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Stockholm School of Economics  
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Master's Thesis

*Venture Capital Impact on the Legitimacy of  
Entrepreneurial Firms in Sweden*

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Abstract:

*This paper investigates if and how a venture capital (VC) firm adds value to an entrepreneurial firm in which it has invested by increasing its legitimacy. The paper also explores what factors affect the ways added legitimacy adds value to the venture. These questions are explored in the context of Sweden's special entrepreneurial and venture capital environment which in many ways differs from for example that of the US which has been the context for most studies on the matter. By using theories of asymmetric information, transaction cost theory and interorganizational relationship theory, hypotheses are formulated on the mechanisms of added value, endorsement and the factors affecting endorsement. Based on the pre-study, the theoretical base and on previous studies, a survey is conducted among 220 Swedish high technology entrepreneurial firms. 67 valid responses are collected and analyzed using descriptive analysis tools and regression analysis. The results indicate that VC endorsement does add value to the entrepreneurial firms and that VC endorsement is related to switching costs, firm age and active VC firm marketing. The results also indicate that Swedish entrepreneurs do value the legitimacy enhancing effect of VC but that this is indirect due to their entrepreneurial profile and context.*

<b>Introduction</b>	<b>1</b>
<b>Research on venture capital and entrepreneurial firms</b>	<b>1</b>
<b>Venture capital, legitimacy and added value</b>	<b>2</b>
<b>The effect of venture capital on legitimacy: Sweden vs. the US</b>	<b>3</b>
<i>Institutional and cultural differences</i>	3
<b>Purpose</b>	<b>5</b>
<b>Definitions</b>	<b>5</b>
<b>Pre-study: Two case studies</b>	<b>6</b>
<i>Methodology</i>	6
<i>Case 1: Appletree</i>	7
<i>Case 2: Evergreen</i>	8
<i>Conclusion from the Pre-Study</i>	9
<b>Theoretical background</b>	<b>9</b>
How does increased legitimacy add value?	9
<i>Benefits of inter-organizational relationships</i>	10
<i>Inter-organizational relationships and endorsement</i>	11
<i>Asymmetric Information Theory</i>	12
<i>Transaction cost theory</i>	13
<i>Conclusions of literature survey and theory section</i>	14
<b>Models and Hypotheses</b>	<b>14</b>
<i>The added value of VC endorsement</i>	14
<i>Characteristics of the focal firm affecting endorsement benefits</i>	15
Newness and legitimacy	15
Switching costs and the value of legitimacy	15
<i>Actions of the VC firm that affect endorsement</i>	16
<i>Summary of Hypotheses to be tested</i>	16
<b>Methodology</b>	<b>17</b>
<i>Questionnaire</i>	17
Reliability of the questionnaire	18
<i>Population and sample</i>	18
Non-Response Analysis	19
<i>Respondents</i>	19
<b>Construct Operationalizations</b>	<b>19</b>
<i>Model 1: The Value added model</i>	20
<i>Model 2: The endorsement model</i>	21

<b>Results</b>	<b>23</b>
<b>Descriptive Results</b>	<b>23</b>
The firms	23
Size of firms at time of first VC investment: Employees and Revenue	23
Industries	24
Options at time of VC investment	25
Important factors when choosing venture capital	25
Reasons for acquiring Venture capital	26
Value added of Venture Capital	27
Investors and financing	27
Customer and supplier relations	28
Recruitment	29
Marketing benefits	29
Product Specificity	29
<b>Statistical analysis</b>	<b>30</b>
<i>Variables in Model 1: The value added model</i>	30
Value added	30
Endorsement	30
Control variables:	31
<i>Variables in Model 2: The Endorsement Model</i>	31
Exploratory Factor Analysis	31
Control variables	33
<i>Multiple Regression Analysis</i>	34
Assumptions	34
Interpretation of Results	35
Regressions to be tested	35
<i>Model 1: Value-added model</i>	35
Correlation amongst variables: Model 1	35
Regression analysis	36
<i>Model 2: Endorsement model</i>	37
Correlation amongst variables: Model 2	37
Regression analysis: Model 2	38
<i>Test of mediating effects:</i>	39
Endorsement mediating the effect of VC marketing on value added	39
<i>Summary of the Results</i>	40
<b>Reliability and Validity Analysis</b>	<b>41</b>
<i>Reliability</i>	41
<i>Validity</i>	41
<i>Generalizability</i>	43
<b>Discussion and Conclusion</b>	<b>44</b>
<i>Discussion of the results</i>	44
<i>Does the Venture Capital firm add value to a portfolio firm by increasing its legitimacy?</i>	44
<i>How does added legitimacy add value to the portfolio firms?</i>	44
<i>What factors affect the process of added legitimacy?</i>	45

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<i>What are Swedish entrepreneurial firm's attitudes towards the legitimacy adding effects of venture capital?</i>	46
<i>Findings and Theory: An Evaluation of Coherency</i>	48
<i>Implications</i>	49
<i>Critique</i>	49
<i>Suggestions for future research</i>	50
<i>Concluding remarks</i>	50
<b>References</b>	<b>51</b>
<b>Appendix A: Pre-study question sheet</b>	<b>55</b>
<b>Appendix B: Survey Questionnaire</b>	<b>57</b>
<b>Acknowledgements</b>	<b>61</b>

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## **Introduction**

This paper examines the relationship between entrepreneurial firms and their venture capital investors in Sweden. It investigates whether venture capital firms add value to the entrepreneurial firms in which they invest by increasing the entrepreneurial firms' legitimacy. If this is the case, then it will also investigate how the venture capital firms add value. In order to relate this to the Swedish cultural context, the paper will also look at how important legitimacy is when the decision to acquire a venture capital investor is made. These related themes will be explored through a qualitative pre-study and a quantitative main study of Swedish entrepreneurial high technology firms.

This paper is in part built on the work of Maula (2001), who built a model on the mechanisms of value added in the relationship between corporate venture capitalists and their portfolio firm in the US. An adapted and enriched model has been used to suit the purposes of this paper. The paper also uses some methodology and measurement items as found in Hsu (2004) when studying venture capitalists and entrepreneurial firms in the US.

The structure of this paper is as follows: First, a review of previous research and a justification for the research questions is given. Then the purpose of the paper is declared. Following that, a definition of key concepts is given. Then a pre-case study is conducted, presented and analyzed. The section after that is dedicated to a literature review of the main theories used. After that, the hypotheses are formulated based on the theories and the pre-case studies. Then the methodology of the research is presented and the constructs are operationalized. Then, the descriptive data from the survey is exposed and commented and the hypotheses are tested using statistical tools. Finally, the findings are discussed and summarized, a critique of the study is made and directions for future research are pointed out.

## **Research on venture capital and entrepreneurial firms**

Extensive research has been done on the relationship between a venture capital firm and its portfolio firm. In the research, it is the active involvement of the VC firm in the entrepreneurial venture that has been the center of attention (Barney et al 1996; De Clercq & Sapienza 2001; Ehrlich et al 1994; Fredriksen 1997; Macmillan 1989; Sapienza 1992; Sapienza & Gupta 1994). Much research and resources have been dedicated to see how venture capital (VC) adds value to its ventures. These studies find that apart from the obvious added value in terms of actually putting money into the venture, VC also contributes in other ways. One line of research has dedicated itself to looking at the impact of venture capital on innovation. Early research done by Timmons and Bygrave (1986) showed that capital is the least important factor in fostering innovation; instead, help to find the select key management-team members, providing credibility for suppliers and customer, and helping focus on strategic issues when operational issues are pressing were listed as valuable contributions of VC.

Other research has looked at the conditions in which VC adds the most value to its ventures, finding that the value added of the VC is positively related to the complexity of innovation being pursued, the frequency of contact between the lead investor and the CEO, the lesser conflict of perspective between lead investor and CEO, the openness of communication therein, and the willingness of the venture to accept business advice (Barney et al. 1996, Sapienza 1992). In ensuing multi-country studies, VC has been found to add value when uncertainty is high, when the venture is already performing well, and when the VC has operating experience in the venture's focal industry (Sapienza et al 1996). In this international study, value added was found to be strongly related to the amount of face-to-face interaction between the VC and the venture and to the number of hours the VC put in to the venture. More recent studies summarizing previous research have found that the value VC adds is through networks, business and operational knowledge, and moral support to the entrepreneurs of their portfolio companies (Sapienza et al 1996, Fredriksen 2003, Sutton 2006).

### **Venture capital, legitimacy and added value**

With the notable exception of Timmons and Bygrave (1986), the majority of the research on the impact of the venture capital firm on credibility has been done by comparing the underpricing of venture capital backed companies with that of non-VC backed companies at initial public offerings (IPO) (Barry et al. 1990, Gompers & Lerner 1997, Hamao et al 2000, Megginson & Weiss 1991). The results of these studies are mixed and provide contradictory results, some finding that VC backed firms are indeed less underpriced, some finding the contrary, and some finding the difference non-significant.

However, apart from the study of legitimacy in the situation of an IPO, studies on the legitimacy effects of VC on portfolio firms tend to be few, far apart, and set in the US. In a multiple case study conducted in California, Fried and Hisrich (1995), found that venture capital firms, especially those with a record of choosing successful ventures, have a positive image that is transferred to their portfolio companies. They found that this image can help securing bank loans, raise credibility with potential customers, and convince potential managers to join the company. Also, using a case study method but instead in-depth studying the venturing capital financings of a single venture, Steier and Greenwood (1995) found that social endorsement of the original investor was more effective than a business plan in attracting financing from new investors. Using secondary data on venture capital backed IPO, Seppä and Maula (2001) found that the prominence of the venture capitalist was strongly positively related to value creation in the venture. Maula (2001) investigated how corporate VC can add value to the portfolio firm through endorsement thus strengthening its legitimacy. Stuart et al (1999) rigorously proved how the prestige of exchange partners was related to value creation in focal firms; this research, however, did not distinctly comprise the Venture Capital firm.

In the US, receiving funds from a VC firm indicates that experts think the venture is of high quality; in this sense, receiving venture capital legitimizes the venture (Sutton 2006). This has been tested by Hsu (2004), who found that VC firms with a high reputation are more likely to be accepted as investors and on average acquire start-up



equity at a 10-14% discount vis-à-vis other venture capital firms. He suggests that entrepreneurs are willing to forego offers with higher valuations in order to affiliate with more reputable VCs, for the reason that external actors will rely on the quality of the start-up's affiliates as a signal of the start-up's quality (Hsu 2004:1805) However, as with the previous cases, this was a study with data collected from the US. As I will argue below, the institutional and cultural differences between the US and Sweden give reason to believe that the results found may not be completely transferable to the Swedish venture capital-entrepreneur situation.

## **The effect of venture capital on legitimacy: Sweden vs. the US**

The majority of entrepreneurship research has been conducted in the US. The US dominance in the field has resulted in that the research has been conducted on the assumptions of a culture of individualism and achievement, an assumption which is at odds with cultural conditions in many other parts of the world such as Sweden. Furthermore, theories of financial economics constitutes the basis for most studies of venture capital. The study of venture capital with different cultural assumptions and theoretical tools is yet at an early stage (Sutton 2006). This section will provide an insight into the institutional and cultural differences that exist between Sweden and the US. In doing so it shows that conclusions drawn on the legitimacy enhancing effects of venture capital in the US are not necessarily transferable to the Swedish context and therefore a study of the legitimacy enhancing effects of venture capital in Sweden is theoretically warranted.

### ***Institutional and cultural differences***

As mentioned above, the culture of entrepreneurship and reasons for entrepreneurship is dominated by assumptions of a culture of individualism and achievement as found in the US. The status of the entrepreneur in society varies over countries and cultures; while entrepreneurs in the US are held in high status, elsewhere entrepreneurs are sometimes viewed as opportunists (Sutton 2006). In the literature on entrepreneurship, motives of entrepreneurs commonly include the desire to be known and admired, the wish to contribute something to their country, and a strong desire to become extremely wealthy. However, in Sweden, the most important driver of the Swedish entrepreneur is the desire for freedom or more independence within her professional life (Bremer 2004). This is reflected in the very low average size of the firms. The average size of firms founded by highly educated Swedish individuals was 1.3 employees, including the founder (Sutton 2006).

Research has also shown that the financial systems differ between Sweden and the US. Sjögren and Zachrisson (2005), when comparing financing of Swedish and American High Technology Small Firms (HTSFs) summarized this research:

“Whilst Sweden is considered to have a bank- oriented, relationship-based financial system in which banks (debt) and other financial intermediaries play an important role in the financing of firms, the USA is considered to have a market-oriented financial system where the role of banks is less important, and stock markets (equity) play a larger role”. (pp. 75)

They suggest that since Sweden and the US represent different types of financial systems, there are reasons to believe that relative importance of the various financial sources may also differ. This is partly confirmed by their results and the results of others. Sjögren and Zachrisson's (2005) results show that Swedish firms have a higher debt to equity ratio and that a higher percentage of the US firms prefer equity financing to debt compared to the Swedish firms. In line with this, Cressy and Olofsson (1996) showed that Swedish Small and Medium-sized Enterprises (SMEs) have a "pecking-order" of financing, preferring first internally generated funds, then bank loans, and lastly new equity from an external partner. Berggren et al (2000), in a study of control aversity among SMEs in Sweden, took this further and found a widespread skepticism among SMEs in Sweden towards relinquishing control of the firm to external actors. Since relinquishing control is often a prerequisite for obtaining venture capital financing, this indicates that Swedish entrepreneurs may be averse to venture capital. The attitude towards venture capital is also reflected in the connotations of word usage. Indeed, the very word "venture capital" in the US implies a focus on the possibility, while in Sweden the word is "*riskkapital*" (directly translated "risk capital") which puts focus on the possibility of failure (Bremer 2004).

To enforce the supposition that institutional and cultural differences between the US and Sweden may lead to differences in results in the study of venture capital and entrepreneurial firms, a comparison of previous studies do in fact show that differences exist between nations. For one, it has been shown that the importance the entrepreneur places on different types of value-added activity varies between nations (Sapienza 1996). Fredriksen & Klofsten (2001) tested the agency theory-rooted prediction that VC firms increase their control over portfolio firms with a high operational risk but found this not to be true. This was in contrast to the results of a study conducted in the US where higher operational risk was found to be significantly related to a tighter VC control (Sapienza & Gupta 1994).

Considering the cultural and institutional differences, including the financing preferences of Swedish entrepreneurs, their desire for independence and the bank oriented financial system in Sweden, there is a ground to speculate that the firms in Sweden may not gain legitimacy the way their US counterparts do when obtaining venture capital. Indeed, if the Swedish entrepreneur views the cost of relinquishing control over the firm as very high, then having to resort to venture capital financing is perhaps more a sign of weakness.

A conceivable argument is that if the entrepreneurial firm is good enough then they would find financing from banks. However, these last lines are speculation and there are theoretical arguments which hold in the Swedish context and that suggest venture capital endorsement may indeed serve to certify a portfolio firm's quality. These theoretical foundations will be discussed below. For now, it suffices to conclude that there is reason to investigate the case of Venture capital and legitimacy in the Swedish context, and this paper serves to fill this gap.

## Purpose

This paper sets out to investigate the issue how venture capital adds value to entrepreneurial ventures by looking at if and how venture capital adds value through endorsing the firms in which it has invested. As shown from the literature review above, very little rigorous research exists that actually investigates this phenomenon. This thesis therefore aims to fill this gap in VC-entrepreneurship research. The purpose of this paper is to answer four questions:

1. Does the Venture Capital firm add value to a portfolio firm by increasing its legitimacy?
2. How does added legitimacy add value to the portfolio firms?
3. What factors affects the process of added legitimacy?
4. What are Swedish entrepreneurial firms' attitudes towards the legitimacy adding effects of venture capital?

This paper will treat the question of “how” in two ways: the first way is looking at what parts of the operations the added legitimacy adds value to, as in “how is the added value of increased legitimacy expressed in the operations of the firm”. Specifically, this targets the effect of legitimacy on the firm’s relationship with customers/clients, suppliers, investors, and potential employees. The second “how” is in the sense of “what activities does the venture capital firm engage in to add legitimacy to its portfolio firm”; this is mainly investigated by looking at how the venture capital firm markets its entrepreneurial venture. A theoretical framework for “how” the firms adds legitimacy will be given in the theoretical section below.

## Definitions

This paper sets out to investigate if and how a Venture Capital firm adds value to entrepreneurial firms in which it invests by adding legitimacy through endorsement. This section defines concepts used throughout the paper.

***Venture capital*** is defined as “money provided by professionals who invest alongside management in young, rapidly growing companies that have the potential to develop into significant economic contributors”. This definition is taken from the National Venture Capital Association (NVCA 2007). This definition excludes private equity investments (popularly equated with venture capital) such as leveraged buyouts and management buyouts of mature firms. Venture capital is denoted VC.

***Entrepreneurial firms*** will be used to denote technologically based firms that are privately held and actively operating and have received at least one round of venture capital financing. As much of previous research on the topic has been done on technology based firms, this paper will continue the tradition by investigating only technology based firms. Technology firms are in part defined according Venture Economics<sup>1</sup> classification of high technology firms which encompasses firms active in the following sectors: biotechnology, communications, computer hardware, computer software, Internet specific technologies and services, medical/ health

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<sup>1</sup> Venture Economics is commonly recognized as the leading source of US venture capital investment data (Gompers & Lerner 1999, Maula 2001, NVCA 2007)

science, and semiconductors/other electronics. In addition to these categories, three categories have been added to do justice to the spread of the industries represented here: manufacturing and mechanics, energy/environmental, and measurement technologies. In the paper, new firms is used synonymously with *start-up*, *entrepreneurial venture*, *venture*, *investee* and *portfolio firm*.

**Legitimacy** and **endorsements** are two concepts actively used in the study. I define endorsement as the process by which the association of the entrepreneurial firm to the venture capital firm has positive reputational effects on the entrepreneurial firm. One may discuss the effect of endorsement in terms of credibility, legitimacy, reputation, or status. In the economic and strategy literature, the term “reputation” is typically used to describe a rent-generating asset (Barney 1991, Fombrun 2001, Rao 1994). In the literature of sociology and institutional theory, the term “legitimacy” is commonly used when referring to the acceptance of a focal actor by its institutional environment (Maula 2001). This study marries the two concepts and uses the word *legitimacy* synonymously with *reputation*, *status* and *credibility* to describe the rent-generating asset that is the acceptance of a focal actor by its institutional environment. To clarify the relationship between these two expressions it should be said that endorsement is the process by which the entrepreneurial firm gains added legitimacy. In the operationalization of the research questions, endorsement is measured in the degree to which the entrepreneurial firm uses the fact that it is associated with its VC investor to acquire advantages.

## **Pre-study: Two case studies**

A pre-study was conducted to deepen this author’s understanding of the topic area and to preliminary test the idea of the role of VC in adding legitimacy to its portfolio firms. The case study format was chosen because the case study method allows the researcher to reach an understanding of causality in the relationship between factors (Yin 1994). This was suitable since one purpose of this paper is to see what factors affect the added value of legitimacy.

## **Methodology**

Interviews were conducted with three entrepreneurs at two venture capital financed companies. The companies were selected on the basis that they were high-technology firms that had received at least one round of VC financing. For convenience sake, companies in the Stockholm area were selected. The interviews were semi-structured and lasted 45-60 minutes, the questionnaire that was used can be found in appendix A. During the interviews notes were taken that were then written into an interview report that was sent back to the interviewees for verification that the message had been correctly understood.

The interviewees insisted that they and their companies be kept anonymous in order to be able to speak openly about their VC investors. The firms and interviewees will be referred to according to the table below. Please note that the interviewees and the firms have been given different names to facilitate reading and understanding.

Table 1: Case study interviewees

Interviewee	Firm	Position
Mr. Apple	Appletree	Co-Founder/CTO
Mr. Pinecone	Evergreen	CEO
Mr. Conifer	Evergreen	Co-Founder/CTO

Mr. Apple was originally at a large Swedish telecommunications company and head of the department that was eventually spun-off to become Appletree. Mr. Conifer was originally at a major IT infrastructure and telecommunications company. Mr. Pinecone has been active as CEO of venture capital financed companies the last ten years and has headed Evergreen since March 2005

The interviews were generally about the added value that venture capital brings to its portfolio firms and specifically how venture capital contributes to the legitimacy of the ventures.

### **Case 1: Appletree**

Appletree builds platforms for the management and servicing of customers in IP and broadband services. Originally a project in a major Swedish telecommunications firm, Appletree was spun off in 1999 and given seed funding to become an independent firm. It soon attracted financing from a venture capital firm in addition to receiving continued financing from its mother firm. A few years later another VC firm invested and attained a majority position as the first VC firm allowed its ownership stake to become diluted. Since the start, the company has attracted around 80M SEK in investments in four rounds of financing. Right now the VC companies together hold a 70% stake of Appletree.

According to Mr. Apple there had been both advantages and disadvantages with having Venture Capital investors. Their current majority investor had helped out in finding key operational personnel and had contributed strategically by giving useful advice on the handling of liquid assets. The chairman of the board is a representative of the second VC company and has sometimes acted as a coach for the CEO of Appletree. Keeping their mother company as an owner has helped their business; the mother company is one of Appletree's major customers and the investment connection has made the communication process smooth. Not only has this helped them meet their customer's needs better, but it has also made them more updated on general market needs. The first VC firm had also been actively involved in attracting more financing. They introduced Appletree to another VC investor and negotiations went far until the founders eventually rejected letting the new VC firm in because of the conditions they postulated.

However, Venture capital has not been without a cost; Mr. Apple particularly notes that VC firms tend to overestimate their own ability to understand operational issues. This meddling sometimes leads to inefficiencies. Also, Mr. Apple notes that the inherent nature of VC makes it costly. The VC firms think they know the market the best and the fact that they want a lot of growth makes them push the entrepreneurial firm to take risks and expand more aggressively than it would have otherwise. This "Up or out" mentality is not always ideal for the firm. Mr. Apple thinks that without

VC investors Appletree would have made other strategic choices and “generally more conservative ones”.

Mr. Apple mentioned how he was especially happy with the first VC investor “because they had a strong media profile and had a niche towards IT firms. They helped spread the word of the firm.” This helped market Appletree a lot, especially through word of mouth marketing. He said that it was hard to quantify exact results that came from having VC from the first investor but the impression was that it helped marketing a lot. Part of the explanation was that the first VC firm had a profile of being an investor in IT firms and was thought of as being very knowledgeable of the industry. The VC firm produced its own publications in which it featured its portfolio firm. Having the first VC firm as investors strengthened Appletree’s reputation in the industry.

## ***Case 2: Evergreen***

Evergreen, a telecommunications company active in optical networking, was founded in 2000 by seven colleagues working at a large telecommunications and IT infrastructure company. Evergreen quickly found a VC investor in the shape of the VC division of a major international bank who invested 90 M SEK in the first round. The investor took a 45 % stake in the company leaving the majority stake with the owners. Two years later another international VC firm invested. Shortly after, the international bank that had previously invested decided to terminate its VC division. The founders were given the opportunity to buy back the equity stake and did so. A year later another Venture Capital actor invested in the company. The latest rounds of financing altogether gave Evergreen another 90 M in capital. Currently, all the VC firms active in Evergreen have stakes of around 13-14% each.

Mr. Conifer reports that Evergreen’s experiences with venture capital have been overwhelmingly positive. The first VC investor helped by offering contacts in its network, one of which eventually led to a contract and acted as a coach to the top management team. Having a VC made the process of reporting more regular and structured, which in turn made it easier to keep a clear strategic direction. Furthermore, having a renowned international banking corporation as an investor “helped open doors”, especially on the sale side. This has partly to do with the high specificity and nature of the optical network industry. Buyers of optical networks will typically invest gradually and incrementally over a many year period. Because of this, when choosing a supplier, they will evaluate whether the seller will be around in the years to come when the buyer will want to expand the network. For this reason, Evergreen has to show that they will be around in the years to come to be credible suppliers to their customers. Having a financially stable institution behind them was therefore a good signal. Mr. Pinecone, CEO of Evergreen, supported this view, saying that the VC investors have indeed contributed to legitimacy and opened doors, which is of great importance for a small and relatively un-established company. Having leveraged the reputations of their VC owners, Evergreen has been able to signal to their customers that they are in it for the long run. In this context it has been very important that the VC investors have had a good reputation. Having prominent VC investors may also help attract qualified personnel since people are more inclined to

join a company with strong financial investors since such companies tend to be more stable. Mr. Pinecone insists that legitimacy also plays a role on the supplier side when the firm is a new and small player; it makes suppliers more inclined to accept giving credit and establish payment schemes. According to Mr. Conifer, having a known VC investor also helped attract other VC. Mr. Pinecone confirmed this, stating that “Venture Capitalists don’t like to go in alone. They prefer following somebody, preferably a know actor with a good reputation.” Because of this, it is easier to attract the second or third VC investor than it was attracting the first one.

### ***Conclusion from the Pre-Study***

The case studies indicate that the venture capital firms do indeed add value to their portfolio firms. The interview also indicate that VC sometimes plays an role in giving the portfolio firm added legitimacy towards customers, suppliers, potential investors and employees. Legitimacy also seems to be connected to the VC firm’s active marketing of the portfolio firm, as in the case of Appletree. It may be concluded that the question of legitimacy is of relevance to the Swedish context. The results of the pre-study are summarized in table 2.

*Table 2: Results from Case studies: Added legitimacy and traditional Value added*

	<i>Suppliers</i>	<i>Customers</i>	<i>Investors</i>	<i>Employees</i>	<i>Marketing</i>	<i>Strategic</i>	<i>Network</i>	<i>Mentor/coach</i>
<b>Appletree</b>	Possibly, through active marketing	Possibly, through active marketing	Yes, Endorsement helped attract potential investors	-	Actively marketed portfolio firm through publications and word of mouth	Provided strategic market info	Helped recruit key operational personnel	Coach for CEO
<b>Evergreen</b>	Yes, more willing to give credit	Yes, due to nature of product	Yes, having one VC investor helped attract others	Yes, makes firm more stable and therefore more attractive	Word of mouth	-	Helped find customers	Reporting requirements helped focus on strategic goals

VC endorsement and its effects on legitimacy seems to express itself in different ways depending on the situation of the firms. We move on to see which theories may serve us in exploring this topic.

## **Theoretical background**

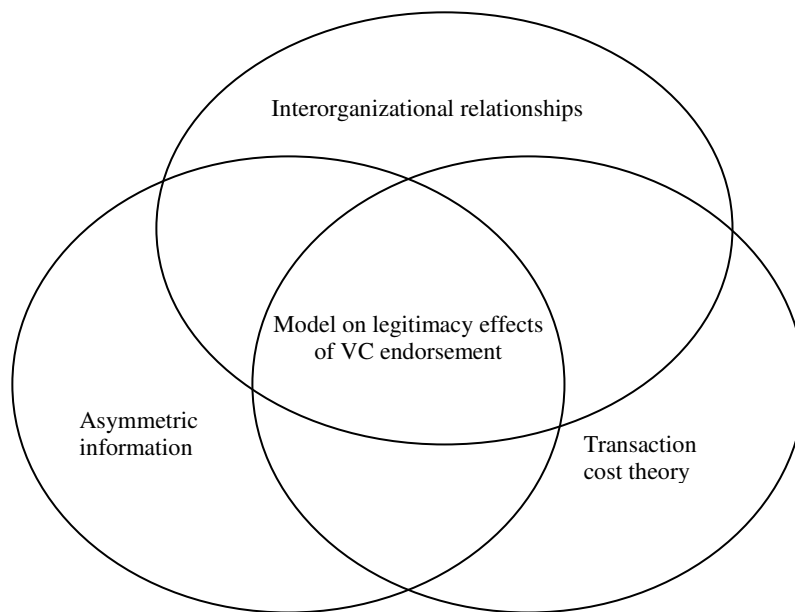
### **How does increased legitimacy add value?**

In order to adequately address the issue of endorsement benefits and added legitimacy of the Venture Capital firm on its portfolio firm this study develops a multi-theoretic framework of the mechanisms of endorsement in adding value and the key factors influencing these mechanisms.

The issue of increasing legitimacy through endorsement is complex and no concrete theoretical model has yet been developed. Maula (2001) has made a contribution

towards the field in studying corporate venture capital and its endorsement effects. This model is broad and treats many aspects beyond the scope and relevance of this paper, such as knowledge transfer issues. It is using a scaled down adaptation of this model that this paper will explore the issue. The issue touches upon the fields of interorganizational relationships, asymmetric information theory and transaction cost theory. Each of these schools has previously been coupled with research on venture capital and value added. Interorganizational relationships has been used to explain the effects of legitimacy in an industry context (Stuart 1999). The theory on asymmetric information has often been used to explain phenomena pertaining to the venture capital industry (Amit et al 1998, Willquist 2003) and venture capitalist behavior and management of its investments (Fried & Hirsch 1995, Gompers 1995). Transaction cost theory has been used by Maula (2001) in the context of corporate venture capital and by Swaminathan et al (2001).

*Figure 1: The theoretical schools influencing the model.*



### ***Benefits of inter-organizational relationships***

Previous research has argued that new firms are dependent on resources available to them through their inter-organizational relationships (Jarillo 1989, Stinchcombe 1965). Newly started ventures are typically in need of vast resources in order to grow quickly but lack these resources themselves. These new ventures are consequently required to rely on the resources of external partners by forming various types of business relationships with customers, suppliers, competitors etc (Jarillo 1989, Pfeffer & Salancik 1978). The extent to which it gains access to these external partners and the quality of these partners will depend on the reputation and legitimacy of the focal firm.



In general, three wide-ranging categories cover most of the reasons why technology based new firms establish interorganizational relationships; access to resources, access to knowledge and enhancing external legitimacy through interorganizational endorsement (Maula 2001). If one disregards network and connections as a resource, venture capital firms scarcely have any resources that may be of value to the operations of a new venture, the benefits of venture capital for entrepreneurs are mainly related to learning benefits and endorsement benefits. Since learning benefits are beyond the scope of this paper, the focus of the sections below will be on a theoretical explanation for the mechanisms and conditions of endorsement.

### ***Inter-organizational relationships and endorsement***

The issue of interorganizational relationships and endorsement has been explored in the work of Podolny (1993, 1994) and Stuart (1999, 2000). Stuart (1999) claims that social or industrial structures can be represented as a set of positions that are arranged hierarchically according to the prominence of their occupants. In situations when there is uncertainty about the quality of a new organization, a new start-up firm's associations with prominent actors will strengthen the positive estimation of the firm and its endeavors. According to Stuart (1999), three mechanisms of association can lead investors, customers and other would-be associates to consider the qualities of a new focal venture's associates and affiliates: (1) Relationships have reciprocal effects on the reputations of those involved. (2). The evaluative capabilities of well-known organizations are perceived to be strong. (3) Relationships with prominent organizations signal a new venture's reliability, and, thus, its likelihood to survival.

The first mechanism indicates that high-status/ high-prominence investors will avoid associating with low-potential ventures because their own reputation may suffer a blow. Prominent organizations will be exclusive in their choice of associates: not doing so would be to risk squandering the economic and social rents generated by a good reputation. In terms of Venture capital and entrepreneurial ventures, this means that a high status VC firms will not associate with a firm unless it believes that firm to have great potential.

The second mechanism is based on the notion that prominent organizations have a superior ability to identify quality in other organizations. Prominent organizations are viewed as expert evaluators, and under conditions of uncertainty the blessing from the right organization in the form of association will serve as a sufficient condition for other organizations to engage in transactions with it. In our context this has intuitive appeal: prominent venture capital investors are likely to have a history of successful investments behind them and their track record gives evidence of their high capacity to evaluate the potential of new ventures.

Stuart (1999) argues that for the third mechanism to hold, two assumptions must be valid. (1). Gaining a partnership with a prominent organization will draw attention. (2). The fact that the firm was selected by a prominent organization is in itself a signal of reliability. A VC firm making an investment in a new venture is bound to draw attention to the new venture. However this first assumption can be criticized for the passivity of the prominent organization in the mechanism. One could argue that the mechanism would be more powerful if the VC firm actively marketed its new

portfolio firm, thus bringing attention to the partnership and in itself increasing the legitimacy of the entrepreneurial venture. Concerning the second assumption, it holds intuitive appeal in the context of the VC firm and the venture; having gotten financial backing from a VC firm predictably makes the entrepreneurial firm more reliable than previously, at least in the sense of financial stability.

It should be noted that Stuart's (1999, 2000) theory on benefits of interorganizational relationships does not assume a strong correlation between the prominence of a new firm's affiliates and the actual quality of the firm; just having highly respected affiliates doesn't necessarily make the firm a better performer. Nonetheless, it has been argued that being perceived as high quality can be seen as a valuable resource in its own right. The three mechanisms described above entail that if a new firm under conditions of uncertainty associate with a prominent actor, this is likely to benefit the firm in the competition to mobilize resources. The "image of high quality" resource could, then, if managed effectively, lead to a firm actually performing better. Podolny (1993) summarizes this best by arguing that a high correlation between partner prominence and a focal firm's quality may reflect the casual influences of the former on the latter. The right relationships may affect other industry actors' perceptions of the firm positively, which in turn may facilitate acquiring and managing relationships with customers, suppliers and financiers.

Stuart's and Podolny's reasoning of an implicit status transfer between two associated firms suggest that Venture capital endorsement should add legitimacy to its investees and that this could be beneficial to the investees.

### ***Asymmetric Information Theory***

Asymmetric information theory was introduced in the influential paper of Akerlof (1970), commonly argued to be the first paper investigating the economics of unevenly distributed information. He demonstrated how markets can break down when potential buyers cannot verify the quality of the product they are offered and when sellers cannot reliably indicate the quality of the product they are offering. The idea of asymmetric information has been applied to a wide range of fields, especially in the domain of corporate finance where Leland and Pyle (1997) introduced the concept of *signaling*. The idea of signaling is based on the assumption that an entrepreneur knows the value of his firm better than an outside investor. If the entrepreneur insists on retaining a majority stake in his firm when allowing outside investors to take a stake in the firm this signals that the entrepreneur believes the future cash flows will be high relative to the current firm value. Previous research, such as Chan (1983), has showed how venture capitalists may mitigate the problems caused by asymmetric information because of their position as better informed intermediaries between the entrepreneurial venture and the capital markets.

Of special pertinence to the purpose of this paper is the segment of research investigating the role of third parties in asserting the value of new ventures. Asymmetric information theory states that the higher the uncertainty about the quality of a new firm, the more valuable certification is likely to be. Asymmetric information theory furthermore states that the more costly the signaling is, the more credible the signals are (Spence 1974). These conditions are found in the VC-new venture

relationship: Investing a large amount of money in a firm has to be considered a costly commitment, and therefore should be considered a credible signal. New ventures have been shown to have a high degree of uncertainty (Aldrich & Auster 1986, Ruhnka & Young 1991), and certification should thus be valuable to them. Thus, the theories on asymmetric information complement those of interorganizational relationships in providing a theoretical basis for VC endorsement adding legitimacy to its portfolio firms.

### ***Transaction cost theory***

Transaction cost theory is the third theoretical sphere that serves as base to the model used in this paper. Transaction cost economics addresses the question on why firms internalize transactions that may otherwise be conducted by markets. A transaction is, according to Williamson (1981, p. 552) “when a good or a service is transferred across a technologically separable interface. One stage of activity terminates, and another begins.” Transactions come with costs that can be divided into search costs, contracting costs, monitoring costs, and enforcement costs (Williamson 1985). Transactional inefficiencies may arise under conditions of complexity, asymmetric information, and opportunism in small numbers situations when these are coupled with bounded rationality. The theory predicts that firms will organize their transaction costs in a manner which minimizes the sum of transaction costs (Williamson 1981, 1985). Transaction cost theory holds two dimension of special pertinence when studying the value of added legitimacy in the relationship between entrepreneurial firms and VC investors: the concept of switching costs and the identified factors that drive transaction costs.

Firstly, according to theory, asset specificity is the most important aspect when describing transactions (Williamson 1981: 555). Assets that are specialized for a certain transaction are called “transaction-specific assets”. These are assets that are valuable for a certain transaction but are not equally valuable in other transactions, thus giving rise to *switching costs*. If switching costs are high then exchange partners will become dependent on each other and will want to safeguard the investment in the transaction specific assets by ensuring that their exchange partner does not switch.

Secondly: the notion that enhanced transaction efficiency can add value to the firm through a decrease in costs. These costs reductions can be achieved by attenuating the factors that drive transaction costs: complexity, uncertainty, information asymmetry and small numbers bargaining condition (Amit & Zott 2001, Williamson 1979). Factors that can reduce transaction (idiosyncratic exchange) costs between firms include reputation, trust, and transactional experience (Williamson 1979).

Transaction cost theory has been widely tested (Maula 2001). Of relevance to this paper is a study conducted by Swaminathan et al (2001) who investigated how suppliers benefited from having high status customers in the US automotive industry. They found that high status customers benefited suppliers of goods with high switching costs (such as architectural goods) more than they benefited suppliers of low switching cost goods (such as modular goods).

Following the line of reasoning of transaction cost theory, it is possible that the costs between the portfolio firm and its potential customers and suppliers may be reduced through the reduced uncertainty and the increased trust born through the increased legitimacy a VC may bestow upon its portfolio firm.

### ***Conclusions of literature survey and theory section***

The three main schools of theory, Interorganizational theory, asymmetric information and transaction cost theory provide a theoretical base for why venture capital endorsement adds value to the portfolio firms. These theories and the data gathered from the pre-study will now be used to formulate the hypotheses to be tested.

## **Models and Hypotheses**

In this section models and hypothesis are developed based on key insights on the literature review and theory section.

### ***The added value of VC endorsement***

Venture capital has been found to add value to its ventures through its assumption of a strategic role, where the venture capitalist acts as a “sounding board” and gives financial and business advice, a networking role, where the venture capitalist actively helps establish contacts with customers, suppliers, partners and potential managers, and a mentoring role where the venture capitalist acts as a personal advisor and “friend” (Fredriksen 2003, Sapienza et al 1996). These are all noted as direct added value bestowed on the venture by the involvement of the Venture Capitalist. However, very little research has been done on the legitimacy enhancing effects of Venture Capital with a few notable exceptions such as Bygrave and Timmons (1986). In the US some research has been done on the legitimacy enhancing effects of corporate venture capital and concluded that having corporate venture capitalist backing does indeed increase credibility and legitimacy (Maula 2001, McNally 1997)

Previous research and theoretical models do suggest that new ventures fulfill many of the conditions that would make them susceptible to gaining value from increased legitimacy from receiving venture capital backing. New ventures are often small firms with short track records and limited resources. Their short track records make it hard for outsiders to evaluate the quality of the venture (Stuart et al 1999). In this situation of asymmetric information, venture capitalists can mitigate the situation by investing in the firm. This is a signal of a certain inherent quality in the venture to potential customers, suppliers, partners and employees. Looking from the perspective of interorganizational relationships, theory predicts that associations with prominent actors can improve the legitimacy of new ventures through embedded status transfer in interorganizational relationships (Stuart et al. 1999, Stuart 2000). Using the reasoning of transaction cost economics it appears that the added legitimacy of having venture capital backing could indeed provide added value; the large amount of uncertainty, complexity and information asymmetry of a new venture means transaction costs will be high. Added legitimacy can serve to reduce these factors, and consequently bringing down the transaction costs.

Furthermore, research has confirmed the role of prestigious venture capitalists in increasing the value of new ventures at initial public offerings (Barry et al. 1990, Brav et Gompers 1997, Megginson et Weiss 1991). It would be surprising if the VC added value only at the instance of going public; rather, the added legitimacy that the VC has given from the start of its involvement with the venture play a part in the value creation in the advent of an IPO.

Finally, the qualitative pre-study confirmed theory. All companies confirmed that having VC backing had brought added value to their ventures through better legitimacy in the industry. The presence of VC had helped raise trust with suppliers as well as customers, and made collaboration easier with other actors within the industry. Considering all this, I hypothesize:

***Hypothesis 1: The value added to the portfolio company is positively related to the perceived endorsement benefit effect of the Venture capital firm.***

## **Characteristics of the focal firm affecting endorsement benefits**

### **Newness and legitimacy**

One factor that is tightly connected with uncertainty is firm age. Ruhnka & Young (1991) found that technology based new firms are highly risky. New ventures also lack routine and experience and their relationships with external actors are often unstable (Stinchcombe 1965). New firms are often small, have severely limited financial and other resources, and run a high risk of technological or operational failure and they face a high risk of early failure.(Aldrich &Auster 1986). New and small firms thus have what is called *liability of newness* and *liability of smallness* (Aldrich & Auster 1986, Stinchcombe 1965). As time passes by a firm overcomes obstacles and reduces the uncertainty in its environment. Research examining legitimizing endorsement benefits from a sociological perspective has similarly focused on the uncertainty measured as the age of the venture ( Stuart 1999, Maula 2001) Since uncertainty is what partly drives transaction costs, following the reasoning above: the higher the uncertainty the higher the benefit of endorsement. Looking from an interorganizational relationship perspective (Podolny 1993, 1994, Stuart et al 1999) and a perspective of signaling theory (Spence 1973), uncertainty has been argued to have an important impact on the legitimization benefits of endorsement. In the context of venture capital and portfolio firms, I hypothesize that the younger the portfolio firm, the higher the effect of endorsement. Thus:

***H2: The endorsement from VC backing is stronger the younger the entrepreneurial firm.***

### **Switching costs and the value of legitimacy**

The magnitude of risk, or specificity of the exchange, is an important factor in transaction cost economics (Williamson 1981). The higher the specificity of assets in an exchange relationship the higher the cost in changing exchange partners and therefore the higher the need of safeguarding the transaction relationship against opportunism and uncertainty. Assuming that prominent partners of a venture provide

a guarantee of sorts against opportunism and related risks, it is likely that the benefit of being endorsed by a prominent firm is perceived as greater when there are high transaction costs between the portfolio firm and suppliers, partners and customers (Swaminathan et al 2001). This idea is further confirmed by the pre-study where Evergreen said that the high transaction costs inherent to the nature of their product made the endorsement benefit of having VC very valuable. Thus, I hypothesize:

***H3: The added-value of VC endorsement is stronger the greater the customer switching costs.***

***H4: The added-value of VC endorsement is stronger the greater the supplier switching costs.***

### ***Actions of the VC firm that affect endorsement***

As mentioned above, interorganizational theory assumes that prominence of the partner is an important factor in endorsement benefits because of the high visibility that originates from the association (Stuart et al 1999). Other research has shown that association with a prominent organization can be valuable for a new venture not only because of the endorsement benefit but also because the signal of the endorsement benefit is likely to be disseminated widely (Stuart et al 1999, Swaminathan et al 2001). When a prominent organization highlights its new association with a new firm by actively marketing the new firm, the endorsement benefit will be strengthened and amplified. The pre-study of Appletree found that the fact that a VC firm had actively marketed the firm through publishing industry publications where the portfolio firm was featured had made the value added of endorsement very high. This was confirmed with the case study of Evergreen which found that the VC company actively spoke of and promoted its portfolio company at all occasions when in contact with people within the industry. Therefore, I hypothesize:

***H5: Active VC firm marketing of its portfolio firm is positively related to value added through endorsement.***

### ***Summary of Hypotheses to be tested***

*Table 3: Summary of Hypotheses to be tested*

H1:	The value added benefits to the portfolio company are positively related to the perceived endorsement effect of the Venture capital firm	
H2	The endorsement benefit from VC backing is stronger the younger the portfolio firm	
H3:	The added-value of VC endorsement is stronger the greater the customer Switching costs.	
H4:	The added-value of the VC endorsement is stronger the greater the supplier switching costs.	

H5:	Active VC firm marketing of its portfolio firm is positively related to value added through endorsement	

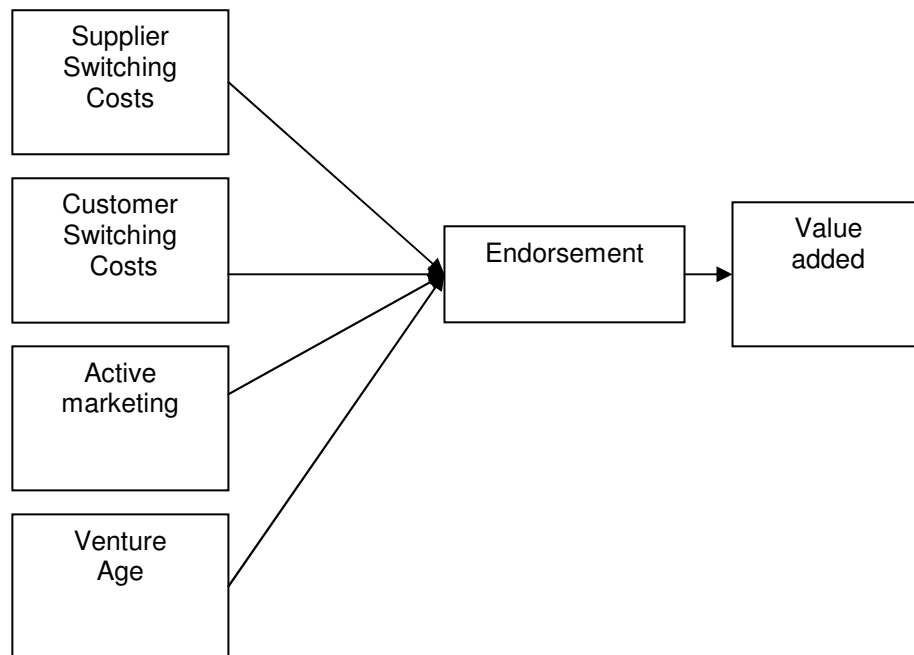


Figure 2: A graphical representation of relationships to be tested. As adapted from Maula (2001).

## Methodology

### Questionnaire

A questionnaire with sections covering firm information, value added provided by the firms VC investor, and in what ways the VC investor has contributed to the legitimacy of the firm was created. The questionnaire was created online using a web-based survey tool<sup>2</sup>. The questionnaire was designed on the basis of questionnaires used in Maula (2001) and Hsu (2004). Questions were added and adopted to fit the purpose of the thesis. Affiliation and its price is easiest studied when the new venture has had a choice of several VC financers with different reputations and price-tags. Therefore, the survey included questions on whether the focal firm received financing from their first choice investor, whether they had a choice and if so what their choices were, and the conditions under which they obtained financing.

The survey was distributed online for the convenience of the participants and a link to the survey will be emailed to the targeted participants. An interval scale was used where the participant is asked to grade the statement style items on a scale of 1 (completely disagree) to 5 (completely agree). Furthermore, the participant was asked questions on firm age, revenue, employees, and industry, which will be included as control variables.

<sup>2</sup> <http://www.questionpro.com>

## **Reliability of the questionnaire**

The questionnaire was reviewed and edited by an analyst at the Swedish venture capital association and a manager at KTH Innovation<sup>3</sup>; this was to make sure that the questions asked were clear and pertinent to the relationship between technology-based entrepreneurial firms and venture capitalist investors. In order to make the survey more accessible to the respondents, the questionnaire, originally in English, was translated into Swedish. To ensure reliability the survey was then translated back into English by a bi-lingual person active at a publishing house. A few discrepancies were found and subsequently changes and clarification were made to the questionnaire. Finally the questionnaire was sent out to the two CEOs of the companies in the case study to ensure the relevance and clarity of the questions.

## **Population and sample**

The companies used in the sample were identified with help from the Swedish Venture Capitalist Association (SVCA), Sweden's largest association for private equity investors and business angels. This thesis targets entrepreneurial firms that are in the start-up and expansion phase and thus in need of venture capital investment to grow. SVCA has a total of 830 portfolio firms with investments from 85 VC firms registered in their database (SVCA 2007). From this population, a sample was selected according to the following criteria.

- The companies had received at least one round of VC financing, and can thus be classified as portfolio companies. By using the SVCA to select the sample, this requirement was met.
- The portfolio firms are active in the high technology industry, as defined above.
- The portfolio company was privately held and actively operating.
- The portfolio firms are registered and/or have their main base of operations in Sweden.

Based on these criteria, a list of 293 names of entrepreneurial high technological firms was provided by the SVCA. It fell upon this author to find the contact information of these firms. In all, 219 specific addresses matching the criteria of the sample could be identified from searching online company registries and the homepages of these firms. Because the online survey tool used to distribute the questionnaire had strict anti-spamming regulations, it was not possible to send to general addresses<sup>4</sup>. 29 of these email addresses were invalid, leaving 190 surveys that reached their targets. Within a week, 39 respondents had answered the survey. After a week, an electronic reminder was sent out. In the following two weeks, a total of 86 respondents had submitted the survey. Of these 86 respondents, 19 had left the survey

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<sup>3</sup> KTH Innovation is an advisory function at KTH (the Royal Institute of Technology) that helps faculty and students at KTH to commercialize research results and inventions. KTH Innovation stimulates entrepreneurship, facilitates the innovation process, and assists in the verification of inventions from KTH

<sup>4</sup> General addresses: "info@ company name.", "contact @ company name"



uncompleted or failed to answer more than a third of the questions. These answers were discarded, leaving 67 completed surveys, a response rate of 35,3%. This may be considered a good response rate; Gaedke and Tootelian (1976) found that a 20% response rate can be expected of surveys of top executives, their time being particularly scarce and precious.

*Table 4: Survey Statistics Report*

	Count	Completed / Started	Completed / Viewed	Started / Viewed
<b>Completed</b>	67	77,91%	46,53%	
<b>Started</b>	86			59,72%
<b>Viewed</b>	144			

## Non-Response Analysis

A non response bias analysis was conducted by looking at the homepages of 35 of the companies that had not responded and registering which industry they belonged to. This sample of industry distributions was then plotted against the distribution of industries within the respondent's samples. No significant difference in distribution over the industries was detected, indicating that the chance of non-response bias concerning industry distribution among respondents and non respondents is small. No other non-response tests could be conducted due to the vast majority of data being based on the survey.

Among the 67 completed surveys, 4 surveys had 1 to 4 questions that had not been filled in. In one survey this was descriptive data about the company that could be completed by using data from the firm's homepage. In the cases of missing data in the gradient questions, the average value of the other was taken and used for the regression. Due to the small number of these missing values, it is unlikely that the missing values have affected the results.

## Respondents

The survey mainly targeted the CEOs of the entrepreneurial firms. In the case when the CEO will not be available to answer, answers from a founder or the chairman of the board may be accepted. The crucial criteria is that the member has seen the firm from an early stage and is will informed about all the activities of the firm.

Among the 67 respondents, 57 were CEOs, of which 19 also were founders and two had been there from the start (but were not founders). Among the non-CEO respondents, four were founders and members of upper management; one was a member of upper management that had been employed since the founding of the firm (but not a founder). The remaining five were all founders of which two were employed by the firms, two were chairman of the boards, and one was a board representative.

## Construct Operationalizations

The operationalization of the constructs of the models that are tested is discussed here. All non-objective measures were operationalized as multi-item scales. The constructs

and measurement items were to the largest extent drawn from existing research. As the non objective measures were about opinions, an interval scale was used (Malhotra 2004). All statement items were measured from 1 (completely disagree) to 5 (completely agree).

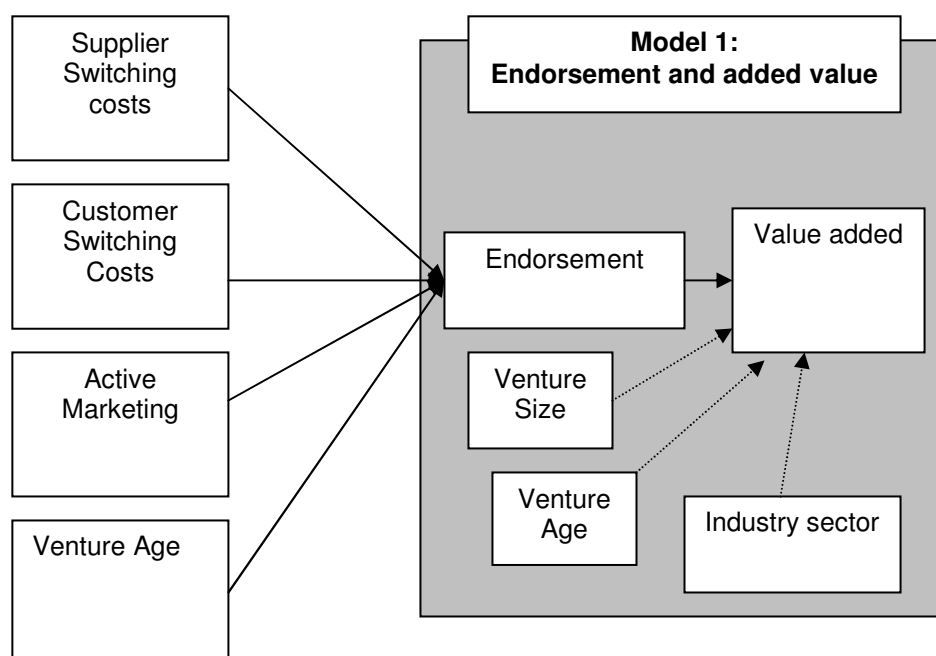
To test the added value of VC endorsement and the factors affecting the value added of endorsement, two models were used, named “Model 1: The value added model” and “Model 2: The endorsement model”.

### ***Model 1: The Value added model***

In the first model, the relationship between endorsement and added value was tested, with perceived added value as the dependent variable. Using the portfolio firm’s perception of added value was chosen for a number of reasons; firstly, previous research has proven a high correlation between perceived value added and objective measures of venture performance (Sapienza 1992, Sapienza & Gupta 1994); secondly, due to the high uncertainty of new ventures and the many factors influencing objective performances these may not be the most reliable for showing added value in the short run; finally, reviews of the literature examining analogous situations such as strategic alliances, joint ventures and performance in vertical customer-supplier relationships have argued and shown that in these cases the reliability of perceptual measures is generally good (Maula 2001:118).

The independent variable in Model 1 is endorsement, operationalized through the measurement items in the survey. In extension to this qualitative measure, we include control variables to see if these have any direct effect on the value added when tested together with endorsement. The selected control variables are size, age and industry sector.

*Figure 3: A graphical representation of relationships to be tested in Model 1*



## ***Model 2: The endorsement model***

In the second model, endorsement is the dependent variable. The independent variables in the endorsement model are:

- Customer switching cost
- Supplier switching cost
- Active marketing
- Venture age
- Controls: firm size, industry sector

Customer Switching costs and supplier Switching costs are operationalized using measurement items in the survey. If the product is coupled with high switching costs and a prolonged transaction process then a buyer will be reluctant to buy from a seller who is un-established and with whom there is great uncertainty whether that seller will still be in existence in the years to come. This phenomenon is particularly common in high technology industries, when there is uncertainty about the future need for the technology and the reliability of the technology itself. As has been shown by Swaminathan et al (2001) in the context of suppliers and Maula (2001) in the context of corporate venture capital, endorsement by a prominent actor is likely to make a potential partner or customer more prone to accept the risk of doing business with a new venture.

Active marketing is also operationalized using measurement items in the survey, as it can be assumed that a portfolio company will have been informed or at least have noticed that their investors are actively promoting them. Active marketing is argued to be important because of evidence from previous studies where added visibility is an important factor in interorganizational endorsement (Stuart 2001).

Age is measured in years based on the information from the survey and used as a proxy for uncertainty. This has intuitive appeal: the newer a company, the higher the uncertainty about the potential and future of the company. It is also an operationalization that has been used before; other studies investigating the effects of endorsement, such as Stuart (1999) and Stuart (2000), have used age as a proxy for uncertainty.

For details on the specific measurement items please see appendix B.

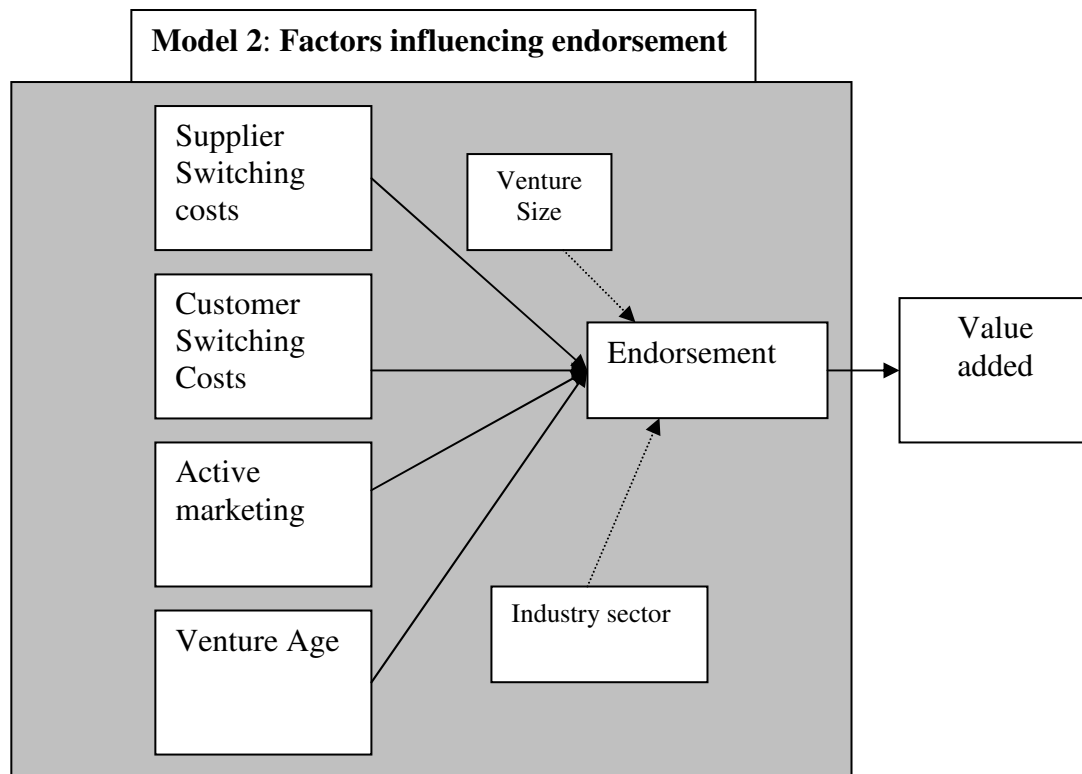


Figure 4: A graphical representation of the relationships to be tested in model 2.

## Results

This part aims to present a picture of the companies included in the analysis. First a descriptive analysis of the data is given, then the statistical analysis and the results from this is given.

### Descriptive Results

#### The firms

The surveyed firms varied in age from 2 to 22 year old. The mean age of the companies was 8 years. 68,2 % of the firms were between 8 and 3 years old in March/April of 2007.

Table 4: Firm age.

Firm founded	Number of Firms	Percent of Non missing
1985	2	3,03%
1986	0	0,00%
1987	1	1,52%
1988	0	0,00%
1989	2	3,03%
1990	0	0,00%
1991	2	3,03%
1992	3	3,03%
1993	1	1,52%
1994	2	3,03%
1995	1	1,52%
1996	3	4,55%
1997	2	3,03%
1998	3	4,55%
1999	7	10,61%
2000	8	12,12%
2001	8	12,12%
2002	5	7,58%
2003	7	10,61%
2004	7	10,61%
2005	3	4,55%
2006	0	0,00%
2007	0	0,00%
<b>Total</b>	<b>67</b>	<b>100,00%</b>

<b>Mean</b>	8,09
<b>Median</b>	7
<b>Standard Dev.</b>	4,93
<b>Min.</b>	2,00
<b>Max</b>	22
<b>N</b>	67

#### Size of firms at time of first VC investment: Employees and Revenue

The firms were small at the time of the first venture capital investment with 89.6% of the firms having 15 or fewer employees. The average number of employees was 7. The largest firm had 110 employees.

Size of firm at the time of first VC investment	Number of firms	Percent of non-missing		
0 employees	7	10,45%	<b>Mean</b>	7,3
1-5 employees	39	58,21%	<b>Median</b>	4
6-15 employees	14	20,90%	<b>Min</b>	0
16-30 employees	5	7,46%	<b>Max</b>	110
31-100 employees	1	1,49%	<b>N</b>	67
>100 employees	1	1,49%		
	67	100,00%		

Table 5: Size of firm at the time of the first VC investment.

Revenues were those stated by the survey respondents themselves. Over half of the firms had no revenues at the time of venture capital investment. On average the companies had 4,7 MSEK in revenues at the time of the VC investment. For the firms founded between 1985 and 1995, the average revenue was 19,1 MSEK, with 61,5% of these 13 firms having revenues of over 5 MSEK at the time of the first VC investment.

MSEK	Number of firms	Percent of Non-missing		
0	35	52,24%	<b>Mean</b>	4,7
0,1-1	12	17,91%	<b>Median</b>	0
1,1-5	10	14,93%	<b>Std. Dev.</b>	13,32
6 - 10	3	4,48%	<b>Min</b>	0
11-30	4	5,97%	<b>Max</b>	85
31-50	2	2,99%	<b>N</b>	67
>50	1	1,49%		
	67	100%		

Table 6: Yearly revenues at the time of the first VC investment

## Industries

As stated above, the thesis targeted companies operating in high technology sectors. The Biotechnology, Communications, Computer Software and Medical/Health firms together accounted for almost two thirds (65.7%) of the firms.

Industry Sector	Number of firms	Percent of non-missing
Biotechnology	10	14,93%
Chemical	3	4,48%
Communications	10	14,93%
Computer Software	12	17,91%
Energy/environmental	4	5,97%
Internet Specific	3	4,48%
Manufacturing/Mechanics	6	8,96%
Measurement technologies	2	2,99%
Medical/health	13	19,40%
Semiconductors/ other electronics	4	5,97%
<b>Total</b>	<b>67</b>	<b>100,00%</b>

Table 7: Industry Sectors

## Options at time of VC investment

The surveyed companies were asked whether they had other financing options when the decision to take in Venture Capital was made. A majority (71,6%) answered that they had no other financing options at the time. The 19 respondents that had other financing options were asked to state what these were. Nine (47,4%) of the respondents had access to public loans and conditional loans provided by organizations such as ALMI, NUTEK, Norrlandsfonden and Teknikbrostiftelsen i Uppsala. Six (31,6%) of the respondents had access to bank loans from private banks. Furthermore, six (31,6%) of the respondents stated that they had access to financing through private investors, such as business angels.<sup>5</sup>

The firms were also asked how many offers of venture capital financing they had to choose from at the time of the first round of financing. 53% of the firms had two or three offers to choose from, while 37,8% had only one offer.

Table 8: Number of venture capital financing offers to choose from in the 1<sup>st</sup> round of financing

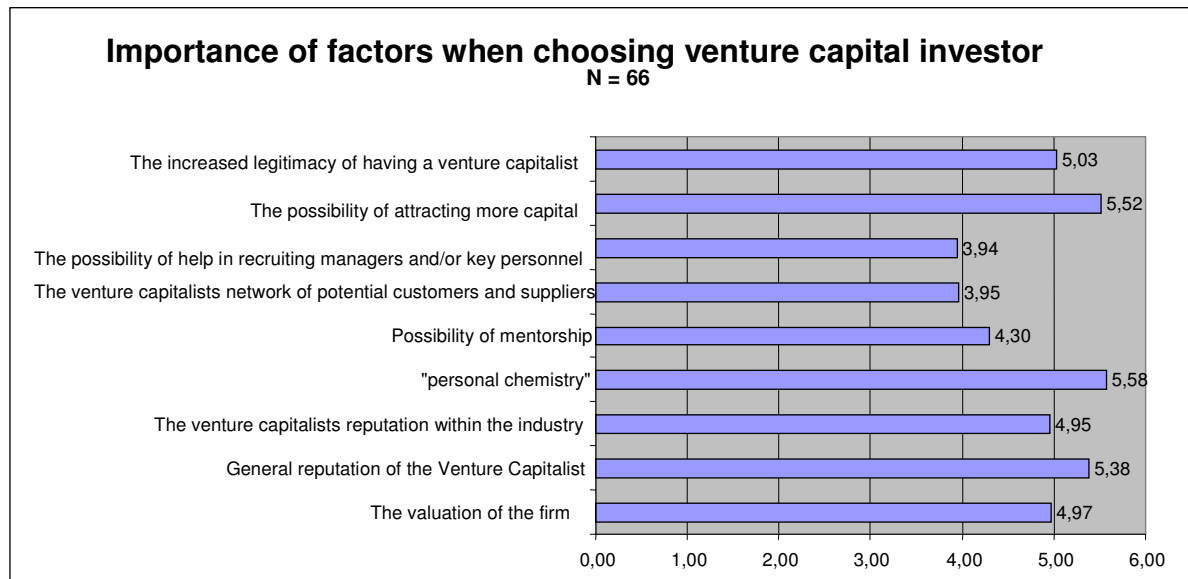
Number of offers	Number of firms	Percent of Non-missing
1	25	37,88%
2	25	37,88%
3	10	15,15%
4	4	6,06%
5	0	0,00%
> 5	2	3,03%
<b>Total</b>	<b>66</b>	<b>100,00%</b>

## Important factors when choosing venture capital

The respondents were asked to grade the importance of nine factors when choosing a venture capitalist investor, where 1 = not at all important and 7 = very important. Among the answering firms, "Personal chemistry", the possibility of attracting more capital, and the general reputation of the VC firm were the three most important factors. The possibility of recruiting management and/or key personnel and the network of potential customers or suppliers were the least important factors. The increased legitimacy of having a VC investor ranked fourth, slightly higher than the valuation of the firm, in terms of importance.

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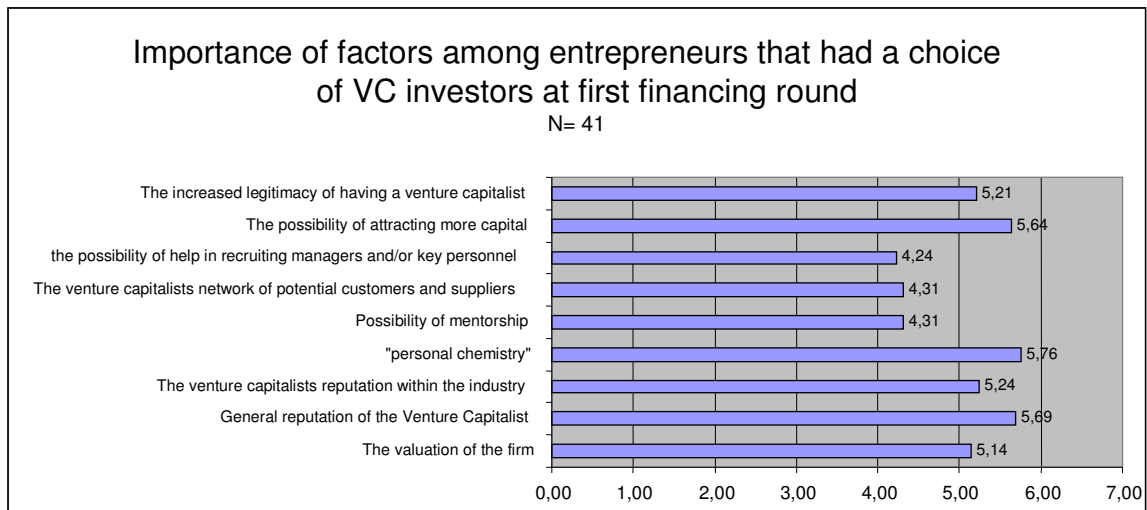
<sup>5</sup> It should be noted that the respondents could have several options of alternative finance. Therefore , the sum of the percentage is not 100%.



Graph 1: Importance of factors when choosing a venture capital investor, mean, all respondents.

When only the entrepreneurial firms that actually had a choice at the first round of financing were included, reputation of the VC firm became the second most important factor after personal chemistry. The possibility of acquiring more capital dropped to third place, while the increased legitimacy of having a venture capitalist remained in fourth place. No radical changes in the answers were observed between those that had an option of alternative financing and those that had not.

Graph 2: Importance of factors when choosing a venture capital investor, mean, entrepreneurs that had a choice.



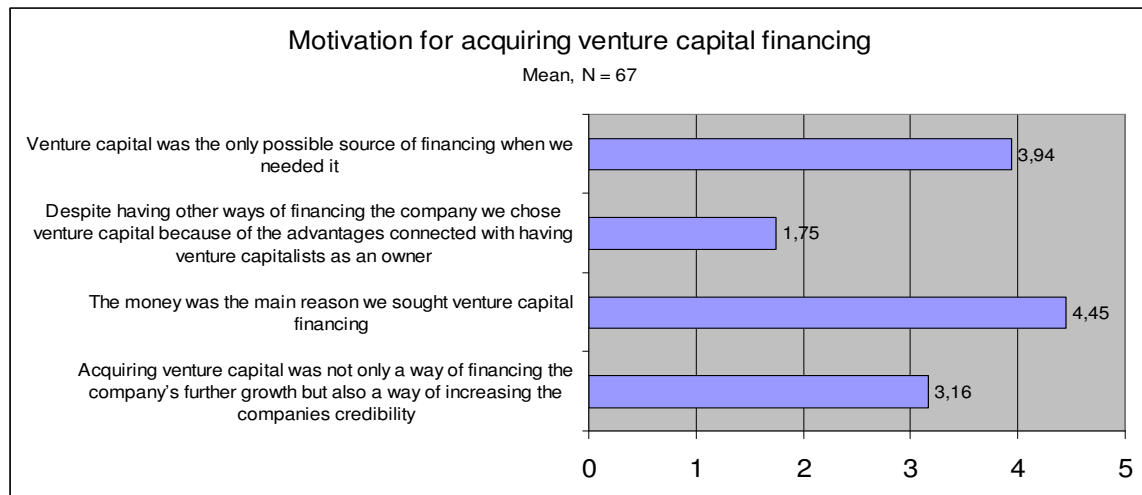
## Reasons for acquiring Venture capital

The survey found that 85% of the respondents agreed or agreed completely with the statement “ Money was the main reason for bringing in venture capitalists”. However, 43,3 % of the respondents also agreed or completely agreed with the statement “venture capital was not only a way to finance the continued growth of the company,



but also a way to increase the legitimacy of the firm.” In total 56 (83,6%) of the respondents also disagreed or disagreed completely with the statement “Despite having other options of financing, we acquired venture capital because of the benefits associated with it.” Among the respondents who actually had a choice of financing at the first financing round, 73,6 % disagreed or completely disagreed with this statement.

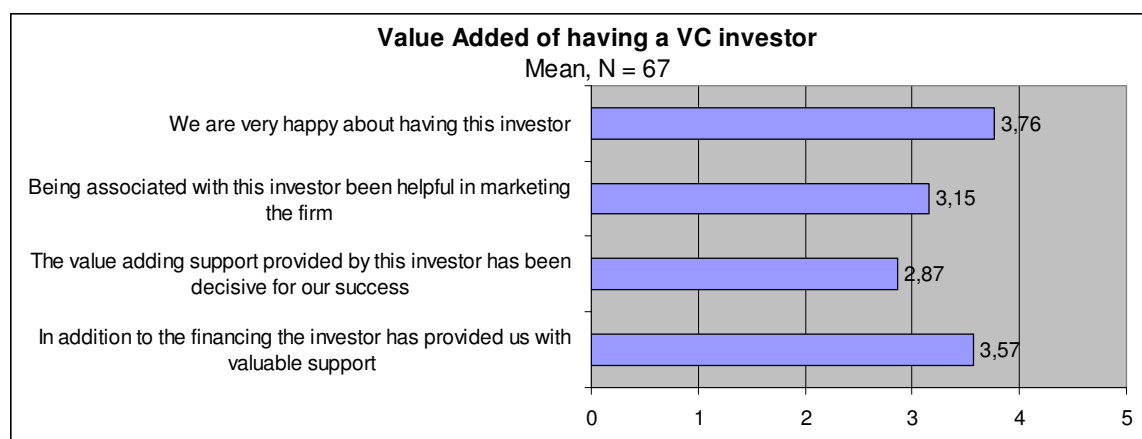
Graph 3: Motivation for acquiring venture capital financing.



## Value added of Venture Capital

Among the survey respondents, 61% agreed or strongly agree with the statement “In addition to the financing, the investor has provided us with valuable support”. Overall, the entrepreneurial firms seem generally happy with their most important venture capital investor, with 65,7% agreeing or strongly agreeing with the statement “We are very happy about having this investor”.

Graph 4: Value added of Venture Capital.



## Investors and financing

The survey showed that 36 (56,3 %) of the entrepreneurial firms agree or completely agree with the statement “we actively use our most important investors name when

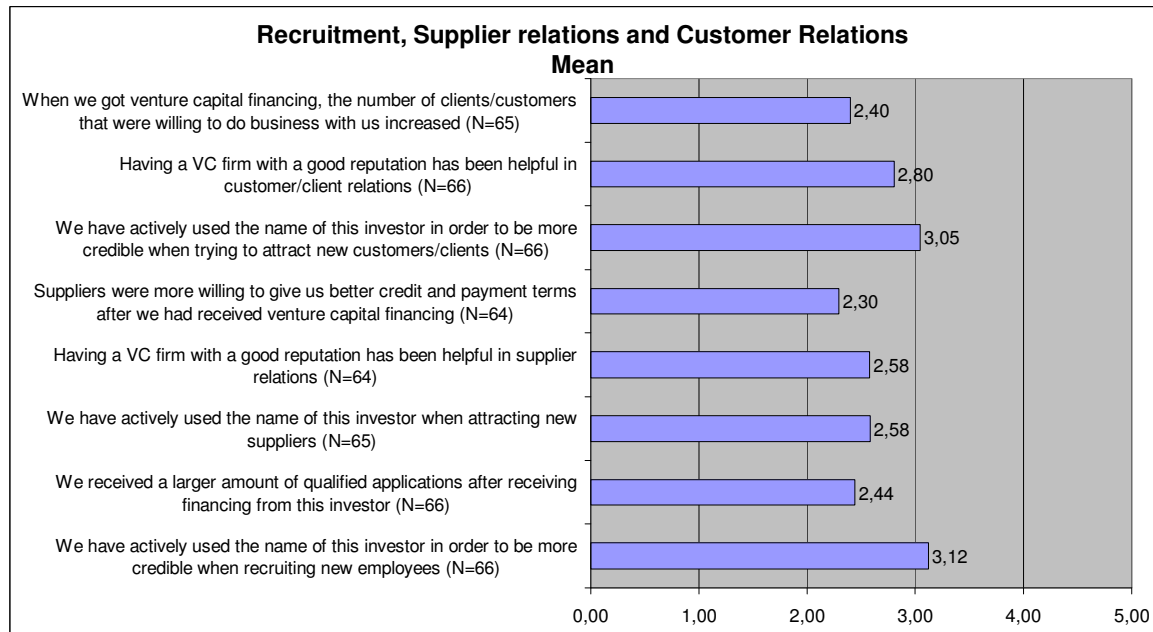
searching for new capital”. Similarly ,37 (57,8%) of the entrepreneurial firms agree or completely agree with the statement “Having an investor with a good reputation has been helpful when looking for new investors or recruiting new capital”.

### **Customer and supplier relations**

Among the respondents, 24 (35,8%) felt that the trust in the relationship with their suppliers improved when they acquired VC financing. On the other hand, only 12 (17,9%) said that the relationship itself had improved. All others stated that there had been no change in the relationship with their suppliers. A whole 43,3 % of the entrepreneurial firms reported that their clients trust in them had improved after having received VC financing. 22,4 % also said that their relationship with their clients had improved after receiving VC financing. The other respondents stated that their relationship with their customers remained unchanged after receiving VC financing.

34 respondents, or 52,3% disagreed or disagreed completely with the statement “We have actively used the name of this investor when attracting new suppliers”. Likewise, 50% disagreed or completely disagreed with the statement “Having a VC firm has been helpful in supplier relations.” A vast majority (84,3%) of the respondents did not agree or were neutral to the statement “Suppliers were more willing to give us better credit and payment terms after we had received venture capital financing.”

Support for the idea that a VC firm investment would improve trust and help attract new clients was generally weak, with only 39,4 % of the respondents agreeing or completely agreeing with the statement “We have actively used the name of this investor in order to be more credible when trying to attract new customers/clients”. On the other hand, 39,4 % of the respondents disagreed with the statement “Having a VC firm with a good reputation has been helpful in customer/client relations”, with a third of the respondents being neutral in the question. 49,2 % of the answering entrepreneurial firms disagreed or completely disagreed with the statement “When we got venture capital financing, the number of clients/customers that were willing to do business with us increased”.



Graph 5: Relationships affected by Venture Capital financing.

## Recruitment

48,5 % of the respondents agree or completely agree with the statement “We have actively used the name of this investor in order to be more credible when recruiting new employees.”. This can be compared to almost a fourth (24,2%) who completely disagree with the statement. On the other hand 54,6 % of the entrepreneurial firms disagree or disagree completely with the statement “We received a larger amount of qualified applications after receiving financing from this investor”.

## Marketing benefits

The results show that 46,3 % of the firms find that their VC investor actively markets them through word-of-mouth. However, 47,8% disagree or disagree completely with the statement “Our most important venture capitalist investor actively promotes our firm through its own publications such as magazines and industry publications.” Of the firms, 31,8 % agreed or completely agreed with the statement. “We are included and asked to participate in meetings with investors and other people in the industry arranged by our most important venture capitalist investor.” However, over half of the firms (52,2%) agree with the statement that their VC investor markets them on its homepage.

## Product Specificity

The results of the survey indicated that a majority of the firms dealt in products or services with high product specificity. For example, 71,2 % of the respondents agreed completely with the statement “Face to face discussions with customers are important when buying our products/services”. Furthermore, 51,5 % of the firms agreed or strongly agreed with the statement “It is expensive for customers to switch to or from using our products/services”. There were also results indicating that for some of the firms, there was a high degree of product specificity with products bought from their

suppliers. 61,2 % of the respondents agreed or agreed completely with the statement “We have suppliers from which buying products/services is a major and strategically important decision for us.” 41,8% also agree with the statement “We have suppliers whose products are very expensive to switch to or from”.

## Statistical analysis

The statistical analysis was done in four steps. First, the variables to be used in a multiple regression analysis are constructed. The dependent variables of model 1 and 2 were created by grouping measurement items and confirming the construct by examining Cronbach’s alpha. The independent variables in Model 2 were established using and exploratory factor analysis of certain measurement items. This was done to test the validity of the constructs. Then, the variables were run through a bi-variate correlation analysis to examine potential correlations between the variables. Finally a multiple regression analysis to test the models was done.

### *Variables in Model 1: The value added model*

#### Value added

As mentioned above the value added was measured using a multi-item scale that, by measuring the general satisfaction of the respondents, measured the value-added the venture capital investor provided the entrepreneurial firm. The construct was operationalized using four measurement items, presented in table 9

*Table 9. Measurement used in Value Added variable.*

<b>Measurement Items: Value Added variable</b>
In addition to the financing the investor has provided us with valuable support
The value adding support provided by this investor has been decisive for our success
Being associated with this investor been helpful in marketing the firm
We are very happy about having this investor

The descriptive statistics for the dependent variable in the value added model are presented in table 10 below.

*Table 10*

	<b>Mean</b>	<b>Median</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
Perceived value added	3,34	3,25	0,92	1,00	5,00	67

The Cronbach’s Alpha inter-item reliability coefficient for this construct was 0,817. This confirms that the validity of the construct is acceptable.

#### Endorsement

When a firm receives venture capital this has been argued to have a legitimacy enhancing effect on the firm. This increased legitimacy may facilitate existing relations and the creation of new relations with suppliers, investors, employees and customers. In this model, endorsement was operationalized using four measurement items presented in table 11 below

Table 11: Measurement Items used in Endorsement Variable.

<b>Measurement Items: Endorsement Variable</b>
We have actively used the name of this investor in order to be more credible when recruiting new employees
We have actively used the name of this investor in order to be more credible when raising money from other investors.
We have actively used the name of this investor when attracting new suppliers
We have actively used the name of this investor in order to be more credible when trying to attract new customers/clients

The descriptive statistic for the independent variable in the endorsement-value added model can be found in table 12 below.

Table 12

	<b>Mean</b>	<b>Median</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
Endorsement	3,08	3,25	1,14	1,00	5,00	67

The Cronbach's Alpha inter-item reliability coefficient for this construct was 0,816. This confirms the validity of the construct.

### Control variables:

Firm age was coded as years since founding according to the information the respondents provided in the survey. Firm Industry effects were controlled for in the multiple regression analysis by including dummy variables. Venture size was measured as number of employees at the time of the first venture capital investment and according to yearly revenues of the firm at the time of the first VC investment. All this was according to the information the respondents provided in the survey.

### Variables in Model 2: The Endorsement Model

In the Endorsement Model, the independent variables are customer-switching costs, supplier switching costs, marketing from the VC firms. The control variables are firm size, age, and industry sector. The descriptive statistics for these variables are presented below in table 13.

Table 13: Descriptive statistics for variables of Model 2: endorsement model.

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
Customer Switching Costs	4,05	0,89	1,00	5,00	66
Supplier Switching Costs	3,30	1,27	1,00	5,00	67
Active Marketing	3,06	1,06	1,00	5,00	67
Firm age (log)	1,94	0,61	0,69	3,14	67
Yearly revenues at time of first VC investment (standardized)	0,00	1,00	-0,36	6,03	67
Employees (standardized)	0,00	1,00	-0,50	7,04	67

### Exploratory Factor Analysis

In order to confirm that the observed measurement items adequately define the theoretical constructs in accordance with expectations, an exploratory factor analysis was conducted. Confirmatory factor analysis is used to test that the loadings of

measurement items on the factors and the number of factors are in accordance with what is to be expected on the premises of used theories.

The following criteria for establishing factors was used; only items with factor loadings equal to or greater than 0.60 on the primary factor and loadings less than or equal to 0.40 on any other factor were included.

Principal component analysis was used in the study. Other possible ways would have been component analysis or common factor analysis, but principal component analysis was used since it is the method commonly used in this domain of research (Maula 2001).

The exploratory factor analysis was conducted simultaneously for all the endorsement mechanisms. The CFA identified three factors, the correct number according to the groupings made when the survey was constructed. The measurement items loaded higher than 0,60 in the primary factor and lower than 0,40 and were thus in line with the inclusion criteria mentioned above. However, the Keyser-Meyer-Olkin (KMO) measuring of sampling adequacy for this construct was 0,678, which is below the 0,7 limit of what is generally acceptable. Because of this, the measurement item with the lowest factor loading was dropped from the analysis. The analysis was re-run, and the factors again loaded as predicted, this time with a KMO statistic of 0,712. Table 14 below presents the measurement items and factor loadings for the factors related to endorsement-model.

Table 14: Endorsement model measurement items and factor loadings.

<b>Measurement Items</b>	<b>Supplier switching costs</b>	<b>Customer switching Costs</b>	<b>VC marketing</b>
<b>Supplier Switching Costs</b>			
We have suppliers from which buying products/services is a major and strategically important decision for us.	<b>0,910</b>	0,081	0,000
We have suppliers whose products are very expensive switch to or from	<b>0,897</b>	-0,007	0,190
The strategically important products or services our suppliers provide us with involve making a major investment	<b>0,897</b>	0,035	0,219
Face to face discussions with customers are important when buying our products/services	<b>0,867</b>	0,050	-0,032
<b>Customer Switching Costs</b>			
Buying our products/services is a major decision for our customers	0,111	<b>0,901</b>	-0,071
Our products/services are very important for our customers	0,055	<b>0,890</b>	0,092
It is expensive for customers to switch to or from using our products/services	-0,028	<b>0,795</b>	-0,033
<b>VC firm marketing</b>			
Our most important venture capitalist investor actively promotes our firm through its own publications such as magazines and industry publications	0,126	-0,074	<b>0,775</b>
We are included and asked to participate in meetings with investors and other people in the industry arranged by our most important venture capitalist investor.	0,156	0,184	<b>0,718</b>
We are promoted on the web page of our most important venture capitalist investor	0,068	-0,085	<b>0,702</b>
Our most important venture capitalist investor actively promotes our firm through word of mouth	-0,049	-0,008	<b>0,875</b>
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. KMO = 0,712			

In order to reconfirm the validity of the construct, Cronbach's Alpha inter-item reliability coefficient for the factors was extracted. Alpha for the VC firm marketing construct was 0,774; for the customer switching cost it was 0,82; and for the supplier switching cost it was 0,918. These numbers confirm the validity of the construct.

### Control variables

Firm age was coded as years since founding according to the information the respondents provided in the survey. Firm Industry effects were controlled for in the multiple regression analysis by including dummy variables. Venture size was measured as number of employees at the time of the first venture capital investment according to the information the respondents provided in the survey.

## Multiple Regression Analysis

This study uses multiple linear regression analysis to test the proposed hypotheses. The general form of the multiple linear regression equations is  $y_j = a + b_1x_{1j} + b_2x_{2j} + \dots + b_nx_{nj} + e_j$ . Here,  $y_j$  = the values of the dependent variable explained in the regression;  $b_1, b_2, \dots, b_n$  = regression coefficients for  $x_{1j}, x_{2j}, \dots, x_{nj}$ ;  $x_{1j}, x_{2j}, \dots, x_{nj}$  = the observations of the independent variables,  $a$  = the constant; and  $e_j$  = is the error term. The error term represents observed residuals from the process of fitting the regression line to the set of observations. Ordinary least squares regression (OLS) was used in this analysis.

## Assumptions

For Multiple linear regression analysis to be possible certain assumptions concerning the nature of the phenomenon and the quality of the data have to be fulfilled. The following seven assumptions have been taken into consideration when analyzing the data. The assumptions and correction methods are as found in Hair et al. (1998):

1. *Metric data:* Data used in multiple linear regression has to be metric or transformed into metric form. To ensure this, the statistical properties of the variables were examined. Variables such as firm industry sector have been included as a dummy variable.
2. *Linear relationships between dependent and independent variables.* Linearity was searched for by scanning residual plots for curvilinear patterns. When necessary, the data was transformed to achieve linearity. For the variable “founding year”, the natural logarithm of the data was used.
3. *Normal distribution of the dependent variable.* The dependent and independent variables were tested using the Normal P-P plot. If found to be distributed according to another distribution, the variables were transformed using logarithmic transformation.
4. *Constant variance of the error term.* This assumption must necessarily be fulfilled when an OLS regression. Heteroscedasticity was searched for by plotting the standardized residuals of the regression against the variables. No cases of heteroscedasticity were detected.
5. *Independent Error terms:* This was confirmed by plotting the residuals against any possible sequencing variable and checking that the pattern appeared random. The error terms of the regressions were found to comply.
6. *Low multicollinearity:* If multicollinearity is high, this means that the independent variables are highly correlated which makes it difficult to determine the impact of each independent variable. This assumption is especially important for the purposes of this study since it aims to determine the nature and strength of the relationship between different variables. Two indicators were examined to check for multicollinearity; variance inflation factor (VIF) and tolerance value. A limit was set at a tolerance value of 0,10. This corresponds to VIF values of above 10. The variables were found to have acceptable levels of multicollinearity.
7. *Sample size:* The rule as suggested in Hair et al (1998) to have 5 times more observations as independent variables was respected. The sample of 67



observations is judged to be small enough as not to make the regression analysis overly sensitive.

## Interpretation of Results

A t-test is used to test the statistical significance of each regression coefficient  $b_j$ . In order to allow for comparison between the independent variables standardized coefficients are reported. The coefficient of determination ( $R^2$ ) and the adjusted  $R^2$  value was used to measure the overall predictive fit of the model. The statistical significance of the overall model is indicated by the F-test of the analysis of variance. When the significance level of the test statistic is below 0.05, the model can be considered to be significant.

## Regressions to be tested

Using the variables found above, multiple regression analysis is used to test the hypothesis formulated in the above model. After the confirmatory factor analysis, the summated scales were used in testing the hypothesized relationship. The variables were created using summated scales. This method was chosen in order to retain all information from the measurement objects, information that would be lost if one were to use factor variables of the factor analysis.

## Model 1: Value-added model

### Correlation amongst variables: Model 1

The table below presents the correlations among the variables used in model 1. Because of the nature of the variables (ratio scale variables and interval scale variable), Pearson's correlation coefficients were used. Running the correlation with at two-tailed test of significance yielded no different results.

Table 15. Variable correlations for Model 1.

Variable	1	2	3	4	5
<b>1. Value added</b>	-				
<b>2. Endorsement</b>	,690(**)	-			
<b>3. Number employees 1<sup>st</sup> VC invest (standardized)</b>	-0,152	-0,150	-		
<b>4. Yearly revenues at time of first VC investment (Standardized)</b>	-0,175	-0,095	,871(**)	-	
<b>5. Firm age (Years, log)</b>	-,229(*)	-,242(*)	,402(**)	,351(**)	-
<b>6. Biotechnology (Dummy)</b>	0,178	0,083	-0,120	-0,143	-0,159
<b>7. Communications (Dummy)</b>	0,178	,297(**)	-0,024	-0,059	-0,032
<b>8. Computer - Software (Dummy)</b>	-0,161	-0,187	,363(**)	,223(*)	0,008
<b>9. Internet Specific (Dummy)</b>	-0,139	-0,079	-0,045	-0,072	0,001
<b>10. Medical/Health (Dummy)</b>	0,078	0,120	-0,189	-0,148	-0,069
<b>11. Semiconductor/ Other electronics (Dummy)</b>	-,248(*)	-,283(*)	0,059	0,062	,262(*)
<b>12. Mechanical (Dummy)</b>	-0,144	-0,091	0,058	,271(*)	,254(*)
<b>13. Chemistry (Dummy)</b>	0,078	-0,143	-0,052	-0,067	-0,121
<b>14. Environmental (Dummy)</b>	0,028	0,137	-0,062	-0,057	-0,025

\*\* Correlation is significant at the 0.01 level (1-tailed); \* Correlation is significant at the 0.05 level (1-tailed).

As could be expected, the two different variables measuring firm size were highly correlated. In order to minimize collinearity in the regression only “Yearly revenues at time of the first VC investment” was picked since it had a lower degree of correlation with the “firm age” variable. Endorsement was found to be highly and significantly related to value added. Furthermore, it can be noted that firm age was found to be negatively related to endorsement and value added.

## Regression analysis

The form of the regression to test model 1 (the relationship between endorsement and added value) is:

$$Y_{valueadded} = \alpha + \beta_1 \chi_{endorsement} + \beta_2 \chi_{YRrev1stVCinvest} + \beta_3 X_{employees} + \beta_5 D_{biotech} + \beta_6 D_{communications} + \beta_7 D_{software} + \beta_8 D_{internet} + \beta_9 D_{medecine} + \beta_{10} D_{semiconduct} + \beta_{11} D_{mechanic} + \beta_{12} D_{chemical} + \beta_{13} D_{environment} + \varepsilon_i$$

The dependent variable and the first independent variable were summated scales of the objects mentioned above. The independent variable “firm age” was the natural log of the age of the firms in years. Dummy variables for 9 of the 10 industries were also created. Two variables were used to measure firm size; employees at the time of the first VC investment, and yearly revenues at the time of the first VC investment. These variables were standardized in order to be usable since many firms had reported “0” for these variables.

In the first regression of Model 1 in the format above, the endorsement variable was found to have a significant and positive coefficient. This is in accordance with the hypothesis postulated. However, the coefficient for the firm age variable, the firm size variable and the industry variables were found to be insignificant. Therefore, a second regression was run using endorsement, firm age, and yearly revenues at the time of the first VC investment. The format for this regression was:

$$Y_{valueadded} = \alpha + \beta_1 \chi_{endorsement} + \beta_2 \chi_{firmage} + \beta_3 X_{YRrev1stVCinvest} + \varepsilon_i$$

In this second regression, all the coefficients had the predicted sign but still only the coefficient for “endorsement” was significant.

The results of the Regression test of Model 1 are displayed in table 16 below.

Table 16: Results from Model 1 regression.

Independent variables	Predicted direction	Dependent variable: Value added Standardized Beta
<b>Hypothesis 1: Endorsement</b>	+	0,675***
<b>Control Variables:</b>		
Firm age		-0,25
Yearly revenues at time of first VC investment		-0,101
<b>Model Indices</b>		
$R^2$		0,489
Adjusted $R^2$		0,465
F		5,542***

\*\*\*  $p \leq 0,001$

Hypothesis 1 predicted a positive relationship between VC firm endorsement and value added. This hypothesis receives support from the regression analysis done for model 1. All VIF statistics for the model were 1,256 or lower and tolerance was 0,796 or above indicating that multicollinearity is not likely to be present. This is further confirmed by the Condition index which was 10,720. None of the control variables in the regression model were significant.

## Model 2: Endorsement model

The form for the regression to test model 2 is:

$$Y_{endorsement\ t} = \alpha + \beta_1 X_{VCmarket} + \beta_2 X_{spplyswitch\ cost\ t} + \beta_3 X_{custswitch\ cost\ t} + \beta_5 X_{firmage} + \beta_6 X_{YRrev\ 1stVCinvest} + \varepsilon_i$$

The dependent variable “endorsement” is a summated scale of objects explained previously. Likewise, the independent variable “VCmarket, “spplyswitchcost” and “custswitchcosts” are the summated scale for VC firm marketing, supplier switching costs and customer switching costs respectively. These three variables were created by using factor analysis as described in an above section. “Firmage” is the natural logarithm of the number of years the firm has existed and the “YRrev1stVCinvestment” is the standardized form of the yearly revenues the firm had at the time of the first capital investment.

## Correlation amongst variables: Model 2

The table below presents the correlations among the variables in Model 2. Because of the nature of the variables (ratio scale variables and interval scale variable), Pearson’s correlation coefficients were used. Running the correlation with at two-tailed test of significance yielded no different results.

Table 17: Correlations in model 2.

		Endorsement	VCmarket	spplyswitc hcost	custswitch cost	firmage	YRrev1s tVCinve st
Endorsement	Pearson Correlation	1					
	Sig. (1-tailed)						
	N	67					
VCmarket	Pearson Correlation	,444(**)	1				
	Sig. (1-tailed)	,000					
	N	67	67				
spplyswitchcost	Pearson Correlation	,301(**)	,195	1			
	Sig. (1-tailed)	,007	,057				
	N	67	67	67			
custswitchcost	Pearson Correlation	,224(*)	,020	,133	1		
	Sig. (1-tailed)	,034	,435	,141			
	N	67	67	67	67		
firmage	Pearson Correlation	-,242(*)	-,088	,115	-,005	1	
	Sig. (1-tailed)	,024	,240	,177	,485		
	N	67	67	67	67	67	
YRrev1stVCinves t	Pearson Correlation	-,095	-,017	,063	,071	,402(**)	1
	Sig. (1-tailed)	,222	,444	,307	,284	,000	
	N	67	67	67	67	67	67

\*\* Correlation is significant at the 0.01 level (1-tailed),

\* Correlation is significant at the 0.05 level (1-tailed).

The correlations indicate that Venture capital marketing of the firm, supplier switching costs, customer switching costs, and firm age are all significantly correlated with endorsement. Among the independent variables there was no correlation except between firm age and Yearly revenues the year of the first venture capital investment.

## Regression analysis: Model 2

First the regression in the form as shown above was run. All independent variables were found to be significant but the control variable Yearly revenues at time of first venture investment was not. Therefore, this variable was dropped from the regression form. The regression was re-run without this variable. The results from this regression test are shown below:

Table 18: Results from regression analysis of Model 2.

<b>Independent variables</b>	<b>Predicted direction</b>	<b>Dependent variable: Endorsement</b>
		<i>Standardized Beta</i>
<b>Hypothesis 2:</b> Firm age	-	-0,225*
<b>Hypothesis 3:</b> Customer Switching costs	+	0,186**
<b>Hypothesis 4:</b> Supplier Switching costs	+	0,231**
<b>Hypothesis 5:</b> VC firm marketing	+	0,375***
<b>Model Indices</b>		
$R^2$		0,334
Adjusted $R^2$		0,28
F		6,128***

\*\*\* $p \leq 0,001$ , \*\* $p \leq 0,05$ , \* $p \leq 0,10$ . One-tailed.

The standardized beta coefficients are shown in table 18. The significance tests for the hypothesized tests were all one-tailed. All variables in the regression were entered simultaneously. Multicollinearity was checked for by examining the tolerance levels, variance inflation factors (VIF) and condition index. Tolerance levels were all above 0,9 and all VIF statistics were 1.08 or lower. The condition index was 16,902. These factors indicate that multicollinearity should not cause any large problems in the regression analysis.

Hypothesis 2 predicted that there would be a negative relationship between the age of the entrepreneurial firm and endorsement. This hypothesis received support from the regression analysis of Model 2. The age of the venture is significantly negatively related to endorsement.

Hypothesis 3 predicted that there would be a positive relationship between customer switching costs and endorsement. This hypothesis was supported by the regression tests done on Model 2, which found that customer switching costs are significantly positively related to endorsement. Similarly, Hypothesis 4 predicted a positive relationship between supplier switching costs and endorsement. The regression tests done on Model 2 supported this hypothesis, finding that supplier switching costs are significantly positively related to endorsement.

Finally, hypothesis 5 predicted that the endorsement benefit is positively related to the degree in which the VC firm markets the company actively. This hypothesis gains some support in the regression tests of model 2, where a highly significant positive relationship was found between the VC firm actively marketing the entrepreneurial firm and endorsement. This hypothesis is more rigorously tested in the test of mediator effects run in the next chapter below.

The regression test of Model 2 found the model to be highly statistically significant, with a F statistic of 6,128, significant at the  $p \leq 0,001$  level. For a commentary and discussion on the  $R^2$  and adjusted  $R^2$  of Model two please refer to the critique section.

In passing it may be noted that an additional separate regression was run testing the dummy variables for each industry on “endorsement” as the dependent variable. None were found to be significant

### ***Test of mediating effects:***

#### **Endorsement mediating the effect of VC marketing on value added**

In order to test whether VC marketing adds value to the entrepreneurial firm through endorsement, multiple regression analysis was used to test the path of the relationship between the variables. A test as described in Baron & Kenny (1986) was conducted to see the extent to which the endorsement variable carries the influence of the VC marketing variable to the value added variable. This was done in three steps: The first step involved running a regression with value added as the dependent variable and VC marketing as the independent variable. In the second step, the endorsement variable was set as the independent variable and the value added variable was set as

the independent variable, as had been done in model one but without the control variables. In the third step a regression was done with the endorsement variable and the VC marketing variable as independent variables and the added value variable as the dependent variable. If the endorsement variable completely mediates the influence of VC marketing on value added, the effect of VC marketing on value added controlling for endorsement should be zero. However, although small and less significant than the endorsement coefficient, the VC marketing coefficient was still highly significant. Still, the coefficients throughout the regressions all had positive signs, indicating that partial mediation is present. This gives support for Hypothesis 5, that the VC firm's active marketing of its portfolio firm is positively related to value added through endorsement.

Table 19: Results of Mediation test.

	Dependent variable: Value added	Dependent variable: Endorsement	Dependent variable: Value added
<b><u>Independent variables:</u></b>			
Active VC marketing		0,444***	0,239*
Endorsement	0,69***		0,584***
<b><u>Model indices</u></b>			
$R^2$	0,477	0,197	0,522
Adjusted $R^2$	0,469	0,185	0,508
F	59,183***	15,954***	35,012***

\*\*\* $p \leq 0,001$ , \* $p \leq 0,05$ , One-tailed.

## Summary of the Results

The results of the regression analysis of the models are presented in table 20 below. All proposed hypotheses were supported by the regression analysis.

Table 20: Summary of the results.

Hypothesis	Result: Multiple Regression analysis
<b>H1:</b> The value added benefits to the portfolio company are positively related to the perceived endorsement effect of the Venture capital firm	Supported
<b>H2:</b> The endorsement from VC backing is stronger the younger the portfolio firm.	Supported
<b>H3:</b> The added-value of VC endorsement is stronger the greater the customer Switching costs.	Supported
<b>H4:</b> The added-value of the VC endorsement is stronger the greater the supplier switching costs.	Supported
<b>H5:</b> Active VC firm marketing of its portfolio firm is positively related to value added through endorsement	Supported

## Reliability and Validity Analysis

Two dimensions of the reliability of the study and three dimensions of the validity of the study are also discussed. The issues of common method variance is also treated. Lastly, the generalizability of the study is discussed.

### **Reliability**

Reliability refers to how close the measurement values are to their “true” values, i.e. the extent to which the measures are free from random error (Malhotra 2004:277).

**Reliability of the Empirical Data:** In order to ensure the reliability of the single respondent, self-reported data collected from the respondent of the entrepreneurial firms, several measures were taken. Firstly, the survey targeted those who could be expected to be the best informed on the relationship between the firm and its investors and the investors’ influence on firm performance: CEOs and founders having followed the firm from its founding. Secondly, the survey instrument was repeatedly re-designed and revised based on consulting from entrepreneurs, analysts from the Swedish venture capital association, and managers from Swedish entrepreneur associations. The survey was also pre-tested on one CEO and one founding CTO of two different entrepreneurial firms. These measures were done to assure that the respondents would be knowledgeable about the issues covered by the questionnaire and have no problems understanding the questions. Thirdly, the quality of the obtained responses was good; only 1,4 % of the measurement items used in the survey were missing values. This suggests that the influence of missing values on the results is insignificant.

**Reliability of the Constructs:** The reliability of the constructs was examined by testing the inter-item reliability of the constructs. This refers to the degree to which the measurement items in the multi-items scales are correlated with each other, thus reflecting the degree to which the items represent a common latent unobserved construct (Hair et al. 1998). Cronbach’s alpha was used to measure the inter item reliability of the multi-item constructs. The lowest observed Alpha was 0,774, indicating that the constructs appear to be reliable. The Alphas for all the constructs used are summarized in table 21 below.

Table 21: Cronbach’s Alpha for all constructs.

Construct	Number of measurement items	Cronbach’s Alpha	N
Perceived value added	4	0,817	67
Endorsement	4	0,816	67
Customer Switching Costs	3	0,82	66
Supplier Switching Costs	4	0,918	67
VC Marketing	4	0,774	67

### **Validity**

Validity is the extent to which a scale or set of measures accurately represents the concept of interest (Hair et al. 1998). Validity can be divided into three dimensions; face validity/content validity, construct validity and criterion related validity:

**Face validity:** Face validity can be described as the extent to which a construct is in line with the generally accepted understanding of the related concept. It is likewise the systematic evaluation of how well the content of a scale represents the measurement task at hand (Malhotra 2004). The face validity was given due diligence in the following steps: First, a review of relevant literature was carried out to understand the relevant concepts. Then, the measurement items and constructs were developed on the foundations of previous research as far as possible. Finally, the survey was developed in close collaboration with, entrepreneurs and people working actively with venture capital and entrepreneurs. These measures speak for the good face validity of the paper.

**Construct validity:** Construct validity measures to what extent a construct is measuring the concept it is supposed to measure (Malhotra 2004). The exploratory factor analysis that was done confirmed the unidimensionality of the multi item constructs in the endorsement model. It found that all measurement items loaded 0,714 or higher on their primary factor. Thus the measurement items surpassed the 0,7 which may be considered a threshold value for a sample of 67 (Hair et al 1998). Furthermore, the paper used earlier validated measurement items and constructs whenever possible. *Discriminant validity* is the extent to which a measure does not correlate with other constructs from which it is supposed to differ (Malhotra 2004). In the factor analysis, the measurement items loaded 0,22 or below on items other than their primary factor, indicating that discriminant validity is acceptable in this study.

**Criterion validity:** Criterion related validity reflects the degree to which the result are in harmony with what could be expected based on theory and previous results. The hypothesis test is a way to measure the predictive validity, a dimension of criterion validity. Support for the hypotheses therefore indicates good criterion validity.

## **Common Method Variance**

Common method variance is the variance that is attributable to the measurement method rather than to the constructs the measures represent. This can affect the validity of the conclusions about the relationships of the measures (Podsakoff et al. 2003). Common Method bias may result when the predictor and criterion variable are obtained from the source, from the measurement items themselves, from the context of the items within the measurement instrument, and/or the context in which the measures are obtained. In this study, common method variance was minimized using the following techniques as recommended by Podsakoff et al. (2003): First, The respondent's answers were anonymous which made their answers less likely to be more socially desirable and consistent, two sources of method bias. Secondly, extreme care was taken when constructing the scale items to reduce item ambiguity by defining terms keeping questions precise and simple, and avoiding complicated syntax. Thirdly, the questionnaire contained few items of social desirability and demand characteristics, which may otherwise have produce spurious relationships that hide the true relationships between variables. Fourthly, the questionnaire was designed to psychologically separate the measurement items of the predictor and criterion variables; this was done by dividing up questions over four consecutive windows and classifying the measurement items under headings and different color



schemes. The respondent could only move forward in the survey and was therefore unable to look at previous answers to confirm the consistency of their answers which may otherwise be a source of measurement bias. Because the survey was and the measurement items were constructed this way, common method variance is believed to have been minimized

### ***Generalizability***

The generalizability, or representativeness, of the study refers to the extent the results can be generalized to other contexts and to the extent the results of the study represent the whole population. This paper argues that the results found are in part driven by cultural factors by shape of the characteristics of the Swedish entrepreneur and financial system. The results, especially those concerning the preferences of the entrepreneurs on VC financing, will most likely be different in other cultural contexts. On the other hand, the supported hypotheses on factors influencing endorsement should hold in other cultural contexts since they were derived on theories mainly originating in another cultural context (the US) and yet were found to hold in the Swedish context. The relatively high response rate indicates that the answers should be representative of the sample population.

## Discussion and Conclusion

### *Discussion of the results*

This section answers the research questions the paper set out to answer, based on the survey responses.

### ***Does the Venture Capital firm add value to a portfolio firm by increasing its legitimacy?***

The data collected confirms with the finding of previous studies in finding that Venture Capital firms do add value to their portfolio firms; a majority (61%) of the entrepreneurial firms agree or strongly agree with the statement “In addition to the financing, the investor has provided us with valuable support”. The regression analysis also found endorsement and value added to be strongly and significantly positively related. The findings of the study thus indicate that a venture capital firm does add value to its portfolio firm by increasing its legitimacy.

### ***How does added legitimacy add value to the portfolio firms?***

Table 22. Summary: How does added legitimacy add value to the portfolio firms?

Positive changes in relationships after having received VC investment.				
Relationship	Investors	Suppliers	Customers	Potential employees
<b>Support for value added through legitimacy</b>	Majority find it helpful when recruiting new capital	Around 1/3 agree trust in existing relationship improved	Around 2/5 agree trust in relationship improved	Around 1/2 actively use VC investor name when recruiting
	Majority use VC investor name actively when recruiting new capital	Around 1/5 agree: existing relationships improved	Around 1/4 agree existing relationship improved	Around 1/5 agree they received more qualified applications
		Around 1/4 agree has been good and helped relationship	Around 2/5 actively use VC investor name to build confidence/attract new customers	
		Around 1/6 agree getting better credit and payment conditions	Around 1/4 agree has been good and helped relationship  Around 1/5 agree number of customers increased	
<b>Conclusion: The role of legitimacy and added value.</b>	Evident value added. The legitimacy of the first investment is a valuable asset when finding new investors.	Value added in parts. Evidence for better payment terms is limited.	Significant evidence for value added in trust. Limited evidence for increase in customers	Evidence of value through decreased uncertainty

As mentioned in the beginning of the thesis, the posed research question “how” has two dimensions. The first dimension looks at what parts of the operations of the firm benefit from the added legitimacy, while the second dimension looks at what activities the VC firm engages in that affect its endorsement.

The first dimension of the question is easiest answered by looking separately at the different parts of the firm’s operations: the relationships with investors, suppliers, customers and potential employees. Table 22 summarizes how and to what extent the gained legitimacy affects the entrepreneurial firm’s relationships with investors, suppliers, customers and potential employees.

The most significant value added from the VC investor comes from the increased legitimacy gained vis-à-vis other investors. In the other relationships, there is some evidence that suggests that the increased legitimacy has reduced uncertainty and lowered transaction costs through increased trust. There are instances when the increased legitimacy has led to direct benefits, such as an increased number of customers and better credit terms; however, these cases were relatively few in the sample of firms investigated.

### **VC activities that affect the added value of endorsement**

Marketing was targeted as one of the factors that affect the added value of endorsement. The results of the survey show that there are VC firms that actively market their portfolio firms but that the phenomena is not ubiquitous. However, the regression analysis indicated that the active VC marketing positively affected value added through endorsement. This provides evidence that VC firms that actively market their portfolio companies do add value.

*Table 23: Percentage of firms being marketed by their main VC investor*

<b>Active marketing measures taken by VC firm</b>	<b>Percent of surveyed firms</b>
VC investor actively markets them through word-of-mouth	46,30%
VC investor promotes the firm proper publications such as magazines and industry publications	26,50%
Firm is asked to participate in meetings with investors and other people in the industry arranged by most VC investor	31,80%
Marketed on VC firm's homepage	52,20%

### ***What factors affect the process of added legitimacy?***

This paper used theory to propose four factors that affect endorsement: customer switching costs, supplier switching costs, the active marketing of the venture capital firm, and firm age. The regression analysis supported these suggested relationships. All coefficients were in the direction as predicted and all were found to be significant. However, the  $R^2$  statistic was relatively low for the endorsement model, indicating there are other factors explaining the variance in endorsement. It can therefore be concluded that the four abovementioned factors do affect endorsement, but that it appears that there are other factors that affect endorsement as well.

## ***What are Swedish entrepreneurial firm's attitudes towards the legitimacy adding effects of venture capital?***

*Table 24: Evidence on the importance of legitimacy for entrepreneurial firms*

<b><i>Indicators Legitimacy is an important aspect of VC</i></b>	<b><i>Indicators Legitimacy is NOT an important aspect of VC</i></b>
<p>43,3 % of entrepreneurial firms agree or completely agreed with the statement that venture capital was not only a way to finance continued growth of the firm, but also a way to increase the legitimacy of the firm.</p> <p>Three out of four most important factors when choosing VC investors are associated with legitimacy: the possibility of attracting more capital, VC firm reputation and the increased legitimacy of having a VC investor. All these factors rank higher than valuation of the firm.</p>	<p>Of the over <math>\frac{3}{4}</math> ths of the respondents that had the choice of several VC financiers and/or had other options of financing, 77,4 % denied acquiring VC because of the benefits associated with it.</p> <p>85% of the respondents agreed that money was the main reason for bringing in venture capitalists</p> <p>For 76,5 % of the respondents, VC was the only possible source of capital when they needed it.</p>

The results from the survey produced a complex and somewhat contradictory picture of Swedish entrepreneurs' attitudes towards the legitimacy aspect of acquiring VC. According to the answers, most entrepreneurs agree that the main reason for obtaining VC financing is money. However, the cumulative ranking of the factors entrepreneurs consider most important when choosing VC investors, the valuation of the firm only comes in 5<sup>th</sup> place. A tentative explanation for this contradictory result is given below based on the evidence of the characteristics of the Swedish entrepreneur.

Giving up equity for cash is the least attractive financing option for the Swedish entrepreneur (Cressy and Olofsson 1996). However, when this is the option chosen, the Swedish entrepreneur does not change into the "economic man" focusing solely on the pecuniary aspects of the VC deal. Rather, the "softer" aspects of VC financing, legitimacy and personal chemistry, become the most important factors when considering which VC investor to pick. One could speculate that the independent- and freedom-loving Swedish entrepreneur is unwilling to admit gaining benefits from associating with a prominent VC firm; that the Swedish entrepreneur so highly values her independence that showing that she needs others for the success of her venture becomes a forbidden thought, incompatible with her self-image. In short, legitimacy plays an important role, but since directly recognizing the need and value of legitimacy is equivalent to admitting being dependent on others this thought is automatically rejected by the Swedish entrepreneur.

**Most important factors when considering VC financing:**

1. "Chemistry" with investor
2. Overall reputation of investor
3. The possibility of raising additional financing
4. Gained legitimacy of attaining VC
5. Pre-money valuation
6. Reputation of investor in your industrial sector
7. Mentoring
8. Contacts with key customers or suppliers
9. Recruiting managers and key employees

Ranking based on cumulative mean of responses from all respondents

*Table 25: Most important factors when considering VC financing.*

In fact, the ranking of factors of VC investment can to a large part be understood in light of the Swedish entrepreneur's motivation for being an entrepreneur. In first place is personal chemistry, which possibly suggests that the entrepreneur sees the firm as an extension of herself, and thus places great importance on personal judgment and "gut feeling" when choosing whom to associate with. The following three can all be connected to legitimacy, either through the effects of increased legitimacy (ability to attract more capital), a possible factor influencing legitimacy (the reputation of the VC firm) or legitimacy in its own right. Furthermore, the on average most unimportant factors when considering VC financing among the entrepreneurs all concern the active involvement of the VC firm in the operations of the entrepreneurial firm: the possibility of mentorship, the venture capitalist's contacts with potential suppliers and customers, and the possibility of getting help in recruiting managers and key personnel. All these have to do with the VC firms actively participating in the running of the firm business. Not surprising, then, that the Swedish entrepreneur who wants to be free and independent ranks these the least important factors when choosing VC investor; they don't want the VC capitalist to meddle. The CEO in the Evergreen case summarized the attitude: "If the venture capitalist wants to start getting involved in the daily operations of the firm, you have to cut then and there." This finding is especially remarkable viewed from the perspective that the help with the operations, including mentorship and use of networks, are the areas which have been identified as the major domains in which the venture capitalist normally adds value (Sapienza et al 1996, Fredriksen 2003, Sutton 2006). The results show that the influence of local culture on the added value of VC financing for entrepreneurial firms is not to be underestimated.

In summary, it may be concluded that the Swedish entrepreneur's attitude towards venture capital and its legitimacy adding effects is generally an aversive one. The results indicate that it is in the inherent nature of the Swedish entrepreneur not to want to give up control of the firm by acquiring VC because it means compromising independence and freedom. When VC is acquired, it is out of perceived necessity. However, after having accepted this relinquishing of complete ownership the results indicate that the added legitimacy becomes an important part of acquiring VC,

although the entrepreneurial firm often hesitates to directly acknowledge this. One may conclude that the legitimacy enhancing effects of venture capital do indirectly play a part for the Swedish entrepreneur.

### ***Findings and Theory: An Evaluation of Coherency***

The result show that theory on interorganizational relationships, asymmetric information and transaction cost theory all help explain how venture capital endorsement adds value to entrepreneurial ventures.

The results show that the mechanisms of interorganizational relationships theory, as laid out by Stuart (1999), are relevant in the VC-entrepreneurial firm relationship. The theory section argued that in line with Stuart's (1999) postulation that high prominence actors will only associate with other high prominence actors, VC firms will only associate with entrepreneurial firms which they believe hold great potential. The results show that the opposite is also true; entrepreneurial ventures value the reputation of the VC firm highly. It could be speculated that the value added of gained legitimacy received from associating with a VC firm with a bad reputation is much lower.<sup>6</sup> In any case, Stuart's 1<sup>st</sup> mechanism holds true. Furthermore, the results show that the entrepreneurial firms in many cases actively use their VC investors name when dealing with business partners. This shows that Podolny's (1993) argument that a high correlation between partner prominence and a focal firm's quality may reflect the casual influences of the former on the latter holds true; the entrepreneurial firms are in some cases leveraging their association with the VC firm to gain customers, other financiers, better supplier deals or attract more qualified workers, thus increasing the value of the firm.

In terms of asymmetric information, the paper showed that value added is negatively related to age and size. Theory of asymmetric information has frequently found uses in explained market inefficiencies in financial markets. Interestingly, the most definite result from this study of legitimacy adding has been the added value of increased legitimacy when finding additional financing. Several previous studies have found that venture capital-backed ventures are less underpriced than non-venture capital-backed companies at initial public offerings (IPO), indicating that VC firms help mitigate information asymmetries on financial markets (Barry et al 1990, Megginson & Weiss 1991). However, the findings here suggest that this mitigation effect in fact happens before an IPO. The first venture capital investment is likely to open doors to other VC investments by signaling the quality of the firm; thus, the information asymmetries have been mitigated already at this stage of the firm's growth.

Looking at the findings in terms of transaction cost theory allows us to conclude that increased legitimacy does sometimes play a role in reducing transaction costs for entrepreneurial firms, especially in cases with high product specificity. Other benefits gained from increased legitimacy are hinted in the results, such as transaction cost

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<sup>6</sup> A VC firm's bad reputation may stem from a history of offering bad conditions, exploiting the entrepreneurs, meddling in the business and/or taking large shares of the entrepreneurial firm's equity.

reductions gained from improved trust. Although the proportion of firms that found credit and payment terms improved was only half of those that reported trust in the relationship with suppliers improved, it could be speculated that transaction costs with suppliers have diminished in less apparent ways. Shorter negotiations, smaller risk of litigation in the occasion of an accident in the exchange process, and a reduction of projected search costs for the partner firm (that would have occurred had the supplying firm felt required to find a new customer due to uncertainty) are some of many subtle cost reductions that this paper has not explored.

To summarize, it may be concluded that the findings of this paper are broadly in line with previous findings and theory. Some findings indicate new dimensions to the mechanisms of reputational effects among firms and information asymmetry enhancing effects of VC firms. There are also findings that hold implications for transaction cost theory that need more research before definite conclusions can be made.

### ***Implications***

The findings of the thesis suggest that there is a connection between endorsement and added value for the entrepreneurial firm. It was also found that the active marketing measures of the VC firm are connected to the value added of endorsement. However, many entrepreneurial firms find that their VC investors do not actively market them. It is therefore possible that VC firms in Sweden could add greater value to their portfolio firms by actively marketing them to a larger extent.

The most important aspects for Swedish entrepreneurs when choosing VC investors were personal chemistry, the general reputation of the VC firms, and the possibility of attracting more capital. For VC firms to successfully attract more options of investment, it is therefore vital to maintain a good reputation within the industry and to give a good impression. Evidence from the case studies and the survey suggests that an appreciated VC investor minimizes its intervention in the daily operations. All these findings should be taken into consideration by VC firms in order to efficiently handle the relationships with their portfolio firms.

### ***Critique***

Although the independent variables in the endorsement model all proved to be significant, the low  $R^2$  value for Model 2 indicates that there are many other factors influencing endorsement. It therefore appears that more independent variables should have been identified and included to explain the variance of the endorsement variable. One may speculate as to what these factors might be. One factor might be the prominence of the venture capital firm, which could be operationalized by measuring the size of the firm in terms of revenues or measuring the number of successful investments. This was not done since the regression models only relied on perceptual measures from the survey answers.

The use of uniquely perceptual measures in the survey may be questioned, especially when measuring the value-added of the VC firm. However, perceptual measures have demonstrated good reliability in several previous studies examining the value added

of venture capital (Sapienza 1992, Sapienza and Gupta 1994, Maula 2001). The use of perceptual data may also give an added dimension that secondary data, such as financial performance indicators, excludes. However, secondary data may be subject to unobserved heterogeneity and selection bias (Maula 2001).

The survey used common scale items as measurement items. With the use of common scale items comes the risk of common factor variance. This can be remedied by proximal or temporal separation of measurement of the criterion and predictor variables. However, due to the importance of anonymity of the respondents to ensure a high and valid response rate this proved hard to implement. Statistical remedies could have been used to offset the effects of common factor variance, but this was judged too costly since other actions, such as survey design measures, had been taken to prevent common factor variance from affecting the results.

Finally, there were a few cases of missing responses in the survey. These might have been avoided if the survey had included the feature making it impossible to move forward in the survey without having completed all of the answers. However, it was judged that this might irritate the respondent who might give up the survey completely if reminded to fill in all the answers.

### ***Suggestions for future research***

One of the findings of this paper was the fact that Swedish entrepreneurial companies on average value personal chemistry over valuation of the company as more important when choosing VC investors. The exploration of why this is would be a topic worthy of further exploration. Also, studies further investigating factors related to VC firm endorsement apart from those highlighted in this study are needed to bring greater understanding to the mechanisms influencing endorsement. It was found that VC reputation is an important factor for entrepreneurial ventures; a study of what factors constitute VC reputation in the eyes of the entrepreneurial ventures in Sweden would give a deeper understanding to this finding. Furthermore, the further study of exactly how transaction costs for Swedish entrepreneurial firms are reduced due to increased legitimacy from VC investment warrants attention and resources.

### ***Concluding remarks***

This study has brought further insight into the relationship between the Swedish entrepreneurial firm and its venture capitalist investors. The evidence produced further enforces the image of the Swedish entrepreneur as something of a particularity in the world of entrepreneurship. Far from being the “economic man”, the average Swedish entrepreneur values her feeling about personal chemistry higher than the valuation of the firm when choosing a VC investor. However, it has been shown that legitimacy is in fact also an important factor for the Swedish entrepreneur in this decision. This paper has shown that having a VC investor does add value to a firm by increasing its legitimacy, and that this value is expressed through benefits in relations with suppliers, customers and, especially, investors. The paper has also identified a few factors that influence the value of endorsement, which are supplier switching costs, customer switching costs, active VC firm marketing, and firm age.



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## Appendix A: Pre-study question sheet

Questionnaire for pre-study. English translation of questions in *italic*. The questionnaire was used as a base and does not include corollary question and questions that were added in the interview process.

### Magisteruppsats: Venture Capital - Entreprenörer Intervjumall för förestudie

Företag: \_\_\_\_\_ Datum: \_\_\_\_\_.

1. När tog ni in riskkapital? (Vilket stadium?)  
*When did you acquire venture capital (at what stage)?*
2. Varför? (Legitimitet?)  
*Why? (Legitimacy?)*
3. I vilken form (andel?)  
*How in what format the venture capital invest? (stake?)*
4. Hur har de styrt? (Close trackers, laissez-faire)  
*How have they controlled the firm (Close trackers, laissez-faire)*
5. Hur har VC bidragit? (*How has VC contributed?*)
  - **Strategiskt:** (Agerat bollplank, get finansiella och affärsmässiga råd?)  
*Strategically: (Sounding board, financial and business advice?)*
  - **Nätverkande:** (Tillhandahållit kontakter till kunder, leverantörer och rådgivare; bistått i rekryteringen av lednings och nyckelpersoner)  
*Networking: (Provided contacts to customers, suppliers and advisors; assisted in the recruitment of managers and key personnel)*
  - **Mentorroll** (agerat som personlig rådgivare, coach och ”kompis”)  
*Mentoring (Acting as a personal advisor, coach and ”buddy”)*
  - **Rykte och legitimitet** (lättare att få finansiering på annat vis, mer förtroende hos leverantörer etc?)  
*Reputation and legitimacy (easier to obtain additional financing, more credibility towards suppliers etc.*
6. På vilka andra sätt har VC bidragit?  
*In what other ways has VC contributed*

**7. Hur har VC kostat?**

*How has VC cost the firm?*

- Finansiellt?

*Financially?*

- Tidsmässigt?

*Timewise?*

- På andra sätt?

*In other ways?*

**8. Är Ni nöjda med att ha tagit in VC/ Skulle ni ta in VC idag igen om ni fick valet?**

*Are you happy with bringing in VC investors/ Would you do so again given the choice?*

**9. Hur skulle VC kunna bidra på andra sätt än de sättet de bidrar med nu?**

*How could VC contribute (add value) in different ways than the ways they contribute today?*

## Appendix B: Survey Questionnaire

### General information about your firm:

Firm was founded (year)?

Size (yearly revenues and employees at the time of first venture capital investment)

Industry: Biotechnology, Chemical, Communications, Computer- Hardware, Computer- Software, Internet Specific, Medical/health, Semiconductors/ other electronics, Other)

Year of first venture capital investment?

### Information on the venture capital investors

Number of Venture capital investors?

External equity financings in millions (0-9, 10-29, 30-49, 50-74, 75-99, 100-149, 150-200, 200-299, 300-399, 400-499, 500 and above)

Ownership by largest investor (0-1%, 2-4%, 5-9%, etc to over 40%)

*The following questions sometimes ask about the “most important venture capital investor in your firm”. The most important investor is defined as the investor that has had the most influence and/or has added the greatest value to the company in other ways than the actual money infusion, such as giving advice, coaching, his/hers personal network and connections, or having a good reputation and helping out with marketing the firm. It may, but does not have to be, your largest investor.*

What is the current percentage of corporate ownership held by the most important investor?(%)

### Alternatives and freedom of choice of venture capital financing

Did you have access to other financing options than venture capital when the choice to let in venture capital was made?

Yes

No

How many venture capital financing offers did you have to choose from in the first round of financing?

How many venture capital financing offers did you have to choose from in this round of financing?

*Please list how important the following was when considering venture capital financing (Scale 1 (Very Unimportant) -7 (Very important))*

Pre-money valuation  
Overall reputation of investor  
Reputation of investor in your industrial sector  
“chemistry” with investor  
mentoring  
contacts with key customers or suppliers  
Recruiting managers and key employees  
The possibility of raising additional financing  
Gained legitimacy of attaining VC

*Questions graded in an interval scale of 1 (strongly disagree) to 5 (strongly agree).*

### **Desirability of venture capital**

Acquiring venture capital was not only a way of financing the company's further growth but also a way of increasing the company's credibility  
The money was the main reason we sought venture capital financing  
The main reason for seeking venture capital was financial  
Despite having other ways of financing the company we chose venture capital because of the advantages connected with having venture capitalists as an owner  
Venture capital was the only possible source of financing when we needed

### **The added value of having a venture capital investor**

In addition to the financing the investor has provided us with valuable support  
The value adding support provided by this investor has been decisive for our success  
Being associated with this investor been helpful in marketing the firm  
We are very happy about having this investor

### **Investor**

We have actively used the name of this investor in order to be more credible when raising money from other investors.  
Having an investor with a good reputation has been helpful when looking for new investors or recruiting new capital

### **Recruitment**

We have actively used the name of this investor in order to be more credible when recruiting new employees.



We received a larger amount of qualified applications after receiving financing from this investor

**Supplier (strategic suppliers supplying high value goods/services of strategic importance to the firm)**

We have actively used the name of this investor when attracting new suppliers  
Having a VC firm with a good reputation has been helpful in supplier relations  
Suppliers were more willing to give us better credit and payment terms after we had received venture capital financing

After getting this investor on board the trust in the relationships with our suppliers changed...

For the worse                      no change                      for the better

After receiving financing from this investor the relationship with our suppliers changed...

For the worse                      no change                      for the better

**Customers/clients**

We have actively used the name of this investor in order to be more credible when trying to attract new customers/clients  
Having a VC firm with a good reputation has been helpful in customer/client relations  
When we got venture capital financing, the number of clients/customers that were willing to do business with us increased

After receiving Venture Capital financing the degree of trust between us and our clients changed

For the worse                      no change                      for the better

After receiving financing from this investor the relationship with our suppliers changed

For the worse                      no change                      for the better

**Active VC firm promotion of the portfolio firm**

Our most important venture capitalist investor actively promotes our firm through word of mouth

Our most important venture capitalist investor actively promotes our firm through its own publications such as magazines and industry publications  
We are included and asked to participate in meetings with investors and other people in the industry arranged by our most important venture capitalist investor.  
We are promoted on the web page of our most important venture capitalist investor

**Product specificity and switching costs client/customer side**

Buying our products/services is a major decision for our customers  
Our products/services are very important for our customers  
It is expensive for customers to switch to or from using our products/services  
Face to face discussions with customers are important when selling our products/services

**Product specificity and switching cost supplier side**

We have suppliers from which buying products/services is a major and strategically important decision for us.  
We have suppliers whose products are very expensive switch to or from  
The strategically important products or services our suppliers provide us with involve making a major investment  
Face to face discussions with customers are important when buying our products/services

**Negative aspects of Venture capital endorsement**

Problems experienced  
Having this venture capital has sometimes made us less self-ruling  
Our venture capital investors have sometimes slowed down decision processes, thus slowing down development  
Having venture capital from this firm has sometimes lessened the willingness of some potential strategic alliance partners or customers to do business with us.

**Position and status of person filling in form:**

Multiple options possible: (CEO, founder, board member, member of upper management, board Chairman, employee, employed at the firm since its founding, other.)

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