10-25%	19	20.2
25-50%	20	21.3
50% or more	21	22.3
Finding investments*	172	100.0
Actively searching	15	8.7
The ventures come to us	49	28.5
Through network	71	41.3
Through other private investors	12	7.0
Family and acquaintances	25	14.5

Note. Variables marked with * include data from questions that allowed multiple choices.

Table 5

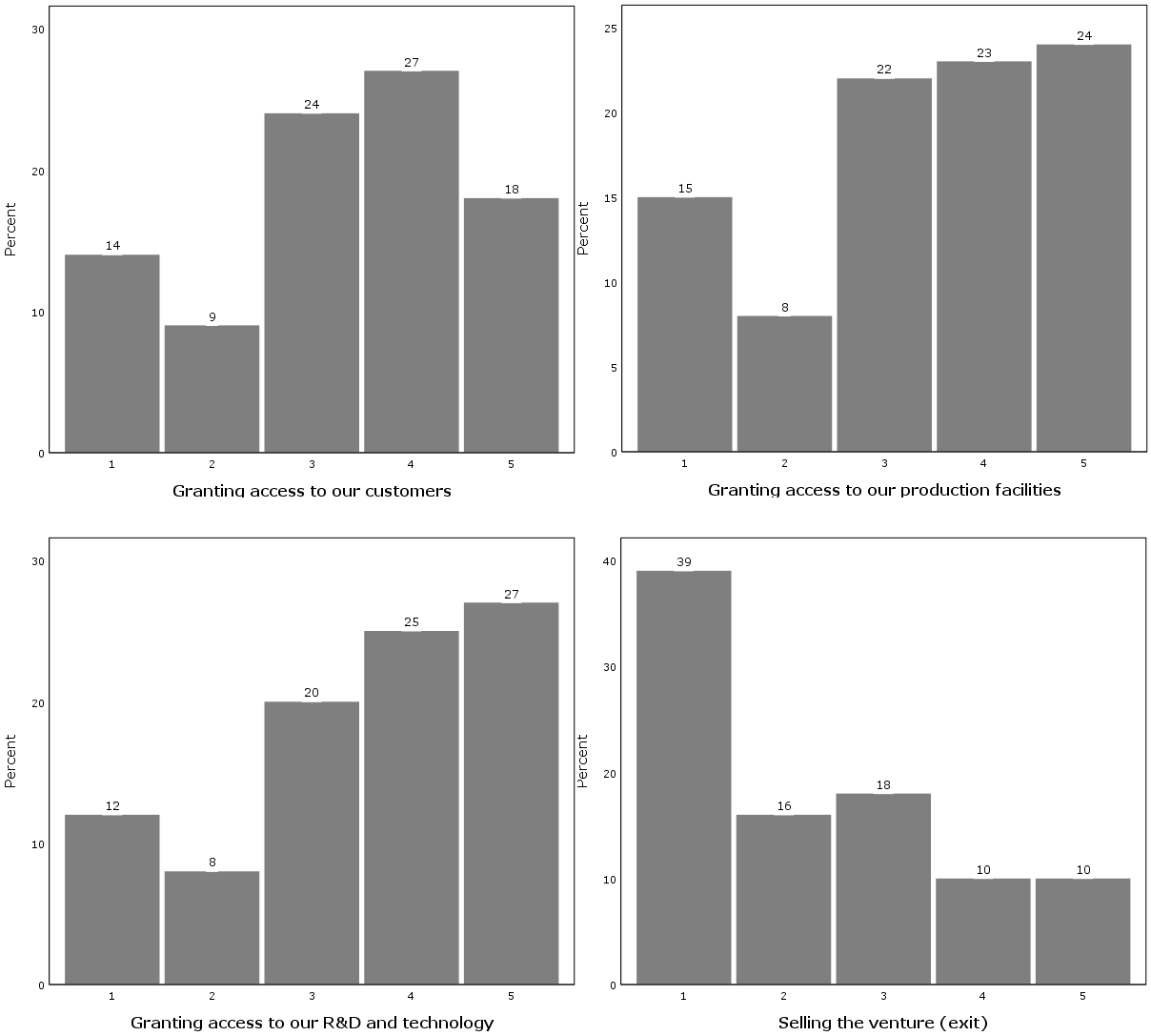
Descriptive statistics about the SME CVCs' value-added services with Means (M) and Standard Deviations (S.D.) on a 1-3 scale (n=94)

Variable	*M*	*S.D.*
Technology development	**3.68**	**0.93**
Product and technology development	4.21	1.04
Production	3.30	1.35
Network within product development	3.57	1.28
Market knowledge	**3.18**	**0.95**
Building relations and network	3.71	1.17
Customer knowledge	3.51	1.20
Sales	3.37	1.15
Logistics/distribution	2.69	1.17
Internationalization	2.67	1.28
Strategy	**3.41**	**0.91**
Project management	3.51	1.12
Strategy (item)	4.03	1.08
Professionalization	3.83	1.11
Contracts	3.09	1.32
Strategic alliance partners	3.39	1.18
Day-to-day operations	3.28	1.21
Recruitment	2.82	1.26
Financial management and financing	**2.89**	**1.14**
Liquidity management	2.99	1.41
Budget management	2.98	1.37
Further financing	3.40	1.29
Valuation	2.75	1.34
Selling the venture (exit)	2.31	1.39
Legitimacy	**3.34**	**0.86**
Securing further finance	3.54	1.23
Recruiting new employees	3.27	1.07
attracting new partners/suppliers	3.71	0.98
Attracting Norwegian customers	3.49	1.09
Attracting foreign customers	2.69	1.20
CVC-specific value-added services	**3.44**	**1.07**
Becoming one of the venture's most important customers*	2.62	1.44
Granting access to our customers*	3.28	1.31
Granting access to our production facilities	3.36	1.39
Granting access to our R&D and technology	3.51	1.35
Granting discounts on our products/services	3.46	1.31

Note. The two items marked with * are not included in the *CVC-specific value-added services* construct due to reliability issues (see subsection 3.3.3).

Figure 6

Histograms showing the distribution of survey answers for selected items on value-added services



Note. Items are rated on a 1-5 scale, from 1=very low contribution to 5=very high contribution.

Value-added services were also measured by having respondents rank what they considered their first, second and third most important contributions from a selected list. The breakdown of this can be found in Table 6. *Business model and strategy (business development)* and *develop technology and product (technology development)* are the most important value-adding roles for the majority of investors, and these were tied as the investors' firstmost important role (39 instances). However, more investors selected *business model and strategy* rather than *develop technology and product* as the second or third most important role (41 versus 26, respectively). In total, the third most important value-added service is to *find and attract customers*, but this had a substantially lower score than the two value-added services that ranked highest. *Entering foreign markets* and *recruit key employees* seem to have particularly minor presences compared to the most important roles, with no instances of being selected as the most important.

Table 6

Responses to survey questions about value-added services from SMEs that invested CVC

	Ranked importance							
	1st		2nd		3rd		Sum	
Variable	*n*	%	*n*	%	*n*	%	*n*	%
Business models and strategy	39	43	27	30	14	16	80	30
Develop technology and product	39	43	14	16	12	13	65	24
Find and attract customers, suppliers and strategic partners	7	7.7	14	16	15	17	36	13
Develop organization, internal systems and processes	2	2.2	14	16	15	17	31	11
Get publicity and recognition in the market	2	2.2	7	7.8	11	12	20	7.4
Secure further finance from external sources	2	2.2	6	6.7	12	13	20	7.4
Recruit key employees	0	0	4	4.4	9	10	13	4.8
Enter foreign markets	0	0	4	4.4	2	2.2	6	2.2

Note. The sum column includes the accumulated scores of the first, second and third most important value-adding roles.

4.2 Inferential statistics

This section includes the inferential analysis of the empirical survey data. First we perform a test for comparing the sample of SMEs that invest CVC towards the sample of SMEs that did not invest, thereafter the hypotheses presented in chapter 2 are tested for correlation.

4.2.1 Comparison to non-investors

The difference in ambidexterity between the samples of SMEs that invested CVC (96 firms) and those that did not (64 firms), was tested. As shown in subsection 4.1.1, the majority of SME CVCs were in the IT industry. The sample of non-investors was more diverse with respect to its industries, but 29 firms belonged to IT. To limit the potential effects of different industries when comparing, only firms in the IT industry were compared.

An independent-samples t-test was performed for comparison of the ambidexterity of SMEs that invested CVC to SMEs that did not invest CVC. A Levene's test for equality of variances indicated that equal variance can be assumed for the two groups (F=.013, p=.909>.05). No significant difference was found for the ambidexterity of SMEs that invested CVC (M=4.14, *S.D.*=.46) and SMEs that did not invest CVC (M=4.08, *S.D.*=.49; $t(84)$=-.472, p=.64, two-tailed).

Table 7

Correlations for the studied measures (n=92)

No.	Variable	Mean	*S.D.*	1	2	3	4	v	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Firm age	23.7	23.7																							
2	Firm size	1.97	.88	.31**																						
3	Number of investments	2.77	1.82	.12	-.00																					
4	IT industry	.62	.49	-.40**	-.11	-.07																				
5	Aquaculture industry	.12	.32	.19	-.15	.12	-.46**																			
6	Other industries	.27	.44	.30**	.22*	-.01	-.76**	-.22*																		
7	Sweat equity	.23	.42	-.20	-.07	-.21*	.11	-.04	-.10																	
8	Planned exit	.39	.49	-.22*	-.08	.04	-.02	-.21*	.17	.15																
9	Managed internally	.82	.39	-.01	.02	-.2	.26*	-.09	-.22*	.11	.09															
10	Board seat	.82	.39	.20	.08	.02	-.09	.17	-.03	-.28**	-.25*	.14														
11	Frequency of interaction	4.61	1.84	-.09	-.25*	.04	-.00	.01	-.00	.01	-.04	.05	.22*													
12	Strategic fit	3.37	.94	.23*	.16	-.23*	-.18	-.01	.20*	-.09	-.12	.00	.37**	.11												
13	Explorative motivation	3.46	1.37	.05	.25*	-.02	.12	-.27*	.06	-.17	.17	.03	.27*	-.1	.24*											
14	Importance of investing for fun	3.89	1.39	-.28**	-.28**	.14	.13	-.14	-.04	.2	.12	-.02	.02	.26*	-.18	.30**										
15	Importance of return on investment	4.25	1.02	.02	.11	-.03	.15	-.19	-.03	-.01	.03	-.08	-.02	.11	.05	.07	-.03									
16	Importance of geographical proximity	2.76	1.25	.11	-.16	.06	-.17	.18	.06	-.1	-.05	-.07	.11	.15	-.05	.02	.12	.06								
17	Window on new technology	3.77	1.38	.03	.20'	-.03	.02	-.25*	.15	-.22*	.19	.06	.27**	-.03	.21*	.84**	.34**	-.05	.08							
18	Technology development	3.68	.93	-.19	-.15	.03	.06	-.19	.07	.00	.05	.04	.27*	.34**	.15	.07	.19	.04	-.02	.06						
19	Market knowledge	3.18	.95	.08	.08	.13	-.18	-.01	.20	-.05	-.02	-.14	.32**	.36**	.31**	.33**	.21*	.20	.10	.29**	.38**					
20	Strategy	3.41	.91	.04	-.03	.18	-.25*	.01	.27**	-.13	-.03	-.17	.39**	.50**	.22*	.18	.32**	.16	.22*	.18	.55**	.75**				
21	Financial management and financing	2.89	1.14	.24*	.07	.10	-.32**	.04	.33**	-.06	.01	-.16	.41**	.36**	.37**	.26*	.21*	.16	.20	.21	.31**	.64**	.76**			
22	Legitimacy	3.34	.86	.11	.20	.32**	-.12	-.04	.16	-.29**	.08	-.13	.17	.26*	.14	.04	.01	.01	-.09	.07	.36**	.29**	.31**	.29**		
23	CVC-specific value-added services	3.44	1.07	-.16	-.07	.06	.17	-.24*	-.02	.04	.08	.18	.17	.28**	-.05	.09	.24*	-.01	.13	.11	.46**	.10	.28**	.04	.31**	
24	Interpersonal roles	3.34	1.03	.02	-.02	.21*	-.17	.12	.09	-.02	.02	-.06	.33**	.27**	.08	.01	.10	.02	.16	.07	.47**	.49**	.53**	.36**	.35**	.30**

Note. Most variables were measured with a 1-5 scale. Exceptions include firm age (number of years since founding), level of interaction (1-7 scale) and the dummy variables 4 through 10. Items 13, 14, 15 and 17 have been adjusted from 1-3 scales to 1-5.

4.2.2 Hypothesis testing

The hypothesis presented in Chapter 2 were investigated using Pearson's correlation coefficient. This parametric test was used to investigate the relationship between all the measurements described in section 3.2. Intercorrelations for a number of dummy variables are also shown, including the different industries, for having invested sweat equity, for having a planned exit timeline, for managing portfolio firms internally and for occupying a board seat. The variables, their means, standard deviations, intercorrelations and significance (when applicable) are shown in Table 7. The correlation coefficient ranges from 0 to 1 in absolute value depending on the strength of the linear relationship. A value below .30 suggests a *small* correlation, a value above .50 suggests a *large* correlation, and a *medium* correlation is in-between (Pallant, 2013). Statistical significance was in all cases based on a two-tailed test.

Evident from the correlation table, *investing for fun* had a moderately high score (M=3.89, $S.D.$=1.39). It is shown to be positively related to *investing to gain a window on new technologies*, with a significant medium correlation (r=.34, p<.01). As such, Hypothesis 1 stating that *the SME CVCs' motivation of investing because it is fun is negatively related to investing to gain a window on new technologies,* is not supported.

Investing for fun also positively relates to *frequency of interaction*. Therefore, Hypothesis 2 stating that *the SME CVCs' motivation of investing because it is fun is positively related to the frequency of interaction between the SME CVC and the entrepreneurial venture*, is supported. However, the correlation is found to be small (r=.26, p<.05).

Explorative motivation shows a small, significant, positive correlation to occupying a board seat. Therefore, Hypothesis 3 stating that *the SME CVCs' explorative motivation for engaging in CVC activity is positively related to having a board seat in the portfolio company*, is supported. However, the correlation is found to be small (r=.27, p<.05). This low correlation is likely to be caused by the fact that a whole 82% of the sample firms are represented on the ventures' board.

The three constructs *market knowledge* (r=.38, p<.01), *strategy* (r=.55, p<.01) and *financial management and financing* (r=.31, p<.01) each show a significant positive correlation to *technology development*. Therefore, Hypothesis 4 stating that *the SME CVCs' value-added contributions in business development is negatively related to the SME CVCs' value-added contributions in technology development, is not supported.* In fact, contributions in business development, technology development and legitimacy are all positively related to each other.

Interpersonal roles is significantly, positively related (r=.30, p<.01) to *CVC-specific value-added services*. The same correlation was also tested when including the two items that were previously removed from *CVC-specific* value-added services (as explained in subsection 3.3.3), and this also showed a significant, positive correlation with a slightly stronger linear relationship (r=.34, p<.01). Consequently, Hypothesis 5 stating that *the strength of SME CVCs' interpersonal roles is positively related to their contributions in CVC-specific value-added services*, is supported.

Frequency of interaction is significantly, positively related to *market knowledge* (r=.36, p<.01), *strategy* (r=.50, p<.01) and *financial management and financing* (r=.36, p<.01). This grants support for Hypothesis 6, stating that *the SME CVCs' interaction frequency is positively related to the SME CVCs' contribution in business development.*

Strategic fit is not significantly related to *technology development*. Therefore, Hypothesis 7 stating that *the degree of strategic fit between the SMEs and the entrepreneurial ventures is positively related to the SME CVCs' value-added contributions in technology development*, is not supported. However, strategic fit was found to be significantly, positively related to market knowledge (r=.31, p<.01), strategy (r=.22, p<.01) and financial management and financing (r=.37, p<.01). Moreover, strategic fit was not found to be positively related to frequency of interaction.

5. Discussion

5.1 Placing SME CVCs in The Venture Capital Galaxy

5.1.1 Why do they invest?

The hypotheses studying the motivations of the SME CVCs are hypotheses 1 and 2.

Hypothesis 1 explored if SME CVCs had a tendency to exclusively resemble either CVCs or BAs in their motivations and stated that *the SME CVCs' motivation of investing because it is fun is negatively related to investing to gain a window on new technologies*. This hypothesis was not supported, but on the contrary showed a significant, positive correlation. This finding is contradictory to prior research on CVCs, which do not report *having fun* as an important motivational factor for CVCs (De Clercq et al., 2006), nor that window on new technology is of any importance to BAs (Bjørgum & Sørheim, 2015). In addition to being positively related, the mean values of both variables are relatively high (3.89 for *having fun* and 3.77 for *window on new technology*, taken from Table 7). This suggests that the motivation of SME CVCs is a hybrid of BAs and CVCs, and that strategic and intrinsic motivations coexist. Reflecting their corporate nature, the SME CVCs also commonly report having strategic motivations such as investing to boost their employees' work motivation and to learn new skills. The fact that SME CVCs' motives beyond financial returns are of high importance clearly separates them from IVCs.

Furthermore, a significant finding grants support to Hypothesis 2, stating that the SME CVCs' motivation of *investing because it is fun is positively related to the frequency of interaction between the SME CVC and the entrepreneurial venture.* This suggests that not only is the motivation of *having fun* unique for SME CVCs compared to their traditional CVC counterpart, but that having fun also influences the behaviour of the SME CVC. Identifying variables that influence frequency of interaction is important as previous research has found that the CVC's frequency of interaction is positively related to financial returns on investments (Botazzi et al., 2008).

An independent sample t-test did not provide a significant difference between the ambidexterity of SME CVCs and SME non-investors within the IT industry, and therefore did not support the notion that SME CVCs have a more explorative outlook compared to non-investors. This could be the result of SME CVCs utilizing their investment activity not to increase their ambidexterity, but to increase the emphasis they already have on either exploration or exploitation. For instance, if an SME already has a large focus on exploitation, they can use their CVC activity to further increase their focus on exploitation, and vice versa.

Ad-hoc investments

Another interesting finding was that only 8.7% of the SME CVCs reported to actively scan the market for investment opportunities. Instead, they often find their portfolio companies by being approached by the entrepreneurial ventures themselves, or through their network, family, or friends. Additionally, the SME CVCs were found to likely invest in fewer portfolio companies (34 % had only 1 portfolio company and only 14.7% of the sample SME CVCs did 6 or more investments) than Yang et al. (2016) found for larger

CVCs (similarly 32% with only 1 portfolio company, but the mean was 29 portfolio companies and the largest portfolio size was reported to be 435).

With less resources available for a dedicated investment unit, one would expect SME CVCs to make fewer investments and be less able to actively search the market for investment opportunities. However, SMEs are often less restricted by bureaucracy compared to larger firms, and they are viewed as more agile and dynamic (Carrier, 1994). This enables them to innovate more instinctively and efficiently and SMEs may therefore be more able conduct ad-hoc investments when promising opportunities arise, without it being rooted in a larger corporate strategy. Particularly the finding that SME CVCs rarely actively search for investment opportunities seems to corroborate this. To study if SME CVCs invest in fewer portfolio companies due to having less resources or a less coherent investment strategy, might be an interesting topic for future research to further our understanding of the motives of SME CVCs.

5.1.2 When do they invest?

A whole 97.9% of the respondents reported that they invest in the entrepreneurial ventures' early stage, and in this aspect they are very similar to BAs (De Clercq et al., 2006; Politis, 2008; Sørheim, 2005; Ramadani, 2009). Although not unexpected, this is an interesting finding that particularly separates SME CVCs from IVCs, but also distinguishes them from their larger CVC counterparts (Bertoni et al., 2013; Chemmanur et al., 2014; De Clercq, 2006; Maula et al., 2005).

As SMEs have less available resources to support their CVC activities than larger corporations (Yang et al., 2016), it is logical to infer that they invest in the early stages, where the entrepreneurial ventures are typically dependent on smaller investment amounts in order to take the next step (De Clercq, 2006). One would also expect the portfolio companies to be most dependent on obtaining knowledge and resources from the external environment in their early stage, and this is therefore likely to also be the stage where SME CVCs can contribute the most. Moreover, another interesting finding that could be connected to this is that some SME CVCs invest only through sweat equity, with 22.6% reporting to have exchanged a product or service, rather than financial capital, in return for equity in the entrepreneurial venture. This is a characteristic that is unique to SME CVCs, as the other entrepreneurial finance sources in The Venture Capital Galaxy almost exclusively invest capital in exchange for equity (De Clercq, 2006). Entrepreneurial ventures in their earliest stage are dependent on both generic and specialized resources from the external environment, and might not have enough money to purchase a product or service they need to further develop their own technology (Mitchell and Singh, 1992; Park and Steensma, 2012). This provides a unique and attractive opportunity for SMEs, with limited resources, to engage with entrepreneurial ventures and make CVC investments. This unique investment practice may improve SMEs' ability to make CVC investments and challenges the earlier assumption that the SMEs' resource base is not sufficient to make discretionary and uncertain investments in entrepreneurial ventures (Basu et al., 2011; Singh, 1986).

5.1.3 How do they manage their investments?

As mentioned earlier, the governance and investment practices should be a reflection of the investor's motivations. It is clear that SME CVCs do not make these investments

purely for a return on investment, separating them from IVCs' financial motivation. SME CVCs' motivations seem to be a hybrid of those of BAs and CVCs, and their organizational structure and investment practices do indeed reflect this, sharing similarities with both BAs and CVCs, and less so with IVCs.

It is apparent that SMEs investing CVC are very active investors and highly involved in the entrepreneurial ventures they invest in. SME CVCs seem to be more active than the typical CVCs and IVCs, and they behave more similarly to the most active BAs (Politis, 2008). Recalling from Chapter 2, Botazzi et al. (2008) found that 69.3% of IVCs in their sample interacted with their portfolio company on a monthly basis or more and 66.2% had board representation. The SME CVCs in our sample interact substantially more than this, with 86.2% reporting to interact on a monthly basis or more and 81.9% of them having board seats. Going back to the investor's motivations, one likely explanation for the SME CVCs' high frequency of interaction is their hybrid motivations of BAs and CVCs. Their intrinsic motivation, in combination with their strategic pursuit of innovation benefits for the corporate parent, is likely to strengthen their desire to take an active role in the entrepreneurial venture, and thus interact more frequently.

In addition to SME CVCs being more active investors than their typical larger counterparts, our sample shows that they also differ from the traditional CVCs in terms of the governance and organizational structure for managing their investments. While 74 % of traditional CVCs have been found to manage their investments through a wholly owned subsidiary (Yang et al., 2016), 79.4% of the SME CVCs in our sample managed their investments internally. This, along with their tendency to have fewer portfolio companies (Yang et al., 2016), is a finding that clearly separates SME CVCs from the traditional CVCs in The Venture Capital Galaxy. On the other hand, SME CVCs share the same traits as their larger CVC counterparts in that they use board seat representation as a mechanism for explorative learning. From our analysis, a significant finding grants support to Hypothesis 3, which states that *the SME CVCs' explorative motivation for engaging in CVC activity is positively related to having a board seat in the portfolio company.* Furthermore, our sample shows that 61.3% of SME CVCs do not have a planned exit strategy and will stay invested *as long as necessary*, making them different from IVCs (often planned exit) and more similar to CVCs and BAs (unplanned exit) (De Clercq, 2006; Bjørgum and Sørheim, 2015). SME CVCs also show strong resemblance to larger CVCs in that the majority do not have a strong preference for investing in ventures with close geographical proximity (Gutmann et al., 2019; De Clercq, 2006). This is an interesting finding, as their high level of interaction tells a different story. One would assume that if they invested outside their region, their ability to frequently interact would be limited. The locations of the SME CVCs' portfolio companies were not investigated in our study, but it would be an interesting aspect to include in future studies on SME CVCs.

As mentioned in section 2.4.2, a logical explanation for SMEs managing their investments internally is that they do not have sufficient resources to set up a separate investment unit. However, and again going back to motivations and upper-echelons theory, this finding could also be explained by top-management's high frequency of interaction and influence. The top-management in SMEs have extensive decision-making power and they partly do these investments because it is fun. They want to be actively involved themselves, and do not want an independent and separate unit to manage the investments. In a sense, and coherent with our findings of SMEs' characteristics, one

could view the top-management of SMEs as BAs investing through their corporate affiliation.

Research question 1

How do SMEs investing CVC (compare to the traditional venture capital sources of CVCs, BAs and IVCs, and) fit into The Venture Capital Galaxy?

Our analysis shows that SME CVCs are fundamentally different from the other sources of entrepreneurial finance. In terms of placing SME CVCs in the venture capital galaxy, our findings suggest that they in many ways can be considered to be a hybrid of BAs and CVCs. Similar to the larger CVCs described in prior literature, SME CVCs also invest corporate funds, are financially and strategically motivated, and often do not have a planned exit strategy. Contrary to their larger counterparts, SME CVCs have a smaller resource base and therefore tend to invest in the entrepreneurial ventures' earlier stage, similar to BAs. Additionally, some SME CVCs invest sweat equity, which is a unique feature that is not frequently reported among the other investor types. Lastly, SME CVCs' motivation stretch beyond financial and strategic, as they similarly to BAs also invest for intrinsic rewards and to have fun. This suggests that SME CVCs should be considered an investor type of their own, separated from their larger CVC counterpart.

It is clear that SME CVCs deserve their own place in The Venture Capital Galaxy, and finally we arrive at a suitable term describing SMEs investing CVC in entrepreneurial ventures, namely *Corporate Angels* (Coveney and Moore, 1997).

Table 8

Placing SME CVCs in The Venture Capital Galaxy (adapted from De Clercq et al., 2006)

Characteristics	Independent Venture Capital	Business Angels	Corporate Venture Capital	Corporate Angels (SME CVCs)
Type of funding	Funds from external partners	Personal funds	Corporate funds	Corporate funds or sweat equity
Resource base	Large	Small	Very large	Moderate
Motivation	Financial	Financial and intrinsic	Financial and strategic	Financial, intrinsic and strategic
Financing stages	Later stage	Early stage	All stages	Early stage
Frequency of interaction	Moderate	Low to very high	Low to moderate	Very high
Investment exit strategy	Planned	Often unplanned	Often unplanned	Often unplanned

5.2 The value-added services of SME CVCs

So far, this discussion has focused on the characteristics of SME CVCs in order to provide a better understanding of why these SMEs decide to pursue CVC investments, and how these partnerships work in a practical sense. As mentioned, both motivation and governance will impact the level of value-added contributions these SME CVCs are able to provide their portfolio companies (Dushnitsky, 2006; and Maula et al., 2005). Following *Resource-dependency theory*, a theoretical framework was developed in section 2.2 to identify and assess what value-adding resources entrepreneurial ventures are able to acquire from SME CVCs. Furthermore, and in connection with the presented hypotheses, this section aims to analyze how these value-added contributions of SME CVCs differ from those of larger CVCs, BAs and IVCs.

The section will first discuss the results of the hypotheses. Following, and in line with this paper's theoretical framework, the value-added services (VAS) in the categories *legitimacy*, *business development*, *technical development* and *CVC-specific* will be discussed, before the SME CVCs' contributions will be attempted to be placed in The Venture Capital Galaxy.

5.2.1 Hypotheses

Recalling from section 2.2, the following hypotheses were presented:

Hypothesis 4. *The SME CVCs' value-added contributions in business development is negatively related to the SME CVCs' value-added contributions in technology development.*

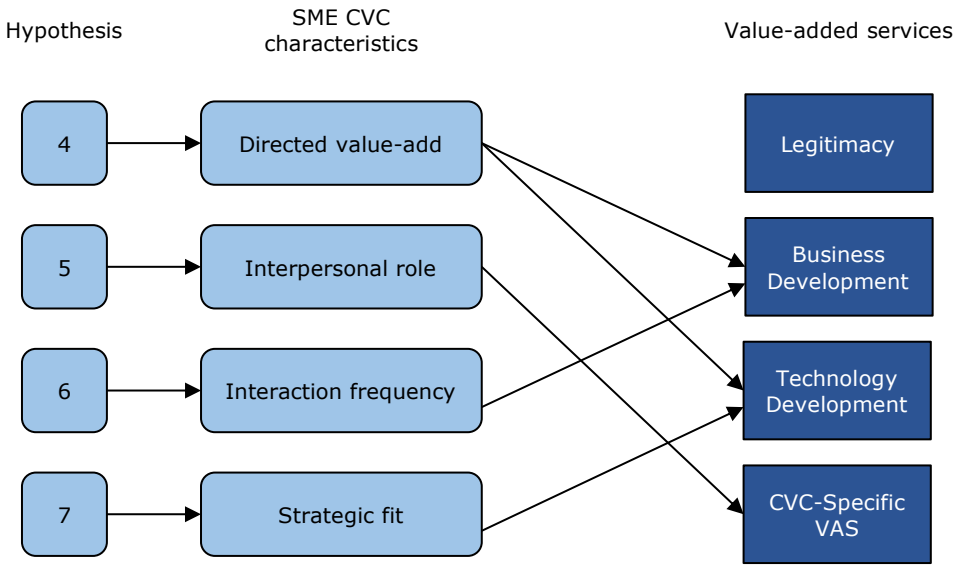
Hypothesis 5. *The strength of SME CVCs' interpersonal roles is positively related to their contributions in CVC-specific value-added services.*

Hypothesis 6: *The SME CVCs' interaction frequency is positively related to the SME CVCs' contribution in business development.*

Hypothesis 7: *The degree of strategic fit between the SMEs and the entrepreneurial ventures is positively related to the SME CVCs' value-added contributions in technology development.*

Figure 7

Relating hypotheses to theoretical framework



Directed value-added contributions

Recalling section 2.2 and upper-echelon theory, we suggested that the SME CVCs' contributions will vary based on the characteristics of the individual SME's top-executives. As a result, SME CVCs will resemble BAs and direct their contributions towards the domain their management has the most expertise in (e.g. technology development). We therefore hypothesized that SME CVCs choose to focus their efforts on one VAS-category, and as a result, their contributions in other areas will be reduced. However, Hypothesis 4 stating that *the SME CVCs' value-added contributions in business*

development is negatively related to the SME CVCs' value-added contributions in technology development, was not supported.

In fact, there was a positive relation between these variables, revealing that those SME CVCs that contributed more in *business development* also contributed more in *technology development*. Furthermore, not only were these two VAS-categories related, but our findings revealed that contributions in *legitimacy*, *business development*, and *technology development* were all positively related to each other. This suggests that SME CVCs do not tend to place emphasis on one specific value-added contribution based on their expertise and neglect other areas. On the contrary, SME CVCs contribute with a broad range of services within all value-added categories. This suggests that SME CVCs differ from BAs in their value-added services and contribute on a much broader level.

Interpersonal roles and value-added contributions

The extent that the SME takes an interpersonal role in the CVC partnership is a measure of the closeness of the relationship, with the SME acting as a mentor and friend to the entrepreneurial venture. Our analysis revealed that SME CVCs score quite high on interpersonal roles, suggesting that these investors tend to form a close relationship with their portfolio companies. In terms of describing their interpersonal roles with the portfolio company, 53.8% reported a high or very high contribution in the mentor role, and 40.8% through the role of being a friend (see Figure 5).

Recalling from section 2.2, the strength of the social relationship can increase the ability to add value, and BAs are particularly known for forming close relationships with their portfolio companies (Hoyos-Iruarrizaga et al., 2017). Thus, we suggested that a stronger interpersonal role would result in the SME CVC contributing more to the portfolio company, particularly in terms of sharing corporate resources such as manufacturing, R&D and testing facilities. This did indeed hold true, as Hypothesis 5 stating that *the strength of SME CVCs' interpersonal roles is positively related to their contributions in CVC-specific value-added services*, was supported. This finding can be explained by the idea that stronger interpersonal roles will lead to stronger personal relations and trust, and the SME CVC is therefore more likely to grant the venture access to their core technology and resources such as R&D and production facilities.

Moreover, and as expected, stronger interpersonal roles did not only correlate positively to contribution in CVC-specific value-added services, but it did so for all of the VAS-categories. Interpersonal roles correlated in similar degree to contributions in both *CVC-specific* and *legitimacy*, however, it showed an even stronger correlation to *business development* and *technology development*. Several factors are theorized to cause this relation. First, as personal relations are built among the SME CVC and the entrepreneurial venture, the SME CVC is likely to become more invested in the venture's success and therefore more inclined to contribute and help. Second, interpersonal roles and trust is likely to reduce the entrepreneurial venture's worries of misappropriation by the corporate parent (Yang, 2012), and it may therefore seek more help. As interpersonal roles were positively related to all value-added variables, this suggests that personal relations are highly important in understanding SME CVCs' contributions to their portfolio companies.

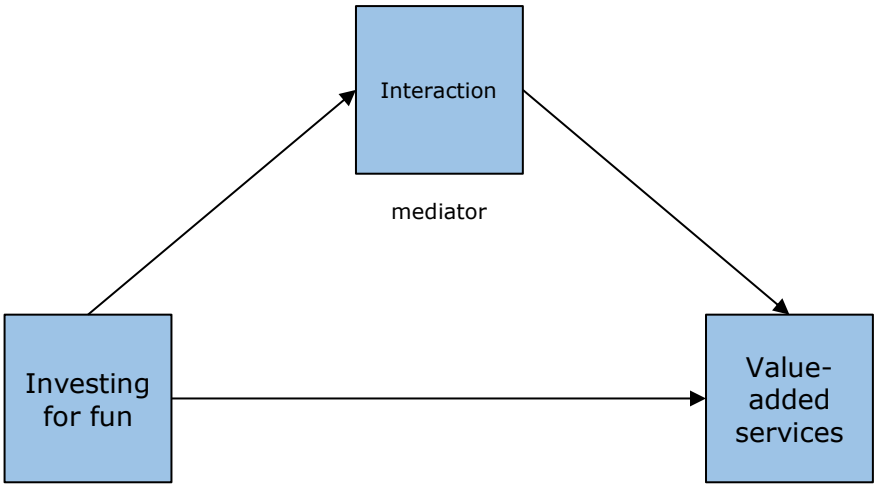
Interaction and value-added contributions

Closely related to interpersonal roles, is the SME CVC's level of involvement, which was measured by frequency of interaction and board seat representation in this study. Our analysis found (as expected) that the SME CVCs' interpersonal roles do in fact relate to level of involvement (significant, positive correlation to both interaction frequency and board seat). This finding is reasonable, as one would expect that a closer relationship will lead to more interaction, and vice versa, more interaction will lead to a closer relationship. As mentioned, prior research has found that the frequency of interaction affects the value-added contributions CVCs provide (Carter et al. 1996; Maula et al., 2009). While this could apply for all types of value-added services, we expected this to particularly hold true for contributions in *business development*. Hypothesis 6, which stated that t*he SME CVCs' interaction frequency is positively related to the SME CVCs' contribution in business development*, was indeed supported. Interestingly, and similar to *interpersonal roles*, *interaction frequency* was also found to be positively related to all *technology development*, *legitimacy* and *CVC-specific* contributions. This finding is logical, as more interaction provides more opportunities to contribute and provide value-added services across the different VAS-categories. Given that SME CVCs have now been found to be very active investors, resembling the interaction frequency of the most active BAs, one could argue that this is a value-add in itself. SME CVCs' striking level of involvement and interpersonal role make them strong contributors and enable them to enlarge their value-added contributions across different domains of the entrepreneurial venture's development.

Expanding on this and recalling from the prior sections on motivation, we also found that if the SME investor's motivation for making these investments is, akin to that of BAs, *to have fun* - then that will lead to higher interaction frequency. This results in an interesting relationship between these three variables (illustrated in Figure 8). One could therefore argue that investing for fun leads to more value-added contributions, and that this relationship could be mediated by interaction frequency.

Figure 8

Depiction of the possible correlation between motivation, governance and value-added contributions in SME CVC partnerships



Interestingly, *investing for fun* was in fact found to be positively correlated to contributions in *business development*. This is likely to stem from the SME-management's intrinsic motivation for working with entrepreneurs, and one would expect them to particularly take an interest providing advice and partaking in beneficial discussions concerning strategies and the overall development of the venture. This is an interesting relationship that the authors wish to investigate further. However, our dataset did not adhere to all the assumptions of SEM (discussed in section 5.6), and it was therefore not viewed as appropriate to conduct a mediator analysis. We therefore suggest future studies to investigate this relationship further.

Strategic fit and value-added contributions

Recalling from prior literature on traditional CVCs, a stronger *strategic fit* with the portfolio company has been shown to increase the CVC's value-added contributions (De Clercq et al., 2006; Ivanov and Xie, 2010; Maula et al., 2009). However, Hypothesis 7, which states that *the degree of strategic fit between the SMEs and the entrepreneurial ventures is positively related to the SME CVCs' value-added contributions in technology development*, was not confirmed. Instead, *strategic fit* was only found to have a positive correlation with contributions in *business development*. This is interesting, as one could expect *strategic fit* to improve the SME CVCs' ability to contribute in *technology development* the most. If the portfolio company and the SME CVC are in the same line of business or share similarities in their technologies, products or core competencies, the SME CVC should be able to contribute more in general, however, one would particularly expect this to hold true for *technology development*. This could suggest that the SME CVCs' value-added services in *technology development* is a reflection of their portfolio companies' needs or resource dependencies, rather than being a reflection of the SME CVCs' strategic fit and resulting ability to contribute. Going back to resource-dependency theory, entrepreneurial ventures are dependent on obtaining both generic and specialized resources from the external environment (Teece, 1986; Park and Steensma, 2012). However, in their earliest stage, they may be more dependent on obtaining generic resources such as costly equipment or skilled engineers. Taking into consideration that the vast majority of the SME CVCs' portfolio companies were in their early stages, our findings could suggest that the technical resource-base of most of these SME CVCs is sufficient, even if the strategic fit is not particularly strong. As a result, a stronger *strategic fit* will not necessarily translate to more contributions in *technology development*.

5.2.2 SME CVCs' contributions in the different value-added categories

Ranking SME CVCs' value-added contributions

As mentioned earlier, the analysis shows that SME CVCs' value-added services are not limited to a few specific types of contributions. On the contrary, SME CVCs typically contribute with a broad range of services within all the VAS categories. In this regard, they are very similar to their larger CVC counterparts. Our findings showed that SME CVCs have a moderate to high contribution (1-5 scale) in all categories of value-added services: *legitimacy* (M=3.34), *business development* (M=3.16), *technology development* (M=3.68), and *CVC-specific* (M=3.44). It seems that SME CVCs tend to contribute the most with *technology development*. However, all of these measurements have considerable standard deviations between .76 and 1.14, making it difficult to draw definite conclusions on what type of value-add SME CVCs contribute most with.

While *technology development* seems to be the value-added service the SME CVCs contribute the most with, it falls behind *business development* in terms of importance. From the SME CVCs' viewpoint, technology development and business are tied in terms of being regarded as their most important value-added contribution, as seen in Table 6. However, *business development* is substantially more frequently reported as the second and third most important contribution. Considering that technological development is frequently reported as CVCs' most important value-added (Bjørgum & Sørheim, 2015), and the fact that the industries included in the sample are high-tech industries, one would assume that technology development would also be the most important value-added service in the eyes of the SME investor. This suggests that contributions in *technology development* is important for only some of the portfolio companies, while contributions in *business development* is important for the vast majority of them. In other words, contributions in *business development* is something that almost all portfolio companies are dependent on. Another possible explanation for this is that the SME CVCs feel like their most important contributions are in the areas that they are most adept at or personally engaged. Linking back to upper-echelon theory and the SME CVCs' intrinsic motivations, the investors might feel that their partaking in the entrepreneurial journey through active discussions and giving business advice based on their own background, could be perceived as more valuable. Particularly if their technical contributions are more generic, such as providing standard equipment, this could be viewed as less important and something that the portfolio company could equally obtain elsewhere.

Legitimacy

As mentioned, CVCs are often viewed as the investor granting the most legitimacy, due their affiliation with a corporate parent (Bjørgum and Sørheim, 2015). Chapter 2 theorized that since SMEs are typically less known outside the region and market they operate in, the span of their reputational effect would be somewhat limited. We therefore suggested that the SME CVCs' contribution in legitimacy would be less prominent than the other types of value-added services. This was not found to be true, and legitimacy was actually found to rank very similar to the other categories (ranked third) of value-added contributions. This can be related to the finding that SME CVCs often invest in the early stages. Similar to BAs, SME CVCs' reputational effect could still be considered substantial due to investing in young firms that are not known outside their network. In the early stages, the sheer fact of having a corporate investor could substantially increase legitimacy and outweigh the challenges of SMEs not being known outside of a region or market.

Business development

Within *business development*, which covers a broad range of activities and services, SME CVCs reported to have the strongest contributions in helping their venture *strategize*. This was followed by other operational activities such as *project management*, helping the ventures *build relations and network*, sharing their *customer knowledge*, as well as *professionalizing* the firm. This shows that SME CVCs, like the other venture capital investors, also make substantial contributions in their portfolio companies' business development. Furthermore, the nature of these activities suggest that SME CVCs contribute by taking a more hands-on approach, and in this way they show resemblance to BAs (Schmidt et al., 2018) and IVCs (Busenitz et al., 2004; Berg-Utby et al., 2007). These activities reflect the SME CVCs' high level of involvement, and their intrinsic motivation to take part in the entrepreneurial ventures' journey is likely to play a part in

this. From this, we can see in a practical sense that SME CVCs tend to contribute more operationally, taking a role that leans more towards being co-entrepreneurs.

On the other hand, the SME CVCs' lowest contribution within business development was in activities related to financial management. This could partly stem from the entrepreneurial ventures being in such an early stage that activities related to company valuation and trade sale (exit), are not particularly relevant yet. The low contribution in these activities is a strong contrast to IVCs, whose financial motivation requires high focus on these types of value-added services. This again reflects the fact that the majority of SME CVCs do not have a planned exit strategy for their investments. While SME CVCs do not tend to contribute much on financial management, they contribute substantially in terms of helping the portfolio companies obtain further finance, which again is a typical characteristic of BAs.

Outside the business development domain of financial management, SME CVCs also contributed less in activities related to *recruitment*. This is an interesting finding that shows resemblance between SME CVCs and their larger CVC counterparts. In terms of the traditional investors' contribution in recruitment, IVCs are known to contribute substantially, utilizing their network to help hire highly qualified employees and managers for portfolio ventures (Colombo and Murtinu, 2017). CVCs on the other hand, tend to contribute directly with the knowledge from the highly qualified employees of its parent corporation instead. Similarly, this finding suggests that SME CVCs also focus more on contributing with the knowledge of their own employees.

Further relating SME CVCs to prior studies on their larger CVC counterparts, the analysis revealed that the three constructs pertaining to contributions in *business development* positively related to *strategic fit* between the SME and the portfolio company. This suggests that SME CVC's ability to add industry-specific resources such as distribution channels, industry network and customer/supplier relations, are contingent on the strategic fit between the SME CVC and the entrepreneurial ventures, similar to traditional CVCs (Ivanov and Xie, 2010).

Lastly, it was theorized that contrary to larger CVCs, which are more likely to operate internationally, SME CVCs will contribute less in internationalization. In fact, internationalization was the item with the lowest reported contributions of SME CVCs within business development. This could be explained by the fact that SME CVCs typically have less experience with internationalization compared to the larger CVCs (Leonidou, 2004), and therefore are less able to make substantial contributions. The argument of low internationalization contributions due to lack of experience is further strengthened as the mean contribution of *attracting foreign customers* is also relatively low (2.69). In addition, the early stage of the portfolio companies is also likely to reduce their need for contributions in this domain. Our analysis showed that only 2 (2.2%) of the SME CVCs reported to invest in the ventures' expansion stage or later, and the SME CVC dependency on contributions related to entering foreign markets are therefore likely to be quite low.

Technology development and CVC-specific contributions

CVCs have prior experience from their own line of business and products, which can be highly relevant for the portfolio company. This study has shown that this also holds true for SMEs. Comparable to their larger CVCs counterparts, and as theorized in Chapter 2, SME CVCs tend to provide the greatest contribution in *technology development*. This demonstrates that they distinctly differ from BAs and IVCs in their value-added contributions and are able to give contributions that are unique to CVCs. Unlike BAs and IVCs, SME CVCs are able to utilize the knowledge, expertise and unique resources of their parent corporation to add value to their portfolio companies (Bjørgum and Sørheim, 2015).

Furthermore, the SME CVCs frequently reported granting their portfolio companies access to the CVC-specific value-added services, which are unique to corporate investors. Of the respondents, a considerable amount partly or strongly agreed in providing their portfolio companies substantial value by: granting access to manufacturing facilities (51.1%); sharing the SME's R&D and technology (56.5%); and supplying the portfolio company products or services at a discount (55.0%). These findings show that SME CVCs, in terms of the value-added contributions they provide, are CVCs by heart.

Research question 2

How do the value-added services of SMEs investing CVC compare to those of traditional venture capital sources?

To summarize and address Research question 2, it is clear that SME CVC's fit into The Venture Capital Galaxy on their own, also in terms of their value-added contributions. SME CVC's, like these other investors, contribute across the board, and can provide value-added services in all *legitimacy*, *business development* and *technology development*. In addition to their strong contributions in technology development, SME CVCs also provide unique *CVC-specific* contributions that are distinct to their parent corporations' resources. This clearly shows that they are CVCs in their essence.

However, SME CVCs' contributions also have aspects separating them for their larger CVC counterpart, such as investing at an earlier stage and being less able to contribute in internationalization. Furthermore, SME CVC's differ from the larger CVC in their level of involvement and interpersonal roles, which are more similar to BAs. This close relationship greatly impacts their ability to provide value-added contributions across all VAS-categories.

5.3 Generalizability

This study provides data of all SMEs in Norway, within the IT and aquaculture industry, with a firm age above three years (extracted from Proff Forvalt). Out of the 3245 firms, 2462 firms were removed due to not holding any shares in other companies. 783 firms were manually screened, where 535 firms were excluded from possibly having invested SME CVC through screening the firms' websites and utilizing the exclusion criteria mentioned in section 3.2.1. Of the remaining 248 SMEs that had potentially invested CVC, 83 were excluded after being contacted and found to not engage in CVC activity. 121 firms confirmed that they had invested CVC (of which 96 filled out the survey), and 44 firms were marked uncertain as the authors were not able to reach them. This means

that between 121 and 165 of the 3245 SMEs invest CVC. *As the first study to explore SME CVCs*, *this reveals that the propensity of Norwegian SMEs in the IT and aquaculture industry to invest CVC is between 3.7%-5%.*

Being able to estimate the propensity to invest CVC among SMEs provides a unique finding. However, it is worth noting that this is indeed an estimate, with a number of uncertainties stemming from the methodological limitations mentioned in section 3.3.4. In addition, it should be noted that this does not provide a specific estimate on the propensity to invest CVC among SMEs in the IT and aquaculture industry separately. As the majority of the data set of SME CVCs belong to the IT industry, this suggests that the number is likely somewhat higher in the IT industry, and lower in the aquaculture industry.

5.4 Limitations

This section discusses the most important limitations of the study, beyond the methodological limitations discussed in section 3.3.4.

First, this study has a limited sample size of 96 SME CVC investors, which restricts the possibilities of generalizing the findings. The authors have, as mentioned, attempted to include all SME CVCs in Norway within the chosen industries (and applicable firm ages) to strengthen the possibility to generalize within this context and to address the propensity of these SMEs to invest CVC. Studying this phenomenon exclusively in Norway has likely reduced the unobserved heterogeneity due to cultural differences, but also limits the possibilities to generalize the findings to other regions, and industries.

Furthermore, and particularly in terms of the value-added contributions, this study has limitations from being exclusively based on the perceptions of the SMEs that invest CVC. If the views of the entrepreneurial ventures had been included as well, it would have provided a more comprehensive study and could reveal interesting differences in both parties' perception of the value-added contribution. Additionally, the study does not include any objective performance measurements of the SME CVCs and their portfolio companies, such as financial results or patent registrations, which is a common measurement of innovation and learning in CVC research (e.g. Dushnitsky and Lenox, 2005; Lee et al., 2018; Schildt, Maula and Keil, 2005). Including objective performance measurements could have increased the quality of the data and provided more accurate measures of certain constructs. This is important to take into consideration, as particular terms used in the survey, such as "contributions" and "help the entrepreneurial ventures succeed", can create an overemphasis and bias among the respondents' positive contributions.

5.5 Implications

In the exploration of SME CVCs, this study has identified their basic characteristics and their ability to provide value-added contributions, potentially introducing a new investor type within venture capital research. This can provide guidance for practitioners, for SMEs investing (or considering investing) CVC, and for entrepreneurial ventures seeking investments. For SMEs considering investing CVC, this study challenges the common perception that SMEs are too financially constrained to engage in CVC

activity (De Clercq et al., 2006; Röhm, 2018), as they also invest sweat equity. Further on, this study can provide guidelines for what is typical SME investment practices, such as managing the investments internally. Contrary to traditional CVCs, the creation of an autonomous and external investment subsidiary is not necessary, thus lowering the resource-intensity of making CVC investments. This study also describes the motivation, governance and value-added services of SME CVCs compared to other investor types, which can also provide useful guidelines for SMEs considering investing CVC. Furthermore, and for SMEs currently investing CVC, this study describes the perceived value-added contributions of other SME CVCs, and thereby provides guidelines into areas in which they currently have a high degree of expertise, and which areas that have room for improvement. Lastly, for entrepreneurial ventures seeking funding, this study highlights several strengths (e.g. contribution on technology development) and weaknesses (e.g. contribution on internationalization) of SME CVCs, both in their own regard, but also in comparison to BAs, IVCs and larger CVCs. This can provide guidance for ventures evaluating such partnerships with SMEs.

For the research stream of entrepreneurial finance, this study highlights many of the fundamental characteristics of SME CVCs and describes their similarities and distinct differences to BAs, IVCs and larger CVCs, related to motivation, governance and value-added services. This study therefore provides a fundamental exploration that future research can be built upon. Additionally, this study also reveals areas in which SME CVCs are unique, for instance that they occasionally engage in CVC activity via sweat equity. Their tendency to resemble a hybrid of BAs and CVCs, while also being distinctively different in some areas, builds the argument of viewing SME CVCs as a potentially new investor type within entrepreneurial finance, namely Corporate Angels.

6 Conclusion and suggestions for future research

6.1 Conclusion

This study is an important contribution towards enhancing our understanding of SME CVCs, a type of investor previously ignored within the entrepreneurial finance literature. The study was aimed at understanding how these SME CVCs fit in The Venture Capital Galaxy in respect to their motivation and governance, and to understand how their value-added contributions compare to those of other sources of entrepreneurial finance, i.e. IVCs, BAs and CVCs. We find that SME CVCs are motivated by both financial and strategic benefits, as well as having fun, and as such can be viewed as a hybrid of CVCs and BAs in terms of motivation. They also share similarities to BAs in that they almost exclusively invest in early stage ventures, and they manage these investments internally. These SME CVCs also have distinct features, such as occasionally obtaining their shares through sweat equity, which is uncommon within entrepreneurial finance. Resembling BAs and CVCs, while still having distinct features leads to the conclusion that they should be viewed as a distinct type of entrepreneurial finance provider within The Venture Capital Galaxy, a hybrid of CVCs and BAs, namely *Corporate Angels*.

The SME CVCs develop interpersonal relations with the portfolio companies, more akin to that of BAs, and have a high frequency of interaction. Furthermore, interpersonal relations and frequency of interaction have positive relations to all value-added services in the theoretical framework. The value-added contributions of SME CVCs are similar to those of larger CVCs, with their largest contribution in technology development, followed by a substantial contribution in CVC-specific value-added. Interestingly, strategic fit does not seem to affect the SME CVCs' ability to contribute in technology development, but it does have a positive effect on their value-added contributions in business development. Their largest difference to CVCs related to value-added services is their low contribution in internationalization.

In terms of their motivation and how they govern their investments, these Corporate Angels seem to resemble both BAs and CVCs, in addition to having unique features of their own. On the other hand, their value-added services highly resemble those of larger CVCs. The authors hope the findings of this study can provide inspiration for scholars to continue studying the characteristics of corporate angels, in addition to providing guidelines for practitioners, in both SME CVCs and entrepreneurial ventures.

6.2 Suggestions for future research

In shedding light on SME CVCs, and answering the outlined research questions in section 1.3, several areas for future research have been identified, both based upon the methodological limitations and the findings of this study. This section discusses some of these areas for future research.

We suggest conducting a longitudinal study on SME CVCs and how their value-added contributions evolve over time. Some of the value-added services described in this paper vary in importance based on the life cycle of the entrepreneurial venture (e.g legitimacy,

internationalization and further financing). Furthermore, the SME CVCs' ability to add value and contribute is also dependent on the entrepreneurial venture's life cycle. Additionally, some of the value-added services may only serve as short-term benefits, such as assisting the ventures in seeking strategic alliances (Maula, 2001). A longitudinal study could enhance our understanding of how the value-added services evolve over time and help identify lagged performance variables.

We suggest studying SME CVC from the perspective of the portfolio companies. This paper merely studies SME CVCs investments through the eyes of the SME, and it would be valuable for future research to gather data on the recipients of investments by SME CVCs. Furthermore, gathering data from both provider and recipient would allow for cross-references among the views of these two groups, and arguably create a more accurate picture of the value-added services SME CVCs provide.

We suggest including objective performance measurements. Including objective performance measurements is, as mentioned in section 5.4, common in venture capital research. Future research could benefit from studying the link between reported value-added contributions and objective performance measurements, as this would enable studying the implications of SME CVC activity on both the corporate parent, and the portfolio company.

We suggest researching SME CVCs in other contexts. This paper attempts to place SME CVCs within The Venture Capital Galaxy. However, if we are to truly identify where SME CVCs fit in this galaxy, and understand their characteristics, future research must carry out studies of SME CVCs in different regions and industries.

We suggest researching investment amounts of SME CVCs and expanding on the practice of investing via sweat equity. This study did not include any measurements of the financial investment amounts that were used to obtain equity in the entrepreneurial ventures. Including this in future research can allow cross-referencing to similar studies among CVCs, IVCs and BAs (e.g. Allen and Hevert, 2007). This paper found that SME CVCs had a strong tendency to obtain their shares through sweat equity, not commonly reported among other investor types. An avenue for future research is to investigate if this is true for other regions and industries, and what implications this has for the governance of the investments, and the value-added contributions they provide to the entrepreneurial ventures.

We suggest conducting comparison studies of SME CVCs and other sources of entrepreneurial finance. Research within venture capital frequently studies two or more sources of entrepreneurial finance simultaneously (e.g. Alvarez-Garrido and Dushnitsky, 2016; Bjørgum and Sørheim, 2015; De Clercq et al., 2006; Hahn and Kang, 2017; Bertoni et al., 2013). Implementing this research design for SME CVCs, and comparing them to either IVCs, BAs or CVCs within specific regions and industries, could provide a valuable contribution in truly understanding the uniqueness of SME CVCs.

We suggest conducting a study on SME CVCs' value-added services through SEM analysis. Structural equation modelling (SEM) was deemed as infeasible to conduct on the limited sample size of 96, because around 300 cases is what is normally considered as suitable (Tabachnick and Fidell, 2013). SEM builds on a number of assumptions like multicollinearity and multivariate normality, and some data in this paper did not even

fulfill univariate normality. Consequently, it was not feasible to study mediation and moderator relations. This topic could benefit from diving deeper into the mediator and moderator relations that affects the value-added services provided by SME CVCs. For instance, if investing for fun positively relates to value-added contributions through the mediator of level of interaction.

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Appendix overview

Appendix A: The survey

Tusen takk for at du tar deg tid til å besvare denne undersøkelsen. Vi undersøker små og mellomstore bedrifter som dere, og som investerer penger for å skaffe eierandel i oppstartsbedrifter/startups som utvikler teknologi. Dersom du ikke har gjort noen slike investeringer, så avsluttes undersøkelsen etter spørsmål 11.

All informasjon vi samler inn blir behandlet konfidensielt. Identifiserbar eller bedriftsspesifikk informasjon vil ikke bli publisert eller spredt i noen form; funnene vil bare bli presentert i aggregert form. Denne spørreundersøkelsen har flere deler. Vi begynner med noen spørsmål knyttet til deg, din bedrift og hvor involvert dere er i investeringer. Videre spør vi om deres samarbeid og bidrag til selskapene som dere investerer i.

Ettersom undersøkelsen også har som formål å avdekke hvor vanlig det er for SMB-er å investere i oppstartsbedrifter i Norge, inviteres du også til å fullføre undersøkelsen selv om din bedrift ikke har begått slike investeringer. Vennligst besvar alle spørsmålene i én økt. Bryter du av underveis, må du starte på nytt.

Undersøkelsen tar rundt 15 minutter å fullføre.

Karakteristikk av bedriften

I denne delen kommer det noen grunnleggende spørsmål om bedriften din.

1. Navn på bedriften

2. I hvilket år ble bedriften etablert?

Anslå hvis du er usikker.

3. Hvilken rolle har du i bedriften?

Vennlist kryss av i alle bokser som passer.

- ☐ Grunnlegger/gründer
- ☐ Medeier
- ☐ Styreleder
- ☐ Styremedlem
- ☐ I toppledelsen
- ☐ Annet...

4. Hvor lenge har du jobbet i selskapet?

Velg ...

5. Vil du klassifisere bedriften som tjeneste- eller produktorientert?

- ○ Tjenesteorientert
- ○ Produktorientert

6. Innenfor hvilket næringsområde vil du klassifisere bedriften?

Velg ...

7. Hva var omtrentlig antall årsverk i selskapet i 2019?

Velg ...

8. I hvor stor grad har omgivelsene endret seg for bedriften i de siste tre årene (før koronakrisen)?

	1 (ingen endring)	2 (svært lite)	3 (lite)	4 (mye)	5 (svært mye)
Teknologisk endring	○	○	○	○	○
Markedsmessig endring	○	○	○	○	○
Politiske endringer	○	○	○	○	○

9. Vennligst beskriv hvordan selskapet har orientert seg de siste tre årene ved å indikere hvor enig du er i følgende påstander:

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
Selskapet søker etter nye teknologiske ideer ved å "tenke utenfor boksen".	○	○	○	○	○
Selskapet baserer sin suksess på sin evne til å utforske nye teknologier.	○	○	○	○	○
Selskapet trenger seg stadig dypere inn i sin eksisterende kundebase.	○	○	○	○	○
Selskapet jobber med å øke kvaliteten og redusere kostnader til sine produkter.	○	○	○	○	○
Selskapet retter seg aktivt mot nye kundegrupper.	○	○	○	○	○
Selskapet satser aggressivt på nye markedssegmenter.	○	○	○	○	○
Selskapet ser etter kreative måter å tilfredsstille sine kunders behov.	○	○	○	○	○
Selskapet øker nivået av automasjon i driften sin.	○	○	○	○	○
Selskapet jobber kontinuerlig med å kartlegge sine eksisterende kunders tilfredshet.	○	○	○	○	○
Selskapet lager nye produkter eller tjenester som er innovative for selskapet.	○	○	○	○	○
Selskapet jobber kontinuerlig med å forbedre påliteligheten til sine produkter og tjenester.	○	○	○	○	○
Selskapet finjusterer sine produkter/tjenester for å holde sine eksisterende kunder fornøyde.	○	○	○	○	○

10. Hvilke typer allianser har selskapet ditt dannet de siste 10 årene?

- ☐ Vi har dannet et joint venture.
- ☐ Vi har kjøpt opp et annet selskap.
- ☐ Vi har spunnet ut et selskap.
- ☐ Annet...

11. I løpet av de siste 10 årene, har selskapet ditt investert eller vurdert å investere i en oppstartsbedrift for å skaffe seg en eierandel? *

- ○ Selskapet har gjort slike investeringer.
- ○ Selskapet har vurdert å gjøre slike investeringer, men vi har fremdeles ikke foretatt noen.
- ○ Selskapet har ikke foretatt slike investeringer og har heller ingen planer om å gjøre det.

Hva ga dere til oppstartsbedriften for å få eierandeler?

- ☐ Penger
- ☐ Tjenester

Hvor mange slike innvesteringer har selskapet foretatt seg? Anslå hvis du er usikker.

Velg ...

Generelle spørsmål relatert til investering i oppstartsbedrifter

Siden du svarte at dere gjør investeringer i oppstartsbedrifter, så kommer det noen spørsmål om dette.

12. Hvordan finner dere oppstartbedriften(e) som dere investerer i?

Merk alle bokser som gjelder.

- [ ] Vi er aktivt ute og søker i markedet.
- [ ] Oppstartsbedriften(e) kommer til oss.
- [ ] Gjennom nettverket vårt, leverandører/kunder/eiere.
- [ ] Gjennom andre private investorer ("Engleinvestorer" eller Venture Capital fond).
- [ ] Familie og venner/bekjente (personlig nettverk).

13. I hvilken fase av oppstartsbedriften investerer selskapet deres normalt i?

Velg ...
I oppstartsfasen
Tidlig stadie
Under ekspansjon
Senere stadie

14. Hvem har ansvaret for gjennomføring og styring av investeringene?

- [ ] Ansatte innenfor den eksisterende strukturen til selskapet vårt.
- [ ] En egen og separat avdeling i selskapet vårt.
- [ ] En selvstendig enhet som eies av selskapet vårt (inkubator, datterselskap e.l.).
- [ ] Vi investerer gjennom et Venture Capital fond.

15. Hvor ofte er dere gjennomsnittlig i kontakt med oppstartsbedriften(e) som dere investerte i?

Velg ...

16. Har dere normalt...

	Ja	Nei
... et styreplass i oppstartsbedriften(e) dere investerer i?	○	○
... en rolle som observatør i styret til oppstartsbedriften(e) dere investerer i?	○	○

17. Hvor lenge planlegger dere å være involverte i oppstartsbedriftene som dere investerer i?

Velg ...
Helst mindre enn 2 år
Opp til 5 år
Opp til 10 år
Så lenge som nødvendig

18. Hva er deres foretrukne eierandel i en oppstartsbedrift?

Velg ...

19. Hvor viktig er følgende faktorer for selskapet når dere investerer i oppstartsbedrifter?

	1 (ikke viktig i det hele tatt)	2 (uviktig)	3 (hverken eller)	4 (viktig)	5 (svært viktig)
Oppstartsbedriften utvikler noe som vi synes er spennende.	○	○	○	○	○
Oppstartsbedriften holder til i samme region/område som oss.	○	○	○	○	○
Oppstartsbedriften er norsk.	○	○	○	○	○
Oppstartsbedriften har en positiv innvirkning på miljø eller samfunn.	○	○	○	○	○
Et Venture Capital fond er med på investeringen sammen med oss.	○	○	○	○	○

20. Hvor viktig er følgende mål for selskapet når dere investerer i oppstartsbedrifter?

	1 (ikke viktig i det hele tatt)	2 (mindre viktig)	3 (svært viktig)
Økonomisk avkastning.	○	○	○
Få tilgang til oppkjøpskandidater.	○	○	○
Å styrke vår gründerånd.	○	○	○
Bedre bruk/benyttelse av eksisterende selskapsmidler.	○	○	○
Lære om banebrytende teknologier.	○	○	○
Utvikle nye ferdigheter/kompetanse.	○	○	○
Gjøre investeringer i disruptive teknologier som potensielt kan kanibalisere vår nåværende teknologi.	○	○	○
Beholde våre ansatte og øke motivasjonen deres.	○	○	○
Fordi det er gøy.	○	○	○

21. Vennligst beskriv hvordan oppstartsbedriftene som dere investerer i relaterer til deres selskaps virksomhet.

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
Oppstartsbedriften er i samme bransje som oss.	○	○	○	○	○
Oppstartsbedriften utvikler teknologi som er nært knyttet til vår teknologi.	○	○	○	○	○
Produktet/tjenesten som oppstartsbedriften utvikler er veldig komplementær med våre produkter og tjenester.	○	○	○	○	○
Kjernekompetansen til oppstartsbedriften er veldig komplementær med vår egen kjernekompetanse.	○	○	○	○	○
Oppstartsbedriften selger sine produkter/tjenester til de samme markedene som oss.	○	○	○	○	○
Oppstartsbedriftens produkter/tjenester fasiliterer bruken av våre egne produkter/tjenester.	○	○	○	○	○

Deres bidrag som investor

Dette er den den siste delen, og her kommer det spørsmål om hvordan dere har bidratt til oppstartsselskapene dere har investert i.

22. Innen hvilke områder har dere som investor bidratt med kunnskap, erfaring og nettverk ovenfor oppstartsbedriften?

Benytt tallskalaen nedenfor og gi rangering for det som oppleves som faktisk bidrag.

Produkt- og produksjonskunnskap

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Produkt- og teknologiutvikling	○	○	○	○	○
Produksjon	○	○	○	○	○
Nettverk innen produktuvikling	○	○	○	○	○

Markedskunnskap

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Relasjons- og nettverksbygging	○	○	○	○	○
Kundekunnskap	○	○	○	○	○
Salg	○	○	○	○	○
Logistikk/distribusjon	○	○	○	○	○
Internasjonalisering	○	○	○	○	○

Organisering

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Prosjektledelse	○	○	○	○	○
Strategi	○	○	○	○	○
Profesjonalisering	○	○	○	○	○
Kontrakter	○	○	○	○	○
Strategiske alliansepartnere	○	○	○	○	○
Operativ drift	○	○	○	○	○
Rekruttering	○	○	○	○	○

Økonomistyring og finansiering

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Likviditetsstyring	○	○	○	○	○
Budsjettering	○	○	○	○	○
Videre finansiering	○	○	○	○	○
Verdifastsettelse	○	○	○	○	○
Salg av oppstartsbedriften (exit)	○	○	○	○	○

23. Innen hvilke områder har dere som investor bidratt gjennom følgende roller?

Benytt tallskalaen nedenfor og gi rangering for det som oppleves som faktisk bidrag

Strategiske roller

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Kritikerpanel	○	○	○	○	○
Bedriftsrådgiver	○	○	○	○	○

Mellommenneskelige roller

	1 (svært lite)	2 (lite)	3 (middels)	4 (mye)	5 (svært mye)
Mentor/veileder	○	○	○	○	○
Venn/fortrolig	○	○	○	○	○

24. Vennligst velg og ranger de tre viktigste rollene og områdene hvor dere har bidratt mest inn mot oppstartsbedriftene som dere har investert i.

Den viktigste rollen

Velg ...

Den nest viktigste rollen

Velg ...

Den tredje viktigste rollen

Velg ...

Forretningsmodeller og strategi
Finne og tiltrekke kunder, leverandører og strategiske partnere.
Gå inn i utenlandske markeder.
Rekruttere nøkkelpersoner.
Utvikle teknologien og produktet deres.
Utvikle organisasjonen, interne systemer og prosesser.
Sikre videre finansiering fra andre eksterne kilder.
Få publisitet og annerkjennelse i markedet.

25. Oppstartsbedriften har aktivt benyttet navnet til deres bedrift som investor for å øke kredibiliteten sin når de skal...

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
... hente finansiering fra andre investorer.	○	○	○	○	○
... rekruttere nye ansatte.	○	○	○	○	○
... forsøke å tiltrekke seg nye partnere/leverandører.	○	○	○	○	○
... forsøke å tiltrekke seg nye kunder i Norge.	○	○	○	○	○
... forsøke å triltrekke seg nye kunder i utlandet.	○	○	○	○	○

26. Har dere bidratt med å gi oppstartsselskapene deres noen av følgende fordeler? Vi som investor har gitt dem stor verdi ved å...

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
... bli en av oppstartsselskapene viktigste kunder.	○	○	○	○	○
... gi dem tilgang til våre kunder.	○	○	○	○	○
... gi dem tilgang til våre produksjonsfasiliteter.	○	○	○	○	○
... gi dem tilgang til vår FoU og teknologi.	○	○	○	○	○
... gi dem rabbattert pris på våres produkter/tjenester.	○	○	○	○	○
... gi dem tilgang til våre kontorlokaler.	○	○	○	○	○

27. Indiker i hvilken grad du er enig i følgende utsagn:

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
Investering i oppstartsbedrifter har hatt en positiv påvirkning på selskapets overordnet utvikling.	○	○	○	○	○
Investering i oppstartsbedrifter er en integrert del av utviklingsstrategien til selskapet.	○	○	○	○	○
Selskapet har klart definerte mål når vi investerer i oppstartsbedrifter.	○	○	○	○	○
Investeringene styres bestemt for å oppnå de satte målene.	○	○	○	○	○
Vi er bedre forberedt på framtiden fordi vi investerer i oppstartsbedrifter.	○	○	○	○	○

28. Hvordan forventer du at investeringsaktivitetene deres rettet mot oppstartsbedrifter vil utvikle seg i løpet av de neste 3 årene?

- ○ Vi har allerede sluttet å gjøre investeringer.
- ○ Vi forventer å stoppe denne aktiviteten og ikke foreta nye investeringer,
- ○ Vi forventer å fortsette å gjøre investeringer, men færre enn tidligere.
- ○ Vi forventer å gjøre et liknende antall investeringer.
- ○ Vi forventer å gjøre flere investeringer.

29. Indiker i hvilken grad du er enig i følgende utsagn. Som følge av koronakrisen vil selskapet de neste tre årene...

	1 (svært uenig)	2 (delvis uenig)	3 (hverken eller)	4 (delvis enig)	5 (svært enig)
... fortsette å investere i oppstartsbedrifter på samme måte som før.	○	○	○	○	○
... fokusere på oppstartsbedrifter i andre industrier/markeder.	○	○	○	○	○
... være økonomisk begrenset til å gjøre flere investeringer i oppstartsbedrifter.	○	○	○	○	○
... ha et økt strategisk fokus på å investere i oppstartsbedrifter.	○	○	○	○	○

30. Takk for at du svarte på undersøkelsen vår! Dersom du ønsker en oppsummering av resultatene, vennligst legg inn din e-postadresse her (Ikke obligatorisk).

Appendix B: Normality assessment

This appendix includes a normality assessment of the data from the survey items (shown in Appendix A) that are relevant for the analyses in the main paper. Skewness and Kurtosis were employed as measures of normality, and as mentioned in the main paper, absolute values of z (standardized values) below 2 are considered sufficiently normally distributed. The items assessed for normality are shown in the table below.

Normality assessment of the data from the items of the study's survey with corresponding Means and Standard Errors (S.E.), as well as Skewness and Kurtosis values, thereunder the Statistic values, Standard Errors and z-values (standardized values)

				Skewness			Kurtosis		
No.	Item	Mean	*S.D.*	Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
1	How many years old is the company?	23.66	23.7	2.5	.25	10.01	6.62	.5	13.37
2	How often are you on average in contact with the venture you invested in?	4.61	1.84	-.47	.25	-1.89	-.68	.49	-1.38
3	How many full-time employees work in your company?	1.97	.88	.95	.25	3.77	.96	.5	1.93
4	Investment in ventures has had a positive contribution on our company's overall development.	3.92	.9	-1.04	.25	-4.16	1.43	.5	2.89
5	Our company searches for new technological ideas by "thinking outside the box".	4.29	.79	-1.25	.25	-5.	2.41	.5	4.87
6	Our company bases its success on its ability to explore new technologies.	3.95	.9	-1.08	.25	-4.3	1.51	.5	3.06
7	Our company continually penetrates deeper into its existing customer base.	3.91	.84	-.17	.25	-.68	-.89	.5	-1.8
8	Our company works on increasing the quality and reducing the costs of its products.	4.25	.79	-1.02	.25	-4.06	.91	.5	1.83
9	Our company actively targets new customer groups.	3.86	.99	-.9	.25	-3.6	.77	.5	1.55

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
10	Our company aggressively targets new market segments.	3.44	1.18	-.55	.25	-2.22	-.44	.5	-.89
11	Our company looks for creative ways to satisfy its customers' needs.	4.25	.86	-1.36	.25	-5.42	2.7	.5	5.45
12	Our company increases the level of automation in its operations.	3.75	1.04	-.73	.25	-2.93	.08	.5	.16
13	Our company is continually working to identify its existing customers' satisfaction.	3.71	.89	-.42	.25	-1.69	-.02	.5	-.04
14	Our company makes new products or services that are innovative for the company.	4.2	1.	-1.36	.25	-5.41	1.44	.5	2.9
15	Our company is continually working to improve the reliability of its products/services.	4.49	.6	-.75	.25	-2.98	-.39	.5	-.79
16	Our company fine-tunes its products/services to keep its existing customers satisfied.	4.45	.6	-.58	.25	-2.34	-.57	.5	-1.14
17	The invested venture operates in the same industry as our company.	3.17	1.37	-.47	.25	-1.89	-1.02	.49	-2.08
18	The invested venture develops technology that is closely related to our technology.	3.56	1.24	-.7	.25	-2.82	-.44	.49	-.89
19	The invested venture's product/service is highly complementary to our products/services.	3.6	1.39	-.8	.25	-3.2	-.63	.49	-1.27
20	The invested venture's core competencies are highly complementary to our core competencies.	3.66	1.15	-.77	.25	-3.09	-.29	.49	-.58
21	The invested venture sells their products/services to the same markets as us.	2.71	1.31	.17	.25	.68	-1.05	.49	-2.14

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
22	The invested venture's products/services facilitate the use of our own products/services.	3.49	1.28	-.58	.25	-2.32	-.67	.49	-1.37
23	How important is it that the venture operates in the same region/area as your company? (item for importance of geographical proximity)	2.76	1.25	.15	.25	.61	-.94	.5	-1.89
24	How important is it the goal of financial returns when investing in entrepreneurial ventures?	2.62	.51	-.77	.25	-3.08	-.83	.5	-1.66
25	How important is the goal of obtaining access to acquisition candidates?	1.68	.65	.42	.25	1.68	-.68	.5	-1.36
26	How important is the goal of strengthening the entrepreneurial spirit?	2.37	.67	-.61	.25	-2.44	-.67	.49	-1.37
27	How important is the goal of better usage of existing company assets?	2.26	.65	-.32	.25	-1.28	-.71	.49	-1.45
28	How important is the goal of learning about groundbreaking technologies?	2.39	.69	-.69	.25	-2.76	-.67	.5	-1.34
29	How important is the goal of developing new skills/competence?	2.62	.59	-1.28	.25	-5.12	.66	.49	1.35
30	How important is the goal of investing in disruptive technologies that can cannibalize existing technologies?	1.97	.76	.06	.25	.24	-1.26	.5	-2.52
31	How important is the goal of retaining employees and increasing their motivation?	2.46	.71	-.94	.25	-3.76	-.44	.49	-.9
32	How important is it the goal of having fun when investing in entrepreneurial ventures?	2.45	.7	-.88	.25	-3.52	-.46	.49	-.94

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
33	Our company has contributed with knowledge, experience and network within product and technology development.	4.21	1.04	-1.38	.25	-5.48	1.42	.5	2.85
34	Our company has contributed with knowledge, experience and network within production.	3.3	1.35	-.35	.25	-1.41	-.97	.5	-1.95
35	Our company has contributed with our network within product development.	3.57	1.28	-.7	.25	-2.8	-.41	.5	-.83
36	Our company has contributed with knowledge, experience and network within building relations and network.	3.71	1.17	-.83	.25	-3.29	-.12	.5	-.23
37	Our company has contributed with knowledge, experience and network within customer knowledge.	3.51	1.2	-.42	.25	-1.66	-.84	.5	-1.69
38	Our company has contributed with knowledge, experience and network within sales.	3.37	1.15	-.28	.25	-1.1	-.63	.5	-1.26
39	Our company has contributed with knowledge, experience and network within logistics/distribution.	2.69	1.17	.22	.25	.88	-.55	.5	-1.11
40	Our company has contributed with knowledge, experience and network within internationalization.	2.67	1.28	.24	.25	.96	-.97	.5	-1.97
41	Our company has contributed with knowledge, experience and network within project management.	3.51	1.12	-.41	.25	-1.62	-.47	.5	-.94
42	Our company has contributed with knowledge, experience and network within strategy.	4.03	1.08	-1.24	.25	-4.94	1.06	.5	2.14

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
43	Our company has contributed with knowledge, experience and network within professionalizing the invested venture.	3.83	1.11	-.94	.25	-3.76	.41	.5	.82
44	Our company has contributed with knowledge, experience and network within contracts.	3.09	1.32	-.22	.25	-.88	-1.06	.5	-2.13
45	Our company has contributed with knowledge, experience and network within strategic partnerships.	3.39	1.18	-.52	.25	-2.06	-.45	.5	-.91
46	Our company has contributed with knowledge, experience and network within day-to-day operations.	3.28	1.21	-.18	.25	-.73	-.94	.5	-1.91
47	Our company has contributed with knowledge, experience and network within recruitment.	2.82	1.26	.12	.25	.48	-.98	.5	-1.98
48	Our company has contributed with knowledge, experience and network within liquidity management.	2.99	1.41	-.08	.25	-.3	-1.3	.5	-2.63
49	Our company has contributed with knowledge, experience and network within budget management.	2.98	1.37	-.09	.25	-.36	-1.22	.5	-2.47
50	Our company has contributed with knowledge, experience and network within further financing.	3.4	1.3	-.48	.25	-1.9	-.82	.5	-1.66
51	Our company has contributed with knowledge, experience and network within valuation.	2.75	1.34	.13	.25	.54	-1.22	.5	-2.47

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
52	Our company has contributed with knowledge, experience and network within selling the venture/exit.	2.31	1.39	.66	.25	2.64	-.86	.5	-1.73
53	Our company has contributed through the role of sparring partner.	3.13	1.23	-.11	.25	-.43	-.81	.5	-1.63
54	Our company has contributed through the role of business mentoring.	3.46	1.1	-.39	.25	-1.55	-.25	.5	-.5
55	Our company has contributed through the role of cmentor/advisor.	3.49	1.16	-.46	.25	-1.84	-.53	.5	-1.06
56	Our company has contributed through the role of friend/confidant.	3.18	1.12	-.23	.25	-.92	-.58	.5	-1.17
57	The invested venture has actively used our company brand to increase their credibility when securing further finance.	3.54	1.23	-.66	.25	-2.65	-.3	.5	-.61
58	The invested venture has actively used our company brand to increase their credibility when recruiting new employees.	3.27	1.08	-.51	.25	-2.02	-.01	.5	-.02
59	The invested venture has actively used our company brand to increase their credibility when attracting partners/suppliers.	3.71	.98	-1.06	.25	-4.24	1.27	.5	2.56
60	The invested venture has actively used our company brand to increase their credibility when attracting Norwegian customers.	3.49	1.09	-.63	.25	-2.52	.09	.5	.17
61	The invested venture has actively used our company brand to increase their credibility when attracting customers outside of Norway.	2.69	1.2	.09	.25	.34	-.76	.5	-1.53

No.	Item	Mean	*S.D.*	Skewness			Kurtosis		
				Stat.	*S.D.*	*z*	Stat.	*S.D.*	*z*
62	Our company has contributed value to the invested venture by becoming one of their most important customers.	2.62	1.44	.32	.25	1.26	-1.26	.5	-2.53
63	Our company has contributed value to the invested venture by granting them access to our customers.	3.28	1.31	-.42	.25	-1.68	-.85	.5	-1.71
64	Our company has contributed value to the invested venture by granting them access to our production facilities.	3.36	1.39	-.45	.25	-1.77	-.98	.5	-1.97
65	Our company has contributed value to the invested venture by granting them access to our R&D and technology.	3.51	1.35	-.59	.25	-2.35	-.77	.5	-1.54
66	Our company has contributed value to the invested venture by granting them discounts on our products/services.	3.46	1.31	-.58	.25	-2.29	-.67	.5	-1.34
67	Our company has contributed value to the invested venture by granting them access to our offices.	3.3	1.46	-.4	.25	-1.58	-1.17	.5	-2.36

Note. Item 1 is continuous, item 2 is on a 1-7 scale, items 3 through 23 are on 1-5 scales, items 24 through 32 are on 1-3 scales, and the rest are on 1-5 scales.

Appendix C: Reliability assessment

The constructs presented in Section 3.2 in the main paper were tested for reliability using Cronbach's Alpha and the item loadings for the items, the results of this test are shown in the table below. When item loadings were below 0.3 the analysis was done once more for that construct, by removing the affected items. The results of the second reliability analysis is shown in parentheses for the two constructs this applies for, "Exploitative outlook" and "CVC-specific value-added services".

Reliability assessment of constructs with corresponding item loadings and Cronbach's Alpha

Construct (survey question number)	Item loading	Cronbach's alpha
Explorative outlook (9)		.80
Our company searches for new technological ideas by "thinking outside the box".	.65	
Our company bases its success on its ability to explore new technologies.	.67	
Our company makes new products or services that are innovative for the company.	.65	
Our company looks for creative ways to satisfy its customers' needs.	.60	
Our company actively targets new customer groups.	.56	
Our company aggressively targets new market segments.	.67	
Exploitative outlook (9)		.56 (.64)
Our company increases the level of automation in its operations.	<.30	
Our company is continually working to identify its existing customers' satisfaction.	.48 (.47)	
Our company is continually working to improve the reliability of its products/services.	.65 (.69)	
Our company fine-tunes its products/services to keep its existing customers satisfied.	.66 (.64)	
Our company continually penetrates deeper into its existing customer base.	.49 (.48)	
Our company works on increasing the quality and reducing the costs of its products.	<.30	

Construct (survey question number)	Item loading	Cronbach's alpha
Explorative motivation (20)		.63
Learning about groundbreaking technologies	—	
Investing in disruptive technologies that can cannibalize existing technologies	—	
Exploitative motivation (20)		.34
Retaining our employees and increasing their motivation	—	
Better usage of existing company assets	—	
Strategic fit (21)		.82
The invested venture operates in the same industry as our company.	.87	
The invested venture develops technology that is closely related to our technology.	.51	
The invested venture's product/service is highly complementary to our products/services	.83	
The invested venture's core competencies are highly complementary to our core competencies.	.59	
The invested venture sells their products/services to the same markets as us.	.73	
The invested venture's products/services facilitate the use of our own products/services.	.43	
Technology development (22)		.63
Our company has contributed with knowledge, experience and network within product and technology development.	.72	
Our company has contributed with knowledge, experience and network within production.	.53	
Our company has contributed with our network within product development.	.59	

Construct (survey question number)	Item loading	Cronbach's alpha
Market knowledge (22)		.85
Our company has contributed with knowledge, experience and network within building relations and network.	.86	
Our company has contributed with knowledge, experience and network within customer knowledge.	.90	
Our company has contributed with knowledge, experience and network within sales.	.85	
Our company has contributed with knowledge, experience and network within logistics/distribution.	.54	
Our company has contributed with knowledge, experience and network within internationalization.	.52	
Strategy (22)		.88
Our company has contributed with knowledge, experience and network within project management.	.69	
Our company has contributed with knowledge, experience and network within strategy.	.85	
Our company has contributed with knowledge, experience and network within professionalizing the invested venture.	.92	
Our company has contributed with knowledge, experience and network within contracts.	.72	
Our company has contributed with knowledge, experience and network within strategic partnerships.	.59	
Our company has contributed with knowledge, experience and network within day-to-day operations.	.59	
Our company has contributed with knowledge, experience and network within recruitment.	.64	

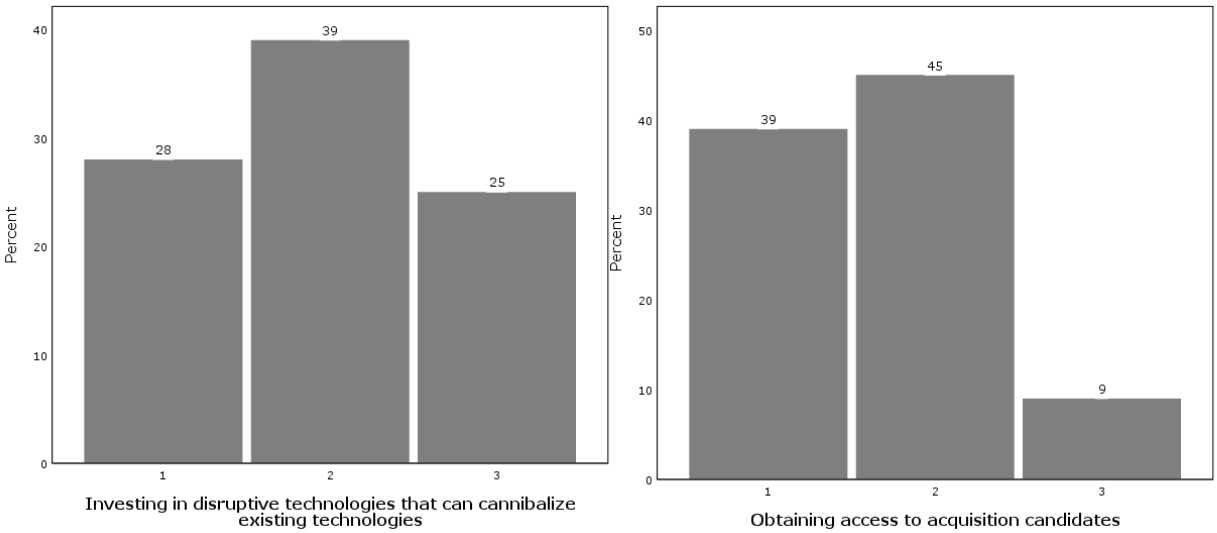
Construct (survey question number)	Item loading	Cronbach's alpha
Financial management and financing (22)		.90
Our company has contributed with knowledge, experience and network within liquidity management.	.85	
Our company has contributed with knowledge, experience and network within budget management.	.88	
Our company has contributed with knowledge, experience and network within further financing.	.86	
Our company has contributed with knowledge, experience and network within valuation.	.86	
Our company has contributed with knowledge, experience and network within selling the venture/exit.	.55	
Strategic roles (23)		.60
Our company has contributed through the role of sparring partner.	—	
Our company has contributed through the role of business mentoring.	—	
Interpersonal roles (23)		.78
Our company has contributed through the role of counselling and mentoring.	—	
Our company has contributed through the role of trusted friend.	—	
CVC-specific value-added services (25)		.45 (.71)
Our company has contributed value to the invested venture by becoming one of their most important customers.	<.30	
Our company has contributed value to the invested venture by granting them access to our customers.	<.30	
Our company has contributed value to the invested venture by granting them access to our production facilities.	.83 (.85)	
Our company has contributed value to the invested venture by granting them access to our R&D and technology.	.64 (.62)	
Our company has contributed value to the invested venture by granting them discounts on our products/services.	.56 (.54)	

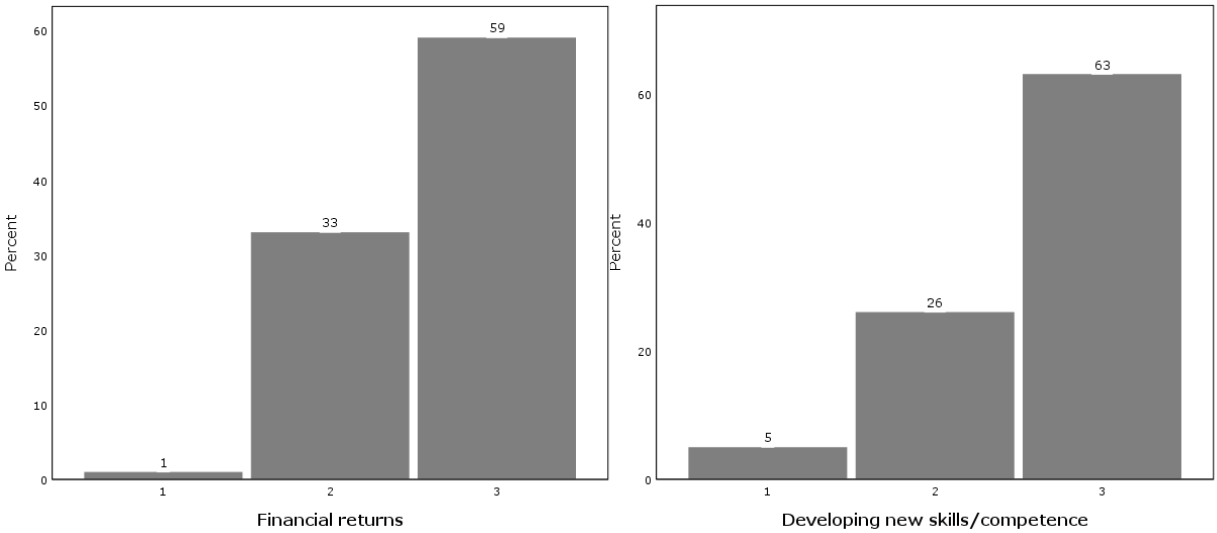
Construct (survey question number)	Item loading	Cronbach's alpha
Legitimacy (26)		.83
The invested venture has actively used our company brand to increase their credibility when securing further finance.	.62	
The invested venture has actively used our company brand to increase their credibility when recruiting new employees.	.78	
The invested venture has actively used our company brand to increase their credibility when attracting partners/suppliers.	.92	
The invested venture has actively used our company brand to increase their credibility when attracting Norwegian customers.	.71	
The invested venture has actively used our company brand to increase their credibility when attracting customers outside of Norway.	.53	

Note. Values in parentheses mean the reliability analysis was performed again without the items with factor loadings <.30.

Appendix D: Histograms of selected SME CVCs motivations

Inspecting the histograms below, (1) *investing in disruptive technologies that can cannibalize existing technologies* seems somewhat normally distributed, (2) *obtaining access to acquisition candidates* is leaned towards low means, and (3) *financial returns* as well as (4) *developing new skills/competence* are heavily leaned towards high means. This is expected to confer with the normality assessment, which it indeed does (the items are (1) relatively normally distributed, (2) positively skewed and (3 and 4) negatively skewed).





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