

## Professional MBA Entrepreneurship & Innovation



# GLOBAL CORPORATE VENTURE CAPITAL

A Master's Thesis submitted for the degree of  
"Master of Business Administration"

supervised by

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# Affidavit

I, Martina Pichler , hereby declare

1. that I am the sole author of the present Master's Thesis, "Global Corporate Venture Capital", 70 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
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# Abstract

Capturing innovation is not only a competitive advantage, but also a necessity for corporations around the world. In the past, innovative endeavors were pursued by research and development (R&D) departments. However, the gleaming days of R&D of being the innovation center of a company are fading. Nowadays innovation takes place all over the world and usually can be found within privately held startups.

For incumbents to spot innovation outside their corporation's fence, corporate venture capital (CVC) is gaining importance as an effective investment method. Formerly, corporations that used CVC as a vehicle to innovation were exclusively based in the United States. However, every year the number of European and Asian companies investing into young entrepreneurs in different countries in the world is raising rapidly.

This raises the question of how corporations, that are from culturally distinct countries, conduct corporate venture capital programs, what are the significant alterations in corporate venture capital and what are the similarities in terms of unit organization and investment activity. Through a survey of 34 corporate venture units from Asia, Europe and North America, those questions will be answered.

This thesis contributes to the discourse on corporate venture capital by providing a better understanding how this investment method is used in different countries in the world.

**Keywords:** corporate venture capital, independent venture capital, corporate venturing, external corporate venturing, internal corporate venturing

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## **I. List of Abbreviations**

CEO	Chief Executive Officer
CFO	Chief Finance Officer
CTO	Chief Technology Officer
CSO	Chief Strategy Officer
CGR	Consumer Goods and Retail
CVC	Corporate Venture Capital
EVP	Executive Vice President
HQ	Headquarter
IPO	Initial Public Offering
IVC	Independent Venture Capital
IVCs	Independent Venture Capitalists
R&D	Research and Development
USD	Unites States Dollar

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# 1 Introduction

Digital Darwinism affects virtually most of today's corporations regardless of their size, location and industry. This phenomenon describes the difficulty for companies to adapt to changing customer behavior due to the fast-evolving technology and society (Solis, 2014). The challenge for companies to be constantly innovative and to adjust can be reflected, *inter alia*, in their decreasing lifespan. In 1958 US companies in the S&P index had an average life expectancy of 61 years. This number fell in 1980 to 25 years and in 2011 decreased further to 18 years based on 7 year rolling averages (Foster, 2012).

One reason companies struggle with innovation is the way they conduct their business. Foster and Kaplan explain that a firm's management, which bases their leadership on continuity, is unable to keep pace with the market's speed, its standards and fails to create value (Foster & Kaplan, 2001). Another rationale behind the innovation obstacle is that corporations, which put a narrow focus on product improvement, run the risk of creating products that are too expensive and too developed for the actual customer need. This gradual innovation leaves space for disruptive innovation to enter the lower tier of the market (Christensen, n.d.).

The innovation paradox can be a further hindrance for companies to stay in the market. This phenomenon occurs because companies' processes and structures, which help them to excel successfully and long lastingly in their daily operation, omit the development of breakthrough innovation (Davila & Epstein, 2014). A generation ago Drucker reasoned that employees are too much engaged in the current business and thus cannot work on new future products (Drucker, 1974). Garvin and Levesque recapped it in the following way: it is indispensable for companies to act more and more Janus-like, which means one focus should remain on the current and the other on the new developing business (Garvin & Levesque, 2006).

Incumbents can avoid those pitfalls by pursuing innovation in a dedicated unit, which is separated from the daily routine (Christensen & Raynor & Mc Donald, 2015). In the past, the R&D department was solely responsible for keeping the innovation wheel spinning. Nowadays the company can access innovation through diverse ways for example through equity investment in form of corporate venture capital (Chesbrough, 2003). The possibility for a company to dedicate a special fund, managed by their own corporate venture capital unit, is a valuable option to complement

R&D. A corporate venture branch acts more agile and to some extent at lower costs than a typical R&D department (Lerner, 2013).

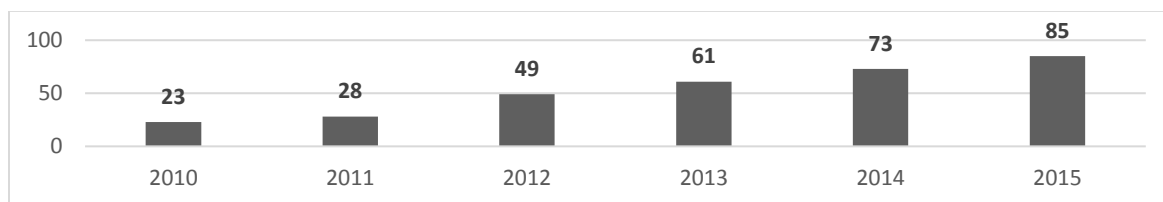
Corporations invest increasingly into external R&D by means of corporate venture capital (CVC), seeking to reignite internal innovation, derived from outside of the corporations 'fences. This investment method is a crucial weapon for corporations regarding innovation. In 2009, around 20 % of the Fortune 500 companies have established a CVC program (Dushnitsky, 2011).

According to a report from Boston Consulting Group more than half of the 30 biggest companies in the technological, pharmaceutical and telecommunication industries have CVC units deployed. Many managers view this form of external investment as a necessary tool to enter innovation (Bielesch & Brigl & Khanna & Roos & Schmieg, 2012). By 2016, around 1,500 corporate venture capital units existed worldwide. From 2011 to 2015, the number of active CVC units rose from 448 programs per year to 801. That constitutes an increase of 79 percent in 4 years. Even though innovation is prevalent all over the globe, most CVC activities take place in the Anglo-American market.

In 2015, North America registered the highest number of CVC deals, followed by Asia and Europe. In 2011 698 deals have been taken place globally, which rose to 1,790 deals in 2015. (Lewis & Carlson & York & Clark, 2016).

Figure 1 depicts the increase in new established global corporate venture units. In 2011, 23 new CVC divisions from around the world conducted their first corporate investment deal. Five years later, in 2015 the number of recently established programs almost quadrupled to 85, which constitutes a significant rise of 96.3 %.

***Figure 1 Number of new global corporate venture capital units by year of their first investment 2010-2015***



**Source:** CB Insights (2016)

## **1.1 Statement of the Problem**

While corporate venture capital received notable attention in the last two decades, not many studies examined the state of corporate venture capital around the globe. Most research projects were based on either quantitative analysis of deals or case studies (Battistini & Hacklin & Baschera, 2013).

Furthermore, to date most of the important literature focuses on the Anglo-American market (Weber & Weber, 2005; Ivanov & Xie, 2010). Ivanov and Xie (2010) noted in their research outlook section that the literature still lacks examinations of CVC units around the world. They suggested it would be interesting to study programs in other countries, outside the USA and UK, to see whether there were differences in corporate venture capital around the world.

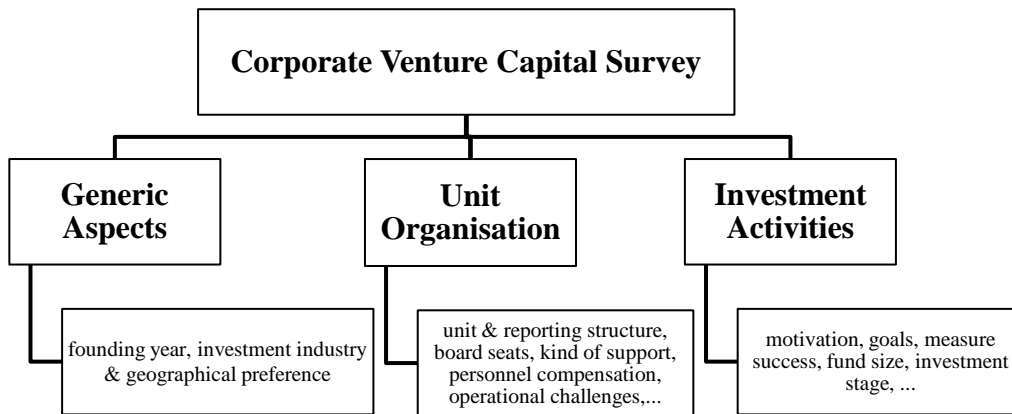
## **1.2 Purpose of the Study and Research Questions**

Research, to date, has examined corporations in, almost exclusively, the North American market while leaving how CVC is done in other parts of the globe unexamined. This gap of knowledge prompted the following questions:

1. How do corporations from different cultural backgrounds conduct corporate venture capital programs?
2. What are the differences in corporate venture capital operations across the world?
3. What are similarities across continents of global corporate venture capital in terms of unit organization and investment activity?

Our work seeks to shed the light on the specific aspects of corporate venture capital in different countries such as generic aspects of a CVC unit, unit organization and financial activities (Figure 2).

*Figure 2 Survey structure with the three main sections*



To answer our questions the following was asked in the online survey:

- Reasons for preferred geographical investment areas and in what industries will the investments be.
- Main organizational structures of the selected CVC programs.
- Source of hire and compensation of corporate venturing program employees.
- Reporting structure and frequency of communication to various stakeholders.
- Autonomy of CVC divisions.
- Support areas for portfolio companies.
- Reasons in investing into corporate venture capital and the pursued goals.
- Preferred investment strategy and average investment amount in USD.
- Average of the investment phase and source of portfolio company.
- Stage phase of investment and measurement of investment success.
- Investment criteria when screening a portfolio company.
- Average ownership in the portfolio company, preferred deal terms of CVC unit and exit strategy.
- Knowledge transfer from incumbent company to CVC division.
- Knowledge transfer from portfolio company to parent company.
- Operational challenges the CVC unit is facing.

### **1.3 Structure of Thesis**

Explorative/quantitative methods are used in our work in order to answer the proposed questions. Special attention will be given to the location of CVC units' incumbents. Data was collected from CVC units via an online survey.

*Chapter 1* outlines the challenges of innovation for corporations. The importance of corporate venture capital is briefly presented. Furthermore, the chapter describes the existing knowledge gap in the literature, the problem statements and the research question.

*Chapter 2* defines corporate venturing and outlines an overview of its different forms. The later sections of the chapter are concerned with the rationale and objectives of such corporate investments and explore the organizational set up of CVC units.

*Chapter 3* discusses the empirical part of the study. This section introduces the research design, explains the data collection process and presents the study samples. Furthermore, our findings will be analyzed thoroughly. First, data from all continents will be presented. Second, the findings of the survey will be broken down per continent. Finally, a summary of the most striking findings will be presented and put into the context of the aforementioned research questions.

In chapter 4, we conclude by discussing the contributions and limitations of our work. In addition, we present our suggestions for future research.

## **2 Theoretical Background**

This chapter aims at presenting the theoretical basis of this thesis. Therefore, the key terms and concepts are explained to categorize the subjects of corporate venturing and corporate venture capital. This chapter discusses corporate venturing and its various forms.

### **2.1 Corporate Venturing**

This section contains the following: First, a description of the entrepreneurial context. Second, a definition of corporate venturing. Third, a discussion of why companies still face challenges with innovation. Fourth, a description of what is considered to be crucial for new businesses to thrive within established corporations. Finally, the various benefits of corporate venturing if the latter is properly set up within the mother corporation boundaries.

In the common literature, corporate venturing is known under different names such as corporate entrepreneurship or corporate intrapreneurship. To avoid confusion, the term corporate venturing will be used throughout this thesis.

Before corporate venturing became recognized as a state of the art model to capture innovation in organizations, creative employees were forced to leave the company to pursue their novel ideas outside of the corporation. (Hisrich & Peters, 1986). Because of losing valuable workforce, companies are challenged to provide talented employees the opportunity to work on their innovative ideas within the organization (Hisrich & Kralik, 2016).

However, some companies still struggle to foster entrepreneurial behavior because of the strong focus on daily operational tasks. Those operational structures can be a hindrance to innovative input. Therefore, the organizational setup needs to not only incentivize innovation, but also separate new corporate venturing from ongoing business activities (Drucker, 1985). If firms decide to pursue venturing activities, they should set up a structure distinct from the organization under which they currently operate (Roberts, 1980; Drucker, 1985). Having a separated structure within the company allows effective execution of both day-to-day operations and innovative ventures (Garvin & Levesque, 2006).

The need for corporate venturing arises when firms are pursuing customer needs that they have not yet met. Thus, corporate venturing can be defined as the process in which employees design and implement products and services that are different from the current offerings of the company.

A company's transformation from old to new business replicates entrepreneurial behavior. Corporate venturing is a method to achieve strategic renewal. Strategic renewal connotes that corporations focus both inwardly on established processes and on outward new resources. This results in necessary changes in strategies/structures to compete in the market and create new wealth (Guth & Ginsberg, 1990). Corporate venturing brings along additional advantages to firms such as new corporate culture, stable headcounts, autonomy culture, and an organizational learning environment. A culture of autonomy increases productivity since employees feel more satisfied as they take ownership of their work. High employee fluctuation is very costly since recruiting and training new personnel is an additional investment. In contrast, a motivated and satisfied workforce leads to lower employee fluctuation. In addition, corporate venturing fosters novel business ideas and thus creativity. The more innovation becomes the norm in the company, the more employees are inspired to try out different ideas besides daily operation. All of this have positive impacts on corporate revenues and profits. (Hisrich & Kralik, 2016).

## **2.2 Different Forms of Corporate Venturing**

This section is an overview of the various forms of corporate venturing. First, we include an explanation of the differences between internal and external venturing. Second, we describe the sub-categories of the latter. Finally, we compare CVC to other forms of external venturing.

CVC literature distinguishes between external and internal venturing. With both forms, the company either enters a new market or commercializes a different product in their existing market. Compared to external venturing, internal corporate venture activities seem to be the more straightforward. Internal venturing is when employees work on an idea generated internally and receive funding from the firm to commercialize the resulting products (Miles & Covin, 2002). In addition, researchers broadly concur that internal corporate venturing creates opportunities inside the company, whereas external activities look for ideas outside the parent company's fence (Rind, 1981; Sykes, 1986; Birkinshaw & Hill, 2002; Weiblen & Chesbrough, 2015).

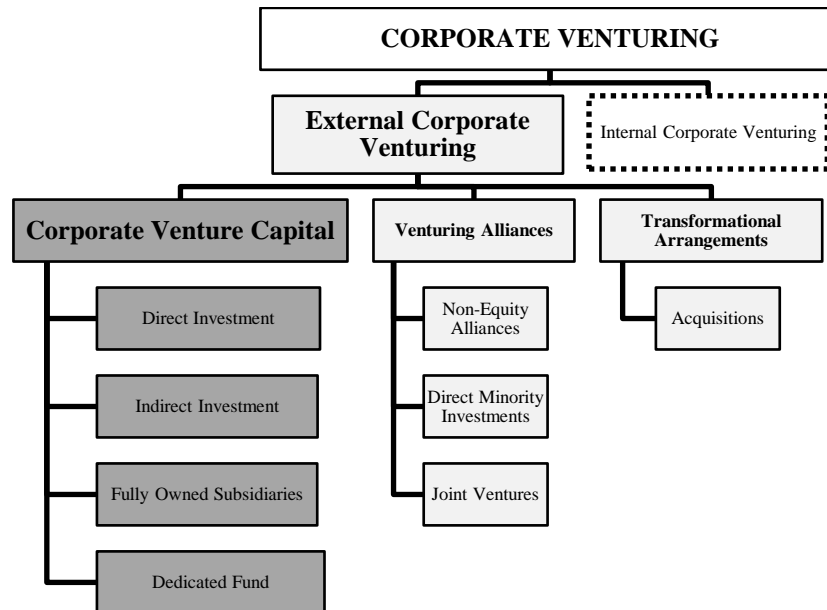
External and internal venturing methods use different target groups for their activities. For example, corporate venture capital as a sub form of external venturing, funds entrepreneurial teams that have no relationship with the corporation. On the other hand, in internal venturing, companies make use of their own talented employees. Thus, funding for internal venturing comes from within

and stays within the corporation. CVC funds are also sourced from within but flow into independent and private companies (Dushnitsky & Shaver, 2016).

The extent to which the executive management is involved in internal or external venturing differs broadly. When companies invest equity into independent firms, the latter requires low corporate involvement in terms of management and allocation of resources (Dushnitsky & Shaver, 2016). Furthermore, the corporate venture capital investment is often managed by an autonomous CVC program, and can be co-invested with traditional venture capitalists (Birkinshaw et al., 2002). On the other hand, with internal venturing, the company establishes a separate unit within its borders for designing new products and accessing new markets. Thus, internal venturing requires a prominent level of corporate commitment (Roberts, 1980).

Figure 2 depicts an overview of corporate venturing activities with the main categories of internal and external corporate venturing. Corporations can leverage different kind of governance modes. Those governance modes are corporate venture capital, venturing alliances and transformational arrangements (Gbadji & Gailly, 2008). Corporate venture capital can be set up in different organizational structures such as direct investment, indirect investment, fully owned subsidiaries and dedicated fund. Those four structures are explored in the chapter 2.3.4.1 “Organizational Structure”.

**Figure 3 Different forms of corporate venturing**



*Source: adopted from Keil, 2002; Schildt & Maula & Keil, 2005; Dushnitsky, 2008*

Alliances are arrangements of two independent parties to share resources and agree to co-develop (Dushnitsky, 2011) based on contracts. Direct minority investments are often conducted by a business unit in the company and for joint ventures a legal entity is created by two companies to develop new business (Schildt & Maula & Keil, 2005). Acquisition emerges when one company buys another firm (Dushnitsky, 2011).

In the past, corporations used traditional R&D, alliances, joint ventures or acquisitions to enhance their internal innovation. Due to the increasing need for innovative growth, companies found with corporate venture capital one way to meet those demands (Dushnitsky, 2011).

Corporate venture capital (CVC) is defined as the equity investment by an established incumbent into an independent startup company (Dushnitsky & Lennox, 2005a; Gompers & Lerner, 1998). As Dushnitsky (Dushnitsky, 2011) puts it, CVC happens when incumbents become sort of venture capitalists.

Therefore, CVC is clearly distinct from other forms of external corporate venturing such as venturing alliances and transformational arrangements (Dushnitsky & Shaver, 2016). On the one hand, corporate venture capital uses a dedicated division or invests through independent venture capitalists (Schildt et. al., 2005). On the other hand, CVC includes neither non-equity based nor equity-

based interorganizational relationships such as joint ventures (Dushnitsky & Shaver, 2016). Equity or non-equity investments are established between a business unit and an entrepreneurial firm and aim to transfer technologies in the early stages of commercialization. After an acquisition, the incumbent fully controls the employees and the assets, which is not the case in CVC investments. The goal of CVC is to set up relationships with portfolio companies and aim to observe their technologies and business models (Keil et. al., 2004).

In the following parts of the thesis, we focus on corporate venture capital as one method of external corporate venturing. The next chapter fully concentrates on when companies started to apply corporate venture capital, what waves of ups and downs in terms of investments occurred and what is the current status quo of CVC investments. The chapter ends with the definition of independent venture capital (IVC) and its distinction to CVC.

## **2.3 Corporate Venture Capital**

Corporate Venture Capital first appeared in the mid-1960s (Fast, 1978) for two reasons. On one hand the diversification trend among corporations (Gompers & Lerner, 1998) and on the other hand, the thriving funds of venture capitalists got corporations investing into external environments (Rind, 1981). During those early days, established corporations invested in both forms of corporate venturing, external and internal (Dushnitsky, 2011).

Since its appearance, CVC experienced serious phases of success and considerable downturns, which took place in three waves between the years 1965 to 1974, 1979 to 1987, and 1994 to 2002 (Gompers, 2002). The first successful wave for CVC investment ended due to the collapse of the market for initial public offering in 1973 (Dushnitsky, 2011). Changes in legislation and growth in technology driven opportunities led CVC investments to rise again. However, the market experienced another crash in 1987. Due to new businesses in internet related areas, corporate venture capital activities peaked again, which did not last very long. In early 2002, corporate investments underwent a considerable drop due to the dotcom burst. After the last considerable bust of CVC, corporate investment shares rose through the years (Birkinshaw et al., 2002; Dushnitsky, 2008). In 2009, almost 20 percent of the Fortune 500 companies have set up a corporate venture capital division (Dushnitsky, 2011).

From 1980 to 2007 CVC had an average share of 6 percent of the total venture capital investment (Ivanov & Xie, 2010).

A swelling number of companies understood that CVC is a key driver of their innovation strategy. They installed policies within their corporation to solve past problems like staff defection due to better compensation opportunities in the venture capital industry (Dushnitsky, 2011).

Corporate venture capital is the second largest investor into startups after independent venture capital (Dushnitsky, 2008). A venture capital is defined as the purchase of shares of young companies, which are not listed yet in the stock market by an independent acting third party (Cressy, 2008). Corporate ventures differentiate themselves from venture capitals by the objectives, compensation schemes, the degree of independence in investment decisions, the life span and the investment horizon.

Corporate venture capital units and independent venture capitalist have a lot in common. However, they slightly differ regarding financial motives. Independent venture capitalists try to capitalize as much as possible on their funds since their compensation is a certain percentage of the capital gains (Rind, 1981). The primary objective of an independent venture capital company is capital profit (Cressy, 2008). An additional feature of a CVC unit besides the financial benefit is the strategic gain which the unit provides to the incumbent by investing into startups (Dushnitsky, 2008; Wadhwa & Kotha, 2006; Ivanov & Xie, 2010). A closer examination of the financial and strategic motivation of CVC is described in the chapter 2.3.2. “Investment Objectives”.

Compensation of corporate venture capital employees is significantly lower compared to independent venture capitalists (Gompers & Lerner, 2001). CVC unit managers receive usually a flat-rate corporate salary. This is still the widespread practice (Dushnitsky, 2011). Independent venture capitalists, however, receive one to two percent fixed fees and twenty percent of profits from the funds. Corporate venture division managers’ fees are included in the company fee plan (McCahey et. al., 2012). In chapter 2.3.4.3 “Compensation of CVC Personnel” the compensation of corporate venture capital manager is more closely discussed.

The structure of the corporate venture division and its freedom in investment have certain implications. The CVC division is usually organized as a wholly owned subsidiary of the parent corporation (Gompers & Lerner, 2001). Thus, the freedom of a corporate venture capital unit is usually limited by the parent company (Ivanov & Xie, 2010) and are dependent in most cases on the parent's sponsorship and in turn results into a less diverse fund (Mccahery et. al., 2012).

In addition, the unit lifespan distinguishes a corporate investor from an independent venture capitalist. In the past, the average duration of a CVC was 2.5 years, which is three times shorter than the average lifespan of investments by independent venture capitals. Nowadays however, the CVC average lifespan has increased and is currently on average 3.8 years. It is interesting to note that many established corporations are already in their second decade of corporate venture investment (Dushnitsky, 2011). A survey of Ernest and Young (2008) examined 37 corporate venture units; they found that 83 percent have been established for 5 years, and half of their respondents more than 10 years.

Corporate venture divisions invest in young entrepreneurial companies in a longer time horizon than independent venture capitalists do. Corporate venture capital units are usually faced with a less rigid amount of capital supply, which leaves CVC managers more space to experiment and explore startups. Long term investments into innovation are needed, especially for investments that might not generate instantaneous financial results. Contrary to this, an IVC expects to have financial results soon after their first investments (Chemmanur & Loutskina & Tian, 2014).

It is noteworthy that corporate venture capital investors and independent venture capitalists provide different complementary assets to young ventures. IVCs assist entrepreneurs to transform their novel ideas into growing and profitable companies. They have the necessary experience in developing strategies and arranging additional financing for young entrepreneurs (Maula et al., 2005). In contrast, established corporations enhance the commercial and public credibility of young firms due to their reputation on the market. Furthermore, corporations can provide those firms access to their already existing partners, customers and suppliers (Maula & Murray, 2001).

After the brief introduction of the history of corporate venture capital investments and a description of what distinguishes a corporate venture capitalist from an independent venture capitalist, the next chapter covers the motivations and goals behind CVC.

### **2.3.1 Rationale for Corporate Venture Investment Activity**

This section will cover three primary areas of the corporate venture investment: First, motivations and goals Second, investment types and stages. Third: main exit strategies of CVC units. The last topic in this section will provide an overview of the advantages from the view point of startup companies.

Innovative technologies are one of the preconditions for external corporate investment. Considerations for setting up a corporate venture unit can be manifold. McNally (1997) explored corporate venture capital units in the UK. They found that corporations pursue CVC investments when firms need to decrease uncertainty, are challenged with shorter product life cycles, notice growing pressure of global competition and sense opportunities in modern technologies. Furthermore, corporations set up CVC programs to have one foot in emerging and not yet developed markets (Ivanov & Xie, 2010; Napp & Minishall, 2011).

Dushnitsky (2008) observed that in the earlier years, corporate venture capital investments were undertaken by established incumbent companies. Those companies had the advantage of possessing a great amount of free available cashflow and operated in a steady industry. Later, however, those corporate investments have been pursued primarily by incumbents in fast changing industries (Dushnitsky, 2008).

Scholars agree that firms pursue corporate venture capital to follow on initiatives that are difficult to evaluate upfront regarding risks and costs. Additionally, When the incumbent's industry is turbulent in the sense of high competition and internal slack resources, CVC programs are more commonly initiated.

Dushnitsky and Lenox (2005a) examined a dataset of 1171 corporations from 1990 to 1990 and found that the higher the company's cash flow and absorptive ability the more it is inclined to invest in corporate venture capital. Additionally, corporations invest more in industries where intellectual property protection is weak and numerous technological opportunities exist. It is worth

noting that they further found that incumbents look for portfolio companies in sectors resembling their own while still not being exactly in the same sector. It is speculated that this effect is due to one of two reasons. The first is substitution effect, where the incumbent's learning is small due to the affiliated industry of the startup. If both parties have very similar basis for knowledge, their knowledge becomes redundant and therefore no additional learning will take place. The second could be a competition effect, where young entrepreneurs avoid corporate investment for fear of expropriation.

Gaba and Meyer (2008) investigated 264 information technology firms from 1992 to 2001. They reported that firms with slack resources and higher sales revenues tend to adapt corporate venture capital investments. Furthermore, they revealed that the existence of investment prospects in the corporation's geographic proximity amplify the probability of building CVC units.

Other reasons for established incumbents to start corporate venture capital units are the fast-technological change in their industries and weak appropriability in their sectors.

Tong and Li (2011), who used real-options theory, evaluated the industry condition of established companies that led firms to choose corporate venture capital over acquisitions. They found that bigger companies with greater performance, high R&D intensity are more inclined to participate in a CVC investment or acquisition. The decision of whether to choose CVC activity or acquisition is influenced by two factors: the higher the degree of uncertainty in an industry and the greater the irreversibility of the investment, the more likely CVC will be chosen over acquisitions.

Basu et al., (2011) came to comparable results when they examined longitudinal data of 477 companies from 1990 to 2000. They found that corporations are more inclined to engage in corporate venture capital when their industry is dynamic, strongly competitive and with weak appropriability. Furthermore, they found that companies which hold well-built technological/marketing resources and resources attained from different venturing experiences, participate in greater CVC activities.

This chapter covered the reasons why companies pursue external venturing in form of corporate venture capital. The following section discusses what the goals of corporate venture capital for companies are.

### **2.3.2 Investment Objectives**

Scholars have drawn a lot of attention to the motivation and objectives behind CVC programs and examined the strategic and financial benefits to parent companies (Dushnitsky, 2006; Wadhwa & Kotha, 2006).

A corporate venturing investment has usually two dimensions. One dimension is the goal of the CVC program; which is strategic, financial or mixed. The other dimension is how much the incumbent and the portfolio company are linked to each other in terms of operational processes and resources. If the link between the investee and the investor is strong, the investee can use the investor's factory, marketing, distribution and technology.

The goal of strategic investments is to leverage synergies between the corporation and the portfolio company. Contrary to this, with financial objectives attractive profits are expected (Chesbrough, 2002).

Some researchers have focused their studies solely on the financial performance of corporate venture capital programs.

Allen and Hevert (2007) looked at the internal rate of return (IRR) of CVCs and found out that on average their IRR was below their parents cost of capital. Despite their meager financial returns, the authors assume that some CVC units continue due to the strategic gains they provide to the parent company.

Yang et al., (2009) observed how CVC units develop skills in terms of selecting and evaluating investments. They found that there is a positive relation between the capability of selection and the valuation of startups to the financial return of the program.

Researchers concur that incumbents pursue external corporate venturing not solely for financial benefits, but also for strategic reasons (Block & MacMillan, 1993; Chesbrough, 2002). Chesbrough (2002) reasons that pure financial investments could be opposed by the companies' shareholder because they would like to see their wealth invested and diversified in markets rather than seeing the corporate funds returned to them.

In one of the first studies on this topic, Siegel et al., (1988) found that even though companies stated return on investment as their priority, they also stress on strategic goals as crucial

MacNally (1997) also concluded that in his study only 36 percent of his sample that is based in the UK put emphasis on financial benefits, whereas most of the initiatives were strategically oriented. He also examined 23 companies that were planning to undertake CVC investments in the next

upcoming years. More than half of the participants mentioned that their CVC investments would be set up to meet strategic demands, especially for window on innovative technologies and markets.

This is in accord with the results that Weber and Weber (2005) found in their empirical study of corporate venture units in Germany. Forty two percent of their analyzed corporate venture capital units had primarily strategic objectives, twenty one percent had primarily financial objectives, and thirty seven percent had a blend of strategic and financial goals.

Dushnitsky and Lenox (2005a) explored the effect of corporate venture programs on value creation for shareholders measured as a Tobin's Q ratio. Their analysis suggests that CVC is more likely to generate value for the corporation when the program pursues strategic motives.

In a study by Ernest and Young (2008), they surveyed 37 companies across 8 countries. 80 percent of their participants claimed that their CVC activities were a mixture of strategic and financial goals. Only 17 percent focused exclusively on strategic benefits and only 3 percent pursued only financial goals.

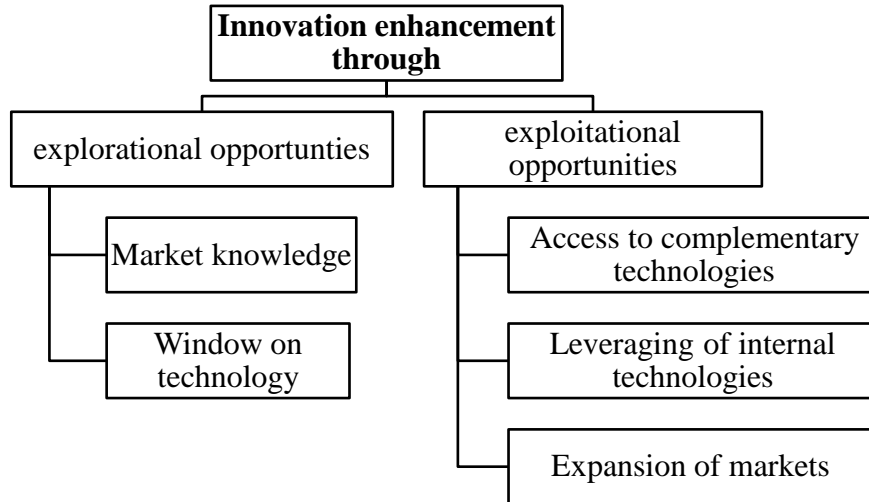
Battistini et al., (2013) found comparable results. Forty-eight percent of their population had a blend of strategic and financial objectives, 29 % had primarily strategic goals and 23 % had mainly financial objectives.

Strategic objectives of a CVC fall either under exploration or exploitation and a CVC unit provides the incumbent either explorational or exploitative benefits (Napp & Minshall, 2011). The enhancement of innovation through exploration and exploitation is depicted in Figure 3.

The explorational opportunities provide novel competencies for the incumbent (March, 1991). In contrast, exploitation-oriented activities build on existing capabilities and technologies, which are then further refined and used for new, but related, products (Covin & Miles, 2007).

Napp, Minshall (2011) explain that explorational gains offer the incumbent a window on emerging markets and technologies, which should secure the parent company long term goals regarding innovation. They further go on to say that the corporation can leverage with the exploitative approach technology areas through complementary technologies from the portfolio company, or leverage existing products in other novel markets.

**Figure 4 Innovation through explorational and exploitative opportunities**



*Source: adopted from Napp & Minshall (2011)*

Some corporations follow a balanced approach between exploration and exploitation. Which approach to choose depends on the degree to which the CVC program complements further innovation activities within the corporation (Napp & Minshall, 2011). CVC activities can be tailored to the needs of the corporation and can include an array of opportunities the CVC program offers. The balance is dependent on the structure of CVC investment portfolios and how the program is designed. For the CVC unit, learning goals, the areas learning should occur in and the balance between explorational and explorative goals should all be clear. (Keil & Zahra & Maula, 2004).

In the past years, some investments in corporate venture capital programs failed considerably because the goal was not clearly defined. Some investments were conducted for financial gains, some were undertaken for their strategic advantages. Such a blend of strategies with goals and success factors that are difficult to control have led the incumbents to close the CVC division. Thus, for an external corporate venturing division a clear direction is crucial for survival (Mccahery et al., 2012).

### **2.3.3 Areas of support through Corporate Venture Capital**

Before a portfolio company accepts corporate support, it weighs the advantages and disadvantages of doing so. This chapter deeply explores the various advantages that a corporation can offer to

young entrepreneurs in form of financials and complementary assets. Furthermore, the success rate of portfolio companies backed by corporations is discussed and the investment of corporate investors and independent venture capitalist presented. The chapter finishes discussing the challenge the corporate venture division faces when backing up a portfolio company, because the division is in-between the interests of the incumbent and young entrepreneurs.

Corporations can offer entrepreneurial firms access to customers, suppliers or alliance partners that would be more cumbersome for young firms without incumbent support to have. Also, an internationally respected corporation can help new ventures attracting new customers in foreign markets. Many corporate divisions belong to incumbents that have a wide global presence and reputation (Maula & Murray, 2001). Portfolio companies can benefit greatly from an incumbent once they receive investments.

They do not only receive financial capital but also get access to their complementary assets (Dushnitsky & Lenox, 2005a). Those benefits can range from reputation, to specific skills and valuable resources. Startups have the possibility to access incumbent's resources in form of researchers, laboratories and sales employees. (Lerner, 2013). Furthermore, access to financial capital, technical and market insight can help the startup be successful (Weiblen & Chesbrough, 2015).

Complementary assets can either be generic or complementary. The difference is that complementary assets are tailored to a specific usage whereas generic assets can be used for alternative purposes (Teece, 1986). Which complementary assets a corporation is providing to the young venture is critical. Companies possessing complementary assets and generating past innovation might offer young ventures valuable knowledge and capabilities (Dushnitsky & Lenox, 2005a).

Park and Steensma (2012) found that, regarding going public and avoiding mistakes, corporate funding was more advantageous for young firms which required specialized complementary assets more than those that needed generic ones. However, in the case of entrepreneurial companies that sought merely generic complementary assets, the incumbent funding had limited benefits on the venture performance. Furthermore, they claimed that corporate investments were beneficial to the venture's performance in an uncertain environment. The entrepreneurial venture is not always able to properly assess what they need for their product development. Thus, the venture is better off using the complementary assets of a corporation rather than sourcing it from arm-length suppliers in the open market. (Park & Steensma, 2012).

Also for initial public offering (IPO) corporate investment in a portfolio company is having a positive correlation. Yang (2012) examined 18 corporate ventures and found that the knowledge outflow from an incumbent into their startup venture increased the probability of the venture's IPO. Gompers and Lerner (1998) compared the success rate of corporate ventures and independent venture capital and came to interesting findings. They presented empirical evidence that CVC investments were better than IVC investments when it came to provide a strategic fit between the corporate parent and the incumbent.

Chemmanur et al., (2014) came to similar findings when they compared CVC and IVC in terms of their differences in nurturing innovation. They found that CVC backed portfolio companies, which are younger and less profitable than IVC backed companies, are more innovative when measured by their patenting result. They could not rule out a selection bias on their population. They argued, however, that the higher innovative output of CVC startups is explained by two factors: First, incumbent corporations are more tolerant towards failures than their IVC peers. Second, corporations do possess a better knowledge due to the technological fit between the incumbent and the startup (Chemmanur et al., 2014).

When accepting a corporate investment, portfolio companies face a trade-off. Complementary assets of the corporation can help the young venture with product development and the commercialization.

Deeds and Hill (1996) examined a sample of 132 biotechnology firms in the United States in 1991. Interestingly, they found that there is a u-shaped relationship between the number of alliances a venture is involved in and the rate of new product development. They argue that strategic alliances provide ventures initially with complementary assets that are necessary for the rise of new product development.

Corporate investments for startups are not without risks. Problems with the performance can arise if the desired complementary assets of the corporation turn out to be poor or fail to meet the promises of the corporate venture. The greatest danger, however, lies in the exploitation of the young venture in the form of acquiring knowledge and in return offering little for the portfolio company. (Deeds & Hill, 1996)

Katila et al., (2008) analyzed 701 technology ventures which received funding between 1979-1995 and found that young firms enter such venture relationships when their need for financial and

manufacturing resources is high and in parallel have defense mechanism in form of trade secrets or timing to protect their innovation. They explain that trade secrets are relatively inexpensive for new ventures and can build a legal barrier around their main resources. On the other hand, timing the corporate investment in a later stage gives the new firm more defendable resources.

Dushnitsky and Shaver (2009) analyzed 1,646 startup companies that received funding in the 1990s and found that the probability of an engagement in an investment relationship between a corporation and a startup in the same industry is less probable to occur under a weak intellectual property protection. In contrast if strong intellectual protection exists startups seek more corporate investment. Furthermore, they indicate that many relationships between a corporation and a young venture do not form unless the startup discloses its invention and would therefore rather pursue investment from an independent venture capitalist. Ventures will avoid the relationship if the benefit they gain from the corporate would be too little or comes with too much risk involvement.

Corporate venture units are facing a challenge to keep the best interest between their parent and the investing company (Rind, 1981). The young firm might find itself with limited freedom in terms of working with competitors of the incumbent (Weiblen & Chesbrough, 2015). Corporate ventures are more likely to coalesce in form of an alliance as a follow-on investment if both parties have a significant technological overlap (Van de Vrande & Vanhaverbeke, 2013)

### **2.3.4 Corporate Venture Unit Organization**

The administration of CVC units in terms of unit design, compensation of human resources and the degree of independence to the corporate mother varies from company to company. This section covers those governance areas, starting with the structure of the CVC unit, which will be followed by how communication autonomy can be designed along with the reporting lines to the parent company. The employee compensation for corporate venture activities round off the chapter.

#### **2.3.4.1 Organizational Structure**

The organizational structure of corporate venture divisions is defined by how the unit is established within the organization of the incumbent (McNally, 1997).

The four most common structures of corporate venture capital divisions are direct investments, indirect investments in form of joining a venture capital fund, fully owned subsidiaries and dedicated fund. Direct investments refer to CVC investments that are operated straight by the business units of a corporation and thus fall under a tight structure (Dushnitsky, 2008). Sometimes CVC units can also be integrated as an informal group within a research and development department (Ivanov & Xie, 2010). The indirect CVC activity refers to the practice of the corporation in investing into an existing venture capital fund and is also called CVC as Limited Partnership. CVC activities that are bundled in an independent branch of the corporation for the only purpose of corporate venture are described as fully owned subsidiaries. In a dedicated fund, the parent company and the venture capitalist co-manage the entrepreneurial fund. This is the least common structure among the four. (Dushnitsky, 2008).

Sykes (1990) studied corporate venture units, where 26 corporations had made direct and 25 had made indirect investments. Twenty of the sample from Sykes' study used direct and indirect approaches. He found that the goals of both methods were quite similar to each other with identifying new opportunities, developing business relationships and assessing potential investment candidates. On one hand, differences were spotted in terms of adapting knowledge in venture capital, which was found as a goal for indirect corporate venture capital. On the other hand, changing the corporate culture was associated with direct corporate venture capital.

Battistini et al., (2013) studied 48 corporate venture units where 23 percent focused mainly on financial returns and found that these activities are typically organized as an independent entity. Corporate venture capital divisions enjoy usually a greater autonomy as equity or non-equity alliances that are generally managed by business units (McNally, 1997).

#### **2.3.4.2 Autonomy and Communication of Corporate Venture Divisions**

The autonomy of a corporate venture unit refers to its independence in investment decisions and employment of resources (Keil et al., 2004). Studies show that the reporting structure from the venture unit to the parent company and the degree of autonomy of a division have an influence on the rate of success of a venture. A tight relationship between those institutions reduces flexibility and decreases the entrepreneurial spirit (Rind, 1981).

Battistini et al., (2013) suggest that the reporting line of a corporate venture division depends on the strategic focus on the venture goals. They found that in ventures, where the main motive was

technology intelligence, units reported directly to the CTO and R&D department. Furthermore, they elaborate by claiming that when corporate venturing enjoys an increasing strategic importance, the reporting could go directly to the CEO and board of directors.

Ideally the corporate venture unit is clearly separated from the parent company (Rind, 1981).

Siegel et al., (1988) advocate that corporate ventures should be set up independently from their parent companies with separate funds. This will lead the corporate venture managers to act more aggressively and manage investment opportunities with less corporate involvement.

Birkinshaw et al., (2002) found out that venture units which were financially more successful had certain distances from their parent companies. This means that they manage a separate fund, have a high level of autonomy in making decisions, enjoy strong relationships with the venture capital industry and receive incentives based on carried interest and bonuses.

The results of Weber and Weber (2005) prove that autonomy from the parent company is crucial for the success rate of the venture division of mainly financially oriented venture activities. They found that, to a certain extent, the more independent the corporate venture unit can take decisions the higher the success rate of the division.

Knowledge in the field of organizational learning got a lot of attention. Learning new knowledge is one of the most important goals in corporate venturing (McNally, 1997; Schildt et al., 2005). Knowledge transfer between the incumbent and its venture company is critical to the success of this activity (Yang et al., 2013). Knowledge transfer is defined as the process through which one division e.g. department, external entity is affected by the knowledge of another division (Argote & Ingram, 2000).

In corporate venturing, the knowledge flow has two directions: corporate inflow and corporate outflow. Corporate venture activities search for innovation which exploit new markets. The experience of new ventures in new markets that can get transferred back to the incumbent is defined as the knowledge inflow. Besides, in corporate venture capital, the knowledge from the corporation needs to be transferred back to the entrepreneurial firm, which is called knowledge outflow (Yang et. al., 2013).

Dushnitsky and Lenox (2005a) analyzed a big panel of public companies over a 20-years period and argued that if the incumbent and portfolio company have a well-aligned technological knowledge, the learning benefit is rather small because they do not have much to learn from each

other. The more the knowledge deviates between those firms, the more novel insights the incumbent will gain. The biggest advantage in gaining new knowledge happens when the two agents become well aligned.

Yang et al., 2013 conducted a research of 61 Japanese and US American companies and found a negative relationship between knowledge transfer and financial incentives e.g. carried interest. Gompers and Lerner (2001) argue that such incentives might lead corporate venture managers to maximize financial returns which could be detrimental to the strategic objectives of the incumbent.

The compensation of CVC personnel is a crucial topic when creating a corporate venture unit. The structure of the corporate venture influences the compensation of CVC personnel. A good compensation structure also helps in knowledge transfer.

In the next section, different forms of incentives for corporate venture capital personnel are discussed and researchers' insights are given.

#### **2.3.4.3 Compensation of Corporate Venture Capital Personnel**

The remuneration of corporate venture capital managers plays a critical role within CVC programs. What compensation scheme is most effective and which payouts to apply within the unit are important considerations for every corporation. Researches gave a lot of attention to the compensation schemes of corporate venture managers. One of the reasons for this is because corporations want to enhance entrepreneurial thinking and retain talented employees in their ventures (Block & Ornati, 1987; Sykes, 1992).

This section explains why remuneration plays such a key role in CVC investments, what different reward patterns exist and which are least and most effective payments for venture managers.

Corporate venture manager payout is also a delicate topic for several reasons. On one hand manager payouts can create certain conflicts among employees in a corporation if CVC managers get additional payouts next to their company salary. According to Block and Ornati (1987) compensation besides corporation salary can either be additional remuneration, incentives or an equity stake in the new venture. Another reason, as Sykes (1992) explains, is that two reward patterns are found in venturing activities in corporations: equity and equality. The latter means that compensation should be dispersed equally, and equity concept means that performance should mirror the payout for managers. Those patterns, however, can create conflicts in corporations. To avoid pay

inequality among employees Birkinshaw et al., (2002) suggest that company salaries should be the standard compensation for CVC personnel. Lerner (2013) explains that corporate venture professionals anticipate equal monetary compensation to their peers in the independent venture capital industry. This expectation and the remuneration of other executives from different departments with similar seniority, can create a serious challenge to corporate leaders.

On the other hand, compensation is decisive in external corporate venturing because it drives investment practices and shapes the investor's behavior. Usually there is a performance gap between corporate venture capitalists and independent venture groups. However, with similar payouts, corporate venture managers did at least as well as their counterparts in the independent capital industry (Dushnitsky & Shapira, 2010).

Multiple possibilities can be offered to compensate the corporate venture personnel like equity, bonuses, salary increases, career progression, recognition and awards. Equity constitutes a part ownership in either the new venture or in the incumbent in form of common or preferred stocks. Furthermore, there is salary increase, career progression besides bonus incentives, which are money linked to performance attainment in sales, profits or return on investments. What counts also as a form of compensation and is non-financial is awards. Here the employee receives for their performance employee recognition in form of employee of the year or recognition ceremonies (Hisrich & Kralik, 2016).

Which type of incentive is effective and gives genuine rewards to CVC managers is crucial especially since not every compensation method is linked to venture success. Evidence for this is suggested by Block and Ornati (1987). In their study of 42 companies, they found no correlation between special compensation (ex: bonus based on return, equity or options in the parent company) and the ventures' success rate. This means that special compensation is either not necessary as or that the design of those incentives is ineffective. Furthermore, they claim that bonuses related to return on equity miss the fact that a lot of CVCs do not have positive return for a couple of consecutive years. Equity in a parent company would reward according to the parent company's performance and not to the venture unit achievements. Birkinshaw and Hill (2002) came to similar findings when they examined 95 ventures across North America and Europe. They found no correlation between equity based remuneration and venture performance. This is since CVC units do not usually focus exclusively on financial objectives in contrast to venture capitalists, which are usually compensated with carried interest.

Special compensation does not show any correlation with venture success. Birkinshaw et al., (2002) say that incentives, which are based on financial or strategic performance exist in corporations, whereas carried interest in portfolio companies is not usually implemented. Dushnitsky (2006) notes that with the previous years of CVC practices, carried interest is negligible among CVC managers. To his observation, corporate salaries predominated in the past while bonuses, based on financial and strategic goals, are getting more and more common. This claim is supported by McMillan et al., (2008), who surveyed 48 CVC units and found that merely 21 percent of senior managers received carried interest and 13 percent got compensated with bonuses similar to carried interest.

So, the important question for corporate managers is which compensation scheme is the best to avoid defection among corporate venture managers and unequal payouts for senior managers in the corporation. Schuster (1985) proposes that the ideal situation for every company is to have compensation programs set up in a way that fosters the organizations' short- and long-term goals in terms of performance. Block and Ornati (1987) recommend bonuses for upon agreed contributions such as an accepted proposal for new business, achievements of predefined milestones in the venture itself or options for equity in the venture once milestones in quantitative results are achieved. To avoid having different payouts among similar hierarchy levels, the incentives for venture managers should be linked to the company's performance and not to corporate investments. The compensation should be like those offered by independent venture companies. In parallel, the remuneration should be connected to the goals of the corporation and the long-term performance of the portfolio company (Lerner, 2013).

### **3 Research Methodology**

This chapter describes the empirical part of the thesis. First, data collection and study sample will be discussed in detail. Second, the research design of the research will be presented. Third, the last section of this chapter will be dedicated to data analysis.

#### **3.1 Data Collection**

The overall response rate was 19 % with 34 completed questionnaires. Data collection took place between April and June 2017. Out of 34 companies, 19 were ‘Fortune global 500’ companies.

The empirical investigation focused on corporate venture capital units from around the world. To identify the study sample, the CB Insights’ 55 most active corporate venture capital firms globally was looked up. CB Insights is a venture capital database and provided a good insight into CVC units that are the most active in recent years. Once corporations with active CVC activities were identified, the corresponding corporate venture units were researched on the internet.

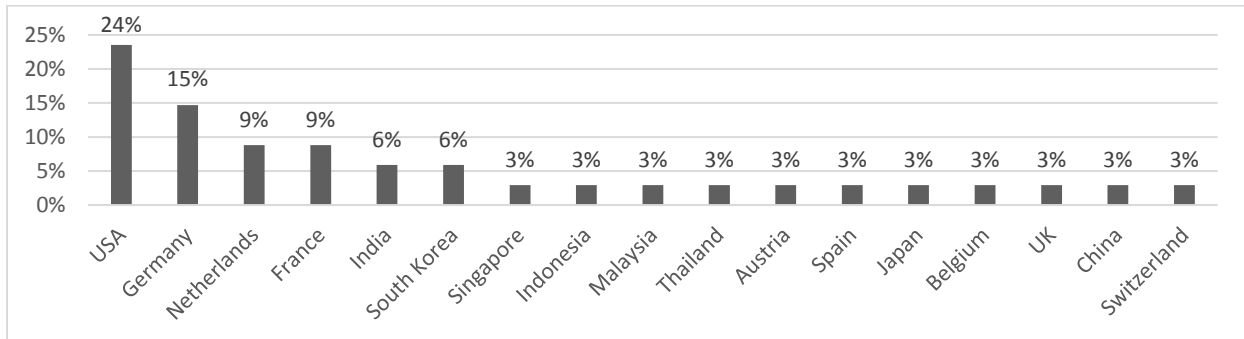
Once a list with 176 active CVC programs was compiled, senior executives and investment managers of the programs were searched on the social networking website LinkedIn. Some venture units had dedicated websites with team members enlisted, which was helpful in finding the target population for the survey.

After compiling a list of 176 companies, the prospects were invited to participate in the survey. The invitation letter for the corporate venture managers can be found in Appendix II.

#### **3.2 Data Sample**

The geographic breakdown of the survey was based on where the parent of the corporate capital venture division is based. In other words, the geographic distinction is according to the headquarter location of the incumbent company. Out of 176 contacted companies, 34 divisions from USA, Europe and Asia were willing to participate. Those corporate venture units received funding from their corporation, which were from 3 continents and 17 countries. The country distribution is illustrated in Figure 5.

**Figure 5 Participating countries**



On the one hand, Figure 5 depicts the distribution of headquarters of CVC divisions on the level of continents. The biggest group of participants are from Europe with 47 %, followed by Asia with 29 % and North America with 24 %. On the other hand, Figure 6 shows the 3 operating industries of parent companies, such as *Technology, Media & Telecommunication*, *Consumer Goods & Retail* and *Industrial Goods & Services, Energy*.

**Figure 6 Attributes of the sample**



The population represented a wide cross-section of industries. Most of the sample (41 %) operated in the *Technology, Media & Telecommunication*. *Consumer Goods & Retail* were represented by 11 % of the sample. Nine percent of overall participating continents were operating in the *Industrial Goods & Services, Energy*.

Most of the participating CVC programs were quite of an early age, with an average foundation year of 2009. The oldest program was 16 years old, headquartered in North America, the youngest was from Europe and not even a year old. The founding year of the whole sample that appeared most often is 2015.

Table 1 illustrates the mode, average, median, minimum and maximum founding years for all 3 continents (North America, Europe, Asia).

***Table 1 Founding year of the corporate venture units in all continents***

<b>All Continents (n 34)</b>				
<b>mode</b>	<b>average</b>	<b>median</b>	<b>minimum</b>	<b>maximum</b>
2015	2009	2010	1991	2017

In the questionnaire, CVC units were asked to indicate the number employees working for the program. Table 2 breaks down the overall numbers in mode, average, minimum and maximum per continent. The highest number of a unit was 120 employees from North America, the minimum was 8 and the mode was 5. On average, there were 19 employees per unit. In North America, the maximum headcount in one division was 120, while the minimum was 3. The average was 24. Europe had roughly similar numbers: a headcount maximum of 100, a minimum of 4, a mode of 4 and an average of 15 employees.

***Table 2 Headcounts of CVC divisions all continents***

<b>All</b>			
<b>mode</b>	<b>average</b>	<b>minimum</b>	<b>maximum</b>
5	19	3	120

A clear majority of 71 % of incumbents provided their CVC programs with funding of over 20 million USD (Table 3). In our sample, no CVC unit got less than 1 million USD to invest into startups.

**Table 3 Funding Support per continent**

<b>Description</b>	<b>All (n=34)</b>	<b>Asia (n=10)</b>	<b>Europe (n=16)</b>	<b>North America (n=8)</b>
Less than \$ 1M	0% (0)	0% (0)	0% (0)	0% (0)
\$ 1M to \$ 3M	3% (1)	0% (0)	6% (1)	0% (0)
\$ 3 M to \$ 5 M	0% (0)	0% (0)	0% (0)	0% (0)
\$ 5 M to \$ 10 M	3% (1)	0% (0)	0% (0)	13% (1)
\$ 10 M to \$ 20 M	6% (2)	25% (2)	0% (0)	0% (0)
over \$ 20 M	71% (24)	80% (8)	94% (15)	13% (1)

Table 4 presents the funding support of operating industry of the incumbent. The most diversity in funding support is in the field of *Technology, Media & Telecommunication*. *Industrial Goods and Services*, *Energy* and *Consumer Goods and Retail* have investment funding over 20 million USD.

**Table 4 Funding Support per industry**

<b>Description</b>	<b>Consumer Goods and Retail (n=11)</b>	<b>Industrial Goods and Ser- vices, Energy (n=9)</b>	<b>Technology, Media &amp; Telecommunication (n=14)</b>
Less than \$ 1M	0% (0)	0% (0)	0% (0)
\$ 1M to \$ 3M	0% (0)	0% (0)	7% (1)
\$ 3 M to \$ 5 M	0% (0)	0% (0)	0% (0)
\$ 5 M to \$ 10 M	0% (0)	0% (0)	7% (1)
\$ 10 M to \$ 20 M	0% (0)	0% (0)	14% (2)
over \$ 20 M	100% (11)	100% (9)	71% (10)

Most of the participating companies invested an average investment sum of \$2 - \$5 *million* into their portfolio units (Table 5).

***Table 5 Average investment amount in USD in portfolio company per continent***

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
< \$ 2M	24% (8)	40% (4)	12% (2)	25% (2)	X(df=4) =4.10; p=.393
\$2 - \$5M	53% (18)	50% (5)	62% (10)	38% (3)	
\$5 - \$10M	24% (8)	10% (1)	25% (4)	38% (3)	

### **3.3 Research Design**

The questionnaire was administered online with the help of a survey tool. The survey was designed to document the corporate venture unit activities on a global scale and focused on 3 sections. One section covered questions of generic nature and asked about the founding year of the unit or preferred investment industry. The other section contained questions regarding the organizational structure, reporting line, compensation, operational challenges. The third and last section referred to the investment activities of the corporate venture unit. Figure 7 depicts the three main topics of the survey and illustrates the key components per section.

*Figure 7 Key aspects of the questionnaire*

<b>Generic Aspects</b>	<ul style="list-style-type: none"><li>• Founding year of CVC unit</li><li>• Invested industry of CVC unit</li><li>• Geographical preference of investment</li></ul>
<b>Unit Organization</b>	<ul style="list-style-type: none"><li>• # source of hire of CVC personnel</li><li>• Organizational form of CVC unit</li><li>• # of headcount of CVC unit</li><li>• Compensation of CVC employees</li><li>• Reporting line to parent company</li><li>• Autonomy of CVC unit</li><li>• Knowledge transfer from CVC unit to parent</li><li>• Operational challenges for CVC unit</li></ul>
<b>Investment Activity</b>	<ul style="list-style-type: none"><li>• Area of support for portfolio company</li><li>• Investment objective of CVC program</li><li>• Funding support from parent company</li><li>• Preferred investment strategy of CVC unit</li><li>• Average investment amount</li><li>• Average investment phase</li><li>• Source of investment deals</li><li>• Investment stages</li><li>• Measurement of investment success</li><li>• Average ownership in portfolio companies</li><li>• Preferred deal terms</li><li>• Preferred exit strategy of CVC unit</li></ul>

The questionnaire was designed with several types of questions. Three questions were intentionally set up as open-ended questions to get more insight of how the unit conducted its business.

Those questions covered the following aspects of CVC:

- Knowledge transfer from portfolio to parent company
- Operational challenges of CVC
- Preferred exit strategy

The rest of the questions were either multiple choice, ordinal or ratio questions.

## 4 Findings

This chapter provides a comprehensive analysis of the answers given by the participating corporate venture divisions from Asia, Europe and North America. The chapter begins with the most noteworthy findings in the key aspects of the survey in all participating continents. Next, the significant differences are broken down per continent to compare CVC on a global level and to understand cultural differences in this investment method.

Almost every question will be presented but with the underlying condition that it offers an interesting observation. The only question that will be disregarded for further discussion in this thesis is the 1<sup>st</sup> question of the survey. This question queried participants to indicate the name of the company they were working for. Since this survey is held strictly anonymous, the data of question 1 will not be shown or further discussed. The reason for this question was to observe how many ‘Fortune Global 500’ companies were participating in the survey. As mentioned in the chapter “3.1. Data Collection” 19 out of the total population of 34 were Fortune Global 500 companies.

### 4.1.1 Findings of overall continents and industries

#### *Investing industry*

Table 6 is an overview of industries that receive the highest rate of investment. The sector *Software* is chosen by 59 % of CVC programs, followed by *Industrial/Energy* with 50 % and with *Consumer Products and Services* with a slightly lower number of 38 %. The least invested sector and last rank is occupied by *Biotechnology* with only 15 %.

**Table 6 Investing industries of CVC units per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chisq.test
Software	59% (20)	60% (6)	56% (9)	62% (5)	X(df=2)=0.09; p=.954
Biotechnology	15% (5)	20% (2)	12% (2)	12% (1)	X(df=2)=0.32; p=.854
Medical Devices & Equipment	21% (7)	40% (4)	12% (2)	12% (1)	X(df=2)=3.27; p=.195
Telecommunications	32% (11)	50% (5)	12% (2)	50% (4)	X(df=2)=5.44; p=.066
Semiconductors	21% (7)	10% (1)	19% (3)	38% (3)	X(df=2)=2.12; p=.347
Industrial/Energy	50% (17)	40% (4)	56% (9)	50% (4)	X(df=2)=0.65; p=.723

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chisq.test
Media and Entertainment	32% (11)	70% (7)	6% (1)	38% (3)	X(df=2)=11.55; p=.003
Networking and Equipment	21% (7)	30% (3)	6% (1)	38% (3)	X(df=2)=3.95; p=.139
IT Services	35% (12)	60% (6)	25% (4)	25% (2)	X(df=2)=3.79; p=.151
Electronics/Instrumentation	32% (11)	30% (3)	38% (6)	25% (2)	X(df=2)=0.42; p=.812
Consumer Products and Services	38% (13)	60% (6)	31% (5)	25% (2)	X(df=2)=2.93; p=.231
Financial Services	29% (10)	60% (6)	19% (3)	12% (1)	X(df=2)=6.48; p=.039
Healthcare	24% (8)	40% (4)	19% (3)	12% (1)	X(df=2)=2.25; p=.324
Retailing/Distribution	21% (7)	40% (4)	19% (3)	0% (0)	X(df=2)=4.41; p=.110
Other (please specify)	24% (8)	10% (1)	31% (5)	25% (2)	X(df=2)=1.56; p=.459

Table 7 shows the areas of CVC investments arranged per incumbent's industry. Surprisingly, the table shows that incumbents invest in the same industries they're already operating in.

**Table 7 CVC investment areas (rows) per incumbent industry (columns)**

Items	All (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	chisq.test
Software	59% (20)	55% (6)	44% (4)	71% (10)	X(df=2)=1.77; p=.413
Biotechnology	15% (5)	18% (2)	11% (1)	14% (2)	X(df=2)=0.20; p=.905
Medical Devices and Equipment	21% (7)	27% (3)	22% (2)	14% (2)	X(df=2)=0.66; p=.721
Telecommunications	32% (11)	36% (4)	11% (1)	43% (6)	X(df=2)=2.64; p=.267
Semiconductors	21% (7)	9% (1)	22% (2)	29% (4)	X(df=2)=1.45; p=.484
Industrial/Energy	50% (17)	45% (5)	89% (8)	29% (4)	X(df=2)=8.11; p=.017
Media and Entertainment	32% (11)	18% (2)	0% (0)	64% (9)	X(df=2)=11.84; p=.003

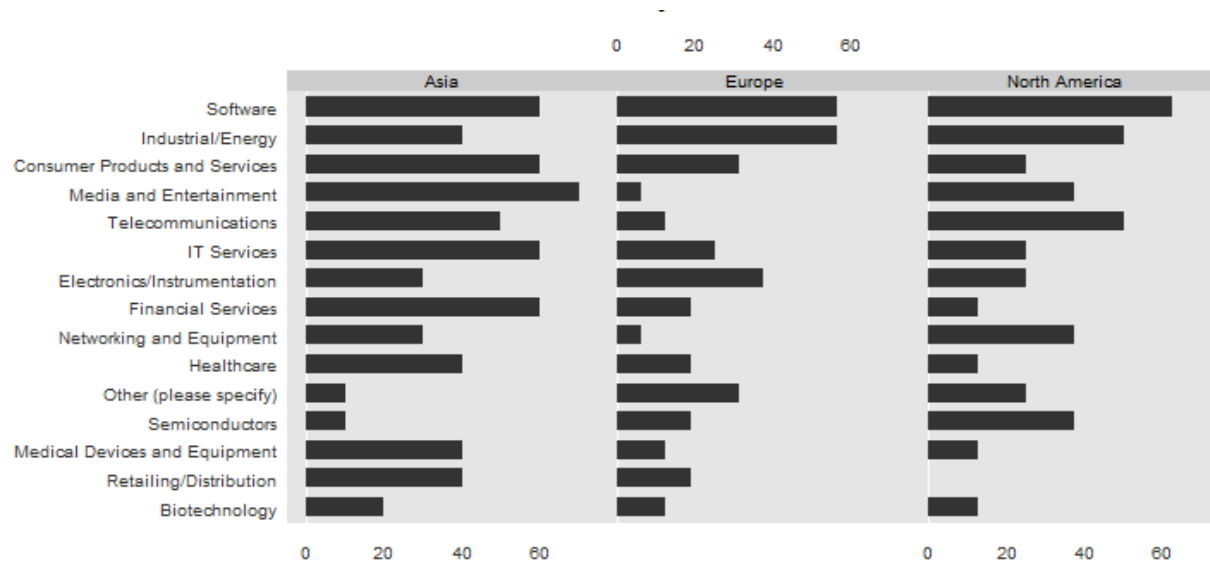
Items	All (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, En- ergy (n=9)	Technology, Media & Telecommunica- tion (n=14)	chisq.test
Networking and Equipment	21% (7)	18% (2)	11% (1)	29% (4)	X(df=2)=1.08; p=.583
IT Services	35% (12)	27% (3)	11% (1)	57% (8)	X(df=2)=5.54; p=.063
Electronics/In- strumentation	32% (11)	27% (3)	56% (5)	21% (3)	X(df=2)=3.11; p=.212
Consumer Pro- ducts and Ser- vices	38% (13)	64% (7)	11% (1)	36% (5)	X(df=2)=5.85; p=.054
Financial Ser- vices	29% (10)	36% (4)	0% (0)	43% (6)	X(df=2)=5.23; p=.073
Healthcare	24% (8)	18% (2)	33% (3)	21% (3)	X(df=2)=0.69; p=.708
Retailing/Distri- bution	21% (7)	9% (1)	11% (1)	36% (5)	X(df=2)=3.34; p=.188
Other (please specify)	24% (8)	9% (1)	56% (5)	14% (2)	X(df=2)=7.07; p=.029

The answer option *Other*, which got chosen by 24 % of the population, revealed the following additional industries:

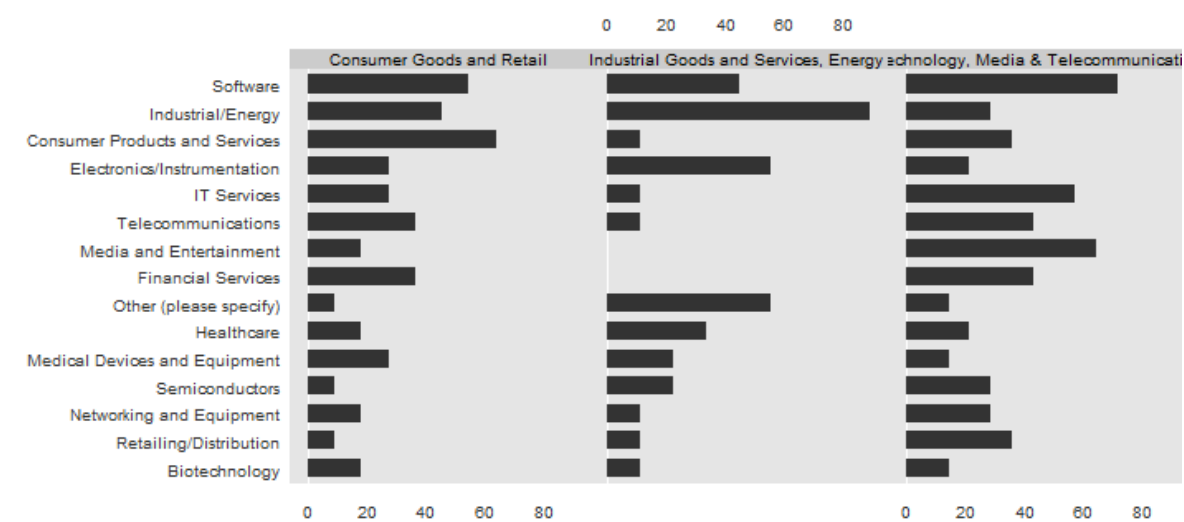
- *Artificial Intelligence*
- *Clean technology*
- *(sustainable) Materials & Chemicals*
- *Food & agriculture*
- *Sustainable materials*

Figures 8 and 9, summarize the investing industries of CVC units (in percentage) within continents (Figure 8) and within the incumbents' industries (Figure 9).

**Figure 8 Investing industries of CVC units per continent (in percentage)**



**Figure 9 Investing industries of CVC units per continent (in percentage)**



### Geographical preference

Table 8 demonstrates the geographical preferences of investments per continent. *North America* is on the forefront as it was chosen by 82 percent of our sample. Europe and Asia came in second and third respectively. The least favorable geographical location for investment in our population was *Africa* (3%).

**Table 8 Geographical preference of investment per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chisq.test
Asia	50% (17)	90% (9)	25% (4)	50% (4)	X(df=2)=10.40; p=.006
Australia	15% (5)	30% (3)	6% (1)	12% (1)	X(df=2)=2.81; p=.246
Europe	68% (23)	30% (3)	94% (15)	62% (5)	X(df=2)=11.55; p=.003
Middle East	15% (5)	10% (1)	19% (3)	12% (1)	X(df=2)=0.42; p=.812
Africa	3% (1)	10% (1)	0% (0)	0% (0)	X(df=2)=2.47; p=.290
North America	82% (28)	70% (7)	81% (13)	100% (8)	X(df=2)=2.78; p=.249
Central America	6% (2)	10% (1)	6% (1)	0% (0)	X(df=2)=0.81; p=.667
South America	6% (2)	10% (1)	6% (1)	0% (0)	X(df=2)=0.81; p=.667

In Table 9 the geographical preferences are split by the investing industry of the parent company. One hundred percent of respondents from *Consumer Goods and Retail* invested in *North America*. Companies in *Industrial Goods and Services, Energy*, conducted CVC in *Europe* and *Asia* with an equal rate of 89 percent. However, no investments were executed in *Australia, Africa, Central-* and *South America*.

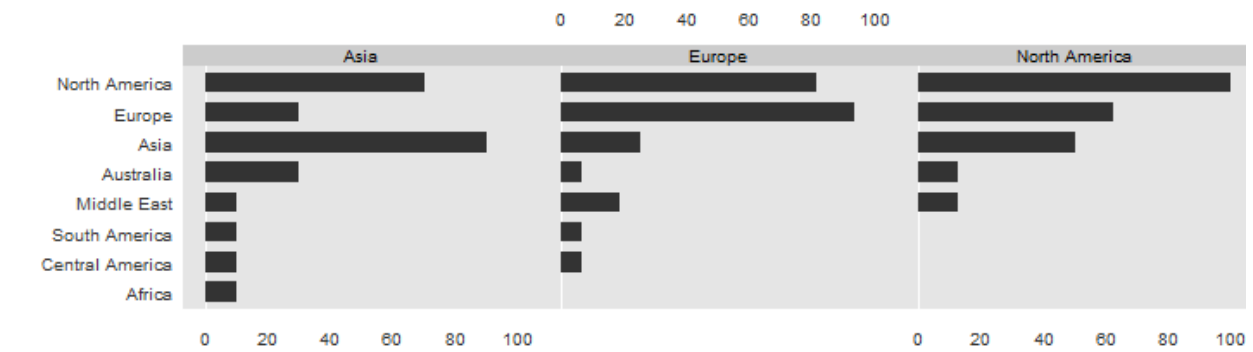
Sixty four percent of companies operating in *Technology, Media & Telecommunication* invested in *North America* and fifty percent in both *Europe* and *Asia*.

**Table 9 Geographical preference of investment per industry**

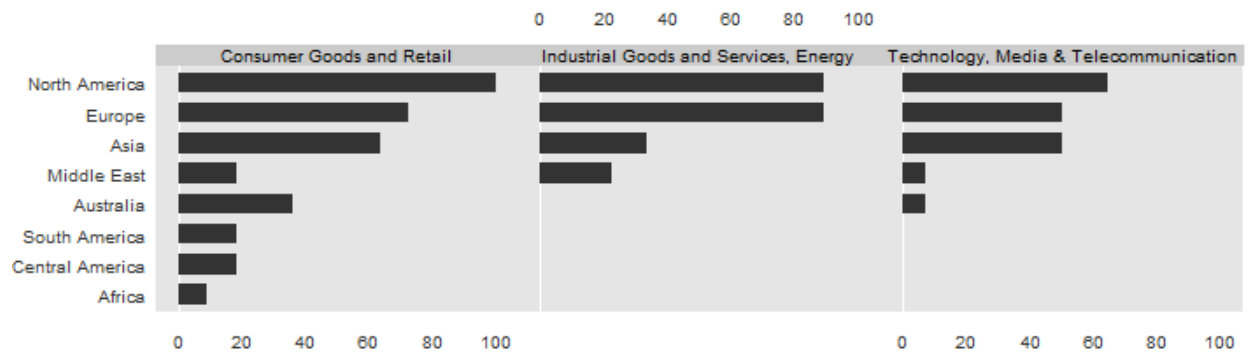
Items	All (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	chisq.test
Asia	50% (17)	64% (7)	33% (3)	50% (7)	X(df=2)=1.82; p=.403
Australia	15% (5)	36% (4)	0% (0)	7% (1)	X(df=2)=6.30; p=.043
Europe	68% (23)	73% (8)	89% (8)	50% (7)	X(df=2)=3.98; p=.137
Middle East	15% (5)	18% (2)	22% (2)	7% (1)	X(df=2)=1.15; p=.563
Africa	3% (1)	9% (1)	0% (0)	0% (0)	X(df=2)=2.15; p=.341
North America	82% (28)	100% (11)	89% (8)	64% (9)	X(df=2)=5.77; p=.056
Central America	6% (2)	18% (2)	0% (0)	0% (0)	X(df=2)=4.44; p=.108
South America	6% (2)	18% (2)	0% (0)	0% (0)	X(df=2)=4.44; p=.108

Figures 10 and 11, summarize the geographical preference of portfolio investments (in percentages) within continents (Figure 10) and within operating industries (Figure 11).

**Figure 10 Geographical preference of investment per continent (in percentage)**



**Figure 11 Geographical preference of investment per industry (in percentage)**



### Organizational form

The most chosen organizational form for CVC programs in our sample is the *independent subsidiary* with 47 %, where an own entity is created but with a reporting line to the parent company (Table 10). The most chosen organizational form for CVC programs in our population is the *independent subsidiary* (47%). This is when a separate entity, that still reports to the mother company, is created. Twenty-nine percent had the CVC unit set up as an *integrated business unit in the corporation* while the least chosen form was the *independent partnership* (15 %).

**Table 10 Organizational forms of CVC programs per continent**

Items	All (34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
independent subsidiary company (reporting to corporation)	47% (16)	50% (5)	50% (8)	38% (3)	X(df=6)=3.57; p=.735
integrated business unit in corporation	29% (10)	20% (2)	25% (4)	50% (4)	
independent partnership	15% (5)	20% (2)	19% (3)	0% (0)	
other (please specify)	9% (3)	10% (1)	6% (1)	12% (1)	

In the answer option *Other*, CVC units mentioned alternative setups to those mentioned in the questionnaire. One CVC unit was part of their R&D and reported directly to the chief technology officer. Another CVC division was an independent trust with a reporting line to the corporation. In addition, one CVC unit stated that they are established within the *Strategy & Corporate Development team*.

#### Source of hire

Table 11 presents the various sources CVC personnel is hired from with no significant difference in the overall population. CVC employees get hired mostly externally from other venture capitalist firms or corporate venture capital units (41 %), followed by internal selection within the corporation (33 %). The least source to employee CVC staff from is outside the (corporate) venture network (27 %).

**Table 11 Sources of CVC unit employees per operating industry**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
hired externally from VC or CVC firms	41% (14)	60% (6)	38% (6)	25% (2)	X(df=4)=3.93; p=.415
hired internally within corporation	33% (11)	10% (1)	38% (6)	50% (4)	
hired externally outside of VC or CVC firms	27% (9)	30% (3)	25% (4)	25% (2)	

### Compensation of CVC employees

The most frequent reimbursement option for CVC personnel is *salary and bonus*, chosen by 76 % of the respondents (Table 12). Only a small number of units (6 %) revealed that they were paying no other incentives besides the regular corporate *salary*. Another minority of 9 % reported that they offered *carried interest* to their CVC managers. A blend of different answers to the answer option *Other* was mentioned by 9 % of the CVC units.

**Table 12 Compensation of CVC unit employees per continent**

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
salary	6% (2)	0% (0)	12% (2)	0% (0)	X(df=8) =NaN; p=NaN
bonus	0% (0)	0% (0)	0% (0)	0% (0)	
salary + bonus	76% (26)	70% (7)	69% (11)	100% (8)	
carried interest	9% (3)	10% (1)	12% (2)	0% (0)	
Other (please specify)	9% (3)	20% (2)	6% (1)	0% (0)	

Table 13 indicates in which industries the above-mentioned compensation forms can be found. Programs from the *Technology, Media & Telecommunication* sectors had a more diverse form of compensation compared to the other 2 sectors. Two units (14 %) paid their CVC managers *carried interest* and 3 (21 %) divisions in this industry indicated *Other*.

**Table 13 Compensation of CVC unit employees per operating industry**

Description	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
salary	0% (0)	11% (1)	7% (1)	X(df=8)=NaN; p=NaN
bonus	0% (0)	0% (0)	0% (0)	
salary + bonus	91% (10)	89% (8)	57% (8)	
carried interest	9% (1)	0% (0)	14% (2)	

Description	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
Other (please specify)	0% (0)	0% (0)	21% (3)	

#### Reporting Line to the Parent Company

Another key point for unit organization was the reporting line of the CVC program to the incumbent. The participants were asked to which management function they were directly reporting.

Twenty six percent of the respondents selected the following 2 options: *CEO, corporate office strategy/development* (Table 14). Another group that comprises 26 percent of the sample chose the answer option *Other* and complemented the provided reporting line list with the following:

- *Investment committee*
- *Independent board*
- *Head of digital*
- *Board of directors for CVC*

**Table 14 Reporting line to parent company on a global level**

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
CEO	26% (9)	50% (5)	19% (3)	12% (1)	X(df=12)=NaN; p=NaN
CFO	15% (5)	0% (0)	19% (3)	25% (2)	
CTO	15% (5)	0% (0)	25% (4)	12% (1)	
corporate office strategy/development	26% (9)	20% (2)	0% (0)	38% (3)	
corporate office finance	3% (1)	0% (0)	6% (1)	0% (0)	
corporate office R&D	0% (0)	0% (0)	0% (0)	0% (0)	
Other (please specify)	26% (9)	30% (3)	31% (5)	12% (1)	

Table 15 summarizes the findings of reporting lines per industry. We found no mentions of reporting to the corporate R&D. No division in the sector *Industrial Goods and Services, Energy* claimed reporting to the *CFO* in the headquarter or to the *corporate office finance*.

**Table 15 Reporting line to parent company per operating industry**

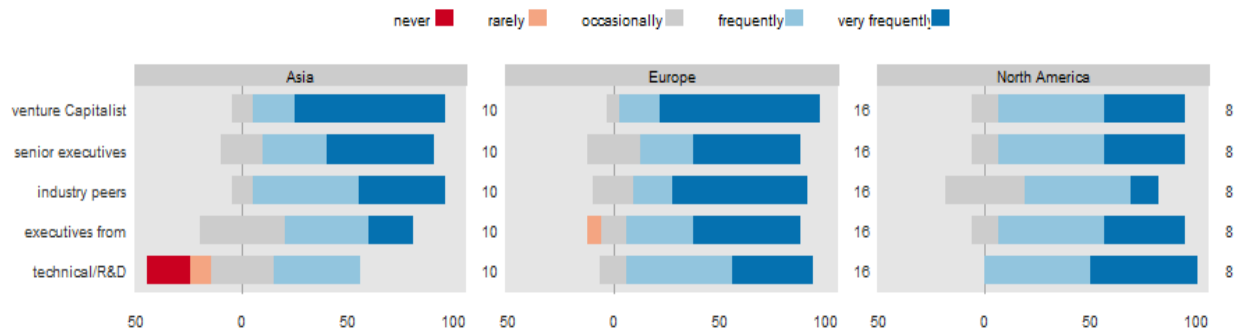
Items	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
CEO	27% (3)	22% (2)	29% (4)	X(df=12)=NaN; p=NaN
CFO	18% (2)	0% (0)	21% (3)	
CTO	9% (1)	33% (3)	7% (1)	
corporate office strategy/development	9% (1)	11% (1)	21% (3)	
corporate office finance	9% (1)	0% (0)	0% (0)	
corporate office R&D	0% (0)	0% (0)	0% (0)	
Other (please specify)	27% (3)	33% (3)	21% (3)	

### Frequency of Communication

CVC programs were asked to indicate how often they communicated with stakeholders such as *senior executives*, *R&D* of the incumbent or *venture capitalists*. The scale to choose from ranged from *very frequently* to *never*.

Figure 12 summarizes the frequency of communications of CVC units (in percentages) per continent. The stakeholders that CVC units communicate with most frequently were *venture capitalists* and *senior executives in the parent company*. The individual findings per continents are further analyzed in the chapter *finding per continent*.

**Figure 12 Frequency of communication per continent (in percentage)**

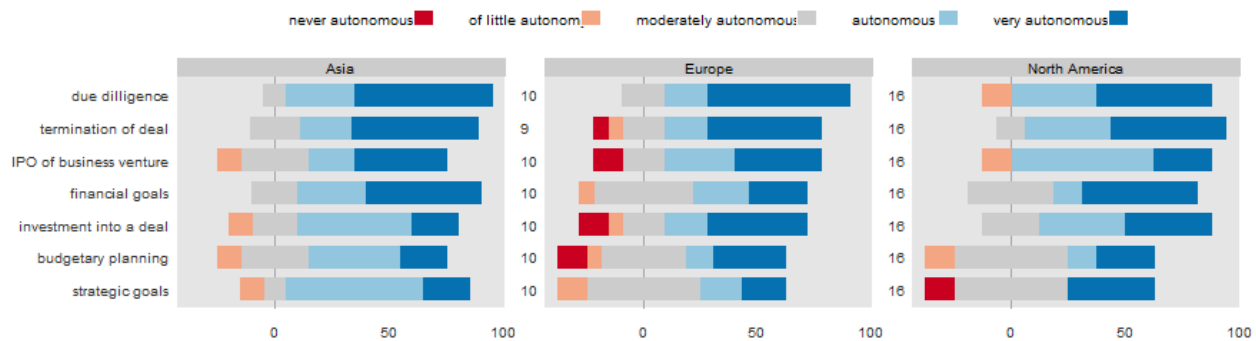


### Autonomy of corporate venture units

How autonomous a corporate venture capital unit is in investment decision making depends on the incumbent. We tried in this section to probe how autonomous CVC units were regarding several aspects such as due diligence, strategic and financial goals or budgetary planning. CVC units had to rate their autonomy with a Likert scale ranging from very autonomous to never autonomous.

Figure 13 summarizes the answers of the CVC programs on a Likert plot (in percentages) per continent. Generally, most respondents considered their units rather autonomous in most of the suggested aspects. The significant findings per continent will be discussed in the individual sections of the continent.

**Figure 13 Autonomy of CVC unit per continent**



### Area of support to portfolio company

A crucial part for startups, when choosing an investor for their entrepreneurial endeavor, is the kind of support they receive from corporate investors. The backing of incumbents to young firms can range from managerial assistance in terms of strategy consulting to usage of R&D laboratories or assistance in the field of marketing. Although the results were not statistically significant, we noticed the following: 71% of programs did offer *management support* to their startups followed by *marketing support* in 44 % of the cases (Table 16).

**Table 16 Areas of support for portfolio company per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chi-sq.test
management (executive contacts, consulting)	71% (24)	80% (8)	62% (10)	75% (6)	X(df=2) =1.01; p=.605

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chi-sq.test
R&D or manufacturing personnel	41% (14)	20% (2)	50% (8)	50% (4)	X(df=2) =2.62; p=.269
usage of test labs or similar facilities in the corporation	26% (9)	10% (1)	31% (5)	38% (3)	X(df=2) =2.08; p=.353
marketing (suppliers, sales force, channels)	44% (15)	50% (5)	38% (6)	50% (4)	X(df=2) =0.54; p=.765
Other (please specify)	32% (11)	20% (2)	38% (6)	38% (3)	X(df=2) =0.99; p=.610

Thirty two percent of the population provided complementary insights under the option *Other*. The following functions of support were named by the CVC managers:

- *Legal, HR support*
- *Global network*
- *Business practices*
- *Customer access*
- *Fundraising*

Interestingly, one CVC unit mentioned that almost no support was provided by the parent company. The CVC unit is aiding the young entrepreneurs directly with contacts, management and the strategy.

Figures 14 summarizes the areas of support to portfolio companies (in percentages) within continents.

**Figure 14 Areas of support for portfolio company per continent**



### Reasons for corporate venture capital

The reasons for corporations to pursue corporate venture capital can be various. In this questionnaire, CVC units could choose from 4 different options, which are presented in Table 17. Twenty-

nine (85 %) of the programs selected *gain window on new emerging technologies* as the main purpose why they invest into portfolio companies. Two other reasons such as *gain window on new markets* and *create new product(s)* were equally chosen by 65 % of programs in all continents. Interestingly, the motivation to *improve firm innovative efforts* was the response of 62 percent of units in north America, 50 percent of units in Europe but is only to a smaller extent of 30 percent of those in Asia.

Interestingly, the motivation to *improve firm innovative efforts* was the response of 62 percent of North American units, 50 percent of European units and 30 percent of Asian ones.

**Table 17 Reasons for CVC**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)
gain window on new markets	65% (22)	60% (6)	63% (10)	75% (6)
gain window on emerging technologies	85% (29)	80% (8)	81% (13)	100% (8)
create new product(s)	65% (22)	70% (7)	50% (8)	88% (7)
improve firm innovative efforts	47% (16)	30% (3)	50% (8)	62% (5)

*Investment objectives of CVC unit*

Corporate Units had to specify which investment objective they were pursuing. Table 18 depicts different results split between continents.

In Europe, most CVC units (75%) and in Asia (56 %) had *strategic merit with financial profit as their* objective (chi-square,  $p < 0.05$ ). In Contrast, North American units *mentioned strategic objective* with significantly higher frequency (chi-square,  $p < 0.05$ ).

**Table 18 Investment objectives of CVC unit**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
strategic objective	29% (10)	40% (4)	12% (2)	50% (4)	X(df=6) =13.03; p=.043
financial objective	9% (4)	10% (1)	12% (2)	0% (0)	
strategic merit with financial profit	56% (19)	50% (5)	75% (12)	25% (2)	
Other (please specify)	6% (2)	0% (0)	0% (0)	25% (2)	

### Preferred investment strategy of CVC divisions

One key aspect of the survey explored the preferred investment strategy of the CVC unit (Table 19). The most often applied strategy among Asian (60 %) and European (50 %) countries are *direct investment*. In contrast, North America (50 %) utilizes the *investment in a syndicate* more often. Notable is that none of the participating divisions is using an *indirect investment (through a venture capital fund)* as their strategy.

Table 19 Preferred investment strategy of CVC program per continent

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
direct investment	50% (17)	60% (6)	50% (8)	38% (3)	X(df=8) =NaN; p=NaN
investment in a syndicate (where CVC unit does not have the lead)	24% (8)	10% (1)	19% (3)	50% (4)	
investment in a syndicate (where CVC unit does have the lead)	10% (18)	10% (1)	25% (4)	12% (1)	
indirect investment (through a venture capital fund)	0% (0)	0% (0)	0% (0)	0% (0)	
Other (please specify)	9% (3)	20% (2)	6% (1)	0% (0)	

Twenty percent of Asian units and six percent of European units mentioned their preferred investment strategies as follows:

- *Combination of direct and syndicate on case basis*
- *both indirect and direct investments*
- *direct investment with another investor, lead or not leading is both*

### Deal source of portfolio company

Corporate Units were asked to which source they turn to when they were looking for a potential investment (Table 20). Half of the contributing divisions (44 %) choose the answer option *Other*. A striking number of divisions indicated that they would use a blend of all the enlisted sources, which are illustrated in Table 20 when they were searching for prospective startups.

Besides, a considerable number of companies (24 %) searched for possible portfolio companies either from *venture capitalists* or through *solicitation within the corporate venture unit*. Interestingly, none of the CVC programs were using *government* or *solicitation done by parent company* as further options.

**Table 20 Source for portfolio company per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
angel investors	3% (1)	10% (1)	0% (0)	0% (0)	X(df=14) =NaN; p=NaN
venture capitalist	24% (8)	0% (0)	38% (6)	25% (2)	
other CVCs (i.e. syndicate)	3% (1)	10% (1)	0% (0)	0% (0)	
solicitation done by parent company	0% (0)	0% (0)	0% (0)	0% (0)	
solicitation done by CVC	21% (7)	20% (2)	19% (3)	25% (2)	
application of portfolio company	6% (2)	10% (1)	6% (1)	0% (0)	
government	0% (0)	0% (0)	0% (0)	0% (0)	
Other (please specify)	44% (15)	50% (5)	38% (6)	50% (4)	

### Investment stage

Corporate units were asked in which stage they usually invest in (Table 21). One Asian CVC division left this question unanswered. Therefore, the response rate for Asia is 9 instead of 10. The *early stage* is mentioned by the majority of respondents. The least cited investment stages by all the CVC units are the *seed stage* and the *expansion stage*. The *startup stage* receives more attention by European companies (31 %) than Asian (11 %) and North American programs.

**Table 21 Investment stage per continent**

Items	All n (n=34)	n	Asia (n=10)	n	Europe (n=16)	n	North America (n=8)	Signifi- cance Test
seed stage (business plan and idea)	33 9 % (1)	9	0% (0)	16	6% (1)	8	0% (0)	X(df=8) =5.80; p=.670
startup stage (development prototype)	18% (6)		11% (1)		31% (5)		0% (0)	
early stage (production of pilot prototype)	44% (15)		44% (4)		38% (6)		62% (5)	
development stage (launched product and revenue growth)	24% (8)		33% (3)		19% (3)		25% (2)	
expansion stage (product experiencing and revenue growth)	9% (9)		11% (1)		6% (1)		12% (1)	

Measurement of investment success

The number 1 measurement of investment success for CVC units were according to our studied sample *financial results* such as *return of investment (ROI)* or *internal rate of return (IRR)*. *Customer acquisition, retention* and *loyalty* was not chosen by any of the CVC divisions (Table 22).

**Table 22 Measurement of investment success per continent**

Items	All (n=24)	n	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
financial results (i.e. ROI, IRR, ROE, cost of capital)	38% (31)	9	33% (3)	50% (8)	25% (2)	X(df=8)=NaN; p=NaN
interaction with portfolio company (#site visits, #hours of contact btw. unit and start up, # startups acquired,)	15% (5)		11% (1)	19% (3)	12% (1)	
R&D effectiveness (# new technologies, # modification to existing products, time saved in product development, product time to market...)	18% (6)		11% (1)	0% (0)	12% (1)	
customer acquisition, retention and loyalty	0% (0)		0% (0)	0% (0)	0% (0)	
Other (please specify)	38% (13)		44% (4)	31% (5)	50% (4)	

In the answer option *Other* most of the 38 % respondents stated that they measured their investment success on both financial and strategic metrics. One CVC units stated that they evaluated positive investments in terms of partnership between the portfolio company and their parent company.

### Investment criteria

Participating units had to convey what their main criteria looked like when they were screening startup companies to invest in (Table 23). The 2 most important criteria for investments into young entrepreneurs are by far *strategic relevance to the corporation* (88 %) and *experience of management team* (82 %). The least chosen criteria are *Board observation rights* by only 26 % of CVC units.

**Table 23 Investment criteria when screening a portfolio company**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)
strategic relevance to the corporation	88% (30)	90% (9)	81% (13)	100 % (8)
experience management team	82% (28)	100 % (10)	75 % (12)	75% (6)
investment range and location	59% (20)	80 % (8)	38 % (6)	75% (6)
board observation rights	26% (9)	20 % (2)	19% (3)	50% (4)
Other (please specify)	21% (7)	20 % (2)	31 % (5)	0% (0)

Twenty-one divisions gave more details on what they put their attention to when seeking potential investees:

- *Scalable and feasible business model*
- *Size of market*
- *Performance to date*
- *Competition, technology differentiation and defensibility*
- *Financial opportunity*

### Deal ownership in portfolio company

Participating CVC units were asked how much ownership they took in portfolio companies. Table 24 shows that every CVC program in our study take *significant minority ownership* in the startup.

None of the studied sample took full or *majority ownership* or *full control* in a portfolio company.

**Table 24 Average ownership in portfolio companies per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
full control	0% (0)	0% (0)	0% (0)	0% (0)	X(df=4) =NaN; p=NaN
majority ownership	0% (0)	0% (0)	0% (0)	0% (0)	
significant minority ownership	100% (34)	100% (10)	100% (16)	100% (8)	

#### Preferred deal terms

The majority of CVC units (41%) used the option *Other* to convey their answer (Table 25). Besides, none of the participants used *dilution protection* as a form of deal term and just a minority of the divisions (3%) used *common shares*.

**Table 25 Preferred deal terms of CVC unit per continent**

Items	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
non-voting board seat	12% (4)	10% (1)	12% (2)	12% (1)	X(df=12) =NaN; p=NaN
voting board seat	12% (4)	10% (1)	19% (3)	12% (1)	
dilution protection	0% (0)	0% (0)	0% (0)	0% (0)	
convertible preferred stock	15% (5)	10% (1)	12% (2)	25% (2)	
liquidation preference	15% (5)	20% (2)	6% (1)	25% (2)	
common shares	3% (1)	0% (0)	6% (1)	0% (0)	
Other (please specify)	41% (14)	50% (5)	44% (7)	25% (2)	

### Open Questions

This section discusses the three open-ended questions from the survey where the CVC managers had the opportunity to give personal insights into their business. The questions dealt with the following aspects:

- Operational challenges of the CVC unit
- Knowledge transfer from portfolio to parent company
- Preferred exit strategy of the CVC unit

The full list of statements can be found in the end of Appendix I. In total 82 % of the survey sample answered the open-ended questions. The highest response rate was from North America (88 %).

### Operational challenges of the CVC unit

CVC divisions were asked to provide their perceptions of the operational challenges they faced.

We organized their feedback into the following categories:

- Parent company
- Strategic versus financial goals
- Cooperation with parent company
- Cooperation with portfolio company
- CVC personnel

### *Parent company*

One CVC unit reported that they were the only investment platform within the corporation's group. Therefore, the parent company demanded high profits from the CVC division. This in turn influenced the CVC investment method considerably.

For another CVC program, it was difficult to balance different parameters of success with the incumbent. A reason for this was because the incumbent expected short term results whereas the unit followed long term results.

Furthermore, a change in leadership in the parent company may require the CVC unit to adopt new strategies based on the wishes of the new management. *“Combining of a business-driven service*

*approach and a self-controlled fund with sometimes opposing investment strategies”* was an additional remark of a venturing unit. The ensuring autonomy from the incumbent and *“building outside in perspective”* was mentioned as a further operational hurdle by one CVC division.

#### *Strategic versus financial goals*

CVC managers encountered obstacles with the parent company strategy. Some parent company demanded strategic investment, which were in the opinion of one CVC program, *“not necessarily good financial investments”*. The right balance of strategic importance and financial measures constituted another key point in terms of the challenges CVC units face.

#### *Cooperation with the parent company*

For some CVC programs, cooperating with other departments within the parent company was challenging. One program admitted that it took time to get all the approvals from departments and subsidiaries in order to work together with portfolio companies. One unit stated in the survey that they encountered *“heavy corporate processes”* while they were required *“to act in a speedy fashion with external partners”*. CVC divisions had to convince, not only the management of the incumbent but also the engineering teams of various departments, in order to conduct investment activities. Getting other departments *“buy in”* could be cumbersome and could slow down the collaboration with potential investees.

One participating CVC unit reported that they were challenged to ensure knowledge transfer between the portfolio company and the incumbent.

#### *Corporation with Portfolio company*

A sudden pivoting of the startup and the resulting adjustment to the change was a reported hurdle conveyed by one program.

A key function of a CVC unit is to mediate between the parent and the portfolio company. One unit admitted that meditating between portfolio and parent company in terms of (different) language and speed constituted a key obstacle to them.

One unit claimed it had difficulties finding startups with strategic relevance to the parent company. The distance between “*today’s business and technology and the investment targets*” was another challenge to overcome when investing into external companies.

#### *CVC personnel*

Programs stated that hiring talented employees and the compensation was a problem in their daily business. They reasoned that there was a risk of losing key people due to the competitive market they were operating in. A unit confessed that they were understaffed in their corporate venture organization.

Another unit summarized the operational challenges in this way: “*As with any traditional VC*”

- “*Deal sourcing*”
- “*Portfolio management*”
- “*Balancing financial imperatives*”
- “*Speedy commercialization of portfolio companies*”.

#### *Preferred exit strategy for CVC units*

Another open-ended question was regarding their favored exit strategy of corporate investments. The most stated exit strategies of the overall population of CVC units were *Trade Sale* with 7 nominations, *Acquisition* with 5, *Initial Public Offering* with 4 followed by *Merger & Acquisitions (M&A)* with 4 nominations. One unit mentioned that they sought a “*long-term exit*” and were more focused on sustainable businesses, generating return on investment via *dividends* and *IPO*. Another division noted that they “*want to gain full control and absorb startups that are strategically important to our business*”. One CVC organization admitted that they preferred high return exits as soon as possible after their investment.

#### *Knowledge transfer from portfolio company to the parent*

Knowledge transfer is a highly sensitive area in the context of corporate venture capital. On one hand the startup needs to protect their IPO from expropriation by the incumbent and on the other hand the CVC unit should ensure value to the incumbent from their investments. The answers in terms of knowledge were considerably diverse. The statements regarding knowledge handover ranged from “*not at all*” to “*direct collaboration with the portfolio companies*”.

CVC units mentioned that knowledge transfer took place indirectly. This meant that the transfer was filtered via the CVC unit through, for example, internal meetings or monthly communications between the stakeholders.

One organization reported, that their practice of transferring knowledge worked through “*proof of concepts*” of the startup’s product in the environment of the incumbent. The CVC divisions frequently mentioned that through collaboration, projects and business unit partnerships’ valuable information got passed on to the corporation.

The knowledge transfer is usually agreed on in contractual arrangements. One unit explained that their knowledge transfers with the startups was written down in separate *business collaboration agreements*.

But not in every corporate venture capital organization knowledge transfer takes place.

One CVC unit admitted that the knowledge transfer does not happen frequently, due to “*risk of IP contamination*”. If stronger collaboration with startups were to take place, a “*non-disclosure agreement (NDA) with a clearly defined purpose*” needed to be signed to protect startups from expropriation of their intellectual property. Only one corporate venturing program confessed that no knowledge transfer takes place with the argument of “*we have Chinese walls*”.

In the next sections, the most striking findings from Asia, Europe and North America will be presented in terms of the generic aspects, unit organization and investment activities.

#### **4.1.2 Findings of Asia**

In our sample, Asian CVC programs were of a relatively young age. The most often mentioned founding year was 2015 and the oldest was 18 years. The industries Asia was investing in the most were *Media and Entertainment* (70 % of respondents) and *Software* (60 %). One alternative sector provided by one organization to the option *Other* was “*Transportation and Auto*”.

Ninety percent of these CVC units invested into the Asian market. One unit explained this decision with the following: “[...] *since now starting a business there is really heated*” and because “*China is a large market to grow a so-called unicorn company*”.

The second highest frequency of investment from Asian programs went to the North American market (70 %). Compared to Asia and North America, Europe received little investment attention from Asian CVC units and ranked equally with Australia (30 %).

Corporate managers stated that their geographical preferences depended on “*easiness to access*” and on where “*most innovative and high growth companies readily available*” were located. Eighty percent of units were given funding support from the incumbent of over 20 million USD. Half of the programs (50 %) were set up as *independent subsidiaries* and one CVC division indicated that they were an “*independent trust reporting to the corporation*”.

Most (60 %) of the CVC organizations hired their personnel externally from VC or CVC firms and only one unit hired their CVC managers internally within corporation.

Seventy percent of Asian units chose *salary+bonus* as the unit compensation.

Half of the Asian (50 %) sample reported directly to the *CEO*. Other divisions stated that they reported to an “*investment committee*”, “*chief strategy officer*” or to an “*independent board*”.

Asian CVC managers communicated most frequently with *industry peers and venture capitalists*. However, they communicated least frequent with *technical/R&D employees from the parent company*.

Programs from Asian countries were very autonomous in terms of *due diligence, termination of deals and financial goals*. The least autonomy could be found in *budgetary planning* and deciding on *strategic goals*.

Asian CVCs communicate most frequently with venture capitalists and senior executives in parent company and the least often with technical/R&D employees in parent company.

They area of support in which startups received help from CVCs that got mentioned most frequently (80 %) was *management* . One CVC unit offered other areas of support to investees such as “*legal, HR, global network*” and “*collaboration with the parent*”.

The rationales behind CVC for Asian programs were *to gain window on emerging technologies* (80 %) and *create new products* (70 %). The investment goal for organizations from Asian countries was *strategic merit with financial profit* (50 %).

Sixty percent of divisions chose *direct investment* as their preferred investment strategy. Forty four percent of Asian divisions invested in an *early stage*. The most often named average investment sum CVCs was 2 to 5 million USD (50 %) with an average investment duration in a deal of 3-7 years. The average investment sum that got chosen most frequently was *2 to 5 million USD* (50%). For CVC units to measure their success of investments success, 33 % of respondents used *financial results* such as *ROI* and *IRR*

Some divisions offered alternative options for measuring success, such as “*interaction with portfolio companies, customer acquisition*”

The most frequently mentioned criterion to invest into a startup firm by Asian respondents was *strategic relevance to the corporation* with 90 %.

#### **4.1.3 Findings of Europe**

In our survey, Europe had the youngest CVC unit across the 3 continents with a founding year in 2017. The most often mentioned founding year was 2009 while 1998 was the earliest year mentioned.

Fifty six percent of European units invested in *Software and Industrial/Energy*. On the other hand, only six percent of units invested in *Media & Entertainment* and *Networking & Equipment*. Additional industries some European units added under *Other* were “*Artificial Intelligence*”, “*Materials & Chemicals*”, “*Cleantech*”, “*Digital Health*”, “*Mobility*” and “*Digital Factory*”.

Most European divisions (94 %) invested into Europe, because of the “*home markets in Europe*” North America received considerable investments from European corporations as well (81 % of European respondents) One CVC division justified their North American investment activity with the argument “*large ecosystems of startups*”. Some divisions correspondingly established their CVC divisions in the North America because the “*majority of relevant startups*” were based there. In contrast, fewer units (25%) invested in the Asian market and no unit, in our European sample, chose Africa for investment. One European CVC manager stated that their division had “*no geographical preference*”, whereas another claimed to invest into countries where “*enough opportunities*” could be found.

Fifty percent of the European divisions established their CVC program as an *independent subsidiary* with a direct reporting line to the parent company. Only 25 % of our European CVC sample did set up their organization as an *integrated business unit in the corporation*. One program explained that they were part of the R&D department and did report directly to the CTO.

CVC units in Europe hired their employees from internal and external sources equally. Thirty-eight percent hired directly from venture capitalist firms or other corporate venture units and 38 % looked within the corporation for suitable investment managers.

The compensation in European divisions showed a distinct picture: 69 % reimbursed their managers with a *salary & bonus* and a considerably lower percentage of 12 % paid with carried interest. Only 6 % of CVC divisions used a combination of “*salary+bonus+carried interest*”.

European division showed a rather diverse reporting line to the parent company. The most reported to function by the divisions was the CTO of the incumbent (25 %). Only 19 % of the participants in the corporate venture capital units report to the CEO and CFO. No division from the sample reported to either the *corporate office strategy/development* or *corporate office R&D*. Some units stated that they reported to the “*Head of Digital*”, “*Board of directors for CVC*”, “*CTO and EVP*” or “*CEO and CFP*”.

The highest level of autonomy was given to European units by incumbents when it came to *due diligence*. On the other hand, CVC units were least autonomous in deciding which portfolio companies to invest in and in planning their budgets. Ninety percent of units were given funding support from the incumbent of over 20 million USD.

Startups received management support from most European companies (62% of respondents). Fifty percent of units did offer help in the form of *R&D or manufacturing personnel*. Other forms of support provided by European divisions included *customer* and *channel access*. One program admitted that there was no support available from the parent company. They claimed that the support to the startup came directly from the CVC program in terms of *contacts, management* and *strategy*.

The reasoning behind CVC according to our European respondents can be summarized as follows: 80% of units sought to *gain window on emerging technologies*, 63% worked to *gain window on new markets* and 50% were motivated by *improvement of firm innovative efforts* or *creation of new products*.

A significant share (75 %) of European divisions pursued *strategic merit with financial profit* as their investment goal. Equally 12 % of them followed either only *strategic* or *financial objectives*. *Direct investment* was the favored investment strategy for half of the European sample (50 %). However, no unit invested indirectly through a venture capital fund. *Two to five million USD* is the average investment amount for 62 % of European CVC programs while 25 % invested a higher amount of *5 – 10 million USD*.

The average investment phase from the initial funding till the exit was for 44 % of the divisions *5-7 years*. The investment stage for 38 % was *early stage* and for 31 % was *startup stage*.

Half of the European CVC units (50 %) measured their investment success through *financial results*. Thirty one percent provided “*strategic benefits & financial return*”, and “*partnerships between the portfolio company and parent company*” as their tool to evaluate investment success.

The investment criteria when screening a startup firm were *experience management team* (100 %), *strategic relevance to the corporation* (81 %) and *investment range and location* (80 %). Only 20 % set their value on *board observation rights*.

#### **4.1.4 Findings of North America**

The oldest North American CVC unit was 26 years old and was the oldest among all participating units in the survey. The most often mentioned founding year was 2008 and the average founding year was 2002. The industry that North American units (62 % of respondents) most invested to was *Software*. Fifty percent of units invested into *Telecommunications* and *Industrial/Energy*. Other alternatives CVC units mentioned were “*Sustainable Materials & Chemistries*” and “*Food & Agriculture*”.

Every North American CVC unit was investing in the North American market.. Sixty-two percent invested in Europe and 50 % in Asian countries. The continents that received no investments from North America were *Africa, Central and South America*. One CVC unit stated that they “*preferred the best deals*” regardless of the geographical location. Another unit mentioned that they favored “*proximity to headquarter*” because of the “*ability to work more closely with the portfolio companies*”.

Half of the CVC programs (50 %) were integrated business units in the corporation while 38 % were established independent subsidiaries. One unit noted that their investment team “sits in the Strategy & Corporate Development team”.

Fifty percent of the CVC managers got hired internally and all programs (100 %) compensated their employees with *salary+bonus*. Thirty eight percent of CVCs reported to their *corporate office strategy/developments* while *twenty five percent reported to their CFOs*. A North American unit commented that they were part of the” *CFO &EVP of Strategy*”.

The divisions were least autonomous in deciding on their *strategic goals* and in planning their budget. However, they had more freedom to decide on *termination of deals* and in which deal to invest in.

North American divisions communicated most frequently with *technical/R&D employees in parent* and the least often with *industry peers*.

The majority (70 %) of CVC units supported their investees with *management support* and 50 % of units did offer support with *R&D or manufacturing personnel* and *marketing*. Some units added

that they further offered help with “strategic fit”, “*go to market strategy and execution*” and “*commercialization within parent company of CVC unit*”.

All units mentioned *gain window on emerging technologies* as their rationale for CVC investment. Eighty eight percent mentioned *Creating new products* and 75 percent mentioned *gain window on new markets*.

One investment goal chosen by 50 % of the North American participants was *strategic objective*, followed by *strategic merit with financial profit* (25% of respondents). Some divisions (25 %) indicated they pursued a blend of strategic and financial goals.

The favored investment strategies for the corporate investors were *investment in a syndicate*, where the CVC unit does not have the lead (50 % of respondents) and *direct investment* (38 %). Thirty eight percent of respondents had an average investment amount of *2-5 million USD*. A second group of thirty eight percent mentioned an amount of *5-10 million USD*.

Thirty eight percent of units scouted potential startups from *venture capitalists*. Some venture managers added that they would use “*personal network*” or their “*global scouting team*” as a source. In our sample, 62% of north American units invested in the *early stage*. As a measurement tool for investment success some CVC units stated *strategic value* and the *financial results*.

All North American participants claimed that the most important investment criteria when screening an investee is *strategic relevance to the corporation*. Furthermore, the *experience of management team* was also claimed as an important criterion (75 % of respondents).

#### **4.1.5 Summary of the Findings**

The thesis was designed to answer the following research questions:

4. How do corporations from different cultural backgrounds conduct corporate venture capital programs?
5. What are the significant alterations in corporate venture capital operations?
6. What are similarities across continents of global corporate venture capital in terms of unit organization and investment activity?

In the following sections, the answers to the research questions based on the findings from the questionnaire will be presented.

## **Research Question I**

The extensive description of the results of our questionnaire, first on a global level and second broken down per continent (Asia, Europe, North America), answers the first research questions of how CVC is conducted from culturally distinct countries.

## **Research Question II**

In this section, the difference of global CVC in terms of unit organization and investment activity will be outlined.

### Unit organization

The organizational forms of CVCs in the three continents exhibited significant differences. For example, Asian and European CVC divisions were set up to 50 % as *independent subsidiaries*. In contrast, 50 % of North American organizations were *integrated business units* in the parent company.

### Source of CVC employees

In Asia, 60% of CVC managers got hired from external sources such as other CVC divisions or VC firms. The majority (50 %) of North Americans hired internally within the incumbent.

### Reporting line to the incumbent

Half of the Asian CVC divisions reported to the CEO and the other half to different other functions. Whereas in North America and Europe the data showed no majority in terms of reporting line. The data was spread across the various answer options.

### Autonomy

Regarding autonomy, the data showed that Europe was in termination of deals, IPO of business venture, investment into a deal and budgetary planning the least autonomous continent. The most autonomy from the incumbent to the CVC unit was granted to Asian organizations.

### Investment goals

The majority of European divisions and half of the Asian respondents indicated that their investment goal was *strategic merit with financial profit*. However, half of the participants from North America indicated *strategic objectives* as their investment goal.

### Investment strategy

Half of the Asian and European respondents conducted *direct investments*. In contrast, half of the North American units invest in a *syndicate where CVC unit does not have the lead*.

## **Research Question III**

After the outlining the differences between the study groups, the following sections consider the similarities in conducting corporate venture capital.

### Compensation

The reimbursement of CVC personnel was for most the organizations in all continents *salary and bonus*.

### Support for portfolio company

A large number of CVC organizations across the continents provided support in terms of *management and consulting*.

### Rationale behind CVC investments

As a rationale for CVC investments, a considerable number of participants mentioned *gaining window on new markets*, followed by the *gaining window on emerging technologies* and *creating new products*.

### Investment stage

Most of the corporate venture units in all three continents indicated that they invested into the *early stage of a startup*.

### Investment criteria

To a significant majority, the most important investment criterion when screening a portfolio company is *strategic relevance of the corporation*, followed by *experience of the management team of the startup*.

## **5 Discussion and Conclusion**

In this final chapter, we aim to put the key results of this work in perspective. First, the main findings are summarized and discussed. Second, building on the discussion, the theoretical contributions of the thesis are recognized and implications for practice are pointed at. Third, the limitations of this work are described. Finally, the chapter ends with suggestions for future research that can further shed the light on such questions.

### **5.1 Discussion of Findings**

In the last decade, corporate venture capital gained a lot of recognition as a crucial method to complement external venturing. Multiple researchers did put a lot of effort to understand the strategic and financial motivations behind corporate venture capital (Chesbrough, 2002; Wadhwa & Kotha, 2006; Allen & Hevert, 2007; Dushnitsky, 2008; Gaba & Meyer, 2008; Basu et. al., 2011). Some of the work aimed at shedding the light on corporate investors' characteristics (Basu et. al., 2011; Gaba & Meyer, 2008), accomplished outcomes through CVC in terms of strategic (Basu et. al., 2011; Dushnitsky & Lenox, 2005b; Keil, 2000; Wadhwa & Kotha, 2006) and financial returns (Allen & Hevert, 2007; Dushnitsky & Shapira 2010; Yang et al., 2009).

In the attempt to provide a multi-faceted picture of this external venturing method, CVC was also examined from both the investor's perspective (Chesbrough, 2002; Wadhwa & Kotha, 2006; Allen & Hevert, 2007; Dushnitsky, 2008; Gaba & Meyer, 2008; Basu et. al., 2011) and the portfolio company's perspective (McNally, 1997; Chesbrough, 2002; Katila et al., 2008; Dushnitsky & Shaver 2009; Gompers & Lerner, 1998).

One of the main goals of this study was to examine whether differences in CVC activities across continents exist. This research complements the literature concerned with understanding corporate venture capital from a global perspective. A questionnaire was designed to compare units from culturally distinct countries and to help answer the research questions.

While not all the results showed substantial differences among continents, some differences and similarities that got presented in the CVC literature are interesting to illustrate.

For example, incumbents tend to look for ventures in industries that resemble their own (Sykes, 1986; Dushnitsky & Lenox, 2005a). We extend this argument by suggesting that corporations invest the majority of their equity in the same sectors they are operating in and not only into a resembling sector.

Corporations seek corporate venture capital not solely for financial purposes, but also for strategic reasons (Block & MacMillan, 1993; Chesbrough, 2002; Battistini et al., 2013). Our work confirms this argument as *strategic merit with financial profit* or *strategic objectives* were frequently mentioned in our population.

The goals of CVC units are similar, regardless of the investment strategies (direct, indirect) they have decided on (Sykes, 1990). Our research suggests that, overall, CVC units had similar motivations and goals pursuing CVC even though continents pursued either direct or indirect investments.

Researchers stated that the best reimbursement method for corporate VC managers were company salaries (Birkinshaw et al., 2012). Researchers observed that corporate salaries predominated in previous years and bonuses tied to strategic and financial goals were becoming more common (Dushnitsky, 2006). The findings of this study concur with this argument because most CVC employees, in our sample, received *salary and bonus*. Other forms of compensation, such as carried interest, are not commonly used (Dushnitsky, 2006; McMillan, 2008). We found similar results since only a small number of CVC managers, in our sample, got compensated with carried interest.

## **5.2 Contribution to Research**

This thesis contributes to research on corporate venture capital in two ways:

First, this study describes corporate venture capital units conducted in different continents based on primary data. Most studies based their results on either quantitative data or case studies. Only a handful of studies on external corporate venturing were conducted using primary data.

Second, most of the collected data originated from the Anglo-American countries. Even though empirical studies of CVC had focused on individual countries, almost no study captured various countries from different continents in their population and compared them with each other.

Furthermore, this work examined CVC from different angles in terms of unit organization and investment activities. The thesis structured and summarized the important aspects of CVC and put the findings from different continents into context.

### **5.3 Limitations**

Several limitations to this work are worth mentioning. First, this study was conducted only on a small sample. Therefore, to generalize the results for larger groups, the study should have involved more participants from different countries. A larger sample size could lead to statistically stronger results.

Second, the populations per continent were imbalanced in terms of size and operating industry. We only managed to get 8 participants from North America and 10 from Asia. In contrast, Europe had a larger population of 16. The participants of this thesis were operating in different industries and the variation in sectors could have implications for our findings.

Finally, due to the limitation of part-time MBA study and full-time work, the research survey was open for a relatively brief period of 3 months. More time for collecting data would have resulted in a larger sample.

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# Appendix

## Appendix I Questions of the survey including the results

### What year was the corporate venture capital unit founded?

*Table I founding year of CVC units*

All Continents (n 34)				
mode	average	median	minimum	maximum
2015	2009	2010	1991	2017
North America (n 8)				
mode	average	median	minimum	maximum
2008	2002	2002	1991	2013
Europa (n 16)				
mode	average	median	minimum	maximum
2009	2010	2010	1998	2017
Asia (n 10)				
mode	average	median	minimum	maximum
2015	2012	2015	1999	2016

## In what industries is the corporate venture unit investing?

*Table II Investing industries of CVC units per continent*

Items	(all) (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chisq.test
Software	59% (20)	60% (6)	56% (9)	62% (5)	X(df=2)=0.09; p=.954
Biotechnology	15% (5)	20% (2)	12% (2)	12% (1)	X(df=2)=0.32; p=.854
Medical Devices and Equipment	21% (7)	40% (4)	12% (2)	12% (1)	X(df=2)=3.27; p=.195
Telecommunications	32% (11)	50% (5)	12% (2)	50% (4)	X(df=2)=5.44; p=.066
Semiconductors	21% (7)	10% (1)	19% (3)	38% (3)	X(df=2)=2.12; p=.347
Industrial/Energy	50% (17)	40% (4)	56% (9)	50% (4)	X(df=2)=0.65; p=.723
Media and Entertainment	32% (11)	70% (7)	6% (1)	38% (3)	X(df=2)=11.55; p=.003
Networking and Equipment	21% (7)	30% (3)	6% (1)	38% (3)	X(df=2)=3.95; p=.139
IT Services	35% (12)	60% (6)	25% (4)	25% (2)	X(df=2)=3.79; p=.151
Electronics/Instrumenta- tion	32% (11)	30% (3)	38% (6)	25% (2)	X(df=2)=0.42; p=.812
Consumer Products and Services	38% (13)	60% (6)	31% (5)	25% (2)	X(df=2)=2.93; p=.231
Financial Services	29% (10)	60% (6)	19% (3)	12% (1)	X(df=2)=6.48; p=.039
Healthcare	24% (8)	40% (4)	19% (3)	12% (1)	X(df=2)=2.25; p=.324
Retailing/Distribution	21% (7)	40% (4)	19% (3)	0% (0)	X(df=2)=4.41; p=.110
Other (please specify)	24% (8)	10% (1)	31% (5)	25% (2)	X(df=2)=1.56; p=.459

*Table III Investing industries of CVC units per operating industry*

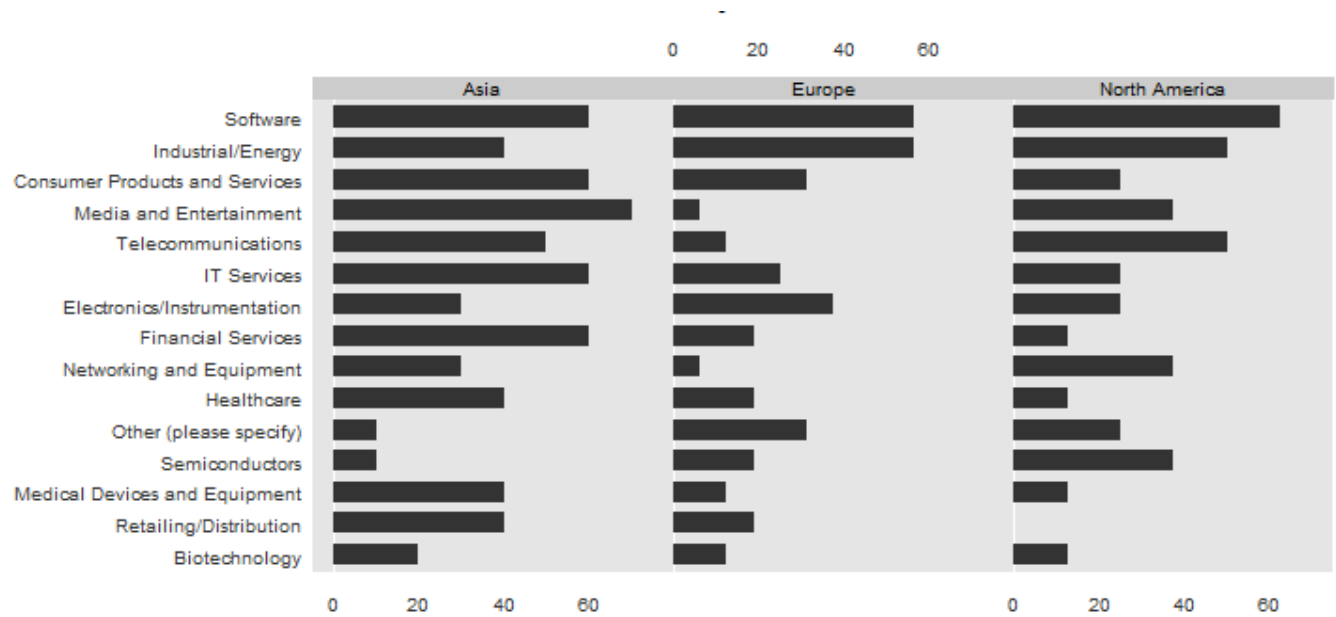
Items	(all) (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, En- ergy (n=9)	Technology, Media & Telecommunica- tion (n=14)	chisq.test
Software	59% (20)	55% (6)	44% (4)	71% (10)	X(df=2)=1.77; p=.413
Biotechnology	15% (5)	18% (2)	11% (1)	14% (2)	X(df=2)=0.20; p=.905

Items	(all) (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	chisq.test
Medical Devices and Equipment	21% (7)	27% (3)	22% (2)	14% (2)	X(df=2)=0.66; p=.721
Telecommunications	32% (11)	36% (4)	11% (1)	43% (6)	X(df=2)=2.64; p=.267
Semiconductors	21% (7)	9% (1)	22% (2)	29% (4)	X(df=2)=1.45; p=.484
Industrial/Energy	50% (17)	45% (5)	89% (8)	29% (4)	X(df=2)=8.11; p=.017
Media and Entertainment	32% (11)	18% (2)	0% (0)	64% (9)	X(df=2)=11.84; p=.003
Networking and Equipment	21% (7)	18% (2)	11% (1)	29% (4)	X(df=2)=1.08; p=.583
IT Services	35% (12)	27% (3)	11% (1)	57% (8)	X(df=2)=5.54; p=.063
Electronics/Instrumentation	32% (11)	27% (3)	56% (5)	21% (3)	X(df=2)=3.11; p=.212
Consumer Products and Services	38% (13)	64% (7)	11% (1)	36% (5)	X(df=2)=5.85; p=.054
Financial Services	29% (10)	36% (4)	0% (0)	43% (6)	X(df=2)=5.23; p=.073
Healthcare	24% (8)	18% (2)	33% (3)	21% (3)	X(df=2)=0.69; p=.708
Retailing/Distribution	21% (7)	9% (1)	11% (1)	36% (5)	X(df=2)=3.34; p=.188
Other (please specify)	24% (8)	9% (1)	56% (5)	14% (2)	X(df=2)=7.07; p=.029

**Table IV Answer to option “Other” revealed per continent**

Description <i>Other</i>	Asia (n=1; 10%)	Europe (n=5; 31 %)	North America (n=2; 25 %)
	Transportation and auto	Robotics, AI	Chemicals and materials
		Materials & Chemicals	Sustainable materials & chemistries; Food & Agriculture
		Cleantech	
		Digital health, agro	
		Digital Factory, Mobility, Building Technologies	

**Figure I Investing industries of CVC units per continent (in percent)**



*Figure II Investing industries of CVC units per industry (in percent)*



**What is the geographical preference of investment and what is the reason for this choice?  
Please check all that apply.**

*Table V Geographical preference of investment per continent*

Items	(all) (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chisq.test
Asia	50% (17)	90% (9)	25% (4)	50% (4)	X(df=2)=10.40; p=.006
Australia	15% (5)	30% (3)	6% (1)	12% (1)	X(df=2)=2.81; p=.246
Europe	68% (23)	30% (3)	94% (15)	62% (5)	X(df=2)=11.55; p=.003
Middle East	15% (5)	10% (1)	19% (3)	12% (1)	X(df=2)=0.42; p=.812
Africa	3% (1)	10% (1)	0% (0)	0% (0)	X(df=2)=2.47; p=.290
North America	82% (28)	70% (7)	81% (13)	100% (8)	X(df=2)=2.78; p=.249
Central America	6% (2)	10% (1)	6% (1)	0% (0)	X(df=2)=0.81; p=.667
South America	6% (2)	10% (1)	6% (1)	0% (0)	X(df=2)=0.81; p=.667

*Table VI Geographical preference of investment per operating industry*

Items	(all) (n=34)	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	chisq.test
Asia	50% (17)	64% (7)	33% (3)	50% (7)	X(df=2)=1.82; p=.403
Australia	15% (5)	36% (4)	0% (0)	7% (1)	X(df=2)=6.30; p=.043
Europe	68% (23)	73% (8)	89% (8)	50% (7)	X(df=2)=3.98; p=.137
Middle East	15% (5)	18% (2)	22% (2)	7% (1)	X(df=2)=1.15; p=.563
Africa	3% (1)	9% (1)	0% (0)	0% (0)	X(df=2)=2.15; p=.341
North America	82% (28)	100% (11)	89% (8)	64% (9)	X(df=2)=5.77; p=.056
Central America	6% (2)	18% (2)	0% (0)	0% (0)	X(df=2)=4.44; p=.108
South America	6% (2)	18% (2)	0% (0)	0% (0)	X(df=2)=4.44; p=.108

*Figure III Geographical preference per continent (in percent)*

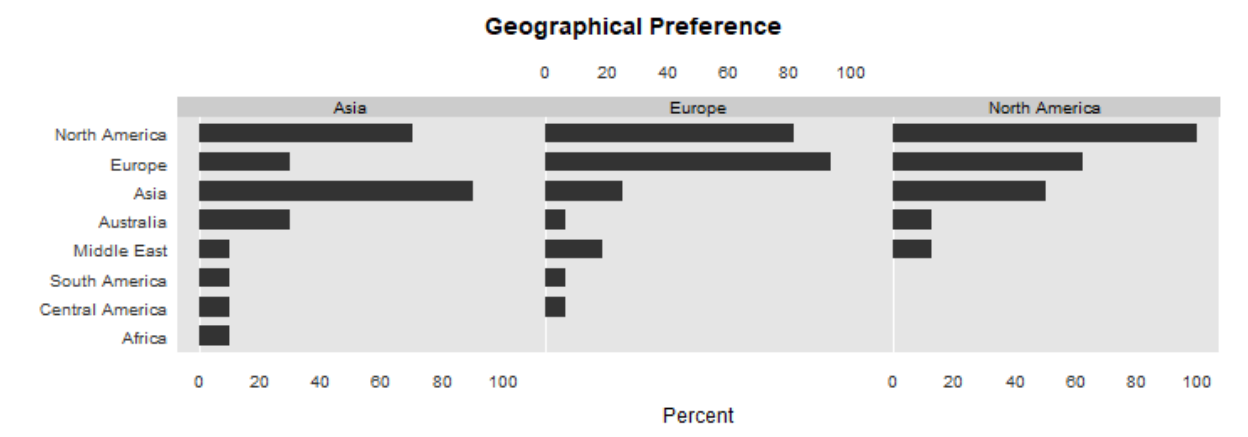


Figure IV Geographical preference per industry (in percent)

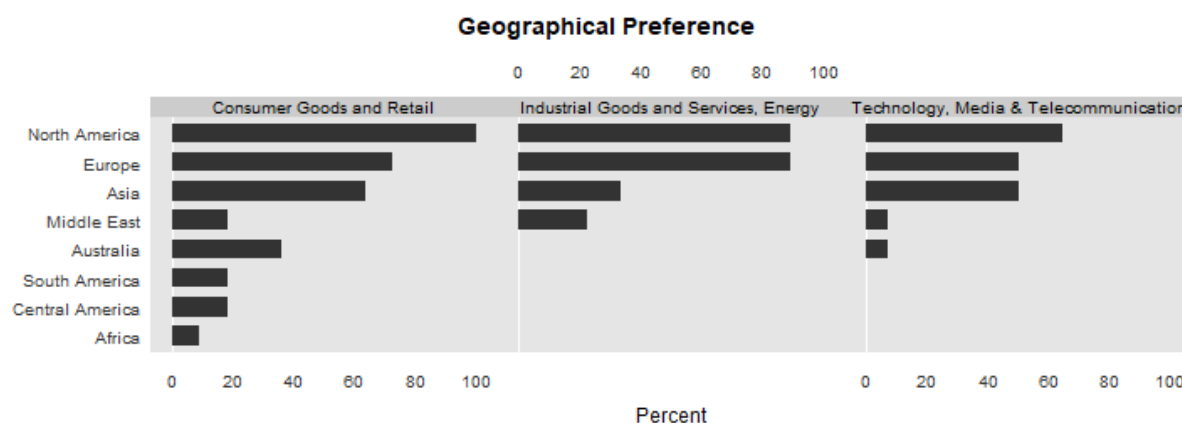


Table VII Answer to option “Other” revealed per continent

Descrip- tion <i>Other</i>	Asia (n=4)	Europe (n=8)	North America (n=5)
	Most of our investment is based in China, since now starting a business is really heated. Last year, almost 2,000 cases were invested through venture capital. China is a large market to grow a so-called unicorn company.	US most active ecosystem, EU strong presence	We prefer the best deals no matter where they are at in the developed world.
	Because our current interests are on AgTech, Robotics and Urban Mobility (Smart City)	Home markets in Europe and large start up eco system in North America	Based in NA, invest globally.
	High growth companies readily available	enough opportunities	Proximity to HQ, ability to work more closely with the portfolio companies
	Due to the mandate and source of fund.	No geographical preference	Headquarter in USA with major markets in Japan & Europe & Australia
	Most innovative companies	That's where the majority of the relevant start-ups are based, and subsequently the corporate VC offices.	

Easiness to access and maintenance	high-tech regions, financial & independent venture capitalists, focus areas of the business
Israel	Capability to evaluate deal flow and to monitor investments Geographies where parent is present

## Under which organizational form is the corporate venture capital unit structured?

*Table VIII Organizational form of CVC program per continent*

Items	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
independent subsidiary company (reporting to corporation)	50% (5)	50% (8)	38% (3)	X(df=6)=3.57; p=.735
integrated business unit in corporation	20% (2)	25% (4)	50% (4)	
independent partnership	20% (2)	19% (3)	0% (0)	
other (please specify)	10% (1)	6% (1)	12% (1)	

*Table VII Answer to option "Other" revealed per continent*

Descrip- tion Other	Asia (n=1)	Europe (n=1)	North America (n=1)
-Independent Trust reporting to corporation	-	Part of R&D; report to CTO	- We invest off the balance sheet; the venture investment team sits in the Strategy & Corporate Development team. Our investment committee are select members of the CEO staff. The Venture team sponsors the investments.

## What is the source of corporate venture capital unit employees?

*Table IX Source of CVC unit employees per continent*

Items	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
hired externally from VC or CVC firms	60% (6)	38% (6)	25% (2)	X(df=4)=3.93; p=.415
hired internally within corporation	10% (1)	38% (6)	50% (4)	

Items	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
hired externally outside of VC or CVC firms	30% (3)	25% (4)	25% (2)	

*Table X Source of CVC unit employees per operating industry*

Items	Consumer Goods and Re- tail (n=11)	Industrial Goods and Services, En- ergy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
hired externally from VC or CVC firms	27% (3)	22% (2)	64% (9)	X(df=4)=6.68; p=.154
hired internally within corporation	36% (4)	56% (5)	14% (2)	
hired externally outside of VC or CVC firms	36% (4)	22% (2)	21% (3)	

**How many employees are working in the corporate venture capital unit? Please indicate a number.**

*Table XI Headcounts of CVC divisions all continents*

All			
mode	average	minimum	maximum
5	19	3	120
North America			
mode	average	minimum	maximum
#N/A	24	3	120
Europa			
mode	average	minimum	maximum
4	15	4	100
Asia			
mode	average	minimum	maximum
5	22	5	90

**How are the corporate venture capital unit employees compensated?**

*Table XII Compensation of CVC unit employees per continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
salary	6% (2)	0% (0)	12% (2)	0% (0)	X(df=8) =NaN; p=NaN
bonus	0% (0)	0% (0)	0% (0)	0% (0)	

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
salary + bonus	76% (26)	70% (7)	69% (11)	100% (8)	
carried interest	9% (3)	10% (1)	12% (2)	0% (0)	
Other (please specify)	9% (3)	20% (2)	6% (1)	0% (0)	

*Table XIII Compensation of CVC unit employees per operating industry*

Description	Con- sumer Goods and Re- tail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
salary	0% (0)	11% (1)	7% (1)	X(df=8)=NaN; p=NaN
bonus	0% (0)	0% (0)	0% (0)	
salary + bonus	91% (10)	89% (8)	57% (8)	
carried interest	9% (1)	0% (0)	14% (2)	
Other (please specify)	0% (0)	0% (0)	21% (3)	

*Table XIV Answer to option “Other” revealed per continent*

Description <i>Other</i>	Asia (n=2)	Europe (n=1)	North America (n=0)
		- salary+bonus+car- ried interest	
- salary+carry			
- Mix of salary, bonus and profit sharing			

**Who, in parent company, is the corporate venture capital unit reporting to?**

*Table XV Reporting line to parent company per continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Signifi- cance Test
CEO	26% (9)	50% (5)	19% (3)	12% (1)	X(df=12) =NaN; p=NaN
CFO	15% (5)	0% (0)	19% (3)	25% (2)	
CTO	15% (5)	0% (0)	25% (4)	12% (1)	
corporate office strategy/de- velopment	26% (9)	20% (2)	0% (0)	38% (3)	
corporate office finance	3% (1)	0% (0)	6% (1)	0% (0)	
corporate office R&D	0% (0)	0% (0)	0% (0)	0% (0)	
Other (please specify)	26% (9)	30% (3)	31% (5)	12% (1)	

*Table XVI Reporting line to parent company per operating industry*

Description	Consumer Goods and Retail (n=11)	Industrial Goods and Services, En- ergy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
CEO	27% (3)	22% (2)	29% (4)	X(df=12)=NaN; p=NaN
CFO	18% (2)	0% (0)	21% (3)	
CTO	9% (1)	33% (3)	7% (1)	
corporate office strategy/develop- ment	9% (1)	11% (1)	21% (3)	
corporate office finance	9% (1)	0% (0)	0% (0)	
corporate office R&D	0% (0)	0% (0)	0% (0)	
Other (please specify)	27% (3)	33% (3)	21% (3)	

*Table XVII Answer to option “Other” revealed per continent*

Description Other	Asia (n=3;3%)	Europe (n=5;31%)	North America (n=1;12%)
- invest- ment commit- tee		- CEO & CFO - CTO, EVP	- CFO & EVP of Strategy
- CSO			

- Independent board
- CTO, CFO, board member sales; head of strategy
- Board of directors for CVC
- Head of Digital

### How often does the corporate venture capital unit communicates with the following?

*Table XVIII Frequency of communication per continent*

Items	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
senior executives	4.30 (0.82)	4.25 (0.86)	4.25 (0.71)	F(df=2;31)=0.03; p=.975
executives from	3.80 (0.79)	4.25 (0.93)	4.25 (0.71)	F(df=2;31)=1.27; p=.294
technical/R&D	2.90 (1.20)	4.25 (0.68)	4.50 (0.53)	F(df=2;31)=9.37; p=.001
venture Capitalist	4.60 (0.70)	4.69 (0.60)	4.25 (0.71)	F(df=2;31)=1.56; p=.227
industry peers	4.30 (0.67)	4.44 (0.81)	3.75 (0.71)	F(df=2;31)=2.49; p=.099

*Table XIX Frequency of communication per operating industry*

Items	Consumer Goods and Retail (n=11)	Industrial Goods and Services, Energy (n=9)	Technology, Media & Telecommunication (n=14)	Significance Test
senior executives	4.64 (0.50)	3.67 (0.87)	4.36 (0.74)	F(df=2;31)=4.04; p=.028
executives from	4.45 (0.82)	4.00 (1.00)	3.93 (0.73)	F(df=2;31)=1.61; p=.216
technical/R&D	4.00 (1.00)	4.33 (0.71)	3.57 (1.22)	F(df=2;31)=1.37; p=.270
venture Capitalist	4.82 (0.40)	4.44 (0.73)	4.43 (0.76)	F(df=2;31)=1.18; p=.320
industry peers	4.00 (0.89)	4.22 (0.83)	4.43 (0.65)	F(df=2;31)=0.76; p=.477

*Figure V Frequency of communication per continent (in percent)*

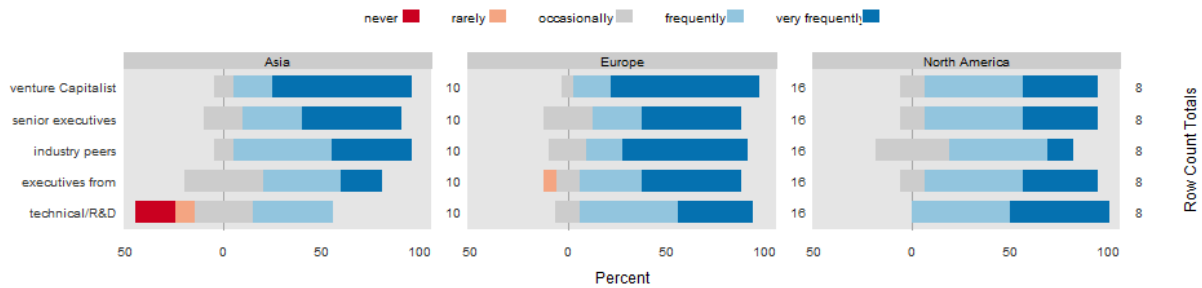
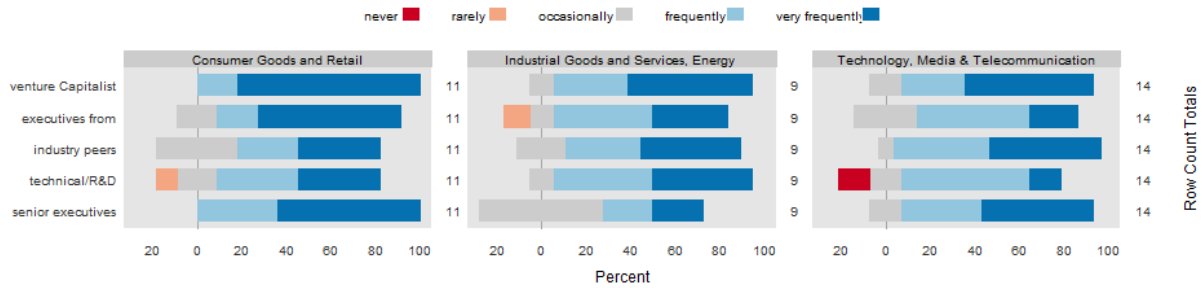


Figure VI Frequency of communication per industry (in percent)



Please specify how autonomous the corporate venture capital unit is regarding the following decisions:

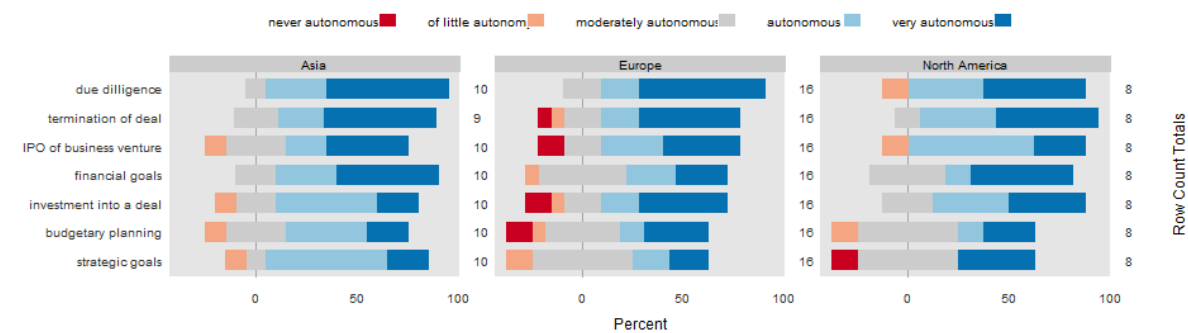
Table XX Autonomy of CVC unit per continent

Items	n	Asia (n=10)	n	Europe (n=16)	n	North America (n=8)	Significance Test
due dilligence	10	4.50 (0.71)	16	4.44 (0.81)	8	4.25 (1.04)	F(df=2;31)=0.12; p=.885
investment into a deal	10	3.80 (0.92)	16	3.75 (1.44)	8	4.12 (0.83)	F(df=2;31)=0.20; p=.821
termination of deal	9	4.33 (0.87)	16	4.00 (1.26)	8	4.38 (0.74)	F(df=2;30)=0.16; p=.850
IPO of business venture	10	3.90 (1.10)	16	3.81 (1.33)	8	4.00 (0.93)	F(df=2;31)=0.01; p=.992
strategic goals	10	3.90 (0.88)	16	3.44 (0.96)	8	3.50 (1.41)	F(df=2;31)=0.85; p=.438
financial goals	10	4.30 (0.82)	16	3.69 (0.95)	8	4.12 (0.99)	F(df=2;31)=1.44; p=.252
budgetary planning	10	3.70 (0.95)	16	3.44 (1.36)	8	3.50 (1.07)	F(df=2;31)=0.13; p=.881

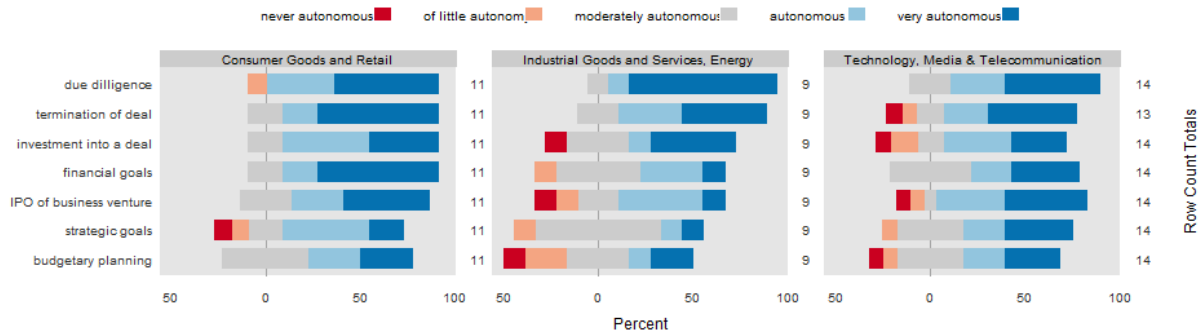
**Table XXI Autonomy of CVC unit per continent**

Items	n	Consumer Goods and Retail (n=11)	n	Industrial Goods and Services, Energy (n=9)	n	Technology, Media & Telecommunication (n=14)	Significance Test
due diligence	11	4.36 (0.92)	9	4.67 (0.71)	14	4.29 (0.83)	F(df=2;31)=0.79; p=.462
investment into a deal	11	4.18 (0.75)	9	3.78 (1.39)	14	3.64 (1.28)	F(df=2;31)=0.42; p=.660
termination of deal	11	4.45 (0.82)	9	4.22 (0.83)	13	3.92 (1.32)	F(df=2;30)=0.52; p=.602
IPO of business venture	11	4.18 (0.87)	9	3.33 (1.22)	14	4.00 (1.24)	F(df=2;31)=1.62; p=.214
strategic goals	11	3.55 (1.21)	9	3.22 (0.83)	14	3.86 (1.03)	F(df=2;31)=1.21; p=.311
financial goals	11	4.45 (0.82)	9	3.44 (0.88)	14	3.93 (0.92)	F(df=2;31)=3.22; p=.054
budgetary planning	11	3.82 (0.87)	9	3.11 (1.36)	14	3.57 (1.22)	F(df=2;31)=0.83; p=.444

**Figure VII Autonomy of CVC unit per continent (in percent)**



**Figure VIII Autonomy of CVC unit per industry (in percent)**



## How much is the funding support provided by the parent company?

*Table XXII Funding support of parent company by continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)
Less than \$ 1M	0% (0)	0% (0)	0% (0)	0% (0)
\$ 1M to \$ 3M	3% (1)	0% (0)	6% (1)	0% (0)
\$ 3 M to \$ 5 M	0% (0)	0% (0)	0% (0)	0% (0)
\$ 5 M to \$ 10 M	3% (1)	0% (0)	0% (0)	13% (1)
\$ 10 M to \$ 20 M	6% (2)	25% (2)	0% (0)	0% (0)
over \$ 20 M	71% (24)	80% (8)	94% (15)	13% (1)

*Table XXIII Funding support of parent company by operating industry*

Description	Consumer Goods and Retail (n=11)	Industrial Goods and Ser- vices, Energy (n=9)	Technology, Media & Telecommunication (n=14)
Less than \$ 1M	0% (0)	0% (0)	0% (0)
\$ 1M to \$ 3M	0% (0)	0% (0)	7% (1)
\$ 3 M to \$ 5 M	0% (0)	0% (0)	0% (0)
\$ 5 M to \$ 10 M	0% (0)	0% (0)	7% (1)
\$ 10 M to \$ 20 M	0% (0)	0% (0)	14% (2)
over \$ 20 M	100% (11)	100% (9)	71% (10)

## What are the most important areas of support for the portfolio company? Please check all that apply.

*Table XXIV Areas of support for portfolio company per continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chi-sq.test
management (executive contacts, consulting)	71% (24)	80% (8)	62% (10)	75% (6)	X(df=2) =1.01; p=.605
R&D or manufacturing personnel	41% (14)	20% (2)	50% (8)	50% (4)	X(df=2) =2.62; p=.269
usage of test labs or similar facilities in the corporation	26% (9)	10% (1)	31% (5)	38% (3)	X(df=2) =2.08; p=.353

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	chi-sq.test
marketing (suppliers, sales force, channels)	44% (15)	50% (5)	38% (6)	50% (4)	X(df=2) =0.54; p=.765
Other (please specify)	32% (11)	20% (2)	38% (6)	38% (3)	X(df=2) =0.99; p=.610

*Table XXV Areas of support for portfolio company per continent*

Description	All (n=34)	Consumer Goods and Re- tail (n=11)	Industrial Goods and Services, En- ergy (n=9)	Technology, Media & Telecommunica- tion (n=14)	chisq.test
management (executive contacts, consulting)	71% (24)	82% (9)	56% (5)	71% (10)	X(df=2) =1.65; p=.438
R&D or manufacturing personnel	41% (14)	55% (6)	56% (5)	21% (3)	X(df=2) =3.83; p=.147
usage of test labs or similar facilities in the corporation	26% (9)	45% (5)	33% (3)	7% (1)	X(df=2) =4.94; p=.085
marketing (suppliers, sales force, channels)	44% (15)	45% (5)	33% (3)	50% (7)	X(df=2) =0.63; p=.730
Other (please specify)	32% (11)	27% (3)	56% (5)	21% (3)	X(df=2) =3.11; p=.212

*Table XXVI Answer to option “Other” revealed per continent*

Descrip- tion Other	Asia (n=2;20%)	Europe (n=6;38%)	North America (n=3;38%)
	- Legal, HR, global networks, business practices, operations	- No support almost from mother-ship. Support from us directly with contacts, management, strategy	- commercialization within parent company of CVC unit
	- Collaboration with parent company	- Channel access	- Strategic fit
		- Hosting pilots, demos on our manufacturing sites	- go to market strategy and execution
		- Fundraising, coaching, business development	

- launching customer, board presence
- customer access

**What are the reasons for the corporate venture capital unit to pursue corporate venture capital? Please check all that apply.**

*Table XXVII Reasons for corporate venture capital*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)
gain window on new markets	65% (22)	60% (6)	63% (10)	75% (6)
gain window on emerging technologies	85% (29)	80% (8)	81% (13)	100% (8)
create new product(s)	65% (22)	70% (7)	50% (8)	88% (7)
improve firm innovative efforts	47% (16)	30% (3)	50% (8)	62% (5)

**What investment goal is the corporate venture capital unit pursuing?**

*Table XXVIII Investment goal of CVC unit per continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
strategic objective	29% (10)	40% (4)	12% (2)	50% (4)	X(df=6) =13.03; p=.043
financial objective	9% (4)	10% (1)	12% (2)	0% (0)	
strategic merit with financial profit	56% (19)	50% (5)	75% (12)	25% (2)	
Other (please specify)	6% (2)	0% (0)	0% (0)	25% (2)	

**Table XXIX Investment goal of CVC unit per operating industry**

<b>Description</b>	<b>Consumer Goods and Retail (n=11)</b>	<b>Industrial Goods and Services, Energy (n=9)</b>	<b>Technology, Media &amp; Telecommunication (n=14)</b>	<b>Significance Test</b>
strategic objective	55% (6)	11% (1)	21% (3)	X(df=6) =11.33; p=.079
financial objective	0% (0)	0% (0)	21% (3)	
strategic merit with financial profit	36% (4)	89% (8)	50% (7)	
Other (please specify)	9% (1)	0% (0)	7% (1)	

**Table XXX Answer to option “Other” revealed per continent**

<b>Description Other</b>	<b>North America (n=2;6%)</b>
- combination of strategic and financial goals	
- Strategic, Financial, Enviro/Social Impact	

**What is the preferred investment strategy of the corporate venture capital unit?**

**Table XXXI Preferred investment strategy of CVC program per continent**

<b>Description</b>	<b>Asia (n=10)</b>	<b>Europe (n=16)</b>	<b>North America (n=8)</b>	<b>Significance Test</b>
direct investment	60% (6)	50% (8)	38% (3)	X(df=8) =NaN; p=NaN
investment in a syndicate (where CVC unit does not have the lead)	10% (1)	19% (3)	50% (4)	
investment in a syndicate (where CVC unit does have the lead)	10% (1)	25% (4)	12% (1)	
indirect investment (through a venture capital fund)	0% (0)	0% (0)	0% (0)	
Other (please specify)	20% (2)	6% (1)	0% (0)	

*Table XXXII Answer to option “Other” revealed per continent*

<b>Description Other</b>	<b>Asia (n=2; 20%)</b>	<b>Europe (n=1; 6%)</b>	<b>North America (n=0; 0%)</b>
- Combination of direct and syndicate on case basis		- direct investment with another investor, lead or not leading is both fine	
- both indirect and direct investments			

**What is the average investment amount in USD the corporate venture capital unit is investing in a portfolio company?**

*Table XXXIII average investment amount in USD*

	<b>Asia (n=10)</b>	<b>Europe (n=16)</b>	<b>North America (n=8)</b>	<b>Significance Test</b>
< \$ 2M	40% (4)	12% (2)	25% (2)	X(df=4) =4.10; p=.393
\$2 - \$5M	50% (5)	62% (10)	38% (3)	
\$5 - \$10M	10% (1)	25% (4)	38% (3)	

**How long is the average of the investment phase (from the initial funding a portfolio company till the exit)?**

*Table XXXIV Average investment phase from initial funding till the exit per continent*

<b>Description</b>	<b>n</b>	<b>Asia (n=10)</b>	<b>n</b>	<b>Europe (n=16)</b>	<b>n</b>	<b>North America (n=8)</b>	<b>Significance Test</b>
< 3 years	9	11% (1)	16	6% (1)	8	0% (0)	X(df=6) =1.20; p=.977
3-5 years		33% (3)		31% (5)		38% (3)	
5-7 years		33% (3)		44% (7)		38% (3)	
> 7 years		22% (2)		19% (3)		25% (2)	

*Table XXXV Average investment phase from initial funding till the exit per operating industry*

Description <sup>1</sup>	Consumer Goods and Retail (n=11)	n	Industrial Goods and Services, Energy (n=9)	n	Technology, Media & Telecommunication (n=14)	Significance Test
< 3 years	10% (1)	9	0% (0)	1	7% (1)	X(df=6) =3.11; p=.795
3-5 years	20% (2)		33% (3)	4	43% (6)	
5-7 years	50% (5)		33% (3)		36% (5)	
> 7 years	20% (2)		33% (3)		14% (2)	

### Where does the corporate venture capital unit source the potential portfolio company?

*Table XXXVI Source for portfolio company per continent*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)	Significance Test
angel investors	3% (1)	10% (1)	0% (0)	0% (0)	X(df=14) =NaN; p=NaN
venture capitalist	24% (8)	0% (0)	38% (6)	25% (2)	
other CVCs (i.e. syndicate)	3% (1)	10% (1)	0% (0)	0% (0)	
solicitation done by parent company	0% (0)	0% (0)	0% (0)	0% (0)	
solicitation done by CVC	21% (7)	20% (2)	19% (3)	25% (2)	
application of portfolio company	6% (2)	10% (1)	6% (1)	0% (0)	
Government	0% (0)	0% (0)	0% (0)	0% (0)	
Other (please specify)	44% (15)	50% (5)	38% (6)	50% (4)	

**Table XXXVII Answer to option “Other” revealed per continent**

<b>Description Other</b>	<b>Asia (n=5;50%)</b>	<b>Europe (n=6;38%)</b>	<b>North America (n=4;50%)</b>
- All of them	- Mix of everything	- Global scouting team	
- Mix of solicitation, application by portfolio company, sourcing from other angel investors	- All of the above	- All of the above	
- all of the above	- contacts in parent company business and other (C)VC's	- All of the above except gov	
- angels, VCs, CVCs, net-working	- almost all of the above	- Other VCs, founders, personal networks, etc	
- All of the above	- mix of CVC, VC, Angels		
	- all of the above excl government		

### **Which stages does the corporate venture capital unit usually invest in?**

**Table XXXVIII Investment stage per continent**

<b>Description</b>	<b>All n (n=34)</b>	<b>n</b>	<b>Asia (n=10)</b>	<b>n</b>	<b>Europe (n=16)</b>	<b>n</b>	<b>North America (n=8)</b>	<b>Signifi- cance Test</b>
seed stage (business plan and idea)	33	9 % (1)	9	0% (0)	16	6% (1)	8	0% (0)
startup stage (development prototype)		18% (6)		11% (1)		31% (5)		0% (0)
early stage (production of pilot prototype)		44% (15)		44% (4)		38% (6)		62% (5)
development stage (launched product and revenue growth)		24% (8)		33% (3)		19% (3)		25% (2)

X(df=8)  
=5.80;  
p=.670

Description	All n (n=34)	n	Asia (n=10)	n	Europe (n=16)	n	North America (n=8)	Signifi- cance Test
expansion stage (product experiencing and revenue growth)	9% (9)		11% (1)		6% (1)		12% (1)	

## How does the corporate venture capital unit measure the investment success?

*Table XXXIX Measurement of success per continent*

Items	n	Asia (n=10)	n	Europe (n=16)	n	North America (n=8)	Significance Test
financial results (i.e. ROI, IRR, ROE, cost of capital)	9	33% (3)	16	50% (8)	8	25% (2)	X(df=8)=NaN; p=NaN
interaction with portfolio company (#site visits, #hours of contact btw. unit and start up, # start ups acquired,...)		11% (1)		19% (3)		12% (1)	
R&D effectiveness (# new technologies, # modification to existing products, time saved in product development, product time to market,...)		11% (1)		0% (0)		12% (1)	
customer acquisition, retention and loyalty		0% (0)		0% (0)		0% (0)	
Other (please specify)		44% (4)		31% (5)		50% (4)	

*Table XL Measurement of success per operating industry*

Items	n	Consumer Goods and Retail (n=11)	n	Industrial Goods and Services, En- ergy (n=9)	n	Technology, Media & Tel- ecomunica- tion (n=14)	Significance Test
financial results (i.e. ROI, IRR, ROE, cost of capital)	10	20% (2)	9	33% (3)	14	57% (8)	X(df=8)=NaN; p=NaN
interaction with portfolio company (#site visits, #hours of contact btw. unit and start up, # start ups acquired,...)		20% (2)		22% (2)		7% (1)	
R&D effectiveness (# new technologies, # modification to existing products, time saved in product development, product time to market,...)		10% (1)		11% (1)		0% (0)	

Items	n	Consumer Goods and Retail (n=11)	n	Industrial Goods and Services, Energy (n=9)	n	Technology, Media & Telecommunication (n=14)	Significance Test
customer acquisition, retention and loyalty		0% (0)		0% (0)		0% (0)	
Other (please specify)		50% (5)		33% (3)		36% (5)	

*Table XLI Answer to option “Other” revealed per continent*

Description	Asia	Europe	North America
Other	(n=4; 40%)	(n=4; 25%)	(n=4; 50%)
Financial, interaction with portfolio companies, customer acquisition, etc.		Both financial and strategic metrics financial as well as deployment uptake in parent company (deployment value)	Strategic value combination of strategic and financial goals
it depends on the stage of investment.			
A and b		all of the above	strategic value
Synergy with group		Strategic benefits & financial return	ROI, IRR, Impact metrics
		partnerships between the portfolio company and parent company	

**What are the investment criteria for the corporate venture capital when screening a portfolio company? Please check all that apply.**

*Table XLII Investment criteria when screening a portfolio company*

Description	All (n=34)	Asia (n=10)	Europe (n=16)	North America (n=8)
strategic relevance to the corporation	88% (30)	90% (9)	81% (13)	100 % (8)
experience management team	82% (28)	100 % (10)	75 % (12)	75% (6)
investment range and location	59% (20)	80 % (8)	38 % (6)	75% (6)
board observation rights	26% (9)	20 % (2)	19% (3)	50% (4)
Other (please specify)	21% (7)	20 % (2)	31 % (5)	0% (0)

*Table XLIII Answer to option “Other” revealed per continent*

<b>Description Other</b>	<b>Asia (n=2;20%)</b>	<b>Europe (n=5;31%)</b>	<b>North America (n=0)</b>
	- Scalable and viable business model	- Financial opportunity	
	- Board or observer roles, size of market, performance to date, competition, technology differentiation and defensibility	- Strength of technology, defensibility, IP	
		- Full board seats, differentiation of product, technology	

**What are the preferred deal terms for the corporate venture capital unit?**

*Table XLIV Average ownership in portfolio companies per continent*

<b>Description</b>	<b>All (n=34)</b>	<b>Asia (n=10)</b>	<b>Europe (n=16)</b>	<b>North America (n=8)</b>	<b>Significance Test</b>
full control	0% (0)	0% (0)	0% (0)	0% (0)	X(df=4) =NaN; p=NaN
majority ownership	0% (0)	0% (0)	0% (0)	0% (0)	
significant minority ownership	100% (34)	100% (10)	100% (16)	100% (8)	

## How does knowledge transfer from portfolio company to parent happen?

*Table XLV Answers to open-ended questions knowledge transfer*

Asia	when the investment amount is over 50 million RMB, the case should be decided by parent company's investment committee.
	Indirect, filtered via CVC unit
	At all stages. Operational, HR practices and financial cum growth strategies
	not happening yet as we focus on Pre-Series A and Series A funding. Most companies are early stage business.
	Meetings, indirect reporting via CVC
	Monthly communications
	By using and doing PoC the product from portfolio company in the parent company environment
Europe	It does not happen, we have Chinese walls.
	Through BU partnerships
	Joint development agreement, license, co-marketing, IP acquisition
	through organized cooperation with Head office services (R&D, Communication) and with Group BUs
	knowledge sharing, transfer not possible because of lacking management competence in parent company, family day + executive board and corporate functions are members of investment committee +
	Yes, under separate partnership agreements, not required
	Not often due to risk of IP contamination, and if so under NDA with a clearly defined purpose
	Direct interaction between portfolio company and parent company experts
	Joint development agreements
	through collaboration projects between the portfolio company and the parent company
	frequent communication w parent
	Relations & interactions, joint projects etc.
	networking
	Through integrating portfolio company solutions and conversations across the bank's business units
North America	Collaboration projects, board observer seats
	Dedicated commercialization professionals
	Employees projects and systems
	Direct interactions
	bca (business collaboration agreements) + board seat
	structured reviews with business leaders and support in driving the company's long-term strategy

	Connection to relevant businesses units within corporation (materials innovation, food business)
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### What are the operational challenges the CVC is undergoing?

*Table XLVI Answers to open-ended questions operational challenges*

Asia	our company is the only investment platform in the group. parent company command a high profit to VC unit, it influence our investment method a lot.
	Distance between today's business/technology and investment targets
	sudden pivoting by portfolio companies and the consequent adjustment plus resource alignment to that
	Time taken to get approval from different subsidiaries/department to work with portfolio company
	Less companies with Strategic relevance
	Difficulties in hiring right person
	Compensation
	The differences parameter of success between short term result (parent company) and long term result (CVC)
Europe	hiring talented investors as we grow
	Match funding rounds timeframe
	Avoiding conflicts of interest between investor's role and commercial and industrial partnership
	understaffed
	Risk of losing key people - competitive market
	Changing strategy of parent, parent asking to do "strategic" investments which are not necessarily good financial investments, heavy corporate processes whilst needed to act in speedy fashion with external partners
	To mediate between portfolio and parent company - in terms of language and speed
	Ensuring the cooperation and knowledge transfer
	combining a business-driven service approach and a self-controlled fund with sometimes opposing investment strategies
	deploy \$70-90m per year
	Gaining traction within the group, dealing with legacy systems
North America	Change of leadership within parent operating unit's changes strategy and/or collaboration with portfolio company
	As with any traditional VC - deal sourcing, portfolio management, balancing strategic and financial imperatives, speedy commercialization of portfolio companies
	taking more risk on deals
	Getting engineering buy in can be difficult/slow.
	how to balance strategic importance and financial measures
	ensuring autonomy and building outside in perspective

## What is the preferred exit strategy of the CVC unit?

*Table XLVII Answers to open-ended questions exit strategy*

Asia	IPO
	M&A
	private placement and typically series C, acquisition and IPOs (though rare)
	Trade sale or IPO
	Secondary sale, IPO
	Strategic exit to parent company
	M&A or IPO as appropriate
	IPO or acquisition by parent company
Europe	M&A
	trade sale
	Trade sale
	Industrial sale rather than IPO
	trade sale to third party
	In current market; M&A
	trade sale
	Sale
	Sale to strategic
	to the business units of the parent company
	high-return exits asap after investment
	Depends
	trade sale
	IPO or acquisition
	n/a, young fund
North America	we want to gain full control and absorb startups that are strategically important to our businesses
	Company is acquired (not by us).
	IPO or trade sale
	exit for the portfolio company, not necessarily through CVC parent acquisition
	Long term exit - more focused on sustainable businesses and generating ROI via dividends, sale, IPO etc.
	Acquisition of portfolio company
	Not applicable

## ***Appendix II Invitation letter to CVC managers***

Dear Sir or Madame,

Thanks for connecting with me on LinkedIn.

Currently, me and Professor Hisrich (Kent State University) are conducting a study to better understand how corporate venture capital is done in different countries in the world.

We understand that you have a tight schedule to follow in your daily business. But the questionnaire takes just **a few minutes** of your time. **All names, data, and content of the questionnaire will be kept anonymously.**

<https://www.surveymonkey.com/r/corporateventurecapitalstudy>

This research is **dependent on people like you**. At the moment, we have a high number of participants in Europe and Asia, but only a **small sample of the USA**. We would so **appreciate your input** because your contribution will be vital to the success of this global study.

Sincerely yours,  
Martina Pichler & Robert D. Hisrich

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