LUNDS UNIVERSITET
Lunds Tekniska Högskola

Masters' thesis

Equity financing of early stage growth firms in Skåne

In cooperation with Teknopol AB

Authors:
Karl Fogelström
Christoffer Nilsson

Supervisor, LTH:
Gösta Wijk

Supervisor, Teknopol AB:
Mats Jacobson

Examinator, LTH:
Ola Alexandersson

Department of Industrial Management and Logistics
Division of Production Management
Faculty of Engineering, LTH
Lund University

September 3, 2013

Executive summary

This master's thesis attempts to map the equity market of Skåne for early stage growth companies. The providers of capital in this market are primarily venture capital firms, business angels and family offices. Family offices are excluded from the study in favor of the other two investor categories, of which business angels is the category most thoroughly investigated.

The study was done in four phases: In the first phase, a general overview of the system was established through 9 interviews with key persons, familiar with and knowledgeable about the innovation system in Skåne, as well as through a literature study. In the second phase, deeper knowledge was sought through interviews with investors, both venture capital firms and business angels. A total of 8 business angels and 5 venture capitalists were interviewed. In the third phase, two questionnaire were constructed and distributed. One of them was targeted at business angels and distributed with the help of Skåne's two largest business angel networks: Connect Skåne and Almi Delfinerna. The second one was targeted at venture capital firms, identified through interviews and the websites of the national venture capital associations in Sweden, Norway, Denmark, Finland and Germany. A total of 150 business angels received the survey, of which 73 responded. Of the 71 venture capital firms, 15 responded. In the fourth and final phase, the data collected from the questionnaires was analysed using Microsoft Excel and IBM SPSS, and interpreted with support from the interviews.

More than half of the business angels were found to be profitable and over 40 % stated that they had been more profitable than the stock market index returns of 8 %. This finding was contrary to the belief put forward during many of the interviews. Two factors appeared to correlate significantly with the business angels level of success: The development stage of the firm they invested in, and to what extent investors used their gut feeling and trusted the entrepreneur by letting him or her keep a larger share of the firm. However, the causality of these relations cannot be established without further research.

Business angels were also mapped into 3 different groups using the factors above: Early stage financiers, early stage motivators and late stage

motivators. Of these, the late stage motivators were the most successful and the early stage financiers the least successful.

The venture capital firms could not be researched as extensively as the business angels, and no measures of success were collected. However, considering statistics from the Swedish Venture Capital Association, the industry appears to be in decline, considering the decreasing amount of capital raised and invested the last couple of years. The findings in this study about the high age of the average fund and the high representation of state owned firms point in the same direction. A relatively large part of the funds' resources were found to be invested, further indicating that new investments will be less frequent in the future.

A more pleasant finding was that a majority of the venture capital firms in the study indicated that they could take lead on investments in Skåne.

Many tendencies and correlations were found, generating theories and hypotheses to be tested.

Keywords. Venture Capital, Business Angel, Business Angel Network, Connect Skåne, Almi Delfinerna, Equity Financing, Early Stage Growth Firm, Scania, Skåne, Profitability, Financing.

Acknowledgements

There are a number of persons that, without their help, this thesis would not have been possible. First of all, we would like to thank our supervisors Gösta Wijk at Lunds Universitet and Mats Jacobson at Teknopol for their support and counsel during the course of the study.

We would like to thank Jeanette Andersson at Connect Skåne and Göran Alvek at Almi Företagspartner for helping us get in contact with many of the interviewees and for their advice.

Also, we want to thank all the interviewees who readily contributed with their thoughts, views and insights about the market: business angels, venture capitalists, entrepreneurs and the people in the innovation support system in Skåne.

Finally, we would like to thank our office hosts during the thesis: Lund Enterprise Agency with special thanks to CEO Gustaf Hamilton who granted us permission to stay there and business coach Gunvor Andersson for helping us with the survey design.

Contents

Chapter 1

Introduction

1.1 Background

This report was primarily written on behalf of Teknopol AB. Teknopol is a part of the innovation support system of Skåne, focused on helping innovators develop their ideas into successful firms. Funded by Region Skåne, Teknopol offers advice on a variety of topics, both industry- and non-industry-specific, related to managing business. Teknopol employs advisors and coaches with many years of business experience for instance as entrepreneurs, executives and management consultants. Through these advisors, Teknopol has access to a large network of contacts that they readily share with their clients (Teknopol, AB, n.d.). Many of the innovators that come to Teknopol looking for advice end up as entrepreneurs in early stage growth firms.

One of the biggest challenges for early stage growth firms relates to the financing of their business. Although it is sometimes possible for the firm to take on debt, this is an exception, as lenders are wary of the risks involved in these firms. As a consequence, most of these firms have to be funded with equity. Initial investments largely come from the founders, and their friends and family. If business goes well, more capital is soon required. Even for firms that have managed to establish a cash flow sufficient for survival and growth, external capital can work as an amplifier and speed up the growth. A higher growth rate means a higher return on investment, but it might also be absolutely necessary in order to fully exploit a first mover advan-

tage before competition from more established firms with more resources catches up. Besides equity capital, external equity investors in early stage growth firms are often expected to contribute with other resources, such as industry experience, a network of contacts, entrepreneurial experience, and/or competencies valuable to the firm.

There are generally three types of investors in this sector: family offices (FO), business angels (BA), and venture capital (VC) firms. BAs are wealthy individuals who, for various reasons, want to invest some of their wealth in early stage growth firms. For some of them the potential returns are the main incentive, while others are more interested in participating in the development of the firm, or in supporting a product that might have social or environmental benefits. The BAs often have previous experience as entrepreneurs, but there are also those who have acquired their wealth by other means.

As opposed to BA's who invest their own money, VC firms invest other people's money through a fund structure. With their large capital, they make more use of external resources such as evaluation consultants and personality tests, and are generally more to be seen as sophisticated investors than business angels. With some exceptions, their goal is very clear: to achieve high returns for their stakeholders.

Family offices are private companies devoted to managing the assets of a single wealthy family, often over many generations. Sometimes, they also engage in venture capital investments.

The last couple of years, the Swedish VC industry has seen a decrease both in the amount of invested and raised capital. This development is shown in figures 1.1 and 1.2. Although the numbers have varied greatly since 2005, the consistently low activity the past three years has made some observers to talk about the "death of a sector" (Cope, Graham, p. 10).

The reason for the declining activity is debated. Some say that returns do not correspond with the risks, i.e. that there is a problem with the *risk-return equation* (Andersson, Jeanette, 2013a). Others claim that we are still seeing the effects from the dot-com bubble: funds that raised capital around the millenium are now closing, most of them showing meager results, which makes it hard for the capital managers to raise new funds (SVCA, 2012, p. 18).

The situation for business angels is harder to evaluate. As there are no prerequisites for becoming an angel investor, there is no official registry of

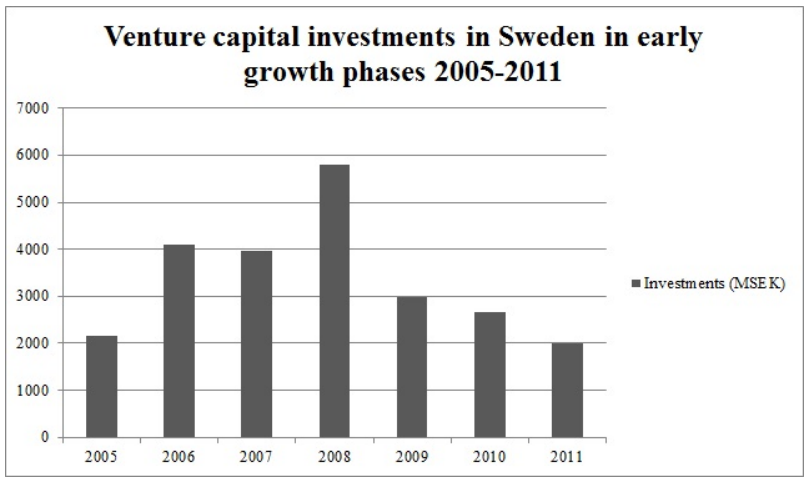

Figure 1.1: Venture capital investments in Sweden in early growth phases 2005–2011. Source: SVCA (2012, p. 10).

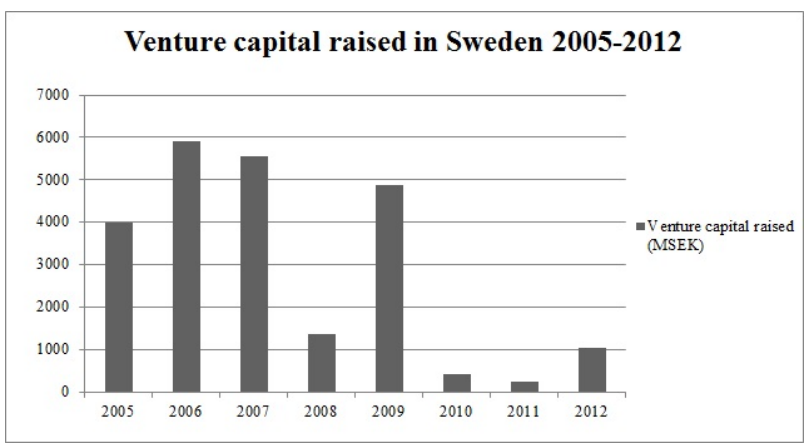

Figure 1.2: Venture capital raised 2005–2012. Source: SVCA (2013, p. 7).

Swedish BAs. However, many are part of a business angel network (BAN) that works as an intermediary in the matching process between BA's and entrepreneurs (Mason, Colin and Harrison, Richard T., 1997; EBAN, 2006). In Skåne, several BAN's exist, with Connect Skåne as the largest one with

around 150 BA members (Andersson, Jeanette, 2013b), followed by Almi Delfinerna with around 50 members (ALMI, n.d.). These networks are not mutually exclusive and many BAs are members of more than one BAN.

1.2 Purpose

This study will map and describe the investors in the equity capital market for early stage growth firms in Skåne, with a focus on VC firms and BAs.

The investigation of the VC firms will primarily try to answer the following questions:

- How many VC firms are there, what are their sizes, and how much capital do they have available?
- Which industries do VC firms invest in?
- Which phase of development do VC firms prefer in their investees?

The investigation of the BAs will be more detailed than the VC firm investigation and focus more on the behavioural characteristics of these investors, it will primarily try to answer the following questions:

- What motivates someone to make BA investments?
- What are BAs looking for in their investees?
- How do the BAs get in contact with their investees?
- How successful are the BAs, and are their any common characteristics of those that are more successful than others?

To successfully carry out this study, it has been made in cooperation with two of the largest BANs in the region: Connect Skåne and Almi Delfinerna. The results are meant to give Teknopol, Connect Skåne and Almi Delfinerna a deeper understanding of the current market, which in turn will help them support their clients, both business angels and entrepreneurs.

1.3 Target audience

The target audience groups of this report are fourfold:

- Business and engineering students at the end of their education.
- Support organisations in the innovation system of Skåne.
- Entrepreneurs in search for venture capital.
- Academic researchers interested in the innovation system of Skåne.

The aim is that the report will be well understood by these groups, as well as found interesting and enjoyable to read.

1.4 Theoretical framework

Like all markets, the equity capital market consists of supply and demand. Demand is represented by companies that require financing to run their business, while supply is represented by different kinds of investors.

There are several types of financing options available to a firm, as may be seen in figure 1.3. These types may be differentiated even further with regards to sources and conditions. The most fundamental difference, however, is the one separating equity and debt. The different properties of these two types are important factors to consider when choosing what is most appropriate for the company.

1.4.1 Equity capital

Equity capital is provided to the firm by its owners. If the firm suffers losses, the equity capital is there to cover these losses. Thus those contributing with equity capital take a significant risk related to the development of the firm. Because of this risk, equity capital holders expect a high return on their capital; the larger the probability of loss or bankruptcy, the higher return is expected. The return is paid through dividends, but investors may also make money by increasing the value of the firm's total assets and selling it to somebody else. To summarise, return on equity capital is wholly dependent on the development of the firm. If all equity capital is consumed, the firm will be bankrupt.

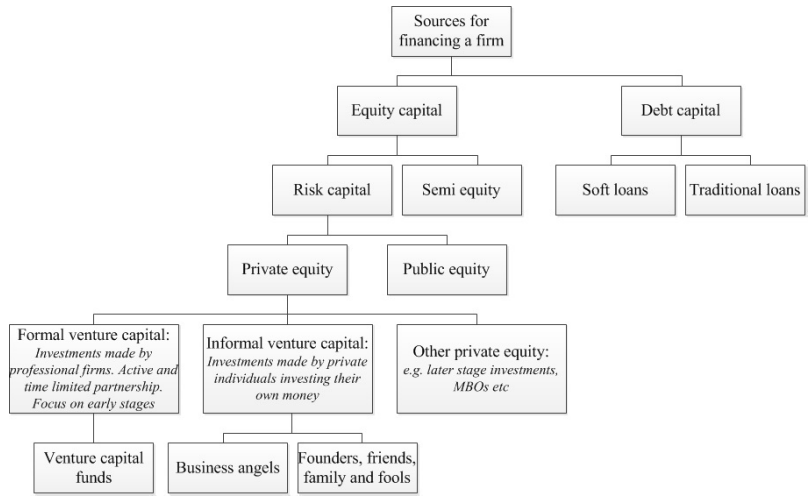

Figure 1.3: The different sources of financing. Source: Adaptation from (Isaksson, Anders, 2006, p. 18).

1.4.2 Debt capital

In contrast to equity capital, debt capital is less dependent on the firm's development, as losses primarily affect equity capital. Only when all equity capital is consumed will the contributors of debt capital (lenders) start losing money in the form of credit losses. This property of debt capital is said to make it more *senior* than equity capital. In some cases, different types of debt capital with different seniority exist. The lenders are paid a predetermined interest on the total loan, independent of firm development as long as there is still equity capital in the firm. Because of its seniority to equity capital and independent interest payments, debt is regarded by investors as a safer investment than equity. For the firm, this means that debt capital is cheaper than equity capital.

1.4.3 Equity and debt option payoff model

The payoff over one year to the holders of equity capital may be modelled as a call option with the firm value $V(t)$ acting as underlying and with strike price $K = E + I = V(0) - D + I$, where $V(0)$ is the firm value at time $t = 0$, E is the face value of the equity, D is the face value of debt and

I is the interest on the debt in the firm. Analogously, debt capital may be modelled as writing a put option with the same strike as the call option. Figure 1.4 shows the payoff for these options when $V(0) = 1$, $E = D = 0.5$ and $I = 0.1$. As is evident, the probability of loss for debt investors is smaller than for the equity investors, and equals $D + I$, independent of the firm value V, as long as $V \geq E + I$. However, debt investors lack the possibility of larger payoffs available to equity investors if the value of the firm reaches $V > V(0) + I$.

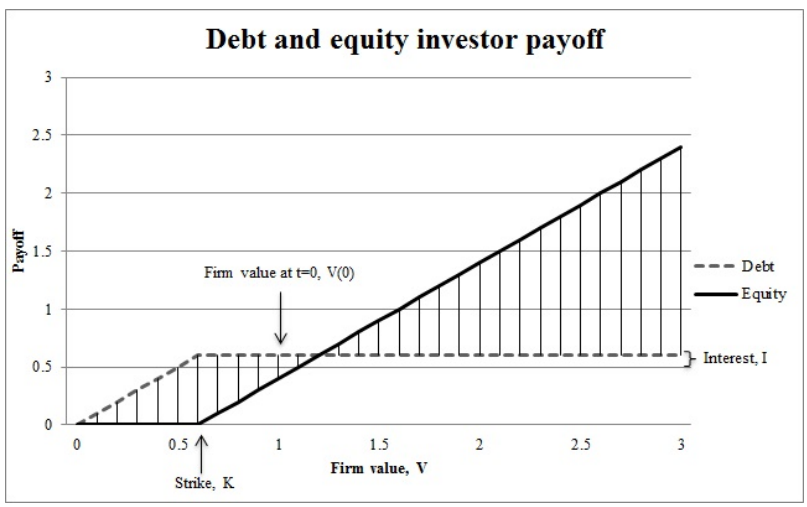

Figure 1.4: The payoff to debt and equity investors modelled as options. Both investors invest 0.5. Source: Own adaptation.

This model is useful to keep in mind as a conceptual framework in order to understand the capital market.

1.4.4 Early stage growth firms

The focus of this thesis is on early stage growth firms. Using EVCA's definitions of the different stages of a company's lifecycle, early stage growth firms are considered to be in one of the following stages (EVCA, 2007, pp. 13–15).

- *Seed: Seed financing is designed to research, assess and develop an idea or initial concept before a company has reached the start-up phase.*

- *Start-up: Start-up financing is used for product development and initial marketing. Businesses may still be in the creation phase or have just started operations and have not yet sold their product commercially.*

- *Post-creation: At this stage, the business has already developed its product and needs capital to begin making and selling it. It has not yet generated any profits.*

- *Expansion/Development: In the case of expansion, the business has reached, or is approaching, breakeven. This is a period of high growth and capital is used to increase production capacity and sales power, to develop new products, finance acquisitions and/or increase the working capital of the business."*

Not every newly created firm falls in this category — in fact, most do not. The keyword is *growth*. There has to be an ambition for the firm to grow, and to grow faster than linearly, preferably exponentially. The cash flows in these firms are extremely uncertain, and the probability of default is high. However, if successful, the firm is likely to generate considerable rewards for the owners. As is seen in figure 1.4, high volatility is beneficial for the equity investor, as his profit is theoretically unlimited, while the debt investor is at a disadvantage since the only thing he cares about is the probability of default, which will increase with higher volatility. Because of the asymmetric risks, equity financing is usually used under these conditions, while debt financing, without some kind of security or guarantee, is rare.

1.4.5 Market structure

As seen in figure 1.3, equity may be divided into three subgroups: *Formal venture capital*, *Informal venture capital*, and *Other private equity*.

Formal venture capital

Often referred to as *classic venture capital*, these investments are made by professional firms using sophisticated methods to determine the scope and scale of their investments. Formal venture capital generally has a fund

structure with limited and general partners as owners. The general partners are the people making the investment decisions, and while they often also have money invested in the fund, the passive limited partners are the major contributors of capital. A conceptual sketch of the fund structure may be seen in figure 1.5.

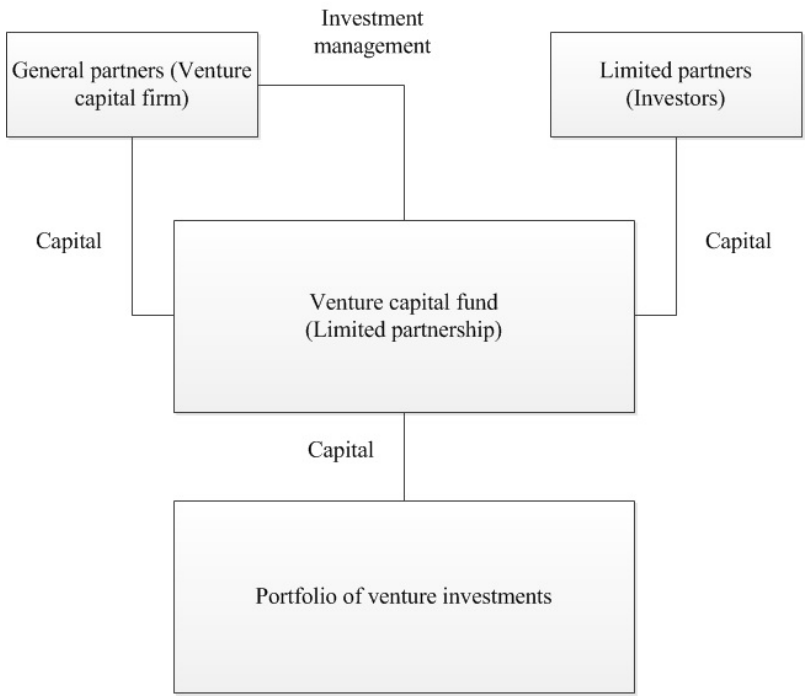

Figure 1.5: Venture capital fund structure. Own adaptation.

It is the general partners that raise the fund, usually starting by searching for cornerstone investors, i.e. limited partners with large financial resources that are able to commit a large amount of capital to the fund. Such cornerstone investors might for instance be pension funds, insurance companies or fund-of-funds. When one or a few such cornerstone investors have been secured, the VC firm has established a high credibility in the market and will start to attract other limited partners as well, such as high networth individuals, family offices, endowments and foundations. A large fund is important, as the methods used to evaluate investment opportuni-

ties are often expensive, which means that every investment needs to pass a certain threshold to be worthwhile. If the fund is small, it can only make a few investments, thereby being unable to diversify risks effectively.

After the fund is raised, the general partners start to look for investment opportunities and make investments where they deem appropriate. The goal of the investment is to maximise the profit within an investment horizon, commonly 3–7 years in Sweden, where after the fund is liquidated and the ventures are divested (Landström, Hans, 2009, p. 267). Because of the limited life of the fund, it usually only accepts new investments during its first few years after creation. It will, however, keep developing its portfolio companies and supply them with more capital if needed. Because of the cyclic nature of VC funds, estimates of how much capital that is ready for investing are hard to make and will usually be inaccurate after a couple of years. This is brought out e.g. by the large variations in figure 1.1 and 1.2 in section 1.1.

In addition to the *classic venture capital* described above, there is also *corporate venture capital* (CVC). These firms are subsidiaries to major corporations and have a slightly different goal and structure. The capital in these funds is solely provided by the owning corporation, and the goal is to find technologies that might develop into something that will fit strategically into the work of the parent company. Another difference is that funds do not usually have a scheduled liquidation date. They will rather reinvest any profits and request more capital from the parent when necessary (De Clercq, Dirk and Fried, Vance H. and Lehtonen, Oskari and Sapienza, Harry J., 2006, p. 91).

A VC fund without a liquidation date is commonly referred to as an "evergreen". These funds are usually either CVC funds or state-initialised funds with a particular objective, such as supporting business, innovations or entrepreneurs.

Informal venture capital

In addition to the institutionalised, formal venture capital, there is also the *informal venture capital*. This category consists of private individuals investing their own money, and are generally the first investor in any new business. The founders of the firm are usually the very first investors, followed perhaps by friends and family. There are, however, also other more

sophisticated investors, contributing not only capital but also competence. These are often referred to as *business angels* (BA).

Compared to formal venture capital investors, BAs have a much simpler, and therefore cheaper, evaluation process, which allows them to make much smaller investments. Even though BAs have been revealed to become more sophisticated the last 20 years (Lahti, 2011), they still lack the financial sophistication of formal venture capital, and their investments therefore often carry more risk.

Previous studies made on Swedish BAs have shown that it is a group with rather heterogeneous drivers and preferences. On average, active BAs have 4.4 informal investments in their portfolio and make one new investment per year, often together with other BAs. Most of them have acquired their wealth by successfully building up and selling one or more companies of their own, and they are almost exclusively middle-aged men (Månsson, Nils and Landström, Hans, 2006). In general, BAs allocate around 5-15 % of their overall investment portfolio to BA investments, so that failed investments does not affect their lifestyle (Mason, Colin, 2006).

In a study from 2002, Mason and Harrison gathered responses from 84 British BAs about, among other things:

- *Motives for investing*: The dominating motives to make BA investments were found to be:

    1. "Potential for high capital appreciation" (72 % of the respondents considered this *very important*).
    2. "Personal satisfaction from being involved with entrepreneurial businesses" (53 % of the respondents considered this *very important*).
    3. "For current or future income, e.g. dividends, fees" (41 % of the respondents considered this *very important*).
    4. "To make use of tax breaks, e.g. Enterprise Investment Scheme" (19 % of the respondents considered this *very important*).
    5. "A way of having fun with some of my money" (14 % of the respondents considered this *very important*).

- *Preferences regarding firm development stage*: The BAs displayed a low interest in financing seed stage firms, a moderate interest in fi-

nancing start-up stage firms and a strong interest in financing later expansion stages.

- *Preferences regarding firm industry belonging*: Industry preferences were quite evenly distributed across "IT", "Internet" and "Telecom", with 42-47 % stating that they had a strong or very strong interest, while the corresponding figures for the industries "Biotech" and "Multi-media" were 25-28 %. About 80 % of the investment proposals received were rejected because the BAs did not feel comfortable investing in unfamiliar industries.

- *What deter them from investing*: 81 % of the BAs in this study indicated that their investments were limited by the quality of the opportunities they were presented with. They were also asked to mark deficiencies they found in over 75 % of the investment opportunities presented to them. The most prevailing deficiency was "Assumptions unrealistic or information lacks credibility", with 43 % of the BAs marking it. It was followed by "Entrepreneur or management team lacks credibility" at 42 %, "Insufficient information provided" at 31 % "Business concept needs further development" at 24 % and "Growth prospects of business is limited" at 23 %.

- *What may make them relax above criterias*: Respondents were asked to cite all situations in which were prepared to relax their investment criterias. 53 % cited "High credibility of entrepreneur or management team, followed by "Small investment required" and "Location of business very close to home or workplace" at 31 %.Only 11 % stated that they never would consider relaxing their criterias. Another 8 situations were also listed, under which 5-30 % of the BAs stated that they would be prepared to relax their criterias.

- *Sources of information on investment opportunities*: The BAs in this study were sampled from the national business angel network, NBAN, an umbrella organisation for other business angel networks. It was found that "NBAN" was the most common source of information on investment opportunities, followed by "Business associates", "Other business angel networks" and "Friends". More formal sources, such as lawyers, banks of VC funds were less common. (Mason and Harrison, 2002)

The study above refers to british BAs, but Mason, Colin and Harrison, Richard T. (1995) have found that there are only small differences between BAs in different countries, indicating that the findings may apply to swedish BAs as well.

Over the years, several classifications has been made to create typologies of the BAs, with the most fundamental being the distinction between *active*, *latent* and *virgin angels*. Active angels have already made investments and are looking for more. Latent angels have previously made investments, but are not currently active, while virgin angels are looking for investments and have never made one before (Coveney, P. and Moore, K., 1998). One of the earliest classification is originating from Gaston, R.J. (1989), where the author lists ten different categories of what would be considered active BAs by Coveney and Moore, but without explaining how to methodologically differ between them. A more recent topology for informal investors based on their role as capital or competence provider has been suggested by Sørheim, Roger and Landström, Hans (2001) and further developed by Avdeitchikova, Sofia (2008b). It may be seen in figure 1.6.

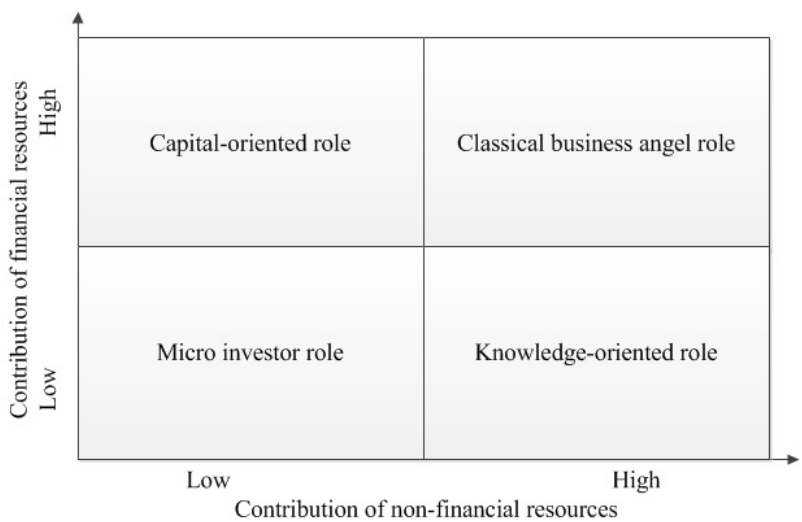

Figure 1.6: Different investment roles. Source: Adaptation from Avdeitchikova, Sofia (2008b, p. 62).

Micro investors are characterised by small investments and a low in-

vestment activity. *Capital-oriented investors*, on the other hand, are ready to contribute with significant funds, but prefer to view the investment as a financial position, much as on the stock market. This enables them to manage many investments at the same time, as they do not contribute with their own time. Unlike the capital-oriented investor, the *Knowledge-oriented investors* mostly contribute their own competence, in exchange for a share of the company, which is sometimes referred to as *sweat equity*. *Classical business angels* provide both financial and non-financial resources, and is the category of informal investors that has received most attention when it comes to academic research and policy making, but studies suggest that they represent only a small part of the total informal investments (Reynolds, Paul D. and Bygrave, William D. and Autio, Erkko and Others, 2003, pp. 64–65).

Riding, A (2005) questions the relevance of classifying informal investor, as they often make different kinds of investments, something that makes it impossible to assign them to a specific investor category depending on investing behaviour. Despite Ridings comments, this study will attempt to classify BAs depending on their preferences and behaviours.

The following definition of business angels (Mason, Colin and Harrison, Richard T., 1995, p. 161) will be used throughout the report:

> 'Business angels' — are private investors who provide risk capital directly to new and growing businesses in which they have had no prior connection.

This definition is wider than the one provided by Avdeitchikova, Sofia (2008b) and Sørheim, Roger and Landström, Hans (2001). In the context of their framework, this definition includes both the capital-oriented investor and the micro investor, as well as the classical business angel.

Other private equity

Other private equity refers to later stage investors such as *buyout* (BO) firms. This report will limit itself to early stage investments and will therefore not investigate this segment further. It should, however, be made clear that BO firms are also part of the financial ecosystem, as they often acquire companies previously financed by VC firms, thus unlocking capital for new early stage investments.

The phases of venture capital

Combining the different types of investors described previously in this section, we get the framework presented in figure 1.7.

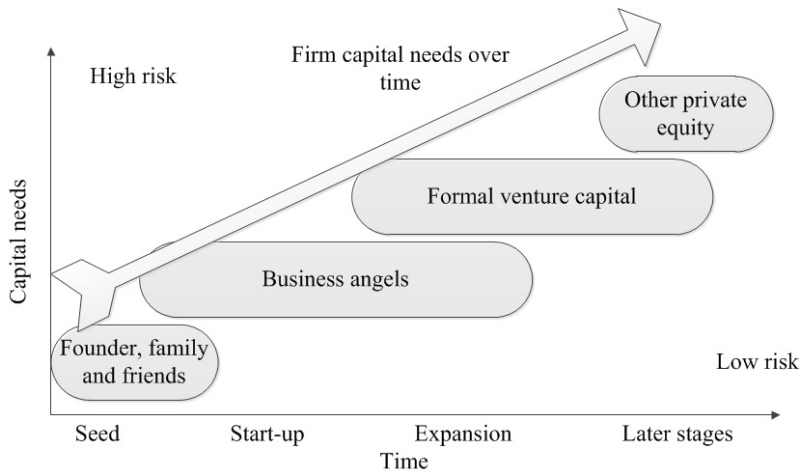

Figure 1.7: The phases of venture capital. Source: Adaptation from Andersson, Jeanette (2013a) and EVCA (2007).

As can be seen in figure 1.7, different kinds of capital is available in different stages of the firm's development. When a family-financed firm grows to a certain size, and the amount of capital required is too much for the family to provide, ideally one or more business angels invest in the firm. After some more years of growth, the BAs will want to divest the firm, and start contacting potential buyers in the formal venture capital segment. After selling the company, the business angels will again be available for new investments in the early seed and start-up phases. The formal venture capital firm will develop the firm, and in turn pass it on to another VC firm or perhaps a buyout firm. This is the life cycle of the private equity business. Lately, however, some observers have noted that BAs are having trouble divesting their previous investments, which might lead to permanently lower investment activity illustrated by the vicious cycle in figure 1.8.

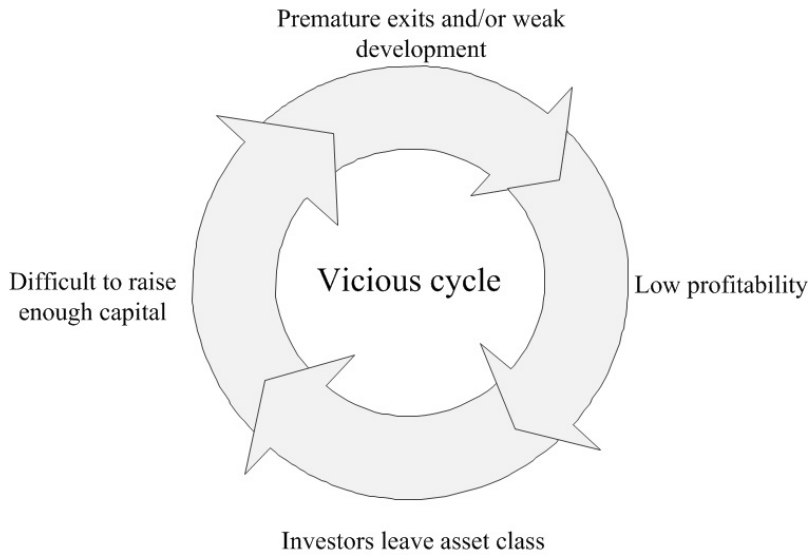

Figure 1.8: A vicious cycle of lower investment activity. Source: Adaptation from Andersson, Jeanette (2011a, p. 52).

1.5 Focus and delimitations

In order to get a comprehensive picture of the potential investors in Skåne, both VC firms and BA investors are studied. Of these two types, BAs are the least studied, especially the BAs in Skåne. Because of this, special focus will be put on BAs. The financial focus of this report is made in bold letters shown in figure 1.9

As there is no official registry of BAs, an estimation of the total population is difficult and the studied samples are often prone to bias, which is a known problem in BA research (Avdeitchikova, Sofia, 2008a, p. 373). It has been suggested by some authors to use several different sampling techniques in order to mitigate potential bias, among others (Lahti, 2011):

- Snowball sampling.
- Referrals from different organisations.
- On-line searches.

- Newspapers and business press.

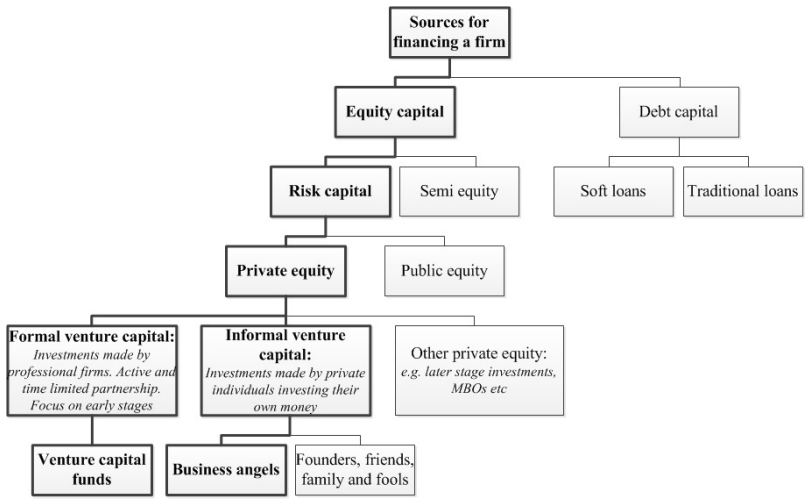

Figure 1.9: Sources of financing — our focus. Our focus marked with bold letters. Source: Adaptation from Isaksson, Anders (2006, p. 18).

In addition to possible sample bias, there is also a considerable risk of non-responder bias, as business angels are generally very concerned about their privacy, and thus reluctant to answer surveys, even anonymously (Benjamin, Gerald A., Margulis, Joel B., 2000). In a study on British business angels from 2002, Mason and Harrison (2002, p. 4) cite a 20 percent response rate as acceptable. As the market of Skåne is significantly smaller than the British, such a low response rate would not yield statistically satisfactory results. Therefore, to reduce the risk of low response rates, the study was made in cooperation with the two largest business angel networks (BANs) in Skåne: Connect Skåne and Almi Delfinerna. With representatives from these organisations endorsing the study and asking their members to fill it out, a significantly higher response rate was anticipated.

By limiting the sampling to just these two networks, a higher risk of sample bias is incurred. However, as the geographical scope is limited, and as Connect Skåne especially, has such a wide coverage in the area, the sampling bias was estimated to be minor. This opinion was further confirmed by interviews with market observers as well as the BAs themselves.

It was decided that some factors, even if they might be of some interest to the study, were not to be examined if they could be seen to violate the investors' privacy and therefore reduce their willingness to participate in the study. Such questions include for example the detailed geographical location and the amount of personal wealth.

As the characteristics of venture capital firms in general is well researched, this thesis will avoid a detailed examination of these characteristics, focussing on studying the current VC firms that are currently investing in early stage growth firms in Skåne.

1.6 Report Structure

The succeeding part of the report will start with chapter 2, which will describe the research method used for the report and discuss its strengths and weaknesses. Chapter 3 will present the results from the empirical and theoretical research undertaken during the course of the study, and chapter 4 will discuss the findings and their implications. In this chapter, hypotheses will also be formulated. Chapter 5 will wrap up and conclude the report.

Chapter 2

Research method

2.1 Method

In order to credibly map the venture capital landscape of Skåne, the study had to be empirical and cover both qualitative and quantitative methods. At the start, the main objective was to get a general overview of the actors and their relationships within the regional innovation system. Subsequently, a deeper understanding of the investors was sought, and acquired through qualitative interviews. These findings were then used to construct two surveys designed to collect more quantitative data from a broad sample of the market and test some hypotheses developed during the previous interviews. Finally, the quantitative data were analysed using statistical tools, and interpreted with the help of previous interviews and literature.

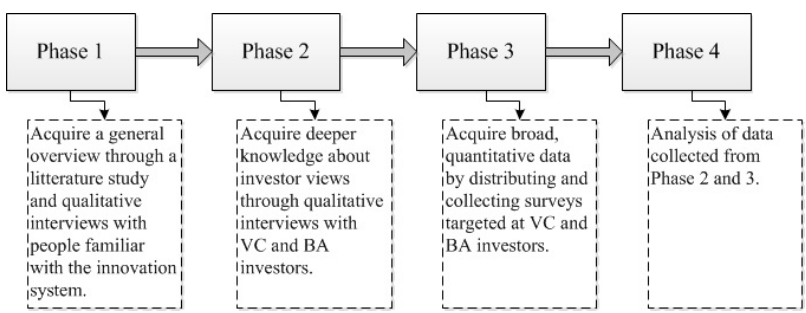

Figure 2.1: The four phases of the study.

To assure the quality of the study, as well as reaching the desired depth and scope, the study was conducted in four distinctly separate phases. These will be more closely explained in sections 2.1.1, 2.1.2, 2.1.3, and 2.1.4. A flowchart with a brief description of the different phases may be seen in figure 2.1.

2.1.1 Phase 1

The objective of phase 1 was to obtain a general overview over the regional innovation system, the actors within it and how they interact. This was done qualitatively, using an inductive approach; firstly gathering data and secondly formulating hypotheses. The data were gathered through a literature review and interviews with people familiar with the innovation system.

Literature review

To ensure a basic understanding of all the actors on the market and their interactions, five books on entrepreneurship and venture capital investments were read. Database searches for scientific articles were made in order to gain a deeper understanding of the fundamental research underlying the current scientific knowledge of venture capital firms and business angels, and to find the more recent studies in the field. To choose the most useful what databases to search, a librarian and three professors at Lund university school of economics and management were consulted.

Interviews

Interviews were conducted with nine persons that are active in the innovation system in Skåne in different ways. The design of these interviews were unstructured, using open-ended questions and letting the interviewee to a large extent direct the conversation. What was sought in these interviews was:

- An understanding of the innovation system.
- Which actors there are and how they interact with each other.
- What effects the system has on society, firms and investors.

- How the system supports the development of entrepreneurs.
- General information and perspectives on early growth firms, business angels and venture capitalists.
- Contact information to investors and business angel networks.

Interviews were held with the following people: Ideon science park CEO Hans Möller, Ideon Innovation incubator CEO Rickard Mosell, Connect Skåne and Almi business angel network coordinators Jeanette Andersson and Göran Alvek, innovation manager at Almi Johan Olsén, business developer and financing advisor at MINC Dag Westberg, SEB Lund head of business customer division Vitor Afonso, and start-up entrepreneurs Henrik Hallgren and Fredrik Olovsson at Parkster AB and GeoSignage Sverige AB.

Table 2.1: Interviewees in phase 1.

Interviewee	**Position**	**Organisation**
Hans Möller	CEO	Ideon Science Park
Rickard Mosell	CEO	Ideon Business Incubator
Jeanette Andersson	Coordinator	Connect Skåne BAN
Göran Alvek	Finance manager	ALMI Skåne
Johan Olsén	Business developer	ALMI Skåne
Dag Westberg	Financing advisor	MINC
Vitor Afonso	Head of business customer division	SEB
Henrik Hallgren	CEO and founder	Parkster AB
Fredrik Olovsson	Finance and Marketing Lead	Geosignage Sverige AB

2.1.2 Phase 2

The objective of phase 2 was to gain a deeper knowledge about investors, their actions and the underlying thoughts and motivations for those actions. This shall help the construction of the surveys in phase three and the interpretation of the answers in phase four.

Phase 1 provided many opinions and hypotheses about investors, enabling the construction of two interview guides; one for business angels and one for venture capitalists. They can be found in appendix A.1 and

A.2 respectively. The questions in the interview guides were open-ended, and while all questions in the interview guides were discussed, it was not necessarily done in the written order.

Jeanette Andersson at Connect Skåne supplied contact data for six business angels and Mats Jacobson at Teknopol for five venture capitalists and one business angel. These were selected primarily on the basis of two criteria: being active and representing different opinions about investing. One additional angel was also contacted on reference. Interviews were held with these investors in the same fashion as in phase 1. The initial interviews were recorded, but as the interviewees appeared distracted and suspicious of the tape recorder, even if they readily allowed it when asked, it was decided that it would have to be sufficient with notes. In each interview, one researcher was assigned primarily for note taking, while another led the interview.

The approach in phase 2 was qualitative and a mixture of inductive and deductive. Some hypotheses from phase 1 were tested on the investors, but mostly it was an exploratory investigation of the investors' decision making process.

2.1.3 Phase 3

The objective of phase 3 was to gather quantitative data on the firms and individuals investing in start-ups in Skåne. The choice of data was based on the information acquired in phase 1 and 2. The research approach was quantitative and both inductive as well as somewhat deductive in trying to prove or disprove a few myths and taken-for-granted truths in the venture capital industry.

Due to the different natures of the business angels and the venture capital firms, they were investigated in two separate studies.

Business angels

An Internet survey was constructed using an Unlimited account on the website Surveymonkey[1]. It was read and commented by Jeanette Andersson, Connect; Göran Alvek, Almi Delfinerna; Mats Jacobson, Teknopol; and

[1] `http://sv.surveymonkey.com/`

Gösta Wijk, Lund university school of economics and management. After adjustments, it was read and commented by Gunvor Andersson, advisor in marketing and sales at Lund Enterprise Agency and a former employee at GfK, experienced in constructing professional surveys. The survey was then sent for pilot testing to the six interviewed business angels contacted through Connect, whereof five answered. After a few final ambiguities were sorted out, the survey was deemed satisfactory. The final version consisted of 30 questions and took between 10–15 minutes to answer. It can be found in appendix B.1.

Through a collaboration with Connect Skåne and Almi's business angel network Delfinerna, the survey was sent out by e-mail to all of their business angel members. The answers to the survey were anonymous, but information was gathered on who had answered and who had not. Reminders to answer the survey were sent out seven, 14, and 21 days after the first e-mail, to those who had not yet answered. In total 150 angels were sent the survey.

Venture capital firms

The study of the venture capital firms was done in two steps: identification and investigation.

Identifying which venture capital firms to approach was done in two steps. In the first step, interviewees in phase 1 and 2 were asked which firms they knew of that invested in Skåne. In the second step, an extensive Internet search was made of the lists of venture capital firms on the websites of the national venture capital associations of Sweden, Norway, Denmark, Finland and Germany. The websites of the companies found there were investigated, and if it was either explicitly stated or implied and probable that they invested in seed or start-up in Skåne, all of Sweden, all of the Nordic countries, or all of Europe, they were added to the list of firms to be contacted. Notes were taken on whether the firm was a publicly owned firm, a regular venture capital firm, or a corporate venture capital firm. Whenever possible, contact details to the person responsible for investments in Skåne were noted. Finally, if the company listed co-investors to their investments, and those co-investors were not found through any previous search, their websites were also investigated in the same manner. 83 funds were found, of which 12 were later discarded due to lack of contact information.

A survey was constructed for the venture firms. The survey consisted of 13 questions, took about 2–5 minutes to fill out and was made in Swedish and English. Before being sent out, it was read and approved of by Mats Jacobson. The english version can be found in appendix B.2. It was then sent out to the e-mail addresses of the investment managers at the venture capital firms. When it was not possible to obtain such an e-mail address, the survey was sent to the general contact address of the company with instructions to forward it to the person responsible for investments in Sweden. In the case of 34 of the firms, the contact person was Swedish, and they were sent the Swedish version of the survey. In the other 37 cases the English version was sent.

Reminders were sent to the companies that did not answer, the first one after seven days and the second one after 14 days. Seven days after the second reminder, calls were made to the people who did not fill out the survey. Those who answered were asked to fill out the survey, either online or over the phone. If they declined they were asked to give a reason. Direct contact with research subjects prior to survey completion have sometimes been shown to dramatically improve response rates (Allen, Chris T. and Schewe, Charles D. and Wijk, Gösta, 1980).

When the survey was closed, the websites of the firms that did not answer were investigated, to find answers to as many of the questions in the survey as possible. These answers were recorded separately, as the method of gathering the data was significantly different and might bias the findings.

2.1.4 Phase 4

The objective of phase 4 was to analyse the data gathered in the previous phases. To make the statistical analyses the PC programs Microsoft Excel 2010 and IBM SPSS Statistics 21 were used.

The answers to the questions were compiled into perspicuous tables and figures, and questions that were thought to correlate were cross tabulated against each other.

By categorising BA respondents according to when they answered the survey, a limited non-response study was conducted in order to get indications on possible differences between responders and non-responders. The observed differences were then tested with a non-parametric test. There

are several different non-parametric test methods available, and SPSS has a function to detect the most appropriate test method depending on the nature of the data — this function was used and the Independent-samples Mann-Whitney U test was chosen. Those who responded before the first reminder were categorised into one group and the rest in another. The groups were then compared, in order to find differences. The underlying assumption was that later responders are considered less inclined to answer the survey, and patterns seen in this study could later be extrapolated to apply also to those who chose not to answer at all, evidently being even less inclined to answer than the late responders.

For the statistical modelling, a correlations matrix between all scale and ordinal variables was created in order to find possible dependencies. This yielded a 55x55 cell matrix, which was exported to excel for further analysis. Relationships between variables with significant correlations were then further investigated.

To find out what factors could influence the financial success of the BA investors, a regression model was used. Since the variable representing overall returns was ordinal, an ordinal regression model was considered the most appropriate choice.

Ordinal regression model

The most commonly used models for ordinal regression analyses are the ordered logit model and the ordered probit model.

Generally, the probit model is better suited if there is a strong belief that the underlying distribution is normal. However, the model is less intuitive than the logit model, and since there is no specific reason to believe that the sample investigated follow a normal distribution, a logit regression model was chosen.

Both the logit and the probit model rest on the parallel regression assumption (also referred to as the proportional odds assumption) requiring that the relationship between each pair of outcome groups is the same. Without this assumption, it would not be possible to describe the dependence with a single function (UCLA: Statistical Consulting Group, n.d.).

In order to decide on which independent variable the regression analysis should be based, all variables with a significant correlation with *Overall, how have your investments developed?* (*Overall returns*) were isolated.

Since it is important that the independent variables actually are independent, their intercorrelation was also analysed.

After the variables were reduced to just a few, uncorrelated variables, an ordinal regression model was created using SPSS. This model was then evaluated using four measures of model validity:

- **Model Fitting information**: The *Sig.* cell describes the probability of obtaining the χ^2 value observed if there is no effect from the predictor variables. The value should be close to zero with a good model.
- **Goodness-of-fit**: This test compares the observed and the expected frequencies and tries to reject the null hypothesis that the model is of a good fit. If the hypothesis is rejected, i.e. if the significance is low, the model is not of a good fit. A good model has large significance levels.
- **Test of Parallel Lines**: The test of parallel lines tests the null hypothesis that the proportional odds assumption is violated. Hence, a significant result would imply that the proportional odds assumption does not hold and logit or probit models should not be used. However, with large sample sizes the test is unreliable and tend to confirm the null hypothesis too often. Since the sample size in this study was less than a hundred, this was not considered a problem.
- **Pseudo** R^2: In an ordinary least-square regression (OLS), R^2 can be explained as the improvement in prediction when using the regression model, compared with just using the mean value of the dependent variable. Since the ordinal regression model uses logistic regression (logit), R^2 values are not applicable. However, several attempts have been made to develop other measures emulating the R^2 used in OLS, and Nagelkerke is the one chosen to be used in this report. This value should be as high as possible, with a value of 1 representing a perfect model (Norušis, Marija J., 2011).

Principal component analysis

In an attempt to enhance the validity of the ordinal regression analysis a principal component analysis (PCA) was performed on the variables corre-

lating with *overall return*. This was expected to identify underlying factors in the original variables that might give a better explanation of the overall profitability of the business angels.

PCA is a technique that converts a set of (possibly) correlated variables into another set of linearly uncorrelated variables. These new variables are called principal components, and are always equal to or fewer than the number of original variables. The principal components are constructed in such a way that the first one defined accounts for as much variability as possible. The succeeding ones also do this, but with the constraint that they must be uncorrelated with the preceding components.

To test the validity of the PCA analyses, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used, which indicates how much of the variance in the variables that can be explained by the principal components. The measure ranges from 0-1, where 1 indicates that all variance is explained, while values below 0.50 are considered of little use (Dziuban, Charles D. and Shirkey, Edwin C., 1974, p. 359).

Finally, the Bartlett's test of sphericity was used to confirm that the variables are actually related. Significant values, i.e. ≤ 0.05, indicate that the variables are related, and therefore suitable for a PCA (Dziuban, Charles D. and Shirkey, Edwin C., 1974, p. 358).

When applicable, the varimax rotation method was used in SPSS.

Cluster analysis

Cluster analysis deals with grouping a set of elements into different groups where all elements in a specific group display characteristics that are more similar to each other than to members of other groups. These groups are referred to as clusters. There are several different methods and algorithms for doing this, and there is no one best method in all cases. The method used in this report is an agglomerative hierarchical method with some later manual adjustments in order to deal with outliers. Since the sample data in this case is relatively small and the number of dimensions is expected to be three or less, it is possible to accurately illustrate it and check the quality of the clustering. Thus, the choice of method is not as critical as it would be if the data consisted of several thousand cases and the number of dimensions was expected to be high, making the clustering difficult to illustrate and evaluate.

In hierarchical clustering there are generally two things to specify: the cluster method, which specifies how the elements should be grouped, and the measure that determines the teoretical distance between the elements. After some experimenting, the within-groups linkage appeared to be the most appropriate cluster method and the squared Euclidian distance the best measure.

2.2 Motivations and limitations of chosen method

The methodological approach of doing both a qualitative investigation, via a number of interviews, and a quantitative investigation, via two surveys, was chosen for a number of reasons. The venture capital market can be described in both qualitative and quantitative terms. It was decided that an approach resulting in quantitative data was preferable to one resulting only in qualitative data, since it would otherwise not have been possible to make an exhaustive and representative study within the given time frame.

Given the choice of quantitative results, it was necessary to decide what quantitative data to gather. This was deemed best done by looking at previous studies and doing qualitative interviews.

One option might have been to base the bulk of the data on interviews with business angels and venture capital firms, but such studies have already been made for each of the groups separately (Andersson, Jeanette, 2011b; Paul, Stuart and Whittam, Geoff and Wyper, Janette, 2007). Quantitative studies have also been made, but not covering this specific geographical region.

Due to the researchers' relatively low experience of the field, it was decided that a somewhat iterative process was to be followed, in order to make better informed decisions regarding what data to obtain, and how to do that.

In phase 2 of the study a number of interviews were conducted with business angels. The choice of whom to interview was made by Jeanette Andersson. The number of interviewees were only six, and was therefore not representative of the entire population. Furthermore, her choice was not random, but aimed at objective of covering as many types of different business angels as possible. Interviewees were also chosen that were known to be willing to be interviewed by students. This approach could be crit-

icised as leading to a biased sample and biased results. While that would be a problem if this was the main source of data collection, the primary aim of these interviews was only to gain a deeper understanding of business angels and their thought processes, prior to constructing the survey aimed at that group.

An online format was chosen for the survey. The reasons behind this decision were time constraints, budget, convenience for recipients, and ability to ensure anonymity. An alternative would have been to print the surveys and send them via mail. This is not the mode of contact that the business angel networks usually use with their members, and might not be appreciated by them. Upholding their anonymity would also have been very difficult in the process of sending the letters to the correct address. A mailed survey could perhaps have been sent to the venture capital firms, but the lead times would have been longer and would have been difficult to fit in within the given timeframe. It would also have been more expensive and taxing on the environment to send all surveys and reminders on paper.

Another possible way to distribute the survey would be to conduct interviews over the phone. For the business angels that was not an option, as their anonymity could not be guaranteed. The venture capital firms however, are not as private, and many of them publish phone numbers on their website. Since the response rate from the surveys was not very good, that might have been a good idea. On the other hand, the follow up phone calls that were made to those who did not answer the survey also had a meager yield, so it is difficult to say what would have worked best.

The business angel survey was made much longer and more detailed than the venture capital survey. Ideally the venture capital survey would have been as comprehensive as the business angel survey, but it was judged that the business angels would be much more prone to answer than the venture capital firms, being contacted through a network where they are members, being individuals rather than part of a company, and being more interested in the results of the study. A shorter survey for the venture capital firms was thought to encourage a higher response rate, and in the case that it was too low, it would be possible to conduct the survey over the phone.

Chapter 3

Results

In this chapter, the results from the interviews in phase 2 and 3, and the statistical analyses in phase 4 will be presented. First, all the results regarding business angels will be presented, and then the results regarding venture capital firms.

3.1 Business angels

3.1.1 Interviews with business angels

The main purpose of the qualitative interviews conducted with business angels was to get a better understanding of their characteristics, and in extension, what questions to ask in the survey. Seven main areas of interest were identified:

- **Demographics** refers to the general demographic traits of the BA.
- **General information on investments** refers to how and when the BA invest.
- **Money** refers to the financial facts of the BA's investments.
- **Time** refers to how much time the BA spend on its investments.
- **Investees** refers to which stages and what industries the BA investees are in.

- **Investments' development** refers to how the BA's investments have developed so far.

- **Factors of importance for investing** refers to the BA's criteria on its investees.

Table 3.1: Business angel survey questions by area of interest.

Area of interest	**Question numbers**
Demographics	1–6
General information on investments	7–10
Money	11–15, 26, 27
Time	16–19
Investees	21, 22
Investments' development	23–25
Factors of importance for investing	20, 28–30

In table 3.1 it can be seen what questions are related to what area of interest. The questions are found in the survey, in appendix B.1.

In section 1.4.4, EVCA defines four stages of company development; *seed*, *start-up*, *post-creation* and *expansion*. In the qualitative interviews, it was found that the stage *post-creation* was not very clearly understood or defined. Therefore, the *post-creation* stage was omitted from the survey.

Some other findings obtained through the qualitative interviews will be addressed in the discussion in chapter 4, in relation to the quantitative findings.

3.1.2 Quantitative study

73 out of 150 business angels answered the 30 questions in the survey. This resulted in a large quantity of data, which was analysed on the level of individual questions, but also with two or more questions at a time, using mathematical and statistical methods to determine correlations and dependencies between different questions. The answers to the survey and the results of the analyses will be presented below.

Table 3.2: General information on all business angels.

General statistics	
Number of recipients	150
Number of respondents	73
Average age of respondents	55.1
Gender:	
- Female	5 (6.8%)
- Male	68 (93.2%)
BA investments are:	
- Main occupation	6 (8.2%)
- Spare-time job	51 (69.9%)
- Retired, engaged part time	16 (21.9%)
Investments are made:	
- Primarily as a private person	10 (13.9%)
- Primarily through a company	62 (86.1%)
Made at least one BA investment	64 (87.7%)

General statistics

In this section, the answers to the individual questions will be presented in aggregated form. They will be presented roughly grouped into the seven areas of interest that were identified in 3.1.1.

As can be seen in table 3.2 the average age of the responding business angels is 55, of which 68 are men and only 5 women. For 70 %, their business angel activities are only a spare-time job, while only 8 % have it as their main occupation and 22 % are retired, and do business angel activities on the side. 86 % invest through a company and the remaining 14 % invest as a private person. 88 % have made at least one business angel investment.

In figure 3.1 it can be seen that the BAs have work experience from a multitude of industries, the most prominent being service and consulting, manufacturing, trade, and ICT: software. Investments are spread a little more evenly, but the most common ones are ICT: software, trade, manufacturing, life science, medtech, and service & consulting. A BA can have experience from more than one industry, and could therefore choose more than one answer to the question related to these statistics.

Table 3.3 through 3.8 and figure 3.2 through 3.3 represent answers from the BAs that have made business angel investments. In table 3.3 some

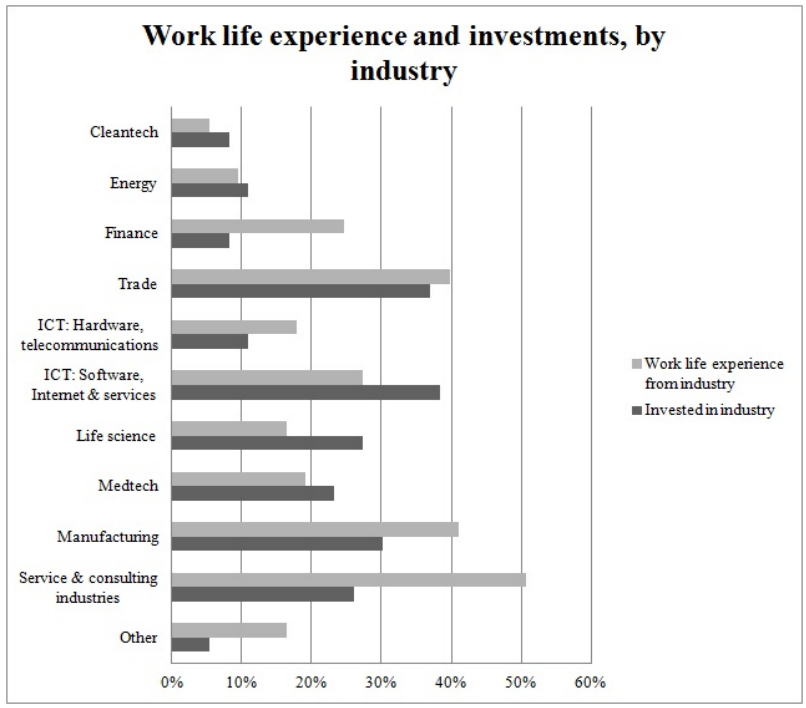

Figure 3.1: Work life experience and investments by industry.

general statistics can be seen regarding these respondents. As on average, it was 7 years and 8 months since they made their first business angel investment, they have made just over 6 investments, and they see 17.6 presentations every year from companies seeking capital. Regarding how they get in contact with the companies they invest in, 46 % do this mostly through personal contacts and networks, 22 % go mostly through formal channels, i.e. business angel networks such as Connect Skåne and Almi Delfinerna, and 32 % get about an equal number of contacts from business angel networks and personal connections.

Regarding money related issues, as can be seen in table 3.4, the BAs have invested an average of 5,046,000 SEK. When they make their first (and perhaps only) investment into a company, they invest an average sum of 438,000 SEK. The least they have invested (on average) is 174,000 SEK, and the most is 1,443,000 SEK. The sum of these initial investments stand

Table 3.3: General investment statistics on all business angels who have made at least one investment.

General investment statistics	**Average**	**Median**
Average years since first investment	7.67	6.00
Average number of investments	6.17	4.50
Contact channels:		
- Mostly formal	14 (22.2%)	
- Mostly informal	29 (46%)	
- About equally formal and informal	20 (31.7%)	
Average number of seen presentations/year	17.6	10.00

Table 3.4: Monetary related statistics.

Monetary related statistics (thousand SEK)	**Average**	**Median**
Total amount of invested capital.	5046	2150
Least invested in initial investment round.	174	100
Most invested in initial investment round.	1443	500
Average investment in initial investment round.	438	300
Share of investments made in initial investment rounds.	64.6%	65

Table 3.5: Time related statistics.

Time related statistics	Average	Median
Months from first contact to contract.	3.8	3.0
Working hours from first contact to contract, per company.	57.7	40.0
Working hours during value adding period, per company and month.	27.8	15.0
Working hours to make exit, per company.	51.6	10.0
Years expected to hold an investment.	5.3	5.0
Years until exit for exited companies.	4.9	5.0

for 64.6 % of all the capital they have invested in BA investments, the rest being follow up investments into companies that they have already invested in and where they have an ownership share.

The answers to questions regarding time can be seen in table 3.5. After the business angels comesinto contact with a company that they will later invest in, it takes an average of 3.8 months until they have actually decided to invest and signed the contract. During this time they spend 57.7 hours on meetings and due diligence specific to that particular company. After making the investment, they spend 27.8 hours per month helping the company to try and build up value, up to the exit phase, where they try to sell their share in the company for as high a price as possible. The process of making an exit takes up about 52 hours of the BAs' time. On average they expect to hold their investment in a company for 5.3 years, and in the companies where they have made an exit, the average time they have been involved was 4.9 years.

The main factors that drive the BAs to make investments, and the strength of each factor, can be seen in figure 3.2. On a scale of 1–7, an answer of 7 meant that that factor was *very important* to them when they made BA investments, 4 meant that it was *neither important nor unimportant*, and 1 meant that it was *very unimportant*. The most important factor was the possibility of later being able to sell the company for a large profit,

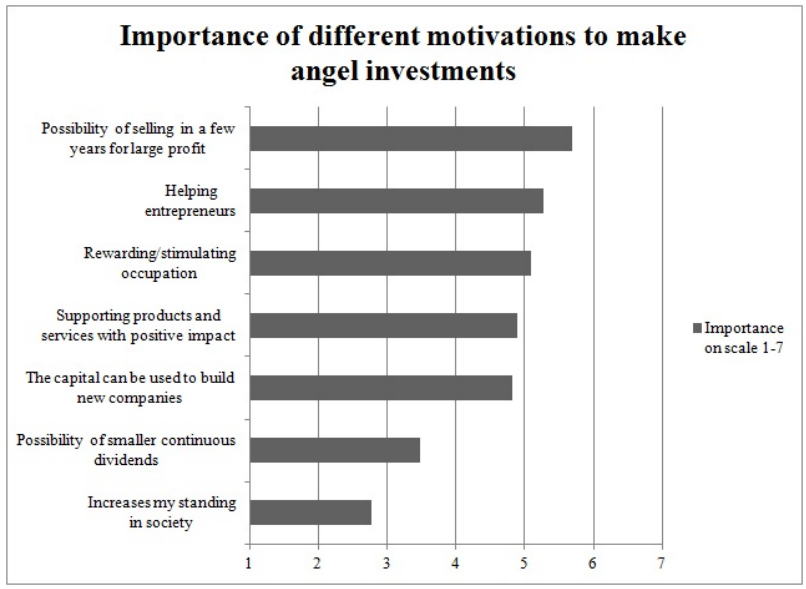

Figure 3.2: Importance of different motivations to make angel investments.

at an average score of 5.68. Following this came helping entrepreneurs, rewarding/stimulating occupation, supporting products and services with a positive impact, and that the capital can be used to build new companies, at 5.27, 5.1, 4.9 and 4.82 points respectively. With far lower scores were the possibility of smaller continuous dividends at 3.48, and increasing their standing in society at 2.78.

Figure 3.3 shows that BA investments are mostly made in early stages of a company's development. 42 % and 33 % are made in the start-up and seed phase respectively. 19 % are made in the expansion phase, and only 6 % are made in later stages.

The business angels have had different levels of success with their investments. They have been grouped into five different categories, depending on how well they have fared. The distribution of the groups is seen in table 3.6. For 18% of the BAs the value of their investments decreased significantly, for 27% the value is pretty much unchanged, for 12.5 % it increased about 8% per year, and 43% have seen a considerable increase. Of those 43 %, 14 % have seen a phenomenal growth in the value of their investments.

Table 3.6: Overall development of investments for investing business angels.

Overall development of investments' value	**Share of angels in each category**
Decreased significantly	17.9%
Neither decreased nor increased significantly	26.8%
Increased approximately as the market index (8%/year)	12.5%
Increased considerably more than the market index	28.6%
Increased many times better than the market index	14.3%

Table 3.7: Return on invested capital for exited investments, displayed as a multiplier on the total amount of invested capital, where 0 means that the entire investment was lost, and 1 means that the investment was returned but no profit was made.

Return on invested capital	**Share of all exited investments**	**Average no. of exited investments, per BA that has made an exit**
Less than 0.5	41%	1.60
0.5 - 1	9%	0.37
1 - 2.5	15%	0.60
2.5 - 7	20%	0.77
More than 7	15%	0.57
Total	100%	3.90

Table 3.8: Number of current investments with different prospects.

Estimated value and prospects on current investments	**Share of all current investments**	**Average no. of current investments, per entrepreneur**
Under liquidation, or very limited pay-off.	10%	0.39
Has not developed much and probably won't.	18%	0.72
Gained a lot of value, or have good chances of doing so.	44%	1.70
Too early to tell.	28%	1.11
Total	100%	3.90

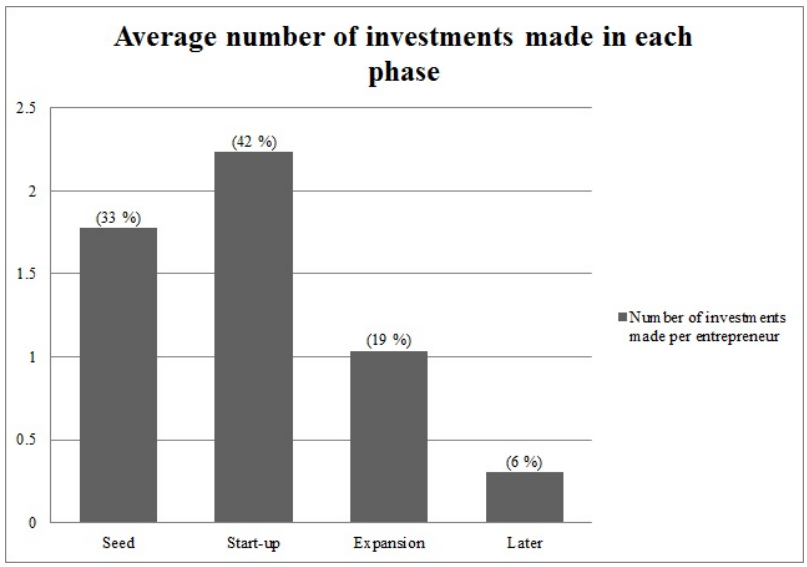

Figure 3.3: Average number of investments made per BA, in companies that were in the indicated phases during the initial investment.

BAs investments are made up of companies where they have made an exit and companies where they still have money invested. The development of the companies where they have made an exit is shown in table 3.7, while the development of the likely develoment of the companies where they are still invested is shown in table 3.8. Half of the exited companies have made a loss, most of them returning less than half of the invested amount. The other half on the other hand has returned more than invested, 15 % between 1 - 2.5 times what was invested, 20 % between 2.5 - 7 times, and 15 % returned in excess of 7 times what was invested.

The value of the investments not yet sold off is more difficult to determine, and the angels had to make rough estimations. According to these, 10 % of the companies are under liquidation or will give a very limited pay-off, 18 % have not developed much and will probably not do so either, 44 % have gained a lot of value or have good chances of doing so, while for 28 % it is too early to tell how they will develop.

When deciding whether to make an investment or not, many factors have to be considered. The BAs' ratings of the importance of 17 such

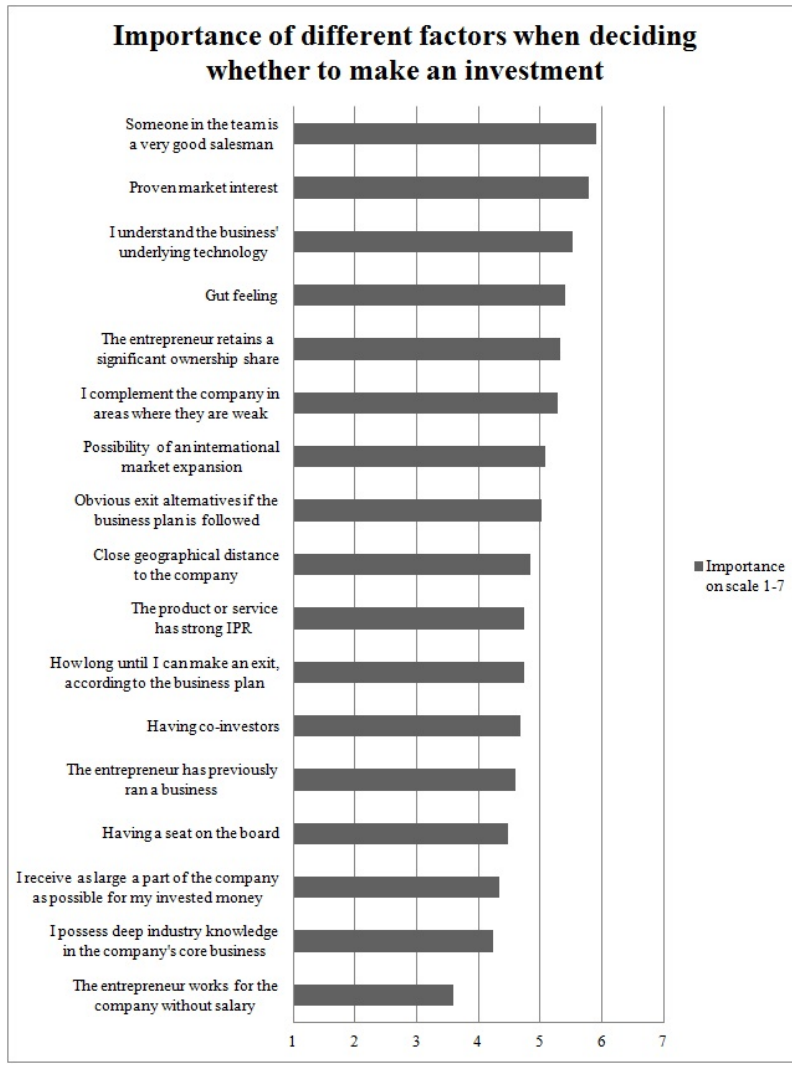

Figure 3.4: Importance of different factors when choosing whether to make an investment, on a scale from 1-7.

factors are displayed in figure 3.4 in descending order of importance. Like the reasons for making angel investments, these factors were also rated on a scale of 1–7, where 7 is *very important*, 1 is *very unimportant* and 4 is

neither important nor unimportant. The two most important factors are that there is someone in the team that is a very good salesman, and that there is a proven market interest. The least important factor is that the entrepreneur works for the company without a salary, which is the only factor with a score below 4.

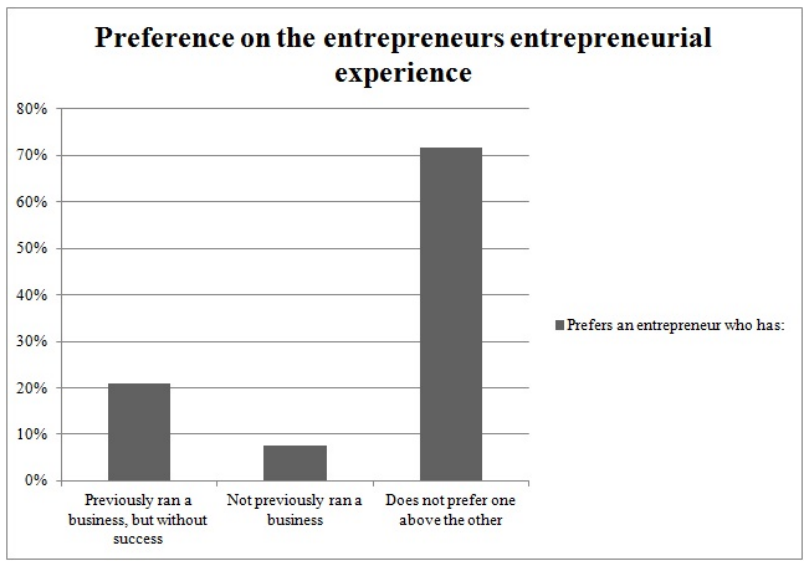

Figure 3.5: Preference on entrepreneurial background of the potential investee.

Given the choice between investing in a company where the entrepreneur has no experience of running a business and a company where the entrepreneur has run a business before, most of the business angels are indifferent. Of those 28 % who prefer one above the other, almost three times as many prefer the entrepreneur who has ran an unsuccessful business above the inexperienced one, as can be seen in figure 3.5.

When BAs have been in contact with a company seeking capital but have chosen not to make an investment, they had various reasons for not making the investment. The angels were presented with a list of the most common reasons for not making an investment and asked to mark any of those reasons that have ever had a decisive role in their decision not to make an investment. More than one answer could be chosen. The results

Table 3.9: Reasons that have played a decisive role when choosing not to invest.

Reasons for not investing	**Share**	**Answers**
Valuation of the company is too high	75.0%	51/68
I do not believe in the business model	64.7%	44
Unrealistic assumptions/information lacks credibility	61.8%	42
Bad gut feeling	57.4%	39
Entrepreneur seems to lack implementation capability	57.4%	39
Entrepreneur lacks credibility	54.4%	37
I do not know the industry	42.6%	29
Product or service lacks originality	41.2%	28
Entrepreneur takes no risk	38.2%	26
Growth prospects are limited	38.2%	26
Business concept needs further development	32.4%	22
Insufficient commitment displayed by entrepreneur	30.9%	21
Entrepreneur gives dishonest impression	29.4%	20
Insufficient information provided	26.5%	18
No obvious exit route	25.0%	17
Company is under-financed/lacks liquidity	16.2%	11
Lack of long-term vision	16.2%	11

of that question are presented in table 3.9. The most common reasons are that the valuation of the company is too high, that they do not believe in the business model, and that assumptions are unrealistic or the information lacks credibility.

Crosstabulated statistics

The survey respondents were anonymous, but were all given a randomly chosen identification number. This enabled crosstabulating their answers and analysing the connection between different answers. In this section, some interesting findings from the crosstabulation analysis are presented.

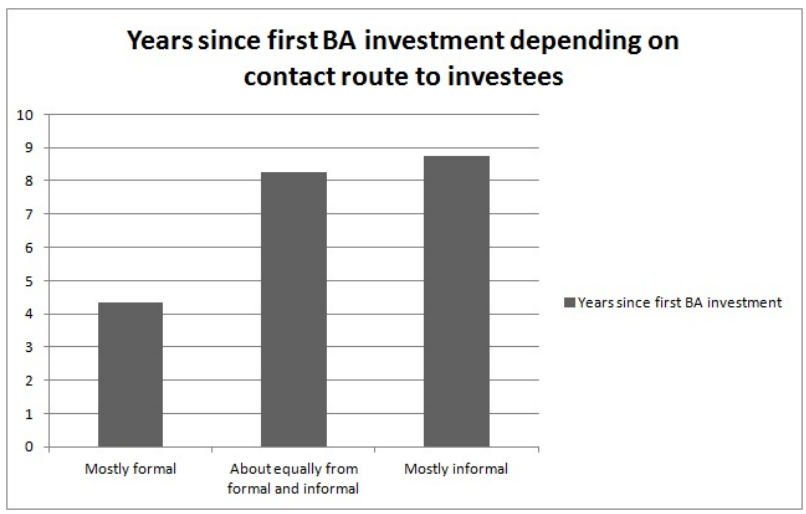

Figure 3.6: Number of years since making the first business angel investment, depending on contact route to investees.

In figure 3.6 the contact routes are mapped against how many years ago they made their first investment. Those with mostly informal contacts and those with about equal of both made their first investments about 8-9 years ago, while those with mostly formal contact routes made their first investment only four and a half years ago on average. This difference was statistically significant at a 1 % level.

In figures 3.7 through 3.10, the financial performance of the business angels is cross tabulated against a number of other statistics. First out, in

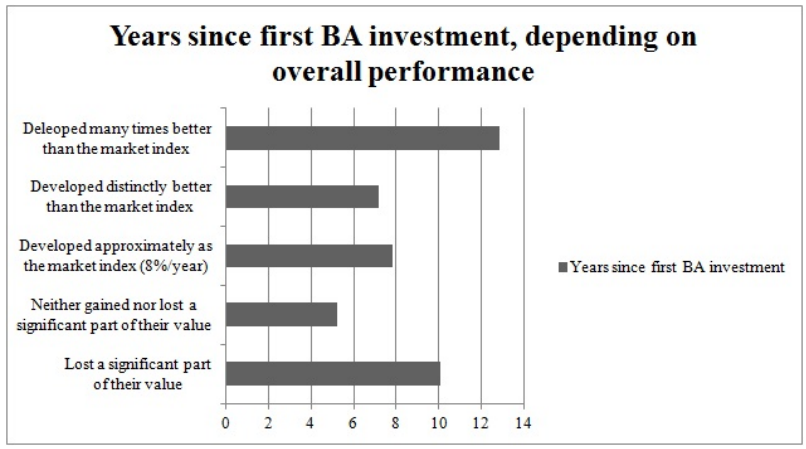

Figure 3.7: Number of years since making the first business angel investment, depending on overall performance.

figure 3.7, it is mapped against how long ago they made their first investment. Those whose investments have neither gained nor lost value have the shortest time since their first investments, while those with the best development have the longest, and those who have lost a significant part of their value have the second longest time since their first investment. However, these differences were not statistically significant.

The number of investments, displayed in figure 3.8, shows that those who have neither gained nor lost have made the least number of investments, and those who have done well have made the most. Those who have lost have made more than the breakeven ones but less than the profitable ones.

When it comes to what factors are important when deciding to make a particular investment, two stand out regarding overall performance; gut feeling and that the entrepreneur retains a significant ownership share. As can be seen in figure 3.9 these factors are both significantly correlated to the profitability of the BAs investments (5 % and 1 % level respectively).

The reasons for not making an investment also showed a relationship between overall performance and two of the factors: bad gut feeling, and the entrepreneur giving a dishonest impression (figure 3.10). Once again gut feeling was a more decisive factor for the more profitable angels, as was the impression of dishonesty in the entrepreneur, although these were not

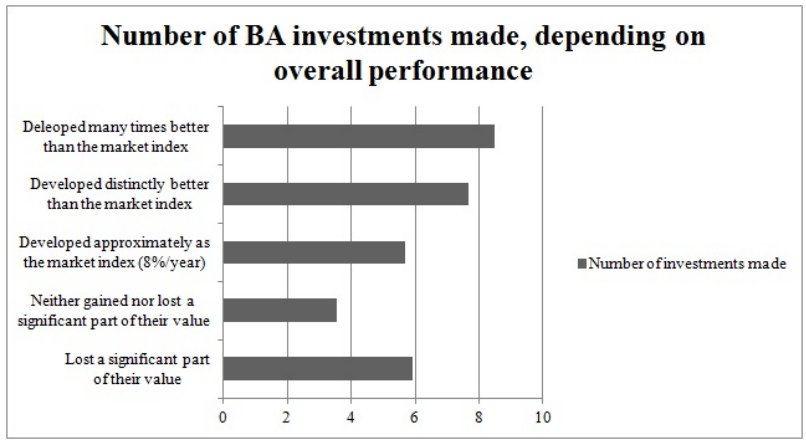

Figure 3.8: Number of business angel investments made, depending on overall performance.

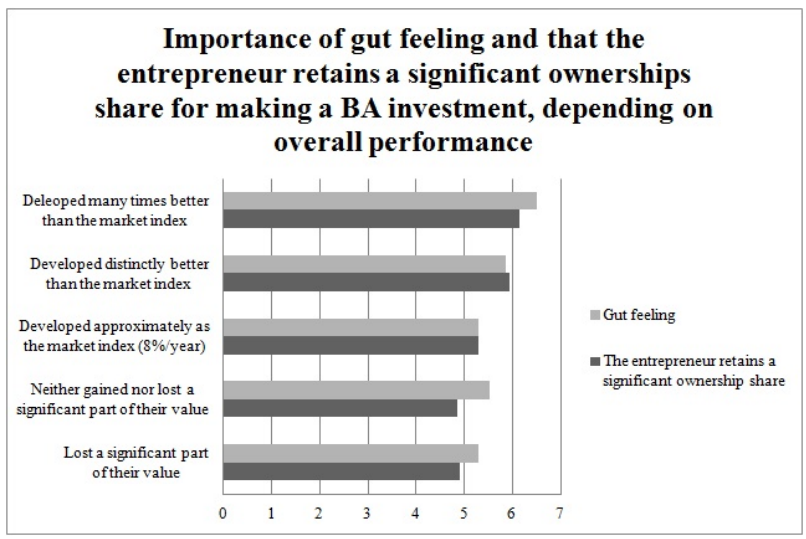

Figure 3.9: Importance of the two factors; gut feeling, and that the entrepreneur retains a significant ownership share, when choosing whether to make an investment or not, depending on overall performance.

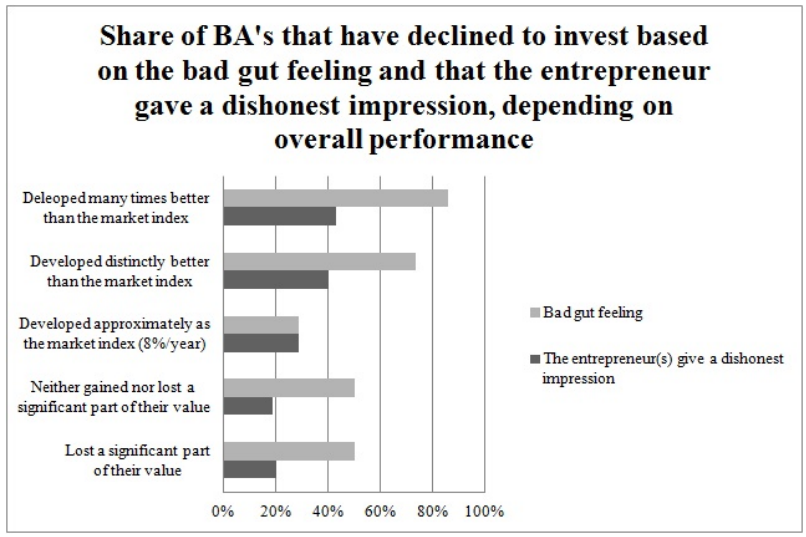

Figure 3.10: Share of business angels that have chosen not to make an investment based on bad gut feeling or the entrepreneur giving a dishonest impression, depending on overall performance.

statistically significant.

Non-response study

The non-response study compared data from BAs who responded before the first reminder and those who responded after, in order to capture indications of traits in BAs that are less inclined to answer. In the first group, there were 37 responders and in the second there were 36. The comparison showed that the two groups had very similar profiles and only displayed three significant differences.

1. The late responders viewed more presentations per year than the early responders, 21 versus 15 on average. However, this difference was far from significant (Sig. 0.461) and after further investigating the sample an outlier among the later respondents was detected, indicated seeing 200 presentations per year. If this outlier is excluded from the data set, the average number of presentations is almost identical.

2. The late responders had invested less than the early responders, 2.75 million SEK versus 7.34 million SEK on average, a difference that was statistically significant (Sig. 0.010).

3. The late responders had made less investments than the early responders, 5 versus 8 on average, a difference that was statistically significant (Sig. 0.041).

Ordinal regression

One objective of this report is to find common factors among the most successful business angels. As explained in section 2.1.4, a correlation matrix with all scale and ordinal factors was created using SPSS, and all factors with a significant correlation with the ordinal variable *Overall, how have your investments developed?* (*overall returns*) were isolated. The two variables *How large share of the investments that you have sold have returned less than half of what was initially invested* and *How large share of your investments have returned more than 7 times the capital that was initially invested* were removed, as they are sub-measures of the *Overall return*. The remaining correlating variables can be seen in table 3.10.

By investigating the correlations between the six remaining variables, strong correlations were found between *Number of Start-up investments as a share of all investments* (*start-up investments*, negative correlation), *Regarding the companies you have invested in, how many of them were in the Expansion stage at the time of the initial investment?* (*Expansion investments*), *Regarding the companies you have invested in, how many of them were in the Later stage at the time of the initial investment?* (*Later stage investments*) and *Approximately how much capital have you invested in those companies in total (thousand SEK)?* (*Total amount invested*). Since investments in later development stages are usually more capital intensive, the variables were interpreted as representing a single dimension, showing to which extent the BA invest in later developmental stages. It was thus chosen to be represented by *later stage investments*. The correlation of *Later stage investments* with the other three variables were, respectively, -.268* (*start-up investments*), .717** (*expansion investments*) and .656** (*total amount invested*).

Significant correlations were also found between the two remaining variables *How important are the following factors when you decide whether to*

Table 3.10: Variables that correlate with *Overall, how have your investments developed?*.

Variables	**Overall return**	
Approximately how much capital have you invested in those companies in total (thousand SEK)?	Pearson correlation Sig. (2-tailed) N	.331* .01 55
Number of *Start-up* investments as a share of all investments	Pearson correlation Sig. (2-tailed) N	-.423** .00 56
Regarding the companies you have invested in, how many of them were in the *Expansion stage* at the time of the initial investment?	Pearson correlation Sig. (2-tailed) N	.266* .05 56
Regarding the companies you have invested in, how many of them were in the *Later stage* at the time of the initial investment?	Pearson correlation Sig. (2-tailed) N	.370** .01 55
How important are the following factors when you decide whether to make an investment or not? *Gut feeling*	Pearson correlation Sig. (2-tailed) N	.273* .05 53
How important are the following factors when you decide whether to make an investment or not? *That the entrepreneur retains a significant ownership share*	Pearson correlation Sig. (2-tailed) N	.378** .00 54
*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).		

make an investment or not? Gut feeling (*Importance of gut feeling*) and *How important are the following factors when you decide whether to make an investment or not? That the entrepreneur retains a significant ownership share* (*Importance of high entrepreneur ownership share*) (.280*). SInce the latter had a stronger correlation with *Overall returns*, it was therefore selected for further investigation with an ordinal regression analysis.

The initial model considered used *Later stage investments* and *Importance of high entrepreneur ownership share* as independent variables, and *Overall returns* as dependent variable. A summary of the results of this analysis can be seen in table 3.11. For an explanation of the measures, please refer to section 2.1.4. For the complete SPSS output, please refer to appendix C.1.

Table 3.11: Results of an ordinal regression analysis, with *Overall returns* as dependent variable and *Later stage investments* and *Importance of high entrepreneur ownership share* as independent variable.

Measure	**Values**
Pseudo R^2, Nagelkerke	0.317
Goodness-of-Fit	
- Pearson	0.997
- Deviance	0.993
Model Fitting Information, final	0.000
Test of Parallel Lines, general	0.268

The Goodness-of-fit, Model fitting information and test of parallel lines all show values indicating that the model is relevant. The Nagelkerke pseudo R^2 measure gives 0.317.

It was suspected that experience would affect the success of a business angel, and two measures of this factor were considered: *Approximately how much capital have you invested in those companies in total (thousand SEK)?* (*Total amount invested*) and *How many business angel investments have you made altogether?* (*Number of investments*). Both these measures correlated significantly with *Later investments*, but the *Number of investments* much less so. It was therefore chosen for another regression analysis. A summary of the results can be seen in table 3.12, while the full SPSS output is available in appendix C.2.

This model has a significantly higher explanatory capability, considering that the Nagelkerke value is 0.372, as opposed to 0.317 in the model summarised in table 3.11. The model fitting information and the goodness-of-fit also indicate a good model, but the test of parallel lines could not be performed. Thus, it cannot confirm that the proportional odds assumption is not violated.

Table 3.12: Results of an ordinal regression analysis, with *Overall returns* as dependent variable and *Later stage investments*, *Importance of high entrepreneur ownership share* and *Total number of investments* as independent variables.

Measure	**Values**
Pseudo R^2, Nagelkerke	0.372
Goodness-of-Fit	
- Pearson	0.363
- Deviance	0.996
Model Fitting Information, final	0.000
Test of Parallel Lines, general	–

To see if the model could be further improved, *Importance of gut feeling* was added, and a summary of the resulting model can be seen in table 3.13. The complete SPSS output can be found in appendix C.3.

Table 3.13: Results of an ordinal regression analysis, with *Overall returns* as dependent variable and *Later stage investments*, *Importance of high entrepreneur ownership share*, *Total number of investments* and *Importance of gut feeling* as independent variables.

Measure	**Values**
Pseudo R^2, Nagelkerke	0.339
Goodness-of-Fit	
- Pearson	0.311
- Deviance	0.999
Model Fitting Information, final	0.001
Test of Parallel Lines, general	0.665

In this model, the Nagelkerke value is lower than in the model, displayed in table 3.12. However, it is still better than the first model considered in table 3.11, and all other model values are good, including the test of parallel lines.

As the results were not quite satisfactory, a principal component analysis (PCA) was made in order to extract underlying factors hypothesised to relate to drive the correlating variables *Later investments*, *Start-up in-*

vestments, *Expansion investments* and *Total number of investments*; and *Importance of high entrepreneur ownership share* and *Importance of gut feeling*. The first factor was considered to represent the stage at which the BAs invest (*Investee stage*), with later stages representing higher values. The second factor represents that investors prioritise investment opportunities where they have a good gut feeling and are therefore able to trust the entrepreneur to do the right things as long as he or she is properly incentivized (*Importance of trust in the entrepreneur*). All variables were put through a PCA, with the number of factors predefined to two. The values can be seen in table 3.14, and a more thorough print out in appendix D.1.

Table 3.14: KMO and Bartlett's test on the variables *Later investments*, *Start-up investments*, *Expansion investments*, *Total number of investments*, *Importance of high entrepreneur ownership share* and *Importance of gut feeling*, restricted to two principal components.

Measure	**Values**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.493
Bartlett's Test of Sphericity, significance	0.233

The PCA did not yield the factors that were expected, and instead grouped *total number of investments* with *importance of gut feeling* and *importance of high entrepreneur ownership share* (visible in the appendix). Additionally, Bartlett's test was failed and the KMO was less than 0.5. Because of this, two new, separate PCAs were made, one for each factor using only the variables suspected to be associated with that factor. For both these factors, the KMO and Bartlett's delivered promising results, if less so with the factor representing *importance of trust in the entrepreneur* were the KMO shows 0.500, a very low score but could still be considered meaningful. The test results for *investee stage* and *importance of trust in the entrepreneur* can be seen in tables 3.15 and 3.16 respectively. For SPSS printouts, see appendix D.2 and D.3.

For the ordinal regression analysis, a modification of the *investee stage* factor was also considered, where *total number of investments* was left out. This factor was named: *modified investee stage*, and its test results can be seen in table3.17, with printouts available in appendix D.4.

Table 3.15: KMO and Bartlett's test on the variables *Later investments*, *Start-up investments*, *Expansion investments* and *Total number of investments*, restricted to one principal component.

Measure	**Values**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.637
Bartlett's Test of Sphericity, significance	0.000

Table 3.16: KMO and Bartlett's test on the variables *Importance of high entrepreneur ownership share* and *Importance of gut feeling*, restricted to one principal component.

Measure	**Values**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.500
Bartlett's Test of Sphericity, significance	0.023

Table 3.17: KMO and Bartlett's test on the variables *later investments*, *Start-up investments* and *Expansion investments*, restricted to one principal component.

Measure	**Values**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.571
Bartlett's Test of Sphericity, significance	0.000

The new factors presented in tables 3.14 to 3.17 were saved in SPSS as new variables, and used for further experimentation with ordinal regression analyses. The best regression model found depended on the two factors *modified investee stage* and *importance of trust in the entrepreneur*. A summary of this model is presented in table 3.18, and the complete SPSS output can be found in appendix C.4.

This model is considerably better at predicting *overall returns* than any of the previous models, displaying a nagelkerke of 0.411, while still passing the other tests of model fitting, goodness-of-fit and test of parallel lines. The variables that were finally chosen are summarised in table 3.19

Table 3.18: Results of an ordinal regression analysis, with *Overall returns* as the dependent variable and the factors *importance of trust in the entrepreneur* and *Modified investee stage* as independent variables.

Measure	**Values**
Pseudo R^2, Nagelkerke	0.411
Goodness-of-Fit	
- Pearson	0.356
- Deviance	1.000
Model Fitting Information, final	0.000
Test of Parallel Lines, general	0.123

Table 3.19: Final factors used in the ordinal regression model.

Composite factor	**Underlying variable**
- Modified investee stage	- Later investments - Start-up investments - Expansion investments
- Importance of trust in the entrepreneur	- Importance of gut feeling - Importance of high entrepreneur ownership share

Cluster analysis

Using the factors *investee stage* and *importance of trust in the entrepreneur*, obtained in the factor analysis in the previous section, a cluster analysis was performed in order to find different types of investors with different profit characteristics. To ensure the suitability of the factors, they were checked for correlation, which showed a pearson correlation of a mere 0.003 at a 0.982 significance level, which means that they could be considered orthogonal and therefore very suitable for a cluster analysis.

Using within-groups linkage as cluster method and squared euclidian distance as the measure, four clusters were identified by the algorithm. One of these clusters held just a single element, and was therefore moved manually into another cluster. Another two elements appeared to have more in common with another group than they were initially assigned to. They were also moved to the more appropriate group. This is illustrated

in figure 3.11, and the change can also be observed through a dendrogram which is shown in appendix E.1.

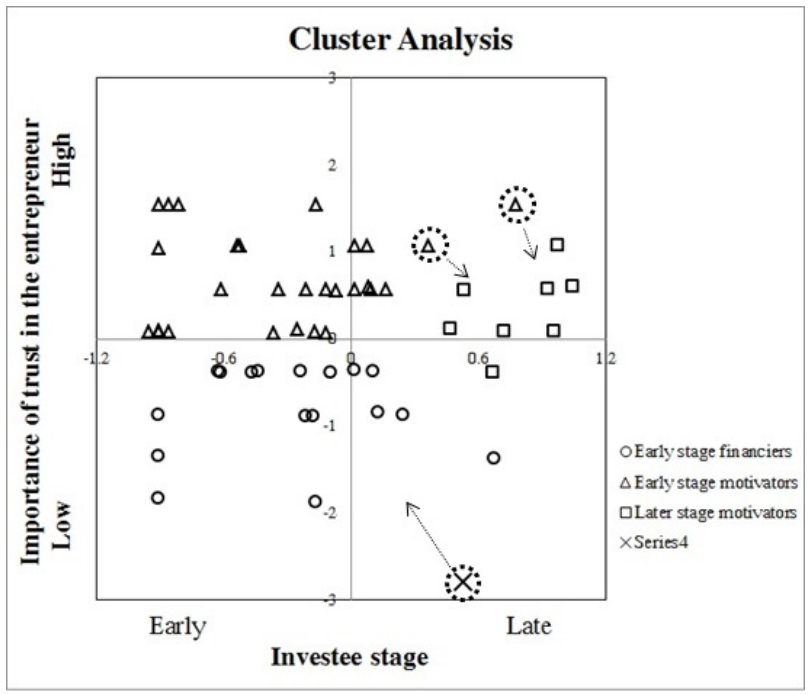

Figure 3.11: Cluster analysis using the factors *Investee stage* and *Importance of trust in the entrepreneur*. The arrows show which groups the marked elements were changed to.

After these final cluster adjustments, three groups remained. They were named the *Early stage financiers* (n=18), the *Early stage motivators* (n=26) and the *Later stage motivators* (n=10). These can be seen in figure 3.12.

The groups will be further investigated for different characteristics, first by illustrating how the groups differ from each other in the variables used to make up the two factors for the cluster analysis, and then by looking at some other interesting variables. The variables used to create the factor *Investee stage* can be seen in figure 3.13.

As can be seen, the *later stage motivators* overall have made signifi-

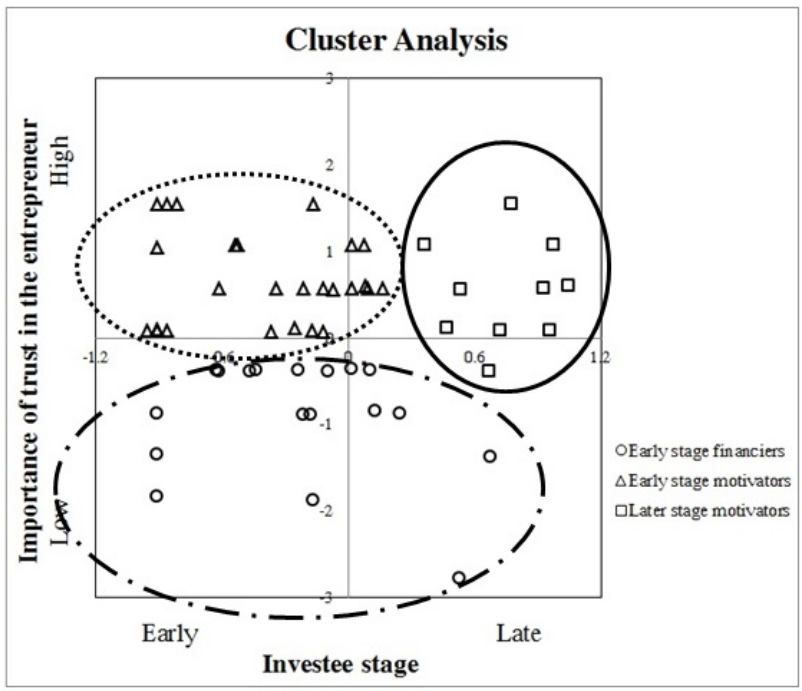

Figure 3.12: Cluster analysis using the factors *investee stage* and *importance of trust in the entrepreneur*. It should be noted that all values are relative to the mean of the complete sample, i.e. a BA ranking low on the y-axis probably still considers trust important, but less so than its peers.

cantly more investments in all categories. However, there are big differences in the distribution of investments over the different stages, the *Later stage motivators* having a much larger share of later stage and expansion stage investments than *Early stage financiers* and *Early stage motivators*. *Early stage financiers* and *Early stage motivators* are fairly similar in this dimension, which is only to be expected considering their position in the cluster analysis illustrated in figure 3.12.

In figure 3.14, the variables used for constructing the second factor, *Importance of trust in the entrepreneur*, is shown.

This time, a closer kinship can be seen between the *Early stage motivators* and the *Late stage motivators*, also expected considering their positions

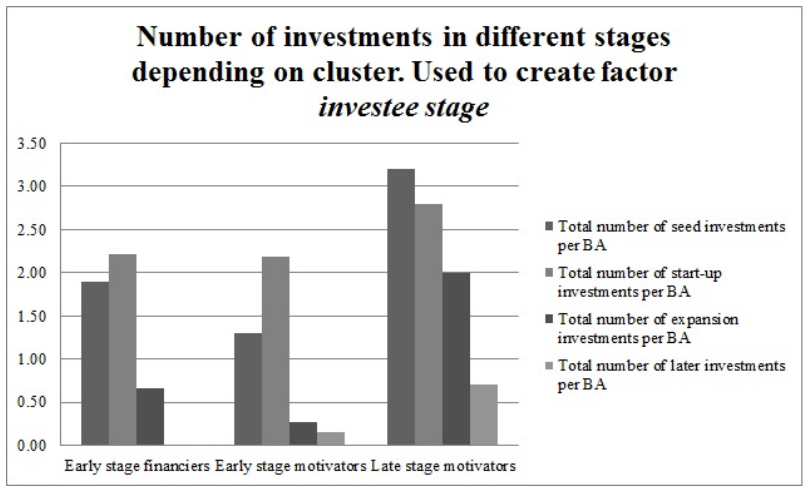

Figure 3.13: Number of investments in different stages depending on cluster. From the data presented in this figure, all variables used to create the factor *investee stage* can be derived.

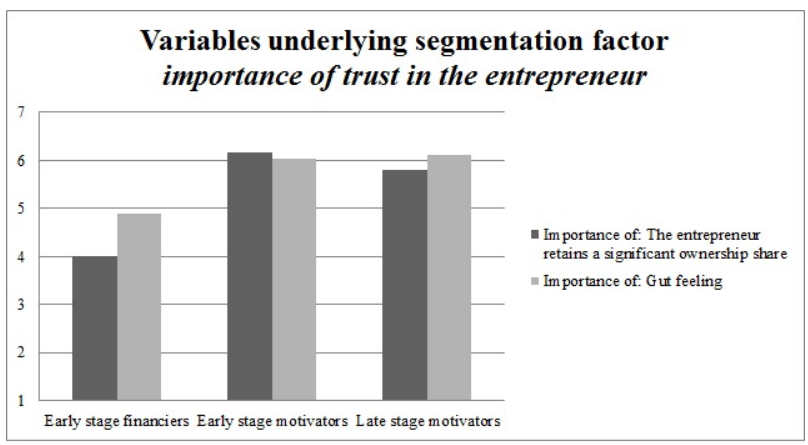

Figure 3.14: The variables underlying the factor *Importance of trust in the entrepreneur*. 1 means *very unimportant*, 7 *very important* and 4 *neither important or unimportant*.

in the cluster analysis in figure 3.12. It should be noted that the *Early stage financiers* also consider it somewhat important that they have a good gut feeling, and that the entrepreneur retains a significant ownershare. They do not, however, stress this as much as the other groups.

The median profitability for the different groups can be seen in figure 3.15.

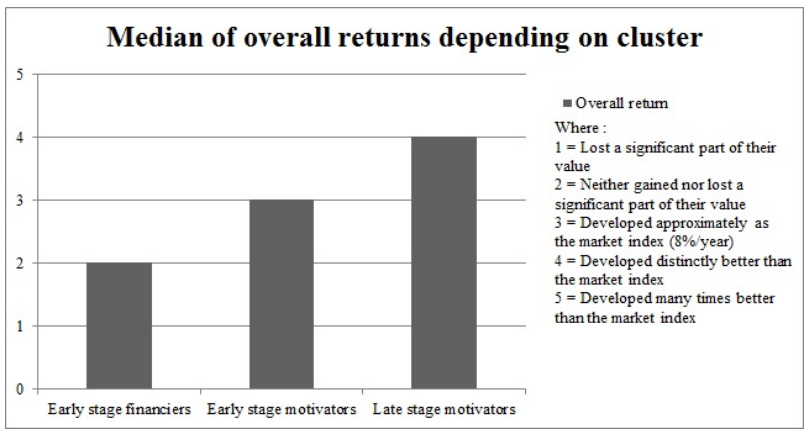

Figure 3.15: Median overall return per business angel in each cluster.

The *Late stage motivators* are the most profitable ones, with the median BA having developed distinctively better than the market index. *Early stage motivators* have had a development approximately the same as the market index, while the *Early stage financiers* have neither gained nor lost a significant share of their investment. These results were also expected considering the regression analysis in the previous section.

To provide a more detailed picture of the structure of the groups returns, the average share of investments with different degrees of success is shown for the three groups. Statistics for already exited investments can be seen in figure 3.16 and current investments in figure 3.17.

For all groups of investors, the most common outcome was that investments returned half or less of what was invested. A large majority of the successful investments made by the *Early stage financiers* are relatively low-yielding investments, with a return of 1–2.5 of invested capital. The *Early stage motivators* and *Late stage motivators*, on the contrary, both have a significant part of very successful investments, with returns over 2.5 times

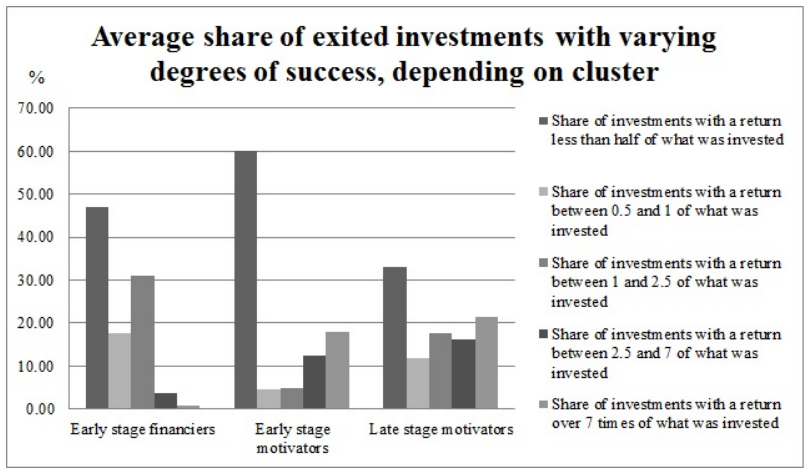

Figure 3.16: Average share of exited investments with varying degree of success, depending on cluster. The values shown are the average percentages of total investments in each group.

the invested capital. The biggest difference between the two latter groups, is that *Late stage motivators* have a much smaller number of investments that returned half or less of what was initially invested than *Early stage motivators*.

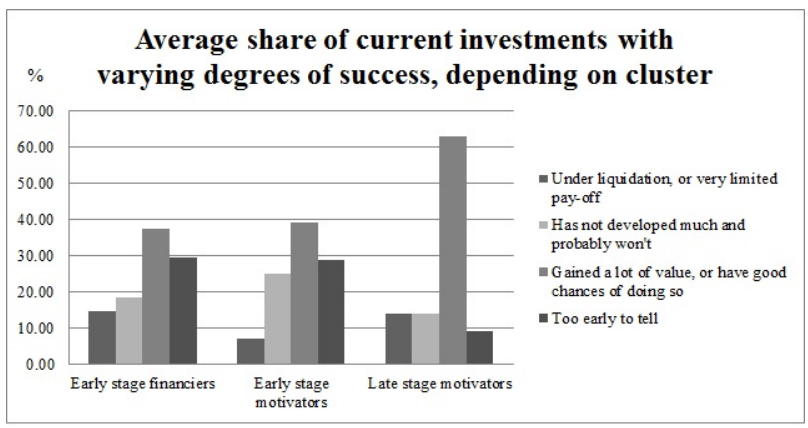

Figure 3.17: Different investor motivators depending on cluster belonging.

Among the investments that are still active, the outlook was generally positive, with the largest category of investments for all groups being *Gained a lot of value, or have good chances of doing so*. The *Late stage motivators* have venture investment portfolios where, on average, over 60 % of the companies *Have increased a lot in value or have good chances of doing so*, which differentiate them from the other two groups, where this category of investments accounts for less than 40 % of the portfolio. *Early stage financiers* and *Early stage motivators* show rather similar characteristics overall.

In figure 3.18, the average number of presentations seen per year by the different groups is shown, together with the total number of actual investments made during the BA's lifetime.

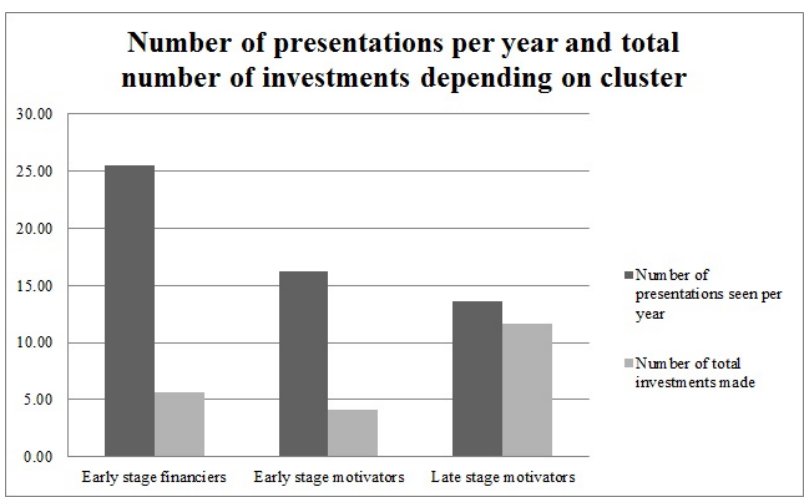

Figure 3.18: The number of presentations seen per year and total number of investments made depending on cluster. Note that the number of investments refer to the BA's lifetime, while the number of presentations are per year.

early stage financiers generally see many more presentations than the other two groups. *Early stage motivators* see significantly less presentations, but still more than the *Late stage motivators*. On the other hand, *Late stage motivators* have on average made more than double the amount of investments as the other two groups. The average age per group was also

investigated. All groups had the same average age: 55, 57 and 55 for *Early stage financiers*, *Early stage motivators* and *Late stage motivators* respectively.

In figure 3.19, the drivers of the BA's in the different groups are presented.

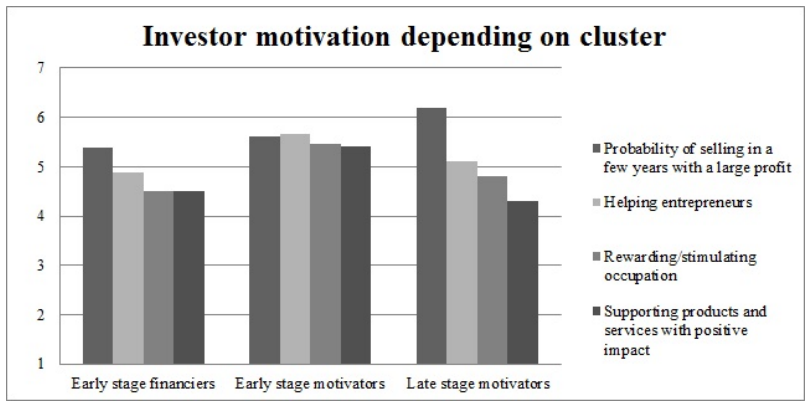

Figure 3.19: The top four investor drivers, depending on cluster.

For the *Later stage motivators*, the probability of selling the venture with a large profit in a few years was the by far most important driver, while supporting products and services with a positive impact was the least important of these drivers. The *Early stage motivators* consider these four drivers about equally important, while the *Early financiers* have a similar profile as the *Late stage motivators*, except for considering everything slightly less important.

3.2 Venture capital firms

3.2.1 Interviews with venture capital

The main purpose of the qualitative interviews conducted with venture capitalists was to get a better understanding of the overall market and the most critical factors determining the scale and scope of the VC investments. Similarly to the business angels, five main areas of interest were identified:

- **Time** refers to the lifetime of the fund.

- **Money** refers to the financial facts of the VC firm's investments.
- **Degree of influence** refers to the prefered ownership shares.
- **Investees** refers to which stages and what industries the VC firm investees are in.
- **Geographical focus** refers to what geographical area the VC firm invests in.

Table 3.20: Venture capital firm survey questions by area of interest.

Area of interest	Question numbers
Time	1, 2
Money	3–6
Power	7, 8
Investees	9, 10
Geographical focus	11, 12

Table 3.20 shows which questions are related to what area of interest. The questions are found in the survey in appendix B.2.

As in the BA study, the firm development stage *post-creation* was omitted, and assumed to be covered by the *start-up* stage.

The interviews will also be used to interpret the results from the quantitative study in the discussion in chapter 4.

3.2.2 Quantitative study

Even though the survey aimed at the venture capital firms was designed to be simple and quick to fill out, the response rates were significantly lower than for the business angel survey. The response rates can be seen in table 3.21.

Because of the low response rate, an effort was made to collect as much information as possible through the websites of the VC firms. Much was found, but it was far from exhaustive. In the coming sections, data provided from the respondents will be combined with data found on the websites, in order to present a more accurate picture of the actual market. While

Table 3.21: Response rates of the survey.

General Statistics	Sent	Qualified respondents	Responses
Swedish VC firms	34	26	10 (38.5%)
Foreign VC firms	37	33	5 (15.2%)
Total VC firms	71	59	15 (25.4%)

researching VC firm websites, several of the firms eliminated, being found to fall outside our target group. Some were found to be business angels or networks of BAs, some were buyout funds, while yet others had gone out of business. The baseline sample used throughout the rest of this section is the 59 VCs that remained after the elimination.

The median VC fund was founded in 2007, but the average fund was founded already 2004. This rather large discrepancy suggests that there are a few very old firms in the sample that push the average down. 22 out of 35 firms indicated that they were evergreen funds without scheduled liquidation dates.

In table 3.22, the scale of the firms' investments is presented. Most firms appear comfortable with investments between a 10–12 % and a 50 % share of ownership. The median largest ownership share the VC firms want to take is 49 %. However, since these numbers only are based on 17 samples.

Table 3.22: The scale of the investments.

	Average	Median	Sample size
Committed capital (MSEK)	1721	740	36
Capital invested	41%	45%	17
Smallest investment (MSEK)	6.4	4.3	34
Smallest company share	13%	10%	17
Largest investment (MSEK)	97.5	86.1	33
Largest company share	54%	49%	17

The geographical focus of the VC firms is shown in figure 3.20. Considering that almost half of the firms in the sample are based in Sweden, it is interesting to note that only 22 % consider Sweden their primary geographical market.

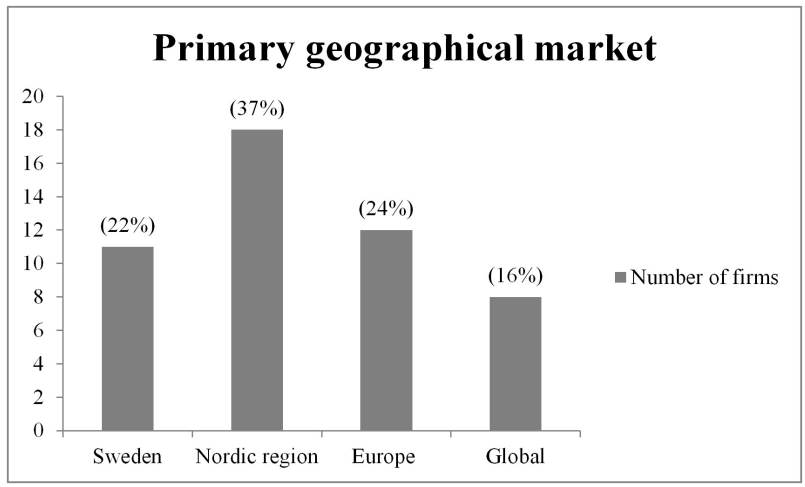

Figure 3.20: Geographical focus of the VC firms. Information was gathered from 49 firms out of 59.

The firms' approach to investments in Skåne is shown in table 3.23. Information on this was found only for 21 firms, but out of them, a large majority appear to be willing to take lead on investments in southern Sweden.

Table 3.23: VC's approach to investments in southern Sweden.

Approach to southern Sweden	**Number of firms**	**Share of answers**
We can take lead	15	71% (25%)
We can invest if others take lead	2	10% (3%)
We do not invest in southern Sweden	1	5% (2%)
I do not know	3	14% (5%)
Respondents	21 (59)	100% (36%)

The diagram in figure 3.21 shows to what degree the sampled firms invest in ventures in different development stages. This information was seldom stated explicitly on the VC firms' websites, but could often be deduced from their descriptions of the kind of ventures they were looking to invest in. Because this is a subjective evaluation, the responses to the

survey have been separated from the information found on the websites.

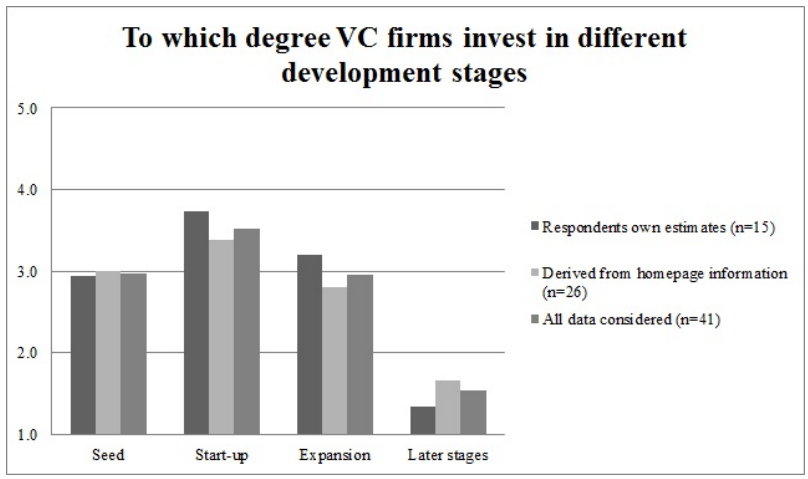

Figure 3.21: To which degree the VC firms invest in ventures in different development stages. Average values are presented, where 1 is *To a very small extent* and 5 is *To a very large extent*.

Investments in the start-up stage seems to be slightly preferred to investments in seed or expansion stages, a finding that is consistent over both samples.

Table 3.24 shows industries in which the VC firms invest. Similarly to the data on investment stages in figure 3.21, table 3.24 displays the preferred industries divided between the respondents own answers and what was found on their websites.

The most popular industries are ICT: Hardware and ICT: Software, a finding that was expected from the qualitative interviews. However, ICT may be part of several other industries as well, e.g. a VC firm with focus on energy might consider investing in a start-up firm working on an iPhone application designed to reduce energy consumption, while declining to invest in other ICT firms not related to energy. When deciding which industries a firm focused on by looking at their website, such a VC firm would not be counted as focusing on ICT, only in Energy. This might explain the discrepancy between the respondents own answers and the information found on the Internet.

Table 3.24: The VC's focused on investments in these industries. The numbers in parenthesis is read as percentage of that sub-sample that is willing to invest in the industry.

Industries	**Combined**	**Respondents**	**Website**
Cleantech	18 (35%)	3 (25%)	15 (38%)
Energy	16 (31%)	4 (33%)	12 (31%)
ICT Hardware	27 (53%)	9 (75%)	18 (46%)
ICT Software	27 (53%)	9 (75%)	18 (46%)
Life science	17 (33%)	1 (8%)	16 (41%)
Medtech	16 (31%)	3 (25%)	13 (33%)
Manufacturing	12 (24%)	4 (33%)	8 (21%)
Other	8 (16%)	3 (25%)	5 (13%)
Sample	51	12	39

Chapter 4

Discussion

The business angel study and the venture capital firm study were conducted parallelly and quite independently, and will therefore be discussed individually, followed by some concluding words.

4.1 Business angels

There are no prerequisites to become a business angel — all you need is a bag of money and a desire to invest it into unlisted companies. Anyone could potentially become a business angel, and since there is no mandatory register for business angels or business angel investments, it is difficult to identify and study them. Fortunately, in Skåne, as opposed to many other places in Sweden, most business angels are members of at least one of a few business angel networks (BANs). These networks were created in order to facilitate BA investments. Incidentally, that also makes for an excellent channel to reach a large portion of them with reasonable effort.

The fact that most BAs in Skåne are part of BANs is confirmed in many of the interviews. There might still be a group of BAs outside of the BANs and unknown in the community. This is, however, rather unlikely, as these "unknown" BAs would have common contact points with the known BAs in the companies they invest in. And even if these "unknown" BAs were not spotted that way, they would probably become known if one of the companies they have invested in would become successful, and grew to a large size, attracting media attention and interacting with other firms. It

is therefore assumed that a majority of the business angels in Skåne have been contacted in this study.

4.1.1 General information on business angels and their investments

Månsson and Landström wrote an article (Månsson, Nils and Landström, Hans, 2006) on the Swedish venture capital market as of 2004. They found that, on average, active BAs have 4.4 informal investments in their portfolio and make one new investment per year, often in syndicate with other BAs. Most of them have acquired their wealth by successfully building up and selling a company of their own, and they are almost exclusively middle-aged men. The results of this study do not show where the BAs acquired their wealth or how often they syndicate their investments. It does, however, show that they hold 3.5 investment on average and make 0.8 investments per year. Both the number of investments made per year and the number of investments held are lower in this study. The region of Skåne is a part of Sweden, but might not be representative of it in this case, which could explain the differing numbers. Another possible explanation is that conditions have changed in the last 9 years.

An implication of how many presentations the BAs see per year and the number of investments they make per year, is that 4.75 % of the times that they see a presentation, they make an investment. This should not be confused with how often a presentation results in an investment, since there are often more than one BA present at a presentation, as well as the fact that they often co-invest.

A clear correlation was expected between the industries BA's have experience from and the industries they have invested in. There is such a relationship, as can be seen in figure 3.1, but there are some discrepancies. The number of BAs having worked in finance and service/consulting is higher than the number of BAs investing in this sector. Conversely, the number of BAs that have invested in software, life science and medtech is higher than the number of BAs that have work experience from those industries. This is interesting, but not completely unexpected. Having experience from an industry would presumably make you more confident in your appraisal of an investment opportunity, and therefore more likely to make an investment. Having experience from the industry would also

make you more able to add value to the company. On the other hand, software, life science and medtech are industries that are generally attractive to venture capital, as the growth potential in these sectors is more often exponential than in investments in finance and consulting.

Another interesting finding relates to through what contact routes the BAs got in contact with the companies they invested in (figure 3.6). If they got most of their contacts through formal business angel networks, the time since their first investment was much shorter and they had made fewer investments. It was suggested in one of the interviews that, if you were unfamiliar with the BA investing scene, it was common to join formal networks and get your contacts through them. As the years went by, you expanded your personal network, in large part due to the BAN contacts, and after awhile you got most of your contacts from your informal network. This sounds like a plausible explanation, and it would be interesting to see a further exploration of this hypothesis.

Looking at the statistics on how many contacts are mediated through *formal* contacts and how many through *informal* contacts, and making the assumption that those who answered that they got about an equal number of contacts through formal and informal networks got an average of 50 % of their contacts from each category, and that the average distance from 50 % was the same in the other two groups, 62 % of contacts would be made through informal networks and 38 % would be made through formal networks. Since the total is skewed somewhat in the favour of informal contacts, it would be reasonable to assume that it might also be skewed in that direction within the three groups. Thus, the data suggest that maybe two-thirds of business angel investing opportunities are found through the business angel' personal network, and one-third with the use of formal business angel networks. This finding, however, is probably the one that is most biased by the sampling of respondents for the survey, who are all part of business angel networks. Those BAs that are investing in Skåne and are not members of Connect Skåne or Almi Delfinerna are probably getting an even higher degree of their contacts through informal networks.

The women who answered the survey were only 5 out of 73 respondents. That is unfortunately too few to make good comparisons between the sexes. According to Jeanette Andersson at Connect Skåne, the number of women in the population should be around 20. If the response rate of the women were the same as the average, around 10 of them should have answered, and

a comparison might have been possible. Assuming that at least 20 women received the survey, then there is a statistically significant deviation in the response rate for women, suggesting that they are less likely to answer. The reason for this is unclear, but might be that since they are so few, they perceive themselves as easier to identify by their answers to the survey.

4.1.2 Motivations and preferences

The investors have varying reasons for being business angels and making angel investments. The most important factor is money: to be able to sell the company and make a large profit. But almost as important are the philanthropic motivations of helping entrepreneurs and promoting products with a positive impact on humanity and nature, as well as that the capital can be used to build new companies, and that it provides a stimulating hobby. While selling for a large profit was the most important reason for investing, dividends were considered less important. This could be interpreted as that the BAs consider the best use of potential profit in the companies is to reinvest it, to try and build a higher value before a sale, instead of giving it to the owners as dividends. By keeping the money in the company the BA does not have to pay capital gains tax before he reinvests the profits. This is contrary to what Mason and Harrison (2002) found in their study, shortly presented in section 1.4.5, were small continuous profits were considered of high importance, but since many BAs in that study were motivated by United Kingdom-specific tax breaks, this supports our theory that the BAs of Skåne avoids dividends for tax reasons.

As for the reasons behind making a specific investment or not (figure 3.4), the two most important factors were related to market and sales. Thereafter came the technology, gut feeling, and incentives for the entrepreneur. This corresponds well with their reasons for investing, where the importance of profit relates to the importance of ability to sell the product or service, and the market on which to sell it.

The only factor that had a score lower than 4, meaning that it was somewhat unimportant, was that the entrepreneur works for the company without salary. This was surprising given the BAs in the interviews. One explanation might be that since there were only eight interviews, they might not be representative of the whole population. Another explanation might be the wording of the question. If it had been "a very low salary" instead

of "no salary", the importance might have been much higher.

A business angel investment can be made in any of a company's developmental phases. However, the amount of external capital that the companies seek increase as the company progresses through these phases. The relatively small sums that are usually involved in the BAs investments suggest that they primarily invest in early phases, which is also confirmed by the data: 75 % of the investments are made in the seed and start-up phases.

Through the interviews with both business angels and venture capital firms it was suggested that, even though most said that they expected to hold an investment for 5 years, it usually took much longer before an exit was realised. Hence, it was somewhat surprising to find that, while the average time frame for investments was 5.3 years, the average number of years that the BAs held an investment before exit was only 4.9 years. This might be due to the fact that liquidated companies were included in the definition of exited companies. If many of the companies were liquidated within a few years, that would pull the average down, and these companies were probably not what the interviewees were thinking about when they made their statements. Another influencing factor could be that the companies not yet exited are not a part of the statistics as this question urge the respondent to only consider historic investments. If the investments still held are older on average than the historic holdings, the average holding period would be increased.

Another opinion that came up in several of the interviews was that in the North American venture capital market you had a better chance of getting an investment as an entrepreneur if you had already ran a business before, even if this business had failed. In Sweden on the other hand, the common view was said to be that failure was bad, and that if you had ran a company unsuccessfully, you were less likely to get an investment than if you had no entrepreneurial experience at all. The interviewees said that they themselves did not see it this way, but that this was the general view. As can be seen in figure 3.5, most business angels do not make this distinction, but of those that do, almost three times as many go down the supposed "American" route, than the "Swedish" one.

The alternatives in the question about reasons for not making an investment were taken from a study conducted by Mason and Harrison (2002), which is also briefly presented in section 1.4.5. Their question relates to deficiencies that the BAs found in investment opportunities, while the ques-

tion in this survey regarded decisive reasons for not making an investment. For this reason three additional alternatives were added: *bad gut feeling*, *entrepreneur seems to lack implementation capability*, *valuation of the company is too high*, and *I do not know the industry*. This seems to have been a good idea, as those reasons were quite frequent. The questions also differed in structure, as Mason and Harrison asked if the criteria were found in more than 75 % of all investment opportunities or if they were found in 50–75 % of investment opportunities. The question asked in this survey, on the other hand, was whether it had ever been a deciding factor for not making an investment. The order of appearance of the factors should, however, still be comparable.

The most frequent reason not to invest was that *the valuation of the company is too high*. Third most frequent was *unrealistic assumptions*, which in many cases might lead to a higher valuation. This could explain why this factor was the most common in Mason and Harrison's study, while *not believing in the business model* was more common in this study. In their study, however, *insufficient information provided* was more common than *business concept needs further development*. Insufficient information was one of the least frequent factors in this study, appearing only 26.5 % of the time, comparable to the most common factor's 75 %. This is a very large discrepancy between the studies, and could indicate differences between the geographic areas where the studies were conducted, this one in Skåne and Mason and Harrison's in the United Kingdom. The reason for such a discrepancy could either be due to the business angels' decision making processes being different, or the entrepreneurs presenting the investment opportunities differently. The situation could also have changed in the 11 years since their study was published.

4.1.3 Investments' development

The impression from the interviews was that business angel investing was very difficult, and that most business angels did not actually even make a profit. It was therefore surprising to find that over half of the BAs had been profitable, and over 40 % very much so, according to their own estimations of the overall development of their investments.

Looking at how long ago the BAs made their first investment and comparing that with how profitable they are, it can be seen that those who

have neither gained nor lost a significant amount have on average made their first investment a shorter time ago. They have also made fewer investments. Neither of these findings are very surprising, as it will take time for investments to gain or lose value. It does however seem that the more profitable BAs have made a larger number of investments. Maybe they learn from their experiences, so that every new investment they make is more likely to be successful.

It might be surprising that profitability correlates with finding gut feeling important, as well as that the entrepreneur retains a significant ownership share. These findings also appear in the question about reasons for choosing not to invest, where it was more common to have chosen not to invest based on bad gut feeling, the more profitable they were. Another reason for not investing that was more common for more profitable BAs, was that the entrepreneur gave a dishonest impression. This could also be regarded as a sort of gut feeling, one where the source of the feeling is more known. Whether they are more successful due to using their gut feeling to a greater extent, or due to having better gut feeling and realising this, would be interesting to study further.

4.1.4 From the standpoint of the entrepreneur

The venture capital market being just that, a market, means that there is a seller and a buyer. The buyer in this case, the business angel, has several preferences on the product (ownership share in the company), of which being able to make a profit from it is the strongest one. The sellers, the entrepreneurs, are often happy enough to find a buyer willing to buy their product at the price they are asking. Ideally, though, they would have several investors trying to negotiate a deal which would allow them to discriminate between the investors and choose who would be allowed to buy a share of their company. They are not simply losing shares in their company in return for the invested money, they are also gaining a long-term partner, and who they choose as a co-owner for their venture could have a huge impact on its chances of success. What an entrepreneur wants is to have the venture grow and increase in value. Therefore an investor whose previous investments have fared well might be able to contribute to the venture in such a way that the chances of success go up. However, it might also be that the investor is just good at picking out good ventures to

invest in, or he could simply have been lucky. But if the reasons behind the success are unknown, then choosing an investor with a better track record should always be a superior choice to choosing one with a worse, as there is no perceivable downside.

The business angels almost always have monetary gains as a primary goal of making BA investments. Knowing what features that characterize a successful BA would then be interesting, in order to see what behaviours could be changed in order to become more successful. Delving deeper into the profitability statistics therefore seems interesting, both from the standpoint of the entrepreneur and the business angel. Drawing conclusions on cause and effect is always difficult in correlational studies, but might still give hints as to what contributes to successful business angel investing.

4.1.5 Statistical models

By looking at the correlation between *overall return* and all other applicable variables, it was rather quickly concluded which variables might influence it. However, as a correlation primarily checks for linear relations, combined with the obvious fact that the questionnaire could not possibly account for every possible variable, it cannot be excluded that other factors not included in the study are influencing profitability. However, one thing that should be considered is that of all the variables that actually were investigated, only the six variables listed in table 3.10 correlated significantly with *Overall returns*. This means that the other variables *did not* correlate significantly with *Overall returns*.

It was found that the dimensions with the biggest influence over the BAs' overall profitability was *investee stage*, represented by a factor including *later investments*, *start-up investments* and *expansion investments*; and *importance of trust in the entrepreneur*, represented by a factor including *importance of high entrepreneur ownership share* and *importance of gut feeling*. While the factors exhibited good explanatory capability, it can not be ascertained that they have been correctly interpreted, even if the explanation provided intuitively makes sense. While *investee stage* was a factor suspected to have a large influence on profitability, considering the flow of capital from early to later stages in the VC industry, the emergence of the other factor, *importance of trust in the entrepreneur*, was surprising. In the regression model, this factor is taken as the independent variable, but

it could very well be the case that the success of a BA results in a higher belief in his own ability to choose profitable investments and therefore a higher trust in his own gut feeling. This is a major problem with this type of studies, and has to be confirmed with further research. One suggestion is to select a panel of representative respondents and use these questionnaires or ones similar to them repetitively with intervals of one or a few years, to measure changes and to get a more accurate measurement of profitability. This was not possible within the limitations of this study.

To evaluate the different models considered, four values were considered: Model fitting information, goodness-of-fit, test of parallel lines and Nagelkerkes pseudo R^2. The first three of these values give us only binary information about the fit of the model, i.e. either it passed, or it did not. The Nagelkerke gives us a value that lets us compare the different models that passed the first three tests. The problem is that the use of a pseudo R^2 measure can lead to misunderstandings, as different measures give different values, none of them directly comparable to the R^2 used for example in OLS regression. Another critique against pseudo R^2 is that different models are not comparable to each other *unless* they apply to the same set of data predicting the same outcome. Since that is the case in this study, it is a suitable measure here. Exactly what is considered a good Nagelkerke value depends on the context (Veall, Michael R. and Zimmermann, Klaus F., 1996). To illustrate the predictive power of the model in a more intuitive way, it was used to try to predict the response categories of the dependent variable *overall return*, using information from the independent variables (*importance of trust in the entrepreneur* and *investee stage*). These predictions were then compared to the actual categories. For reference, the categories of *Overall return* were:

1. My investments have lost a significant part of their value.

2. My investments have neither gained nor lost a significant part of their value.

3. My investments have developed approximately as the market index (around 8 %).

4. My investments have developed distinctly better than the market index.

5. My investments have developed many times better than the market index.

The model managed to predict 44.2 % of the BAs correctly. This should be compared with the best possible guess without a model, which would be the category with the most observed members. In this case, that was *My investments have developed distinctly better than the market index*, which 28.8 % of the BAs indicated. Hence the model has a much better predictive capability than the best guess without the model, but will still fail to predict the correct category of BA in more than half of the cases. An odd feature of the model is that it did not predict that any BAs belonged to category 3. For more details on the simulated predictions, refer to appendix C.5.

The construction and selection of factors finally used in the ordinal regression model and the cluster analysis was mainly done through experimenting and then choosing the best results. This caused slightly different factors to be chosen to represent the dimension *investee stage* in the ordinal regression analysis and the cluster analysis. This is due to the fact that the two analyses have different objectives: the regression model tries to explain one particular variable, *Overall return*, while the cluster analysis tries to make a rough segmentation of the BAs, where *Overall return* is only one of several interesting traits.

When doing a cluster analysis, SPSS will always deliver a result, but it will differ significantly depending on the methods and measures used. It is up to the researcher to try to interpret the results in a meaningful way. If this cannot be done, the analysis does not have any value. In this study, the clusters identified by SPSS were slightly modified in order to give more comprehensive and clearer clusters. It should be stressed that the data itself were not modified, only cluster belonging. Some might say that this is inappropriate interference since cluster belonging has been "mathematically decided": However, this would not be fair. The mathematical algorithms used by SPSS are just a rough tool providing an indication of which clusters that could exist among the BAs. The final decision lies with the researcher and how he or she can explain the segments.

4.1.6 Reflections on the research method

A potentially large source of error is how the survey questions have been interpreted by the BAs. When constructing the survey, great care was taken

to make the questions as clear as possible and potentially ambiguous questions were changed or removed. The survey was also piloted and reviewed by an expert to ensure the clarity of the wording, but it is still possible that some questions were systematically misunderstood. However, during the analysis, no such indications were received, and the results and conclusions in this report are based on the assumption that there are no major misinterpretations related to the survey.

Something that is unaccounted for in the study is BAs from outside of Skåne investing in firms located in Skåne. The interviews gave a clue as to how large a portion of investments were made from business angels from outside Skåne. Business angels are often selective when it comes to the geographical distance of a company they might invest in, a general rule for many of them being that the company should not be located more than an hour away, or that it should be a one day affair to make a visit. Thus, most business angels only invest in their immediate area. Some, however, are less concerned with this, or willing to make exceptions, if a good enough opportunity arises (Mason and Harrison, 2002). Two of the interviewed BAs had made at least one investment outside of Skåne, and been in contact with angels from outside of Skåne that had invested in Skåne. They estimated that perhaps 10–15 % of investments were made by BAs located outside of Skåne. These numbers are very uncertain, and the external BAs can probably be assumed to deviate from the average BA, so that the results of the survey cannot safely be assumed to be representative also for this group.

Another source of uncertainty are the non-responders of the survey. The non-response study conducted was fairly limited, but suggested that the late responders were similar to the early responders in most ways, except that they appeared to have been less active historically, with fewer total investments and a smaller total invested capital. At the same time, they saw a larger number of presentations per year, perhaps indicating that they just recently were becoming more active. It is therefore not safe to assume that the responding group is representative of the entire population, and due to privacy and anonymity issues, it was not possible to carry out a more thorough non-responder bias investigation.

An alternative method for identifying research subjects would have been to investigate companies that recently received investments, and track down the investors. This method might have been used as a complement to the

chosen method, and in addition to expanding the subject pool, it would also have helped in estimating the number of BAs investing in Skåne that are not part of Connect Skåne or Almi Delfinerna, and given an indication on how they differed in their answers to the questions.

Perhaps the most thorough sampling method is the one used by Avdeitchikova in an article about the Swedish BA market from 2007, where 40320 individuals are sampled in order to identify all kinds of different informal investors (Avdeitchikova, Sofia, 2008b). Such a method would remove the sampling bias, but was not deemed to be viable considering the limited resources of this project.

4.2 Venture capital firms

Venture capital firms, as opposed to business angels, have only one objective: making money. This can take somewhat different shapes depending on the type of firm. If it is a regular venture capital firm, it is pretty straightforward: The firms are supposed to generate as much return as possible on their investors' money, within the agreed upon conditions. Corporate venture capital firms, have to think not only on the isolated profitability of the individual investment, but also on how it could increase long-term profitability of the parent company. Public venture capital firms have macroeconomic effects to take into account, aside from the profitability of the investment. The companies they invest in will pay taxes and create jobs. This will benefit the state, which provided the money to the VC firm in the first place. This gives them what might be seen as a rebate on their investments. For that reason, they have policies to always co-invest with private firms, so as not to undercut the market and compete with the private capital on uneven terms. Whatever the sort of venture capital firm, however, the ultimate goal is to make as profitable investments as possible as effectively as possible.

Not doing this for their own pleasure, but having effectivity demands from and responsibilities to external stakeholders, the VC firms are more reluctant to spend time on research that will not benefit them directly. The effect of this can be seen in the response rate to the survey in this study. Many of the companies that were called up expressed their regret over not being able to fill out the survey for this reason.

Fortunately, they also supply a lot of public information about their business. The reason is that they want to supply companies that are good investment opportunities with enough information to know that they fit the profile of companies that the VC firm invests in, as well as make companies that do not fit their investment profile realise this and refrain from contacting them. Thus, much of the information that was sought in the survey could be found on the VC firms' websites.

The comparability of the information gathered from the survey and the information gathered from the websites is debatable, and for that reason the results have been displayed both as the total result of the combined method and as the results of the individual methods wherever applicable. The firms could have ulterior motives for displaying false information on their website. No obvious such motive comes to mind, something that could also be said for the answers to the survey. It is a threat to the integrity of the study, but will not be addressed further.

Another factor possibly influencing the quality of the data gathered with the different methods, is that in the survey the firms had to interpret the question, while in the data gathered from the websites, the researchers had to interpret data that was not provided to specifically answer the questions in the survey. Where the information related to one of the questions was ambiguous, it was decided to leave the question unanswered.

The answers to the questions differed a lot. The oldest fund, for instance, was started 39 years ago, while the newest was started last year. The fund with the least capital committed held 28 million SEK, while the biggest was 6885 million SEK. How many percent of the funds capital that was invested varied from 95 % to 5 %, and so on. This paints the picture of a very diverse market.

The funds are relatively old. The median is six years, and the average of the funds not explicitly stating that they are evergreen funds, is 8 years and 8 months. Some of the older ones in that group probably are evergreens anyway, but nevertheless, the funds' ages are pretty high, and could be an indication that many recently closed funds have not been able to raise capital for a new fund.

Many funds do not want to invest more than that they get a 49 % ownership share, meaning that they do not want to take on the role of majority shareholder. At the same time, many are willing to take the role as lead investor in Skåne. This indicates that there are many public

actors, and that a lot of co-financing takes place, something that was also supported by the data and the interviews. It should be noted, though, that information on ownership shares was only gathered from 17 responders and its validity could therefore be questioned.

Not many firms focus mainly on Sweden as their primary market, even though they have Sweden as their base of operations. This could be explained by the size of the market: Sweden may not be a big enough market if you are a larger player. This intuitive assessment is supported by the fact that the average committed capital of the firms with Sweden as their primary market was 138 million SEK, while the average for the firms with a larger primary market was 344 million SEK. Additional support for the hypothesis comes from the fact that most of the public actors, who might not be profitable if not for their "rebate", do not invest outside of Sweden at all.

4.3 Concluding remarks

The business angels and the venture capital firms are the two main providers of investments on the venture capital market. The third actor that has any impact to speak of are the family offices. Giving a complete overview of the market is not possible without also studying them, but they are without doubt the minor actor, and leaving them out should not affect the picture too much.

The general differences on how the BAs and VC firms act on the market are related to the sums involved. They invest in the same phases, although the VC firms make larger investments within a given phase than the BAs. Due to investing large sums, there are however fewer investment opportunities in the earlier phases for the VC firms. Inversely, by investing smaller sums, there are fewer investment opportunities for the BAs in the later phases. The impression from the interviews, with both BAs and VC firms was that the majority of BA investments are made without the involvement of VC firms. Investments made by VC firms, however, are quite often made as co-investments with a number of BAs. How these co-investments fit into the BA statistics would be interesting to know, and something that could be addressed by future research.

VC firms investing larger amounts than the BAs, when they invest in

the same phases, could be due to a number of reasons, one being that they invest in different industries. This seems to be partly true. Comparing the industries that the VC firms are willing to invest in and the industries that the BAs have made investments in, it can be seen that the percentages are pretty equal in the software, life science and medtech industries, while the VC firms are willing to invest in cleantech, energy and hardware to a much higher extent than the BAs. These are industries that generally require large investments before any profit can be realised. As the VC firms were asked which industries they are *willing to* invest in while the BAs were asked if they *had made* investments, the statistics do not really measure the same thing but should still be a good indicator of differences in what industries they have invested in.

Another explanation as to why the VCs make larger investments within the same phase would be that they pick up those investments within a certain phase that require more capital to take to market. Presumably then, the pay-off should also be big to justify the larger investment. It is also possible that the VCs "move up a gear" compared to the BAs, putting in more resources at an earlier stage — more marketing, longer production series, bringing in external management.

Operating on the same market and in the same developmental phases of the companies, one would think that the BAs and the VC firms would be competing against each other in trying to be the one to invest in the promising companies. This seems not often to be the case, probably because the VC firms pick the companies in the upper spectrum of capital need for each phase, while the BAs pick those in the lower spectrum. The VC firms do not even seem to be competing very much with each other, as could be expected. Instead, they frequently co-invest with their "competitors", in order to spread risk and share costs of due diligence and board work. Some years ago, the number of VC firms was much larger, suggesting a more competitive climate at that time. The collaborative behaviours might be necessary measures for survival, for the firms.

The fact that the number of VC firms has dwindled during the last five years is a sign that the industry is struggling. This has effects on all involved parties. The business angels are a good support mechanism for the VC firms, as they provide a good deal flow of investments in expansion and later stages, but this also means that they to a large extent rely on the VC firms to relieve them of their investment. When there are fewer

buyers for the BAs' investments, the BAs get stuck longer than they had intended. Their capital gets locked up, and their time is taken up by the current investments, preventing them from making new investments, in turn affecting the entrepreneurs, and in the long run, hurting the future deal flow for the VC firms.

The other side of the market — the entrepreneurs that are seeking capital — would probably accept this capital from any actor. It is a rare case when they seek out the venture capitalists primarily to gain a knowledgeable partner. Whether this is the correct approach or not, entrepreneurs generally start looking for external capital when they realise that they will need it. The effect of this behaviour on the market is difficult to judge. It could mean that, by the time they start looking for capital, they do not have time and knowledge enough to find the most suitable investor. The rather long due diligence lead times could also put the entrepreneurs in a tight spot when negotiating with the investors, as they might be starting to run low on liquidity. One should however be careful to start searching too early. Not being investment-ready when the investment is supposed to take place is a sure way of getting a rejection.

This study is confined to the relatively small region of Skåne. How much of the results that can be extrapolated to other regions of Sweden is uncertain. The VC firm actors are almost the same wherever in Sweden you are, with some local exceptions that are e.g. active only in Skåne or only in Stockholm. There are also a few Danish firms that are willing to invest in Skåne because of the close proximity, but would not invest in parts of Sweden that are farther away. The business angel part is difficult to judge. The business angel networks in Skåne cover a large share of the business angels present in the region. This is not true for most parts of Sweden. How this affects the properties and qualities of the angels in those regions has to be explored. For regions with a similar structure, e.g. Gothenburg, the properties of the BA population should be quite comparable. Internationally, the VC firm industry structure in Norway, Finland and Denmark is similar to the one in Sweden. Outside of this region there are few common actors, laws and regulations are different, as well as industry structure. This makes applying the results on other regions difficult. For BAs the situation looks a little brighter, as Mason, Colin and Harrison, Richard T. (1995) have found that BAs are very similar in many countries, and one could assume that they are also similar between different

regions in the same country. However, a difference between different regions in Sweden relates to BANs, which are very differently developed in different regions. The effect on the BA population because of this in unknown.

Chapter 5

Conclusions

The purpose of the study was to explore and map the sellers side of the venture capital market for innovative growth firms in Skåne. This goal is considered to have been met. The ambition was to make a comprehensive study, however, limitations in resources forced some restrictions, making the business angel section of the study more extensive than the venture capital firm section. The response rate for the survey directed at BAs was also much better than the one directed at VC firms. If this could have been remedied with more resources is uncertain. The response rate of 49 % from the BAs was actually extraordinarily high compared to similar studies, enabling many statistical analyses that would have otherwise been unfeasible. The contrast between the BA and the VC survey is also evidence of the power of authority and credibility when doing a survey, and it is possible that a higher response rate for the VC survey could have been obtained if it was done, for instance, in cooperation with SVCA, thereby creating conditions more similar to those in the BA study.

5.1 Main findings

The large quantity of data that was collected resulted in many findings, some more interesting than others. In this section the most interesting findings are summarised. First, a bulleted list presents the key takeaways. They will thereafter be expanded on, and a few other interesting findings will also be presented.

- On average business angels do very well financially.
- BAs' main motivational factor is financial gains, but more philanthropic factors are also important.
- When deciding whether to make an investment, the BAs find factors related to market and sales to be the most important.
- The most common reason why BAs choose not to make an investment is that they find the valuation of the company to be too high.
- The Swedish market seems to be too small for many VC firms to have as its sole focus.
- Many foreign VC firms will consider investment opportunities in Sweden.

One of the most interesting findings relates to the overall profitability of the business angels. After the initial interviews there was an impression that business angels in general were not profitable, and that they had to be motivated by other factors than returns. Of the different possible motives suggested in the study, the BAs considered the financial gains the most important by far. It was, however, not the only driver, and more philanthropic motives such as a will to help entrepreneurs were also strong in comparison. Of the business angels that participated in this study, over half of them stated that they were profitable, over 40 % that they were performing better than the stock market index, and almost 15 % that they were outperforming the market by several times its average return. This indicates that there is, or at least have been, a relatively good supply of profitable opportunities for business angels.

The angels' financial performance correlated with several factors that in the end could all be related to in which stage the angel invested, its experience in angel investing, dependence of gut feeling and its focus on keeping the entrepreneurs incentivized. With a factor analysis, these were reduced to a mere two factors: What firm development stage they invested in, and to what extent investors used their gut feeling and trusted the entrepreneur by letting him or her keep a larger share of the firm. While the first of these factors was expected, the fact that higher trust in the entrepreneur could drive profitability was a surprise. However, the ordinal

regression model developed using these factors fail its predictions in more than half of the cases, indicating either that other, unknown factors also play significant roles, or that there is a strong element of randomness. Care must be taken when interpreting these findings, as the direction of causality is just a theory, and more research needs to done before anything can be ascertained.

Using the two factors above, BAs can roughly be mapped into three groups with different characteristics: early stage financiers, early stage motivators and late stage motivators. The late stage motivators are the most profitable of these groups, followed by the early stage motivators. A majority of BA investments are made by the two groups investing in earlier development stages, but it appears as if there are more profitable opportunities in later stages.

The VC firms were not as extensively researched as the BAs, but judging from what was revealed, the VC industry is in decline. Statistics from the Swedish Venture Capital Association reveals that the amount of invested and raised capital has seen a dramatic decline since around 2008. Findings from the survey also appear to confirm this, as the average non-evergreen fund is relatively old, almost 9 years, and considering that most funds have an investment horizon of maximum 10 years, this means that few new funds have been raised recently. 40 % of the VC firms' funds were on average already invested, and since they usually save a quite large part of their capital for follow up investments, this is a rather high number, further indicating that new investments will be less frequent in the future. There is also a large share of state owned actors — perhaps an indication that it is not profitable enough for private firms.

The declining VC market is a threat both to entrepreneurs looking for financing and business angels who want to sell off old investments. The VC market is the link between BAs on one side and later investors and the public market on the other; if they grow weaker the whole ecosystem suffers.

More encouraging is that a majority of the VC firms, even the foreign ones, stated that they could take lead on an investment in Skåne. If this is correct, entrepreneurs should not be reluctant to search outside of Sweden's borders when looking for VC investors.

5.2 Further research

During the course of the study several ideas for future studies were found, and are presented below.

- New BAs get started by joining BANs. There, they start to invest and build informal networks. After a couple of years in the business, they start to get more and more investment opportunities through these informal networks. This makes the BANs very important in introducing new BAs to the market and support the investor community. One interview suggested this might be the case and there are several indications in the data supporting it. This possible function of the BANs is suggested to be further explored with future research.
- The importance of gut feeling correlated with overall returns. It would be very interesting to explore in which direction there is causality, or if there is some other unknown variable affecting both gut feeling and overall return. Also, what factors influence a good gut feeling?
- How co-investing affects BA preferences and performance.
- The BANs have the opportunity, if they want, to collect panel data on their BA members, i.e. to collect data periodically on the same set of BAs every time, something that would enable research into the causality of variables by applying a time lag to the variable hypothesised to be dependent, and see if there is, for example, a correlation between the BAs' investment criteria 5 years ago and their performance today. This would also reveal how BAs develop over time.

Hopefully, the findings presented in this report can be of interest to all parties involved, whether they be entrepreneurs, business angels, venture capitalists or working for any of the support organisations present in the innovation system of Skåne.

Bibliography

Allen, Chris T. and Schewe, Charles D. and Wijk, Gösta. More on Self-Perception Theory?s Foot Technique in the Pre-Call/Mail Survey Setting. *Journal of Marketing Research, Vol. XVII, November, 498–502*, 1980.

ALMI. Delfinerna, Almi Skånes affärsängelnätverk, n.d. Online, `http://www.bwz.se/almi/b.aspx?vi=12&vid=691&ucrc=501A9DBD` Accessed 2013-06-02.

Andersson, Jeanette. Challenges for early stage venture capital in Sweden. Master's thesis, Henley Business School, University of Reading, 2011a.

Andersson, Jeanette. Challenges for early stage venture capital in Sweden. Master's thesis, Henley Business School, University of Reading, 2011b.

Andersson, Jeanette. Why are we here? *Connect conference 2013-02-04: Challenges for early stage venture capital in Sweden and possible solutions*, 2013a.

Andersson, Jeanette. Affärsänglar KAPITAL OCH KOMPETENS, 2013b. Online, `http://www.connectskane.se/program/affarsanglar-kapital-och-kompetens/` Accessed 2013-06-02.

Avdeitchikova, Sofia. What do we mean when we talk about business angels? Some reflections on definitions and sampling. *Venture Capital Vol. 10, No. 4, 371-394*, 2008a.

Avdeitchikova, Sofia. On the structure of the informal venture capital market in Sweden: developing investment roles. *Venture Capital Vol. 10, No. 1, 55-85*, 2008b.

Benjamin, Gerald A., Margulis, Joel B. *Angel Financing: How to Find and invest in Private Equity.* New York: Wiley, 2000.

Cope, Graham. EIF and Sweden, is there more that should be done? Connect conference: Challenges for early stage venture capital in Sweden and possible solutions, 2013-02-04.

Coveney, P. and Moore, K. *Business Angels: Securing Start-Up Finance.* Wiley, Chichester, 1998.

De Clercq, Dirk and Fried, Vance H. and Lehtonen, Oskari and Sapienza, Harry J. An Entrepreneur?s Guide to the Venture Capital Galaxy. *Academy of Management Perspectives*, 2006.

Dziuban, Charles D. and Shirkey, Edwin C. When is a correlations matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin, Vol. 81, No. 6, 358-361*, 1974.

EBAN. Information for Public Decision-makers, Entrepreneurs and Virgin Angels on the Role of Business Angels and their Networks, 2006. Summary Brief on Private Informal Venture Capital Players,
`http://www.insme.org/files/2348`
Accessed 2013-06-02.

EVCA. Guide on Private Equity and Venture Capital for Entrepreneurs, 2007. EVCA Special Paper,
`http://www.evca.eu/uploadedFiles/Home/Toolbox/Introduction_Tutorial/EVCA_PEVCguide.pdf`
Accessed 2013-02-15.

Gaston, R.J. *Finding venture capital for your firm: a complete guide.* John Wiley & Sons, New York, 1989.

Isaksson, Anders. *Studies on the venture capital process.* PhD thesis, Umeå School of Business, 2006.

Tom Lahti. Angel investing: an examination of the evolution of the finnish market. *Venture Capital Vol. 13, No.2, April 2011, 147-173*, 2011.

Landström, Hans. *Entreprenörskap och företagsetablering: Från idé till verklighet*. Studentlitteratur, 2009.

Månsson, Nils and Landström, Hans. Business Angels in a Changing Economy: The Case of Sweden. *Venture Capital, Vol. 8, No. 4, 281-301*, 2006.

Colin Mason and Richard T. Harrison. Barriers to investment in the informal venture capital sector. *Entrepreneurshi p and Regional Development, 14, 271-287*, 2002.

Mason, Colin. Informal sources of venture finance. *The Life Cycle of Entrepreneurial Ventures: Volume 2. International Handbook on Entreprenerurship*, 2006. Kluwer.

Mason, Colin and Harrison, Richard T. Closing the Regional Equity Capital Gap: The Role of Informal Venture Capital. *Small Business Economics 7: 153-172*, 1995.

Mason, Colin and Harrison, Richard T. Business angel networks and the development of the informal venture capital market in the UK: Is there still a role for the public sector? *Small Business Economics 9: 111-23*, 1997.

Norušis, Marija J. *IBM SPSS Statistics 19 Advanced Statistical Procedures Companion*. Pearson, 2011.

Paul, Stuart and Whittam, Geoff and Wyper, Janette. Towards a Model of the Business Angel Investment Process. *Venture Capital: An International Journal of Entrepreneurial Finance*, 2007.

Reynolds, Paul D. and Bygrave, William D. and Autio, Erkko and Others. *Global entrepreneurship monitor 2003 global report*. PhD thesis, Babson College, Babson Park, MA, USA and London Business School, London, UK, 2003.

Riding, A. On the size and structure of the informal market. *Working paper, School of Business, Carleton University, Canada*, 2005.

Sørheim, Roger and Landström, Hans. Informal investors: A categorization, with policy implications. *Entrepreneurship and Regional Development, 13, 351-370*, 2001.

SVCA. SVCA Årsrapport 2011, 2012. Online,
`http://www.svca.se/PageFiles/807/SVCA_arsrapport_2012.pdf`
Accessed 2013-05-16.

SVCA. nalys av riskkapitalmarknaden fjärde kvartalet 2012, 2013. Online,
`http://www.svca.se/PageFiles/807/SVCA%20Aktivitetsrapport%20Q4%202012.pdf`
Accessed 2013-05-16.

Teknopol, AB. Teknopol History, n.d. Online,
`http://www.teknopol.se/what/history/`
Accessed 2013-06-02.

UCLA: Statistical Consulting Group. Annotated SPSS Output: Ordered Logistic Regression:Test of Parallel Lines. Online, n.d. Online,
`http://www.ats.ucla.edu/stat/spss/output/ologit.htm`
(Accessed 2013-05-16),.

Veall, Michael R. and Zimmermann, Klaus F. Pseudo-R^2 measures for some common limited dependent variable models. *Journal of economic surveys, Vol. 10, No. 3*, 1996.

List of Figures

List of Tables

Appendix A

Interview guides

A.1 Interview Guide — Business Angels

1. **Could you tell us a little bit about yourself?**
    - Professional background?
    - How did you accumulate wealth?
    - Have you been investing since before the economic downturn? If so, have you changed your investment behaviour since then?
        - Investments past 5-10 years? How did they go? Why?
    - What motivates you into investing in early stage ventures?
    - On what scale do you invest?
    - What does your investment portfolio structure look like regarding asset classes?
2. **Could you give us some insight into your investment process?**
    - How do you get in contact with entrepreneurs?
    - How much time does the investment process generally take (both calendar and business time) from first point of contact until all papers are signed?
    - Under what circumstances are you willing to invest? What is most important?

- Are there any circumstances under which you would consider relaxing your normal criteria?
- What are your thoughts on co-investing (other business angels, venture capital)?
- Do you do due diligence? How?
- How do you appraise the value of the venture?
- How do you work out terms and agreements and what do you usually include in them?
  - Regarding: Capital gains, clear vision/mission/goals of the venture, future investors, future investments, others?
  - To what extent is everything documented?
- How do you exit an investment?
  - Do you plan for an exit already when you make the investment?
  - What is your time horizon?

3. **What are your thoughts on the Connect processes?**

4. How is your relationship with the entrepreneur?

   - Post-investment: what does the relationship with the entrepreneur look like?
     - Formal vs. informal
     - How much time do you spend on the venture?
     - How often do you contact/meet the entrepreneur?
   - Other than capital, what do you contribute with to the venture?
   - If you invest where there already are other investors committed in the same venture, how do you handle this situation?

5. **Are there any external factors affecting your investment decisions, such as tax, regulations?**

6. **How do you perceive the current investment climate?**

   - Macro economy

- Innovation system in Skåne

7. **How many business angels do you expect there are in Skåne that are not part of the Connect network?**

A.2 Interview Guide — Venture Capital

1. **Could you tell us a little bit about the fund?**
   - How is it founded?
   - On what scale do you invest?
   - How have you been affected by the downturn in the economic climate the last 5 years?
   - What motivates you into investing in early stage ventures as opposed to other asset classes?
2. **Could you give us some insight into your investment process?**
   - How do you get into contact with entrepreneurs?
   - How much time does the investment process generally take (both calendar and business time) from first point of contact until all papers are signed?
   - Under which circumstances are you willing to invest?
   - Are there any circumstances under which you would consider relaxing your normal criteria? Any real-life examples?
   - What are your thoughts on co-investing (business angels, other venture capital)?
   - How do you do due diligence?
   - How do you appraise the value of the venture?
   - How do you work out terms and agreements and what do you usually include in them?
     - Regarding: Capital gains, clear vision/mission/goals of the venture, future investors, future investments, other?
     - To what extent is everything documented?
   - How do you exit an investment?

  - Do you plan for an exit already when you make the investment?
  - What is generally your time horizon?

3. **How is your relationship with the entrepreneur?**

   - Post-investment: what does the relationship with the entrepreneur look like?
     - Formal vs. informal
     - How much time do you spend on the venture?
     - How often do you contact/meet the entrepreneur?
   - Other than capital, what do you contribute with to the venture?
   - If you invest where there already are other investors committed in the same venture, how do you handle this situation?

4. **How do you perceive the current investment climate?**

   - Macro economy-wise
   - Pros and cons of the innovation system in Skåne?
   - Are there any external factors affecting your investment decisions, such as tax or regulations?

Appendix B

Surveys

B.1 Survey — Business angels

Affärsängelundersökning 2013

Välkommen!

Undersökningen utförs inom ramen för ett examensarbete på Lunds Tekniska Högskola, i samarbete med Teknopol, Connect Skåne och Almi Delfinerna. Syftet är att undersöka utbudet på kapitalmarknaden för uppstartsbolag i Skåne.

Undersökningen genomförs helt anonymt. Varken Connect, Almi eller vi kommer kunna koppla dina svar till dig.

Har du några frågor om undersökningen är du välkommen att kontakta oss:

Christoffer Nilsson
E-post: e.c.p.nilsson@gmail.com
Telefon: 073-0438222

Karl Fogelström
E-post: karl.fogelstrom@gmail.com
Telefon: 070-3252637

1. Ålder:

- ○ Under 20 år
- ○ 20-29
- ○ 30-39
- ○ 40-49
- ○ 50-59
- ○ 60-69
- ○ 70-79
- ○ 80-89
- ○ Över 90 år

2. Kön:

- ○ Kvinna
- ○ Man

3. Vad är affärsängelaktiviteterna för dig?

- ○ Huvudsysselsättning
- ○ Bisyssla till annan huvudsysselsättning
- ○ Jag är pensionerad men engagerar mig som affärsängel på deltid
- ○ Annat:

Affärsängelundersökning 2013

4. Vad är din huvudsakliga kanal för affärsängelinvesteringar?

- ○ Jag investerar huvudsakligen via bolag
- ○ Jag investerar huvudsakligen som privatperson
- ○ Annat:

5. Om man bortser från dina engagemang som affärsängel, inom vilka branscher har du arbetslivserfarenhet?
(Välj alla som passar)

- ☐ Cleantech
- ☐ Energi
- ☐ Finans
- ☐ Handel
- ☐ ICT: Hårdvara, telekommunikation
- ☐ ICT: Mjukvara, Internet, tjänster
- ☐ Life science
- ☐ Medtech
- ☐ Tillverkningsindustri
- ☐ Tjänste- och konsultföretag
- ☐ Annat:

***6. Har du gjort en eller flera affärsängelinvesteringar?**

- ○ Ja
- ○ Nej

7. Vilket år gjorde du din första affärsängelinvestering?

År

8. Genom vilken typ av kanaler har du fått kontakt med de bolag du investerat i?

- Mest via formella kanaler (t.ex. genom Connect, Almi Delfinerna eller andra affärsängelnätverk)
- Mest via informella kanaler (t.ex. genom personliga kontakter och nätverk)
- Ungefär lika många från informella som från formella kanaler

Kommentarer:

9. Ungefär hur många presentationer från företag som söker kapital ser du per år?

Antal presentationer

10. Hur många affärsängelinvesteringar har du gjort sammanlagt?

Antal investeringar

11. Ungefär hur mycket kapital har du totalt investerat i dessa bolag? (Svara i tusentals kronor, tkr)

Totalt alla investeringar (tkr)

12. Hur mycket kapital har du som minst investerat i en initial investeringsrunda? (Svara i tusentals kronor, tkr)

Kapital investerat som minst (tkr)

13. Hur mycket kapital har du som mest investerat i en initial investeringsrunda? (Svara i tusentals kronor, tkr)

Kapital investerat som mest (tkr)

14. Hur mycket kapital investerar du i genomsnitt i en initial investeringsrunda? (Svara i tusentals kronor, tkr)

Kapital investerat i genomsnitt (tkr)

15. Av det kapital du investerat, hur stor andel av det har varit i initiala investeringar (alltså inte följdinvesteringar)?

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

16. Hur lång tid tar en investering i genomsnitt, från första kontakt med företaget fram till undertecknat kontrakt?

	Månader
Kalendertid i månader	

17. I de företag du investerar i, hur många arbetstimmar lägger du i genomsnitt ner från första kontakt till underskrivet kontrakt?

Antal timmar

18. I de företag du investerar i, hur många arbetstimmar lägger du i genomsnitt ner per månad och företag under bolagets värdebyggande fas?

Antal timmar per månad och företag

19. I de företag du investerar i, hur många arbetstimmar lägger du i genomsnitt ner i processen för att göra exit?
(Ange "0" om du ännu inte gjort någon exit)

Antal timmar

20. Hur stor betydelse har följande faktorer för dig då du investerar? (Svara för varje rad)

	1: Väldigt liten betydelse	2	3	4: Varken stor eller liten betydelse	5	6	7: Väldigt stor betydelse
Möjligheten att om några år kunna sälja bolaget med stor vinst	○	○	○	○	○	○	○
Möjligheten till mindre, kontinuerliga vinster, t.ex. genom utdelningar	○	○	○	○	○	○	○
Givande/stimulerande sysselsättning	○	○	○	○	○	○	○
Få ut produkter som är positiva för människan och samhället på marknaden	○	○	○	○	○	○	○
Hjälpa entreprenörer	○	○	○	○	○	○	○
Kapitalet kan användas för att bygga nya företag	○	○	○	○	○	○	○
Det ökar mitt anseende i samhället	○	○	○	○	○	○	○

21. I vilka industrier har du gjort affärsängelinvesteringar? (Välj alla som passar)

- ☐ Cleantech
- ☐ Energi
- ☐ Finans
- ☐ Handel
- ☐ ICT: Hårdvara, telekommunikation
- ☐ ICT: Mjukvara, Internet, tjänster
- ☐ Life science
- ☐ Medtech
- ☐ Tillverkningsindustri
- ☐ Tjänste- och konsultföretag
- ☐ Jag har inte gjort någon investering än
- ☐ Annat:

22. Av de företag du investerat i, i vilken fas har de befunnit sig vid det initiala investeringstillfället? (Ange antal investeringar för varje fas)

Sådd	
Uppstart	
Expansion	
Senare	

23. Överlag, hur har dina investeringar utvecklats? (Välj ett alternativ)

- ○ Mina investeringar har förlorat en signifikant del av sitt värde
- ○ Mina investeringar har varken ökat eller minskat signifikant i värde
- ○ Mina investeringar har utvecklats i ungefär samma utsträckning som marknadsindex (ca 8% årligen utan hänsyn till inflation)
- ○ Mina investeringar har utvecklats klart bättre än marknadsindex
- ○ Mina investeringar har utvecklats många gånger bättre än marknadsindex

Kommentarer:

24. Gällande de innehav du inte längre har kvar på grund av försäljning, konkurs eller av någon annan anledning, hur många av dem har:
(Välj det som passar bäst)
(Där du delvis sålt ditt innehav, gör en uppskattning av värdeutvecklingen på den del du har sålt)
(Om du inte har några investeringar som passar in på beskrivningen ovan, svara då med "0" i minst ett av fälten)

	Antal innehav
Gett tillbaka mindre än hälften av kapitalet du investerat i bolaget	
Gett tillbaka mer än hälften men mindre än allt kapital du investerat i bolaget	
Gett tillbaka mellan 1-2,5 gånger av kapitalet du investerat i bolaget	
Gett tillbaka mellan 2,5-7 gånger av kapitalet du investerat i bolaget	
Gett tillbaka över 7 gånger kapitalet du investerat i bolaget	

Annat:

25. Av de innehav du fortfarande har kvar, hur många av dem:
(välj det som passar bäst)

	Antal innehav
Är under likvidation och/eller kommer att ge en ytterst begränsad avkastning	
Har inte nämnvärt ökat i värde och sannolikheten att de kommer göra det är numera mycket liten	
Har ökat mycket i värde eller har goda möjligheter att göra det	
Det är för tidigt för att kunna avgöra utvecklingen i dessa bolag	

Kommentarer:

26. Vad har du vanligtvis för tidshorisont när du investerar, det vill säga hur många år förväntar du dig att det kommer ta innan du kan göra exit?

Antal år

27. I de bolag du har gjort exit, hur lång tid har det då i genomsnitt tagit från din första investering till exit?
(Om du inte gjort någon exit, välj det i menyn)

Antal år

28. Hur viktiga är nedanstående faktorer då du beslutar huruvida du kommer göra en investering eller inte?
(Svara för varje rad)

	1: Helt oviktigt	2	3	4: Varken viktig eller oviktig	5	6	7: Mycket viktigt
Att jag besitter djup branschkunskap inom företagets kärnverksamhet	○	○	○	○	○	○	○
Att det finns medinvesterare	○	○	○	○	○	○	○
Att produktens eller tjänstens konkurrensskydd/IPR är starkt	○	○	○	○	○	○	○
Att jag har förståelse för tekniken som affärsidén bygger på	○	○	○	○	○	○	○
Att få en plats i styrelsen	○	○	○	○	○	○	○
Magkänsla	○	○	○	○	○	○	○
Att det finns ett bevisat marknadsintresse	○	○	○	○	○	○	○
Att det finns möjlighet till internationell marknadsexpansion	○	○	○	○	○	○	○
Att jag får så stor del som möjligt av företaget för de pengar jag investerar	○	○	○	○	○	○	○
Att grundarna arbetar i företaget utan lön	○	○	○	○	○	○	○
Att entreprenören/entreprenörerna tidigare drivit företag	○	○	○	○	○	○	○
Hur lång tid det dröjer tills jag, enligt planen, kan göra exit	○	○	○	○	○	○	○
Geografisk närhet till företaget	○	○	○	○	○	○	○
Att jag kunskapsmässigt kompletterar företaget inom områden där de är svagare	○	○	○	○	○	○	○
Att det finns någon i teamet som är mycket duktig på att sälja	○	○	○	○	○	○	○
Att det finns tydliga exitalternativ om affärsplanen följs	○	○	○	○	○	○	○
Att entreprenören/entreprenörerna behåller en betydande ägarandel	○	○	○	○	○	○	○

29. Allt annat lika, i vems företag skulle du helst investera i?

- ○ En entreprenör som tidigare drivit företag, men utan framgång
- ○ En entreprenör som ej tidigare drivit företag
- ○ Jag föredrar ingen av dem framför den andra

30. I de fall där du har varit i kontakt med företag men valt att inte investera, vilken eller vilka av dessa faktorer har då varit avgörande för beslutet? (Välj en eller flera)

- ☐ Entreprenören/entreprenörerna ger ett oärligt intryck
- ☐ Entreprenören/entreprenörerna uppvisar brist på engagemang
- ☐ Brist på unikitet i produkten eller tjänsten
- ☐ Entreprenören/entreprenörerna verkar saknar genomförandeförmåga
- ☐ Otillräcklig information tillhandahållen
- ☐ Jag tror inte på affärsmodellen
- ☐ Företagets värdering är för hög
- ☐ Antaganden är orealistiska och/eller presenterad information saknar trovärdighet
- ☐ Företaget är underfinansierat/saknar likvida medel
- ☐ Tillväxtmöjligheterna är begränsade
- ☐ Ingen uppenbar exitväg
- ☐ Affärskonceptet behöver utvecklas mer
- ☐ Entreprenören/entreprenörerna saknar trovärdighet
- ☐ Dålig magkänsla
- ☐ Entreprenören/entreprenörna tar ingen egen risk
- ☐ Jag kan inte branschen
- ☐ Brist på långsiktig vision

Övriga anledningar:

B.2 Survey — Venture capital firms

Venture Capital Survey 2013

1. What year was the active fund started?

	Year
Founding year	

2. When is the fund scheduled to be liquidated?
(If there is no scheduled liquidation date, choose that in the menu.)

	Year
Scheduled liquidation	

3. How much capital is committed to the fund (million EUR)?

Committed Capital (million EUR)

4. How many percent of the fund's total committed capital is invested?

- ○ 0-10%
- ○ 10-20%
- ○ 20-30%
- ○ 30-40%
- ○ 40-50%
- ○ 50-60%
- ○ 60-70%
- ○ 70-80%
- ○ 80-90%
- ○ 90-100%

5. What is the least you would normally be willing to invest in an initial investment round (thousand EUR)?

Investment (thousand EUR)

6. What is the most you would be willing to invest in a single company (including follow-up investments) (thousand EUR)?

Investment (thousand EUR)

7. What is the smallest ownership share you would consider taking as compensation for your investment, given otherwise favourable conditions?

	Share
Ownership share	

8. What is the largest ownership share you would consider taking as compensation for your investment, given otherwise favourable conditions?

	Share
Ownership share	

9. To what extent do you invest in companies in the following phases?

	1: To a very small extent	2	3: Neither small or large extent	4	5: To a very large extent
Seed	○	○	○	○	○
Startup	○	○	○	○	○
Expansion	○	○	○	○	○
Later	○	○	○	○	○

10. Within the next two years, do you have any intention of making investments in companies where you currently have no ownership? If so, within what industries:

- ☐ The fund doesn't have any intention of investing in new companies
- ☐ Cleantech
- ☐ Energi
- ☐ ICT: Hardware, telekommunication
- ☐ ICT: Software, Internet, services
- ☐ Life science
- ☐ Medtech
- ☐ Manufacturing industry
- ☐ Other

11. What is your primary market?

- ○ Sweden
- ○ Nordic region
- ○ Europe
- ○ Global
- ○ Other:

12. What is your attitude towards investments in southern Sweden?

- ○ We can take lead on investments in southern Sweden
- ○ We can invest if there is somebody else who takes lead on the investment
- ○ We do not invest in southern Sweden
- ○ I do not know

13. If you would like to be contacted by companies that fulfill the above stated criteria, please fill in your contact details below.

Name:	
E-mail:	
Telephone number:	

Appendix C

Ordinal regression analysis

C.1 Ordinal regression analysis: *Number of investments in later stages* and *Importance of that the entrepreneur retains a significant ownership share*

Case Processing Summary

		N	Marginal Percentage
Overall, how have your investments developed?	My investments have lost a significant part of their value	10	18.9%
	My investments have neither gained nor lost a significant part of their value	14	26.4%
	My investments have developed approximately as the market index	7	13.2%
	My investments have developed distinctly better than the market index	15	28.3%
	My investments have developed many times better than the market index	7	13.2%
Valid		53	100.0%
Missing		20	
Total		73	

Pseudo R-Square

Cox and Snell	.303
Nagelkerke	.317
McFadden	.116

Link function: Logit.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	79.803			
Final	60.672	19.131	2	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	24.224	46	.997
Deviance	25.840	46	.993

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[OverallReturns = 1]	1.487	1.092	1.854	1	.173	-.653	3.627
	[OverallReturns = 2]	2.995	1.155	6.720	1	.010	.731	5.260
	[OverallReturns = 3]	3.708	1.192	9.680	1	.002	1.372	6.044
	[OverallReturns = 4]	5.716	1.309	19.057	1	.000	3.150	8.282
Location	InvestmentsInLaterStages	1.316	.540	5.944	1	.015	.258	2.373
	SignificanceThatEntrepRetainLargeShare	.562	.206	7.454	1	.006	.159	.965

Link function: Logit.

Test of Parallel Lines[a]

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	60.672			
General	53.063[b]	7.609[c]	6	.268

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model. Validity of the test is uncertain.

Figure C.1: Results of an ordinal regression analysis, with *overall returns* as dependent variable and *later stage investments* and *importance of high entrepreneur ownership share* as independent variables.

C.2 Ordinal regression analysis: *Number of investments in later stages*, *Importance of that the entrepreneur retains a significant ownership share* and *Total number of investments made*

Case Processing Summary

		N	Marginal Percentage
Overall, how have your investments developed?	My investments have lost a significant part of their value	10	19.2%
	My investments have neither gained nor lost a significant part of their value	14	26.9%
	My investments have developed approximately as the market index	6	11.5%
	My investments have developed distinctly better than the market index	15	28.8%
	My investments have developed many times better than the market index	7	13.5%
Valid		52	100.0%
Missing		21	
Total		73	

Pseudo R-Square

Cox and Snell	.355
Nagelkerke	.372
McFadden	.141

Link function: Logit.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	141.119			
Final	118.340	22.780	3	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	146.307	141	.363
Deviance	100.762	141	.996

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[OverallReturns = 1]	2.453	1.195	4.210	1	.040	.110	4.796
	[OverallReturns = 2]	4.047	1.280	9.997	1	.002	1.538	6.555
	[OverallReturns = 3]	4.745	1.324	12.839	1	.000	2.149	7.340
	[OverallReturns = 4]	6.920	1.483	21.773	1	.000	4.013	9.826
Location	InvestmentsInLaterStages	1.329	.563	5.564	1	.018	.225	2.433
	SignificanceThatEntrepRetainLargeShare	.665	.214	9.655	1	.002	.246	1.085
	TotalNumberOfInvestments	.091	.048	3.577	1	.059	-.003	.185

Link function: Logit.

Test of Parallel Lines[a]

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	118.340			
General	119.495[b]	[c]	9	.

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The log-likelihood value of the general model is smaller than that of the null model. This is because convergence cannot be attained or ascertained in estimating the general model. Therefore, the test of parallel lines cannot be performed.

Figure C.2: Results of an ordinal regression analysis, with *overall returns* as dependent variable and *later stage investments*, *importance of high entrepreneur ownership share* and *total number of investments* as independent variables.

C.3 Ordinal regression analysis: *Number of investments in later stages*, *Importance of that the entrepreneur retains a significant ownership share*, *Total number of investments made* and *Importance of gut feeling*

Case Processing Summary

		N	Marginal Percentage
Overall, how have your investments developed?	My investments have lost a significant part of their value	10	19.6%
	My investments have neither gained nor lost a significant part of their value	14	27.5%
	My investments have developed approximately as the market index	6	11.8%
	My investments have developed distinctly better than the market index	15	29.4%
	My investments have developed many times better than the market index	6	11.8%
Valid		51	100.0%
Missing		22	
Total		73	

Pseudo R-Square

Cox and Snell	.323
Nagelkerke	.339
McFadden	.127

Link function: Logit.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	152.698			
Final	132.813	19.885	4	.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	188.845	180	.311
Deviance	128.654	180	.999

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[OverallReturns = 1]	3.562	1.616	4.860	1	.027	.395	6.730
	[OverallReturns = 2]	5.165	1.706	9.164	1	.002	1.821	8.510
	[OverallReturns = 3]	5.870	1.750	11.253	1	.001	2.440	9.300
	[OverallReturns = 4]	8.070	1.882	18.388	1	.000	4.382	11.759
Location	InvestmentsInLaterStages	1.274	.574	4.932	1	.026	.150	2.399
	SignificanceThatEntrepRetainLargeShare	.636	.217	8.593	1	.003	.211	1.062
	TotalNumberOfInvestments	.085	.048	3.078	1	.079	-.010	.180
	SignificanceOfGutFeeling	.236	.227	1.080	1	.299	-.209	.682

Link function: Logit.

Test of Parallel Lines[a]

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	132.813			
General	123.377[b]	9.436[c]	12	.665

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model. Validity of the test is uncertain.

Figure C.3: Results of an ordinal regression analysis, with *overall returns* as dependent variable and *later stage investments*, *importance of high entrepreneur ownership share*, *total number of investments* and *importance of gut feeling* as independent variables.

C.4 Ordinal regression analysis on factors: *Investment stage* and *importance of trust in the entrepreneur*

Case Processing Summary

		N	Marginal Percentage
Overall, how have your investments developed?	My investments have lost a significant part of their value	10	19.2%
	My investments have neither gained nor lost a significant part of their value	14	26.9%
	My investments have developed approximately as the market index	7	13.5%
	My investments have developed distinctly better than the market index	15	28.8%
	My investments have developed many times better than the market index	6	11.5%
Valid		52	100.0%
Missing		21	
Total		73	

Pseudo R-Square

Cox and Snell	.392
Nagelkerke	.411
McFadden	.161

Link function: Logit.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	156.604			
Final	130.728	25.876	2	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	192.528	186	.356
Deviance	127.484	186	1.000

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[OverallReturns = 1]	-2.198	.459	22.964	1	.000	-3.098	-1.299
	[OverallReturns = 2]	-.451	.337	1.799	1	.180	-1.111	.208
	[OverallReturns = 3]	.380	.333	1.302	1	.254	-.273	1.034
	[OverallReturns = 4]	2.646	.516	26.245	1	.000	1.634	3.658
Location	ImportanceLargeEntrepreneruShareGutFeeling	1.078	.315	11.697	1	.001	.460	1.695
	ShareStartupNbrLaterNbrExp	1.940	.543	12.791	1	.000	.877	3.004

Link function: Logit.

Test of Parallel Lines[a]

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	130.728			
General	120.694	10.034	6	.123

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

Figure C.4: Results of an ordinal regression analysis, with *overall returns* as the dependent variable and the factors *importance of trust in the entrepreneur* and *modified investee stage* as independent variables.

C.5 Prediction results

Overall, how have your investments developed? * Predicted Response Category Crosstabulation

			Predicted Response Category				
			My investments have lost a significant part of their value	My investments have neither gained nor lost a significant part of their value	My investments have developed distinctly better than the market index	My investments have developed many times better than the market index	Total
Overall, how have your investments developed?	My investments have lost a significant part of their value	Count	2	4	4	0	10
		Expected Count	1.0	3.5	5.2	.4	10.0
		% within Overall, how have your investments developed?	20.0%	40.0%	40.0%	0.0%	100.0%
		% within Predicted Response Category	40.0%	22.2%	14.8%	0.0%	19.2%
		% of Total	3.8%	7.7%	7.7%	0.0%	19.2%
	My investments have neither gained nor lost a significant part of their value	Count	3	8	3	0	14
		Expected Count	1.3	4.8	7.3	.5	14.0
		% within Overall, how have your investments developed?	21.4%	57.1%	21.4%	0.0%	100.0%
		% within Predicted Response Category	60.0%	44.4%	11.1%	0.0%	26.9%
		% of Total	5.8%	15.4%	5.8%	0.0%	26.9%
	My investments have developed approximately as the market index	Count	0	4	3	0	7
		Expected Count	.7	2.4	3.6	.3	7.0
		% within Overall, how have your investments developed?	0.0%	57.1%	42.9%	0.0%	100.0%
		% within Predicted Response Category	0.0%	22.2%	11.1%	0.0%	13.5%
		% of Total	0.0%	7.7%	5.8%	0.0%	13.5%
	My investments have developed distinctly better than the market index	Count	0	2	12	1	15
		Expected Count	1.4	5.2	7.8	.6	15.0
		% within Overall, how have your investments developed?	0.0%	13.3%	80.0%	6.7%	100.0%
		% within Predicted Response Category	0.0%	11.1%	44.4%	50.0%	28.8%
		% of Total	0.0%	3.8%	23.1%	1.9%	28.8%
	My investments have developed many times better than the market index	Count	0	0	5	1	6
		Expected Count	.6	2.1	3.1	.2	6.0
		% within Overall, how have your investments developed?	0.0%	0.0%	83.3%	16.7%	100.0%
		% within Predicted Response Category	0.0%	0.0%	18.5%	50.0%	11.5%
		% of Total	0.0%	0.0%	9.6%	1.9%	11.5%
Total		Count	5	18	27	2	52
		Expected Count	5.0	18.0	27.0	2.0	52.0
		% within Overall, how have your investments developed?	9.6%	34.6%	51.9%	3.8%	100.0%
		% within Predicted Response Category	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	9.6%	34.6%	51.9%	3.8%	100.0%

Figure C.5: A crosstab between *overall returns* and the prediction of overall return using the oridnal regression model from appendix C.4.

Appendix D

Factor analysis

D.1 Six variables substituted with two factors

Communalities

	Initial
How many business angel investments have you made altogether?	1.000
Startup investments as a share of all investments	1.000
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	1.000
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	1.000
How important are the following factors when you decide whether to make an investment or not? That the entrepreneur retains a significant ownership share	1.000
How important are the following factors when you decide whether to make an investment or not? Gut feeling	1.000

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
How many business angel investments have you made altogether?	.630	-.124
Startup investments as a share of all investments	-.728	-.122
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	.745	-.002
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	.192	.605
How important are the following factors when you decide whether to make an investment or not? That the entrepreneur retains a significant ownership share	-.134	.666
How important are the following factors when you decide whether to make an investment or not? Gut feeling	-.056	.683

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.539	25.657	25.657	1.539	25.657	25.657
2	1.307	21.779	47.437	1.307	21.780	47.437
3	1.006	16.770	64.207			
4	.941	15.686	79.892			
5	.641	10.683	90.575			
6	.565	9.425	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.493
Bartlett's Test of Sphericity	Approx. Chi-Square	18.579
	df	15
	Sig.	.233

Figure D.1: PCA of *later investments*,*start-up investments*, *expansion investments*, *total number of investments*, *importance of high entrepreneur ownership share* and *importance of gut feeling*, constricted to two factors.

D.2 Investee stage 1

Communalities

	Initial	Extraction
Startup investments as a share of all investments	1.000	.299
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	1.000	.797
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	1.000	.687
How many business angel investments have you made altogether?	1.000	.401

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Startup investments as a share of all investments	-.547
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	.893
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	.829
How many business angel investments have you made altogether?	.633

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.184	54.593	54.593	2.184	54.593	54.593
2	.817	20.422	75.015			
3	.740	18.494	93.509			
4	.260	6.491	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.637
Bartlett's Test of Sphericity	Approx. Chi-Square	57.662
	df	6
	Sig.	.000

Figure D.2: PCA of *later investments*,*start-up investments*, *expansion investments* and *total number of investments* constricted to one factor.

D.3 Importance of trust in the entrepreneur

Communalities

	Initial	Extraction
How important are the following factors when you decide whether to make an investment or not? That the entrepreneur retains a significant ownership share	1.000	.640
How important are the following factors when you decide whether to make an investment or not? Gut feeling	1.000	.640

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
How important are the following factors when you decide whether to make an investment or not? That the entrepreneur retains a significant ownership share	.800
How important are the following factors when you decide whether to make an investment or not? Gut feeling	.800

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.280	63.979	63.979	1.280	63.979	63.979
2	.720	36.021	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	5.168
	df	1
	Sig.	.023

Figure D.3: PCA of *importance of high entrepreneur ownership share* and *importance of gut feeling*, constricted to one factor.

D.4 Investee stage 2

Communalities

	Initial	Extraction
Startup investments as a share of all investments	1.000	.339
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	1.000	.807
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	1.000	.767

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Startup investments as a share of all investments	-.582
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Expansion	.898
Regarding the companies you have invested in, what phase were they in at the time of the intitial investment? Later	.876

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.914	63.784	63.784	1.914	63.784	63.784
2	.807	26.887	90.671			
3	.280	9.329	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.571
Bartlett's Test of Sphericity	Approx. Chi-Square	46.305
	df	3
	Sig.	.000

Figure D.4: PCA of *later investments*,*start-up investments* and *expansion investments* constricted to one factor.

Appendix E

Cluster analysis

E.1 Dendrogram

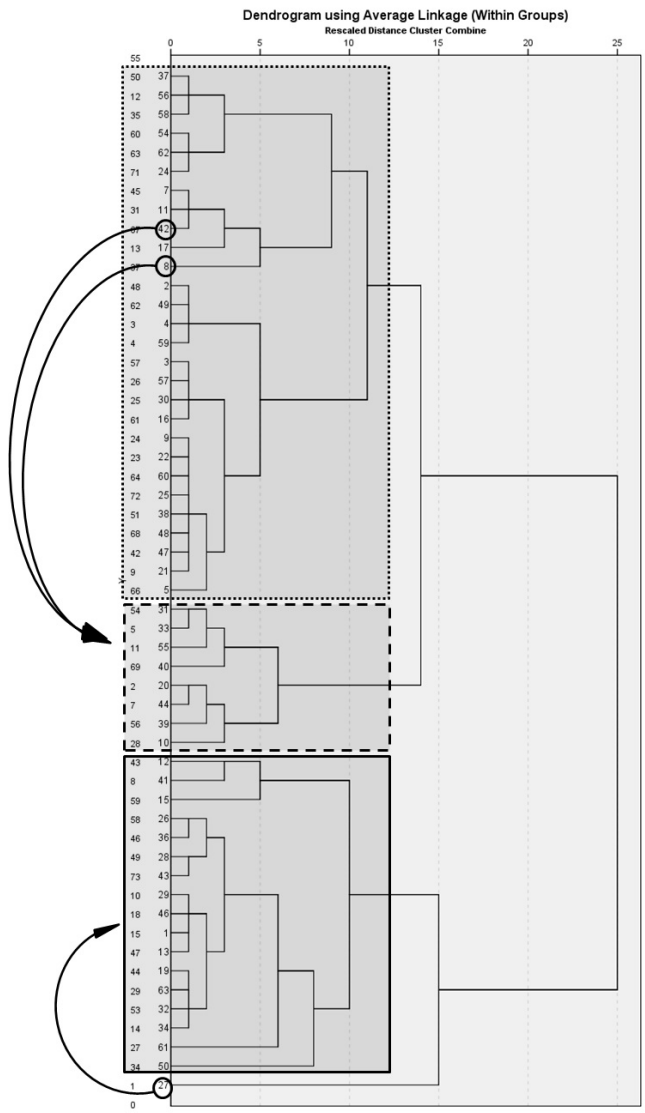

Figure E.1: A dendrogram illustrating where it was cut off and what changes were made afterwards.