

Venture Capitalists' Human Capital

Investigating the relation between human capital and venture capital strategy



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Executive summary

Because of the risks involved in financing in new high-tech, high-growth ventures, one of the few funding sources available is venture capital. Venture Capital firms are businesses that are owned and managed by venture capitalists (VCs). Within these firms the VCs manage Venture Capital funds, one VC or Venture Capital firm can manage multiple funds. The money in these funds is supplied by external investors. VCs have certain experiences and educational backgrounds (human capital) that leads them to implement a certain investment strategy which influences the returns of the funds.

Historically the returns for Venture Capital funds have been very low. This threatens the supply of capital to future technology start-ups. One of the reasons for the low returns may be because VCs lack the necessary human capital related to the investment strategy they implement.

The problem is that it is currently not known how the strategy of a Venture Capital Fund and the knowledge and experience of the managing VC influence each other. Earlier research has found that there is a relationship between a top management team's human capital and their ability to execute a strategy. And additional research has shown that a VC's human capital and the returns of the funds he manages are related. However, it is not known how these relationships work.

Institutional investors limit the risk of their investment through diversification. VCs limit their investment risk through specialization. A VC that is specialized in a specific sector and invests in that sector should in the long run perform better than a VC with less sector specific human capital.

This exploratory research investigates the relationship between VCs' human capital and the investment strategies of their funds. Using a multiple case-study approach, several VC funds have been investigated by interviewing partners of the managing firms. This research did not look at the extended relationship between VCs' human capital and the returns by their funds.

The results show there is a strong relation between the specific industry experiences of VCs and the investments they make. When a VC starts at a VC firm the human capital that a VC has matches the investment strategy of the firm/fund they join or start.

VCs do not change their investment strategy easily. On the one hand this appears to be by design of the Venture Capital system where a VC is limited by his Limited Partners from modifying his investment strategy significantly.

On the other hand this appears to be because of a self-reinforcing cycle, where a VC invests in a specific market according to a specific strategy and by doing this gains more experience and social capital in that market. This helps him make better investments in that market in the future, which leads to more human- and social capital in that specific market. This self-reinforcing cycle (lock-in) makes it difficult for a VC to move to different markets. This is not a problem when the market a VC is specialized in offers a lot of good investment opportunities. However, when the market does not offer good investment opportunities, the VC is limited by his experience, reputation and legal obligations from investing in different markets or according to different strategies.

The most important management implication of this research is how VCs can change their strategy over time. Several of the interviewed VCs have changed their strategies by using their social capital to internalize new human capital. The strategy formation process can be characterized as highly emergent but deliberately confined.

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1 Introduction

The goal of this chapter is to introduce the research problem and explain how and why, the problem is deconstructed and answered. This chapter starts by briefly introducing how venture capital works and explaining the problems facing the venture capital today. One of the problems is the low returns of VC funds which highlighted in section 1.2.1. The cause of the problem may be a mismatch between the VCs' human capital and a VC fund's investment strategy, the importance of VCs' human capital is explored in section 1.3. Following this exploration the research problem is defined followed by the research questions, approach and relevance. This chapter concludes with an introduction of the report structure.

A strong and healthy economy requires entrepreneurs developing new products and services. To build a new high-tech venture, significant investment is often required (Hsu 2005). Because of the risks involved in investing in new high-tech ventures, one of the few funding sources available for high-tech ventures that need significant capital, is venture capital (Acs 2006; Groh and Liechtenstein 2010). This means that understanding venture capital and the people working in it important for facilitating future high-tech entrepreneurship.

Venture Capital firms are businesses that are owned and managed by venture capitalists (VCs). Within these firms the VCs manage Venture Capital funds, one VC (or Venture Capital firm) can manage multiple funds. VCs have certain experiences and educational backgrounds (human capital) that leads them to implement a certain investment strategy which influences the returns of the funds.

Research by Zarutskie (2010) and others (Dimov and Sheperd 2003; Dimov and De Clercq 2006; Dimov, Sheperd et al. 2007; De Clercq and Dimov 2008) have found small but significant correlations between the specific types of human capital Venture Capitalists (VCs) possess and the performance of the Venture Capital fund.

Research into the relationship between human capital and VC fund returns up until now has been shallow. Most of the research only determined very roughly what kind of human capital a VC possesses. For example the type of degree (business, law, etc.) and industry experience (finance, consulting, etc.), and correlates it with the number of successful exits in the VC's portfolio. This tells us nothing about the nature of the relationship between human capital, portfolio performance and strategy and does not explain why the correlations are so small. Also, it does not say whether VCs invest in sectors aligned with their human capital or not. Another problem is that most of the current research has only relied on secondary data, because of this, little is known about the underlying thoughts and motivations of VCs.

Currently venture capital in Europe faces an important problem: the returns of venture capital funds over the last years have been very low (E&Y 2011; EVCA 2012a). Low returns reduce the future supply of money to the venture capital industry, which in turn reduces the supply of capital to new high-tech ventures.

From the literature it is clear that human capital influences the performance and strategy of VC funds. What is not clear is how their human capital, strategy and performance are related. This research explores the role the human capital possessed by VCs plays on the investment strategy of the funds Venture Capitalists manage. This research will improve the understanding of both the

implicit and explicit human capital- and strategy formation processes of VCs and help to establish hypotheses for future research.

The next section explain how venture capital works. For a more historic and complete introduction to venture capital and human capital refer to section 2.1 and 2.2 respectively.

1.1 Introduction to Venture Capital Investing

A vibrant economy requires the availability of capital for risky endeavors (Acs 2006; Groh and Liechtenstein 2010). The key players in venture capital and their relationships are depicted in Figure 1.

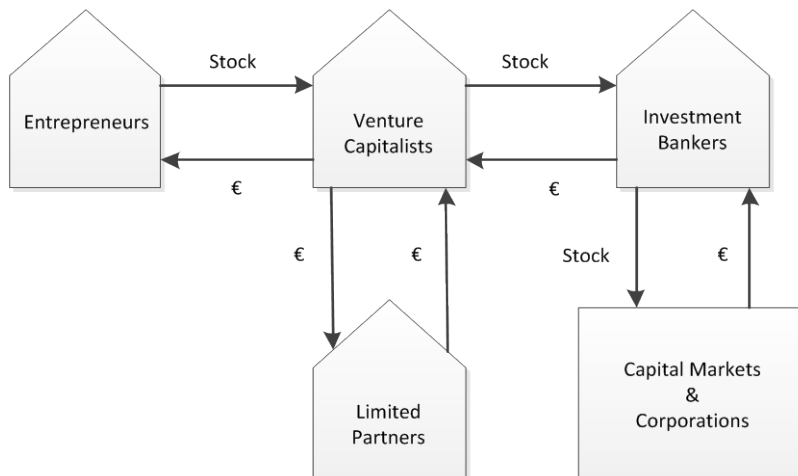


Figure 1: players and relationships in venture capital. Adapted from Zider 1998 (Sahlman 1990; Zider 1998).

Venture capital is in no way a cheap source of capital for entrepreneurs. On the contrary, venture capital is extremely expensive contrasted with, for example, bank loans and government subsidies. However, many young growth oriented companies require significant capital. More capital than can be provided by government programs and friends and family. They also lack the underlying assets necessary to be eligible for bank loans. Venture capital is often the only financing source available to companies in such positions (Zider 1998).

Venture capitalists are, in essence, intermediaries who receive capital from large institutional investors and wealthy individuals to invest into young high-growth firms. In this research these individuals and institutions are called Limited Partners (LPs). The term “Limited Partner” is derived from the position these parties hold in the most commonly used legal structure for venture capital funds: a limited partnership (Gorman and Sahlman 1989; Sahlman 1990; Zider 1998). For more information on the legal structure of Venture Capital funds please refer to section 2.1.3.

A venture capital firm usually employs several people, a few Venture Capitalists who are the main investment managers of the funds under management. They are usually the ones who raised the funds and have a contract with the LPs. In the context of this thesis VC or venture capitalist will refer to a general partner or equivalent at a VC firm. Often there are also a few associates working at a VC firm, they are usually in an apprentice position and, if successful, become VCs and raise funds themselves in the future (Sahlman 1990).

Venture Capitalists

Venture Capitalists receive capital from Limited Partners to invest in growth oriented companies. When venture capitalists raise a new VC fund they need to convince LPs to invest their capital in their fund. There are several criteria used by LPs to decide whether to invest in a particular VC fund or not, for example; the VC's access to deal-flow; or the match of the experience of VC team members with the proposed investment strategy (Sahlman 1990; Zider 1998; Groh and Liechtenstein 2010). VCs often only invest in high-tech businesses that are already slightly successful and need money to grow their business.

VCs limit their investment risk through specialization. A VC that is specialized in a specific sector and invests in that sector should in the long run perform better than a VC with less sector specific human capital.

Investment Strategy

VCs invest according to a certain pattern. They do this either consciously or unconsciously. This pattern is their investment strategy. The two major components of an investment strategy are the investment focus and the capital deployment strategy.

Investment focus

The investment focus of a fund describes the type of companies a VC invests in, for example; "Business to Business, software as a service companies with more than 1 million in revenues per annum."

Capital Deployment Strategy

The Capital Deployment strategy is how a VC invests capital in an investee over time. For example; "investing only small sums at the start to allow the company to prove that their market is large and can develop quickly, and once this is proven invest larger sums of money to scale the company."

Limited Partners

Limited Partners (LPs) are the individuals and institutions that invest in Venture Capital Funds. They are active investors that often manage funds of over a hundred billion Euros on which they need to have healthy returns so they can meet their own future obligations.

To spread the risks of their investments, institutional investors usually invest in many different types of asset classes of which Venture capital is only one (Sahlman 1990; Checkley 2009; Higgins 2009; Berk and DeMarzo 2011). For example; an institutional investor may need to invest 10 billion Euros, he will reserve 1 billion for venture capital, of that 50% in the US and 50% in Europe, of the 50% in Europe a third will be for life sciences, a third for cleantech and a third for IT, and the third for IT will be split over several VC funds that are raising capital at that time. Other asset classes include stocks, bonds, futures and private equity. If a particular asset class systematically underperforms compared to alternative asset classes it runs the risk of receiving less investment over time.

LPs decide in which VCs to invest based on several criteria. Groh and von Liechtenstein found that "[L]imited partners search for teams which are able to implement a certain strategy at a given cost" (Groh and Liechtenstein 2010). In their research they identified several key criteria that LPs used to judge VC fund investment proposals. Some of the most important criteria are in Table 1. For more information on the role of LPs in Venture Capital funds please refer to section 2.1.3.

Deal flow/Access to transactions
Track record
Local Market Experience of Team
Match of Team Background and Strategy
Reputation of Team of Individuals
Alignment of interest Between LPs and VCs

Table 1: overview of several key VC selection criteria (Groh and Liechtenstein 2010)

Because VCs operate with the capital of LPs, certain agency issues may arise. To decrease the likelihood of agency issues having a negative influence on the return to the LP, funds and compensation are structured to ensure that the interests of VCs and LPs are aligned. For example, a large part of the income of a VC is a percentage of the profits generated by the fund (the carry). It is common for LPs to demand VCs to also invest some of their private capital into the VC fund. Usually around 1% of the total fund size. This way VCs will personally experience loss if the fund fails, and are motivated to achieve the highest possible risk-adjusted returns for the LPs. Obviously there are more principal-agent problems in the LP-VC relationship, however it is outside the scope of this research to discuss these issues further (Sahlman 1990; Amit, Brander et al. 1998; Zider 1998). For a more in depth explanation of VC compensation please refer to section 2.1.4.

Entrepreneurs

The investee who receives capital from a VC is usually a young growth oriented company operating in a rapidly growing market. An entrepreneur receives capital from a VC in exchange for equity (Sahlman 1990; Zider 1998).

As with the LP-VC relationship, the VC-investee relationship is also fraught with principal-agent problems. VCs use both contracts and monitoring to manage the agent-principal issues. The investment agreement is designed to; align the interests of the entrepreneur and the VC, demand disproportionate voting rights and veto's on key issues, and include penalties for certain types of undesirable behavior (Sahlman 1990).

To align the financial incentives of the VC with the financial incentives of the entrepreneur, the entrepreneur often works for below market salary and is expected to earn the majority of his returns through the appreciation of the stock he holds in the company which will need to be liquidated at some future point (Sahlman 1990; Zider 1998).

Investment bankers

Investment bankers assist VCs in exiting their portfolio companies through Initial Public Offerings (IPOs) or trade sales. For this service investment bankers usually receive a fee of 6-8% of the total value of the transaction (Zider 1998).

During the first few years of the fund the capital is invested into the stock of private companies. After the first few years the VCs will attempt to exit their investments by either an IPO, a sale or any other mechanism that can turn the stock into cash or marketable securities. The capital and the return on the capital is then returned to the LPs, and when the last assets are sold the fund is closed (Sahlman 1990; Zider 1998).

1.2 Venture Capitalists' Human Capital

Human capital is the sum of the experience, knowledge and skills possessed by an individual or group. It is well established that the human capital of Top Management Teams influences the decisions they make and the organizational performance that results (Dimov and Sheperd 2003).

It wasn't until recent years that the influence of VCs' human capital on venture capital investing has been researched. The major contributions of this research have shown correlations between specific types of human capital and the successes or failures of VC firms. The correlation coefficients were small but statistically significant (Dimov and Sheperd 2003; Dimov and De Clercq 2006; Dimov, Sheperd et al. 2007; De Clercq and Dimov 2008; Zarutskie 2010).

One of the major distinctions between the VC human capital research and other human capital research is that the researchers have made distinctions between different kinds of education and the contents of the education (Dimov and Sheperd 2003; Zarutskie 2010), whereas most human capital research only looked at the years of education (or work experience), neglecting whether one studied engineering or law. The research on the influence of human capital in venture capital investing has also looked at the type and the content of the education (Brüderl, Preisendörfer et al. 1992; Cooper, Gimeno-Gascon et al. 1994; Gimeno, Folta et al. 1997).

While research has shown that the content of the human capital of VCs is related to the success of the VC fund; the correlations that were found were often small and only provide descriptive results of how the current situation is. It does not help us in improving our understanding of how human capital influences venture capital investment performance.

All the reviewed studies on the influence of human capital on VC investment performance have 2 things in common. All of the studies use secondary data and quantitative methods, and all the studies apply rather broad labels for "specific" human capital. To give an example, two of the labels used in research by Dimov & Shepherd (2003) were those of "general" human capital and "specific" human capital. In this context general human capital was education in fields ranging from sociology to history to engineering. "Specific" human capital ranged from degrees in business to finance to law.

One of the reason that the correlations that were found were small (but statistically significant) may be because the labels were too broad and therefore did not allow the researchers a high enough resolution to find stronger results. Therefore, this research will look at the relationship between the specific educational background and specific industry work-experience a VC has and their Funds' strategy.

In this research the human capital of a VC refers to his education and experience in specific sectors. Research by Hitt, Bierman et al. (2001) discovered that human capital (the professional experience and education of an individual) has both a direct and moderating effect on the performance of a firm. The relationship they found is strong and statistically significant. They found that firms with higher human capital demonstrate higher performance. And they found that higher levels of organizational human capital increased the positive effect of a particular strategy on firm performance (Hitt, Bierman et al. 2001). This means that the Venture Capital firm managed by VCs with higher levels of human capital should perform better. This is supported by evidence from De Clercq and Dimov who found that investors or syndicates with relevant human capital performed better (De Clercq and Dimov 2008).

1.3 Problems facing Venture Capital

This section describes the issues faced by the Venture Capital Industry, for issues facing Venture Capital Research please refer to section 2.2.1.

The venture capital industry in Europe is much younger than the VC industry in the US. And while the US VC industry also has its share of difficulties, they are less severe than the difficulties faced by European VCs (E&Y 2010).

US Venture Capital

The largest issue facing US venture capital today is that LPs believe that the risk-adjusted returns for the overall VC industry in the US are too low. While few US LPs are currently abandoning the VC asset class, it may create a more competitive fund-raising environment for VCs if the returns do not improve (E&Y 2010).

EU Venture Capital

European Venture Capital suffers from 5 systemic interrelated issues. **The first** is that there are very few big LPs in Europe that are investing in Venture Capital. This creates a difficult fundraising market for VCs. **The second** issue is that the portfolio-company exit-environment is very poor. Both for IPO's and trade-sales. This makes it difficult for European VCs to liquidate their investments. **The third** issue is a consequence of the comparatively young age of the European VC market, compared to the US there are a lot less experienced VCs in Europe, this makes it difficult for LPs to find reliable VCs to invest in. **The fourth** issue is the heterogeneity of the European market. Across Europe there are many different countries, languages and cultures which make it difficult for portfolio companies to scale quickly. And **the fifth** and perhaps most important issue of all is that the historical returns of European Venture capital have been very low. To give an example, the average return to LPs over the years 1986-2006 for early-stage European VC is 0% (Murray and Marriott 1998; Martin, Sunley et al. 2002; George and Nathusius 2007; E&Y 2010; E&Y 2011).

1.3.1 Problem Statement

Historically the returns for Venture Capital funds have been very low. This threatens the supply of capital to future technology start-ups because LPs will not be willing to invest in the VC asset class if they can receive better returns with lower risk in another asset class. Without enough capital available for future high-tech companies the European economy is at risk of losing the innovation intensive businesses it relies on to remain competitive in the world.

One of the reasons of these low returns may be, because VCs lack the necessary human capital related to the investment strategy they implement. Another reason may be that VCs invest in opportunities based on market-hype instead of investing in solid businesses that they understand.

The reason we do not know with certainty if VCs' human capital is a reason for the low returns is because we do not know how VCs' human capital influences the investment strategy, which in turn influences the returns of the VC's fund. If we do not improve our understanding of the relationship between human capital and venture capital investing we will not be able to improve the performance of the VC industry and through them the development of high-growth high-tech ventures.

1.4 Research Problem

The research problem is that it is currently not known how the investment strategy of a VC Fund and the knowledge and experience of VC influence each other. The importance of venture capital for the high-tech entrepreneurial eco-system is clear. Currently the asset class VC is not performing well, this threatens the future availability and diversity of new venture financing sources.

From the literature it is clear that the VCs' human capital influences the performance of their VC funds. Literature shows that this relationship is mediated by the investment strategy that the VC uses (Groh and Liechtenstein 2010).



Figure 2: Extended relation between VC Human Capital and VCF returns

Figure 2 illustrates the relationship which is expected based on the reviewed literature. Human capital possessed by individual VCs is expected to influence the investment strategy and investment focus that the VC (either consciously or unconsciously) applies in choosing valuable portfolio companies in which to invest (and vice versa). The companies in which VC's invest end up determining the returns by the VC fund.

It is not feasible to investigate the extended relation between VC Human Capital and fund returns. This is partly due to the limited time and resources available for this study and partly because VCs are notoriously secretive of their achieved returns (Sahlman 1990).

Because of the lack of available knowledge on the effects of human capital on venture capital investment specializations and the need to limit the scope of this research to an achievable size, the specific research problem that this researcher wishes to dive into is the encircled section in Figure 3: *How do the Venture Capitalists' Human Capital¹ and the investment strategy of the Venture Capital Fund influence each other?*



Figure 3: Research Focus

Because so little is known about the relation between human capital and strategy, this research is exploratory research aimed at developing a set of initial hypotheses about the research problem. This set of initial hypotheses can be the starting point of future research.

¹ In the context of this research, human capital is the education an actor has enjoyed and the specific industry experience an actor has gained in his career.

1.5 Research Questions

The research objective is to understand the relationship between the Human Capital of VCs and the investment strategy and investment focus of the Venture Capital Funds they manage. Because this relationship has not been studied in depth before it is important to establish the context of this exploratory research. In order to do so the research problem has been broken down into several actionable research questions that work as a funnel towards developing initial hypotheses. The first three questions establish the theoretical context that allow the fourth question to be investigated and analyzed.

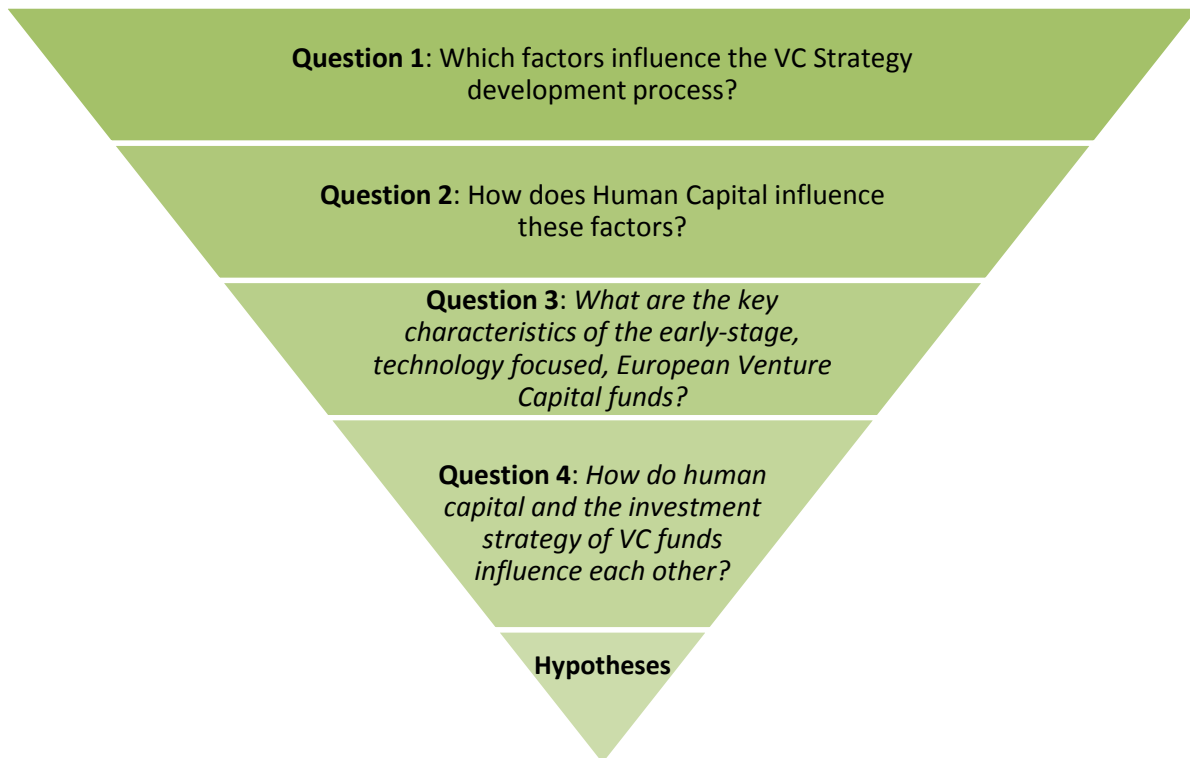


Figure 4: Research question funnel

The first question is designed to provide an overview of the research space and set the context:

1 *Which factors influence the VC strategy development process?*

The answer gives insight into the relevant factors in the VC strategy formation process and is answered through a review of literature in paragraph 2.3.

The second question builds on the first:

2 *How does Human Capital influence these factors?*

This question establishes to what degree the factors that influence the strategy formation process are themselves influenced by the human capital of VCs. This question is answered through a review of the literature in paragraph 2.4.

The third research question delves into the specific context of this research:

3 *What are the key characteristics of the early-stage, technology focused, European Venture Capital funds?*

This question helps make sense of the diverse nature of the VC market in Europe. The answer provides the basis for determining what type of VCs to interview for question four. This question is answered in section 2.5 through reviewing Venture Capital Association reports and analysts' reports.

4 *How do human capital and the investment strategy of early-stage, technology focused, European VC funds influence each other?*

The first question explores the factors that play a role in the venture capital investment strategy formation process. The second question looks at the role human capital plays in these factors. The third question introduces the diverse nature of the European VC market. And the final question uses the results of the third question to select a sample of VCs to interview to uncover how human capital influences the VC strategy formation process. The results of question four are compared with the results of question one and two, to see what the differences between the theory and practice are and to distill new hypotheses for future research. The fourth question is answered by doing empirical research in chapter 3.

1.6 Research Approach

The approach is to create a thorough understanding of the research-problem's context by doing literature review and desktop research. The results assisted in developing an interview and sampling protocol for doing multiple case studies of European VCs.

The protocol is used to conduct interviews with VCs to discover how their human capital shaped their fund's investment specialization. In these results several patterns are found. For more on the research approach please review chapter 3.

1.6.1 Defining Key Concepts

From the research questions, two core concepts can be distilled; Human Capital and Investment Strategy. To make these concept observable they need to be defined further in the context of this research project.

Human Capital

In the context of this research human capital is defined as; the education an actor has enjoyed and the specific industries in which an actor has gained experience and what his roles were in those industries.

Investment Strategy

The investment strategy is made up of two important components. The capital deployment strategy and the investment focus. The investment focus will often be mentioned separately from the investment strategy because this appears to be the most important part of the investment strategy.

Investment Focus

The investment focus of a fund describes the type of companies a VC will invest in, for example; "Business to Business, software as a service companies with more than 1 million in revenues per annum".

Capital Deployment Strategy

The capital deployment strategy is how a VC, after raising a fund, decides to invest his capital. At both the VC firm level as well as how cash is invested in investees. For example: investing in small sums at the start of the investment of the investee to allow the company to prove that their market is large and can develop quickly, and once this is proven invest larger sums of money to scale the company.

1.6.2 Research Subject

Several VCs work together in one firm, a firm may manage multiple funds, a specific fund has a specific investment strategy and investment focus. This strategy and focus is formed, consciously, or unconsciously, by the VCs who established and run the fund.

The research subject is the VC fund and the research subject is investigated through the VCs who act as informants. This research will target early-stage European technology focused funds because these funds demonstrated the lowest returns, while they are critical for helping to grow technology focused businesses in Europe.

1.6.3 Methodology of Literature Review and Influence on Empirical Research

To answer the first two research questions;

1 *Which factors influence the VC strategy development process*

2 *What is the influence of human capital on this process?*

The literature is reviewed. The correct literature is identified using a snowball-method after an initial literature review.

Question 3 is answered through desktop research of VC association reports and analysts' reports.

3 *What are the key characteristics of the early-stage, technology focused, European Venture Capital market?*

The final research question;

4 *How do human capital and the investment strategy of early-stage, technology focused, European VC funds influence each other?*

Has been answered by interviewing Venture Capitalists using a protocol developed based on the results of the first 3 research questions. Multiple VCs who represent different sub-sections of the Early-stage, technology-focused, European VC industry are interviewed.

The VCs are approached through a snowball method; an initial VC willing to participate in the study is identified and this VC helped to acquire more participants by identifying potential subjects and making introductions to these VCs.

1.7 Scientific Relevance

If we know more about how VCs determine their investment strategy and focus we can in the future investigate whether certain strategies lead to better results. Because this research will help us understand the role of human capital in the strategy, we will be able to train and guide new VCs better and help institutional investors select better VC fund managers.

Currently there are very little studies in human capital theory that look into the detailed relationship between specific human capital content and its influence in practical outcomes. The results of this thesis will be a strong step into delving deeper into the complex relationship between human capital and real-world outcomes.

There is limited qualitative research into human capital, this limits our understanding of human capital theory works on the individual level. This research will add to the knowledge on human capital theory by using qualitative research to investigate how particular human capital influences micro-level events will increase our understanding of human capital theory.

Venture capital research often assumes that venture capital acts as “smart money” in the sense that VCs add value to a company they invest in. While this research does not claim to test this assumption, the results offer more insight into the validity of this assumption.

The research that has looked into what VCs look for in portfolio companies have resulted in a lot of descriptive knowledge, however it has not given researchers an insight in how investment strategies form, this thesis will help to improve researchers’ understanding of this process.

Recent research has shown that the content of the human capital of VCs is important to the success of the VC fund; the relations that were found only provide descriptive results of the current situation. It does not improve our understanding of how human capital influences venture capital investment performance. This thesis will help close that particular gap in our knowledge.

1.8 Managerial Relevance

For VCs this research will help them understand how investments in their own human capital may improve their performance. It will also give them an understanding of how they can improve their investment strategy and consequently their funds’ returns. It also allows VCs to make better hiring and training decisions for junior positions in their firms. Finally, this research also shows how VCs can consciously change their investment strategy over time and thereby improve the returns of their funds.

For LPs this research will help them understand the importance of a VCs human capital in determining the returns of the fund. This will help LPs to pick the right VC to invest in, given a particular strategy.

1.9 Report Structure

Chapter 2 starts by introducing the context of this research in section 2.1 and 2.2. The chapter continues with answering research question one and two in sections 2.3 and 2.4, and ends by answering question three in section 2.5.

Chapter 3 introduces the empirical research. The chapter start off by explaining the sampling and research design in section 3.1 and 3.2. Section 3.3 describes the results from the case studies. Chapter 3 ends with an analysis of these results and an answer to research question four.

Chapter 4 distills the conclusions from this research, discusses its limitations and proposes directions for future research.

2 Literature Review

The goal of this chapter is to introduce the reader to the wider context within which the empirical research in chapter 3 is performed. This chapter starts with an introduction of the wider context of the Venture Capital market and explores the history of Venture Capital. Sections 2.1.2, 2.1.3 and 2.1.4 explain the different types of Venture Capital funds, the structure of Venture Capital firms and how VCs are compensated. Section 2.1.5 explores the history of venture capital research.

Section 2.2 introduces the wider context of human capital theory and that this research only uses a concept of the wider human capital theory. Section 2.3 reviews the literature in order to answer the first research question. Section 2.4 answers the second research question and section 2.5 answers the third research question. The results from section 2.3, 2.4 and 2.5 form the basis for the empirical research in chapter 3.

2.1 Understanding Venture Capital

Venture capital is a subset of the larger Private Equity (PE) market. VCs invest funds into young growth-oriented companies. They raise these funds from larger (institutional) investors such as endowments, pension funds and rich individuals. These larger investors are referred to as Limited Partners (LPs) of the Venture Capital funds (Sahlman 1990). One Venture Capitalist firm can manage several funds at the same time, and these different funds may, or may not, have different investment foci and investment strategies.

2.1.1 The History of Venture Capital

Institutional venture capital is a recent phenomenon and came forth from the fund management activities of wealthy families (for example the Rockefellers) in the early 20th century United States. The very first organized venture capital activities were in the Boston area where in 1911 the local chamber of commerce started providing financial and technical support to new ventures. This was followed by the establishment of the New England Industrial Development Corporation in 1940. The first modern institutional venture capital fund was ARD (American Research and Development) and was established in Boston in 1946 (Kenney and von Burg 1999; Landström 2007).

In the 1960s another cluster of venture capital developed on the west-coast of the US in the San Francisco/Silicon Valley area. The industry here grew at an incredible rate on the back of the explosion of the electronics industry (Kenney and von Burg 1999; Landström 2007).

In the US

In the early years the amount of venture capital was still relatively limited and geographically highly concentrated. During the 1970s the amount of VCs and available capital decreased further due to high capital-gains taxes and several failed VC funds. But this changed rapidly during the 1980s, during this decade the amount of available venture capital increased ten-fold. The reasons for this are three-fold; the first reason is that from 1979 onwards pension funds were allowed to invest in Venture Capital; secondly, capital gains tax was lowered by 21%; and thirdly, the emergence of new technology, such as microprocessors, allowed for many new investment opportunities (Landström 2007).

Near the end of the 1980s and in the first half of the 1990s the VC industry experienced several ups and down, and many VCs left the industry after the overheated market of the mid-1980s. This in turn helped stabilize the market and increase returns (Sahlman 1990; Landström 2007).

In the second half of the 1990s the venture capital industry expanded from roughly \$6 billion invested in 1996 to \$100 billion invested in 2000. However, in 2000 the dot-com bubble burst and the US venture capital market declined significantly and was around \$32 billion in 2011 (Landström 2007; E&Y 2011).

In Europe

Even though there were a handful of VC firms active in early 1970s Europe, venture capital did not really start developing until the latter half of the 1980s. Before the eighties, the amount of available capital was small and VC firms were isolated. In the latter half of the 1980s the amount of available venture capital in Europe tripled to \$29 billion (Landström 2007).

It is important to note that, while there are many similarities between the US and EU VC markets, there are also significant differences (Landström 2007). Differences such as:

- EU VCs appear to be more dependent on financial institutions such as banks and insurance companies for their capital
- Legal structures for VC funds vary across Europe, while in Anglo-Saxon countries the structure is usually a limited partnership
- EU VC is less focused on early-stage deals when compared to the US VC market
- The level of VC involvement in portfolio firms varies across countries
- Exit strategies for European VCs differ from their US counterparts where there is a larger focus on exits through IPOs

Venture Capital in the Rest of the World

Venture Capital did not become a worldwide phenomenon until the late 1990s. During the dot-com boom significant VC markets developed in Asia. The development of VC markets in Asia varies greatly, in part due to the highly heterogeneous nature of its constituent countries. Currently, large VC markets can be found around Beijing and Shanghai (Landström 2007; E&Y 2011).

The bursting of the dot-com bubble affected all VC markets. Since the dot-com bubble burst, the size of VC markets has increased again and has been stable in recent years. The US market is back to its pre bubble level, the European market is slightly smaller than the US market, and the markets in Asian countries are growing (Landström 2007; E&Y 2010; E&Y 2011).

2.1.2 Different Types of Venture Capital Funds

From literature four main different types of VC can be identified. Informal venture capital, corporate venture capital, governmental venture capital and institutional venture capital.

Institutional venture capital

There are many different definitions of venture capital available in the literature and definitions vary according to geography. However a common definition of a venture capital fund would include: A professionally managed fund which invests the capital it manages on behalf of wealthy families, financial institutions and large companies into the equity of young, growth-oriented companies that are not listed on any stock market (Landström 2007). This research focuses on institutional venture capital.

Informal venture capital

There are several definitions of informal venture capital. These definitions range from a narrow definition which focuses on Business Angels (high net worth individuals who invest time and money in risky young companies) to a wider definition which includes all informal investors (non-corporate, non-institutional investors) this also includes the family and friends of an entrepreneur who invest in the entrepreneur's business (Landström 2007).

Corporate venture capital

Corporate venture capital distinguishes itself from other venture capitalists in that its funds are supplied by another (non-financial) corporation and that this corporation is the only "Limited Partner" of this fund. Corporate venture capital is usually used as a strategic tool to facilitate new business development and to acquire innovation for the parent corporation (Landström 2007).

Governmental venture capital

Governmental venture capital is comparable to corporate venture capital in that its funds are (usually) supplied by one non-financial entity, in this case a local or national government. Although it is important to note that the implementation of the fund differs per program, the idea behind them is the same, to invest in young high-growth companies. Often governmental venture capitalists have additional societal motives to invest (Lerner 1996).

A summary of the differences between the various types of venture capital is given in Table 2.

	Institutional Venture Capital	Informal Venture Capital	Corporate Venture Capital	Governmental Venture Capital
Source of Funds	Institutional investors.	Personal capital	Corporate funds	Government funds
Legal Form	Limited Partnership	Private individuals	Subsidiary of a large company	Varies
Motive for investment	Equity growth	Equity growth & intrinsic rewards	Strategic and equity growth	Social importance and economic stimulation
Investment	Experienced investors	Varied experience	Experience within industry/technology	Varied experience
	Large investment capacity	Limited investment capacity	Large investment capacity	Large investment capacity
	Extensive due diligence	Limited capacity for due diligence	Extensive due diligence	Extensive due diligence
Monitoring	Formal control	Informal control	Corporate control	Varies

Table 2: overview of key-characteristics of different types of venture capital expanded from (Landström 2007)

This thesis will focus on institutional venture capital. Therefore, in the context of this thesis, the term "Venture Capital" will only refer to institutional venture capital.

2.1.3 Venture Capital Firm structure

Venture capital funds are often structured as partnerships. Partnerships have two types of partners, General Partners and Limited Partners. General Partners are responsible for the daily management and are personally liable for the funds obligations. Limited Partners are part owner of the fund but they are not allowed to interfere with the daily management. They are only liable for the obligations of the fund up to the amount that they have invested into the fund. The Venture Capital firm may be a General Partner of more than one Fund. For an overview of the relationships please review Figure 5.

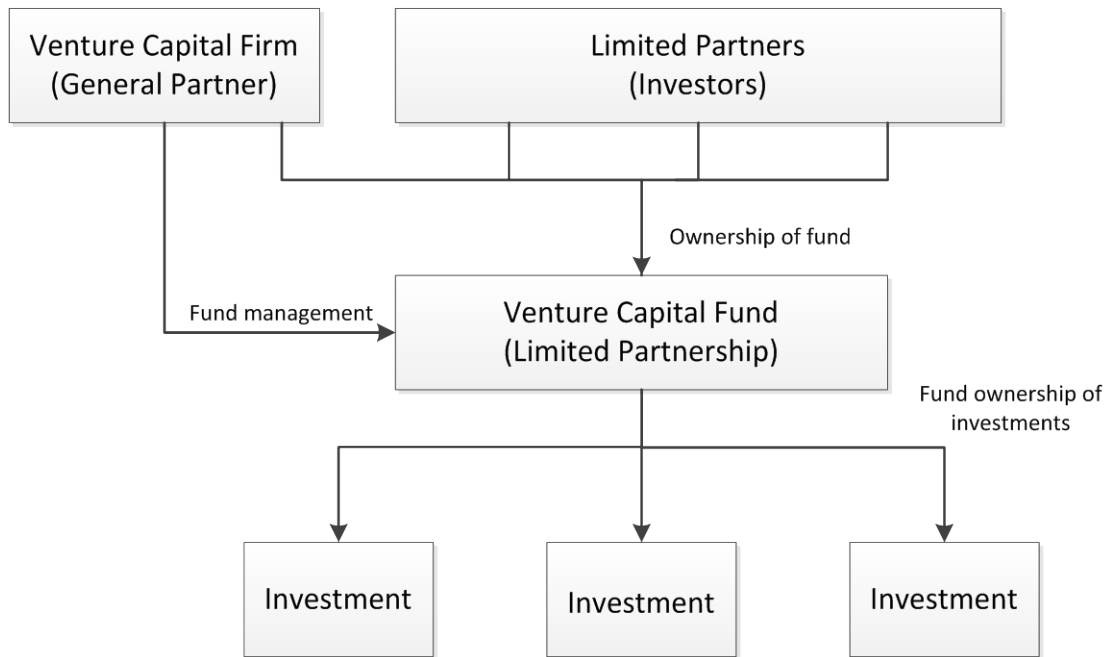


Figure 5: Common Venture Capital Firm structure

2.1.4 VC Compensation

In exchange for managing the investments VCs usually receive three different forms of compensation. The first is a management fee, this is usually 2-2,5% of the committed capital per year to pay for salaries and expenses. The second is a carry on the realized returns, this is usually 20%. For example, if a fund of 100 million Euro is closed and has returned in total 150 million Euro, the VCs will get 20% of $150 - 100 = 50$ million Euro, which is 10 million Euro. Obviously this calculation is over simplified and only serves as an illustration. The third form of compensation is in the form of interest free loans from the LPs to the VCs. Because most of the returns of a VC fund may come from only one or two investments, the payout on the carry which VCs receive would come all at once near the end of the life of the fund. To smooth-out the income of the VC over time LPs may provide interest free loans before the assets are liquidated to allow VCs a more stable income over time (Litvak 2009).

2.1.5 History of Venture Capital Research

Before the 1980s research into the phenomenon of venture capital was limited and diffused. During the 1980s the size and importance of the VC market grew and with it the interest by scholars. The early research was mainly descriptive, which makes sense considering that venture capital was an unknown phenomenon that did not fit into the existing finance literature because that mainly focused on large existing businesses, and neither fit into the existing entrepreneurship literature because venture capital as a finance sources was a relatively scarce and new financing source for new ventures (Landström 2007).

In the 1990s venture capital research moved from more descriptive research towards more theory driven research. An important point to add is that the volume of venture capital research increased partly due to the availability of data through databases such as Venture Economics. The theory driven research trend in the 1990s made frequent use of rational economic models also employed in other management science studies at that time (Landström 2007).

The majority of the research comes from two different camps. On the one hand are the management and entrepreneurship scholars who had a micro-level focus. They focused on the venture capital process issues such as fund-raising, exits, etc. The other camp has the finance and economics scholars who focused on the macro-level, such as understanding the role of VC in the development of new industries, and the geographical distribution of venture capital. To this day these different camps of authors hardly cooperate or reference authors from different camps. Obviously with the exception of the key-authors in the field of Venture Capital research (Landström 2007).

Problems with Current Venture Capital Research

There are still many issues facing the relatively young field of venture capital research. This section, by no means, pretends to introduce all the issues facing VC research, it only introduces an brief overview of a few issues.

One of the biggest issues is that a lot of the research on venture capital has been done in the US and now that VC is a global phenomenon the insight gained from US based research is not always applicable in different environments because VCs in Europe behave differently from VCs in the US, especially when it comes to the financial tools they use to structure their investments (Schwienbacher 2008).

Also, there are also significant differences between the US and European VC market (Landström 2007). Differences such as:

- EU VCs appear to be more dependent on financial institutions such as banks and insurance companies for their capital
- Legal structures for VC funds vary across Europe, while in Anglo-Saxon countries the structure is usually a limited partnership
- EU VC is less focused on early-stage deals when compared to the US VC market
- The level of VC involvement in portfolio firms varies across countries
- Exit strategies for European VCs differ from their US counterparts where there is a larger focus on exits through IPOs

This makes it difficult and dangerous to thoughtlessly apply US based research on European VC situations.

One of the assumptions in entrepreneurship and the venture capital literature is that institutional venture capitalists add-value, however the research that has attempted to investigate this relation has met with mixed results (Busenitz, Fiet et al. 2004; Welppe, Dowling et al. 2010).

Another problem of venture capital research is that it often uses quantities and/or cross-sectional research methods to investigate what are, at least at the firm level, complex social processes (Landström 2007).

The importance of the human capital of VCs has also received a greater amount of attention by scholars in recent years, however the results so far have been promising but limited due to the heavy use of secondary sources (Dimov and Sheperd 2003; Dimov and De Clercq 2006; Dimov, Sheperd et al. 2007; De Clercq and Dimov 2008; Zarutskie 2010).

This research does not suffer from the same problems as some of the current research mentioned earlier in this section because it uses qualitative methods to gain a deep understanding of how a specific fund-level phenomenon works. This has rarely been done before.

2.2 Understanding Human Capital

Human capital is the sum of the experience, knowledge and skills possessed by an individual or group. It is well established that the human capital of Top Management Teams influences the decisions they make and the organizational performance that results (Dimov and Sheperd 2003).

A large body of research into the influence of human capital on firm performance has focused on the quantitative aspects of human capital, for example number of years of education and number of years working experience (Brüderl, Preisendörfer et al. 1992; Cooper, Gimeno-Gascon et al. 1994; Gimeno, Folta et al. 1997). These rough measures do not provide any insight into the qualitative aspects of Human Capital. And as other research has shown, not just the volume and variety of human capital matter, also the actual content, the specific knowledge, experience and skills matter (Dimov and Sheperd 2003; Dimov, Sheperd et al. 2007). An individual's Human capital can be divided into many different elements, for example, the types of education an actor has enjoyed, the content of his education such as the degree and courses taken; the types of experience the actor has (both personal and professional) and what the actor's role was within this experience, (job, responsibilities etc.); and the skills this education and experience has given the actor.

2.2.1 The History of Human Capital Theory

While this research will only borrow a concept of the wider theory of human capital, it is important to understand the context of where the theory comes from and why the concepts that are used in thesis are relevant to the subject at hand.

“Human capital theory suggests that individuals and society derive economic benefits from investments in people” (Sweetland 1996) p341. The concept that the knowledge and skills possessed by individuals can be viewed as a form of economic capital first surfaces in Adam Smith's “An inquiry into the nature and causes of the wealth of nations” in 1776. But it wasn't until the 20th century that human capital became recognized as a form of wealth in the economic context, and only in the second half of the 20th century human capital became established as a field of study (Sweetland 1996).

In the 1950s the foundation for Human Capital theory, as it is used today, was established. In this era; research showed that a higher level of educational attainment was related to higher income and less decline in income at later age. It was also found, through technical analysis, that increases in human capital helped explain the growth of the economic productivity of the United States (Sweetland 1996).

In the 1960s Gary Becker conducted perhaps the most well-known of all human capital studies. He studied the differences in income between high-school graduates and college graduates and found (among many other things) that the investment in a college education gave, on average, a rate of return of 7-9%, not taking into account indirect returns (Becker 1975; Sweetland 1996).

Around the same time Theodore Schultz found that increases in total Human Capital explained the significant increase in national income in the US in the first half of the 20th century. He also identified 5 major categories of human activity investments which improved human capital (Sweetland 1996).

1. Health Facilities
2. On-the-job training
3. Formal education
4. Non employer adult study programs
5. Migration of individuals and families to adjust to labor market shifts

So far Human Capital theory has shown that human capital is an important part of economic capital for both the individual and the nation: both at a micro-economic level as well as the macro-economic level.

Since the 1960s research has focused on addressing the empirical shortcomings of the theory on human capital and developed different methods to measure the contribution of education to economic output. Additionally human capital theory has been extensively used in the study of the economics of education. (Sweetland 1996).

Further discussion of more recent work on human capital theory is outside the scope of this thesis. This research's approach uses a limited concept of individual human capital. In this thesis only the concept that specific human capital attributes, such as specific education and specific industry experience, influence choices and performance at the firm-level will be used.

2.2.2 Human Capital and Firm Performance

VCs are also entrepreneurs. They do not only invest in firms, but they also run one themselves. This means that a lot of the research on the influence of human capital on firm performance is also relevant for VCs and their firms and funds.

Research into top management teams has found that the characteristics of top management teams, such as educational attainment and industry experience, influences the performance of their firms (Hitt, Bierman et al. 2001; Bottazzi, Da Rin et al. 2008).

Research by Hitt, Bierman et al. (2001) discovered that human capital has both a direct and moderating effect on firm performance. The relationship they found was strong and statistically significant. They found that firms with higher human capital demonstrate higher performance. And they found that higher levels of organizational human capital increased the positive effect of a particular strategy on firm performance (Hitt, Bierman et al. 2001). This means that the Venture Capital firm managed by VCs with higher levels of human capital should perform better. This is supported by evidence from De Clercq and Dimov who found that investors or syndicates with relevant human capital performed better (De Clercq and Dimov 2008).

2.3 Factors Influencing the VC Strategy Formation Process

Venture capitalists are strategists on two-levels. On the one hand they help their portfolio companies with setting-up and executing their strategies, a topic which has received a lot of attention in literature. And on the other hand VCs develop and enact strategies in the context of their VC fund, a topic which has received almost no attention from academic scholars. This research focuses on VCs as strategists in the context of their funds.

There are many ways that strategies may develop. Mintzberg and Waters proposed that these paths are on a spectrum with on one end purely deliberate strategies and on the other purely emergent strategy formation processes. How these strategies develop is influenced by context specific factors and path dependency (Mintzberg and Waters 1982; Mintzberg and Waters 1985; King 2008) some typologies of the strategy formation processes and its influencing factors are mentioned in Table 3.

King (2008) investigated the investment strategy formation process of VCs. His research suggests that VCs develop investment strategies through a strongly emergent process. This is not surprising given that VC funds operate in a highly heterogeneous and dynamic environment. King also found a strong variation in the attention given to strategy development between firms.

Emergent strategies, unlike deliberate strategies, do not develop solely from planning and analysis. Emergent strategies develop through an semi-evolutionary process where the strategists, in this case the VCs, provide initial input into the strategy formation process, but the strategy is in continuous flux based on input from the environment and the strategist's predicted changes in the environment.

Emergent strategies develop within an envelope of various internal and external factors. These factors may constrain the VC to invest according to certain foci. A focus is basically a set of guidelines for investing in certain markets and sectors based on changes and expectations in that market and the VC firm's environment.

Strategy process	Major features
Planned	Strategies originate in formal plans: precise intentions exist, formulated and articulated by central leadership, backed up by formal controls to ensure surprise-free implementation in benign, controllable or predictable environment; strategies most deliberate
Entrepreneurial	Strategies originate in central vision: intentions exist as personal, unarticulated vision of single leader, and so adaptable to new opportunities; organization under personal control of leader and located in protected niche in environment; strategies relatively deliberate but can emerge
Ideological	Strategies originate in shared beliefs: intentions exist as collective vision of all actors, in inspirational form and relatively immutable, controlled normatively through indoctrination and/or socialization; organization often proactive vis-a-vis environment; strategies rather deliberate
Umbrella	Strategies originate in constraints: leadership, in partial control of organizational actions, defines strategic boundaries or targets within which other actors respond to own forces or to complex, perhaps also unpredictable environment; strategies partly deliberate, partly emergent and deliberately emergent
Process	Strategies originate in process: leadership controls process aspects of strategy (hiring, structure, etc.), leaving content aspects to other actors; strategies partly deliberate, partly emergent (and, again, deliberately emergent)
Unconnected	Strategies originate in enclaves: actor(s) loosely coupled to rest of organization produce(s) patterns in own actions in absence of, or in direct contradiction to, central or common intentions; strategies organizationally emergent whether or not deliberate for actor(s)
Consensus	Strategies originate in consensus: through mutual adjustment, actors converge on patterns that become pervasive in absence of central or common intentions; strategies rather emergent
Imposed	Strategies originate in environment: environment dictates pattern is in actions either through direct imposition or through implicitly pre-empting or bounding organizational choice; strategies most emergent, although may be internalized by organization and made deliberate

Table 3: overview of major strategy formation processes ranging from highly deliberate to highly emergent. Taken from Mintzberg & Waters, 1985

The following factors have been recognized in the existing literature to influence the strategy of VCs.

2.3.1 VC – LP Covenants

When raising funds, VCs propose a certain investment strategy and focus to their LPs. This becomes a part of their investment agreement and is called a covenant. While LPs often do not directly force VCs to keep to the initial strategy, it is in the interest of the VC to do so. If the VC follows the strategy and fails, LPs will be more forgiving of the failure, after all, they signed off on the strategy, and LP's may decide to invest in the VC's next fund. However, if the VC changes his strategy and fails, LPs may not invest in the VCs next fund. Obviously, if the VC delivers excellent returns to his LPs they will not care much whether or not the VC stuck with the original strategy. They will care to some degree, even in the case of success, because LPs choose a VC with a specific focus to diversify their investments, if this VC then changes the focus, it may impact the diversification of the LPs invested capital and increase the overall risk of the LPs invested capital (King 2008).

This effect introduces a significant constraint to VC firms, especially less established firms. Because of the nature of their relationship with their LPs they will not be able to change directions quickly, since doing so may limit them raising funds from those LPs in the future. This limited maneuverability may lead to limited returns on their funds, keeping them very dependent on their relationships with their LPs. Established firms, however, have a lot more maneuverability, because they will have a longer history of successful funds, they know they will be able to raise funds again even if their current fund does not perform well. And this flexibility allows them to improve the returns of their fund because they can more easily adapt to changes in the environment (King 2008).

2.3.2 Opportunity

An important external influence on how investment foci and strategies form is based on opportunity. Or more precisely, luck. For a VC to deploy his capital within a certain focus he will have to have access to high-potential investment opportunities within that space. Additionally, if a high-potential investment presents itself which is in an adjacent market, a VC would be foolish not to invest. Investing in the adjacent market will then shift the strategy and focus of the VC, not through conscious and deliberate planning, but through emerging opportunities (Muzyka, Birley et al. 1996).

2.3.3 Legal System

The legal system of the country within which a VC firm operates influences the investment strategy that a firm might pursue. One of the most important influences the legal system has on the strategy formation process of VCs is an indirect one. Capital market laws and regulations influence the amount of capital available to be invested in VC funds and influence the size of the VC market. When the VC market is smaller, LPs are in a more powerful position vis-à-vis VCs which may reduce the ability of the VC to change strategy, act opportunistically and take risks (Porta, Lopez-de-Silanes et al. 1997; Jeng and Wells 2000; Wonglimpiyarat 2009; Fuller 2010).

Another way through which the legal system influences the relationship between LPs and VCs, and indirectly investment strategy, is through private equity regulation. Fuller (2010) found that in a market where private equity (of which venture capital is a sub-set) which is better regulated LPs allocate larger shares of their portfolios to private equity, because, according to Fuller, the legal environment reduces the transaction costs for the LP because the VC now has to act with accordance to the law and this often reduces agency risk for the LP (Fuller 2010).

The investment focus of VCs is also influenced by the regulations placed on their potential investee companies. Jeng and Wells (2000) found that in countries with more rigid labor markets, VC's were less likely to invest in Early Stage companies.

Besides regulation, the degree of enforcement of certain laws also influences the specialization strategy of VCs. For example, VCs operating in a market with weak intellectual property protection will be less likely to invest in IP-based businesses (Fuller 2010).

It is important to note that while the legal system the VC firm operates in, influences the investment strategy of the VC firm, experienced VCs are able to implement the same legal instruments and structures regardless of the legal system (Kaplan, Martel et al. 2004).

2.3.4 Peer Network

There are three main ways through which social networks influence economic outcomes. Firstly by improving the quality and flow of information. Secondly, through introducing a source of reward and punishment for negative opportunism. And thirdly, by establishing trust among parties (Granovetter 2005). For VCs their social network with other VCs is source of competitive advantage and through various processes affects how a VC firm's strategy develops.

One important way through which peers influence firm strategy is through co-investing. Through co-investing a firm can more safely invest funds in a company which may not currently fit inside its investment focus by co-investing with a VC that does have experience in that specific investment focus. Through this process VCs can invest in more diverse foci through co-investing and gain expertise and reputation in new foci that they may wish to specialize in (Manigart, Lockett et al. 2006; De Clercq and Dimov 2008; Schwienbacher 2008).

A peer network also influences which deals a VC has access to. A lot of VCs acquire new deals from fellow VCs who cannot invest in them for various reasons. And because of the socially embedded nature of VCs among peers the referred deals are usually of a higher quality than deals acquired through Entrepreneur's approaches, this is especially true for later stage investment opportunities (Fiet 1995; Granovetter 2005; Manigart, Lockett et al. 2006).

2.3.5 Informant Network

One of the most important risk factors for a VC when investing in a specific company is the information asymmetry between the VC and the entrepreneur (Sahlman 1990). The most important way through which a VC can reduce the information asymmetry is by gathering information about the entrepreneur and the investment through reliable mutual contacts, or informants (Fiet 1995).

An informant can only add value if he has worked with the entrepreneur in question and is therefore restricted to a particular social network that is tied up in a specific industry. A VC can only rely on an informant if he trusts this person's judgment and will often need to have worked with the informant in the past to establish this trust. This creates a path dependency similar to that regarding reputation and experience in that work in a particular investment focus improves the VC's ties in that focus and allows the VC to reduce the information asymmetry between himself and a potential investment (Fiet 1995; Granovetter 2005).

Due to this path dependency, the informant network a VC has established influences the investment strategies he can develop successfully.

2.3.6 Capital Markets

Another important factor that influences VC strategy formation processes is the existence and extent of the capital markets. One of the investment exit mechanisms used by VCs is to take a company public. The degree to which this option is available depends on the strength and depth of the public stock-markets to which a company could potentially exit. When stock markets are weak other exit options need to be found and this influences the investment specialization of the VC (Jeng and Wells 2000; Cumming and Johan 2007; Wonglimpiyarat 2009). For example, Jeng et al (2000) found stock markets have little effect on early-stage investing, but significantly affect later stage investments.

2.3.7 Brand and Reputation

One of the reasons VCs develop an investment focus is because it allows them to build a brand in that particular market. VCs with an established brand in a particular market will attract better quality teams and investment opportunities to their firm. This improves the return of the fund (King 2008; Groh and Liechtenstein 2010). Additionally, Dimov, Sheperd et al. (2007) found that VC firms with a high reputation in a particular market are more likely to invest in earlier stage firms. This may be because the firm attracts higher quality teams and proposals which allow it to invest in earlier stage companies with less risk.

Once a firm has a reputation in one particular market it is difficult for the firm to quickly change to another focus because they may have no, or a lower, reputation. So while a brand and reputation improve the performance within a certain investment focus, it also creates a certain path dependency that makes it more costly to abandon a focus or start investing in a new focus (King 2008).

2.3.8 Human Capital

Research has shown that experience (in general) affects the investment focus that VCs develop (Dimov, Sheperd et al. 2007; King 2008) and experience affects the fund performance (Dimov and De Clercq 2006; De Clercq and Dimov 2008; Zarutskie 2010).

Experience, which is an integral part of the Human capital of a VC, is a firm resource and creates a competitive advantage (Hitt, Bierman et al. 2001). This motivates VCs to specialize because it allows them to increase their knowledge of a particular focus which will improve their added value and allow them to discern valuable investment opportunities more effectively (King 2008).

While research has shown that the content of the human capital of VCs is important to the success of the VC fund; the relations that were found were often small and only provide descriptive results of how the current situation is. It does not help us in improving our understanding of how human capital influences venture capital investment performance.

All the reviewed studies of the influence of human capital on VC investment performance have two things in common. First, all of the studies use data from secondary sources (such as the Thomson Reuters VentureX database) and quantitative methods. And second, all the studies apply rather broad labels for “specific” human capital. To give an example, two of the labels used in research by Dimov & Shepherd (2003) were those of “general” human capital and “specific” human capital. In this context general human capital was education in fields ranging from sociology to history to engineering. “Specific” human capital ranged from degrees in business to finance to law. The application of broad labels may explain why the correlations the researcher found were significant but small.

2.3.9 Fund Parameters

One final, and often overlooked, factor that influences the investment behavior of a VC, are the factors that are inherent to the VC fund itself, such as the age of the fund and the amount of capital already deployed. A VC fund has a fixed life time, and within this lifetime a VC must identify opportunities, invest capital and exit the investment. This means that if a VC fund is already half-way into its lifetime the VC will usually not invest in early stage opportunities, even if it is a good opportunity and is within the normal investment focus, because it will not be able to exit those opportunities before the fund closes (Sahlman 1990; Zider 1998).

If a VC fund has deployed most of its capital it will no longer be able to make large investments even if good investment opportunity presents itself (Sahlman 1990). These inherent aspects of the VC fund will therefore affect the investment strategy VCs can and will pursue.

2.3.10 To Conclude

The first research question found that there are nine factors that influence the VC strategy development process. These factors are:

- VC-LP covenants (investment contracts)

This effect introduces a significant constraint to VC firms.

- Opportunity (luck)

For a VC to deploy his capital within a certain focus he will have to have access to high-potential investment opportunities within that space.

- The environment's legal system

The legal system of the country within which a VC firm operates influences the investment strategy that a firm might pursue.

- The VC's peer network

One important way through which peers influence firm strategy is through co-investing.

- The VC's informant network

The most important way through which a VC can reduce the information asymmetry is by gathering information about the entrepreneur and the investment through reliable mutual contacts, or informants.

- The state of the capital markets

One of the investment exit mechanisms used by VCs is to take a company public. The degree to which this option is available depends on the strength and depth of the public stock-markets to which a company could potentially exit.

- The VC's brand and reputation

VCs with an established brand in a particular market will attract better quality teams and investment opportunities to their firm.

- The VC's human capital

Experience, which is an integral part of the Human capital of a VC, is a firm resource and creates a competitive advantage.

- The VC fund's stage in its lifecycle

A VC fund has a fixed life time, and within this lifetime a VC must identify opportunities, invest capital and exit the investment. This means that if a VC fund is already half-way into its lifetime the VC will usually not invest in early stage opportunities.

Many of these factors also influence each other, these relationships are introduced in section 2.4.

2.4 Human Capital and the VC Strategy Formation Process

The factors identified in section 2.3 influence the venture capitalists' investment strategy. Many of these factors are interrelated and influenced by human capital and each other. These interrelations are found in the literature and are described in more detail below. These relations are summarized in figure 6.

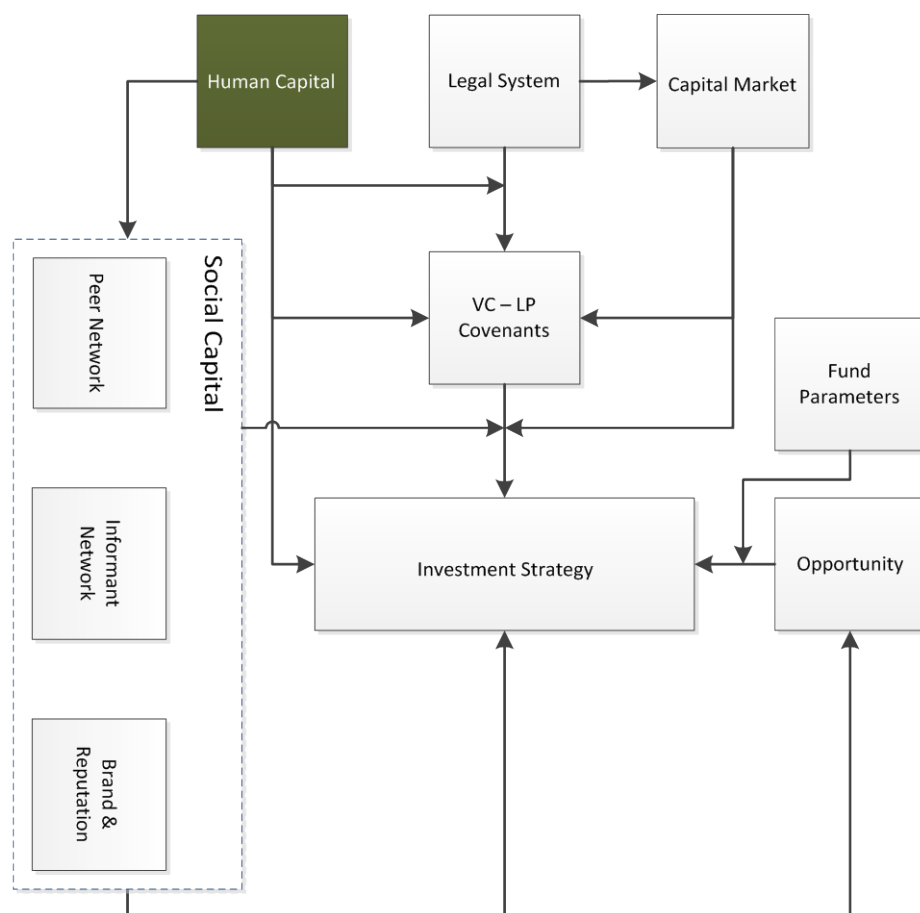


Figure 6: the relations among factors influencing the VC investment strategy formation process based on literature

2.4.1 Legal System

The legal system within which a VC operates influences the legal protection that a VC enjoys and the nature and use of the contracts VCs can engage in with their Limited Partners and their investees. The legal system also influences the size and efficiency of the capital markets in that country which influences LP and VC investment behavior (Porta, Lopez-de-Silanes et al. 1997; Armour and Cumming 2006).

While the legal system influences the contracts the VC can engage in, Kaplan, Martel et al. (2004) found that experienced VCs found ways to implement the same contracts regardless of the legal system of the country the VC was operating in. The research by Kaplan suggests that while the legal system influences the contracts and opportunities a VC can engage in, its effects are moderated by the Human Capital of the VC (Kaplan, Martel et al. 2004).

2.4.2 Covenants

LP-VC covenants are influenced by three main factors. The country's legal system, the capital market environment when the covenant is created and the human capital of the VCs. A country's legal system influences the type of contracts parties can engage in and specifically in countries with a high level, and appropriate enforcement, of investor protection laws, covenants can be less complicated because the LP can trust that the law will protect him against potentially malicious behavior from VCs (Gompers and Lerner 1996; Cumming and Johan 2006).

Capital markets influence covenants because when capital markets are weak VCs will have difficulty to exit later stage investments (Jeng and Wells 2000). This will be reflected in the covenants because the investment stage the VC will focus on is one of the parameters a covenant can limit, and VCs and LPs have little to gain by making investments which they cannot exit before the fund closes (Cumming and Johan 2006). This may lead to covenants being influenced by the state of the capital market.

Human capital influences the covenants LPs and VCs make on two levels. Firstly because experienced VCs will be able to make more flexible agreements with their LPs based on prior experience with similar contracts. And secondly because a VC that is experienced and has been successful in the past will have an easier time attracting capital and this will improve his negotiation position with his LPs (Gompers and Lerner 1996; Cumming and Johan 2006; King 2008).

And the covenant limits the investment opportunities a VC can engage in (Cumming and Johan 2006; King 2008).

2.4.3 Social Capital

Social capital is benefit arrived from the connections between, and cooperation of, people. Two components of social capital influence the investment strategy formation process; social networks (more specifically the VC's peer-network and informant-network) and a VC's brand and reputation. These forms of social capital help form a path-dependency which may move a VC to develop more human capital and social capital within a specific investment focus. This in turn influences the opportunities a VC can invest in (Fiet 1995; Granovetter 2005; Manigart, Lockett et al. 2006).

Peer- and Informant-network

The peer and informant networks and the human capital of a VC can share a common source. Human capital does not usually develop within a social vacuum (Spender 1996).

Social networks are often built in environments where people study or work together, through these experiences VCs develop their human capital and social capital at the same time. This implies that the social capital one has, is influenced by the human capital one has developed and vice versa. For example, a VC who attended Stanford Business school, will develop a peer and informant network that he can use later to gain access to additional human capital or investment opportunities. The same goes for a VC who has worked as an associate at a leading VC firm for many years before starting his own fund. His experience (human capital) was co-developed with his network of peers and informants (social capital).

Additionally, it is important to note that VCs prefer to work with other VCs with a similar human capital (for example attended similar universities or working at similar consulting firms) (Gompers, Mukharlyamov et al. 2012).

Brand & Reputation

Brand and reputation are a function of the human capital and social capital a VC firm has. A VC with a lot of experience in a specific investment focus will build up a brand name and reputation within that focus (King 2008). This helps establish a reinforcing cycle where a VC gets more experience in a specific investment focus and improves his network within that focus which will lead to an increase in brand and reputation in that investment focus. This leads to more high quality investment opportunities desiring to work with the VC, which in turn will improve the VCs experience, network and reputation (King 2008).

2.4.4 Opportunity

The opportunities a VC has access to is influenced by his social capital. The opportunities that a VC chooses to invest in form a certain path dependency that influences the investment strategy formation process because past investments give a VC experience and social capital within that specific strategy's investment focus and that influences the investments a VC has access to over time (Fiet 1995; Granovetter 2005; King 2008).

2.4.5 Investment Strategy

All of the previously mentioned parameters influence the strategy formation process indirectly, emergently and are in varying degrees themselves influenced by human capital. However, human capital also directly and deliberately influences the strategy formation process. VCs are influenced by emergent and external factors but also learn from past experiences and strategies and may actively develop and improve their strategy over time (King 2008).

2.4.6 Fund Parameters

Even when an opportunity presents itself that can be invested in, a VC is also dependent on the state of his fund about whether or not he can invest in the opportunity. This way the fund parameters influence the opportunities a VC can invest in (King 2008). This factor has a mediating effect on the relationship between opportunity, social capital and human capital and has not been (fully) included in the diagram to enhance clarity, it is, however, an important factor in determining which decisions a VC can take.

2.4.7 To Conclude

All of the factors discovered in section 2.3 are interrelated and particularly human capital is a pervasive factor that influences most of the other factors directly or indirectly. A VC's human capital directly influences a VC's social capital (which consists of a VC's peer-network, informant-network and brand and reputation). It also directly influences the VC-LP covenants and the investment strategy. Besides the direct influences, human capital also moderates the effects of the legal system on VC-LP covenants.

2.5 Understanding the European VC Market

In order to decide which types of VCs to pursue for the empirical research it is important to understand the wider financial market in which VCs operate and to understand the diversity of the European VC market.

Private Equity (PE) is an asset class based on investing in the equity of non-publicly traded companies. There are many different investment strategies within PE of which Venture Capital is one. Other strategies include Leveraged Buy-Outs, Growth Capital, Mezzanine Capital etc. There were at least 1431 Private Equity funds active in Europe at the end of 2011². Of these 1431 funds nearly 770 are Venture Capital funds (EVCA 2012a).

Venture Capital is a sub-set of PE, or framed in another way, a financial strategy for doing PE investments. Venture Capital invests in earlier stage companies than most PE firms. VCs may invest in companies before they have made a profit, or before they have any revenues.

Within Venture Capital a distinction is often made between Early-Stage VCs and Late-Stage VCs. It is important to note that these labels do not appear to have any fixed definition, in the context of this research Early-Stage Venture capital is intended to mean VC firms that invest in firms that do not have significant structural profits yet. From the nearly 770 VC funds that were active in Europe at the end of 2011, 459 were Early-Stage VCs, 120 were Late-Stage VCs and 191 were Balanced, which means that these funds invest in both early and late stage opportunities (EVCA 2012a).

Usually Venture Capital funds are closed, which means that the funds have a limited lifetime of (usually) ten years. However, there are some funds, called evergreen funds, that do not have a limited lifetime, these funds reinvest the returns they generate back into new opportunities. The number of Evergreen funds in Europe is unknown, they are however the exception and not the rule.

The part of the PE (and VC) market that have so far been discussed is the so-called “primary market” these are PE investors that directly buy and hold shares in privately owned businesses. A secondary PE (and VC) market exists which does not invest directly in existing businesses but that buys preexisting PE investments. There are two types of secondary market investments; direct and indirect (Lutyens 2008).

With direct investments in the secondary market the Secondary Market Fund buys the equity of the portfolio companies another PE fund currently owns. This allows the primary PE fund to liquidate its assets (Lutyens 2008).

With indirect investment in the secondary market, the Secondary Market Fund buys part of-, or the entire, limited partnership. This allows the primary fund’s LPs to liquidate its assets and be released from any further obligations to the primary fund (Lutyens 2008).

² These figures are limited to the Funds that submit their figures to the EVCA. It is unknown how many funds are either not a member of the EVCA or do not submit their figures.

2.5.1 Key Characteristics of VC in Europe

In 2011 Early Stage VC funds raised 1.9 Billion Euro, Later Stage VC funds raised a total of 1 Billion Euro and Balanced VC funds raised a total of 2 Billion Euros for new funds in Europe. Private Equity, not counting VC, raised nearly 35 Billion Euros in Europe in 2011 (EVCA 2012b).

In 2011 2 Billion Euros was invested in Early Stage VC, this was invested in slightly over 2000 companies (EVCA 2012b).

Sectors

Of all the venture capital invested in 2011 the following five sectors received the most capital (the percentage of the total is in parentheses behind the sector name):

1. Life Sciences (31.09%)
2. Computer & Consumer Electronics (17.79%)
3. Communications (17.64%)
4. Energy & Environment (11.38%)
5. Consumer goods & retail (4.51%)

(EVCA 2012b)

Limited Partners

In 2011, 135 Venture Capital Funds were raised by 105 venture capitalist firms in Europe. The top five types of investors in these funds (the Limited Partners) and their percentage of the total capital contribution (in parentheses) are:

1. Government Agencies (34.0%)
2. Private Individuals (14.9%)
3. Corporate Investors (12.1%)
4. Banks (9.8%)
5. Fund of funds (9.0%)

(EVCA 2012b)

Fund sizes

Within Venture Capital most funds (525) are less than 50 Million Euros in Size, 115 are between 50 and 100 million, 96 are between 100 and 250 Million and only 34 are over 250 million Euro in fund size (EVCA 2012a).

2.5.2 To Conclude

The Early-stage European VC market is home to a diverse set of firms:

- Early-stage only firms
- Firms varying in fund size
- Balanced firms (both early and late stage)
- Evergreen firms (funds that do not have a closing date)
- Primary and secondary market firms

When sampling a set of firms to include in the empirical research it is important to take this diversity into account. Based on the identified diversity, this research interviewed VCs who manage funds with varying size: smaller than 50 Million Euros; between 50 and 200 million Euros and above 200 million Euros. It also succeeded to gain insight from VCs managing not just Early-stage funds, but also Balanced Funds and Evergreen Funds and involved VCs from both the primary, as well as the secondary market.

3 Empirical research

The goal of this chapter is to show the results of this research and answer the fourth research question. This chapter starts with explaining this research's sampling and design choices. Section 3.3 introduces the results of the case studies and section 3.4 analyzes the results and answers the fourth research question.

3.1 Sampling

In order to achieve the research objective, this research interviews VCs who invest in early-stage technology based companies in Europe. Within this group it is important to be as diverse as possible to ensure that some measure of generalizability can be ensured. The sampling will not look at who the LPs of a particular fund are because this information is often confidential and difficult to come by.

This research attempted to interview VCs who manage funds with varying size: smaller than 50 Million Euros; between 50 and 200 million Euros and above 200 million Euros. It also succeeded to gain insight from VCs managing not just Early-stage funds, but also Balanced Funds and Evergreen Funds and involved VCs from both the primary, as well as the secondary market. The research also interviewed an investor at a PE firm to determine how their strategy process contrasts with the process at VC firms. For an overview of the diversity of the VCs who are interviewed please refer to table 4 in section 0.

VCs are difficult subjects to study because; firstly, there are not a lot of them; secondly, they are very busy and thirdly, there is a lot of information they do not wish to share because it confers a strategic advantage over other VC firms.

To overcome these barriers the strategy to acquire interviewees is to use a snowball approach. To identify one initial VC willing to participate in the research and approach new interviewees through the initial VC. The initial VC is identified and approached through the university's network and together with this VC the optimal strategy for approaching the other VCs is determined. The VC suggested that to maximize the chance for an interview, the interview should be short (at most 30 minutes) and anonymous to overcome the fear that sensitive strategic information reaches competitors.

In total 15 VCs are approached. These VCs are selected based on whether they are Early-stage European Technology focused VCs with the diversity of fund and market focus described earlier in this paragraph. Of the 15 VCs 6 responded positively combined with the initial VC a total of 7 VCs are interviewed. The VCs are approached by the introducing VC via email, a template is used, this template can be found in Appendix A: introduction e-mail template. The template is modified and personalized by the introducing VC to increase the chances of response. To give an example, one introduction included birthday wishes since the recipient had recently had his birthday.

A test interview is done with the initial VC to ensure that the limited time is used optimally and that the questions asked got to the core of the research problem. After this practice interview a revised set of semi-structured interview guidelines are established which are used to guide all the interviews. One of the key-results from the test interview is that LinkedIn profiles are often not complete and to ensure that all relevant experiences are identified it is important to ask the interviewee for their career history.

Because some of the interviewees are native or experienced Dutch speakers, some interviews are done in Dutch, the remaining interviews are done in English. The guidelines can be found in: Appendix B: Interview guide template English and Appendix C: Interview guide template Dutch.

From the respondents all but one are male.

3.2 Design

The goal of the research is to explore in depth and create understanding of how VC's human capital and their investment strategy influence each other. To gain this depth, a multiple case study approach using semi-structured interview is used. This allows the researcher to ensure that the right topics are covered, but that, where needed, the researcher can delve deeper into the specifics of a VC's human capital, or a fund's strategy.

3.2.1 Reliability

The interview is structured to prevent the VCs from giving socially desirable responses as much as possible. As can be noted from Appendix A: introduction e-mail template the VCs received very little information up front about the research.

To minimize the chance of VCs explaining their prior work experiences and related human capital on the basis of the strategy that they currently have, they are **first** asked what their experiences are and what the content of these experiences is. **Secondly** they are asked about the strategy at their firm, this is done after they explained their human capital because even if they would adapt the strategy related answer to reflect their human capital, this would be more difficult to do because the strategy is often, at least in summary (and without specifics), available on their website, and misrepresentation could then more easily be detected.

Thirdly the VCs are asked about how this strategy came to be, and why this strategy. This is done last because if the VC attempts to give a socially desirable answer, it can more easily be detected, because the actual strategy and the VCs human capital have already been established.

3.2.2 Preparation

Prior to every interview the websites of the Firms are reviewed, their posted strategy is reviewed and (if applicable) questions are added to the specific VC's interview guidelines. Additionally, the employee biographies on the firm's websites are reviewed to gain insight into the experiences of the entire firm.

For every interviewee their LinkedIn profiles are reviewed. Where applicable, additional probing questions are added to the VC's interview guidelines.

To record the interviews a Skype dial-in phone number and call recording software are purchased to allow the researcher to fully analyze the interview at a later time and focus on delving deeper into the answers

3.2.3 Execution

When starting an interview call, the interview started almost immediately. During the interviews the answers of the interviewee are noted and during the conversation follow-on questions are determined and asked based on the need to create a deeper understanding of the given answers.

At the end of the interviews the interviewees are given the option to ask questions in return. Nearly all respondents used this opportunity to get a further understanding of the research topic and problem because they had not been widely informed before the actual interview.

3.2.4 Post Interview

When analyzing the results the interviews are reviewed again, the most relevant points are written down and relevant quotes are added to improve understanding. Where the interview is conducted

in Dutch the quotes are translated by the researcher into the English equivalent. These results are combined with the notes from the interview preparation and the notes taken during the interview itself. These results and observations on these results can be found in section 0.

3.3 Results

After gathering the data, the data is reduced using theme-based coding, the data are split across three main sections on a case-by-case basis; first, all the data regarding the human capital of a VC is reduced; secondly, all the data regarding the strategy is reduced; and thirdly, all the additional observations of the VC and researcher are reduced.

To guarantee strict anonymity, the names; VC1, VC2, VC3 etc. have been randomly assigned. Additionally the term “He” is used to refer to both male and female interviewees.

Of the 7 interviewees 5 are partners at their firm. One is a senior principal, this is usually the last step before becoming partner at a firm. One interviewee is an Analyst, this is an entry-level function.

Of the interviewed funds 3 are early-stage investors only, 3 are balanced firms, of the 3 balanced firms one is an Evergreen fund and one invested only on the secondary market. One interviewee’s firm is a Private Equity firm, not a VC firm. For an overview of the distribution of interviewees please refer to Table 4.

All of the interviewees invest in Europe, most invest across multiple countries, and VC3 and VC7 also invest some of their capital in the US.

	Total Fund size (Million EUR)	Partner	Early Stage	Balanced	Evergreen	Primary/ secondary	Private Equity
VC1	100	Yes	X			Primary	
VC2	>50	Yes	X			Primary	
VC3	800	Yes		X		Primary	
VC4	<50	Yes	X			Primary	
VC5	2000	Yes		X	X	Primary	
VC6	2500	Analyst				Primary	X
VC7	>100	Principal		X		Secondary	

Table 4: overview of interviewees’ characteristics

3.3.1 VC1: Partner Medical Devices

VC1 works for an Early-stage technology focused European VC firm with 4 partners of which VC1 is one. They operate mainly across 2 large European countries and currently have over 100 million Euros under management. All the partners at the firm have a similar educational and professional background. Most have an MBA and have worked in strategy consulting and M&A at some point. The firm invests in a wide variety of sectors, every partner focuses on a specific sectors where that partner has the most experience.

Human Capital

VC1 has over 11 years of experience in the Venture Capital industry. Before Venture Capital VC1 worked at a financial institution working on M&A specifically in the Telecom industry where VC1 worked with both start-ups as well as more established businesses in both hardline and wireless Telecoms.

Before his work at the Financial Institution VC1 received an MBA. Before the MBA VC1 worked as a management consultant for a large international management consulting firm. Here VC1 was working as a generalist, not really specialized in a sector or industry. Before working as a management consultant VC1 received a university degree in Engineering.

Since starting his career as a VC, VC1 has moved from investing in telecoms into Industrial Technology and Medical Devices. VC1 gained experience in this field by learning from the deal flow and by co-investing with partners that had a lot of experience in this field.

“I was really educated by the deal-flow and a few co-investments.” – VC1

Fund Strategy

The initial focus of the firm was internet. However in the early 2000s they started widening the focus of the fund. At first mainly in the Telecom sector, but later also in even more sectors such as clean-tech and medical devices. The firm decided to open the focus of the fund because they had the opportunity to do so. They had an extremely high reputation in one of their local markets and were, for a time, the only serious investor in that market.

“It was more an opportunity than a reason, and the opportunity was that we have been, for a long time, the only real player in [local market] and so our deal flow included several entrepreneurs in other industries that had the time and the patience to educate us and to show us other industries where we could have made a lot of money. Had this industry been much more competitive at the time it wouldn’t have been possible to be frank.” – VC1

“We had a fantastic reputation at that moment in [local market] because we just had a few exits, so everyone knew us and it wasn’t obvious to them that our competence was so low in some areas so lots of people came to see us and had patience with us because they really wanted us on board. Today that wouldn’t work because there is more competition in [local market] and it also didn’t work in [second local market] where we also invest.” – VC1

Currently the focus of the fund is very wide. They will invest in almost anything except for Biotech. The main foci of the fund are; Internet related businesses (mainly finance related), Industrial

Technology (such as Cleantech) and Medical devices, but no Pharmaceuticals or Biotech because the firm has “zero-competence” in this field.

They usually do not actively approach investment opportunities but see which ones approach them.

Once the decision to invest has been made, there is no general firm-wide strategy regarding how to invest the capital in the investee. Each partner tries to apply the best approach based on the specific company. VC1 prefers an approach where he does not acquire strong shareholder rights but ties capital injections to achieving specific milestones. However, this preference is a function of the sectors VC1 invests in, because in Industrial technology and medical devices it is easier to protect IP but product milestones need to be met before the company can continue, that’s why VC1 believes that the approach of milestones based cash is the most useful strategy. However, partners which focus on digital media, where there is very little IP protection and the product is easy to build, a lot of capital is invested upfront To position the company quickly.

“My style is very much to nurture a company from the early stage, be close to them and give them money as they need with very clear milestones and value creation in mind.” – VC1

“I don’t have particular governance rights, but I very much use cash to ensure that there is focus on the milestones.” – VC1

Observations

In the case of the firm of VC1 it is interesting to see that there does not appear to be any deliberate strategy process. The strategy evolved because of opportunities that presented themselves and the social network that influenced the Partners and educated them on investing in other sectors.

There does appear to be some initial influence from the human capital background, especially professional experience, that lead VC1 to start investing in Telecom, so the human capital background influenced the initial investment focus. However, this focused was changed by environmental inputs and opportunities that presented themselves, through these opportunities VC1 gained experience in investing in different sectors and is now focusing exclusively on these new sectors.

It is interesting to note that VC1 learned to invest in other sectors from syndicate partners.

“I was really educated by the deal-flow and a few co-investments.” – VC1

This is in line with De Clercq and Dimov who found that investors or syndicates with relevant human capital performed better even if the not all of the VCs in the syndicate have the relevant human capital (De Clercq and Dimov 2008).

3.3.2 VC2: Partner Enterprise software

VC2's firm manages 2 funds. The main fund that is being managed invests in Early-Stage Business IT and has a size of 50 million Euros. The firm has 4 partners of which VC2 is one. The firm geographically focuses on the Benelux region. The second active fund is 20 Million Euros and is focused wider. The partners have a varied backgrounds (ranging from banking to operational experience at IT companies), though a few of them have worked at the same governmental venture capital firm.

Human Capital

VC2 has over 15 years' experience working as a venture capitalist. After obtaining a degree in Engineering, VC2 started a technology company working on high-performance computing. The company sold software, hardware and content, that was needed for parallel computing.

During VC2's time at this company they took over a another firm in the US and finally sold the company. During the sale of the company VC2 came into contact with venture capital, and after the sale VC2 started working as an investment manager at a governmental investment firm.

After nearly four years at the investment firm VC2 started his own VC firm together with one of his colleagues. The reasons that VC2 started a new fund was because of the limitations that were inherent to the governmental investment firm.

"With [governmental investment firm] we could invest in [regional market] but at the time there were also good deals in [other regional markets]. We could never join those [deals]. –VC2

"I wanted to leave, I realized that I wanted to start my own fund, but I realized that is not something I could do alone, I was much too inexperienced for that, and [co-founding partner] is a few years older, wiser and more experienced, and he was interested in joining me." – VC2

Fund Strategy

The current focus of the venture capital firm is Enterprise software where the firm of VC2 can invest in both the early and the later stage. Early stage for VC2 is, at minimum, 4-5 pilot customers for the investee's product, it is important for VC2 to see market validation from companies. We invest between 500.000 EUR to 4-5 Mio EUR, and there has to be a technological barrier of entry. It needs to be innovative in an existing market.

"The fund we raised 2005 [the second 20 million Euro fund] was a wider fund, but for me, I've always focused on the software front." – VC2

VC2's firm invests defensively, before VC2 invest larger sums, the investee has to demonstrate that they understand the market, they should stay small until the product and market approach have been validated. It is extremely expensive to scale prematurely, we first want a company that's in a test phase, that understands what the market wants and is in close contact with customers and early stage customers, until they've become more predictable and scalable, at which point you invest a lot of money.

“Our investment focus is based on our knowledge and experience, this is something that emerged, when I started with [governmental investment firm] I had my business experience, but being investor was something I still needed to learn, luckily I worked on IT at [governmental investment firm] and there I picked up the necessary skills.” – VC2

“When we started our first fund in [year] we were pretty opportunistic.” – VC2

“When we started with [second fund] we invested in a very wide range [of companies], we were approached by a bank who told us, we have 20 million we want you to invest, these are the guidelines, they are very wide, so we told them, this is a very wide range, we do not have knowledge of these markets, so we don’t want to do it this way, unless we can get the knowledge and experience from somewhere.” – VC2

“When we started [third fund] we made an analysis, what have we been good at? All the investment we’ve made, let’s compare them and see what went well and what went wrong, and analyze why it went right and why it went wrong, we found a trend, the things I mentioned earlier, B2B business software, market validation and innovation in an existing market at the moment that there are already customers. – VC2

“Formally our investment focus and strategy is limited by our shareholders-agreement, I have limited opportunity to deviate from that, if I want to deviate I will first need to get permission from the board.” – VC2

“Our limited partners also make a specific allocation decision, for example, they decided; ‘I want to invest one third [of my capital] in IT, one third in Lifesciences and one third in Cleantech. IT, ok, what’s going to be my geographical spread: 40% Europe, 50% US, 10% Asia, within Europe, home many percent early stage, later stage,’ So, if I suddenly change [my strategy], [the LPs] will take issue with that, because it no longer fits in their investment mix.” – VC2

Observations

Unlike VC1, the investment focus is still very dependent on the experience of the VCs in the past, but the strategy of how to deploy capital changed based on review of earlier investments. This indicates that there is a strong influence from a VCs human capital, and specifically, work experience, in influencing the focus part of the investment strategy. However, the capital deployment part of the strategy has evolved after deliberate consideration.

The only time when a change of strategy occurred however, was when a new fund was being raised. This is the same as with VC1, where the decision to widen the investment focus was based on external factors, but they only could do it when they raised a new fund.

3.3.3 VC3: Partner Digital Media, Software and Cleantech

The firm VC3 works at is a pan-European early-stage technology focused venture capital firm with currently 800 million Euros under management. The firm is active all over Europe and occasionally also in the US. Occasionally VC3 also invests in later stage deals.

The firm is mainly split between Life Sciences and Technology, where technology is where the bulk of the investments are made. This is also where VC3 work, the Life Sciences section is operated by a different team. Within Technology the firm focuses on Digital media, Software and Research Efficiency (cleantech).

The technology section of the firm has four partners of which VC3 is one. The team members at the firm have varied backgrounds, ranging from investment banking to being technology-entrepreneurs.

Human Capital

VC3 has been in venture capital for over 14 years. VC3 has a Master's degree in Physics, after graduating he started his own firm which went bankrupt.

After this, VC3 worked for a large international oil company as a process engineer for four years. After he went to work for a large international management consulting firm.

After 2 years at the consulting firm VC3 went to business school for an MBA in finance. After the MBA program, VC3 started a medical services company. During this time VC3 also started working for a Private Equity fund and set up their early-stage technology investment branch. After two years of working at the early stage investment section of the private equity fund, and doing some deals in IT technology, VC3 joined a large pan-European venture capital fund where VC3 is currently one of four general partners.

Fund Strategy

The firm invests in Early Stage technology ventures. The firm's technology section is focused on internet and Software, and Cleantech, this is based on expectations of the attractiveness of these investment areas.

"Our game is to invest in early stage, often university spin-off, companies where we believe that, if everything goes correctly, that they can become billion [Euro] companies." – VC3

"We take a macro perspective on where we believe we can find opportunities and we believe that those sectors will have the most innovation that can create large companies." - VC3

"From a technology perspective there are only two focus areas that we invest in and a lot that we don't invest in." – VC3

VC3 believes that because of the high-tech nature of the businesses they invest in, it is impossible to keep the knowledge in the firm up to date on developments, therefore they have a formal network of external partners which are senior individuals in the areas they invest in.

“Besides the core team, we also have a team of [external] partners that allocate a part of their time to [our firm] and who are very senior in these sectors [we invest in] and they give us a wide network, they help us find experts exactly in those sectors” – VC3

“Through these [external] partners we scan the market, where are the expert that we can use to do technical due diligence on a company.” – VC3

The firm's goal is to buy a part ownership in a firm and after that hold on to that part. Assuming that the valuation goes up the firm tries to keep investing to defend the ownership share size, but only to a certain degree, if rounds become too large the firm they do not continue co-investing further.

VC3 deploys capital in a phased approach, he does not invest according to milestones, but invests for the company to work towards their plan for a number of months, after which they will have to raise money again to continue to survive.

VC3's firm receives a lot of deals passively because it is a relatively old and well-established European firm. However, all of the deals that are actually closed are pro-actively approached.

“We have a pretty big network, and we keep them up to date on what [kind of companies] we're looking for.” - VC3

Observations

This firm is interesting in that the VCs that work there, did not have a lot of particular experience in the focus that they invested in (there was some experience). They gained this experience while working at the firm. They're using their network to get access to good deals and do technical due diligence.

What is interesting to note is that the firm recently (in the last few years) started an additional fund that invests in Life Sciences, however this is a separate fund with separate partners and VCs with experience in that area.

3.3.4 VC4: Partner Telecom, Digital Media and Software

VC4 is one of three partners at his current firm. VC4's firm invests in the Internet, Telecom, digital media and software, however most of the actual investments have been made in eCommerce related businesses.

The partners have different backgrounds, two of the partners have a lot of experience as investors often at the same firms. The third partner also has quite some operational experience in the software industry.

Human Capital

VC4 has nearly 25 years of experience in Venture Capital. After receiving a law degree and subsequently an MBA, VC4 started working at a large international Venture Capital firm.

After 5 years, VC4 left the large international VC firm and started working for a telecommunications company where he worked on mergers and acquisitions in the European Telecom market.

"I came into this profession 25 years ago, we do IT, Telecoms, Media, internet, and that's our background, that's where we have our networks, I did business development and M&A in a Telecom company for 4 years, that's the reason [we invest in this specific focus]." – VC4

After 4 years VC4 left the telecom company and founded several investment funds investing in communication services, these funds closed in 2007. During which VC4 also started a new venture capital firm focusing on IT, Telecommunication, Media and Internet. Additionally, VC4 is currently also a partner at another venture capital firm focusing on (online) media.

Fund Strategy

The main fund that VC4 manages currently is focused on Internet, Telecom, Software and Digital Media. The fund invests in Early stage companies. Most of the companies that are invested in are actively approached by the firm.

VC4 speaks strongly for specialization, he cannot imagine investing in anything outside Internet and Digital Media because he has no experience outside of these foci.

"You need be focused [in early stage investments], whether, Media, IT, Life sciences, you need to have a lot of knowledge of these segments, you need to be from these segments, you need to have your networks there, you can't invest there as a banker, as an accountant." – VC4

"25 years of experience in Media and Telecom gives me an advantage, I know all the business models, I've seen thousands of business plans over the years." – VC4

"I can't work outside of Telecoms and Media, I wouldn't know in Bakeries or Biotech what to look for, I don't know anyone there, in machine building, I wouldn't know where to start." – VC4

"If you review 300 business plans every year you will be educated." – VC4

VC4 makes strong use of their social networks, to acquire information, deals and to validate people.

"[About investees] With 4-5 phone calls we will know whether the team is any good or not." – VC4

VC4 also believes that especially in early-stage investing, financial expertise is not important, its market and technology expertise. This is confirmed by VC5 and VC6.

"For start-ups it is completely irrelevant if you have any financial expertise, you need to have product and technology knowledge as a VC To determine what you're going to invest in, in the first place. The financials, the business plans, that's all bullshit anyway." – VC4

"The most important skillset for a VC is human psychology. Whether the entrepreneur you're talking with is going to deliver the results he's promising." – VC4

Observations

VC4 has a lot of experience as an investor in the Telecom industry and remains focused on this sector. It appears that this has created a strong path dependency of the investment focus of the VC, at the same time that it limits the VC in the areas he could potentially invest in, in the VC's experience it also allows him to learn a lot from this specific sector and to be able to add a lot of value to the companies VC4 invests in. It is however interesting to note that VC4 has no operational experience in the Telecom industry.

Another recurring theme with VC4 is the importance of informant networks, this confirms what the literature predicted (Fiet 1995).

3.3.5 VC5: Partner Evergreen Medical Technology

VC5 is one of the partners at his firm. This firm (and its funds) differs greatly from the others that have been investigated in that it does not have a specific closing date, it is an evergreen and is listed on a stock-exchange.

The firm is over 30 years old and invests across all of Europe. It has over 2 Billion Euros under management and invests both early and later stage in four different sectors. Each sector has teams working on them with a varied background, both venture capital as well as later stage (buyout) financing backgrounds.

Partners and other team members have a varied background varying between R&D, finance, operational experience and consulting.

Human Capital

VC5 has been a VC for 12 years now. After studying Business, VC5 worked as an international business developer for a dredging company.

After two and a half years at the dredging company VC5 started working as an international business developer for a large telecommunications company.

After 2 years at the telecommunications company VC5 joined a bank where he became the head of the telecom section of the corporate finance department.

VC5 left the bank after 3 years and joined the investment firm where he is now a partner. Currently VC5 is working in the funds' Health & Care sector, however, historically VC5 focused mainly on software, telecoms and semiconductor investments, which was focused on investment that made business processes smarter using software and electronics solutions.

VC5 has worked for the investment firm on both early stage as well as later stage deals. Last year VC5's firm started focusing more on specific investment themes (foci) and VC5 moved from software and semiconductors towards Health and Care because the firm already had a strong life sciences arm, but they wanted to add medical technology, which is more similar to software and semiconductors.

Fund Strategy

VC5's firm invests in both early stage as well as later stage companies. The investment strategy of VC5's firm is very interesting because the strategy was changed last year. The strategy was changed because the "old game" of early stage venture capital is one where a VC would invest in a nice technology, build it and hope that a large corporate buys the company for a lot of money. This would sometimes return ten times the investment while other times the return would be zero. What VC5's firm observed over the years is that corporates are starting to understand this "game." The fluctuations in the company prices are not as large anymore and the corporates are looking at earlier stage companies they're also much more aware of what is available in the market, so the chance of a ten time return is more limited. Also the number of investment opportunities that can potentially deliver a ten times return are more limited. So on the early stage side, the successes have been limited, this has led to a decline in funding for early-stage technology ventures.

“It’s very simple, we’re a financial business, returns are our driver, and we observed that our returns were under pressure.” – VC5

“We need to do it differently, but we do have a lot of knowledge in house of a lot of companies, we’ve been around for over 30 years, we’re one of the oldest players in Europe, we have a lot of knowledge in house, we have great teams, but we need to deploy our knowledge and teams differently, we know where we have knowledge, we know where we have strong teams, we know how to finance and to judge risk, we’re good at markets. We needed to move towards a more sustainable business model.” – VC5

A large international strategy consulting firm, together with an internal team, helped to determine four investment platforms, which act as a tool to help focus the investment decisions and develop specialized knowledge and experience. These platforms are not extremely different from what the firm invested in earlier, however it made it tangible and allowed the firm to start investing more focused on where they have experience and network.

“We are going to finance companies where we expect that we can create value, and a higher value than normally through the stock market, and if you’re going to create value, you need to have more knowledge of the markets the companies operate in, so we’re looking for companies where we believe that we can achieve above average growth and where we can create value through operational efficiency, or through buying it when its small and then build through acquisitions. But for this you need to know your markets, so we started working through investment platforms and themes.” – VC5

The change

Before the change the firm was mainly split between early stage venture capital and later stage venture capital, and each VC invested in areas that they understood. After the strategy change both early and later stage investors are now split over 4 different investment foci, however within the different foci, the tendency is to do the Early-stage investments in the high-tech opportunities, and later stage investments into less technology driven opportunities.

“Until last year [the firm was] split between Venture Capital and Buy-out. And we changed this, we’re going to work according to market groups and investment platforms” – VC5

“[Within Health and Care] what you’ll see is that we’re more prone to invest in the really high-tech, for example biotech, medical devices, in the early stage, and that for the IT solutions and clinics we’ll invest in more developed businesses.” – VC5

Another strategy component that has changed since focusing the investment strategy on specific sectors is that VC5’s firm more proactively approach investment opportunities instead of passively seeing what approaches them. However, a large part of the deal flow still approaches them because they are a large and well established player.

“We do invest in things we are [at the start] not completely familiar with, but we do need to have an understanding of the general environment [of the opportunity].” – VC5

Investment strategy

Once VC5 has decided to invest in a specific opportunity he tends to finance for longer periods.

“We don’t like drip feeding, [...] we want finance a company for the next 18 to 24 months and rather 24 months in the current markets.” – VC5

The main motivation here is because VC5 invests mainly in biotech and medical technology and in a period of less than 2 years it is difficult to have meaningful milestones to steer these companies by. For example, in two years a biotech company can go from a lab to animal testing, which is a significant value creating step forward.

Observations

VC5’s firm started a specific strategy improvement process based on fund performance, similar to VC2’s review of their investment strategy. This review led to a focus on investment areas where the firm was strong and where the firm saw opportunities for the future.

VC5 has had experience in the sector he invested in prior to join the VC firm. However, over time this shifted from Telecom to Semiconductors to Medical Devices. Like with VC1, VC5 started investing within certain specific foci that he was experienced in, but his evolved over time.

Another similarity with VC1 is that the strategy for investing cash into an investee is dependent on the sector and circumstances of the investee, and not a particular firm wide strategy.

3.3.6 VC6: Analyst Private Equity

VC6 is an investment Analyst at a private equity firm. Unlike all the other VCs that have been interviewed, VC6 is actually not a VC. Venture capital is part of Private Equity, however VC focuses more on early-stage higher-risk investments.

The reason VC6 was interviewed, even though VC6 was outside of the target subject group, was to provide insight into the human capital – strategy relation from the point of view of other financial equity investors.

The firm VC6 works for is medium small compared to other Private Equity funds. The firm currently has 2.5 Billion Euros under management over several funds. The last fund was raised in 2011 and has a total size of 1.1 Billion Euros.

The fund invests across Europe and has offices in 4 European countries. Most of the people working at the fund have a background in Strategy consulting at large international strategy consulting firms. A small but sizable group has mainly experience as an entrepreneur.

Human Capital

VC6 has been in Private Equity for over 2 years. He has a bachelor's degree in management science, and a master's degree in financial mathematics and a master's degree in organizational psychology. During his education VC6 did several internships. One at a pension fund, one, as an organizational psychologist, at a large IT consultancy firm, one at a merchant bank where VC6 focused on analyzing public biotech companies and one at a large international strategy consulting firm.

After graduation, VC6 started working at a Private Equity firm where he has been working as an analyst since.

Fund Strategy

The firm VC6 works at invests in a highly diverse range of companies. They do not have a specific investment focus, however they do invest in line with certain pre-defined macro-trends. These Macro-trends are still the same as the ones that were used when the first fund was established and act more as guidelines than limitations. The motivation behind the macro-trends is to identify markets that are growing in a non-cyclical manner.

"[Macro-trends] that we look for are, for example, aging populations, specialization, sustainable, from funeral homes to bioethanol plants. Leisure and luxury." – VC6

"We consciously do not limit ourselves to one or more sectors." – VC6

"If an opportunity presents itself, we wouldn't say no just because it doesn't fit a theme, but in general, [investments] are driven by the themes" – VC6

The firm VC6 works for invests in companies that have already proven to be successful and that operate in a growing market with a large number of other small competitors. The firm's general strategy is to look for growing fragmented markets and then actively approach healthy companies in that market. The firm then invests in the company and uses the investment, and any follow-on investments, to buy other companies in that space and thereby grow the original investee and consolidates the market.

“Our investment focus is new sectors that are fundamentally growing in fragmented markets, where we can invest in the number two or three in the market that has a lot of growth potential.” – VC6

“[We’re looking for] markets that are fundamentally growing, are not too cyclical and that are still fragmented, where you can professionalize.” – VC6

“Our investment focus is more market driven than company driven” – VC6

“Companies we find interesting are usually companies doing very well already, that don’t need money to survive, only our capital will help them accelerate growth.” – VC6

The firm invests in a later stage than Venture Capital because that way they can invest in already successful companies. Because the companies are already somewhat successful it is easier to assess the chance of successfully growing the company using the firm’s buy and build strategy. Additionally, the size of the fund is too large to meaningfully invest into Venture Capital type of investments.

“[regarding motivation for later stage investing] you can better determine the success factors when its already a proven concept. If it’s already profitable. For both the product and the entrepreneurs it’s easier to determine the chances for success” – VC6

“The fund we raised a year and a half ago is 1.1 billion, if we need to invest that in tickets of 1 million [which is normal in venture capital] we need to make a lot of investments, doing a 100 million euro deal does not cost us a lot more time than a 1 million [euro] deal, so we prefer to make 25 to 40 larger deals than 1100 small ones.” – VC6

Once the decision to invest has been made the money is invested straight into the company and a reservation is made to allow for follow on investments. VC6s firm attempts to add value to their investments in two ways, the first is by acting as a sounding board for the company’s management regarding the market forces, because the firm strongly analyzes markets before they pursue companies they believe to have a strong understanding of the market the investee operates in. Secondly, the firm has the knowledge and skills that are needed to do series of fast acquisitions because they’ve done that a many times before and this is often something that is not inherent in the companies they invest in.

Observations

Unlike in the Early Stage technology focused Venture Capital firms that were investigated, the investment focus of VC6’s firm is along Market lines and not along sectorial lines. They invest in businesses in markets with a certain profile.

VC6’s firm does not appear to have any strategic review or change process in place. Judging by the breadth of sectors in which VC6’s firm invests they do not appear to have any experience with the particular market prior to investing in it, they have experience in executing a specific strategy, but do not appear to have a lot of content knowledge on where they invest. They do, do a lot of analysis before making an investment and this gives the involved actors some knowledge of the market and business.

3.3.7 VC7: Sr. Principal Secondary Market

VC7 works at a secondary direct market investment firm. VC7 is a Senior Principal at this firm. VC7's firm is different from all the other interviewed VCs' firms because it does not directly invest in new businesses, it invests in investment opportunities and existing portfolios of other operating VC firms.

The firm was started in 2003 and currently has several hundred million dollars under management. The firm is active in both the US and European markets, with offices in both. Everyone in the team has some diverse experience ranging from entrepreneurship to consulting, however everyone in the team has some experience in finance and investment banking.

"we have a lot of investment bankers in our team so we know how to do it and we're very exit focused." – VC7

VC7 is currently in the process of leaving this firm and is working on setting up his own fund, also investing in the secondary direct market.

Human Capital

VC7 has undergraduate degrees in Political Science and Law, and a master's degree in Applied Economics. After graduating, VC7 worked for a Large European bank in one of their Brazilian offices, here VC7 worked in corporate banking. After leaving the corporate bank, VC7 joined a large international investment bank where he worked as an investment banker in the Health Care sector, mainly on M&A. After his time at the investment bank VC7 attempted to start his own company in the education space, he received a term-sheet, but decided to abort the project because VC7 believed the market was not yet ready for the product.

After aborting the start-up, VC7 joined a VC firm. Here he worked on investments in IT Technology and B2B ecommerce.

After his time at the VC firm, VC7 went on to study for an MBA in the US, after which he joined his current firm where he worked for over 7 years. Currently VC7 is in the process of leaving this firm and setting up his own fund.

Fund Strategy

The firm starting with buying up small portfolios, this was financed by the founders, but after a while they got access to larger deals, so they needed more money and then they raised capital from LPs.

"It's not like the strategy changes every year. You look at it, but the VC terms are pretty long, You cannot say after six months, this works, this doesn't work, you need to be patient." -

After a while the firm learned that the larger deals gave smaller returns, because they were more competitive. That's why the firm decided to invest in smaller portfolios and single assets. The initial strategy was to raise the funds on a deal by deal basis, the firm would find a deal and raise the funds to do the deal. But this makes it complicated to do smaller deals so the firm raised a larger fund to start investing in smaller portfolios and single assets.

VC7's firm invests broadly in: software; hardware; communications; equipment and cleantech. But not Medical technology.

“We do not do medtech because development times are long, and it’s difficult to understand the market unless you have a medical background and we don’t have that, also the cashflow is very different, especially for biotech, hit and miss, and FDA approval.” – VC7

The reason to invest in the secondary direct market instead of the primary opportunities is because the returns are less volatile.

“The average exit time for a VC backed company in the US is 9 years, while the investment period of a fund is 4 to 5 years, so on average you need 11 to 12 years between the first investment and the exit [...] so VCs have a lot of assets that they cannot get liquid.” – VC7

“We can invest in companies later, at a valuation below that of the other investors, so we get a quicker time to exit and better returns.” – VC7

“the model is very different from normal VC, a normal VC invests and 2 to 3 investments get all the money back and the rest fails, for us its different, we’ve invested in 115 different companies and have only had 9 write-offs [...] we don’t get the Googles or the Facebooks, but we do get the deals that consistently return 2-4x the money.” – VC7

“There are three groups of VC-backed companies, the superstars, which we will never get because they are not held in VC funds long enough, you’ve got all the really bad companies that just die, we don’t get those either, and then you’ve got the middle of the pack, some companies can become something, some cannot, our jobs is, first to select the right ones, and two, get to liquidity, so we come into companies and we actively set up a strategy to get to an M&A event” – VC7

Once the firm buys into a portfolio or company, the goal is to quickly move to an M&A exit. The firm has had some IPOs, but believes that its easier to do M&As.

“We look at ‘what does a company need to do to get bought pretty quickly?’ and pretty quickly is 1 to 3 years.” – VC7

The human capital at the firm is developed through hiring, there is no formal training on the job.

“[The human capital acquisition] is completely recruitment focused, you get the people who have the right profile, there is very little training, you learn on the job, but there is no formal training.” – VC7

The fund VC7 is currently starting will also invest in the secondary direct market and invest in a wide range of technologies.

Observations

Since VC7 has worked in Early stage Technology focused venture capital and currently work closely with venture capitalists but is somewhat removed from the actual practice he had interesting views on the issue of strategy in Early Stage Venture Capital firms based on his own observations.

“What I see with VCs, especially in Early and mid-stage, VCs invest as individuals in what they know and understand, so the make-up of the team determines the strategy, and how those teams work together is very important, if there are bad decision making systems, which is the case in most VC funds, then its dysfunctional decision making, you have a lot of teams where everyone tries to get the best for their own deals, because that’s their own track record, etc., within the firm, it doesn’t necessarily matter if they do the best for the fund. And that is off-course problematic, you also have large egos, so the dynamics within the teams isn’t so good, also the system of a partnership is not a good one, because if you’ve got 4, 6, 8 partners, it’s very difficult to make decisions, so that’s the key issue.” – VC7

“In the secondary direct market we have a bit of luck because one person does an investment, but another person is going to manage and sell it, so it’s more of a team effort, that makes it difficult to say what your own track record is, so the decisions are more standardized, this works pretty well, not perfect, but pretty well.” – VC7

“You need to imagine, if someone knows enterprise software very well he will do enterprise software deals, if there’s a good market for enterprise software, great, but if there’s a bad market for enterprise software than the returns are bad, so what determines the returns is the knowledge of the partners that enter the firm.” – VC7

“If they know the right sector for the right time, fine, if they know the bad sectors, it won’t go so well, the beta³ may be more important than the alpha⁴ [...] especially for early and mid-stage growth.” – VC7

“A VC will only remain a partner if he has good results, so its threatening for him to get someone else [on board] who understand a good sector [to invest in], and then not have any good deal because your old sector is bad, so some VCs change their sector, some do it well, but some badly, so capacity to adapt is important.” – VC7

Unlike in the Early Stage technology focused Venture Capital firms that were investigated, the investment focus of VC7’s firm is along Financial lines and not along sectorial lines. They buy equity in businesses with a certain financial profile. While the actors at VC7’s firm do have some experience in technology driven businesses and some of the sectors in which they invest, this does not appear to have a strong influence on deciding whether to invest in a particular business. For example, while VC7 admitted that the firm has zero understanding of the Medical Technology business, they did end up investing in 3 of them.

However, the firm does have a lot of prior experience in finance, in particular investment banking, and appears to leverage this experience in executing the firm’s investment strategy.

While there is no formal process for reviewing the strategy, similar to VC5’s firm, the returns are closely monitored, and when the returns decrease strategic change is made.

³ The beta in finance is the correlated volatility of an asset in relation to the volatility of a benchmark.

⁴ The alpha in finance is a measure for the risk adjusted return of an asset.

3.4 Analysis

Table 5 and provides an overview; of the interviewee's characteristics; of whether the interviewee has mentioned the impact of factors cited in literature on the strategy formation process; and whether human capital has influenced the investment focus and investment strategy of the interviewee. Page 58 explains the terms used in the table.

	VC1	VC2	VC3	VC4	VC5	VC6	VC7
Total Fund size (Million EUR)	100	70	800	<50	2000	2500	>100
Interviewee is Partner	Yes	Yes	Yes	Yes	Yes	No, Analyst	No, Sr. Principal
Years as VC	11	15	14	25	12	2	7
Investment Stage	Early	Early	Balanced	Early	Balanced	Private Equity	Balanced
Evergreen	No	No	No	No	Yes	No	No
Primary/secondary	Primary	Primary	Primary	Primary	Primary	Primary	Secondary
Legal System	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned
Capital Markets	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Strong influence
VC-LP covenants	Only change with new covenant	Only change with new covenant	Not mentioned	Not mentioned	Not applicable, no covenant	Strategy matches initial covenant	Not mentioned
Peer Networks	Important	Not mentioned	Important	Not mentioned	Not mentioned	Not mentioned	Not mentioned
Informant networks	Important	Not mentioned	Very Important	Important	Not mentioned	Not mentioned	Not mentioned
Brand and reputation	Strong	Not mentioned (not strong brand)	Strong	Not mentioned (not strong brand)	Strong	Not mentioned (not strong brand)	Not mentioned (has stronger brand)
Opportunity	Strong influence	Not mentioned	Not mentioned	Not mentioned	Strong influence	Strong influence	Not mentioned
Fund parameters	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Only mentioned in reference to buying portfolios ⁵

⁵ VC7 only operates in secondary markets, it is influenced by the fund parameters of the Funds it invests in (if there are not funds that are close to closing it cannot invest), not its own fund parameters since it can start a new fund for specific deals if needed.

	VC1	VC2	VC3	VC4	VC5	VC6	VC7
<i>HC matches Initial investment focus</i>	Yes	Yes	Somewhat	Yes	Yes	No	No
<i>Evolving Investment Focus</i>	Yes	Yes, but returned to initial focus	Yes	No	Yes but not significantly	No strong investment focus	No strong investment focus
<i>Human capital match focus</i>	Yes	Yes	Yes	Yes	Yes	No strong investment focus	No strong investment focus
<i>Investment strategy evolved</i>	No	Yes, after strategy review	No	No	No	No	Yes after declining returns
<i>HC influences opportunity</i>	Yes	Yes	Yes	Yes	Yes	Not a-priori ⁶	Yes
<i>Timing of strategy change</i>	New fund	New fund	New Fund	No Change	After identifying problem	No Change	After identifying problem
<i>Passive / active approach</i>	Passive	Assertive	Assertive	Assertive	Passive	Assertive	Not mentioned (not applicable) ⁷

Table 5: qualitative matrix comparing interviewee responses

⁶ VC6 invests based on the status of the market, if the market looks promising VC6's firm will do analysis on the market and attempt to increase the firm's human capital in that market to a sufficient degree.

⁷ The passive/active dichotomy of the other VCs is based on whether they actively pursue companies they believe will be good investments. VC7 invests in existing investments and portfolios, not specific companies usually and can therefore not be equally compared to the other firms.

3.4.1 Qualitative Matrix Terms

Legal System: This item lists whether the interviewee mentioned the legal system as a factor that influenced strategy.

Capital Markets: This item lists whether the interviewee mentioned the capital marketstem as a factor that influenced strategy.

VC-LP covenants: This item lists whether the interviewee mentioned the VC-LP contracts as a factor that influenced strategy.

Peer Networks: This item lists whether the interviewee mentioned peer networks as a factor that influenced strategy.

Informant networks: This item lists whether the interviewee mentioned informant networks as a factor that influenced strategy.

Brand and reputation: This item lists whether the interviewee mentioned brand has an influence on the strategy and whether or not the firm appears to enjoy a strong brand.

Opportunity: This item lists whether the interviewee mentioned luck of opportunity as a factor that influenced strategy.

Fund parameters: This item lists whether the interviewee mentioned the fund's parameters as a factor that influenced strategy.

HC matches Initial investment focus: This item lists whether the initial investment focus of the venture capital fund matched the prior industry experience of the VC.

Evolving Investment Focus: This item lists whether the investment focus of the funds has changed over time.

Human capital match focus: This item lists whether the experience of the VC still matches the current investment focus.

Investment strategy evolved: This item lists whether the capital deployment strategy has changed over time.

HC influences opportunity: This item lists whether Human Capital, in the experience of the VC, influences the opportunities the VC can invest in.

Timing of strategy change: This item lists when, if ever, the strategy was changed.

Passive / active approach: This item lists whether the VC actively approaches investment opportunities or is more passive and lets itself be approached.

3.4.2 Relation between Human Capital and VC Investment Strategy

Legal systems and capital markets are not considered important factors in influencing early stage VC strategy. They do not consciously factor in as a direct variable. This is logical because these factors are such independent environmental variables that they are not consciously considered with regards to strategy. The other factors that have been identified in section 2.4 have come back in interviews as relevant factors of varying importance, especially VC-LP covenants; opportunity; peer- and informant-networks; brand and reputation; and human capital, have been frequently referred to as important factors. One of the most surprising results is the strong influence of social capital on human capital. The results show that VCs learn through their networks and access external human capital through their networks. This is not found in the reviewed literature.

The results also show that the specific human capital of VCs is strongly related to the investment focus of the firms/funds they join and when the investment focus changes the VCs invest in acquiring the related human capital, either through learning from experience or through social networks.

The importance of the human capital matching the investment focus is most important for primary market early stage VCs. In private equity and secondary markets finance related human capital is more important than industry related human capital.

Relevant industry human capital is especially important when investing in Medical and Biotechnology firms. Most of the interviewees specifically did not invest in these types of firms because of a lack of human capital in that area. They only started to invest in that field after acquiring the related human capital.

Initial strategy

VCs often (initially) join a fund with a pre-existing strategy. The initial human capital of the VC matches the investment focus of the fund in all the cases for Early-stage investing. In Private Equity and secondary markets this is not important, there finance related human capital is more important.

The only early stage investor where the initial human capital did not strongly match the investment focus of the fund is in the case of VC3, however the firm VC3 joined has as a strategy to leverage its informant network's human capital, this may explain a limited match between human capital and the fund's initial focus.

No relationship is found between VC's human capital and the capital deployment strategy employed by the VC. Several VCs have also mentioned that the capital deployment strategy is dependent on a firms specific environment and market, this means that the capital deployment part of the investment strategy is dependent on the investment focus.

Strategy change

All the early stage VCs that significantly modified their investment focus only did so when raising new funds. They did not change the strategy of existing funds because of obligations to their LPs. Taking into account that a VC firm can often only start a new fund every 3 to 5 years (at most) this means that the opportunities for strategic change are limited. The only exception to this appears to be VC5, but since VC5's firm is an evergreen it does not raise new funds from LPs, but rather reinvests proceeds.

The trigger to change strategy is dependent on external factors (such as diminishing returns or the access to external human capital). Early stage VCs do not invest in developing new human capital outside of their current field of expertise. Only in limited cases it develops further human capital in existing investment foci. This means that VCs do not change strategy based on developing new human capital, but based on external factors and then acquire the needed human capital for executing the new strategy. Of the VCs that significantly changed their investment focus permanently, all had a well established reputation.

3.4.3 To Conclude

The fourth question is investigated based on the results from the first three questions. These results are compared to the literature in the Conclusions chapter. This research found that the human capital of VCs matches the initial investment focus of the VC firm that they join or start. This research also found that VCs only change their investment focus when they raise a new fund. VCs do not change the investment strategy of funds that are already operating. If VCs change their investment focus, they acquire new human capital that matches that focus.

4 Conclusions, Limitations and Future Research

In its conception, this research project started because the returns of Early-stage European VCs are extremely low and there are questions whether this could be attributed to a lack of specific human capital regarding the investment strategy of VCs. What is clear from this research is that Early stage VCs do understand the markets they invest in and this initial expectation is not supported by this research.

4.1 Conclusions

This research has investigated how human capital and the investment strategy of VCs influence each other. From the case studies it is clear that human capital matches the investment strategy and that they reinforce each other over time leading to the potential entrenchment of a VC in a specific strategy.

VCs usually have specific human capital related to the field they invest in when they start as VCs. They only change their investment focus if and when they can acquire the necessary human capital (either internally or externally) and are raising a new fund. This has not been researched before and therefore adds to the body of knowledge on venture capital investing.

4.1.1 Research questions' conclusions

This first three research questions acted as a funnel and allowed this research to empirically investigate the fourth research question.

1 Which factors influence the VC strategy development process?

Through answering the first question this research found that there are nine factors that influence the VC strategy development process. These factors are:

- VC-LP covenants (investment contracts)
- Opportunity (luck)
- The environment's legal system
- The VC's peer network
- The VC's informant network
- The state of the capital markets
- The VC's brand and reputation
- The VC's human capital
- The VC fund's stage in its lifecycle

2 How does Human Capital influence these factors?

All of the factors discovered in question 1 are interrelated and particularly human capital is a pervasive factor that influences most of the other factors directly or indirectly. A VC's human capital directly influences a VC's social capital (which consists of a VC's peer-network, informant-network and brand and reputation). It also directly influences the VC-LP covenants and the investment strategy. Besides the direct influences, human capital also moderates the effects of the legal system on VC-LP covenants.

3 *What are the key characteristics of the early-stage, technology focused, European Venture Capital market?*

The Early-stage European VC market has multiple types of firms:

- Early-stage only firms
- Firms varying in fund size
- Balances firms (both early and late stage)
- Evergreen firms (funds that do not have a closing date)
- Primary and secondary market firms

This research has interviewed a varied set of firms that together cover these different types.

4 *How do human capital and the investment strategy of early-stage, technology focused, European VC funds influence each other?*

The fourth question is investigated based on the results from the first three questions. This research found that the human capital of VCs matches the initial investment focus of the VC firm that they join or start. This research also found that VCs only change their investment focus when they raise a new fund. VCs do not change the investment strategy of funds that are already operating. If VCs change their investment focus, they acquire new human capital that matches that focus.

4.1.2 Strategy formation process

The strategy formation process that this research found resembles the more emergent strategy formation types from Mintzberg and Waters (1985) and is supported by the research by King (2008). Please review table 6 for an overview of strategy formation types.

There is not a strategy formation type that completely describes the process observed during this research. This may be due to the unique nature of the relationships between external forces, internal constraints and the highly timing dependent nature of opportunities for strategic change.

When a fund is raised, the strategy that it is raised on is planned and formalized in the VC-LP covenants. This is similar to the Planned strategy type. This planned strategy then creates a restraint within which VCs need to operate and within which they have to formulate their practiced strategy. This is similar to the Umbrella/Imposed type of formation process because the covenant provides an external constraint together with other environmental constraints within which the VC is free to operate.

In the strategy formation process there are also several aspects that are comparable with the Unconnected strategy formation type because VCs at the partner level are usually relatively free to propose and initiate certain investments.

The only time that a new strategy can be implemented is when a new fund is raised because that allows for the create of a new umbrella within which the VC then has to operate. But whether or not a VC can convince LPs to support him within this new umbrella is dependent on the human capital a VC has access to. And this human capital shift is dependent on the Social Capital a VC has.

Strategy process	Major features
Planned	Strategies originate in formal plans: precise intentions exist, formulated and articulated by central leadership, backed up by formal controls to ensure surprise-free implementation in benign, controllable or predictable environment; strategies most deliberate
Entrepreneurial	Strategies originate in central vision: intentions exist as personal, unarticulated vision of single leader, and so adaptable to new opportunities; organization under personal control of leader and located in protected niche in environment; strategies relatively deliberate but can emerge
Ideological	Strategies originate in shared beliefs: intentions exist as collective vision of all actors, in inspirational form and relatively immutable, controlled normatively through indoctrination and/or socialization; organization often proactive vis-a-vis environment; strategies rather deliberate
Umbrella	Strategies originate in constraints: leadership, in partial control of organizational actions, defines strategic boundaries or targets within which other actors respond to own forces or to complex, perhaps also unpredictable environment; strategies partly deliberate, partly emergent and deliberately emergent
Process	Strategies originate in process: leadership controls process aspects of strategy (hiring, structure, etc.), leaving content aspects to other actors; strategies partly deliberate, partly emergent (and, again, deliberately emergent)
Unconnected	Strategies originate in enclaves: actor(s) loosely coupled to rest of organization produce(s) patterns in own actions in absence of, or in direct contradiction to, central or common intentions; strategies organizationally emergent whether or not deliberate for actor(s)
Consensus	Strategies originate in consensus: through mutual adjustment, actors converge on patterns that become pervasive in absence of central or common intentions; strategies rather emergent
Imposed	Strategies originate in environment: environment dictates pattern is in actions either through direct imposition or through implicitly pre-empting or bounding organizational choice; strategies most emergent, although may be internalized by organization and made deliberate

Table 6: overview of major strategy formation processes ranging from highly deliberate to highly emergent. Taken from Mintzberg & Waters, 1985

4.2 Reflection

This research was initiated because of the bad returns of the Venture Capital industry. This research explores the importance of human capital in the Venture Capital system because human capital is known to be an important factor in the performance of firms but had not been researched properly before in the context of venture capital investing.

A systemic explanation for the low returns of VC funds has emerged. It appears that the problem is not that VCs do not understand what they invest in. The problem may be that VCs only invest in what they understand. VCs are highly inflexible, partly by design of the VC-LP covenants, in changing their field of investment. This is not a problem if the field they are specialists in is currently growing rapidly and provides ample high quality investment opportunities. However, it is a problem if the growth rate of that market is declining and there are less high quality opportunities in that field. In the latter case the VC has funds he needs to invest, but the only place where the VC can invest them will not deliver strong returns, but at the same time a VC cannot shift to another field. This possible explanation of the low returns of the VC asset-class has not been observed elsewhere in the literature.

This conclusion emerges from the observations that:

1. VCs are strongly dependent on their initial human capital for investing in certain fields.
2. This creates a path dependency where VCs start with investing in a field based on their existing human capital and develop more and more human capital, but only in one specific market with a specific strategy, supported by research by King (2008).
3. Combined with the observation that VCs have very limited opportunities during their career for strongly changing the investment strategy. Roughly only once every few years, supported by Sahlman (1990).
4. This leads, over time, to a lock in of a VC within a certain market.
5. Markets change over time and may no longer offer good investment opportunities
6. VCs cannot easily change markets therefore VCs keep investing in markets that have declined and this reduces the overall return of the VC asset class

4.2.1 Comparing literature with empiric results

The first research question uncovered 9 factors which influence the strategy formation process of VCs:

- VC-LP covenants (investment contracts)
- Opportunity (luck)
- The environment's legal system
- The VC's peer network
- The VC's informant network
- The state of the capital markets
- The VC's brand and reputation
- The VC's human capital
- The VC fund's stage in its lifecycle

Some of these factors directly influence the strategy formation process and some factors only influence the process indirectly these relationships are summarized in Figure 6 and Figure 7. During the empirical research VCs were not interviewed about these factors directly, but several of them were stated voluntarily by VCs as important factors. Especially the factors that question 2 identified as having a direct effect on the strategy formation process. This comparison is summarized in Table 7.

Factor	Mentioned by VC	Direct or indirect
VC-LP covenants (investment contracts)	Yes	Direct
Opportunity (luck)	Yes	Direct
The environment's legal system	No	Indirect
The VC's peer network	Yes	Direct
The VC's informant network	Yes	Direct
The state of the capital markets	No	Indirect
The VC's brand and reputation	Yes	Direct
The VC's human capital	Yes	Direct
The VC fund's stage in its lifecycle	No	Indirect

Table 7: Comparing literature and empirical results

From the comparison between the literature and the empirical results it becomes clear that the factors that indirectly influence the VC strategy formation process, according to literature, are not consciously identified as salient factors by VCs. Perhaps this is because these factors are considered so self-evident that they are assumed, or perhaps because they are simply ignored by VCs. Never the less it would be valuable to gain more understanding of the importance of these factors on the VC strategy formation process.

In section 2.4 a model is distilled from literature that shows the interrelation of various factors with the investment strategy of VCs. Most of these interrelations have been confirmed by the interviewees and particularly human capital and social capital are the most important factors influencing the investment strategy of VCs. Especially the following relationships have been supported:

- The (strong) relation between human capital and social capital (both ways)

The strong relationship from human capital influencing social capital is supported by the research by Gompers, Mukharlyamov et al. (2012). The strong relationship where social capital influences human capital has not been found in literature and is new.

- The relation between social capital and opportunity

The relation between social capital and opportunity is in line with prior research from, among others, Granovetter (2005).

- The relation between opportunity and investment strategy

King (2008) found that opportunity is an important factor in the practical reality of VC investing. This research goes further and has shown that opportunity shapes a VC's investment strategy.

- The relation between VC-LP covenants and strategy

The relation between VC-LP covenants and a fund’s investment focus is in line with the literature from Sahlman (1990) and King (2008).

The remaining relationships are not actively mentioned by VCs. This does not mean that they are not present, it means that VCs did not consciously experience or consider them.

In question 2 the research determined how human capital influences, and moderates the effects of, several factors that influence the strategy formation process. Many of these relations are confirmed by the empirical research. One of the relationships that is not found in earlier literature is the strong link between social capital and human capital. An update version of Figure 6 is depicted in Figure 7 below. From the literature it is clear that human capital influences the social capital a VC maintains and develops. During the empirical research it also became clear that social capital strongly influences the access to- and absorption of new human capital. This is a clear addition that this research makes to the field.

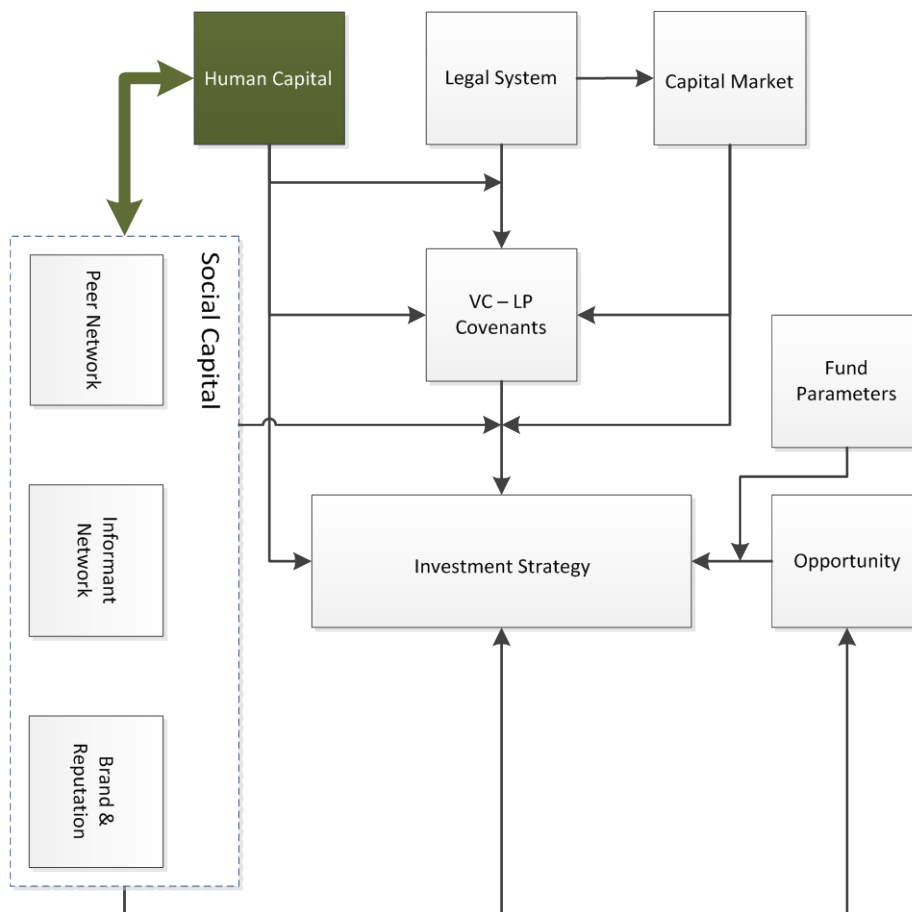


Figure 7: updated overview of the influence of human capital on VC investment strategy

4.2.2 Change Strategy

It is very difficult for VCs to change their investment strategy. However, it is possible. Some of the VCs that are interviewed have successfully changed their investment focus. The only way VCs change their strategy is if they can change their human capital. No strategy shift occurs without a corresponding shift in human capital.

All of the strategies that are used to shift a VC's human capital involved social capital. While this has not been directly observed before in the context of VC strategy, it is in line with the general theory on social capital. All the VCs who successfully changed their investment strategy had a strong reputation and used external human capital, from either their peer-network or their informant-network, to change their strategy. Social structures facilitate the flow and quality of information (Granovetter 2005). And this has helped VCs internalize new Human Capital that has allowed them to shift their investment specialization. VC1 internalized new human capital by doing co-investments with more experienced peers. VC3 uses its informant network to keep its human capital up to date with its investment focus.

None of the reviewed literature on VC syndication (co-investing) has looked at syndication as a mechanism for VCs to learn from other VCs (Manigart, Lockett et al. 2006; De Clercq and Dimov 2008; Checkley 2009). The reviewed literature does conclude that syndicates with human capital that matches the opportunity they are investing in perform better than syndicates that do not have this match (Manigart, Lockett et al. 2006; De Clercq and Dimov 2008; Schwienbacher 2008).

The results of this research show that a strong reputation is common among all the VCs that successfully changed their investment focus. From the literature there is no clear explanation on why this is the case. It could be explained that because Brand and Reputation signal quality to external partners a VC with a high-value brand and reputation has access to the social resources needed to make a shift in investment focus. On the other hand, because of the small sampling size it could be purely coincidental.

4.3 Hypotheses

The goal of this research is to explore how venture capital strategy and human capital influence each other. This research has its limitations due to the relatively small sample size. The results do allow us to derive hypotheses for further future research.

Hypothesis 1

This research shows that VCs do not have a lot of flexibility in adapting their strategy. This creates a lock-in effect for individual VCs as well as the funds they have under management. It would be valuable to investigate whether this lock-in effect reduces the returns of the asset-class, because this, in turn, determines the amount of available capital and the number of young innovative companies that can receive funding. This research supports the hypothesis that:

The strategic inflexibility of VCs reduces the returns of the VC asset class.

This could be investigated quantitatively by comparing the historic results of firms that have changed their investment focus over time and comparing these to the historic returns by firms who have not changed their investment focus.

Hypothesis 2

In order to change their investment focus, VCs used their social capital. It could be very valuable to investigate how the social capital interacts with the process of strategy change. A deeper understanding of this process could help other VC firms develop the right processes to change their investment focus. This research supports the hypothesis that:

VCs with strong social capital have the opportunity to change strategy more frequently.

Such research would also shed more light on whether reputation and brand are as important as this research suggests. This could be investigated by doing multiple case studies where VCs that has recently started a new fund with a different investment focus are interviewed.

Hypothesis 3

None of the reviewed literature on VC syndication (co-investing) has looked at syndication as a mechanism for VCs to learn from other VCs (Manigart, Lockett et al. 2006; De Clercq and Dimov 2008; Checkley 2009). This research supports the hypothesis that:

VCs use syndication to internalize new human capital.

This hypothesis can be tested by investigating by surveying VCs who changed their investment focus after first syndicating with VCs who are experienced in that investment focus.

Hypothesis 4, 5 & 6

From the comparison between the literature and the empirical results it becomes clear that the factors that indirectly influence the VC strategy formation process, according to literature, are not consciously identified as salient factors by VCs. Perhaps this is because these factors are considered so self-evident that they are assumed, or perhaps because they are simply ignored by VCs. Never the less it would be valuable to gain more understanding of the importance of these factors on the VC strategy formation process. These indirect factors are: the legal system; the capital market and the age of the fund.

The following hypotheses are supported by the literature but not by this research:

A fund's legal environment influences the investment strategy of the fund.

The state of the capital market influences the investment strategy of a fund.

The age of a fund influences the practiced investment strategy of a fund

It will be valuable to investigate these hypotheses individually because it will help policy makers improve the environmental conditions for Venture Capital. It will also support VCs in understanding the life-cycle of the funds they invest their money in and how this could potentially be optimized.

The fourth hypothesis: **A fund's legal environment influences the investment strategy of the fund.** Can be investigated by looking at the differences in investment strategy between firms subjected to different legal systems.

The fifth hypothesis: **The state of the capital market influences the investment strategy of a fund.** Can be tested by comparing the investment strategies of funds raised during different market conditions.

The sixth hypothesis: **The age of a fund influences the practiced investment strategy of a fund.** Can be tested by doing multiple case studies on VC firms and investigate whether and how the investment focus of a fund changes over the lifetime of the fund.

4.4 Limitations

There are several limitations to this research project that have to be taken into account when using the conclusions of this research. Most of these stem from the sampling and to a lesser extent the methodology.

4.4.1 Sampling

One obvious limitation of this research is its small sample size. Only 7 people are interviewed of which only 5 are currently active as primary market Early-stage European technology focused venture capitalists. This small subset may be unique in their match between their human capital and investment foci.

VCs are well known for usually declining to participate in academic research. This may mean that the VCs who do support academic research are significantly different from VCs who do not do this. Since only VCs who support academic research have been interviewed it may be that the results are biased in that regard.

While VCs were sought that are sufficiently different from one another within the target population, such as; different fund sizes; different strategies, all the VCs are approached through the network of one other VC. This may have led to a sample bias in that regard.

Nearly all of the VCs that are interviewed have been a VCs for many years and are very experienced. This may induce a bias because these VCs are, at least to some degree, successful, otherwise they would not still be operating as VCs. This means that unsuccessful VCs may not have been part of the sample.

4.4.2 Methodology

While precautions are taken to limit the VCs from responding with socially acceptable responses, it is still possible that, given the open ended nature of the questions, that VCs sought to provide the type of answers that they believed to be socially acceptable. This would imply that their strategy is not as dependent on their human capital as is concluded.

4.5 Managerial implications

The results of this thesis show that in order to successfully acquire new human capital the VC needs to use its social network. The VC will need to use both his informant and peer network to acquire and internalize new human capital. This allows a VC to shift his investment focus when raising a new fund.

This research shows that it might be in the interest of the VC to start an Evergreen fund instead of a closed fund unless he can negotiate more strategic flexibility when setting up the VC-LP covenants. This will give the VCs access to more investment opportunities and allow for better fund returns.

This research has shown that it is important for VCs to develop compatible human capital, however this research has also shown that VCs currently do not actively invest in acquiring new human capital once a fund has started. VCs can increase their returns in the long run if they invest more resources in acquiring and developing new and relevant human capital.

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Appendix A: introduction e-mail template

Dear [First Name],

Currently mr Jeroen Netten is investigating the influence of the knowledge and experience of venture capitalists on the focus and strategy of their funds. The research of Mr Netten is part of the research being conducted at the Technology, Strategy and Entrepreneurship department at the Technical University in Delft.

His idea is the following: If we can learn more about this topic, VCs in the future will be able to more effectively recruit and nurture the right skills and experience for their funds, and be able refer to a body of knowledge as to why their expertise matches their strategy when raising new funds.

In order to do this research Mr Netten would like to interview you briefly.

The interview can be done by phone (or in person) at any time and day at your convenience depending on your preference and geographical location. The interview will last under 30 minutes, and all interviews will be anonymized.

I hope you want to contribute to this research. If you be so kind to reply positively to Mr Netten.

Kind regards.

[Introducing VC]

Appendix B: Interview guide template English

The interview is semi-structured, the structural questions are:

Question 1: could you tell me your career so far, starting with higher education if applicable?

Follow on:

For example, what kind of education, which jobs in which sectors and any additional courses? Is the experience of the investment team complementary, or does everyone have a similar background?

Question 2: what type of companies does your fund invest in, what is the investment focus?

Follow on:

For example, what phase, sector etc? Could you give any examples? How did you decide that this was the right space to invest in?

Question 3: how did you determine your investment strategy?

Follow on:

Was this actively discussed? How did you figure out this was the right investment strategy?

Additional questions if time permits:

Question 4: how do you invest in developing new knowledge and experience in the team?

Question 5: could you briefly describe the background and careers of the rest of the investment team?

During the interview I will try to dive into the given answers and ask specific questions based on pre-interview research. Prior to the interview I will analyze the LinkedIn profiles of all the funds employees (if size permits) and read the webpage of the fund.

Appendix C: Interview guide template Dutch

Het is een semi-structured interview, de structuur vragen zijn:

Vraag 1: zou je mij kort je loop baan kunnen vertellen, en beginnen met eventueel hoger onderwijs?

Verdieping:

Bijvoorbeeld wat voor opleiding je hebt gedaan welke banen in welke sectoren en eventuele cursussen? Is de ervaring van het investment team complementair? Of meer specialiserend?

Vraag 2: wat voor bedrijven investeert jullie fonds in, wat is de focus?

Verdieping:

Bijvoorbeeld wat voor fase, sector etc? Zou je enkele voorbeelden kunnen geven? Hoe wisten jullie dat dit een goede space was?

Vraag 3: hoe zijn jullie tot jullie investeringsstrategie gekomen?

Verdieping:

Hebben jullie daarover eerder gesproken? Hoe wisten jullie dat, dat een goede strategie was?

Mits tijd:

Vraag 4: hoe investeren jullie in de ontwikkeling van nieuwe kennis en ervaring in het team?

Vraag 5: zou je kort de achtergronden en loopbaan van je collegas kunnen beschrijven?

Tijdens het interview probeer ik dieper in te gaan op de gegeven antwoorden, dit ook op basis van voor onderzoek. Voorafgaand aan het interview neem ik de LinkedIn informatie van (wanneer mogelijk) alle medewerkers door en lees ik de internetpagina van het fonds door.