MASTER

Organizational learning through corporate venture capital investments

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Preface
This master thesis is the result of the final graduation phase of the master Innovation Management at the faculty of Industrial Engineering & Innovation Sciences at the Technical University of Eindhoven. I would like to thank a few people that have helped to make this final work of my years at the university of Eindhoven possible.

First of all, I would like to thank Fred Langerak and Sharon Dolmans for their support and guidance as supervisor. Fred Langerak gave me inspiration and freedom to find my own process and create a final master thesis that is in line with my interests and personality. Sharon Dolmans was more than a second supervisor in this process, and during the absence of Fred Langerak in the last months, she has provided useful feedback that helped me take the research to a higher level.

Second of all, I would like to thank my colleagues at Accenture for the warm welcome and nice working environment during my internship. I would like to especially thank my supervisor Guido D’Hert, for giving me the opportunity to do this interesting and challenging project at Accenture.

Finally, I would like to thank my family and friends, not only for your support during this final phase of the study, but also for all the great times I’ve had during these 7 years at the university. My parents and Teuntje have supported me in every decision I have made during these years and I am incredibly grateful for their support.
Management Summary
The subject of this master thesis project is the relationship between corporate venture capital and organizational learning. It has both an academic and a practical goal. At the academic level, the thesis aims to contribute to the scientific literature on organizational learning in the context of CVC. The practical goal of the project is to develop more insight in how companies can develop, distribute and use knowledge, which was gained from CVC activities, within the parent company. To reach these goals I adopted a three-stage research methodology, in which the different components provide a clear and rigorous process for answering the main research question: How can organizational learning from corporate venture capital be facilitated? The first phase is the theoretical research phase, existing of a review of the relevant literature, followed by the empirical research phase, existing of a multi-case research, and finally followed by a design phase.

Theoretical background
Corporate venture capital can be defined as “equity investments by established corporations in entrepreneurial ventures” (Dushnitsky & Lenox, 2006, p. 754). CVC allows firms to learn from a portfolio of start-up firms, which enables firms to gain knowledge on emerging technologies, markets and business models. While independent VC firms invest solely for financial reasons, corporate VC investments often primarily have strategic objectives. Firms can gain a number of varied strategic benefits from their CV initiatives if they succeed, besides looking for attractive financial returns. Multiple authors have made a further distinction between different types of strategic goals. Three often mentioned objectives are the development of business relationships, development of the ecosystem, and gaining a window on emerging technologies and markets. A number of the objectives can be seen as learning objectives, such as gaining the window on emerging technologies and markets, new product development, and building new capabilities. Linked to the objectives of the CVC initiative is the selection of a market focus; reinforcing core business, studying adjacent business areas, or focusing on opportunities beyond the usual business activities (Battistini et al., 2013).

Corporations often struggle with gaining long-term strategic benefits from CVC, because of troubles with operationally linking these activities to the organization and with transferring knowledge that was gained. Companies have to decide on the degree to which the ventures in their CVC portfolio are linked to the parent company’s operational capabilities, including its resources and business processes (Chesbrough, 2002). Four basic organizational models exist for CVC; investing in VC funds as a limited partner, investing directly, funding a stand-alone VC subsidiary, and establishing a CVC fund. The most appropriate model depends highly on the firm’s strategy for the CVC initiative. Often the investments are done by a dedicated unit within the company or through a dedicated fund that is separate from their company. To capture the strategic benefits of the CVC activities successfully, companies should define the different roles and responsibilities in the CVC process of different employees in the company that are involved. Besides their responsibility for the operational and financial side of the investment process, they also play an important strategic role by functioning as a crucial channel to capture strategic value.

A key success factor to gaining strategic benefits from CVC is that valuable information of the start-up firm should be harvested by the parent firm (Lerner, 2013). The learning benefits that can be gained from CVC are dependent on the process of transferring knowledge from the venture to the parent firm, i.e. on organizational learning. Organizational learning is the process of acquiring information and knowledge that is new for a firm and is crucial for product, process and
organizational innovation (Dess, Ireland, Zahra, Floyd, Janney, & Lane, 2003). To gain learning benefits from CVC investments, companies should not only acquire new knowledge, but also process and integrate this knowledge to improve actions of organizational creation, renewal, and innovation. Multiple conceptualizations of different types of organizational learning exist in literature that are relevant to CVC, including the distinction between exploitative and explorative learning. A limited number of different activities to enable organizations to learn from CVC and moments at which learning can take place have been proposed in literature.

The literature review shows that a relation exists between these CVC and organizational learning, since CVC provides an important source for learning about opportunities that can enable firms to renew and develop new businesses and capabilities. External sources, such as start-ups, are an important source for learning about opportunities that can enable firms to renew and develop new businesses and capabilities. A growing amount of literature connects organizational learning to corporate entrepreneurship, and also more specifically to corporate venture capital. The research field that connects these concepts is relatively new and many of the subjects that influence this relationship have not yet been researched. Therefore more research should be done on how organizational learning from CVC should be facilitated and on the aspects that influence this relationship.

**Empirical research**

The second phase of this master thesis project existed of a multiple-case study based on in-depth interviews and secondary sources. The 6 case studies provide insight into the processes by which organizations engage in CVC and in learning from their CVC activities, and into how this learning is facilitated. The core activity for building theory from case study research is the analysis of the gathered data. The case studies were analyzed in two steps; first a within-case analysis was done, followed by a cross-case analysis. The data collection and analysis were based on the most important aspect that influence organizational learning from CVC activities, which were identified through the literature review. The first aspects are related to the CVC strategy; the organizational model, the objectives, the market focus, and the operational linkages that are in place. The second aspect is the learning activities. And the final aspect is the organizational learning process and outcomes.

The analysis of the case studies has led to a number of conclusions:

**Strategic focus** – All of the CVC activities have strategic objectives, except for one, but these strategic objectives are rather abstract and flexible. All companies used a top-down approach to match the focus of the CVC to the strategic focus of the company. Because investments are often made for diverse strategic reasons, the knowledge that is gained through the investments is also diverse and the governance on how to transfer this knowledge is unstructured.

**Organizational model** – The organizational model did not seem to have direct effect on the learning outcome, since with all organizational models both explorative and exploitative learning could be reached and diverse objectives were seen across the different models. However, in the case studies the organizational model did seem to influence the amount and type of operational linkage.

**Operational linkage** – The operational linkage and reporting line of the CVC unit largely determine the type of investments that are done and the strategic learning benefits that are gained. Therefore
the operational linkage is a crucial aspect for the learning process, since it both allows for knowledge to be transferred and influences what type of learning outcomes are reached.

Learning activities – Diverse learning activities were present in the CVC process of the companies, which enabled the operational linkage to lead to learning, and allowed for the transfer of knowledge. CVC managers play a crucial role in the transferring of knowledge and act as a knowledge broker in a lot of these learning activities, besides their responsibility for the operational and financial side of the investment process. Three learning activities happened in almost all of the companies; sharing information about possible investments and the portfolio during review meetings, sharing information about the deal flow, and creating joined projects or other business relationships with start-ups. Few learning activities are carried out that directly link employees of the companies to the ventures, besides the business relationships.

Organizational learning – CVC is used as a tool for strategic benefits by the case companies, and they are aware of the learning benefits that CVC can offer. The case studies displayed both explorative and exploitative learning from the CVC activities. However, the learning mostly happened more ad hoc, than in a structured manner. Even though all companies have strategic objectives, learning is not one of the primary responsibilities of the CVC unit and the learning is often not managed and directly facilitated. Multiple learning moments exist during the CVC process during which the learning activities can happen and organizational learning can take place. The case studies confirmed that learning can happen in all phases of the CVC process.

Design phase
The results of the case studies and the review of the literature provided the starting point for the final design phase of thesis project. Multiple design parameters were identified that influence how organizations learn from CVC. These parameters are key aspects in the CVC process and structure that were abstracted from the theoretical framework and the analysis of the results. Based on this set of design parameters and the insight that were gained through this research, a three step process was designed that can help companies in setting up the CVC in such a way that learning is facilitated. These steps are; 1. Decide on the CVC strategy, 2. Decide on the operational linkage between the different components, and 3. Decide on the learning activities that will be carried out.

Conclusions
The research presented in this master thesis offers a contribution to the existing literature on the influence of different aspects of the CVC strategy and of different learning activities on organizational learning and fills a number of gaps in the literature. Together these aspects provide insight in how and when organizational learning should be facilitated and what the learning process looks like. On a practical level this thesis provides a number of practical insights and parameters that can support companies when developing, distributing and using knowledge that was gained from CVC activities, within the parent company.
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1. Introduction

This thesis focuses on the relationship between corporate venture capital (CVC) and organizational learning. It has both an academic and a practical goal. At the academic level, the thesis aims to contribute to the scientific literature on organizational learning in the context of CVC. The practical goal of the project is to develop more insight in how companies can develop, distribute and use knowledge, which was gained from CVC activities, within the parent company. To reach these goals I adopted a three-stage research methodology, in which the different components provide a clear and rigorous process for answering the main research question; How can organizational learning from corporate venture capital be facilitated? The first phase is the theoretical research phase, existing of a review of the relevant literature, followed by the empirical research phase, existing of a multi-case research, and finally followed by a design phase.

1.1 Theoretical background

Corporate venture capital can be defined as “equity investments by established corporations in entrepreneurial ventures” (Dushnitsky & Lenox, 2006, p. 754). CVC allows firms to learn from a portfolio of start-up firms, which enables firms to gain knowledge on emerging technologies, markets and business models. Organizational learning is the process of acquiring information and knowledge that is new for a firm and is crucial for product, process and organizational innovation (Dess, Ireland, Zahra, Floyd, Janney, & Lane, 2003). This thesis shows that a relation exists between these two concepts, since CVC provides an important source for learning about opportunities that can enable firms to renew and develop new businesses and capabilities.

In today’s competitive and technologically dynamic economy, firms need to be innovative to survive. Corporations increasingly complement traditional R&D activities with entrepreneurial activities to gain new knowledge, generate product and process innovations and to expand their firm. Schumpeter stated, already in 1934, that entrepreneurship is the key to innovation (Schumpeter, 1934). This still holds today, and firms of all sizes need to adopt an entrepreneurial attitude to prosper and flourish in the competitive environment. The process of organizational creation, renewal, and innovation that occurs within existing firms is called corporate entrepreneurship (Sharma & Chrisman, 1999). The term corporate entrepreneurship includes multiple different entrepreneurial activities within firms, including corporate venture capital. This thesis will focus on this specific form of corporate entrepreneurship. To view corporate venture capital in a broader context, the concept of corporate entrepreneurship will first be explained briefly.

1.1.1 Corporate venture capital – a form of corporate entrepreneurship

It is increasingly recognized that entrepreneurial activities do not only occur within start-ups and SME’s, but that these activities are also happening in large, more established corporations (Schildt, Maula, & Keil, 2005). Therefore, Sharma and Chrisman (1999, p. 17) define entrepreneurship as “acts of organizational creation, renewal, or innovation that occur within or outside an existing organization”. Several scholars have argued that corporate entrepreneurship is important for the growth and survival of established firms and allows firms to learn about new technologies, markets and ways to operate (Schildt et al., 2005).
Corporate entrepreneurship is a term that can indicate multiple different entrepreneurial activities within existing organizations (Figure 1). Similar to the research field of entrepreneurship in general, the manner in which entrepreneurship within corporations is defined also lacks consistency (Sharma & Chrisman, 1999). Most commonly used definitions of corporate entrepreneurship point to one of the following two phenomena; corporate venturing and strategic renewal (Ireland et al., 2009; Sharma & Chrisman, 1999).

The first is often referred to as corporate venturing and describes the origination, financing, and development of a new business by an established cooperation. A distinction can be made between internal corporate venturing and external corporate venturing. Internal corporate venturing refers to corporate entrepreneurial efforts that lead to the creation of new business organizations within the corporate organization (Sharma & Chrisman, 1999). The term intrapreneurship is closely related to this phenomena, and involves an individual or individuals championing new product or process ideas within a corporate context (Hornsby, Kuratko, & Montagno, 1999). External corporate venturing is the creation and development of (semi-)autonomous organizational entities together with external partners. This includes corporate venture capital, but also alliances, spin-offs or joint ventures (Keil, 2004; Sharma & Chrisman, 1999).

The second is the phenomena where an "entrepreneurial" philosophy permeates an entire organization's outlook and operations to create strategic and organizational renewal. This phenomena is often referred to as strategic renewal (Sharma & Chrisman, 1999) or entrepreneurial orientation (Covin & Slevin, 1991).

Figure 1: Forms of entrepreneurship, adapted from Sharma & Chrisman (1999)
Multiple of these phenomena often co-exist in the corporate activities of a single organization and are not mutually exclusive. Some of today’s most successful innovative companies, including Apple, 3M, P&G, and Google, spend considerable resources on figuring out how to sustain their entrepreneurial attitude and on how to create an environment that fosters corporate entrepreneurship. As a part of their entrepreneurial activities, many of these companies invest in startups through corporate venture capital, including Google and Apple (Lerner, 2013). To extract value from the ambiguous and risky corporate entrepreneurship initiatives, firms need to apply management practices that deviate from those of the other business activities (McGrath, Keil, & Tukiainen, 2006).

1.1.2 Learning from corporate venture capital

As stated before, in this thesis the focus is on one specific type of corporate entrepreneurship, namely corporate venture capital. Corporate venture capital is one of the fastest-growing innovation strategies for the transition of the closed, linear model of innovation into an open, collaborative approach with new, external partners for innovation (Battistini, Hacklin, & Baschera, 2013). In the broadest sense, CVC can be defined as “equity investments by established corporations in entrepreneurial ventures” (Dushnitsky & Lenox, 2006, p. 754).

A growing amount of literature connects organizational learning to (corporate) entrepreneurship (e.g. Alegre & Chiva, 2013; Cope, 2003; Wang, 2008; Hill & Birkinshaw, 2008), and also more specifically to corporate venture capital (e.g., Schildt et al, 2005; Dushnitsky & Lenox, 2005). Organizational learning is the process of acquiring information and knowledge that is new for a firm and is crucial for the exploitation of the knowledge needed for innovation (Dess, Ireland, Zahra, Floyd, Janney, & Lane, 2003). Research has shown the positive effect of organizational learning on corporate entrepreneurship. Dess et al. (2003) show that organizational learning mediates the relationship between corporate entrepreneurship and the development of knowledge that renews a firm’s skills and capabilities. Alegre & Chiva (2013) show that organizational learning mediates the relationship between entrepreneurship and the firm’s innovation performance and overall performance. While the relationship between corporate entrepreneurship and organizational learning is broadly researched, only limited research exists on the relationship between organizational learning and corporate venture capital.

External sources are an important source for learning about opportunities that can enable firms to renew and develop new businesses and capabilities (Benson & Ziedonis, 2009). Corporate venture capital allows firms to learn from such an external source, namely start-up firms. Start-ups are often an important source of innovative ideas and technologies, and frequently bring these new technologies to market before the rest of the industry. Therefore, investing in start-ups can enable firms to gain knowledge on emerging technologies, markets and business models. Even if the investment does not lead to a transfer of a specific technology that the parent firm can use, it may still provide important insights in the development of a technology or market (Maula, Keil, & Zahra, 2013). CVC initiatives can allow more effective innovation by enhancing knowledge creation capabilities (Schildt et al., 2005; Wadhwa and Kotha, 2006), creating a window on new technologies and markets (Allen & Hevert, 2007), and creating a balance between exploitative and explorative activities (Rice, O’Connor, Leifer, McDermott, & Standish-Kuon, 2000).
1.1.2 Theoretical framework

In the literature review (chapter 2) the academic literature related to corporate venture capital and organizational learning is reviewed in more detail. The literature review shows that a relation exists between organizational learning and CVC, and that organizational learning plays an important role for many of the strategic benefits that can be gained from CVC. A growing amount of literature connects these two concepts, either implicitly or explicitly, however the research field that connects CVC and organizational learning is relatively new and many of the subjects that influence this relationship have not yet been researched. The literature review argues that organizational learning plays an important role for many of the strategic benefits that can be gained from CVC, including gaining a window on emerging technologies and markets. Many of the strategic benefits are dependent on the process of harvesting and transferring knowledge from the portfolio of ventures to the parent firm. Only limited research has focused on how the organizational learning from CVC can be facilitated to help transfer, integrate and use this knowledge gained from the portfolio of start-ups in the parent firm.

The theoretical research helped identify a number of gaps in the literature and helped develop a theoretical framework that was used for the empirical research phase (Figure 2). Chapter 2 will describe these gaps and the framework in detail.

Figure 2: Theoretical framework

1.2 Research design and research questions

The goal of this master thesis project is twofold. The practical goal of the project is to develop more insight in how companies can develop, distribute and use knowledge, which was gained from CVC activities, within the parent company. This is done by developing a set of design parameters that influence how organizations learn from CVC, incorporated in a three step process that can guide companies in setting up the CVC in such a way that learning is facilitated. At the academic level, the thesis aims to contribute to the scientific literature on CVC and organizational learning by connecting these two concepts. This thesis aims to contribute to the limited research that has studied how the organizational learning from CVC can be facilitated to help transfer, integrate and use the knowledge gained from the portfolio of start-ups in the parent firm. Based on these two goals, the main research question of the thesis has been formulated:

Research question: How can organizational learning from corporate venture capital be facilitated?
To address the barrier between science and practice, the development and accumulation of design knowledge using the reflective cycle can be used (Heusinkveld & Reijers, 2009). A business problem-solving activity is at the basis of the reflective cycle, which aims at developing prescriptive knowledge in the form of technological rules or solution concepts (Van Aken, Berends, & Van der Bij, 2012).

This research has followed the reflective redesign process, which is based on the reflective cycle, to answer the research questions of this thesis. The reflective redesign process (Van Aken et al., 2012) does not simply focus on specific business problems of a company, but also includes a generic business phenomenon (Figure 3). The outcome of this process is a generic design proposition for solving the business phenomenon. Reflective redesign starts with a general research question concerning a literature gap about a certain business phenomenon. The gaps in the literature will be described in the next chapter. The business phenomenon in this thesis is the facilitation of organizational learning from corporate venture capital investments. Multiple specific cases of this business phenomenon are selected, and the problem solving cycle is used to collect data on these cases and analyze the specific business problem and design a solution. The final step of the research process is to examine, evaluate and generalize possible solutions, leading to a set of generic guidelines for tackling this type of business problem.

Figure 3: Reflective redesign based on Van Aken et al. (2012)

To answer the main research question, multiple sub-questions have been identified, which will be answered throughout the remainder of this thesis. The answers to these sub-questions will together provide input to answer the main research question. The first sub-questions are answered through this review of the literature on both CVC and organizational learning, and the literature that connects the two concepts.

Sub-question 1: What is corporate venture capital?
Sub-question 2: What is organizational learning?
Sub-question 3: What is the relationship between CVC and organizational learning?
Sub question 4: What constructs influence this relationship?
The answers to these question provide a framework to research these concepts in a real-life contact. In the literature review a number of gaps in the literature have been identified, which were also investigated further.

The second set of sub-questions were researched through a multi-case study approach, based on the aspects that were identified in the literature review.

**Sub-question 5: How do organizations learn from their CVC activities?**

**Sub-question 6: What influence do different aspects of the CVC strategy have on organizational learning?**

**Sub-question 7: At what moments in the CVC process can organizational learning take place?**

**Sub-question 8: What activities are used to facilitate organizational learning?**

### 1.3 Report outline

Table 1 provides an overview of the different chapters in this master thesis report, and the phases and research questions discussed in every chapter. During the initial phase a review was done of the relevant literature and a framework for the relationship between CVC and organizational learning was developed. This theoretical research is described in chapter 2 and discusses the concepts that are relevant for answering sub-questions 1 to 4. A theoretical framework was developed through the theoretical research phase to serve as the blueprint for the further research. The development of theory to create a sufficient blueprint for the case studies is an essential base for case study research (Yin, 2009). The theoretical framework directed the empirical data collection and analysis.

The second stage is a multiple-case study providing insight into the processes by which organizations engage in CVC and in learning from their CVC activities, and into how this learning is facilitated. Chapter 3 will describe the research methodology of the empirical research phase. Chapter 4 will discuss the results and analysis of the results of the case studies. In the final phase the theoretical analysis and the empirical analysis are combined to design a three step process that can guide companies in setting up the CVC in such a way that learning is facilitated, based on a set of design parameters that influence how organizations learn from CVC. The approach of the design phase is and design of the three step process are described in detail in chapter 5. Chapter 6 will provide a discussion of the conclusions of this master thesis project and an answer to the main research question. Moreover, this chapter will discuss the managerial implications, the opportunities for further research and the limitations of the master thesis project.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Phase</th>
<th>Research questions answered</th>
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<td>2. Literature review</td>
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<td>Sub-questions 1 to 4</td>
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<td>3. Methodology</td>
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<td>4. Results &amp; analysis</td>
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<td>Sub-questions 5 to 8</td>
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<td>5. Design</td>
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<td>6. Conclusions</td>
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<td>Main research question</td>
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2. Literature review

This chapter will describe the theoretical research phase of this master thesis project. The review of literature on both corporate venture capital and organizational learning, and the relationship between the two concepts, was used to answer sub-questions 1 to 4 and to analyze the gaps in the literature. Moreover, the literature review helped define the research focus, by helping to build a theoretical framework, to define the key constructs and to define sub-questions 5 to 8 for the remainder of the research.

In the literature review an iterative approach was taken in which the following activities were done alternately; formulation of the research question, literature collection, literature interpretation and analyses, and writing of the review. A systematic approach was taken for collecting the literature, based on two different search strategies; the keyword approach and the waterfall approach. For the keyword approach a search was done based on a number of keywords, depending on the research question at a certain point in the process. The searches were done by using the ABI/Inform search database, and limited to a number of top journals on management and entrepreneurship (Table 2). The first search included the search terms “corporate entrepreneurship” and “corporate venture capital” and synonyms of these terms. Later the searches also included “organizational learning” and synonyms. Finally, searches were also done on the combination between “organizational learning” and “learning”, and “corporate venturing capital” and synonyms to this term. The articles that were found through these keyword searches and seemed relevant, were scanned by reading the abstracts and conclusions to judge their relevance for the literature review, and later fully read if they indeed were relevant. Later the waterfall approach was used to gain more literature by identifying relevant papers in the references of the papers that were found through the keyword searches. This approach was repeated until a sufficient amount of evidence was obtained. Finally, the most relevant papers were used for the literature review.

Table 2: Top journals

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<tr>
<th>Academy of Management Journal</th>
<th>MIT Sloan Management Review</th>
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<tr>
<td>Academy of Management Review</td>
<td>Organization Science</td>
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<td>Administrative Science Quarterly</td>
<td>Organization Studies</td>
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<tr>
<td>Decision Sciences</td>
<td>Organizational Behavior and Human Decision Processes</td>
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<td>Harvard Business Review</td>
<td>Research in Organizational Behavior</td>
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<td>Journal of Management</td>
<td>Strategic Management Journal</td>
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<td>Journal of Management Studies</td>
<td>Entrepreneurship Theory and Practice</td>
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<td>Management Science</td>
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<td>MIS Quarterly</td>
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The first part of this literature review will discuss the literature on corporate venture capital and the different types of CVC. The literature review begins by exploring the concept corporate venture capital, the organizational models that exist for CVC, how CVC is operationally linked to the parent firm, and what different objectives for CVC exist. The second part of the literature review discusses the literature on organizational learning by providing an overview of the concept organizational
learning, the different mechanisms of learning, how organizational learning can be facilitated, and how knowledge can be transferred. Section 2.3 will discuss the relationship between the concepts of corporate venture capital and organizational learning. Finally, section 2.4 will provide the overall conclusions of the literature review, leading to the theoretical framework used for the further research.

2.1 Corporate venture capital
The interest in corporate venture capital in history has waxed and waned in sync with the overall interest in venture capital (Lerner, 2013). In the past, three major waves of corporate venturing activities can be observed since the 1960s (Birkinshaw, van Basten Batenburg, & Murray, 2002). The first ended with the recession in the early 1970s. The second mostly involved investments in the computer and electronics sector during the 1980s and ended in the late 1980s because of another recession. The third one happened during the 1990s dotcom bubble, ending with the burst of this bubble during early 2000s (Birkinshaw et al., 2002). Currently the investments in corporate venture capital are increasing again and an growing number of firms are starting or expanding CVC initiatives (Battistini et al., 2013), indicating a fourth wave of CVC investments. Companies that have successfully implemented CVC as a key part of their innovation strategies include Intel, 3M, GE, Motorola, and Microsoft (Covin & Miles, 1999).

Although many companies have sensed the potential value of corporate venture capital, many of these companies failed in gaining and sustaining positive returns from these initiatives (Covin & Miles, 1999). Some corporate venture initiatives were an outright failure, but many more have given up too quickly, with a median life span for corporate venturing programs of around one year (Lerner, 2013). While independent VC firms invest solely for financial reasons, to gain attractive return on capital, corporate VC investments often have primary objectives that are of strategic nature (Sykes, 1990). Dushnitsky and Lenox (2006) found that corporate venture capitalists experience increased value creation, but that CVC is only likely to create this value when it is used for strategic reasons, rather than mainly for financial reasons. Although it is possible to gain direct financial benefits through superior selection and enhancement of a portfolio of ventures, structural deficiencies can erode these benefits. These structural deficiencies include internal conflicts, weak incentives, and rampant information asymmetries. Indirect strategic benefits however can compensate for these deficiencies (Dushnitsky & Lenox, 2006). Research by Campbell et al. (2003) indicates that the biggest mistake companies made when setting up corporate venturing units was to have mixed objectives and mixed-up business models. Therefore, firms must set clear strategic objectives for their CVC initiatives. There are multiple different strategic benefits that can be gained through CVC and these are discussed in detail in the next chapter. Start-up firms are often an important source of innovative ideas and technologies, and frequently bring these new technologies to market before the rest of the industry. Therefore, investing in start-ups can enable firms to gain knowledge on emerging technologies, markets and business models, allowing them to focus their internal R&D on new business opportunities (Keil, Maula, Schildt, & Zahra, 2008).

Corporations have also struggled with gaining long-term strategic benefits from CVC, because of managerial uncertainty on how these activities should be operationally linked to the organizational strategy process and agenda (Covin & Miles, 2007). Even successful corporate venturing funds have sometimes had problems with the transfer of the new knowledge that was gained from the CVC initiatives from the venture to the parent firm (Lerner, 2013). To gain maximum value from the
corporate venturing initiatives, firms should facilitate organizational learning from these activities. The ventures can be used by the parent company as vehicles to explore new technologies and markets through radical learning, as well as vehicles for exploiting existing knowledge through incremental learning (Schildt et al., 2005).

There are multiple different ways for corporations to participate in the venture capital process (Winter & Murfin, 1988), and firms undertake CVC initiatives for a number of different reasons. In the corporate venturing literature many different ways to categorize CVC initiatives have been described. A number of studies make a distinction between the different types of initiatives by the organizational model that is used (e.g., Winters and Murfin, 1988). Other authors have categorized the different types of CVC initiatives based on the objectives of the CVC initiative (e.g., Chesbrough, 2002; Campbell et al., 2003; Sykes, 1990). Therefore, I will now first discuss the different organizational models and objectives for CVC activities.

2.1.1 Organizational models and operational linkage
Companies should decide on the organizational structure of the investment activities. Companies have to decide on the degree to which the ventures in their CVC portfolio are linked to the parent company’s operational capabilities, including its resources and business processes (Chesbrough, 2002). Companies can invest as a passive, minority investor or as an active investor with direct involvement, for example by taking place in the board of directors or acting as an advisor (Markham, Gentry, Hume, Ramachandran, & Kingon, 2005). Direct and frequent communication between the parent firm and the venture about areas of special or mutual interest lead to most strategic benefits (Sykes, 1990).

Four basic organizational models exist for CVC (Winter & Murfin, 1988);
1. Investing in VC funds as a limited partner.
2. Funding of own stand-alone VC subsidiary, which acts in the same way as an independent VC fund and focuses on financial return.
3. Establishing a venture development subsidiary, which invests to create new business opportunities or other strategic benefits for the parent company.
4. Direct investments in companies as part of an existing business function or as a separate internal unit.

The most appropriate model depends highly on the firm’s strategy for the CVC initiative (Birkinshaw et al., 2002). Direct investments and investing through funds as a limited partner (LP), for example, can both serve somewhat different purposes and be complementary to one another (Sykes, 1990). LP investments are more useful for providing contact with the VC community and generating a flow of investment offers, and direct investments are more useful for enhance business relationships, including marketing or research agreements (Sykes, 1990).

Companies can make direct investments in venture companies as a part of the corporate development function, but often companies invest through a dedicated unit within the company or through a dedicated fund that is separate from their company (Figure 4). Many CVC initiatives are managed through a separate venture unit that is given a certain amount of autonomy. Venture units need to be separated from the parent company, especially at the early stages, to avoid that innovative ideas and an entrepreneurial, failure-tolerant culture are not killed by the mainstream business. However, at the same time, CVC units that operate too separate from the parent company
will have trouble realizing the potential strategic benefits (Birkinshaw, van Basten Batenburg, & Murray, 2002). A balance needs to be found between separation and linkage. Therefore, companies should carefully decide on how their CVC activities are operationally linked to the organizational strategy process and agenda (Covin & Miles, 2007), but also to the organizations operations.

Figure 4: Organizational linkage based on Ernst, Witt and Brachtendorf (2005)

![Organizational linkage diagram]

The CVC unit is often responsible for identifying suitable ventures to invest in, adding value to those start-ups, and deciding whether and when to exit them (Birkinshaw et al., 2002). Besides their responsibility for the operational and financial side of the investment process, they also play an important strategic role by functioning as a crucial channel to capture strategic value (Napp & Minshall, 2011). To capture the strategic benefits of the CVC activities successfully, it is crucial to clearly define the different roles and responsibilities in the CVC process of the CVC unit, but also for the other person’s involved, such as business units and management (Napp & Minshall, 2011). To gain most strategic value, strong linkage should be created between the CVC unit and the management of the different business units and other management within the parent firm (Napp & Minshall, 2011). The CVC activities should not be seen as a stand-alone activity, but rather as one of several activities that stimulate innovation and corporate development (Birkinshaw, van Basten Batenburg, & Murray, 2002). Other activities could be corporate entrepreneurship activities like acquisitions, alliances or internal incubators.

2.1.2 Objectives

Companies generally have a number of different objectives for their CVC initiative. These objectives fall somewhere along a spectrum between mainly strategic or mainly financial (Chesbrough, 2002). Financial return is often stated as an important objective of CVC (e.g., Battistini et al., 2013; Siegel et al., 1988), but CVC investments are often done primarily for strategic reasons (Sykes, 1990). Firms that invest for strategic purposes seek to identify and exploit synergies between them and the start-up they invested in (Chesbrough, 2002). Firms can gain a number of varied strategic benefits from their CVC initiatives if they succeed, besides looking for attractive financial returns.

Only limited empirical evidence exists on the link between CVC performance and objectives of the CVC initiative. Researchers have not reached consensus on what objectives, financial or strategic, are most important when setting up and managing a CVC initiative (Allen & Hevert, 2007). Researchers in the ‘financial’ corner argue that financially unsuccessful programs likely will lack ongoing management support, unmeasured strategic benefits are not a sufficient base, and capturing value of
strategic benefits largely depends on activities by managers not associated with the CVC initiative (Allen & Hevert, 2007). Researchers in the ‘strategic’ corner argue that focus on financial returns can lead to premature cancelation of initiatives, financial focus is not likely to lead to a portfolio of strategically interesting ventures and when CVC is part of a wider corporate strategy, strategic benefits can compensate for disappointing financial returns (Allen & Hevert, 2007). Multiple studies do point out that companies that focus on one specific objective for their CVC initiative were generally more successful (Campbell et al., 2003; Birkinshaw et al., 2002). Moreover, CVC initiatives should make sure their objectives are not mixed, and that the business models of their CVC initiative connects to the chosen objective (Campbell et al., 2003). Lerner (2013) points out that the objectives of the venturing unit should be aligned with both those of the start-up and the parent firm.

Linked to the objectives of the CVC initiative is the selection of a market focus; reinforcing core business, studying adjacent business areas, or focusing on opportunities beyond the usual business activities (Battistini et al., 2013). It is crucial to align the goals of the venture fund, with those of the parent company, but also with the goals of the start-ups. The market focus should have an overlap with the corporate parent’s business, to ensure that start-ups can draw on its expertise, knowledge and network. Keil et al. (2008a) found that CVC investments in related industries have the most positive effect on innovation performance.

**Strategic objectives in literature**

Multiple authors have made a further distinction between different types of strategic goals. An overview of these goals is given in Table 3. Sykes (1990) identified six different goals. Their research found that identification of new business opportunities, through a window on new technology, and development of business relationships were seen as most important. Siegel et al. (1988) give a different list of four possible strategic objectives, besides return on investments. The objective to gain exposure to new technologies and markets through CVC was considered the most important strategic objective also in this research.

Battistini et al. (2013) give an even more extensive list of objectives. According to their research the most important objectives for corporate venturing activities are financial return, a window on technology and market intelligence, access to breakthrough technologies and development of strategic partnerships.

Allen and Hevert (2007) converged a list of three strategic objectives from literature. The first two stated in this paper are similar to the first objective in Table 3 as stated by the previous three authors; exposure and access to new technologies and exposure to new markets and access to relationships and resources which can accelerate new market entrance. The third is enhancing the demand for products of the parent company.

Campbell et al. (2003) have found four objectives combined with a business models that drive successful corporate venturing units, including CVC units; ecosystem venturing, innovation venturing, harvest venturing and private equity venturing. Harvest venturing is not a CVC activity, but focuses on turning internal spare resources into profitable businesses through venturing. The others, however, are ways to use CVC as a profitable business model. Ecosystem investments help support and develop a firm’s ecosystem of customers, suppliers and complementary businesses. Innovation venturing focuses on developing innovations for the firm’s existing businesses. Private equity investments are investments as a traditional VC firm for financial returns.
Table 3: Objectives of CVC

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<th>Objective</th>
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Strategic learning objectives

An often mentioned objective is the development of business relationships. The business relationship can lead to agreements about marketing of the venture’s products by the parent corporation or about the venture conducting research for the corporation (Sykes, 1990). The exposure to external ventures can also help corporations in innovating themselves or in procuring disruptive innovations through acquisition or licensing (Dushnitsky & Lenox, 2006). However, Sykes (1990) found that objectives that produce a mutually supportive environment are more likely to lead to success, while objectives that induce a potential conflict of interest, such as venture acquisition, may lead to a non-productive environment and failure of the relationship (Sykes, 1990).

Another strategic benefit that is often named in one way or another is ecosystem development. These investments help develop a firm’s ecosystem of customers, suppliers and complementary businesses. Firms can invest in complementary products and services that help stimulate demand and adoption of a company’s current or future products develop (Dushnitsky & Lenox, 2006). A company can gain strategic benefits without tightly linking its operations to the venture by making investments that stimulate the development of the ecosystem in which the firm operates (Chesbrough, 2002).

In most literature listed above the creation of a window on new technology and markets is mentioned as one of the most important strategic benefits. Corporate venturing can help corporations respond to disruptive technologies and business models, because it can move faster, more flexible, and more cheap than traditional R&D (Lerner, 2013). Even if the investment does not lead to a transfer of a specific technology that the parent firm can use, it may still provide important insights in the development of a technology or market (Maula, Keil, & Zahra, 2013). This type of strategic benefit can be seen as learning opportunities for future development, creating growth value for the corporate investor (Yang, Narayanan, & De Carolis, 2014). The creation of a window on new technologies, markets, and business models involves the transfer of knowledge from the venture to the parent firm and can therefore be regarded as a learning objective.

Moreover, Battistini et al. (2013) also name access to new capabilities, new product development and access to breakthrough technologies as possible objectives of CVC, all of which require learning by the parent firm. Multiple of the benefits mentioned above can lead to new business development and firm expansion. If firms want to expand their business they should build up internal competencies to extend their domain (Pennings, Barkema, & Douma, 1994), and CVC can help firms to leverage their core competencies and build new competencies (Covin & Miles, 1999). CVC initiatives can allow more effective innovation by enhancing knowledge creation capabilities (Schildt et al., 2005; Wadhwa and Kotha, 2006), creating a window on new technologies and markets (Allen & Hevert, 2007), and creating a balance between exploitative and explorative activities (Rice, O’Connor, Leifer, McDermott, & Standish-Kuon, 2000). Moreover, CVC initiatives can enhance the firm’s capabilities to engage in other strategic activities, including acquisitions (Benson & Ziedonis, 2009) and new business development (Birkinshaw et al., 2002). Research has also shown that information gained through CVC can help improve the productivity of a firm’s internal R&D (Benson & Ziedonis, 2009). Within this literature review, the focus will be on those strategic objectives that require learning by the parent firm, referred to as learning objectives in this thesis (Table 3).
2.2 Organizational learning

A key success factor to gaining strategic benefits from CVC is that valuable information of the start-up firm should be harvested by the parent firm (Lerner, 2013). The learning benefits that can be gained from CVC are dependent on this process of transferring knowledge from the venture to the parent firm. The parent firm’s learning process is not only enabled by the investments and contact with an individual start-ups, but also by the knowledge that is gained during the process of screening ventures processing of deal proposals (Maula et al., 2013). To succeed in gaining strategic benefits from CVC firms need to invest as much in learning from the CVC process as they do in investing in them and managing them (Lerner, 2013). To understand how firms can organize and facilitate learning from their CVC activities to gain strategic benefits, it is important to understand how learning within and between organizations happens. Therefore, this section will describe the concept of organizational learning and how this relates to corporate venturing capital activities.

In today’s changing business environments, many researchers have identified the ability to learn as a crucial source of sustainable competitive advantage (Levinthal & March, 1993) and to build new capabilities that help adapt to an external disruption (Keil, Autio, & George, 2008). Organizational learning allows firms to innovate, as learning allows the development of new ideas, which are crucial in the development of new products or processes (Alegre & Chiva, 2013). Organizational learning is the process of acquiring information and knowledge that is new for a firm and is crucial for product, process and organizational innovation (Dess et al., 2003). The concept of organizational learning dates back to the late 1950s, but only became a hot topic in the late 1980s (Easterby-Smith, Crossan, & Nicolini, 2000). Since then, the amount of literature has dramatically increased and the importance of the concept for organizational performance is generally accepted (Crossan et al., 1999; Foil & Lyles, 1985). This literature review of the topic of organizational learning will focus on the literature that is most relevant to corporate venture capital.

A growing amount of literature connects organizational learning to entrepreneurship and entrepreneurial orientation (e.g., Alegre & Chiva, 2013; Cope, 2003; Wang, 2008), and to corporate entrepreneurship (e.g., Schildt et al, 2005; Dess et al., 2003; Hill & Birkinshaw, 2008). Both Wang (2008) and Alegre and Chiva (2013) show that the relationship between entrepreneurial orientation and firm performance is mediated by organizational learning. This implies that organizational learning needs to be facilitated for entrepreneurship to have an impact on firm and innovation performance (Alegre & Chiva, 2013). Corporate entrepreneurship is a key source of knowledge that can help redefine and renew the firm and its markets or industries and can enable them to adapt and respond to changes in the market (Dess et al., 2003). Moreover, corporate entrepreneurship can increase performance by developing knowledge that serves as the foundation for new competencies or revitalizing existing ones (Zahra, Nielsen, & Bogner, 1999).

Tapping into external sources for the acquisition of new technologies and knowledge is an important source of corporate renewal and development of capabilities and resources (Benson & Ziedonis, 2009). As stated before, CVC is an activity that enables learning from these external sources (e.g., Schildt et al., 2005; Lai et al., 2010). With this growing amount of literature on the connection between organizational learning and (corporate) entrepreneurship, surprisingly little of this literature explicitly looks at CVC as the form of corporate entrepreneurship. In the final section of this literature review these two concepts will be connected and the papers that do discuss this relation will be discussed. But first, the process of organizational learning will be discussed in more detail.
2.2.1 Learning process

Fiol and Lyles (1985, p. 803) define organizational learning as “the process of improving actions through better knowledge and understanding”. This definition shows that, besides acquisition and creation of new knowledge, it is also crucial to act on the obtained knowledge through corporate actions and change (De Geus, 1988). This can only happen if the knowledge that is acquired, is also integrated in the organization. An important related characteristic of organizational learning is its breadth, pointing to the fact that when more of a firm’s components, like units, obtain the same knowledge and recognize its potential for the firm, more organizational learning occurs (Huber, 1991). This is crucial for CVC, because the objective of these investments is not to acquire new knowledge, but to use and integrate this knowledge to improve actions of organizational creation, renewal, and innovation. The acquisition of knowledge is purely the means to an end.

Multiple antecedents exist for organizational learning, including environmental factors, the firm’s history and managerial biases (Lavie et al., 2010). Besides these antecedents, it is also important to actively manage and facilitate organizational learning (Nonaka, 1991). Gaining new knowledge is more than simple “processing” of information, but also depends on transforming insights and ideas of employees into knowledge that can be used by the whole organization (Nonaka, 1991). Schulz (2001) states that besides the production of knowledge, this knowledge should also be encoded in forms that are suitable for transmission and the knowledge should be recombined with existing organizational knowledge. He states that knowledge can be both transferred horizontally, to peer units and employees, and vertically, to supervising units or employees.

Companies can be seen as social communities that use their relational structure to enable the communication and transfer of new knowledge and capabilities (Zander & Kogut, 1995). The transfer of knowledge among units within an organization can create mutual learning processes and cooperation between these units can facilitate the creation of new knowledge (Tsai, 2001). For these processes to occur, organizational units should have access to external knowledge. Moreover, it depends on the absorptive capacity of the unit (Tsai, 2001). Levitt and March (1988) distinguish between three different ways knowledge can be diffused through an organization. A single source can broadcast knowledge to a population at once. The second way is spreading information through the contact between a person that has certain knowledge and a person that does not have this knowledge. The third method has two stages; first the knowledge is spread within a small group and then broadcasted to the remainder of the population. When learning from CVC, a person or a small group will learn from this activity first. Depending on their position in the parent firm, all of these methods are possible for the further diffusion of this knowledge.

Crossan et al. (1999) developed a framework for the process of both acquiring and integrating knowledge through organizational learning in the context of renewal of the firm (Figure 5). Their framework considers learning at three levels - individual, group, and organization - which are connected through four social and psychological processes: intuiting, interpreting, integrating, and institutionalizing. Knowledge is intuited on individual level, then interpreted on both individual and group level, leading to integration on group level through the development of shared understanding and acting on this new knowledge. When this shared understanding and the actions lead to formal rules, routines and procedures, integration and institutionalization of the knowledge also happens on the organizational level. Through this whole process, cognition and action are linked by organizational learning.
Figure 5: Learning process. Adapted from Crossan et al. (1999)

<table>
<thead>
<tr>
<th>Level</th>
<th>Description of process</th>
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<tr>
<td>Individual</td>
<td>Intuiting: “Preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experiences”.</td>
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<tr>
<td>Group</td>
<td>Interpreting: “The explaining, through words and/or actions, of an insight or idea to one’s self and to others”.</td>
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<tr>
<td>Organization</td>
<td>Integrating: “The process of developing shared understanding among individuals and of taking coordinated action through mutual adjustment. Dialogue and joint action are crucial to the development of shared knowledge”.</td>
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<td>Institutionalizing: “The process of ensuring that routinized actions occur. Tasks are defined, actions specified and organizational mechanisms put in place to ensure that certain actions occur”.</td>
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Besides the individual, group and organizational level, inter-organizational learning has been added in literature to the organizational learning concept as another level of analysis (Easterby-Smith et al., 2000), as is the case with CVC.

A key concept of organizational learning, for example from other organizations, is the absorptive capacity of a firm. The ability of a firm to explore new knowledge is associated with its absorptive capacity (Cohen & Levinthal, 1989), that is, “their ability to successfully identify, value, assimilate, and commercialize innovative discoveries made by outside parties” (Benson & Ziedonis, 2009, p. 331). The absorptive capacity enables firms to explore new technologies and markets, because it enhances the interaction with the external environment (Lavie, Stettner, & Tushman, 2010). The ability of firms to gain benefits from the obtained knowledge depends on (1) the strength of their internal knowledge base and (2) the ability and activities to tap into superior sources of information (Benson & Ziedonis, 2009). Absorptive capacity enables and improves organizational learning from the external environment (Lavie et al., 2010).

2.2.2 Learning mechanisms

Multiple conceptualizations of different types of organizational learning exist in literature. Keil et al. (2008b) found that through CVC activities, companies engaged in a process of ‘disembodied experimentation’, pointing to the process of experimentation outside organizational boundaries where a specialized unit acts as a knowledge broker enabling development, experimentation, and learning of new knowledge. Disembodied experimentation is similar to the following well-researched learning processes; experimental learning, trial and error learning or mimicking (Keil et al., 2008b). However it does not take place within organizational boundaries, but the learning processes are situated externally, allowing companies to learn about emerging technologies, markets and other business practices external to their firm (Keil et al., 2008b).

Zahra et al. (1999) make a similar distinction between acquisitive learning, which happens when knowledge that already existed outside of the firm’s boundaries is acquired and internalized, and experimental learning, which happens when knowledge is created internally that is specific for the
firm. The access to external knowledge through acquisitive learning enables firms to create new businesses and engage in strategic renewal or successful innovation (Dess et al., 2003). However, this knowledge is to a large extent publicly available, and is therefore not a source unique knowledge that can lead to sustainable competitive advantage (Kreiser, 2011). Experimental learning on the other hand generates private knowledge that can be valuable and rare, leading to more sustainable competitive advantage (Dess et al., 2003). Both types of learning therefore need to be present within an organization and fulfill different roles.

CVC enables acquisitive learning, because it provides access to and enables acquisition of external knowledge into the firm. In a later stage this acquired knowledge can lead to the creation of new knowledge internally, so to experimental learning. Organizational learning theory suggests that when firms acquired new and diverse stimuli through external sources, existing assumptions and beliefs within the company can be questioned (Dess et al., 2003). This is crucial for product, process and organizational innovation (Dess et al., 2003).

Another distinction between two learning mechanisms that is relevant to CVC is the distinction between explorative versus exploitative learning (March, 1991). The acquirement and usage of new knowledge is essential for the process of building new capabilities (Keil, 2004). Because of the high speed of technological change, firms need to constantly learn new capabilities and knowledge, but concurrently the time to exploit previously built capabilities and knowledge is shortened (Schildt et al., 2005). It is important for firms to maintain an appropriate balance between both exploration and exploitation to maintain growth and survival, which is difficult since these activities compete for scarce resources (March, 1991). Organizational learning therefore involves a certain tension between explorative and exploitative learning (Crossan et al., 1999).

Levinthal and March (1993, p. 105) stated that, within the context of exploration and exploitation of knowledge, exploration involves “a pursuit of new knowledge”, whereas exploitation involves “the use and development of things already known”. Lavie et al. (2010) suggest that, if an organization leverages existing skills and capabilities, exploitation also includes the development of new knowledge that builds on the organization’s existing knowledge base. Exploration, on the other hand, is the development and acquiring of new knowledge that creates a shift away from the firm’s current capabilities and knowledge base towards new knowledge on technologies, markets or external relationships (Lavie et al., 2010). This supports the view that exploration and exploitation should be considered as two ends of a continuum, rather than two discrete options as stated in some other research. The position on this continuum is defined by the degree the new knowledge is related to the firm’s existing knowledge base (Lavie et al., 2010).

To manage the balance between the two mechanisms, different organizational activities can be maintained that contribute to either exploration or exploitation (Schildt et al., 2005). Organizations can relax the inherent tension between exploration and exploitation by using different, loosely coupled units or by leveraging external resources (Lavie et al., 2010), as is the case when investing through CVC. CVC initiatives can lead to more explorative learning by allowing them to explore knowledge about emerging markets and technologies. However, CVC can also lead to more exploitative learning by allowing firms to learn skills or knowledge to exploit existing businesses (Keil et al., 2008b; Napp and Minshall, 2011). Schildt et al. (2005) have found that less integrated modes of venture governance, such as CVC investment, often lead to more explorative learning, rather than
exploitative learning. Less integrated governance modes are chosen by companies to conduct more risky explorative ventures, since they are relatively inexpensive, limiting the risks, and are least constrained by the existing corporate agenda (Schildt et al., 2005).

Even though these activities are two ends of a continuum, they are interrelated and should both be present in an organization. Since the ability of a firm to develop and search for new knowledge is largely dependent on the knowledge base of the company, so on its absorptive capacity, exploitation is a crucial base for successful exploration (Lavie et al., 2010). Vice versa, exploration provides new knowledge and opportunities that should be exploited by the organization further to become useful (Lavie et al., 2010). This mutual dependency blurs the distinction between the two behaviors and makes balancing them both more important and more difficult. This implies that while explorative learning through CVC can be very useful, this new knowledge should also be linked to exploitative processes within the firm.

2.3 Organizational learning through CVC
From the reviewed literature, it becomes clear that organizational learning plays an important role in the relationship between CVC and gaining strategic benefits. Especially when the objective of the CVC investments is to gain a window on emerging technologies, markets and business models and to use the CVC initiative as a tool to reach organizational creation, renewal and innovation. CVC can enable organizational renewal, innovation, and firm expansion. A key to gaining these strategic benefits is to facilitate harvesting of valuable information from the investments through learning (Lerner, 2013). Start-ups represent an important source to explore new ideas and knowledge for corporations (Wadhwa & Kotha, 2006). Corporate ventures enables radical organizational learning to explore new technologies and markets and for incremental organizational learning to exploit existing knowledge (Schildt et al., 2005).

As stated before, while multiple studies exist that show the relationship between corporate entrepreneurship and organizational learning, only limited studies exist that are specifically aimed at CVC as the form of corporate entrepreneurship.

Schildt et al. (2005) examined the antecedents of inter-organizational learning of technological knowledge from external corporate ventures, including corporate venture capital. They found an only weakly significant result between CVC and organizational learning. They provide two possible explanations for this results. The first is that technological learning is not taking place in these relationships, for example because employees of the parent firm do not have connections to the knowledge generated by the start-up company and because the CVC unit is inefficient in absorbing and transferring this knowledge. Another possible explanation lays in the fact that they measured these activities by looking at the patents generated by CVC, which only happened in a few cases. CVC initiatives are generally not focused on technological learning that directly leads to patents, but focuses on a number of different objectives, including a window on new technologies, markets and opportunities (Maula et al., 2013).

However, Wadhwa and Kotha (2006) did find a positive relation between the number of CVC investments of a firm and the rate of knowledge creation, measured through number of patents. They studied if CVC investments affect knowledge creation of parent firms and under which
conditions. This relationship was only present when the involvement by the parent firm in the ventures was high, which was not tested in the above mentioned research.

Dushnitsky and Lenox (2005) did a similar research, focusing on the relationship between firm investment through CVC and the amount the parent firm learns, as shown by the investing firm’s innovation rate. They also did find strong evidence for a positive relationship between CVC investments and patent citation, especially in industries with a weak IP regime. This relationship was mediated by the firm’s absorptive capacity. The absorptive capacity will determine the degree to which firms may learn from CVC investments. The relationship between absorptive capacity and learning from investments is non-monotonic. On one hand, acquiring and transferring of knowledge if the firms lacks expertise related to this knowledge, is difficult. On the other hand, firms are unable to gain much new knowledge if their knowledge base overlaps with that of the ventures.

These studies are somewhat inconclusive, but all found an at least weakly significant effect between CVC and organizational learning. Indicated by these papers and the previous reviewed literature, it can be concluded that corporate venture capital can lead to organizational learning. More specifically, because CVC provides access to external sources that contain knowledge that is different from the current knowledge of the firm, CVC can lead to acquisitive and explorative learning on an inter-organizational level. However, this organizational learning should be facilitated to allow the transfer of knowledge to the parent firm.

2.3.1 Facilitating learning from CVC

The organizational learning field is an extensive one and the importance of organizational learning for entrepreneurial activities, like CVC, is widely recognized. However, the actual mechanisms that promote organizational learning from CVC have received little attention in academic literature.

Corporations can gain a lot of interesting new knowledge from their CVC activities. However, because CVC units often are not directly linked to the parent’s business processes, knowledge does not automatically flow from start-ups to the organization. Many barriers exist to organizational learning from CVC activities. Lerner (2013) states a number of those barriers. The CVC unit may be located far from the central operations of the firm and the units that could benefit from the knowledge. Moreover, employees in the company are often busy with their everyday tasks, and too little time is available to learn new knowledge. The employees might even view the new technologies developed by the ventures as not applicable to the firm. Lastly, there might be a cultural gap between the employees of the CVC unit and the managers of the parent firm. Therefore it is crucial to set up a process to facilitate the process of organizational learning (Lerner, 2013).

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of linked units to transfer knowledge</td>
<td>Lerner (2013)</td>
</tr>
<tr>
<td>Creating direct linkage between employees of parent firm and venture</td>
<td>Birkinshaw et al. (2002)</td>
</tr>
<tr>
<td>Formation of liaisons between in-house divisions and ventures</td>
<td>Yang et al. (2014)</td>
</tr>
<tr>
<td>Communication of scenarios</td>
<td>De Geus (1988)</td>
</tr>
<tr>
<td>Using manager’s position to act as knowledge broker</td>
<td>Maula et al. (2013)</td>
</tr>
</tbody>
</table>
A number of different activities to enable organizations to learn from CVC have been proposed in literature (Table 4). Lerner (2013) proposes that a successful method for transferring knowledge from the venture to the parent firm is the creation of linked units with the specific goal to transfer knowledge. This unit should be separate from the CVC unit and should focus on assessing new technologies and interact with intelligence officials (Lerner, 2013). Another option is to create a direct linkage with the venture, e.g. by involving employees in due diligence, by letting managers take a seat on the board or by explicit partner agreements between the venture and the parent company (Birkinshaw et al., 2002). Another option for direct involvement is created by forming direct liaisons between in-house divisions and the ventures, which encourages and funnels knowledge (Yang et al., 2014). De Geus (1988) proposes that the communication of scenarios can stimulate “games” and discussions between people with decision-making authority. This can facilitate and accelerate the process of organizational learning and change the mental models of decision makers (De Geus, 1988).

Maula et al. (2013) state that CVC managers have an unique position between the CVC unit, VC community and portfolio of ventures, and the parent firm. Therefore they should act as knowledge brokers that operate in both environments at the same time and transfer knowledge to the parent firm. They can also mediate and solve conflicts that arise between the cognitive frameworks of the parent firm’s managers and the new knowledge and opportunities that arise.

Corporations have struggled with gaining long-term strategic benefits from CVC, because of managerial uncertainty on how these activities should be operationally linked to the organizational strategy process and agenda (Covin & Miles, 2007). Moreover, CVC funds might gain new knowledge from the venture at multiple moments in the investment process. Multiple specific learning moment have been proposed in the literature, namely during the screening of potential ventures, during the due diligence process, during direct involvement, when monitoring the growth and evaluating performance of the portfolio, or when undertaking joint projects or engaging in business relationships (Maula et al., 2013; Yang et al., 2014; Birkinshaw et al., 2002). In the remainder of the research these learning moments will be divided over the following five phases; the screening phase, the due diligence phase, the direct involvement phase, the monitoring and evaluation phase and the business relationship phase (Figure 6). The due diligence process involves all phases starting from the proposal to invest in a start-up and ending with the decision whether to invest or not.

Figure 6: Learning moments in the CVC process
Although multiple learning activities (Table 4) and learning moments (Figure 6) have been proposed to enable the parent firm to learn from the portfolio of ventures, to the best of my knowledge no literature exists that compares these different strategies for learning from CVC. Therefore more research should also be done on how and when organizational learning should be facilitated.

Moreover, only limited research exists that has studied the influence of different models for CVC investments on the relationship between CVC and organizational learning. As described above, many different strategic objectives and models exist for CVC investments. In the studies that have researched the influence between CVC and organizational learning, CVC initiatives have mostly been considered as one group (Schildt et al., 2005; Dushnitsky et al., 2006). Wadhwa and Kotha (2006) found that only if the involvement of the parent firms is high, the rate of knowledge creation is also high. This implies that firms should pick a CVC model that stimulates this involvement. Other characteristics of different models are also likely to influence the learning process. More research should be done on what the influence of different models is on the relationship between CVC initiatives and organizational learning.

2.4 Conclusion

In the literature review the academic literature related to corporate venture capital and organizational learning has been reviewed. After discussing the literature on both concepts individually, the literature review has shown that a relation exists between organizational learning and CVC. A growing amount of literature connects these two concepts, either implicitly or explicitly. Corporate venture capital allows firms to learn from a portfolio of start-up firms, which enable firms to gain knowledge on emerging technologies, markets and business models. This provides an important source for learning about opportunities that can enable firms to renew and develop new businesses and capabilities. This literature review has argued that organizational learning plays an important role for many of the strategic benefits that can be gained from CVC, including gaining a window on emerging technologies and markets. Many of the strategic benefits are dependent on the process of harvesting and transferring knowledge from the portfolio of ventures to the parent firm.

The research field that connects CVC and organizational learning is relatively new and many of the subjects that influence this relationship have not yet been researched. Therefore more research should be done on how organizational learning from CVC should be facilitated. In this literature review a number of gaps in the literature have been identified.

Although multiple strategies for learning and learning outcomes have been proposed in literature, not much agreement exists on how to facilitate learning from CVC investments and what the learning process looks like. A number of aspects have been identified that influence the organizational learning outcome of the CVC process; the moments at which learning occurs, the process of knowledge diffusion and transfer and the learning mechanisms. Therefore a gap in the literature is how and when organizational learning should be facilitated and what the learning process looks like.

Moreover, only limited research exists that has studied the influence of different strategies for CVC investments on organizational learning. Because many different strategic objectives and models exist for CVC investments, more research should be done on what the influence of different aspects of CVC strategies is on organizational learning. Four aspects of the CVC strategy have been identified that influence how a CVC initiative is set up and what the desired and actual organizational learning outcomes are; the objective(s) of the CVC initiative, the organizational model used for the
investments, the operational linkage between the parent firm and both the ventures and the investment unit, and the market focus of the investments. The influence of these different aspects on organizational learning is a second gap in the literature. Moreover, other aspects might influence this relationship that have not been identified in the literature review. The final gap is another aspect that has a big influence on the organizational learning outcomes; the learning activities that are carried out by the firm. Multiple activities are mentioned in the literature, but to the best of my knowledge no research has been done that compares these different activities.

Figure 7: Theoretical framework

Besides these gaps, a theoretical framework has been abstracted from the literature review that served as the input for the remainder of the research (Figure 7). The framework does not function as a theoretical model, but is made to provide an overview of the most important aspects that were studied further in the empirical research phase and that were used to support the analysis of the results. In the framework the most important aspects of the CVC strategy that influence the firm’s organizational learning outcomes are the organizational model, the objectives, the market focus, and the operational linkages that are in place. The CVC strategy is executed through the learning activities. The learning activities are all activities that are carried out by either the CVC unit and/or by employees of the parent firm to gain, process and transfer knowledge to the parent firm. The learning activities allow a firm to execute the CVC strategy in such a way that desired organizational learning outcomes are reached, and therefore plays a mediating role between the strategy and the outcomes. Multiple different organizational learning outcomes can be gained from CVC, ranging from technological learning that leads to patents, to more strategic learning through gaining a window on new technologies, markets and opportunities.
3. Methodology
This chapter discusses the research methodology that was used for the remainder of the master thesis project, and will reflect on the quality aspects of this methodology. The second phase of this master thesis project is a multiple-case study based on in-depth interviews and secondary sources. The 6 case studies provide insight into the processes by which organizations engage in CVC and in learning from their CVC activities, and into how this learning is facilitated. This phase answers sub-questions 5 to 8. Chapter 4 describes the results of the case studies and the analysis of these results.

According to Yin (2009) case studies are the preferred research method when the research question seeks to explain “how” or “why” some contemporary social phenomenon works and when the answer requires an extensive and in-depth description of the phenomenon. Moreover, case studies are most useful for events that cannot be controlled.

The main research question of this thesis seeks to explain the “how” of a contemporary business phenomenon, namely how organizations learn from CVC activities and how this can be facilitated. The research mostly has an explorative character and requires an extensive, in-depth description of this learning, rather than an abstract answer. Lastly, the event will be studied in an uncontrolled environment, to be able to study the phenomenon in its real-life context. For these reasons a case study approach will be used. Blumberg, Cooper and Schindler (2008) state that the use of a multi-case study approach provides more robust results compared to single case interviews. Moreover, multi-case studies improve the grounding and generalizability of the theory in comparison to single case studies (Keil, Autio, & George, 2008). The results of the multiple case studies are expected to differ between the cases, because of difference in circumstances. Multi-case studies are preferred over single case studies, because the comparison of the case studies will lead to a set of more powerful, cross-case conclusions (Yin, 2009). Therefore a multi-case study approach will be used for this research.

The empirical research of this thesis project has been executed during my internship at Accenture, one of the world’s leading organizations providing management consulting, technology and outsourcing services, with approximately 319,000 employees; offices and operations in more than 200 cities in 56 countries; and net revenues of $30.0 billion for fiscal 2014.

3.1 Data collection
To investigate how companies learn from CVC activities, and answer sub-questions 5 to 8, the empirical analysis builds on 6 case studies at companies that engage in or have engaged in CVC activities. Case studies allow for the combination of different sources of evidence. The data collection for the case studies in this research existed of qualitative, semi-structured interviews at every company, combined with information from literature and other documents. These case studies were aimed at uncovering how organizational learning from CVC activities happened in the case companies. Moreover, the case studies studied the influence of the different aspects of the corporate venture capital strategy that were identified in the literature review. Lastly, it aimed at uncovering what activities are used to facilitate learning and at what moments learning happens in practice.

One of the most important aspects of setting up a case study research, is the selection of appropriate cases, as it controls the variation in the data and defines the limits for generalization of the results.
(Eisenhardt, 1989). Because relatively little is known about how learning from CVC is facilitated, a diverse sample of cases was selected to allow for the comparison of different strategies and aspects. The sample of companies provides a rich variety in their overall approach to the CVC process, thus allowing me to gain a broad perspective on the influence of different CVC and organizational learning strategies on organizational learning. The case companies and interview participants were selected on the basis of a number of criteria. The case companies had to engage in CVC investments in external start-up companies. A number of investments had to be done by the company already. Lastly, the interview participants had to be directly involved in these initiatives. Table 5 provides an overview of the companies.

Table 5: Overview of cases

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
<th>CVC started</th>
<th>Organizational model*</th>
<th>Portfolio size</th>
<th>Number of interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A</td>
<td>Telecom</td>
<td>2010</td>
<td>Direct</td>
<td>25 - 30</td>
<td>1</td>
</tr>
<tr>
<td>Company B</td>
<td>Transport</td>
<td>2009</td>
<td>Fund</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Company C</td>
<td>High Tech</td>
<td>1997</td>
<td>Direct</td>
<td>10 - 15</td>
<td>3</td>
</tr>
<tr>
<td>Company D</td>
<td>Healthcare</td>
<td>2011</td>
<td>LP</td>
<td>10 - 15</td>
<td>1</td>
</tr>
<tr>
<td>Company E</td>
<td>Energy</td>
<td>2007</td>
<td>LP</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Company F</td>
<td>High Tech</td>
<td>2009</td>
<td>LP</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

*Options: Investing in VC funds as a limited partner (LP), investing through a dedicated investment fund (fund), or direct investments in companies as part of an existing business function or as a separate internal unit (direct).

To make sure confidential information is not disclosed and to provide privacy to the companies, all data has been anonymized. The companies will be represented as companies A to F. Every case study existed of at least 1 interview with an employee that is directly involved in the CVC activities of the company. Appendix A provides an overview of the different functions of the employees that were interviewed.

Additional information was collected from literature and other documents, which help in applying a process of triangulation (Blumberg et al., 2008). The documents, including newspaper articles, company websites and academic reports, have helped in preparing the interviews and analyze the data (Appendix A). The interviews had a semi-structured approach with open questions on the different topics extracted from the theoretical framework. An interview protocol (Appendix B) has been used to ensure that all necessary areas are covered and that the questions are asked in a similar fashion. However, the semi-structured interview approach also allows for the exploration of topics in more depth and the discussion of topics that were not found in literature. The interviews on average took about 1 hour, and have been recorded to ensure all information could be retrieved later. The interviews serve two purposes; uncovering the informant’s perspective on the issue at hand, and checking if the informant can confirm insights and information already possessed by the interviewer (Blumberg et al., 2008). Other documents, possibly pointed out during the interview or found later in the process, have been taken into consideration for the case study too.
3.2 Data analysis

The core activity for building theory from case study research is the analysis of the gathered data. The case studies were analyzed in two steps; first a within-case analysis was done, followed by a cross-case analysis.

The case studies were analyzed based on the research questions and the theoretical framework. For the analysis of the case studies, the interviews have first been fully transcribed and coded. The framework was used to create an initial set of coding tags to analyze the interviews on the different aspects of the framework. Through an iterative process the list of tags was transformed and other underlying tags were identified, to capture all important information. The final list of tags can be found in Appendix C. The coded information has been categorized per case, and compared to the information from the collected literature and documents, and if multiple interviews were held at the same company also to other interviews.

Within-case analysis typically exists of case study write-ups for each case that are often mainly descriptive (Eisenhardt, 1989). These write-ups are important for the generation of insight since they help cope early in the analysis process with the big amount of data and generate familiarity with the cases as a stand-alone entity (Eisenhardt, 1989). Such a write-up was made of the relevant data per case study, focusing on the different aspects of the theoretical framework (Figure 8).

Figure 8: Theoretical framework

CVC strategy
- Organizational model
- Objective(s)
- Market focus
- Operational linkage

Learning activities

Organizational learning outcomes

The CVC strategy of a firm was analyzed by looking at the organizational model, the objectives, the market focus, and the operational linkages that are in place. The learning activities were analyzed by looking at all activities that are carried out by either the CVC unit and/or by employees of the parent firm to gain, process and transfer knowledge to the parent firm.

In this research the organizational learning outcomes were not tested in a qualitative matter. Previous research, as described in chapter 2.3, has measured learning outcomes for example through patent citation. A limitation of these qualitative measures is that diverse learning outcomes can be reached through CVC, such as technological learning that leads to patents, but also multiple different learning outcomes, such as a window on new technologies, markets and opportunities. To be able to take all different types of learning outcomes into account, this research will describe the learning outcomes in a qualitative matter. The organizational learning outcomes of a firm’s CVC process were analyzed by looking at the type of learning that happens, looking at explorative or exploitative learning. Moreover the analysis describes the overall learning process, looking at whether learning happens in a structured manner or not, and at which moments learning happens (through learning activities).
In multi-case research the within-case analysis is generally coupled with cross-case analysis to uncover patterns in the data. By reflection of the results through the cross-case analysis, case-specific elements are removed from the results (Van Aken et al., 2012). The case studies were compared to each other and to the existing academic literature. The different aspects of the theoretical framework are analyzed on cross-case similarities and differences. Besides that, the cross-case analysis has studied if relationships exist between the different aspects. Lastly, the analysis also included searching for patterns in the case studies, besides the aspects of the theoretical framework. By applying a structured and diverse cross-case searching tactic, researchers are stimulated to search beyond initial impressions (Eisenhardt, 1989).

Finally a number of conclusions have been drawn by developing theory from the analysis. To develop theory from the analysis of the case studies, analytic generalization is used, in which the review of the literature and the theoretical framework are used as a template with which the empirical results of the case study are compared (Yin, 2009). These conclusions answer the research questions and develop theory on the relation between CVC and organizational learning.
4. Results & analysis

This chapter describes the results of the case studies and the analysis of these results. The analysis presented here is based on six case studies that were performed for this master thesis project. Through the analysis of these case studies sub-questions 5 to 8 are answered. In this first section the different cases will be discussed separately. Section 4.1 will give an overview, per case, of the relevant information that was gathered during the separate case studies and will describe how the different companies approach CVC and organizational learning. Section 4.2 will analyze the results further based on the theoretical framework as described in the previous chapter. Section 4.3 will provide a summary of the results and an answer to sub-questions 5 to 8.

The companies varied in industry. All CVC initiatives that were researched were still active, except for company C, which was canceled in 2006. Table 6 gives an overview of the CVC initiatives that were researched in the case studies and the different aspects of the theoretical model. It shows the organizational model of the CVC initiative. The organizational model of the investments varied across the different cases, and all three types of models were present in the sample: direct investments (direct), investments through a dedicated fund (fund) and investments through the participation in a fund as a limited partner (LP). The table also shows whether the primary objectives were strategic or financial. If both were equally important the CVC has mixed objectives. Moreover, the table shows whether the market focus was on core business, start-ups adjacent to the core business, or opportunities beyond the usual business. Lastly, the table shows whether learning happens at the firm and whether this learning happens in a structured matter or not. The companies that did not have a full structured process to facilitate the learning, but did have a limited number of structured activities in place that aimed at learning from the CVC initiative, are marked “to some extent”.

Table 6: Company overview

<table>
<thead>
<tr>
<th>Company</th>
<th>Organizational model</th>
<th>Portfolio size</th>
<th>Objectives balance</th>
<th>Market focus</th>
<th>Learning?</th>
<th>Structured learning?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Direct</td>
<td>25 - 30</td>
<td>Strategic</td>
<td>Adjacent</td>
<td>Yes</td>
<td>To some extent</td>
</tr>
<tr>
<td>B</td>
<td>Fund</td>
<td>8 - 10</td>
<td>Mixed</td>
<td>Adjacent</td>
<td>Yes</td>
<td>To some extent</td>
</tr>
<tr>
<td>C</td>
<td>Direct</td>
<td>10 - 15</td>
<td>Strategic</td>
<td>Core/Adjacent</td>
<td>Yes</td>
<td>To some extent</td>
</tr>
<tr>
<td>D</td>
<td>LP</td>
<td>10 - 15</td>
<td>Strategic</td>
<td>Core/Adjacent</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>E</td>
<td>LP</td>
<td>8 - 10</td>
<td>Mixed</td>
<td>Adjacent</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>F</td>
<td>LP</td>
<td>8 - 10</td>
<td>Financial</td>
<td>Adjacent</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

4.1 Within-case analysis

In this section an overview will be given of the relevant information per case. The within-case analysis will describe how the different companies approach CVC and organizational learning, by looking at the different aspects of the theoretical framework as discussed in the chapter 3.2; the CVC strategy, the learning activities and the organizational learning process and outcomes. These write-ups help generate insight in and familiarity with the cases as a stand-alone entity.
4.1.1 Company A
Company A is a telecommunications company that invests in start-ups since 2010. The company was founded in 2005, and currently is world leader in its core business. The company has operations in 14 countries, mainly in Europe, and has 38,000 employees. Last year’s revenue was $18.1 billion.

Organizational model
They invest directly from the balance sheet of the company through a dedicated unit.

Objective(s)
They have a strategic investment focus and their investments can be divided over two different types. Firstly, they do long-term strategic investments to see which innovations could be an opportunity or threat on the long term. Secondly, they do shorter term investments in innovations that can complement their ecosystem or solve a problem of a business unit. However, the CVC unit really functions as a tool for the rest of the company; “We are here to serve the company, in whatever way is relevant”.

Market focus
Their investments focus on companies that are adjacent to their core business. The CVC unit is aware of the strategic roadmap and long-term vision of the other business units within the company, and look for investments that fit these.

Operational linkage

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
</table>

Table 7 shows all employees that are involved in the process in some way. Company A has a dedicated unit that is responsible for the CVC initiative, which exists of 4 employees. When an interesting start-up is found, a relevant business unit is approached to sponsor the investment. Overall the CVC unit reports to the CTO, and the portfolio is reviewed once every quarter of a year. Besides the investments, the CVC unit is also responsible for an internal incubator and participation in external incubators. Many of the employees of company A are in some way linked to the CVC unit or the venture(s).

Learning activities
The portfolio is reviewed every quarter of a year with the senior management team. During this meeting the threats and opportunities for company A that have been identified by the CVC unit are also discussed, besides the status of the portfolio.

The second structured learning activity, which is done in a more irregular manner, is the screening and mapping of an ecosystem in a direction requested by one of the business units. This does not necessarily lead to investments, but leads to a report that is used by a business unit to evaluate threats and opportunities in a certain direction.
The company also learn indirectly because the CVC unit is directly involved in the start-ups, but also directly by putting a manager on a board seat. Every time an investment is done, a different managing director is put on a board seat of the start-up. “We try to push them out of their comfort zone this way towards such an innovation, so that they are exposed to it. That is very good for their development”. This managing director will share it’s experiences and knowledge with other managing directors. This final sharing of information by the managing director does not happen in a structured manner.

Besides that, the business units and investment committee are both involved in the due diligence process and learn through this involvement. Finally, the investments often lead to a business relationship with the start-up, which again leads to contact between the venture’s employees and employees of the relevant unit.

**Learning process and outcomes**

Company A does learn from the ventures, but states this is more in an ad hoc manner than in a structured manner. However, as stated above, they engage in a few structured learning activities that lead to organizational learning. The CVC investments are mostly used as a support for the business units, and therefore the business unit managers gain most knowledge from the investment process. Exploitative and explorative learning both happened through the CVC process at company A. Exploitative learning happens when the CVC does shorter term investments in innovations that can complement their ecosystem or solve a problem of a business unit, explorative learning happens when they do long-term strategic investments.

<table>
<thead>
<tr>
<th>Learning moments at company A</th>
<th>Screening phase</th>
<th>Due diligence phase</th>
<th>Direct involvement phase</th>
<th>Monitoring and evaluation phase</th>
<th>Business relations phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Learning from the CVC initiative happens in every phase of the CVC process at company A through the learning activities that are carried out.

**4.1.2 Company B**

Company B is active in the European transport industry since early 1900s, and invests in start-ups since 2009. Company B is primarily a service company that does not have internal R&D and production. Company B employs around 32,000 employees and is part of a larger group of companies that together had almost 25 billion euro revenue in 2014.

**Organizational model**

They invest through a dedicated fund, which was set up together with 4 partners; company B, one other company from the same industry, a university and a financial partner. All partners have equal voting right in the fund.

**Objective(s)**

Company B primarily does investments for strategic reasons, mainly to stimulate innovation. “You can see that it is very difficult for a large company that has been around for a long time to innovate in
a good way. We are often stuck in existing structures.” Therefore, they invest in companies that can create innovation in the company, either short-term or long-term, and that have business impact. However, because of the structure with 4 partners, sometimes the strategic linkage is a bit more indirect, and financial performance is equally important as strategic relevance for evaluation of the start-ups.

Market focus
Even though they invest together with four partners, they are very clear on their investment focus; “We did say that we do really want to keep a clear focus, so it has to be able to mean something to our core processes”. Their investment focus is in companies that are adjacent to their core business. They have identified a number of business areas in which they would like to innovate and actively search for start-ups in these areas.

Operational linkage

Table 9: Operational linkage at company B

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Of every company one C-level manager is part of the investment committee, who make the final investment decisions. For company B it is their CFO. Of every company 2 or 3 employees are active in a fund committee. The 3 employees of company B that are part of the fund committee are all management level employees that spend 1 to 2 days a week on this task. Two of those managers are also directly responsible for the innovation of company B, besides the CVC activities. The CVC activities have a clear influence on the overall innovation strategy. The innovation strategy influences the focus of the investments that are made, but also the other way around. “A big part of the innovation strategy is done through the fund. If you look at the innovation agenda of the past years, than the fund has shown to be one of the most successful things”.

And lastly, there is an independent fund manager that does day-to-day operations and coordination. The CVC process is pretty separate from the rest of the company, until in some of the cases a business relationship is started with a company, for example as lead customer.

Learning activities
The only structured learning activity that happens within company B is the discussion of the fund activities with the ‘innovation board’ of company B. Two of the members of the fund committee are part of this board, which meets every other month to stimulate innovation within the company. The activities of the CVC initiative are shared in this innovation board with other ‘innovation champions’ of the different business units within company B.

A less structured learning activity that happens on an irregular basis is the communication of the investments that are done by the fund to the rest of the employees of the company through internal communication channels like the internal magazine.
No learning activity is in place to communicate the deal flow. However, since two of the CVC managers are also part of the innovation board, they can share information about relevant ventures that has not been invested in at these meetings. The investment committee, and in some cases also the business units, are involved in the due diligence process and learn through this involvement. The company also learns indirectly because the CVC unit is directly involved in the start-ups, but no other direct linkage is created between the company and the ventures. Direct involvement only happens in some of the cases by starting business relationship with companies. Lastly, learning happens in the monitoring and evaluation phase by involvement of both the investment committee, which is the CFO for company B, and the fund committee.

Learning process and outcomes
Company B does learn from the ventures, but states this is more in an ad hoc manner than in a structured manner. However, there are a few structured learning activities that can be pointed out in the CVC process of company B. The learning mostly happens on a strategic level. Company B mostly engages in explorative learning through the CVC investments. Since they have no internal R&D and most innovations are developed externally, no direct link can be made with internally developed innovations, and therefore the investment is used as an explorative activity.

Table 10: Learning moments at company B

<table>
<thead>
<tr>
<th>Learning moments at company B</th>
<th>Screening phase</th>
<th>Due diligence phase</th>
<th>Direct involvement phase</th>
<th>Monitoring and evaluation phase</th>
<th>Business relations phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Learning from the CVC initiative happens in most phases of the CVC process at company B, besides during direct involvement. Only the CVC unit is directly involved in the start-ups.

4.1.3 Company C
Company C was founded in the 1890s and at the time of their CVC activities was a company in the high tech and consumer electronics industry. Their investment activities started in 1997 and ended in 2006, when it was decided to shift the focus to the development of internal initiatives through an internal incubator program. In 2004 they had over 160,000 employees and 2,8 billion revenue.

Organizational model
Company C invested directly from the balance sheet through a dedicated unit.

Objective(s)
Company C focused on strategic benefits and invested mainly to gain a window on new developments in technology and business models. However, because business units had to be found that supported the investment, the portfolio of investments were close to the core activities of the business. This helped in gaining knowledge that was interesting for the development of products of that business unit, but helped less in gaining a window on broader, long-term developments that could have been relevant for company C.

Market focus
Their focus was to invest in start-ups that were strategically relevant and close to their core business.
“When we first presented the proposal to start a CVC initiative, the idea was more to invest in white spaces, but because company C back then already was very broad, it was decided to focus more. [...] It was said back then, we will just venture within the scope of the existing business units, because that is even too big already.”. Because business units had to support, the investments were very related to the developments in the business units.

Operational linkage

Table 11: Operational linkage at company C

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The investments were done by a dedicated unit within company C. To make sure that the investments were strategically relevant to the business units, for every investment a business unit had to be found that wanted to support the investment. Moreover, the investments had to be defended in the board of company C, which served as the investment committee.

Learning activities

No learning activity was in place to communicate the deal flow. Both the investment committee and the business units are involved in the due diligence process and learn through this involvement. Every time an interesting venture was found, the CVC unit had to report this to the business unit that could be interested. Moreover, if the business unit was interested, a visit by the responsible managers of the business unit to the venture would be arranged.

Besides that the CVC unit shared all proposals with the investment committee and they also evaluated the performance of the portfolio of ventures. Learning happens in this monitoring and evaluation phase by involvement the investment committee.

The company also learns indirectly because the CVC unit is directly involved in the start-ups, but no other direct linkage is created between the company and the ventures. Direct involvement only happens in some of the cases by starting business relationship with companies.

Learning process and outcomes

Company C did learn from the ventures and this partly happened on a structured basis and partly on an ad hoc basis. In the end company C has decided not to proceed many of the strategic directions in which investments were made, and even whole business units were scrapped. Therefore, much of the knowledge that was gained, has been lost. Because of the required support of the business units for every investment, the learning that happened was very adjacent to the innovations developed by the business units and therefore mostly exploitative learning happened.
Learning from the CVC initiative happened mostly in the later phases of the CVC process at company C when a business relationship is started, but also earlier during the due diligence phase, and the monitoring and evaluation phase.

4.1.4 Company D
Company D currently is active all over the world in the healthcare and consumer electronics industry. The company was founded over a century ago. They currently have over 110,000 employees and they had over 21 billion in sales in 2014. Their CVC activities focuses only on the healthcare industry.

Organizational model
They invests in start-ups through a partnership with independent VC company X. They are limited partner in one of X’s funds, which is set up in collaboration with company D and with their strategic focus in mind.

Objective(s)
Company D started the CVC initiative for strategic reasons, namely to see what developments are happening within the healthcare industry. A message they released on their website states that the investments are an addition to the other innovation activities, including the internal incubator, they do in the same area.

Market focus
The fund invests in start-ups in the healthcare technology and healthcare service industry. This ranges from ventures that are adjacent to the business of company D to ventures that are in the same core business as company D.

Operational linkage

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The CVC unit that is responsible for the financial and operational aspects of the investment process are managers of VC company X. The team of company D that is responsible for the investments is also responsible for the internal incubator in the same area. They generally do not have direct contact with the start-ups, but X’s CVC unit regularly updates them on the status of the portfolio and possible new investments. Later on in the process, direct contact with the ventures does happen through business relations. Moreover, an employee of company D also joined company X as a partner, to help X understand the needs and strategy of company D and to make a link back to
company D. A select number of employees of company D are aware of the status of the investments done by company X, mainly people that work in strategy-related functions of the healthcare business.

**Learning activities**

Company D is not directly involved in the screening and due diligence process, but information is shared about potential investments. Company X regularly reports the status of the investments and shares information about what is going on during review meetings with company D. They also discuss the possible investment directions during these meetings. Besides the meetings, company D also has direct access to the whole deal flow, but this is not shared structurally.

Generally no direct linkage is created between the company and the ventures. Direct involvement only happens in some of the cases by starting business relationship with companies. When a venture is of special interest to company D, they will engage in a partnership with the venture, for example for joint testing or for market entrance.

**Learning process and outcomes**

Company D does learn from the investments, but this is more in an ad hoc manner and indirectly. The knowledge that is gained is diverse and not only strategic, but also technical knowledge, or about new ways of working or business models. Exploitative and explorative learning both happen through the CVC process at company D. Explorative learning happens when company D learns about emerging technologies and important developments in the healthcare market. Exploitative learning happens when company D starts a business relationship with a company and combine their knowledge.

**Table 14: Learning moments at company D**

<table>
<thead>
<tr>
<th>Learning moments at company D</th>
<th>Screening phase</th>
<th>Due diligence phase</th>
<th>Direct involvement phase</th>
<th>Monitoring and evaluation phase</th>
<th>Business relations phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Learning from the CVC initiative happens in most phases of the CVC process at company D, except during the direct involvement phase.

**4.1.5 Company E**

Company E is a company that is active in the energy industry. They currently have over 2500 employees in The Netherlands and Belgium, and are part of a bigger group of companies that operate all over Europe. Their revenue in 2014 was almost 150 million euros.

**Organizational model**

They invest in start-ups as a limited partners in VC fund Y with independent management, which was set up by company E in collaboration with another energy company and the government.
Objective(s)
The fund was set up as part of a deal with the government in 2007, and has the goal to invest in and stimulate sustainable energy. Therefore, company E did not have any financial or strategic objectives for the fund when it was started. The first years the fund was seen as a mandatory activity, and it took a few years before they realized that the fund could also have other benefits. Currently company E has gained financial return from the investments. Moreover, with the help of the managers of VC fund Y they realized also strategic benefits can be gained; “The most what company E has gained from the fund is the insights in what is happening in the industry. And the funny thing is that in the energy sector where we are doing our business, a real mega transition is happening.”. Company E therefore currently has mixed objectives for the fund.

Operational linkage

Table 15: Operational linkage at company E

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The investments process is done by the management of VC fund Y. During a monthly review call the deal flow and portfolio are discussed with the responsible managers of company E. The manager of company E, who is responsible for these review meetings, changes regularly. Moreover, the management of VC fund Y shares information directly with a large number of managers of company E, including the CEO, CTO and Head of Innovation, to managers of business units.

Market focus
The investments done by fund Y are in innovations that support the usage and generation of sustainable resources. Energy is the core business of company E and so they invest in companies adjacent to their possible core business of the future.

Learning activities
Two structured activities are done to communicate information from the VC fund to company E. The first is a monthly review call in which the deal flow and portfolio are discussed. The other is a visit of the VC managers to company E to discuss interesting companies in more detail, because the deal flow also contains many interesting ventures that are relevant to the future of company E, but not necessarily for investments. “We specifically go visit them then, and then we make a separate list of things of which we are sure that they are interested in”.

The fund management takes care of the operational aspects of the investment process and no direct linkage has been created between the company and the ventures so far. So no learning happens during direct involvement or business relationships.

Learning process and outcomes
Since the fund was not set up for strategic reasons and these benefits were only later realized, a learning structure is not present yet at company E. “We are finally speaking to many people within company E and everybody is enthusiastic about our contribution in their innovation process in different ways, while they still have a lot of trouble with transforming this in tangible ideas.”.
Company E still struggles with the question how venturing can add value to the internal innovation process. Company E primarily engages in explorative learning from the CVC investments. They invest to gain a window on a market that is in transition and to gain a window on emerging technologies and business models in this market.

Table 16: Learning moments at company E

<table>
<thead>
<tr>
<th>Learning moments at company E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening phase</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

Learning from the CVC initiative happens in some of the phases of the CVC process at company E. The learning happens in the screening, due diligence, and monitoring and evaluation phases through review meetings with the CVC managers.

4.1.6 Company F

Company F is a company active in the high tech industry, with offices in 16 countries. In 2014 they had over 14,000 employees and over 5.8 billion in sales. They invested in VC in 2008.

Organizational model

Company F invested in independent VC fund Z in 2008 as one of the limited partners. The five other limited partners included three other companies in the same industry.

Objective(s)

The main reason for them to invest in start-ups was to stimulate the local high tech community, and secondly for the possible financial returns. For company F there were no strategic reasons to invest in the fund.

Market focus

The investments focus of the fund is start-ups in the high-tech industry.

Operational linkage

Table 17: Operational linkage at company F

<table>
<thead>
<tr>
<th>Involved in CVC process</th>
<th>C-level management</th>
<th>Management of business unit</th>
<th>Other management</th>
<th>Other employees (R&amp;D etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The investments process is done by the management of VC fund Z. Once a year a review meeting takes place and the LP’s are kept up to date about the investments and the status of the portfolio.

Learning activities, process and outcomes

They are not using the investments as a learning tool in any way and therefore company F will be left out of the further analysis.
4.2 Cross-case analysis

This section will provide an overview of the differences and similarities between the different cases with the goal of uncovering patterns in the data and analyzing the differences and similarities between the cases. These will be analyzed based on the different aspects of the theoretical framework as discussed in chapter 3.2; the CVC strategy, the learning activities and the organizational learning process and outcomes. Moreover, a number of aspects that were not discussed in the literature review, but were identified through the cross-analysis of the cases, will also be discussed. The first section will describe the analysis of the CVC strategies of the different companies by looking at their objectives, market focus, operational linkage and organizational models. The second section will describe the learning activities that were carried out in the case studies. The final section will provide the analysis of the learning process and outcomes.

4.2.1 Corporate venture capital strategy

Objectives, market focus and organizational model

The objectives of the various initiatives varied widely among the different cases. When looking at the objectives for investing, all had strategic reasons (except for company F). Two of those also stated that the financial reasons were equally important for evaluating the portfolio, and therefore had mixed objectives. The other four had primarily strategic objectives.

Table 18: Overview of CVC strategies

<table>
<thead>
<tr>
<th>Company</th>
<th>Organizational model</th>
<th>Objectives balance</th>
<th>Market focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Direct</td>
<td>Strategic</td>
<td>Adjacent</td>
</tr>
<tr>
<td>B</td>
<td>Fund</td>
<td>Mixed</td>
<td>Adjacent</td>
</tr>
<tr>
<td>C</td>
<td>Direct</td>
<td>Strategic</td>
<td>Core/Adjacent</td>
</tr>
<tr>
<td>D</td>
<td>Limited partner</td>
<td>Strategic</td>
<td>Core/Adjacent</td>
</tr>
<tr>
<td>E</td>
<td>Limited partner</td>
<td>Mixed</td>
<td>Adjacent</td>
</tr>
</tbody>
</table>

Besides the mix between different types of strategic investments, companies must also decide on the balance between the financial and strategic goals. Even if it was not a primary focus, all companies mentioned that financial return is also an objectives of their CVC initiative.

Company A: “How I see it is that you always have a strategic element and a financial element. And 1+1=2, we only do investments if both elements are present. But you can imagine that if a strategic element is very big, then the financial element can be a bit smaller. And that’s what makes CVC unique in the VC industry, because if your financial element is smaller and you are still doing the deal, than your competitive position is very big compared to financial VCs. And when strategic is smaller and financial is very big, then we will quickly pull out, because there will be much competition.”

None of the companies in the sample indicated that they focused on a market that was beyond their usual business activities. Four indicated that with their CVC initiative they invested in business areas adjacent to their core business, while two of the initiatives focused on developments in both core and adjacent businesses.

In the case studies, both the market focus and the objectives seemed to not be related to the organizational model that was used. Although the organizational model differed across the different
cases, all initiatives have a CVC unit existing a multiple employees that manage the CVC process. This unit is either an internal unit, in the cases of the direct investments and the fund, or an external independent unit, in the cases where the company is LP in a fund. The organizational model did seem to lead to a difference in the amount and type of operational linkage. The CVC units that used direct investments seemed to lead to most operational linkage to the business units and required their support for the investments. The CVC unit that did investments through a dedicated fund seemed to mostly be more indirectly linked to the business units and other employees of the firm and had more autonomy. Lastly, investments as an LP in a VC fund seemed to provide the least operational linkage by different employees of the firm to the CVC process and the ventures, except through review meetings with the VC fund and business relationships with the ventures.

All companies used a top-down process for the selection of an investment focus, in which the focus is abstracted from the strategic directions of the overall company and/or of the related business units. Company C: “Strategy and venturing were neighbors. A strategy indicates the direction that a company wants to take, and as a CVC unit you’ll of course try to connect to that”. The CVC units were closely linked to the corporate strategy and often also more specifically to the strategy of the business units. Company A: “As a CVC unit, we have a five year vision. I am aware of the five year vision of the most relevant business units here for me. [...] So when I am looking for companies or find companies, then I know if these could fit to the five year visions or not.”

Multiple companies mentioned that one of the main strategic objectives was to gain a long-term window on emerging markets and technologies. Such a window can be used for new business development. Company E: “The most that company E gets out of the CVC fund is a window on what’s happening in the industry. The funny thing is that within the energy sector in which we are active a mega transformation is taking place. [...] And venturing helps with that transition, because we can show companies that are working on this. Where we can teach them by partnering with them.” One of the other CVC managers pointed out that this is also the context in which CVC activities are most useful, to help in transformational thinking. Company C: “You have to use venturing in transformative thinking. If they are the same extension of your existing business, then you are not doing the right thing, because then you will be pushing it within the existing system.” When CVC is used for new business development the organizational learning process is very important. In company A and D the CVC activities are also closely linked with internal innovation activities in the same directions, like incubators, that complement each other to help develop new businesses. This helps in integrating knowledge in the organization and using the CVC activities for transformational thinking.

Although many of the companies had the clear goal to gain a window on emerging markets and technologies, most of them had a process that was flexible and dependent on the circumstances. If an investment came by that was not normally within their long-term strategic focus, but interesting for the company at that moment, many of the companies would still invest in it.

Both companies A, B and C pointed out that there was a bottom-up approach to the investment process, besides the top-down approach. The bottom-up approach is started by an interest in a start-up company by an employee. This employee will then approach the CVC unit and they will decide if the start-up is interesting to invest in. Company B points out the advantage; “The advantage is that if
there are questions within company B like ‘I have an interesting start-up company, can we do something with it?’, then we could immediately lead them to the fund.”.

Operational linkage
When comparing the different companies with respect to the operational linkage, many differences can be seen. Different employees are involved at different moments in the CVC process, during which learning can happen. Table 19 shows the different employees in the companies that are involved in these moments, divided by function.

Table 19: Learning moments and operational linkage

<table>
<thead>
<tr>
<th></th>
<th>Screening phase</th>
<th>Due diligence phase</th>
<th>Direct involvement phase</th>
<th>Monitoring and evaluation phase</th>
<th>Business relations phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVC unit</td>
<td>A, B, D, E</td>
<td>A, B, C, D, E</td>
<td>A, B, C, D, E</td>
<td>A, B, C, D, E</td>
<td></td>
</tr>
<tr>
<td>C-level management</td>
<td>E</td>
<td>A, B, C, E</td>
<td>A, B, C, E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of business units</td>
<td>A, B, E</td>
<td>A, B, C</td>
<td>A</td>
<td>A, B, C</td>
<td>A, B, C, D</td>
</tr>
<tr>
<td>Other management</td>
<td>E, D</td>
<td>B, D</td>
<td>A</td>
<td>B, D</td>
<td></td>
</tr>
<tr>
<td>Other employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R&amp;D etc.)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

In all companies, except for company C, the deal flow or part of the deal flow was shared with managers of the business units or other relevant managers, either structurally or more in an ad hoc manner, to help screen the potential ventures.

In all companies, except for company E, the C-level management was not involved in the screening of the deal flow. In companies A, B and C they are only involved later on when an investment decision had to be made. This investment decision is often made by an investment committee that includes one or multiple C-level managers. In companies A and C also the business units had to give a go decision, before an investment was made, and in company B the business unit managers were also involved in the process. Finally, in company D the management of the internal incubator was responsible for the due diligence process and the investments decision, instead of the C-level management.

Only company B mentioned that they communicate the investments that are done to all employees with the company, through internal communication channels. This happens after the due diligence is finished and an investment decision is taken. Other employees in the other companies were to a large extent only directly informed about, and involved in, the start-ups in a later stage of the process.

Company A is the only company that directly involved managers in the direct interaction with the ventures to support them in their development. They do this by putting a managing director on a
board seat. Company C arranged a visit to the start-up as part of the due diligence process, but this single interaction cannot be seen as direct involvement. In the other cases the direct support of the start-up was left to the CVC unit.

The review meetings mostly involved both the go/no-go decisions as an evaluation of the portfolio, so in all companies the same people are involved in these two moments in the process. Company B also discusses their portfolio during their Innovation Board meetings, which includes managers of multiple levels in the company. Also in company D managers of for example the strategy and M&A departments are involved in the evaluation of the portfolio.

When a venture that has been invested in turns out to be of value to the current business units of the company, often a joint project or partnership is started. Only company E did not start any business relationships with the start-ups yet. This often happens in a later stage of the investment process, when the company has already developed further.

Operational linkage and strategic objectives
The persons within a company that are responsible for the investments will largely also determine the actual investment focus. Most companies had an investment committee that reviewed the investment proposals. The exact members of this committee partly determine the focus of the initiative. Company A: “We report to the CTO. So other CVC units report to the CFO, and then it’s way more financially driven, and we report to the CTO and then you will see that it is more technologically driven.”

Another example is company B. They do CVC investments for strategic reasons through a shared fund in which all four partners have equal voting rights in the investments committee. The fund also involves a partner that does it mainly for financial reasons and one that has a slightly different strategic focus. Company B: “But you have four partners, so it is a process of give and take. In some of the investments it’s more indirect what we get out of it, than direct.”

The CVC units of both company A and C have to find a business unit to support the investment, besides approval of the investment committee. For both this seems to result in more short-term investments than long-term investments. Company A: “Now you’ll see that it is very easy to find sponsors for short term, because you solve a problem, while it is harder for the long term because the business units will say ‘I’ve got enough problems to fix, so I don’t want to get even more things’.”

One of the interviewees of company C mentions this was one of the main problems of their CVC initiative. Company C: “The mistake that has been made, is that it was way too dependent on what the business units were doing themselves already. That was the big problem.”

One of the other problems with the requirement to find a business unit to support the idea is that this leads to a more bottom-up approach, rather than a top-down approach led by the company’s innovation strategy. Company C: “The consequence was also that most investments that we did, I believe even 85% of the investments we did, were investments in companies that were initiated by the business units itself. […] But if we came to them with companies that we thought were interesting for them, then it would take one and a half year before they would make a decision.”
4.2.2 Learning activities
As stated before in the literature review, multiple activities have been proposed in the literature to transfer knowledge. Table 20 shows the learning activities that were proposed in the literature.

Table 20: Learning activities from literature review

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of linked units to transfer knowledge</td>
<td>Lerner (2013)</td>
</tr>
<tr>
<td>Direct linkage between employees of the parent firm and the venture</td>
<td>Birkinshaw et al. (2002)</td>
</tr>
<tr>
<td>Formation of liaisons between in-house divisions and ventures</td>
<td>Yang et al. (2014)</td>
</tr>
<tr>
<td>Communication of scenarios</td>
<td>De Geus (1988)</td>
</tr>
<tr>
<td>Using CVC manager’s position to act as knowledge broker</td>
<td>Maula et al. (2013)</td>
</tr>
</tbody>
</table>

Two of the activities that were found in literature, were not present in any of the case studies that were done; the creation of linked units to transfer knowledge and the communication of scenarios. Lerner (2013) stated that these linked units should be separate from the CVC unit and should focus on assessing new technologies and interacting with the business units. None of the companies had an employee or unit that was separate of the CVC unit and had the specific task to transfer knowledge. Table 21 shows the learning activities that were present in the case studies.

The usage of the CVC managers as knowledge brokers was seen in every company. The CVC units in A, B, C often did not serve as a linked unit to transfer knowledge in a direct way, since this task was often secondary to the tasks of investing in and managing of the CVC portfolio. However, multiple activities were present where the CVC manager served as a knowledge broker. An example that was found in every company was the review meetings during which the whole portfolio was reviewed and possible new investments are discussed with an investment committee of C-level management or other managers. In company D and E the managers of the independent VC fund, although they are not employees of the company, also serve as knowledge brokers.

Multiple of the initiatives reported to also learn during the screening of potential ventures, including company E; “We do not only see interesting start-ups that we invest in, but we also see other interesting companies that we do not invest in, but can be of interest to company E. […] The ones that we invest in are not the interesting ones in the end. The interesting thing is that we see five hundred deals every year in this office in our sector. That’s where you have to look. Those most likely include 50 every year that are interesting to you. Not all of them to collaborate with, but to follow and see what happens. That’s what you should do.”

Many of the companies communicate this, with the CVC manager as a knowledge broker. Company A even does this as a separate learning activity, where they map out all ventures within a specific ecosystem as requested by one of the business units, and not necessarily to look for an investment. This learning activity was not found in literature.

Only company B stated to directly communicate information about the investments that are made to the whole company through internal communication channels. Both company A and B stated that they could improve knowledge sharing through improving the usage of internal communication
<table>
<thead>
<tr>
<th>Specific learning activity</th>
<th>Broad learning activity</th>
<th>Evidence from interviews</th>
<th>Cases where activity was present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review meetings with investment committee</td>
<td>CVC manager as knowledge broker</td>
<td>Company A: “So we review the whole portfolio once every quarter of a year. […] That is a strategic review session, […] more on strategic and financial level.”</td>
<td>A, B, C, D, E</td>
</tr>
<tr>
<td>Innovation board</td>
<td>CVC manager as knowledge broker</td>
<td>Company B: “We have an innovation board, where the activities of the CVC unit are also discussed extensively. […] They meet once every two months and two people of the CVC unit of company B come from this innovation group.”</td>
<td>B</td>
</tr>
<tr>
<td>Communicate deal flow</td>
<td>CVC manager as knowledge broker</td>
<td>Company E: “We specifically go visit them then, and then we will make a separate list of things of which we are sure that they are interested in”</td>
<td>A, B, D, E</td>
</tr>
<tr>
<td>Map and track ecosystem</td>
<td>CVC manager as knowledge broker</td>
<td>Company A: “So there is a problem or a strategic direction that somebody has chosen, and he will ask us ‘show us all companies that do this’ or ‘what is the development of this ecosystem’. […] And that will lead to a report and that is structurally shared with the persons that are responsible for the strategy of that business unit.”</td>
<td>A</td>
</tr>
<tr>
<td>Internal communication</td>
<td>CVC manager as knowledge broker</td>
<td>Company B: “Every time we do an investment, we will show this. We try to internally communicate this. we have these internal magazines and things like that, and that’s how we do it.”</td>
<td>B</td>
</tr>
<tr>
<td>Reporting</td>
<td>CVC manager as knowledge broker</td>
<td>Company C: “We only had to report. When we came across a nice company, or something we thought was interesting, then we immediately had to look for the business unit for whom it was interesting.”</td>
<td>C</td>
</tr>
<tr>
<td>Non-CVC manager on board seat</td>
<td>Direct linkage</td>
<td>Company A: “And then we also always take a board seat at that company. […] And we consider who can add most value in this board seat, and often that’s a managing director.”</td>
<td>A</td>
</tr>
<tr>
<td>Visiting start-up company by business unit</td>
<td>Direct linkage</td>
<td>Company C: “When we came across a nice company, or something that we thought was interesting, than we immediately had to look for a business unit for whom it was interesting. Then a visit is arranged generally.”</td>
<td>C</td>
</tr>
<tr>
<td>Joined projects or partnerships</td>
<td>Formation of liaisons</td>
<td>Company D: “Company D does not have direct contact with the start-ups, until they come to the conclusion that is really is an interesting company to become more acquainted with. Then they will get more acquainted with the start-up and company D will be more involved as a partner to the start-up, for example by helping the start-up to test products or to go to market.”</td>
<td>A, B, C, D</td>
</tr>
</tbody>
</table>
channels. Company A: “By doing more internal PR about what is happening and why. And also by making agreements about this with start-ups. By organizing more demo days, instead of doing your work in a corner.”

Besides the CVC managers, in company A and C also other managers are used to create a direct linkage with the venture by involving them in the CVC process. Company A puts managing directors on the board seat of the start-ups, who also serve as knowledge brokers. Company A: “But by putting that managing director on a board seat in this way, he will know everything about the start-up and will share this with the other managing directors.”

Another form of direct linkage is the formation of business relationships. The formation of liaisons between the employees of the firm and the venture in general only happens later in the process. Direct involvement of general employees only happens when such business relations are started or joint projects are executed, not in earlier phases. The danger of too much direct involvement of employees of the company is that this might kill the entrepreneurial culture of the start-up. Company B: “But in the end one of the biggest risks is that the start-ups are hugged to death by a corporate, so you have to keep the involvement of the business a bit at a distance.”

When looking at table 21, it is clear that companies that are LP in a fund engage in less learning activities than the companies that invest through a dedicated fund or directly. Moreover, three of the learning activities happened in almost all of the companies; sharing information about possible investments and the portfolio during review meetings, sharing information about the deal flow, and creating joined projects or other business relationships with start-ups. The direct involvement of employees, besides the formation of liaisons, was limited. Moreover, the usage of the CVC managers as knowledge brokers is seen in every company. The specific activities that the CVC unit use to do this were different in every company. The different learning activities that were done, happen at different moments during the CVC process. The next section will analyze at what moments these learning activities happen and who was involved in them.

4.2.3 Organizational learning process and outcomes
All of the companies stated to learn new knowledge from the CVC process. Company D, for example, reported to gain multiple types of knowledge from the CVC process: “Strategic knowledge is gained, but also definitely technical knowledge. Sometimes also other types of knowledge about for example new ways of working or new business models.”

The types of knowledge that were gained, how this knowledge was transferred and what the knowledge was used for, were different over the different case studies. The learning in all companies was mostly based on ad hoc processes, rather than on a structured process. None of the companies had defined a clear process for the sharing of information and the integration of this knowledge. However, all companies carried out certain activities during the CVC process that allowed for information about the ventures to be communicated to other employees of the firms. However, learning is more than simply communicating and acquiring information, but also depends on transforming insights into knowledge that can be used by the organization and recombining this knowledge with existing organizational learning. This processing of information by the CVC unit, before communicating it, did happen to some extent in all of the companies, for example by analyzing the deal flow on threats and opportunities for the company. However, the amount of activities in place to actively process the knowledge into useful knowledge for the firm varies across
the different firms. At company A, for example, this happens through the mapping of ecosystems for business units or through the discussion of threats and opportunities during review meetings. While the VC managers of the fund of company E only process the information by selecting the relevant ventures for different managers within company E.

Knowledge from the CVC process was in all companies transferred mostly horizontally by the CVC unit, to managers of peer units. Some information was also transferred vertically, to supervising managers, mostly through review meetings. Knowledge transfer in a downward vertical direction, to other employees of the company, hardly ever happened. These employees mostly gained knowledge through direct contact with the start-up. Overall the breadth of the organizational learning, indicating the number of a firm’s components, like units, that obtain the same knowledge and recognize its potential for the firm, was not very wide. The information was in general mostly communicated to a select number of people, and therefore less organizational learning occurs (Huber, 1991). Levitt and March (1988) distinguish between three different ways knowledge can be diffused through an organization; a single source can broadcast information to a whole population, information can be spread to person-to-person interaction, or the knowledge can be spread in a small group and then broadcasted to the remainder of the population. Overall the knowledge is shared on a more person to person way within the case companies, with the CVC unit as knowledge brokers, and not broadcasted. Only company B directly broadcasted information about their investments to the whole company.

Table 22: Learning mechanisms

<table>
<thead>
<tr>
<th>Company</th>
<th>Explorative learning</th>
<th>Exploitative learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>D</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>E</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Exploitative and explorative learning both happened through the CVC process (Table 22). Exploitative learning, by developing new knowledge that builds on the organization’s existing knowledge base, happened by investing in start-ups that were relevant to business units in the short-term. Company A, for example, invests in start-ups to solve problems of the business units. Explorative learning, by acquiring new knowledge that creates a shift away from the firm’s current knowledge base, mostly happened when the companies invest in start-ups that are relevant for their overall business in the long-term. This type of learning creates a window on emerging markets and technologies. Company E, for example, gains a window on the transition that is happening in the energy sector, which helps them develop new knowledge on how to develop new business to react to this transition. The two companies that invested as a LP focused mostly on this last type of learning, while the other companies emerged in both types of learning.

These different types of learning happen during different learning moments. The screening of ventures enables scanning for and learning about a large number of start-ups, and therefore about technologies, markets and business models. Learning in this phase was mostly explorative learning to gain a window on emerging technologies and markets.
During the due diligence, direct involvement, and monitoring and evaluation phases both explorative and exploitative learning can happen. The due diligence phase allows for more in-depth learning about a group of the most relevant ventures. By involving employees directly in the direct involvement phase, this person is able to directly learn new knowledge from the venture, rather than using the CVC unit as a knowledge broker. This enables learning about the way of working and the entrepreneurial culture, besides learning about new technologies, business models and markets.

Finally, when the start-ups are directly linked to the business units in the business relationship phase, this often leads to more exploitative learning since it is directly linked to already existing business and knowledge of the business unit. However, this direct linkage also enables learning about the way of working and the entrepreneurial culture, besides the exploitative learning.

4.3 Conclusions

Strategic focus
All of the CVC activities have strategic objectives, except for one, but these strategic objectives are rather abstract and flexible. All companies used a top-down approach to match the focus of the CVC to the strategic focus of the company. They make strategic investments in companies that matched this focus and somehow can provide value to the company, either long-term or short-term. Although gaining a window on emerging markets and technologies was often mentioned as one of the key objectives, none of the CVC units have a structured process aimed specifically at the communication and integration of this window on emerging markets and technologies. Because investments are often made for diverse strategic reasons, the knowledge that is gained through the investments is also diverse and the governance on how to transfer this knowledge is unstructured.

Organizational model
The organizational model did not seem to have direct effect on the learning outcome, since with all organizational models both explorative and exploitative learning could be reached and diverse objectives were seen across the different models. However, in the case studies the organizational model did seem to influence the amount and type of operational linkage. The CVC units that used direct investments seemed to lead to most operational linkage to the business units, while the CVC unit that did investments through a dedicated fund seemed to be more indirectly linked to the business units and other employees of the firm and had more autonomy. Lastly, investments as an LP in a VC fund seemed to offer the least operational linkage to the CVC process and the ventures, and they seemed to engage in less learning.

Operational linkage
The operational linkage and reporting line of the CVC unit largely determine the type of investments that are done and the strategic learning benefits that are gained. Therefore the operational linkage is a crucial aspect for the learning process, since it both allows for knowledge to be transferred and influences what type of learning outcomes are reached. Having the requirement that investments need approval from a business unit creates a situation where the investments are more short term and support exploitative learning. Less linkage to the business units allows for more long-term learning that is often directed at gaining a window on emerging markets and technologies. Therefore, the operational linkage should be aligned with the strategic focus, which includes the strategic objectives and the market focus.
Learning activities
Diverse learning activities were present in the CVC process of the companies, which enabled the operational linkage to lead to learning, and allowed for the transfer of knowledge. CVC managers play a crucial role in the transferring of knowledge and act as a knowledge broker in a lot of these learning activities, besides their responsibility for the operational and financial side of the investment process. Three learning activities happened in almost all of the companies; sharing information about possible investments and the portfolio during review meetings, sharing information about the deal flow, and creating joined projects or other business relationships with start-ups. Few learning activities are carried out that directly link employees of the companies to the ventures, besides the business relationships.

Organizational learning
CVC is used as a tool for strategic benefits by the case companies, and they are aware of the learning benefits that CVC can offer. The case studies displayed both explorative and exploitative learning from the CVC activities. However, the learning mostly happened more ad hoc, than in a structured manner. Even though all companies have strategic objectives, learning is not one of the primary responsibilities of the CVC unit and the learning is often not managed and directly facilitated. Overall the CVC units did function as knowledge broker and knowledge is shared mostly person to person by them, and not broadcasted. Knowledge from the CVC process was in all companies transferred mostly horizontally by the CVC unit, to managers of peer units, and vertically, to supervising managers. Overall the breadth of the organizational learning, indicating the number of a firm’s components, that obtain the same knowledge and recognize its potential for the firm, was not very wide in the case companies. By involving more employees, the breadth could be improved leading to more organizational learning (Huber, 1991).

Learning moments
Multiple learning moments exist during the CVC process during which the learning activities can happen and organizational learning can take place. The case studies confirmed that learning can happen in all phases of the CVC process (Figure 9). Most of the companies communicated information during the screening phase about the deal flow and involved the business units in this process. Learning during the screening of ventures is just as important for explorative learning as learning from the ventures that is invested in, if not more important. Learning from the whole deal flow provides a broader view on the external environment. Learning from investments, during the other phases of the CVC process, is important for both explorative and exploitative learning benefits. Finally, learning during business relationships mostly leads to exploitative learning benefits. Companies should be aware of these different learning moments, the learning activities that can be done during these phases, and the different learning benefits that each phase offers.

Figure 9: Learning moments in the CVC process
5. Design

Organizational learning should be actively managed and facilitated (Nonaka, 1991) and firms need to invest as much in learning from the CVC process as they do in investing in them and managing them (Lerner, 2013). While the companies in the case studies did learn from the CVC activities, they all did not have an structured process to facilitate and manage the organizational learning. By setting up such a process, companies can gain more strategic learning benefits. This chapter will describe the design of a three step process that can help companies set up the CVC process in such a way that it facilitates and manages organizational learning from CVC activities. The goal of this final phase was to design a tool to help companies in setting up this process. The case studies and literature show that there are diverse ways to engage in the CVC process and companies engage in CVC for diverse reasons. Therefore it is impossible to design a single optimal process of how organizations should facilitate learning from their CVC initiatives. However, a tool can be designed that helps in identifying the optimal process for a specific company.

The results of the case studies and the review of the literature provided the starting point for the final design phase of this business problem-solving project. Multiple design parameters have been identified that influence how organizations learn from CVC. These parameters are key aspects in the CVC process and structure that were abstracted from the theoretical framework and the analysis of the results. A number of additional case studies found in literature (Napp & Minshall, 2011; Kuiper & van Ommen, 2015) were used as inspiration for possible solutions. Based on this set of design parameters, a three step process was designed that can help companies in setting up the CVC in such a way that learning is facilitated (Appendix D). This chapter will describe the steps and design parameters in detail.

Figure 10: Step 1: CVC strategy

Step 1: Decide on the CVC strategy.

The first aspect in this step the strategic focus for the CVC initiative. To gain most strategic learning benefits from the CVC initiative it is important to be clear on what exactly are the strategic objective(s). Should the benefits be long-term or short-term? Is the goal to create a window on emerging technologies and markets or another learning objective? If a company does not have learning objectives, but only other objectives, like financial objectives, it might not be important to set up a learning process.
The second aspect of the strategic focus is closely linked to the strategic focus; the **market focus** of the CVC initiative. The company has to decide on whether the market focus is to reinforce the core business, studying adjacent business areas, or focusing on opportunities beyond the usual business activities. This focus should be abstracted top-down from the strategic focus of the whole company and their innovation goals.

If companies decide to focus on more than one learning objective or market focus, it is important to consider if these require the same type of learning structure.

The third aspect of the CVC strategy is the **organizational model** that is used for the investments. The most appropriate model depends highly on the firm’s strategy for the CVC initiative (Birkinshaw et al., 2002). Investments through participation in a fund as a limited partner seemed to lead to more explorative benefits and less learning activities. The other two types of investments seemed to be more similar and lead to both explorative and exploitative benefits. The organizational model is also important because, to a certain extent, it controls the operational linkage that is in place.

**Figure 11: Step 2: Operational linkage**

**Step 2: Decide on the operational linkage between the different components.**

The first aspect is setting up the **CVC unit** by deciding who is part of this team and what their responsibilities are. Besides the operational and financial side of the investments, CVC managers have the crucial role of knowledge brokers. This role should be kept in mind during the selection of employees that will perform this role. For organizational learning it can be very useful to give responsibilities to the CVC managers that are not directly related to the start-ups, but stimulate knowledge sharing, such as being part of the innovation board of a company or leading an internal
incubator. Lerner (2013) proposes that separate linked units should be created that transfer knowledge, assess new technologies and interact with the business units. Although this was not done by any of the companies in this research, it might still be a very valuable approach, especially with the importance of the CVC manager as knowledge broker in mind.

The second aspect is the direct linkage between the CVC unit and the portfolio of ventures. CVC units often take board seats at the start-ups and support them in other ways.

Next, the other roles and responsibilities of the different components of the parent firm should be defined. The reporting line should be set up, deciding who functions as the investment committee. This investment committee will do the review meetings with the CVC unit, make the investment decisions and evaluate the performance. It is key that the reporting line is linked to the strategic objectives that the company has for the CVC initiative.

The CVC unit should also have linkage to the relevant business units and other innovation activities of the firm, including internal incubators. The CVC activities should not function as a stand-alone activity, but rather as one of several activities that stimulate innovation and corporate development (Birkinshaw, van Basten Batenburg, & Murray, 2002). A certain amount of linkage should always exist between the different units, since together they execute the innovation strategy of a firm. However, the amount of linkage to these units depends on how related the investments should be to the existing business units or to the directions of the other innovation activities. If the objective of the CVC unit is to gain a long-term window on emerging markets and technologies, the CVC unit should communicate this window to the business units, but should not be required to get approval from them for the investments.

Depending on the learning objectives of the CVC initiative, links should also be created with other managers in the company, for example in the innovation department or the M&A department. Lastly, links should also be created with the rest of the company, and specifically employees in the relevant business units, to allow for firm-wide knowledge sharing.

The final aspect is the direct linkage between the different components of the parent firm and the portfolio of start-ups. Too much involvement of the company in the start-ups can be fatal for the entrepreneurial culture, so CVC managers should perform the role of knowledge brokers. However, it is still useful to set up limited direct linkage between the parent firm and the start-ups, to allow for knowledge to flow more directly from the start-up to the parent firm.

**Step 3:** Decide on the learning activities that will be carried out.

The operational linkage that has been set up influences the possible learning activities, but also vice versa, the learning activities create the operational linkage. Five categories have been identified for the learning activities, based on the research. It is important to consider the linkage to different components of the parent firm and the different learning moments when setting up the learning activities. Figure 12 shows where in the CVC process these learning activities are carried out and which employees can be involved. The case studies and additional case studies in literature (Napp & Minshall, 2011; Kuiper & van Ommen, 2015) were used as inspiration for examples of learning activities in every category.
The screening phase is an important phase for scanning the external environment and for learning about emerging technologies and markets. The deal flow contains many start-ups that are not interesting to invest in for whatever reason, but could still be of interest to the company. There are multiple possible learning activities for this phase, including, but not limited to, the following:

- Communication of the deal flow; the CVC unit should communicate the deal flow to key players in the company. Preferably, the deal flow is filtered and the most relevant start-ups are selected for a certain person or unit.
- Reporting on threats and opportunities; by analyzing the whole deal flow, the CVC unit can extract general insights about emerging markets and technologies. Reports on these market trends and the threats and opportunities they provide to the company and its business units, can be distributed to key players in the company.
- Mapping and tracking of ecosystem; the CVC unit has access to the start-up community and therefore can map and track ecosystems of start-ups in a certain direction. This can be useful for business units to help solve a business problem or develop a strategic direction.

### Figure 12: Step 3: Learning activities

<table>
<thead>
<tr>
<th>C-level managers</th>
<th>Business units manag.</th>
<th>Other managers</th>
<th>Other employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Screening and deal flow</td>
<td>2) Due Diligence</td>
<td>Direct involvement</td>
<td>Monitoring &amp; evaluation</td>
</tr>
</tbody>
</table>

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<td>2) Due Diligence</td>
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</tr>
</tbody>
</table>

1) Screening and deal flow activities

The screening phase is an important phase for scanning the external environment and for learning about emerging technologies and markets. The deal flow contains many start-ups that are not interesting to invest in for whatever reason, but could still be of interest to the company. There are multiple possible learning activities for this phase, including, but not limited to, the following:

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- Reporting on threats and opportunities; by analyzing the whole deal flow, the CVC unit can extract general insights about emerging markets and technologies. Reports on these market trends and the threats and opportunities they provide to the company and its business units, can be distributed to key players in the company.
- Mapping and tracking of ecosystem; the CVC unit has access to the start-up community and therefore can map and track ecosystems of start-ups in a certain direction. This can be useful for business units to help solve a business problem or develop a strategic direction.
2) Review activities

The review activities are aimed at sharing information about the start-ups that the CVC unit has selected as potential investments and the start-ups that has been invested in. These review activities often support both the due diligence process and the evaluation of the current portfolio. There are multiple possible learning activities for this phase, including, but not limited to, the following:

- Review meeting with investment committee; information should be shared about the potential ventures should be communicated to the investment committee for a decision whether to invest or not, and about the venture portfolio for evaluation of the performance.
- Reporting to business units; information about the potential ventures and status of the portfolio can be shared with relevant business units. This could be done either through reports, but also through visits of the start-up. Either to ensure alignment with their current business by requiring support of a business unit for investments, or to inform them on activities of the CVC unit to share knowledge and align the strategy.
- Due diligence together with business units; doing due diligence together with the business units can help the CVC unit to assess whether or not the innovation is relevant to the company, because of the technological and market knowledge of the business unit. Moreover, the business unit will gain in-depth knowledge about the start-up by being part of this due diligence process.
- Innovation board; information about the investments and potential investments can be shared in an innovation board or with managers that is responsible for the innovation strategy of the firm. Either to ensure alignment with the innovation strategy by requiring support of a this unit, or to inform them on activities of the CVC unit to share knowledge and align the strategy.

3) Direct involvement

Direct involvement of other people besides the CVC unit can enable direct learning from the ventures, rather than using the CVC unit as a knowledge broker. There are multiple possible learning activities for this phase, including, but not limited to, the following:

- Board seats; a manager, either of a business unit of another department, can take a board seat at a start-up. This helps in transferring knowledge directly to this managers rather than through a CVC unit, but also allows the manager to learn about the entrepreneurial way of working and creating a more open view towards innovation.
- Joined education; joined workshops or trainings for business units and start-ups, to bridge the cultural gap and exchange knowledge.

4) Business relationships

If a start-up is relevant to current business, often a business relationship is started with this start-up. This can be by being lead customer of the start-up, but also through engaging in joint projects for the development of products, joint marketing and distribution or joint research. These activities are all possibilities for the involved employees to learn more about the start-up, it's technology and the business model. It also helps in combining knowledge of the employees of the parent and of the start-up, stimulating the development of new knowledge.
5) Broadcasting activities

When more of a firm’s components, like units, obtain the same knowledge and recognize its potential for the firm, more organizational learning occurs (Huber, 1991). There are multiple possible learning activities for this phase, including, but not limited to, the following:

- Internal communication; use internal magazines or newsletters to broadcast information about new investments, the status of the venture portfolio and collaborations to the whole company or specific parts of the company at once.
- Exposure events; exhibitions or meet-ups between business units and other employees, start-ups, and possibly also other investors to generate interest in and share knowledge about the portfolio of ventures within the parent firm and to explore further collaborations.
6. Conclusions
This chapter will discuss the overall conclusions of this thesis project. Section 6.1 will provide an answer to the overall research question and a number of conclusions by comparing the theoretical research to the results of the empirical research. The theoretical and managerial implications of the research results are discussed in section 6.2. Finally, section 6.3 will presents the limitations of this research and the opportunities for future research.

6.1 Research question
This thesis project focused on the relationship between CVC and organizational learning. From the reviewed literature and the case studies, it has become clear that organizational learning plays an important role in the relationship between CVC and gaining strategic benefits. CVC enables radical organizational learning to explore new technologies and markets and for incremental organizational learning to exploit existing knowledge (Schildt et al., 2005). Different strategic learning objectives can be fulfilled through CVC activities, requiring different types of learning by different people in the company. A number of learning objectives have been identified in literature. To fulfill these objectives, organizational learning should be actively managed and facilitated (Nonaka, 1991) and firms need to invest as much in learning from the CVC process as they do in investing in them and managing them (Lerner, 2013). Therefore, the main research question of this thesis was: How can organizational learning from corporate venture capital be facilitated?

For companies to learn from their CVC activities, they should decide on the appropriate objectives and market focus. This strategic focus determines what type of learning benefits a company will focus on. Having clear objectives is important, because in the case studies investments are often made for abstract and flexible strategic reasons, leading to an unstructured learning process that not optimally makes use of the knowledge that can be gained.

Besides the strategic focus, companies should consider a number of different aspects of the CVC process that are crucial for facilitating and managing learning from this process. This research has shown that operational linkage, learning activities and learning moments are crucial aspects of the CVC process to facilitate organizational learning. The organizational model is also important, because, to a certain extent, it controls the operational linkage that is in place. The most appropriate model depends highly on the firm’s strategy for the CVC initiative (Birkinshaw et al., 2002), and different models can both serve somewhat different purposes and be complementary to one another (Sykes, 1990). However, the organizational model does not exclude certain operational linkages to be in place and therefore is of secondary importance.

The operational linkage is a crucial aspect for the learning process, since it both allows for knowledge to be transferred and influences what type of learning outcomes are reached. Direct and frequent communication between the parent firm, the CVC unit and the venture about areas of special or mutual interest lead to most strategic benefits (Sykes, 1990). The learning benefits that can be gained from CVC are dependent on the transfer knowledge from the venture to the parent firm, either indirectly through the CVC unit or directly. To capture the strategic benefits of the CVC activities successfully, it is crucial to clearly define the different roles and responsibilities in the CVC process of the CVC unit, but also for the other person’s involved, such as business units and management (Napp & Minshall, 2011).
The research showed that managers of the CVC unit play an important role as knowledge broker in the learning process. This is in line with the conclusions of Napp & Minshall (2011) and Maula et al. (2013) that CVC managers play an important strategic role by functioning as a knowledge broker to capture strategic value, besides their responsibility for the operational and financial side of the investment process. To gain most strategic value, strong linkage should be created between the CVC unit and the management of the different business units and other management within the parent firm (Napp & Minshall, 2011).

An important part of operational linkage is the reporting line, and the question whether support of business units is required for investments. The research shows that if approval for the investments by business units is required, the investments will have a more short-term focus and mainly support exploitative objectives. Birkinshaw et al. (2002) also found that CVC units that did not require business unit support were more successful in gaining disruptive ideas and investments. Therefore the operational linkage should be aligned with the strategic focus, which includes the strategic objectives and the market focus.

When more of a firm’s components, like units, obtain the same knowledge and recognize its potential for the firm, more organizational learning occurs (Huber, 1991). Therefore a firm should consider what components of the firm should be involved in the CVC process, and therefore are able to learn. This research has divided these components over five categories; the CVC unit, C-level managers, business units managers, other managers, such as managers of other innovation activities or managers in the strategy department, and other employees, such as employees in R&D of the business units.

During the whole CVC process multiple learning moments can be identified at which persons can be involved to gain knowledge. In this research the CVC has been divided over five phases that all offer learning opportunities; the screening phase, the due diligence phase, the direct involvement phase, the monitoring phase and the business relationship phase. At these different moments in the CVC process, different learning activities can be carried out that lead to different types of learning and different types of knowledge. When setting up a CVC initiative with learning objectives, companies should be aware of these different learning moments, the learning activities that can be done during these phases, and the different learning benefits that each phase offers. In many of these learning activities the CVC unit functions as the knowledge broker, and knowledge is indirectly transferred to the parent firm. However, the learning moments also offer opportunities for direct learning.

This research shows that, as Maula et al. (2013) already proposed, the screening of ventures is an important phase for explorative learning about emerging technologies and new businesses. Learning activities in this phase can be carried out that directly transfer knowledge on the whole deal flow or a relevant part of the deal flow, but learning activities could also be aimed at processing the deal flow into threats and opportunities for the firm and a window on emerging technologies and markets.

Learning from investments, during the due diligence phase, the direct involvement phase and the monitoring phase, is important for both explorative and exploitative learning benefits. During these phases the learning activities should be aimed at gaining and transferring more knowledge about the technologies, business models and markets of the portfolio of ventures. A common activity is the sharing of information about possible investments and status of the portfolio during review meetings between the CVC unit and the investment committee. However, other employees can also be
involved during these phase, for example by involving relevant business units in the due diligence process or putting a manager on a board seat to directly gain new knowledge.

Finally, learning during the business relationship phase mostly leads to exploitative learning benefits. In the case companies few learning activities are carried out that directly link employees of the companies to the ventures. However, this often did happen when business relationships, such as joint projects, were started by the firm and the start-up is directly linked to a business unit.

Companies can set up a process that facilitates and stimulates organizational learning from their CVC initiative by considering all of these aspects together; the strategic focus, the organizational model, the operational linkage and the learning activities.

### 6.2 Theoretical and managerial implications

This thesis project had both an academic and a practical goal. At the academic level, the thesis aimed to contribute to the scientific literature on organizational learning in the context of CVC. After discussing the literature on both concepts individually, the literature review showed that a relation exists between organizational learning and CVC. A growing amount of literature connects these two concepts, either implicitly or explicitly. The research field that connects CVC and organizational learning is relatively new and many of the subjects that influence this relationship have not yet been researched. In the literature review a number of gaps in the literature were identified, which were researched further in the empirical research phase.

The research presented in this master thesis offers a contribution to the existing literature by providing insight into the influence of different aspects of CVC strategy on organizational learning and filling the gaps in the literature. The research provides insight in the different aspects of the CVC strategy, including the objectives, market focus, operational linkage and organizational model, and the influence they have on the organizational learning outcomes. Moreover, different learning activities and learning moments have been identified. Together they provide insight in how and when organizational learning should be facilitated and what the learning process looks like. Moreover, this research has broader implications for our understanding of the issues related to organizational learning from corporate entrepreneurship activities.

The practical goal of this work was to develop more insight in how companies can develop, distribute and use knowledge, which was gained from CVC activities, within the parent company. This thesis provides a number of practical insights and parameters that can support companies when developing, distributing and using knowledge from CVC initiatives. Developing insights in why and how companies might learn from CVC initiatives is valuable, since CVC initiatives still often fail to capture strategic value from their investments and by considering the learning outcomes that should be reached and how these can be reached one can improve their chance at success. The insights and parameters have been used to design a three-step process that can guide companies when starting a CVC initiative that facilitates organizational learning.

### 6.3 Limitations and future research

The research methodology and scope that were used in this research pose a number of limitations, which need to be taken into account and provide opportunities for future research. The qualitative method that was chosen for this research is a multiple-case study approach, for the reasons explained in chapter 3. By using multiple cases and comparing these to the existing literature, the
findings of this study provide valid insights that can be applied in the broader context of CVC initiatives. However, to generalize all claims made in this research and to provide universal guidelines for the facilitation of organizational learning from CVC initiatives, the findings should be tested in a qualitative study with a larger sample.

Moreover, the empirical scope this thesis is relatively broad, since it studied companies in a range of different industries and with different strategic objectives. Therefore it was not possible to propose an ‘ideal’ CVC process for facilitating learning. However, by focusing on a specific industry and on a specific strategic objective, it will be possible to give more guidelines for an ideal CVC process. For instance, further research could focus on how to facilitate organizational learning from CVC initiatives in the high tech industry to gain a window on emerging technologies and markets. More generally, because of the limited empirical sample size and broad scope of the case studies this thesis remains of exploratory nature.

A final limitation of this research is that it did not use a quantitative measure for the organizational learning outcomes. Therefore, it did not directly measure the success of these initiatives. This work does show that successful outcomes largely depend on the objective of a company, and no single measure can be developed for all types of CVC initiatives. However, by limiting the empirical scope of the research, such a measure could be developed and research could test what approach to learning produces most successful results. This research can help in the development of such a measure for a specific context.
References


Appendix A: Overview of interview participants and sources

Interview participants

<table>
<thead>
<tr>
<th>Interview Participant</th>
<th>Function interview participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A – interview 1</td>
<td>Manager of CVC unit at company A</td>
</tr>
<tr>
<td>Company B – interview 1</td>
<td>Manager of CVC unit of company B and manager M&amp;A at company B</td>
</tr>
<tr>
<td>Company C – interview 1</td>
<td>Previously manager of CVC unit at company C</td>
</tr>
<tr>
<td>Company C – interview 2</td>
<td>Previously manager of the Strategy department at company C</td>
</tr>
<tr>
<td>Company C – interview 3</td>
<td>Previously Strategy manager at company C</td>
</tr>
<tr>
<td>Company D – interview 1</td>
<td>Previously manager Strategy &amp; Business Development at company D</td>
</tr>
<tr>
<td>Company E – interview 1</td>
<td>Manager of VC unit of fund Y</td>
</tr>
<tr>
<td>Company F – interview 1</td>
<td>Manager of VC unit of fund Z</td>
</tr>
<tr>
<td>Company F – interview 2</td>
<td>Strategic Business Development manager at company F</td>
</tr>
</tbody>
</table>

Overview of sources

<table>
<thead>
<tr>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company D</td>
</tr>
<tr>
<td>Company E</td>
</tr>
<tr>
<td>Company F</td>
</tr>
</tbody>
</table>
Appendix B: Interview protocol

Intro

1. What is your function at the company and what is your background?

Corporate venture capital

2. Why do you invest in start-ups? What are your goals for these activities?
3. Are these mainly financial or strategic? What is the balance between these?
4. In what way do you invest in start-ups? What is the organizational structure; direct/dedicated fund/as LP?
   If direct;
   1. Is there a structured process for the investments and what does the process look like?
   2. Is there a dedicated unit that is responsible for the process?
   If dedicated fund;
   1. How is the fund structured in comparison to the rest of the company? How much autonomy? How is it linked to the rest of the company?
   2. What does the investment process look like?
   If LP;
   1. What is your role as LP? What does the investment process look like for you?
   2. How much influence do you have on the investment process?
   3. Do you have direct contact with the start-ups?
5. How do you decide in what companies you invest? Do you only invest in certain markets/technologies?

Organizational learning

6. Are you consciously busy with learning, and gaining and sharing knowledge from the investments?
   If yes;
   1. What does the learning process look like? How is it facilitated?
   2. Do you have an example of how this happened and what the results were for the company?
   3. What type of new knowledge is gained through CVC that is useful for other departments of the firm?
   4. How is the knowledge communicated and shared with other departments in the company and with what departments is it shared?
   5. During what moments in the process is knowledge gained?
   If no;
   1. Is knowledge gained during the CVC process that is interesting for other departments of the company?
   2. Is this knowledge shared in any way? How?/Why not?
7. What are the problems for sharing and communicating this knowledge? Do you have any examples?
8. Is all useful information shared? What could be improved?
## Appendix C: Coding tags

<table>
<thead>
<tr>
<th>Tag</th>
<th>Explanation (Quotes indicating...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start CVC</td>
<td>The year in which the company started with their CVC activities</td>
</tr>
<tr>
<td>Organizational model</td>
<td>The organizational model that is used for the investments. This can be one of three options; direct, via a dedicated fund or as a limited partner in a fund.</td>
</tr>
<tr>
<td>Portfolio size</td>
<td>The number of start-up companies that are currently in the portfolio, or were in the portfolio on average.</td>
</tr>
<tr>
<td>Market focus</td>
<td>The focus of the investments in terms of relatedness to the markets that are served by current business units.</td>
</tr>
<tr>
<td>CVC objective</td>
<td>The objective of the CVC initiative</td>
</tr>
<tr>
<td>CVC objectives balance</td>
<td>The balance between financial and strategic objectives, with three possible options; strategic, financial and mixed. It indicates the primary objective, which does not exclude that the other objective is not present at all. If no primary objective can be pointed out, a mixed tag will be chosen.</td>
</tr>
<tr>
<td>CVC team</td>
<td>The composition and members of the CVC unit</td>
</tr>
<tr>
<td>Operational linkage</td>
<td>How the CVC unit is linked to rest of the company, f.e. the reporting line of the CVC unit.</td>
</tr>
<tr>
<td>CVC process</td>
<td>What the CVC process looks like, from determining strategy to investing to interacting with start-ups.</td>
</tr>
<tr>
<td>CVC challenges</td>
<td>Challenges that arise in the CVC process</td>
</tr>
<tr>
<td>Interaction w/ start-ups</td>
<td>All interactions that happen directly with the start-up, either by the CVC unit or other employees of the firm</td>
</tr>
<tr>
<td>KPIs</td>
<td>The key performance indicators that are used to evaluate the performance of the CVC unit and portfolio of ventures</td>
</tr>
<tr>
<td>Learning activities</td>
<td>All interactions that happen between the start-up or the CVC team and other people within the company, which create knowledge diffusion and transfer.</td>
</tr>
<tr>
<td>Structured learning?</td>
<td>Whether or not the learning from CVC happens in a structured manner.</td>
</tr>
<tr>
<td>Learning barriers</td>
<td>The barriers that exist to learning</td>
</tr>
</tbody>
</table>
Appendix D: Three step process for organizational learning from CVC

Step 1: CVC strategy

- Strategic focus
  - Objective(s)
  - Market focus

- Organizational model
  - Direct investments
  - And/or
  - Dedicated fund
  - And/or
  - LP in independent fund

Step 2: Operational linkage

- Parent company
  - Reporting line
  - Business units
  - Other innovation activities
  - Other management
  - Other employees

- CVC unit
  - CVC managers

- Portfolio of ventures
  - Start-ups
### Step 3:
#### Learning activities

<table>
<thead>
<tr>
<th></th>
<th>Screening</th>
<th>Due Diligence</th>
<th>Direct involvement</th>
<th>Monitoring &amp; evaluation</th>
<th>Business relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-level managers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Business units managers</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other employees</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- **1) Screening and deal flow**
- **3) Direct involvement**
- **5) Broadcasting activities**
- **2) Review activities**
- **4) Business relationships**