



Business Angels and Value Added: Does it Affect New Venture Performance?

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ABSTRACT

Purpose. Business angels are often the first external source from which entrepreneurial ventures can secure financing. In addition to providing financial capital, business angels are known for their extensive value adding involvement in the portfolio ventures. This research seeks to map the effects of value added by business angels to the performance of new ventures in Sweden.

Methodology. Using a dataset of 41 Swedish ventures backed by business angels, this master thesis employs a regression analysis to evaluate the effects of four value adding roles; the sounding board and strategic role, resource acquisition role, supervision and monitoring role, and mentoring role; to the entrepreneur's perceived performance of their firm.

Findings. The study's findings conclude there is a significant relationship between value added and new venture performance. The data provides supporting evidence of a positive effect of the sounding board and strategic role, as well as resource acquisition role, on performance. In contrast, supervision and monitoring was found to have a negative effect on venture performance and mentoring had no significant effect in either direction.

Implications. The results suggest that entrepreneurs and business angels could benefit from better communication of value added expectations. The data further implies that certain value adding roles have a stronger effect on performance than do others.

Contribution. Prior empirical studies have not mapped theoretical value added by business angels to perceived performance of the ventures. This paper thus adds insights into the complex value adding relationship between entrepreneurs and their business angels.

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1. Introduction

The role of business angels and the value they add to firms as investors has been widely discussed in industry when observing the performance and growth of new ventures. However, there remains a limited body of academic research into the value added by business angels (Lumme, Mason, and Soumi, 1998; Mason, 2006; Kelly, 2007; Politis, 2008). The studies that do exist often have varying definitions of what constitutes as value added and how to measure its value. They also use different underlying theoretical approaches to connect theory to what is observed in practice. Thus, while there exists a body of theoretical knowledge on the value added by business angels, it remains fragmented. This study uses Tyebjee and Bruno's (1984) definition of value added: "any activity provided by a business angel that is unrelated to supplying personal financial capital".

Developed studies that focus on the categorisation of the types of value added by investors in new ventures primarily focus on venture capitalists (e.g. Brettel, 2003; MacMillan, Kulow, and Khoylian, 1989). Part of this is due to the more informal nature of business angel investments. They are difficult to identify which makes the collection of data on their activities difficult for research. Although there are studies that take an empirical look at business angels and value added (Ehrlich, De Noble, Moore, and Weaver, 1994; Mason and Harrison, 1996), these studies often do not look into how value added activities affect new venture performance and do not focus on the perspective of the entrepreneur. Landström (1993), in part, does empirically discuss a select few value added activities of business angels and venture performance in Sweden. However, the study focuses on the characterisation of business angels and takes the point of view of the angel where performance satisfaction is measured by the return on their investment.

Overall, previous research on value added has mainly taken the business angel's/venture capitalist's perspective (Harrison and Mason, 1992; Stevenson and Coveney, 1996; Lumme, Mason, and Soumi, 1998; Ardichvili, Cardozo, Tune, and Reinach, 2002; Paul, Whittam, and Johnston, 2003) and this can be misleading. We argue the two parties – the value added giver and the value added receiver – have different perceptions of what constitutes as value added. The entrepreneur's perspective should be further investigated since it is the venture that is in need of the value added, and the entrepreneur tends to have a closer understanding of its needs as they relate to long-term goals. Taking the point of view of the entrepreneur can provide a better gauge of the true level of value that business angels add rather than the perceived value that business angels assume they provide. There remains a gap in the current literature for a

quantitative investigation into the value added by business angels and its relationship on performance from the perspective of the entrepreneur. Therefore, this study aims to answer the question: Does the value added by business angels affect new venture performance?

The intention of this study is to empirically map the value added by business angels that is observed in real ventures to the firm's performance in order to add to the theoretical literature on business angels and value added. In turn, this will provide a richer understanding of the relationship between business angels and entrepreneurs in practice. Using already established theoretical frameworks (e.g. Wetzel, 1981, 1983; Ehrlich et al., 1994; DeClercq, Fried, Lehtonen, and Sapienza, 2006; Politis, 2008), this research aims to add to the greater entrepreneurial literature by providing a quantitative framework and method into the investigation on value added activities of business angels and the resulting effect it has on the performance of firms from the entrepreneur's perspective. The study looks at 41 ventures in Sweden that have received business angel funding between 2000 and 2014. Data was collected through a survey adapted from the questionnaire designs of MacMillan, Kulow, and Khoylian (1989). The study is referred to as the reference study throughout the rest of the text. Since different new ventures have different needs, our study looks at perceived value added.

In the remainder of this thesis, we discuss the theoretical framework of business angel and value added on which our quantitative analysis is based, the methodology employed to conduct the research, and the results of the empirical data collection. Then, a discussion of the limitations and implications of our results have on research is presented. The study ends by providing recommendations for entrepreneurs, business angels, and researchers then closes with final conclusions.

2. Theoretical Framework

In order to understand if value added by business angels affects performance of new ventures it is essential to first understand how performance is measured and why business angels are an important factor when doing so. This chapter discusses the theoretical underpinnings of performance measures in startups, and then continues on to defining business angels and their characteristics along with the different value adding roles they can assume. The current situation in industry and relevant theories are discussed and previous research is analysed. Each of the four subsections discussing the different value adding roles conclude with a number of hypotheses to be tested in this study.

2.1 Measuring New Venture Performance

Because business angels typically are the first external financiers for entrepreneurs and their ventures, the general consensus in literature is that business angels impact the performance of their portfolio companies (e.g. Pape, 2014; Chua and Wu, 2012). Chua and Wu (2012) found that business angels contribute significantly to the enhanced performance of their investee firm, yet other studies conclude that the effects of this contribution on performance are highly dependent on what performance metrics are used and over which time frame they are measured (Mason and Harrison, 2002). Hence, it is critical to understand how performance is measured in order to assess the direction and magnitude through which business angels can influence it. The following section will discuss challenges with measuring new venture performance as well as what different metrics are commonly used.

Limitations of smallness and newness can make it difficult to measure the performance of new ventures. The difficulties arise because new ventures often lack significant and representative historical data upon which traditional financial performance metrics, such as sales and turnover, are based. However, performance can also be measured on a non-financial basis by looking at metrics related to customer satisfaction, retention rates, and delivery time. Such metrics tend to be more reliant than financial performance metrics in the short run (Wiklund, Davidsson, and Delmar, 2003). Founders and managers of new ventures, therefore, tend to use a hybrid approach of equally emphasising financial and non-financial metrics when evaluating their performance (Gin Chong, 2008). Although performance literature presents several theoretical frameworks that take different perspectives on performance, the goal approach – measuring the extent to which an organisation attains its goals – is by far the most commonly used to measure performance in new ventures due to its simplicity and ease of

access to information (Quinn and Rohrbaugh, 1983; Yuchtman and Seashore, 1967; Gin Chong, 2008). Allowing performance to be measured against internally set goals, which are based on the founder's own interests and capabilities to achieve them, makes the goal approach the best fit for evaluating performance in new ventures (Gin Chong, 2008). Therefore, this study will take a goal approach when measuring financial and non-financial performance by placing an equal emphasis on the two performance categories.

Regarding the selection of performance variables, previous research concludes that both short- and long-term measurements should be incorporated in performance evaluations in order to provide a holistic measure (Delmar, McKelvie, and Wennberg, 2013; Kirchhoff, 1977; Wiklund, Davidsson, and Delmar, 2003). Mason and Harrison (2002) claim that it is not uncommon for investments to have an immediate negative effect on performance of ventures, and that positive effects may not be observed until five to six years after the investment has occurred. Hence, there is a need for performance metrics that span across different time horizons to accommodate for this complexity. Commonly reoccurring metrics that are measureable over various time horizons are sales volume, net profit, number of employees, customer retention rate, and market share. This combination of traditional financial performance measures and more subjective non-financial measures allows entrepreneurs to capture and compare their performance on a wider scale by taking into account their competitiveness and place in the market (Begley and Boyd, 1987; Covin and Slevin, 1989). In a similar study on value added by venture capitalists, MacMillan, Kulow, and Khoyleian (1989) investigate the relationship between value added and venture performance based on market share, return on investment, sales volume, and net profits. As the study takes the venture capitalist's perspective on performance, measuring return on investment is justified. This study is focused on capturing the entrepreneur's perspective on performance and it would therefore make less sense to incorporate the return on investment as a performance metric. The performance metrics used in this study are: sales volume, market share, net profits, number of employees and customer retention rate.

Furthermore, MacMillan, Kulow, and Khoyleian (1989) along with Zammuto (1984) acknowledge the difficulties of objectively measuring performance and so justify the use of subjective performance measures, particularly with respect to new ventures. Due to liabilities of newness as well as the lack of publicly reported data of new ventures, it is difficult to obtain objective performance measurements in the early years of a firm (Gin Chong, 2008). By allowing the entrepreneurs to provide their version of perceived performance, this issue can be overcome. In the aforementioned study on venture capitalists and value added, the venture

capitalists were asked to subjectively rate the performance of their investees. The results revealed that the ventures, on average, performed below expectations on all four performance criteria, indicating that no bias existed toward reporting only the successful ventures. Therefore, previous studies in the field of value added and performance metrics justify the use of subjective measurements and this study will hereafter consider and measure the entrepreneur's perception of value added and performance. The subjective data, nevertheless, should be treated carefully. A separate means analysis will be conducted on the performance measurements in order to detect the presence of such a bias in this study.

2.2 Business Angels – What do we know?

Business angels (BAs) constitute the most significant source of investment in startups and innovations, collectively investing more than 3 billion SEK in Swedish ventures annually (Tillväxtverket, 2015). This has caused an increased interest amongst entrepreneurs, researchers and decision makers alike to seek more understanding of the BA investment and role. In order to investigate the possible effects that BA value adding activities may have on new venture performance, the term business angel must first be clearly defined. The terms 'business angel' and 'informal investor' are often used interchangeably throughout literature, yet we believe that this discrepancy causes confusion. The relationship between the investor and investee is undefined for informal investor, meaning that the term can include family, friends and colleagues as well as unrelated individuals. The definition of business angel is more restrictive, thereby making it easier to identify them. We will consider business angels according to the following definition throughout the remainder of this study: "An individual, unrelated to the entrepreneur, who invests a proportion of his/her own assets in the venture. Apart from investing financial capital business angels also provide value added in various forms, e.g. commercial skills, experience, business know-how and industry networks." (Freear, Sohl, and Wetzl, 1994; Mason and Harrison, 1995).

Despite the definition stating that BAs are individuals, it is increasingly common that more than one BA will collectively partner with other BAs to make a single investment in a venture, referred to as a syndicated BA investment (Jääskeläinen, 2012; UK Business Angel Association, 2015). Through syndication, BAs can spread the monetary risks as well as bring together angels with different individual business experiences that can positively influence the success of an early-stage venture. It should also be noted that a venture might also receive investments from multiple individual BAs, simultaneously, without it being a syndicate investment. Previously, BA activity has been hampered due to the invisible nature of angels

and consequently difficulties of matching BAs to entrepreneurs arise (Mason and Harrison, 2000; Reitan and Sørheim, 2000; Sørheim and Landström, 2001). The invisible nature of BAs makes it difficult for them to communicate their investment preferences and areas of expertise, which contribute to information asymmetry in matchmaking. This leads to an increased complexity of collecting data in the research field. Syndicate investments typically are better at facilitating in this matching process because they are primarily initiated through established business angel networks (Aernoudt and Erikson, 2002). Business angel networks (BANs) act as intermediaries between individual BAs and entrepreneurs, with the main objective to facilitate angel investments. BANs are becoming increasingly popular (Politis, 2008), particularly, amongst the new and relatively inexperienced BAs. However, certain studies have found syndication to have a negative impact on the degree of angel involvement due to the duplication of efforts and free-riding behaviour amongst angels (Bottazzi, Da Rin, and Hellmann, 2008). Further, the study found that syndication has a positive impact on venture performance, yet a negative moderating effect. This study and future studies must take into consideration the changing investment environment and incorporate syndicate investments and BANs into their analyses.

It is not only the method of investing - individually, as syndication, or multiple individuals - that differs between BAs. In fact, extensive research has been undertaken to identify the characteristics of BAs and has revealed that they are an extremely heterogeneous group (DeClercq et al., 2006; Kelly, 2007; Swedish Agency for Growth Analysis, 2013; Fili and Grünberg, 2014). Nevertheless, a study by Kelly (2007), focusing on identifying generalities amongst the heterogeneous angels, identifies certain common characteristics. BAs tend to be wealthy, middle-aged men with entrepreneurial backgrounds who invest in geographically close ventures and often together with other angels. Kelly's results are supported by findings from Landström (1993) that found 96% of all BAs, in Sweden, have previous startup experience and their investment activity is influenced by their prior industry knowledge. Kelly (2007) also found that angels can have different intentions with their investments and therefore categorises them accordingly: the financial angel, the altruistic angel and the self-oriented angel.

Based on the identified characteristics, previous research indicates that BAs can contribute much more than pure financial resources when investing in a venture (Mason, 2006; Kelly, 2007; DeClercq et al., 2006), yet few studies exist that conceptualise such value adding contributions (Lumme, Mason, and Soumi, 1998). Kelly (2007) enforces the importance of value added by business angels, but fails to identify various value adding activities they are

involved in. DeClercq et al. (2006) concentrate on defining value added in the institutional venture capital market and claim that value added, in certain cases, may be the primary reason for seeking venture capital. The authors take their argument one step further and identify six common value adding roles of venture capitalists: strategic role; financing role; networking role; interpersonal role; reputational role; and discipline role. MacMillan, Kulow, and Khoylian (1989) extend the literature on value added by venture capitalists by relating it to perceived performance. They found that venture capitalists most commonly serve as a sounding board to the venture's management team, thereby making the strategic role most pronounced. This was also the role that resulted in the highest performance according to the study.

MacMillan, Kulow, and Khoylian's (1989) article looks at the perceived value added and performance from the venture capital's perspective – the opposite perspective that this study investigates. However, there are many similarities between the motivation of our study and their article. Thus, a number of learnings and devices are adapted from their article, such as the design of the questionnaire and the different value adding activities occurring in new ventures. These are used to complement the existing business angel literature on value added. Politis (2008) provides an extensive literature review of 14 studies on value added by business angels in different countries between 1992 and 2005. The study results in the categorisation of value adding activities into four roles: sounding board and strategic role; resource acquisition role; supervision and monitoring role; and mentoring role. This study's theoretical framework will be based upon these four roles, which will be individually discussed in the next section.

2.3 Value Adding Roles

Because of the value added by business angels, for example sharing their entrepreneurial network and management expertise, Kelly (2007) defines angel money as “smart money”. Tyebjee and Bruno (1984) were among the first to discuss value adding activities in BA literature, defining it as any activities that are unrelated to supplying personal financial capital. Since then, attempts have been made to define value adding activities and assess their impact on new venture performance but such studies have previously been limited by small, unrepresentative samples and are often limited to descriptive rather than analytical methodologies (Da Rin and Penas, 2011). This study will base the research on the four main value adding roles identified by Politis (2008). Angels can be involved in all four roles simultaneously but are typically more active in some roles than others. The four roles and their respective value adding activities are shown in **Table 1**. This categorisation of activities and

roles form the framework for this study and is based on previous literature (e.g. Politis, 2008; MacMillan, Kulow, and Khoylian, 1989).

Table 1: The Four Value Adding Roles and their Activities

Value Adding Roles and Activities
<i>Sounding Board and Strategic Role</i>
<ul style="list-style-type: none"> - Formulating business strategy - Serving as sounding board - Formulating marketing plans - Developing product or service - Industry knowledge
<i>Resource Acquisition Role</i>
<ul style="list-style-type: none"> - Searching for candidates for the management team - Interviewing and selecting the management team - Networking activities - Finding and obtaining additional sources of capital - Interfacing with investor groups
<i>Supervision and Monitoring Role</i>
<ul style="list-style-type: none"> - Monitoring financial performance - Monitoring operational performance - Soliciting customers, suppliers and distributors - Managing crises and problems - Reporting and control
<i>Mentoring Role</i>
<ul style="list-style-type: none"> - Professional relationship with the entrepreneur(s) - Personal relationship with the entrepreneur(s) - Motivating employees - Sharing the burden of hardship

2.3.1 Sounding Board and Strategic Role

The sounding board and strategic role involves being active in making long-term plans for the venture and often also being able to contribute to the greater picture of the venture. Such activities may include formulating business strategy and marketing plans to achieve long-term goals as well as using industry knowledge and entrepreneurial experience to define customer segments and identify demand (Politis, 2008). Previous research indicates that this is the most frequently reported value adding role (Pape, 2014). As Kelly (2007) and Landström (1993) found, previous experience of the BA is of great importance in this role. It is therefore not uncommon that the role also involves, to a certain extent, the development of products and/or services. Another important activity is serving as a general sounding board to the founders and

their management team, something that MacMillan, Kulow, and Khoylean (1989) found to be the most important contributing factor to new venture success in the venture capital market. A firm's internal environment is key to establishing a sustainable competitive advantage and by adding value through a sounding board and strategic role BAs help achieve this (Prahalad and Hamel, 1990; Teece, Pisano, and Shuen, 1997). Hence, this role can be considered a key strategic resource for the entrepreneur and the portfolio company with the potential to add significant value. Based on these findings the following hypothesis will be tested regarding the relationship between the value added through the sounding board and strategic role and venture performance.

H1. There is a positive relationship between the sounding board and strategic value adding role of a business angel and venture performance.

2.3.2 Resource Acquisition Role

Early research in BA contributions often address the initial financial capital offered by these informal investors. Business angels often focus on how ventures can create and maintain a stable flow of key resources in the firm by providing the entrepreneur with access to their personal networks (Ardichvili et al., 2002). Startups must be capable of linking the venture to its external environment because the success of a startup is heavily dependent on establishing lasting relationships and building long-term networks (Pfeffer and Salancik, 1978). As such, the resource acquisition role is theoretically supported by the resource dependency theory (Politis, 2008). Ventures should take control over critical relationships and assets to reduce dependencies, yet the ability to do so is often significantly increased when supported by a BA. Sørheim (2005) takes the connection of BA activities and resource dependency theory further by looking at how BAs add value by taking a resource acquisition role in the firm to assist in further financing. Overall, the study communicates that the behaviour of facilitating further finance is highly affected by the previous business record of investing done by the angel. This is important to note while researching the value added role of BAs because it takes into consideration the past experience of the BA and how it affects the impact of the value they add. In practice, BAs contribute with this kind of value added by assisting in recruiting the management team, offering networking opportunities, and helping to obtain further financial capital (Politis, 2008). Based on these findings, the following hypothesis will be tested regarding the relationship between the value added through the resource acquisition role and venture performance.

H2. There is a positive relationship between the resource acquisition value adding role of a business angel and venture performance.

2.3.3 Supervision and Monitoring Role

Supervision and monitoring by investors is performed to protect the investment from managerial misbehaviour and moral hazard (Van Osnabrugge, 2000). Business angels often do so by seeking out opportunities within their area of expertise. Industry knowledge facilitates the overseeing of operating matters and protection of assets, and as such the value added can be maximised to provide maximum economic gains for both investor and investee. Politis (2008) and Fili and Grünberg (2014) suggest that the tendency for BAs to have a high level of previous industry experience may be related to investment governance and agency theory because the more industry experience the angel has the easier it is to control the investment. DeClercq et al. (2006) make a similar finding when evaluating the value adding roles of venture capitalists, namely that the disciplinary role is enhanced by relevant previous experience and contributes to continuous evaluation and control such that the investor ensures the agreed objectives are attained. In practical terms, this role includes monitoring financial and operational performance, as well as soliciting customers, suppliers and distributors (Politis, 2008). This commonly occurs by instituting proper accounting and reporting systems (Mitchell, Reid, and Terry, 1997) or by taking a place on the venture's board (Gabrielsson and Huse, 2002). Based on these findings, the following hypothesis will be tested regarding the relationship between the value added through the supervision and monitoring role and venture performance.

H3. There is a positive relationship between the supervision and monitoring value adding role of a business angel and venture performance.

2.3.4 Mentoring Role

Mentoring corresponds to how BAs take on a coaching role in order to guide less experienced entrepreneurs through the growth process of a firm. Business angels can add value both on a professional and personal level by building lasting, fruitful relationships, and by being an open and trustful partner to their investee companies (Brettel, 2003; Sætre, 2003). The role may also include motivating personnel and sharing the burden of hardship (Politis, 2008). Although focused on the German market, Brettel (2003) takes a look into the behaviour of BAs and how they provide advice and support to their respective investee companies. The study found that

most BAs in Germany take the role as mentor due to their motivation to help their firms and for their own personal enjoyment. Sætre (2003) and Lindsay (2004) argue that BAs often see themselves as entrepreneurs and because of this they should not be considered solely as financiers but as co-entrepreneurs and mentors. This can be related back to the categorisations presented by Kelly (2007) on the BA's intentions with the investment. However, previous literature reveals that it is highly important that the entrepreneur and angel have similar characteristics and personal traits in order to strengthen the mentoring connection between the two parties (Pape, 2014). Based on these findings, the following hypothesis will be tested regarding the relationship between the value added through the mentoring role and venture performance.

H4. There is a positive relationship between the mentoring value adding role of a business angel and venture performance.

3. Research Methodology

This chapter seeks to explain the research methodology of the study, including the research design that underpins this research. The methodology further encompasses the data collection, data sampling, and data analysis and interpretation. The chapter will justify the use of certain methods for data sampling, collection and analysis. The chapter concludes with a brief discussion of the ethical considerations made during the design of the research.

3.1 Research Design

This research implements a cross-sectional design to collect data from multiple respondents at a set point in time to quantify the relationship between the investigated variables. The objective of the research is not to quantify the effects of business angel value added on performance over time, but rather to investigate the relationship at a set point in time, which is why a cross-sectional research design is appropriate (Bryman and Bell, 2011). This study makes use of a questionnaire for data collection because of the relative simplicity and speed at which the large amount of data necessary for an analysis can be collected when compared to interviews (Bryman and Bell, 2011). The research draws upon existing literature's categorisation of value added by business angels (Politis, 2008; MacMillan, Kulow, and Khoylian, 1989; DeClercq et al., 2006). Hence, the underlying dimensions of value added have been collected from previous studies within the field, as detailed in the previous chapter. The intention of this study is to empirically map a pre-defined set of value added activities performed by BAs to the entrepreneur's perceived performance of the company while basing the study on real ventures. This research is therefore considered to be deductive by seeking to capture the entrepreneur's perceptions and observations of value added by their business angel(s) and thereafter analysing the relationship between value adding roles and venture performance. This in turn will allow for the possible confirmation of our hypotheses and add to the existing body of literature.

3.2 The Questionnaire

The questionnaire is designed to incorporate the value adding activities identified in previous research while using a number of different methods of measuring new venture performance. The aim with the questionnaire is to collect quantifiable data that can be used to test our hypotheses and is designed accordingly. This study considers the entrepreneur as the focal point and collected observations perceived by the entrepreneur. A questionnaire designed for a similar study on the correlation between value added by institutional venture capitalists and

venture performance (MacMillan, Kulow, and Khoylian, 1989) was used as a framework when designing the questionnaire for this study. Due to the similarities in research questions between this study and the reference study, it was considered appropriate to use the reference study as a model when designing the questionnaire for this research. The reference survey contains four sections: general venture information, investment specific information, value added information and performance indicators. Three of the four sections are employed in this study, while the second ‘investment information’ was changed to ‘general business angel information’. However, the reference study used the venture capitalist as the focal point, constituting a major difference in research objective. The layout of this questionnaire is therefore altered to take this into consideration. The content design of each individual section of the questionnaire is detailed in Sections 3.2.1 to 3.2.4.

Two external parties validated the design and content of the questionnaire before it was distributed. Amendments were made afterwards and the questionnaire finalised. These parties were a seasoned BA and an entrepreneur from an early-stage startup that received BA funding. An important point brought up by the external parties was the incorporation of ventures that had received multiple rounds of investments and/or investments from multiple angels and syndicates. These were considered by the two reviewing parties to have an impact on the value added by BAs. The two external parties were excluded from taking part in the study itself. The questionnaire was created through the online tool Typeform to facilitate user interaction and compilation of the results. All questions in the survey were compulsory in order to successfully submit a response to ensure no entries were accidentally left blank. In addition, the room for interpretation was minimised by only asking closed questions. Distribution was through email and included a cover letter and link to the questionnaire. The cover letter was included to ensure all ethical considerations of the study were met, something that is discussed in the last section of this chapter. A sample of the cover letter is provided in Appendix I. Reminders were sent out one week after the initial distribution to the proportion of the sample who had yet to participate in the study. A sample of the questionnaire is provided in Appendix II.

3.2.1 Survey, Section 1 - General venture information

This section sought to collect venture specific information. The name of the company and the position of the respondent within the venture were only used to monitor which sample participant had responded. The founding year and location of the venture were collected to ensure the venture met the inclusion criteria for the study (inclusion criteria is further discussed in the subsequent section of this chapter). Regarding the industry, the respondents were asked

to select an industry from a given set of alternatives. The industry alternatives were defined according to Retriever Business (2015), although certain very similar industries were grouped together to narrow the range of selection. Provided the definition of BAs introduced in Section 2.2, the entrepreneurs were asked to indicate whether they had received BA funding for the venture they were responding on behalf of. The section concluded with a question regarding the form of BA investment, whether it was an individual BA, a syndicate investment or multiple individual BAs. The importance of this question was to identify if more than one BA was active within the venture. If so, the respondent was asked to complete the remainder of the questionnaire with respect to the most active BA only to minimise the complexity of analysing value added by multiple BAs.

3.2.2 Survey, Section 2 - General business angel information

In this section more specific information regarding the BA and investment were collected. The date and amount of initial investment formed the basis of the section, with the investment size being collected in range groups from <100,000 SEK to >500,000 SEK to respect the investment confidentiality most ventures have with their angel. The range of investment size was determined according to the range of typical BA investments found in literature (DeClercq et al., 2006; Kelly, 2007). A follow-up question, regarding potential subsequent rounds of funding, collected information concerning the total amount of angel investment provided - the number of investment rounds and the date of the latest investment. Whether the BA held a position on the venture's board and the size of the angel's equity share were both considered as important background information to evaluate the BA's level of involvement in the venture. The respondents were asked to quantify the dedication in hours per week the angel committed. Literature indicates that the higher the amount invested the higher the level of equity share a BA tends to receive, which in turn motivates the BA to take a more active role on the board and dedicate more hours on each investment (DeClercq et al., 2006; Kelly, 2007). Three YES/NO questions regarding the BA's previous experience were included as previous research shows that the behaviour of BAs is highly related to their professional background (DeClercq et al., 2006; Kelly, 2007). Lastly, the stage of development at initial investment was categorised into seed stage, early stage, expansion stage, and mature stage.

3.2.3 Survey, Section 3 - Quantification of value adding activities

In order to quantify the level of value added, the entrepreneurs were asked to indicate the perceived level of value added by their BA in 19 activities on a scale from 1 to 5.

The scale was graded as follows:

- 1 - No value added;
- 2 - Low value added;
- 3 - Acceptable value added;
- 4 - High value added;
- 5 - Exceptional value added.

The 19 activities were sub-activities of the four main value adding roles. Sounding board and strategy, resource acquisition, and supervision and monitoring contained five activities each. Mentoring contained four activities. The 19 activities were determined by compiling the results of 14 independent articles in the field of value added by BAs, and are outlined in **Table 1**. Hence, all activities quantified in this study were based on a thorough review of value adding literature and corresponded to activities already observed in real angel-venture interaction. The activities were also crosschecked with the activities investigated in the reference survey and the activities were very coherent.

3.2.4 Survey, Section 4 - Venture Performance

In the last section, the respondents were asked to evaluate the performance of their venture. They were asked to provide a subjective opinion on five different performance metrics regarding the venture's perceived actual performance compared to what was expected. The metrics were determined by reviewing literature on measuring new venture performance and the compilation of the conclusions from the MacMillan, Kulow, and Khoylian (1989) reference study and an article by Wiklund, Davidsson, and Delmar (2003). The articles acknowledge the difficulties of measuring new venture performance due to the lack of reporting requirements and availability of performance data early in the business life cycle. The five metrics used were sales volume, market share, net profit, number of employees and customer retention. Again, a five-point scale was implemented to enhance consistency throughout the questionnaire.

The scale was graded as follows:

- 1 - Far below expectations;
- 2 - Below expectations;
- 3 - Achieved expectations;
- 4 - Above expectations;

5 - Far above expectations.

3.3 Data Sampling

Due to the anonymous and invisible nature of the BA population, data sampling is an acknowledged issue within the field of BA research (Harrison and Mason, 2008; Farrell, Howorth, and Wright, 2008; Avdeitchikova, Landström, and Månsson, 2008). Consequently, many previous studies have been unable to generate representative samples, but rather relied on convenience samples. Discrepancies in the definition of BAs and the interchangeable use of the terms ‘business angel’ and ‘informal investor’ has contributed to further difficulties in generating a representative, random sample (Avdeitchikova, Landström, and Månsson, 2008). These issues are of importance as the respondents were asked to indicate whether they have received business angel funding. To minimise the risk of discrepancies in the results of this study due to variation in BA definitions, a number of inclusion criteria were established. These are detailed in **Table 2**. The population for this survey are all ventures that meet these inclusion criteria.

Responses were excluded from the data set according to the exclusion criteria if BA funding had been received for other ventures than the one currently employed by, if the venture was located outside Sweden, if more than fifteen years had passed since the venture’s founding, and if the amount invested subceeded 100 000 SEK as this is the lower boundary for business angel investment according to literature (DeClercq et al., 2006; Kelly, 2007). It should be noted that no criteria was set for the location of the business angel, only the venture.

Table 2: Inclusion Criteria

Variable	Description
Business Angel Funding	Have received business angel funding, per the definition of business angel provided in section 2.2 in this paper, for the venture reported on.
Amount Invested	Minimum 100 000 SEK.
Age of Venture	Maximum 15 years.
Geographical Location of Venture	Sweden.

Due to the acknowledged difficulties in collecting a truly random sample within the field of BA research and the difficulty in identifying potential companies started in Sweden since 2000 that have received BA funding, a convenience sampling technique was chosen. Only ventures with publicly announced BA funding were targeted to reduce the risk of contacting a large selection of ventures with unknown presence of BA funding. These public

announcements were available to us through various social media sites and professional networks of BAs.

The sampling process occurred in two stages:

- 1) Identification – Identifying potential sample subjects.
- 2) Verification and information gathering – Verifying that the subjects meet the inclusion criteria. If so, collect information through the online questionnaire.

Potential ventures were identified via a number of different sources; established business angel networks (BANs) and incubators, as well as through online professional networks. The different sampling channels are specified in **Table 3**. Connect Skåne, STING Business Angels (SBA), Stockholm Affärsänglar and Roslagens Affärsänglar are some of the largest BA networks in Sweden. Apart from SBA, the networks include angels and entrepreneurs from all kinds of industries and ventures. SBA, on the other hand, mainly focuses on high-growth tech-startups. One limitation of these BA networks is the tendency among all four networks to only invest within their local region. Nevertheless, as they are distributed in three different regions (two in Stockholm, one in Roslagen and one in Skåne) the geographical spread of the sample is increased. Furthermore, three online startup networks were accessed – AngelList, Crowdsourc List and Malmö Startups. Although global, the two former networks allow filtering on investments and startups in specific countries and thereby the Swedish market could be targeted. One incubator was contacted, STING, but due to confidentiality requirements no official lists could be provided for this research. However, STING did reveal a number of their companies that sit in their incubator with BA investment along with their contact information via the incubator's external website. Additionally, Swedish BAs and ventures were identified using the open and online professional network LinkedIn. Lastly, at the end of the questionnaire the respondents were asked to indicate potential participants in their own network by providing names of the potential participating ventures. Hence, a chain effect was created (Bryman and Bell, 2011). Using several different sources when generating the sample minimises the limitations of sampling through convenience, and therefore the representativeness of our sample is enhanced. Nevertheless, it remains to be verified whether the sample is representative of the entire population of ventures with BA funding as the different sources also have similar characteristics.

Once identified, the location and age of a venture was verified through the Swedish business information database Retriever Business (2015). The respondent verified all four

inclusion criteria (location, age, and receiving BA funding of min. 100 000 SEK) in the questionnaire, but no official verification of the size of the investment and the presence of BA were made due to deal confidentiality agreements between venture and angel. The identified and verified sample was managed through an Excel-database. The database included 114 potential respondents, however 11 respondents were excluded due to not actually having received BA funding, making the sample size 103 ventures. The targeted response rate was 48% in order to generate 50 respondents, yet only 41 responses – response rate of 40% – was reached. The various response rates per distribution channel are illustrated in **Table 3**, ranging from 0% to 67%.

Table 3: Sources of Sample Ventures and Response Rates

Name	Type	Location	Sample	Responses	Response rate
AngelList	Startup Network	Global	2	1	50%
Connect Skåne	BAN	Skåne	25	12	48%
Crowdsorce List	Startup Network	Global	2	1	50%
LinkedIn	Open Network	Global	11	2	18%
Malmö Startups	Startup Network	Malmö	6	4	67%
Roslagens Affärsänglar	BAN	Roslagen	3	2	67%
STING	Incubator	Stockholm	5	2	40%
STING Business Angels	BAN	Stockholm	39	16	41%
Stockholm Affärsänglar	BAN	Stockholm	7	0	0%
Questionnaire referrals	Referrals	Sweden	3	1	33%
Total			103	41	40%

Notes: BAN=Business Angel Network

3.4 Data Analysis

3.4.1 Regression Analysis

The data collected from survey responses was analysed in a hierarchical two-step multivariate regression analysis to model the relationship between the four value added categories and new venture performance while controlling for other possible relationships. Statistical Package for the Social Sciences (SPSS) was used to analyse the 41 observations. The first defining set of variables ran in the model were the four control variables (*IT Industry*, *Involvement Frequency*, *Syndicate*, and *Angel Experience*) in order to see potential affects the variables had on the dependent variable (*Performance*). This was followed by the additional inclusion of the four independent explanatory variables (*Sounding Board & Strategic*, *Resource Acquisition*,

Supervision & Monitoring, and Mentoring) that were constructed from the 19 attributes defining the value adding activities of BAs found in the survey (see **Table 1**). Cronbach's alpha was used for reliability analysis to construct composite dependent and independent variables. All alpha values were well above the accepted standard threshold of $\alpha = .70$ (Nunnally, 1978), indicating a high level of internal consistency for all items included in each of composite variable scaling. Explanation of variables used in our regression model plus results of variable scaling are discussed below while regression results are presented in **Tables 7** and **8**.

Dependent Variable

Performance. The composite dependent variable of the perceived performance of the firm measured with a five-item, 5-point Likert scale. Respondents were asked to rank the level of perceived performance of the firm since the BA investment ($\alpha = .84$)

Independent Variables

Sounding Board & Strategic. The first composite independent variable of activities relating to the value added by BAs in a sounding board and strategic role. Variable measured with a five-item, 5-point Likert scale ($\alpha = .81$).

Resource Acquisition. The second composite independent variable of activities relating to the value added by BAs in a resource acquisition role. Variable measured with a five-item, 5-point Likert scale ($\alpha = .86$).

Supervision & Monitoring. The third composite independent variable of activities relating to the value added by BAs in a supervision and monitoring role. Variable measured with a five-item, 5-point Likert scale ($\alpha = .87$).

Mentoring. The fourth composite independent variable of activities relating to the value added by BAs in a mentoring role. Variable measured with a four-item, 5-point Likert scale ($\alpha = .92$).

Control Variables

Controls were selected based on past studies' theoretical findings of which variables, related to BAs and the firm, potentially have an effect on new venture performance. In one previous study, the involvement frequency was reported to be positively associated with the level of value added as well as performance (Wiltbank and Boeker, 2007). The more time the investor

commits to its portfolio venture, the higher the performance. The control variable, *Involvement Frequency*, was included to represent this effect after it was found to be both statistically significant while having an increasing effect on the accuracy of our model. In addition, as previously revealed, it can take time before the performance effects of angel investments become observable and measurable. Negative effects of angel investments tend to appear, on average, two years after the investment, whereas positive effects may not appear until five to six years after (Mason and Harrison, 2002). Therefore, one can assume that the longer the time has passed since the investment, the more likely it is of high firm performance. This was not added to our model as it did not have an effect on the accuracy of the model nor was it found to be statistically significant.

A key set of variables often discussed in practice and theory is the angel's background and its relation to value added and venture performance. Wiltbank (2009) found that angels with entrepreneurial experience gained from personally starting a venture outperform those who had not in terms of providing value added. Likewise, Fili and Grünberg (2014) conclude that angels with highly relevant industry experience contribute more in terms of access to networks and monitoring. However after testing these variables (*Industry Experience* and *Entrepreneurial Experience*), we found that they had no significant effect on our particular sample and did not aid in increasing the accuracy of our model. This plus our attempt to minimise the number of predictors because of our relatively small sample is why we choose to exclude these two variables and any other control variables that met the same statistical exclusion criteria. Conversely, the following variables listed were included as control variables in the model because of their statistical significance and effect of increasing accuracy of the model:

IT Industry. This variable indicated whether the venture is in the IT and software industry or not. While not detailed or comprehensive, this dummy variable was selected to simplify and display the potential affects different industries may have on venture performance or other independent variables in the model, (Yes=1, No=0).

Involvement Frequency. This variable measures how often the angel engages with the venture through face meetings or phone calls. Treated as a continuous variable. It is acknowledged that this only measures the quantity of involvement and not quality, (0 = < 1 hour, 1 = 1-5 hours, 2 = 5-10 hours, 3 = 10-15 hours, 4 = 15-20 hours, 5 = > 20 hours).

Syndicate. This variable indicates whether BA investment was a syndicate investment or not, (Yes=1, No=0).

Angel Experience. This indicates whether angel has previous experience as a BA or not. To keep the number of control variables low, only the BAs previous experience as an angel was chosen due to its statistical significance in the model while industry experience and entrepreneurial experience were excluded, (Yes=1, No=0).

3.4.2 Sample Description

In total, we have 41 responding ventures in our final sample, of which 21 are from the IT and software industry (51.2%) and 20 from other industries (48.8%). The responding ventures have a mean age of 5.20 years (min=0, max=15), and employs 3.88 people on average (min=1, max=38). The participating ventures reported a mean turnover of 1.8 million SEK, with individual values ranging from 0 to 14.6 million SEK. In total, 75.6% of the ventures are product-based, whereas the remaining 24.4% offer services. Thirty-six ventures (87.8%) received BA funding in the seed or early stage and 5 ventures (12.2%) received funding during their expansion stage. Of the respondents, 92.7% reported that their BAs were active angels prior to the investment, and 80.5% of BAs also had direct startup experience of their own. Interestingly, these results seem to support previous literature that the angels tend to be seasoned entrepreneurs and invest in several different ventures. Despite previous literature strongly arguing for the relevance of the BA's industry background in relation to value added, only 43.9% of the responding ventures considered their BA's industry background to be relevant to the industry of the venture itself. Approximately two thirds of the ventures (70.7%) incorporate their angel on the company's board. Seventeen participating ventures (41.5%) received the investment from one individual angel, whereas 18 ventures (43.9%) received investments from multiple individual angels, and 6 ventures (14.6%) received a syndicate investment. The angels invested, on average, 500,000+ SEK in return for 26.2% of the equity. **Table 4** provides a summary of the descriptive respondent characteristics.

Table 4: Descriptive Respondent Characteristics

Variable	Mean/median	Number of ventures	%
Age	5.20		
Number of employees	3.88		
Turnover (SEK)	1,834,780		
IT and Software		21	51.2%
Product-based		31	75.6%
Amount invested (SEK)	>500,000	28	68.3%
Equity	26.2%		
Angel on board		29	70.7%

<i>Time of investment</i>		
Seed/Early stage	36	87.8%
Expansion stage	5	12.2%
<i>Angel background</i>		
Angel experience	38	92.7%
Entrepreneurial experience	33	80.5%
Relevant industry experience	18	43.9%
<i>Type of investment</i>		
Individual angel	17	41.5%
Multiple individual angels	18	43.9%
Syndicate	6	14.6%

3.4.3 Non-Response Analysis

Non-response bias arises if non-respondents differ from respondents according to a number of pre-set characteristics (Whitehead, Groothuis, and Blomquist, 1993). Although this study employs convenience sampling and a relatively small number of participating entrepreneurs, it does not necessarily indicate a non-response bias (Grooves, Brick, Couper, Kalsbeek, Harris-Kojetin, Kreuter, and Wagner, 2008). However, sampling techniques, sample size and response rates are commonly used as measures of data quality (Lineback and Thompson, 2010). Thus, it is important to carry out a non-response analysis to detect the presence of such a sample response bias that could impact the implications of the study. The analysis was based on publicly available information from Retriever Business (2015) regarding the sample ventures. The variables for the non-response analysis were venture industry, age of venture, number of employees and turnover. The characteristics of respondents who returned completed questionnaires and non-respondents who failed to do so were compared using difference in means tests and Pearson chi-square tests and were defined statistically significant according to a 95% confidence limit.

The non-response analysis revealed that there was in fact no bias in the responding sample. Neither of the four non-response variables showed to have any statistical significance (see **Table 5**) nor can it be concluded that the difference between the responding sample and the non-responding sample is small enough for the respondents to be a representative sample of the whole sample population.

Table 5: Descriptive Characteristics of Respondents and Non-Respondents

Variables	Respondents (N=41)	Non-respondents (N=62)	Statistics	Significance Level
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IT and software industry	51.2%	40.3%	1.19 ^a	.28
Age	5.20	5.90	-.74 ^b	.46
No of employees	3.88	4.53	-.55 ^b	.59
Turnover (SEK)	1,834,780	3,775,630	-1.63 ^b	.11

Notes: ^aPearson chi square value; ^bt-value. Significance levels: *p <.05, and **p <.01.

Although not statistically significant, we can see that the firms who responded were, on average, slightly younger, had fewer employees and half the turnover when compared to the non-respondents. Yet, as the chi-square test and t-tests conclude, this difference has no effect on the representativeness of the respondents within our sample population.

Furthermore, in order to detect the presence of a bias of reporting only successful ventures and thereby addressing the issue of subjective/objective performance measures, a simple analysis of means was used on the five performance metrics. The results are shown in **Table 6** and indicate that the respondents on average perceived their performance across the various measures as below the expected, with the exception of customer retention rate. Hence, the data reveals that the respondents are not only reporting successful ventures.

Table 6: Performance Bias Analysis

Performance Variables	Mean	S.D.
Sales volume	2.67	.96
Market share	2.73	.92
Net profits	2.46	.84
Number of employees	2.68	.99
Customer retention rate	3.02	1.04

3.5 Ethical Considerations

Due to the nature of the research certain ethical aspects had to be considered prior to the study. It was perceived as particularly important to not harm the relationship between the entrepreneur and the business angel. Ethical considerations were identified and handled according to Bryman and Bell's (2011) five points: information requirement, consent requirement, confidentiality and anonymity requirement, usage requirement, and false pretences.

Information requirement. The questionnaire was distributed, featuring a cover letter detailing the aims and objectives of the research. This information was also provided at the start of the questionnaire and the specific aims of each section of the questionnaire were explained at the relevant section.

Consent requirement. The sample was informed through the cover letter and the start page of the questionnaire that participation is voluntary and that they had the right to exit the study at any time without further explanation.

Confidentiality and anonymity requirement. All responses were guaranteed to remain confidential. All participants remained anonymous throughout the research, only the company name was used to confirm the inclusion criteria and identify non-respondents. In particular, it was emphasised that the responses would not be shared with the ventures respective business angel.

Usage requirement. The data collected was solely used for this specific research.

False pretences. The respondents were carefully and unbiasedly guided through the study, and offered to receive a copy of the final report to ensure no false pretences were given.

4. Analysis and Results

This section presents and analyses the results of our regression model and statistical tests.

4.1 Regression Analysis

Our multivariate linear regression was split into two steps (Model I and Model II) in order to observe the effects our selected control variables had on performance before and after the inclusion of our independent composite variables.

To check for multicollinearity before running our models, we computed the Pearson r-correlations and descriptive statistics of all the variables presented in **Table 7** below. The two largest concerns of collinearity amongst the variables were between the *Mentoring* and *Supervision & Monitoring* variables and the *Mentoring* and *Sounding Board & Strategic* variables, which had relatively high correlation values of .82 and -.65 respectively. Due to the concerns these high correlation values raised, the Variance Inflation Factors (VIFs) were checked for all variables. There was no evidence of multicollinearity as all VIF values fell between 1.09 and 4.65, well below the suggested VIF standard threshold of 10 (Hair, Anderson, Tatham, and Black, 1998).

Table 7: Descriptive Statistics and Correlations

	Variables									Mean	S.D.
	1	2	3	4	5	6	7	8	9		
1. Performance	-									2.71	.74
2. Involvement Frequency	.21*	-								1.98	1.25
3. Angel Experience	-.11	.15	-							.93	.26
4. Syndicate	-.48**	-.22*	-.15	-						.15	.36
5. IT Industry	-.08	.26**	-.27**	.13	-					.51	.50
6. Sounding Board & Strategic	.42**	.21*	.32**	-.45**	-.25*	-				2.67	.77
7. Resource Acquisition	.38**	.43**	.06	-.23*	-.15	.47**	-			2.62	.99
8. Supervision & Monitoring	.09	.18	.31**	-.14	-.50**	.58**	.57**	-		2.51	.84
9. Mentoring	.25*	.31**	.29**	-.28**	-.30**	-.65**	.55**	.82**	-	2.82	1.22

Notes: significance levels *p <.05, and **p <.01

After testing for multicollinearity, we ran the first step in our regression analysis (Model I) which included the block of control variables looking at industry, BA involvement frequency, whether not the investment was completed as a syndication or not, and the prior experience of the BA as an investor. The results of the regression were a statistically significant model with an adjusted R^2 of .26. This indicates that Model I weakly fits the data and explains only 26% of the variability of the response data around the mean. However, it is still relevant given its statistical significance.

A second block, which included our independent variables, was then added to Model I to produce our final regression, Model II. The resulting model was statistically significant with an increased adjusted R^2 of .38. This indicates that including the independent variables into our model with our control variables leads to a 12% increase (Δ Adj. $R^2 = .12$) in the model's ability to accurately explain the variability of the response data around the mean. Therefore it was relevant to included value added variables in our model looking at venture performance. The complete results of both regressions are presented in **Table 8**.

Table 7: Regression Analysis

		Standardised Coefficients	
		Model I	Model II
Model	<i>Control</i>		
I	Involvement Frequency	.18	.07
	Angel Experience	-.24*	-.24*
	Syndicate	-.46**	-.26*
	IT Industry	-.13	-.19*
Model	<i>Independent</i>		
II	Sounding Board & Strategic	-	.36**
	Resource Acquisition	-	.31*
	Supervision & Monitoring	-	-.50**
	Mentoring	-	.18
	R^2	.29	.44
	Adj. R^2	.26	.38
	ΔR^2	-	.15
	Δ Adj. R^2	-	.12
	F (sign.)	7.98**	7.22**

Notes: The table reports β (standardized coefficients), R^2 , adjusted R^2 , and significance levels * $p < .05$, and ** $p < .01$

A further discussion of the results and the reported effects that the control and independent variables have on performance are presented below.

4.1.1 Control Variables and Performance

In both of our regression models, *Syndicate* and *Angel experience* were found to be significant. *Syndicate* investments have a negative effect on performance in Model I ($p = .00$; $\beta = -.46$) and in Model II ($p = .01$; $\beta = -0.26$). This implies that *syndicate* investments can hamper the performance of a firm when compared to ventures with multiple or individual business angel investments in our sample. This can potentially be explained by the free-riding effects and duplication of efforts that occur when more than one business angel collaborates in an investment (Bottazzi, Da Rin, and Hellmann, 2008; Jääskeläinen, 2012). Similarly, a BAs prior experience as an angel has a negative effect on performance in Model I ($p = .02$; $\beta = -0.24$) and in Model II ($p = .02$; $\beta = -0.24$).

Both variables *IT Industry* and *Involvement frequency* were found to be not significant. This can be explained by the fact that, for *IT Industry*, IT and software is such a broad industry category for this particular data set while majority of the survey respondents, 51.2% (**Table 4**), were also from this industry. *Involvement frequency* on the other hand could be insignificant as this particular variable does not say anything about the quality or productivity of the time spent by the business angel with the venture, only the quantity is communicated.

4.1.2 Independent Variables and Performance

Sounding board and strategic role

As indicated earlier, sounding board and strategic role activities are the most frequently reported value added role (Pape, 2014). Model II (**Table 8**) confirms that the sounding board and strategic role has a significant impact on venture performance ($p = .01$; $\beta = .36$). We can accept H1 that there is a positive relationship between the sounding board and strategic value adding role of a BA and venture performance for this particular sample.

As Kelly (2007) and Landström (1993) found, relevant industry experience of a business angel greatly influence this role while the previous management experience of angels also possibly adds value to performance (Shepherd, Douglas, and Shanley, 2000). Initially we included industry experience in the model, but it was statistically not significant. This, in addition to our attempt to minimize the number of predictors given our small convince sample, is why we chose to exclude it in the final regression models. However, *Angel experience* had a statistically significant positive correlation of 32% with *Sounding board and strategic role*.

Conversely, our model shows that *Syndicate* had a significant negative affect on the role. As angels pool their resources into a *syndicate* investment, it is possible that some angels decrease their involvement due to free-riding effects (Bottazzi, Da Rin, and Hellmann, 2008;

Jääskeläinen, 2012). The regression model showed that syndicate investments had a -.22 correlation with an angel's involvement frequency.

Resource acquisition role

BAs can leverage their personal networks in order to seek more funding or to contribute other resources that can add value and affect the performance of a firm (Sætre, 2003; Sørheim, 2005; Politis, 2008). Model II (**Table 8**) confirms that the resource acquisition role has a significant impact on venture performance ($p = .01$; $\beta = .31$). We can accept H2 that there is a positive relationship between the resource acquisition value adding role of a business angel and venture performance for this particular sample.

Involvement frequency and *Syndicate* have significant correlation values of .43 ($p = .00$) and -.23 ($p = .02$) with resource acquisition activities, respectively. New ventures can benefit from establishing lasting relationships and building long-term networks that are provided by their business angels (Pfeffer and Salancik, 1978). However like the free-rider problem and duplication of resources issue occurring in sounding board and strategic value added activities, resource acquisition value added activities are negatively affected by syndication investments (Bottazzi, Da Rin, and Hellmann, 2008).

Supervision and monitoring role

Model II confirms that the supervision and monitoring value adding role has a significant impact on venture performance ($p = .01$; $\beta = -0.50$), yet the direction is opposite of that assumed in the hypothesis. Hence, we cannot accept H3 that there is a positive relationship between the supervision and monitoring value adding role of a business angel and venture performance for this particular sample. However, a statistically significant negative relationship does exist between the supervision and monitoring value role and performance.

This negative relationship can be described by the fact that BAs can often outstep their bounds or make short-term decisions to control financial operations that can hurt the performance of a venture in the long run. It is possible that, BAs can steer the venture away from the vision and goals that the entrepreneur has defined and set to accomplish (Jääskeläinen, Maula, and Seppä, 2006). Often venture capitalist and BA goals are concerned with short-term financial values (Landström, 2007) consequently making financial monitoring decision that can potentially harm the long-term visions of the firm.

Angel Experience and *IT Industry* have significant correlation values of .31 ($p = .00$) and -.50 ($p = .00$) with supervision and monitoring activities, respectively.

Mentoring role

The results of Model II indicate that the mentoring role of BAs does not have a significant impact on venture performance ($p = .31$; $\beta = .18$). Thus, we cannot accept H4 that there is a relationship between the mentoring value adding role of a BA and venture performance for this particular sample. This is possibly due to two main reasons.

First, some angels have shown to partake in value adding activities as an investor for personal reasons and fulfilment (Van Osnabrugge, 2000; Ibrahim, 2008). Mentorship role activities focus on the direct personal relationship between the BA and entrepreneur. Some angels could choose to be a personal mentor and give advice that is focused on the personal growth of the entrepreneur or the management team for the pure enjoyment of being a mentor. It is difficult to measure the effects that a personal relationship may have on the performance of the venture without conducting a separate study.

Secondly, there are limitations of the study's sample size that could greatly affect the significance level of the mentoring independent variables. Additionally, the *Mentoring Role*, like our other explanatory variables, is a subjective self-reported measure of how entrepreneurs believe how much value their BA adds in the mentoring role. Measuring subjectively the value added aids in telling a richer story about BAs and the value they add through mentorship activities when it is difficult to measure such activities objectively. However, reliability of the measure could be affected that weakens statistical power and increasing the risk of a Type I error. Future studies could sacrifice a small amount of statistical significance to minimise the risks of Type I and II errors (Gabrielsson and Politis, 2012).

5. Discussion

It is widely acknowledge in theory and practice that BAs contribute more than simply financial capital when investing in new ventures – something literature refers to as value added (Freear, Sohl, and Wetzel, 1994; Mason and Harrison, 1995; DeClercq et al., 2006; Kelly, 2007; Politis, 2008). Despite a number of efforts to categorise and understand the phenomenon better, we still know little about what effects value added have on new ventures and how it influences new venture performance. This study seeks to fill this theoretical gap by analysing data collected through a questionnaire among Swedish ventures with BA funding. Revisiting our initial question we sought to answer at the start of this study, we ask again: Does the value added by business angels affect new venture performance? On the basis of our results and

findings we can conclude that value adding roles do have a significant impact on new venture performance, but the nature of the effects is mixed. Firstly, this conclusion confirms the theoretical prediction saying that BAs do add value to their portfolio companies, but also confirms the theoretical underpinnings of value added having an effect on performance.

As discussed and argued for in the development of the four hypotheses (H1, H2, H3, and H4), we assumed all four value adding roles to have a positive association with performance. We acknowledge the differences between the four roles and discuss their respective values to the entrepreneur and its venture. In the analysis we find that these differences result in significant differences in performance effects for three of our four value adding roles. Both Hypothesis 1 and 2 are accepted as the findings show that the sounding board and strategic role and the resource acquisition role both have a positive effect on new venture performance. Even though we observe a significant effect of the supervision and monitoring role, the direction of the relationship is opposite to what was assumed in Hypothesis 3 and it is therefore not accepted. Interestingly, mentoring does not show to have a significant effect on performance so Hypothesis 4 is not accepted. Taken together, we can conclude that value added by BAs can influence venture performance. Next we discuss the limitations that this study has, before analysing the implications that our research generates despite these restrictions. Based on the limitations and implications of this study we then suggest areas for further research.

5.1 Limitations

Their invisible nature and the fact that angels are not legally required to disclose information concerning their investments make it difficult to obtain large datasets with information regarding their investment activity. This research is based on a relatively small number of observations – 41 entrepreneurs with angel funding – which induces certain limitations when interpreting the results of the regression analysis.

Linear regression is based on a number of key assumptions, e.g. a linear relationship between the variables and little multicollinearity, and requires a large number of observations for the results to have the possibility of being normally distributed (Harrel, 2001). The small number of observations included in this research (N=41) significantly challenges these key assumptions as there simply is not enough data to ensure that they are met. As a rule of thumb, a regression analysis requires at least 10 observations per independent variable (Harrel, 2001), meaning that our amount of data could be statistically appropriate for including maximum four independent variables. Yet as we are interested in also looking at a number of control variables in addition to the four value adding roles we part from this guideline. We are aware of the

limitations that this induces on the results, and take that into consideration when interpreting and discussing them. Despite the low number of observation we generate a significant regression model in which only low levels of multicollinearity are observed. As stated in Section 4.1, certain variables are close to or above the generally acceptable correlation limit of .70, yet the VIFs are not close to the thresholds that would indicate concerns for multicollinearity. Despite the model being significant and no multicollinearity seem to be present, we cannot rule out that there is collinearity between variables and therefore the results must be interpreted with care. Consequently, variables that show to be significant may in fact not be so, and insignificant variables may indeed be significant.

The representativeness of the sample is limited by using a convenience sample (Avdeitchikova, Landström, and Månsson, 2008). Hence, the results may not be representative of ventures with angel funding in general but are rather focused on a biased sample of new ventures. Yet, as the non-response analysis revealed, the actual observations (N=41) are representative of the entire sample population (N=103). The results of the study are not affected as such, but the impact of the results is limited. We cannot claim our findings to be general as the conclusions of this study are only appropriate to explain the effects on performance amongst the responding ventures.

The use of cross-sectional design limits the causality of the conclusions because the effects of value added are not measured over time but rather at one point in time. Hence the direction in which the effects are moving cannot be explained in this study, reducing the internal validity. Resulting from collecting the data by means of a questionnaire, all information is self-reported and only the non-response variables are confirmed using independent data. A bias in the information provided by respondents due to subjectivity would lead to unreliable results and conclusions. This is something that must be taken into consideration when interpreting the results. In addition, the heterogeneous nature of angel investments – each investment having its own specifics – makes it difficult to design a questionnaire that can capture all nuances of the often highly complex relationship. If availability of data is increased significantly one could categorise different types of investment relationships, e.g. only include syndicate investments, and thereby better capture issues related to that type of relationship. We do not have sufficient amount of data to do so in our study, therefore a more general questionnaire is used.

Due to the relative newness of this research topic and the value it therefore potentially can bring, in this study we focus on raising awareness of this complex research field and start the dialogue amongst researchers and practitioners in order to, in the future, make more

representative and general studies. We acknowledge all limitations discussed above yet believe that the study helps lay the groundwork for future work within the field.

5.2 Implications

Despite the limitations, primarily caused by the relatively small dataset, the study generates several important implications for both theory and practice. The primary implication of this research is that our findings indicate that there exists both a theoretical and a practical value in mapping value added by BAs to new venture performance. Our results show an overall significant regression model with several significant independent variables. We hope our study can stimulate the research field of BAs and value added as there seems to be interesting findings and conclusions to be made regarding the theoretical understanding of angels' investment activity as well as mapping the relationship between entrepreneurs and angels in more practical terms.

Furthermore, our findings indicate that certain value adding roles contribute more to firm performance than do others. Previous studies claim the sounding board and strategic role is the most frequently reported form of value added (Pape, 2014), and our analysis shows that the case is true in our responding ventures. Formulating business strategy and serving as a sounding board are perceived as particularly valuable. In accordance with literature, our findings support that, within the resource acquisition role, ability to assist in obtaining additional funding is most sought after amongst entrepreneurs (Sørheim, 2005). All five supervision and monitoring activities were, on average, perceived to contribute less than acceptable levels of value added, in particular soliciting suppliers, customers and distributors. Not only did our results indicate that supervision and monitoring adds the least value to the venture, but it also adversely affects performance. This sharply contradicts previous literature which assumes it to be a positive relationship (Politis, 2008; Pape, 2014; Kelly, 2007). Pape (2014) states that “providing help with finding suppliers and customers” has a significant positive effect on performance and directly opposes our findings. Interestingly, however, is that Pape (2014) categorises this particular value adding activity into the resource acquisition role, whereas we, in accordance with MacMillan, Kulow, and Khoylian (1989), categorise it into the supervision and monitoring role. Furthermore, Pape (2014) categorises “acting as a sounding board” as both part of the sounding board and strategic role and the mentoring role.

In contrast to Pape (2014), who regresses the performance effects of individual value adding activities, we combine individual activities into overarching composite value adding roles. By doing so we focus on identifying the effects the major value adding roles have on

venture performance rather than individually investigating each of the 19 activities. The Cronbach's alpha values for the four value adding constructed variables range from .81 to .92, suggesting that our categorisation of individual activities into the different roles is appropriate. Thereby our data supports the inclusion of "soliciting customers, suppliers and distributors" into the supervision and monitoring role and "acting as a sounding board" in the sounding board and strategic role. However, we do acknowledge that there is room for a deeper discussion of the effects of individual activities on performance as we observe a small variance within the groupings. Although our dataset supports our categorisation of value adding activities, comparisons with similar studies highlight the complexity of categorising value adding activities and that there is some overlapping between the value added roles. The resulting theoretical implication is that there are certain activities that can belong to more than one role and that work still remains to identify and categorise value adding activities. Despite a high Cronbach's alpha, relatively high correlations are observed between certain value adding roles in this study and the overlapping of roles may offer an explanation but also a solution to this issue. The theoretical framework on which this study relies – the four value adding roles identified by Politis (2008) – may not be profound enough yet to use as the underpinning for a regression analysis as it induces high variable correlations due to overlapping in value adding activities. Improving the identification and grouping of activities may eliminate overlapping and perhaps also decrease the correlation between the value adding roles.

When looking at the β -coefficients from the Model II regression analysis we observe a slightly higher positive value for the sounding board and strategic role (.36) compared to resource acquisition (.31), indicating that there might be a slight preference in more sounding board and strategic advice provided by BAs. However, the absolute value of β for the supervision and monitoring role is .50, indicating that the destructive effects of supervision and monitoring value added are more pronounced than are the positive effects of both the sounding board and strategic role and the resource acquisition role. Several scholars link supervision and monitoring activities and agency theory to explain the desires of angels to control their investments (Jensen and Meckling, 1976; Van Osnabrugge, 2000; Politis, 2008; Fili and Grünberg, 2014) and claim that it often occurs by taking a place on the venture's board (Gabrielsson and Huse, 2002). However, theoretical arguments for why entrepreneurs demand value added through supervision and monitoring are much scarcer. Hence, although literature identifies a number of different activities that theoretically are expected to help the angel control its investments, few activities are identified that are demanded by the entrepreneurs. The significant negative relationship found between supervision and monitoring and

performance may indicate that there are discrepancies in the demand and supply for certain types of value added. The value adding relationship between business angels and their entrepreneurs is not one-directional, but in fact multi-directional, meaning that the entrepreneur may demand certain value added and the angel may supply certain value added. As in most economic theories, equilibrium occurs when demand equals supply and therefore it is important that both the entrepreneur's demands and the angel's supply is clearly communicated in theory as well as in practice.

Interestingly, when only looking at the correlation between the supervision and monitoring role and the other value adding roles there is a significant positive relationship. This may indicate that supervision and monitoring in itself does not translate into a positive effect on performance but that it acts through its association with the other value adding roles. Furthermore, according to Landström (1993) direct supervision and monitoring by BAs may damage the sense of trust in the entrepreneur-angel relationship that in turn could result in negative effects on performance. In combination with agency theory, the issue of trust between the two parties highlight the importance for angels to control their investments in an appropriate way such that the relationship with the entrepreneur is not jeopardised. By clearly communicating expectations and boundaries of the angel's involvement and authority, a good relationship can be maintained in terms of supervision and monitoring activities. This also reduces the risk for over-involvement and the possibility that the angel steer the entrepreneur away from his/her vision and passion, something that other studies have found to have a negative effect on venture performance (Pape, 2014). As a concluding remark regarding the supervision and monitoring role, literature supports such activities and argue a strong case for its assumed positive effects on performance but work still remains to, in practice, perform such activities without damaging the trust relationship with the entrepreneur.

Remarkably, the individual activities that scored the highest in the questionnaire were "establishing a professional relationship with the entrepreneur" and "establishing a personal relationship with the entrepreneur", both categorised within the mentoring role. Yet taken overall, this role did not appear to have a significant effect on performance. This indicate that there may be certain activities provided by business angels that are indeed perceived as value adding by the entrepreneur, without translating directly into enhanced performance. In our data, the correlation between mentoring and both resource acquisition and supervision & monitoring show to be significantly positive. The correlation between mentoring and supervision and monitoring is particularly strong, inducing that the better the mentoring activities and angel-entrepreneur relationship, the better the value added through supervision and monitoring. This

is in accordance with the implications discussed in the previous paragraph, where we relate agency theory to the relationship between the parties. Hence, although mentoring is perceived as value added, both in theory and practice, our data shows that it does not affect new venture performance. An important theoretical implication of this finding is that new venture performance may not necessarily be an appropriate measure of the quality of value added by business angels, particularly with respect to certain types of value added. To better understand the impacts of value added through mentoring it might therefore be more appropriate to measure it against a different dependent variable.

As acknowledged by Mason and Harrison (2002), it may take several years, usually five to six, before the positive effects of angel investments become visible. The median age of our respondents is 3 years old, meaning that the majority of the ventures have not yet reached this critical age and it may therefore affect the performance. However, our dataset shows no significant relationship between venture age and perceived performance. In addition, neither when compared to the collected objective performance data used for the non-response analysis (number of employees and turnover) a significant relationship can be observed nor can it be assumed that the current investment effects are portrayed in the responding firms' performance. Further, no significant relationship was observed between this objective performance data and the perceived performance collected through the questionnaire. However, as previously discussed in Section 2.1 using subjective performance measures are considered appropriate when measuring the effects of value added.

The practical implications of our study is that angel investors may wish to focus on providing advice on more long-term strategic matters and on obtaining additional funds. On the other hand, angels should be wary of being over involved and controlling the entrepreneur and the venture to a great extent as this may provoke destructive spirals in the angel-entrepreneur relationship. Hence, it may be in both the angel's and the entrepreneur's best interest to clearly communicate commitment and boundaries at the start of the relationship to avoid such issues further down the road. Both the angel and the entrepreneur should also be aware that there are certain activities that can be valuable without having an impact on performance.

5.3 Further Research

Based on this analysis and discussion of implications and limitations of this study, there are a number of issues that could be stimulated and potentially solved by future research. First, to overcome the limitations of the data used in this research, further studies should be conducted

with more extensive sets of data, including a larger number of observations from ventures. The models used here could also be used with datasets from different areas of the world in order to understand how angels operate globally, and perhaps if there are cultural and regional differences in their value adding activities. As the BA market in the U.S. is approximately 60 times larger than that of Sweden (Sohl, 2014), we suggest the American market to be an appropriate starting point for such an international comparison. Also the British market is significantly larger than the Swedish (Mason and Harrison, 2011) and may provide an interesting comparison. Research in venture capitalists have observed significant differences in investment behaviour between countries (Sapienza, Manigart, and Vermjer, 1996). Thus, it would be interesting to see whether this also applies to BAs as they tend to be more influenced by personal characteristics than do venture capitalists.

Second, the increasing frequency of syndicate investments calls for a more in-depth analysis of their effects. The number of observations with syndicate investments in this study was considered too low to include the variable in the regression model, but for future studies this should be included where data is available.

Third, this study looked at value added at a given point in time. Changes in value added that may naturally occur over time as the venture grows and develops were therefore ignored but introduces potential opportunities for future research. It can logically be assumed that as the venture changes over time, so does their perception of value added and therefore it may be of interest to better understand the dynamism of the BAs and value added.

Finally, this study only looks at the entrepreneur's perspective on value added and performance. Future studies could combine the entrepreneur's perspective with that of the BA to generate better insights on how value added is perceived from both sides and if there are discrepancies in the perception of it between the receiver and the provider.

6. Conclusion

This study provided an early investigation into empirically mapping the value added by business angels observed in real ventures to the performance of the companies. While limited by sample size, it was found that there exists a significant relationship between sounding board and strategic, resource acquisition, and supervision and monitoring value adding activities. Mentoring value added activities appear to have had no significant relationship with venture performance. However, this could be due to the small sample size and other contributing effects

that stem from the personal relationship between entrepreneurs and angels that the variable captures.

Overall, sounding board activities and resource activities have a positive effect on performance. This is highly due the fact that financing opportunities, networking partnerships, and industry and strategic advice are all significant and key value adding activities that influence firm performance in the early stage of growth. Conversely, supervisions and monitoring activities have a negative effect on performance. This is, perhaps, partially due to the fact that angels have short-term financial goals that can steer firms away from their long-term goals – ultimately hurting the performance of the company. As observed by the insignificant effect of value added through mentoring, it is not necessarily so that all value adding activities translate into performance effect. Further research should investigate deeper into how each role affects performance while control for other factors that we outside the bounds of this study.

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Appendices

Appendix I: Cover Letter

The following cover letter was used when distributing the questionnaire. The letter was sent in Swedish or English depending on the entrepreneur. The majority of entrepreneurs were Swedish speaking.

Hej X,

Mitt namn är Ragna Landgren och jag studerar en Master i Entrepreneurship vid Lunds Universitet. Tillsammans med min partner, Christina Halstead, skriver jag för närvarande Masteruppsatsen "Business Angels and Value Added: Does it Affect New Venture Performance?". Studien fokuserar på att undersöka entreprenörers uppfattning om "value added" av deras affärsängel.

Vi har identifierat dig och ditt företag som en potentiell deltagare i vår forskning, då vi har blivit informerade att ni eventuellt har erhållit en ängelinvestering. Deltagandet inkluderar en konfidentiell enkät genom vilken vi försöker kvantifiera din uppfattning om hur er affärsängel bidrar/bidrog med "value added", samt hur du uppfattar ditt företags framgång i förhållande till dina förväntningar. Enkäten tar inte mer än 10 minuter att fylla i, och din erfarenhet av affärsänglar är av stort värde för oss och andra entreprenörer.

Deltagande är givetvis frivilligt, men vi hoppas att du vill bidra till att skapa en ökad förståelse för den komplexa natur som omfattar affärsänglar. Syftet med studien är att stärka relationen mellan entreprenörer och affärsänglar, och genom att bidra med din erfarenhet kan du underlätta för andra entreprenörer som söker, eller har fått, ängelinvesteringar. Vi är därför oerhört tacksamma för din hjälp.

För att delta i studien, var vänlig följ länken nedan:

<https://ragnalandgren.typeform.com/to/XMYesO>

Notera att ditt deltagande är konfidentiellt och dina svar kommer endast att användas för forskningssyfte.

Tveka inte att kontakta mig om du har några frågor eller funderingar, antingen via denna mail eller via telefon +46 (0)70 213 9985.

Med Vänliga Hälsningar,

Ragna Landgren och Christina Halstead
MSc Entrepreneurship - New Venture Creation
Lund University, Sweden

Dear X,

My name is Ragna Landgren and I am a Master student in Entrepreneurship at Lund University. Together with my partner, Christina Halstead, I am currently writing a thesis on the effects of value added by business angels on new venture performance, incorporating a quantitative study on entrepreneurs' perception of value added by their business angel.

We have identified your firm as a potential participant in our research, as we have been informed that you may have received investment from business angels. The participation includes a confidential questionnaire through which we seek to capture your perception of through which activities your business angel adds most value, and also how you perceive your venture's performance in relation to your expectations. The questions take no more than 10 minutes to respond to, and your experience and opinions are of great value to us.

Participation is of course voluntary, but we hope that you want to contribute to creating a better understanding of the complex nature of business angels. Our objective with this research is to strengthen the relationship between entrepreneurs and angels, and by providing information on your experience you can facilitate for other entrepreneurs who are looking for, or have received, angel funding.

To participate in this student research, please follow the link below to complete the questionnaire:

<https://ragnalandgren.typeform.com/to/XMYesO>

Please note that your participation is confidential and that your answers only will be used for research purposes in this specific study.

If you have any questions please do not hesitate to contact me, either by replying to this email or by phone +46 (0)70 213 9985.

We look forward to hearing your opinions.

Kind Regards,

Ragna Landgren and Christina Halstead
MSc Entrepreneurship - New Venture Creation
Lund University, Sweden

Appendix II: The Questionnaire

The following questionnaire was distributed amongst the entrepreneurs with business angel funding. The questionnaire can also be accessed via:

<https://ragnalandgren.typeform.com/to/XMYesO>



Business angels and value added

How does it affect startup performance?

This survey is part of a Master Thesis at Lund University School of Economics and Management. The purpose of the thesis is to map value added by business angels to startup performance. By providing information regarding the different value adding roles of your business angel you can help to better understand how to optimise the business angel-entrepreneur relationship and help other startups to succeed. Participation is voluntary, and you have the right to exit the questionnaire at any point if you wish to cancel your participation. Your responses will remain confidential and the data will only be used for research purposes. We greatly appreciate your participation.

If you have any questions, please contact:
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Take Survey press ENTER

1 → General venture information.

The following section includes questions related to the nature of your venture.

a. Please state the name of your company.*

Your answers will remain confidential in this study. The name of the company will only be used to confirm the venture's location and founding year.

b. What relationship do you currently have to the venture you are representing in this questionnaire?*

If more than one option apply, please select the one which you find most important.

<input type="checkbox"/> A CEO	<input type="checkbox"/> B Founding member
<input type="checkbox"/> C Management team	<input checked="" type="checkbox"/> D Employee
<input type="checkbox"/> E Board member	<input type="checkbox"/> F Other

c. Please state the year when the venture was founded.*

d. Is your venture located in Sweden?*

<input type="checkbox"/> Y Yes
<input type="checkbox"/> N No

e. In which industry is your venture active?*

Please select the most applicable category.

f. Are you primarily offering a product or a service?*

<input type="checkbox"/> A Product	<input type="checkbox"/> B Service
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g. Have you received business angel funding for the venture you are currently representing?*

Please consider "business angel" as an individual, unrelated to the entrepreneur, who invests a proportion of his/her own assets in the venture. Apart from investing financial capital, business angels also provide value added in various forms, e.g. commercial skills, experience, business know-how and industry networks.

Y Yes

N No

h. How did the business angel invest in your venture?*

Individual business angel: one sole business angel provided all investments.
Syndicate of business angels: multiple business angels invested collectively.
Multiple business angels: multiple business angels invested independently.

A Individual business angel

B Syndicate of business angels

C Multiple business angels

For the remainder of this questionnaire, please answer the questions with regards to the **currently most active** business angel in your venture.

Continue press ENTER

2 → General business angel information

The following section includes questions relating to general information about your business angel. If you have more than one business angel in your venture, please consider your business angels as one group and answer the questions with regards to **the group as a whole**.

- a. Please state the date of receiving the first round of angel investment.*

(mm-yyyy)

- b. Please indicate the size of the first round of angel investment.*

A < 100 000 SEK

B 100 000 - 200 000 SEK

C 200 000 - 300 000 SEK

D 300 000 - 400 000 SEK

E 400 000 - 500 000 SEK

F > 500 000 SEK

- c. Have you received more than one round of angel investment?*

Please only indicate later stage investments by the **same** angel.

Y Yes

N No

- d. Please specify the total amount of angel investment received, the number of rounds of investments and the date of the latest investment.*

(total amount, number of rounds, date)

e. Is the business angel a member of the venture's board?*

Y Yes

N No

f. How much equity does your business angel own in your venture?*

g. How many hours per week does the business angel on average dedicate to your venture?*

E.g. through meetings, operational activities and networking.

A < 1 hour

B 1 - 5 hours

C 5 - 10 hours

D 10 - 15 hours

E 15 - 20 hours

F > 20 hours

h. Does your business angel have a professional background in the industry in which your venture is active?*

Y Yes

N No

i. Has your business angel (previously or currently) started his/her own venture?*

Y Yes

N No

j. Was your business angel active as angel before investing in your venture?*

I.e. has your business angel invested in other ventures before becoming active in your venture?

Y Yes

N No

k. Indicate the stage of development of the venture at the initial investment.*

Seed stage: Developing prototype and doing market research.

Early stage: Starting operations and developing business plan.

Expansion stage: Operating commercially and increasing scale and/or scope of the business.

Mature stage: Profit making and ready for IPO or major expansion.

A Seed stage

B Early stage

C Expansion stage

D Mature stage

“ The following four sections seek to quantify the level of value added by your business angel. Based on previous research, value added has been categorised into: *resource acquisition; sounding board and strategy; supervision and monitoring; and mentoring*. You will be asked to rate your business angel's level of value added in a number of activities related to each of these four value adding roles.

The following scale will be used:

1 - No value added

2 - Low value added

3 - Acceptable value added

4 - High value added

5 - Exceptional value added

Continue

press ENTER

3 → Sounding board and Strategic role

a. Formulating business strategy?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



b. Serving as a sounding board?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



c. Formulating marketing plans?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



d. Developing product or service?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



e. Industry knowledge?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



4 → Resource acquisition roles

a. Searching for candidates for the management team?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



b. Interviewing and selecting the management team?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



c. Networking activities?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



d. Finding and obtaining additional sources of capital?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



e. Interfacing with investor groups?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



5 → Supervision and Monitoring role

a. Monitoring financial performance?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



b. Monitoring operational performance?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



c. Soliciting customers, suppliers and distributors?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



d. Managing crises and problems?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



e. Reporting and control?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



6 → Mentoring role

a. Professional relationship with the entrepreneur(s)? *

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



b. Personal relationship with entrepreneur(s)? *

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



c. Motivating employees? *

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



d. Sharing the burden of hardship?*

- 1 - No value added
- 2 - Low value added
- 3 - Acceptable value added
- 4 - High value added
- 5 - Exceptional value added



7 → Performance of Venture

The following section asks you to provide **your opinion** on your venture's performance, based on a number of performance metrics, by matching the actual performance to expected performance.

a. Sales volume*

- 1 - Far below expectations
- 2 - Below expectations
- 3 - Achieved expectations
- 4 - Above expectations
- 5 - Far above expectations



b. Market share*

- 1 - Far below expectations
- 2 - Below expectations
- 3 - Achieved expectations
- 4 - Above expectations
- 5 - Far above expectations



c. Net profit*

- 1 - Far below expectations
- 2 - Below expectations
- 3 - Achieved expectations
- 4 - Above expectations
- 5 - Far above expectations



d. Number of employees*

- 1 - Far below expectations
- 2 - Below expectations
- 3 - Achieved expectations
- 4 - Above expectations
- 5 - Far above expectations



e. Customer retention*

- 1 - Far below expectations
- 2 - Below expectations
- 3 - Achieved expectations
- 4 - Above expectations
- 5 - Far above expectations



8 → If you know any other ventures that have received business angel funding, please state their names here and we will invite them to participate in this study.

9 → If you wish to receive a copy of the final MSc thesis, please provide your email below and we will send it to you by the end of May 2015.

Ok ✓ press ENTER



Thank you for taking the time to participate in this research.