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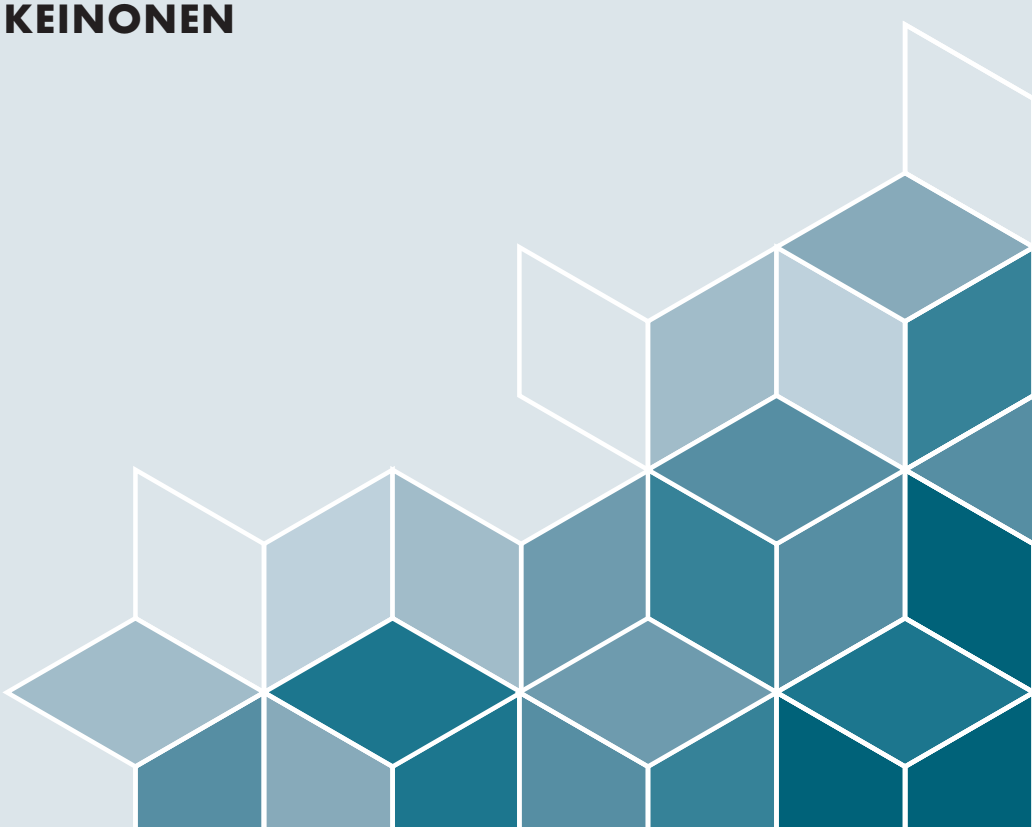
Essays on agency problems in entrepreneurial ventures and publicly listed companies

HENRIK KEINONEN



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Supervised by
Associate Professor
Tom Lahti
Hanken School of Economics, Finland

Professor Emeritus
Tom Berglund
Hanken School of Economics, Finland

Opponent
Professor Emeritus
Hans Landström
Lund University, Sweden

Henrik Keinonen
Hanken School of Economics
Department of Management and Organisation
Subject: Entrepreneurship and Management
P.O.Box 479, 00101 Helsinki, Finland

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Helsinki, 15.11.2021

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LIST OF PAPERS

This doctoral dissertation contains a thesis frame and the following three papers, which are referred to in the text by their numerals:

I. Lahti, T. & Keinonen, H.: Business angel networks: a review and assessment of their value to entrepreneurship

II. Falik, Y., Lahti, T., & Keinonen, H.: Does startup experience matter? Venture capital selection criteria among Israeli entrepreneurs

III. Keinonen, H.: Blockholders and Firm Performance within the Nordic Corporate Governance Model: Finnish Evidence

1 INTRODUCTION

1.1 Research Background

Finnish company Riot Entertainment Ltd. was founded in the early 2000s during the dot-com boom. The firm's business idea was to produce scalable mobile games. The founders were neither game developers nor did they have enough talented people to create mobile games. Yet they were successful in attracting notable investment in record time from some of the most reputable investors of that period. Nokia Ventures, Rupert Murdoch's News Corporation, and the Carlyle Group invested more than 20 million euros in "building brands and emotional power" in mobile entertainment. The investors required the entrepreneurs to recruit at least 100 employees to build an appealing façade for the firm. The entrepreneurs then recruited almost anyone they could find, and spent the invested capital in less than two years on parties, expensive travel and exquisite offices, leaving an additional 3 million euros of debt by the end of 2002.

This is a classic example of where both parties acted hazardously. The investors pushed the entrepreneurs to take high risks, and the entrepreneurs utilised the invested capital predominantly for private consumption. It is also typical of the moral hazard problem caused by *asymmetric information*. Moral hazard occurs when actors behave in a self-interest seeking manner rather than to benefit both parties (e.g. Dembe & Boden, 2000). *Information asymmetry* refers to a situation where the actors do not share the same information (e.g. Cable & Shane, 1997). As in the example of Riot-E, it enables entrepreneurs to use external funding for their own benefit, rather than to maximise the economic value of the company into which it was invested.

This dissertation examines moral hazard problems at different stages of a company's development. Thus, it seeks to provide a nuanced view of how and why such problems occur. In particular, high levels of

ownership concentration can be a source of such problems in Finnish publicly listed companies (hereinafter PLCs), when large owners have interests that are not aligned with minority owners. This can be detrimental to company valuation (Keinonen, 2021). Foreign investors, who are typically in the minority shareholder category, might start eschewing investment in Finnish listed companies, in fear of large owners' misbehaviour (e.g. Gilson, 2006). This type of moral hazard can lead to strengthening the home bias of foreign investors (Berglund & Westerholm, 2010). Moral hazard is a serious problem also on an aggregate level, since it can lead to market imperfections, economic inefficiency, and, in the worst case scenario, market failure (e.g. Bator, 1958; Akerlof, 1970; Stiglitz, 1989).

Asymmetric information may not only cause *moral hazard* problems, but also *adverse selection*. In the entrepreneurship research, this has typically been characterized as a situation where an investor selects a poor quality entrepreneur and venture, due to their inability to ascertain quality prior to the investment (e.g. Amit et al., 1990; Van Onsabrugge, 2000). This thesis acknowledges that adverse selection is also a concern for the entrepreneur's selection of an investor, where asymmetric information might lead an entrepreneur to select an investor with inadequate qualities (Valliere & Peterson, 2007; Falik et al., 2016).

Moral hazard and adverse selection are a part of the *agency theory*, which examines the relationship between a principal and an agent. The principal delegates a task to the agent, who is expected to act in the best interests of the principal (e.g. Ross, 1973; Jensen, 1986). Agency theory lies at the core of corporate governance (hereinafter CG), which originates from the separation of ownership and control. CG is concerned with how to secure a fair return for investors, and properly exercised CG should lead to the suppression of agency costs (e.g. Coase, 1937; Fama & Jensen, 1983a,b). Self-interest seeking behaviour stems from the divergence of interest or utility associated

with choices (Jensen & Meckling, 1976). For the agent, maximising their own utility may involve behaviour that is not in the principal's best interest (Jensen & Meckling, 1976). Agency problems have been observed between shareholders and firm managers, debtors and owners, and new owners vs. old owners (e.g. Berle & Means, 1932; Fama, 1980; Agrawal & Knoeber, 1996).

The primary aim of this dissertation is to examine agency problems between entrepreneurs and investors in entrepreneurial ventures, and between minority owners and blockholders in PLCs (cf. Ang, 1991; Denis, 2004). Second, to show that agency problems can be detrimental to a company's value, and the problems differ depending on the firm's stage of development, since the principal-agent roles may change as the business grows.[1] Finally, the dissertation discusses solutions to prevent these problems arising. Next, I reflect in brief on agency problems at different venture development stages.

At the seed and startup stages, entrepreneurs commonly have an idea and business concept but very little revenue (Bottazzi & Da Rin, 2002). There is a risk for the investor that the entrepreneur purposely neglects to impart important information in their funding pitch, or they might simply misuse the investment (Landström, 2017). While this behaviour may partly result from bounded rationality or an entrepreneur's cognitive biases, such as overconfidence or over-optimism, it is often caused by information asymmetries between the parties, which enables the entrepreneur to exploit the investor due to information advantage (Landström, 2005).[2] In this thesis, I acknowledge that Business

[1] It is acknowledged in this thesis that not all firms grow according to a pre-defined model or follow a path of development from a startup to a scaleup to a listed company. For instance, many entrepreneurial driven firms may remain small and yet be profitable. It is also noted that only a fraction of entrepreneurial ventures actually become successful or approach for external funding from investors.

[2] Bounded rationality refers to the analysis of decision-making, equipped with cognitive limits to an individual's knowledge and capacity to act rationally, whereas cognitive bias is due to systematic deviations from full rationality (see Cyert & March, 1973; Simon, 1982).

Angel Networks (hereinafter BANs) can aid in reducing information asymmetries. They are formed to function as intermediaries between business angels (hereinafter BAs) and entrepreneurs, and in doing so provide investors with pre-screened investment opportunities (e.g. Lahti & Keinonen, 2016). By investing through BANs, BAs provide small amounts of money to seed and startup ventures in exchange for ownership, and non-pecuniary resources such as their personal networks, business experience and industry contacts, which are often even more valuable than the invested capital (e.g. Ardichvili et al., 2002).[3]

At the scaleup stage, the entrepreneurial venture has revenues and satisfied customers (e.g. Valliere & Peterson, 2007). These scaleups often seek venture capital (hereinafter VC) funding to scale/expand their business on the international stage (e.g. Falik et al., 2016). Venture capitalists (hereinafter VCs) who invest in them encourage entrepreneurs to take risky actions to yield a return on their investment. They operate in a Limited Partnership (hereinafter LP) funding structure, which means they serve as general partners and outside investors, investing in the funds as limited partners. Hence, they are under pressure to satisfy outside financiers in order to attract money to the fund.

In the relationship between entrepreneurs and VC investors, the entrepreneurs/entrepreneurial teams have typically been portrayed as the agents and the VCs as the principals (e.g. Amit et al., 1990; Van Osnabrugge, 2000; Arthurs & Busenitz, 2003). The research on the topic is traditionally concerned with agency problems caused by entrepreneurs. This view is warranted, as VCs typically face considerable information asymmetry due to the informationally opaque nature of scaleups, which are often high-tech firms with insufficient assets to

[3] When discussing "Investors" in this dissertation, reference is made to either Business Angels (BAs) or Venture Capitalists (VCs). When referring to VC firm managers, we use a direct analogy to VC General Partners (GPs).

cover potential losses (e.g. Hyytinen & Pajarinen, 2008). However, compared to VC investors, entrepreneurs are typically less diversified and more heavily invested in their own company. Thus, instances may occur where the VC firm might be the party to the relationship that is acting in a self-interest seeking manner (e.g. Cable & Shane, 1997; Lehtonen & Lahti, 2009; Lahti, 2014). Against this background, it is important to bear in mind that VCs' behaviour is motivated by their need to comply with what has been agreed with outside investors and terms stipulated by a fund agreement (e.g. Sahlman, 1990).

Because VCs are expected to return outside investors' money plus a risk premium, they might have to push entrepreneurs to take overly large risks. The expectation is that one or two out of ten investments should become extremely successful (e.g. Sapienza et al., 1994). In accordance with fund agreements, a VC fund should be closed and money returned to outside investors in 10 years time. This piles further pressure on the entrepreneurs, who need to find a way for the investors to exit the venture, implying the disposal of the investors' shares. Moreover, since VCs are aiming to minimise uncertainty to benefit the fund's investors, they sometimes impose harsh covenants and rigid contract terms on entrepreneurs (e.g. Kaplan & Strömberg, 2003, Kaplan et al., 2007). Counterintuitively, this might in fact reduce the likelihood of a successful exit, since those covenants make it difficult for entrepreneurs to react to customer demands and/or change strategy without the VC fund's consent (e.g. Cable & Shane, 1997; Falik et al., 2016).

Consequently, at the scaleup stage, we find instances where entrepreneurs are affected by VCs' moral hazard/opportunistic behaviour. While entrepreneurs who invested their own savings face high personal risk (e.g. De Clercq et al., 2006), VC investors receive a fixed 1.5-3 per cent annual management fee, regardless of the success or failure of an individual investment. Thus, they are less dependent on the fate of a single firm in their portfolio. This may amplify their risk-taking behaviour towards entrepreneurs (e.g. Sahlman, 1990). Thus, it

becomes extremely important for entrepreneurs to select a VC who is serving the best interests of both parties.

VCs typically hope that some of their scaleups become PLCs and exit through an initial public offering (IPO), as it tends to substantially increase the value of their holdings (Gompers, 1996; Lee & Wahal, 2004). Agency problems are often different in nature at the PLC stage than those addressed to date, typically concerning different types/ categories of owner. Although large shareholders are commonly expected to increase the value and performance of PLCs, their power and influence can induce them to abuse their position.

Arguments in favour of strong owners' value-enhancing role suggest they are equipped with monitoring capabilities, and incentivised to develop the PLC in the long-term (Lekvall, 2014). Small shareholders, on the other hand, suffer from other small shareholders' free-riding, and have fewer incentives to develop the company (Black, 1990).[4] Proper monitoring and mentoring of the management should in theory add company value, while increasing risk where it is justified by higher return expectations (Jensen & Meckling, 1976).

Moral hazard problems may occur at the PLC stage when influential owners wish to reward themselves for monitoring the management, by pursuing goals other than company value maximisation. They may increase their private wealth or extract perks at the expense of other shareholders (e.g. Pagano & Röell, 1998; Gomes, 2000; Claessens et al., 2002; La Porta et al., 2002b; Maury & Pajuste, 2005). Also, political goals might steer controlling owners' behaviour when the state is the largest owner (e.g. Roe, 2002; Putniņš, 2015). According to the Nordic Corporate Governance (hereinafter NCG) model, strong owners are accepted as they protect minority owners from managerial discretion, and develop the company in the long-term to benefit all shareholders

[4] Monitoring, as defined by Jensen and Meckling (1976), is not limited to measuring and observing the agent's behaviour, but involves also the principal's efforts to control the agent using budgets, compensation policies, operating rules, and other measures.

(Lekvall, 2014). However, the inherent risk of the NCG model is that large controlling owners may abuse their power and insight to extract undue private rents from the company, and, thus, promote their private benefit rather than create value for all shareholders (Lekvall, 2018).

This dissertation comprises three separate papers, each employing a different data set and approach to address agency problems. The first paper is a review and assessment of the performance of BANs in Europe and the US and their value to entrepreneurship (Lahti & Keinonen, 2016). In the second paper, entrepreneurs' perspective on VC selection criteria is examined using data from Israel, a country that has a vivid VC market. One particular finding is that startup experience has an impact on the criteria entrepreneurs employ in selecting a VC (Falik et al., 2016). The third paper investigates the relationship between blockholders and minority shareholders in Finnish PLCs during a period of economic stability. The key finding is that certain types of large owner have a negative impact on company valuation (Keinonen, 2021).[5] The results suggest that impact may be due to large state[6] ownership.

1.2 Motivation of the Study

Entrepreneurship is important for economic growth and employment (e.g. Landström, 2005; Gabrielsson, 2017; Landström, 2017). However, in countries like Finland, only a very small share of these ventures is fast-growing, and thereby creating a large number of the new jobs (Lahtinen et al., 2016). These companies are typically dependent on external funding to reach their development milestones (Wilson et al., 2018).

[5] Large shareholders, controlling owners, strong owners, majority shareholder, influential shareholders, and blockholders are used concomitantly in the paper.

[6] We use "state" and "government" interchangeably in this paper with reference to state authority.

One source of external funding in seed and startup stages is BA funding. Mason and Harrison (2008) define a business angel is as "a high net worth individual acting alone or in a formal or informal syndicate, who invests his or her own money directly in an unquoted business in which there is no family connection and who, after the investment generally takes an active involvement in the business, for example, as an advisor or member of the board of directors" (pp. 309). Since the BA market is virtually invisible with no public record of active angel investors, BANs have been set up to enhance the process of matching angels with entrepreneurs (e.g. Wetzel, 1983; Mason & Harrison, 2008).

BANs are often referred to as 'dating agencies', providing a communication channel that enables BAs to review investment opportunities while preserving their anonymity, and allowing entrepreneurs seeking finance to present their investment opportunity to a large number of potential investors (Harrison & Mason 1996). BANs play many important roles, addressed here in Section 2, which describes the actors in this thesis. One of their primary roles is to ascertain the quality of the investment opportunities presented to a BAN's BA members (Christensen, 2011). Thus, they may not only increase the number of investment opportunities BAs encounter, but also their quality.

From this perspective, the first paper in the dissertation undertakes a review and assessment of the different roles BANs can play. It deals with agency problems in the seed and startup stages, addressing different means through which asymmetric information on the quality of entrepreneurial projects can be reduced. These can involve activities that help entrepreneurs better communicate their ideas to investors and/or help BAs separate good from poor investment candidates (Harrison & Mason 1996; Christensen, 2011).

Typically, venture capitalists have hundreds of investment candidates to choose between when picking proposals with the best potential

(Tyebjee & Bruno, 1984; Sweeting, 1991; DeClercq et al., 2006). However, in the academic research, a less widely recognized fact is that, similarly, entrepreneurs face a crucial selection decision on which VC to approach for funding. This is particularly important in a venture's scaleup stage, where large amounts of funding are required to satisfy growth/expansion ambitions, and the terms proposed by VCs can vary a great deal (e.g. Murray, 1994; Kaplan & Strömberg, 2003). In a relatively small country, such as Finland, the options are relatively few, but in a highly vibrant VC market, such as in Israel, there is a plenitude of VC providers (Falik et al., 2016). Thus, we selected Israel as the target market in the second paper in the thesis, which studies VC selection criteria among Israeli entrepreneurs. Information asymmetry may cause entrepreneurs to select a VC that charges a high price for the investment (i.e. offers a low valuation for the entrepreneur), but does not provide adequate value-added contributions, such as advisory and strategic input, sounding-board functions, and industry and professional contacts (e.g. Sapienza et al., 1996; Hellmann & Puri, 2000; Croce et al., 2013).

If a company reaches maturity and is listed on a stock exchange, problems related to asymmetric information do not disappear, though their nature may be very different. In PLCs, shareholders can typically be classified as large owners, or so called blockholders, and minority shareholders that own less than 10 percent of the company's shares. Although agency theory predicts that agency problems are least common in firms where ownership is concentrated to a small group of owners, which may involve the entrepreneur/management (e.g. Jensen & Meckling, 1976), the third paper in this thesis suggests that may not always be the case. Agency theory views ownership concentration favourably because it should incentivise actors with large shareholdings to maximise firm value (e.g. Jensen & Meckling, 1976; Eisenhardt, 1989). However, the third paper examines whether blockholders forgo company value maximisation to enjoy the private benefits of control to the detriment of the minority shareholders (Keinonen, 2021). Given

that risk, the separation of ownership and control can be assumed most efficient in companies with dispersed ownership where minority shareholders can authorise the board of directors (hereinafter BOD) to oversee their interests (Fama & Jensen, 1983a). The study context in paper III is Finland, where large controlling owners have in the previous research been shown to prevent dividends being paid out and minority owner coalitions forming (Maury, 2004; Kinkki, 2008). Next, I summarize some of the main components of this dissertation.

First, this work shows that agency problems differ by stage of development (startups, scaleups, vs. PLCs). Second, that agency relations change as firms grow and their financing needs change. Third, I provide arguments for agency problems in each development stage. Finally, solutions to prevent agency problems are discussed. The framework enables the observation of a variety of moral hazard and adverse selection problems. This information is valuable for practitioners, such as investors and entrepreneurs, to tailor their offerings to each other more effectively. Also, for different investor types, such as blockholders, governmental owners, minority shareholders, and foreign investors, in maximising the value of their investment. And finally, for policy planners and researchers in understanding economic dynamism (e.g. Schumpeter, 1943). The following presents the problem and aim of this research as well as the structure of the dissertation.

1.3 Research Problem, Research Gap, and Research Aim

Ever since the seminal paper by Berle and Means (1932), agency theoretical issues have been subject to considerable research interest (e.g. Jensen & Meckling, 1976). This stream of research has focused on dividend policies (La Porta et al., 2000b); managers and shareholders (Agrawal & Knoeber, 1996); CEO ownership (Griffith, 1999); residual claimants (Fama & Jensen, 1983b); agency costs and ownership structure (e.g. Pagano & Röell, 1998; Ang et al., 2000; Rebel et al., 2000); agency conflicts (Burkart & Panunzi, 2005); agency costs and

controlling minority owners (Cronqvist & Nilsson, 2003); corporate diversification (Denis et al., 1997; 1999); agency problems in family ownership (Maury & Pajuste, 2005; Maury, 2006); and, the principal's problem (Ross, 1973).

There is also a vast amount of research that applies agency theory to understanding the relationship between a VC or BA and entrepreneurs in the pre- and post-investment stages (e.g. Landström 1992; Van Onsabrugge, 2000; Arthurs & Busenitz, 2003; Lahti, 2009, 2011; Söderblom et al., 2016). While nearly all of these studies portray the entrepreneur/management as the agent that may maximise their own interests at the expense of the investor's, some papers suggest the reverse, as the entrepreneur typically has more at stake (e.g. Cable & Shane, 1997; Lehtonen & Lahti, 2009; DeClercq et al., 2006; Lahti, 2014). However, to the best of my knowledge, there is to date no published study that takes a holistic view of agency problems and asymmetric information from seed and startup to listed company. This thesis looks to fill that research gap.[7]

The dissertation comprises three individual papers. In the following, I provide a brief overview of their key content. Paper I presents statistics and a discussion on BANs in Europe and in the US. It illustrates various types of BAN, summarizes their core functions and scope, and discusses how BAN performance should be measured. The paper also reviews the extant research on BANs' socioeconomic impact, and evaluates their pros and cons for entrepreneurs, investors, and society (e.g. Collewaert et al., 2010; Knyphausen-Aufsess & Westphal, 2008; Christensen, 2011). Finally, it makes suggestions for policy makers on whether or not to support BAN activities. The thrust of the paper is to synthesize important insights from the extant research about BANs'

[7] The first paper covers a large data set from the US and Europe. The second paper utilises data from Israel, which has the most dynamic VC market in the world. The third paper employs Finnish data and takes the Nordic Corporate Governance model view in the analysis.

impact and value to entrepreneurship, especially in terms of angel funding, employment and growth in BAN-backed companies.

Paper II is concerned with Israeli entrepreneurs' selection criteria in choosing a VC firm. There is a vast body of research on VCs' decision-making processes (e.g. Van Osnabrugge, 2000), investment criteria (e.g. Macmillan et al., 1985; MacMillan et al., 1987), growth potential (e.g. Cope et al., 2004), and optimal team features (Hisrich & Jankowicz, 1990). However, it is equally important to understand entrepreneurs' motivation in choosing the most appropriate VC firm. This paper reverses the traditional order and focuses on the selection criteria entrepreneurs' employ when they select a VC fund. There is a handful of earlier studies looking into VC selection criteria among entrepreneurs (e.g. Smith, 2001; Kaiser et al., 2007; Valliere & Peterson, 2007; Zheng, 2011). The second paper of my dissertation adds to this research stream by specifically studying the influence of entrepreneurs' startup experience on trade-offs between resource-related criteria and those related to the investment deal's conditions. Moreover, it extends the research on selection criteria to a new geographical and cultural context, as it focuses on entrepreneurs and the VC market in Israel.

Paper III examines the relationship between large shareholders of PLCs and firm performance in Finland during a period of economic stability. There is a vast amount of research on the impact of family ownership (e.g. Maury, 2004; Maury, 2006), equity ownership (e.g. McConnell & Servaes, 1990), managerial and CEO ownership (Morck et el., 1988; Griffith, 1999), choice of ownership structure (Pagano & Röell, 1998), and dual-class shares (e.g. Rydqvist, 1990; Zingales, 1994; 1995). Research has also been conducted on ownership structure and diversification (Belkaoui & Pavlik, 1992), and ownership structure and economic performance in European companies (e.g. Thomsen & Pedersen, 2003). However, there is less research on the NCG model and blockholders. Why are so many Nordic companies represented on the Forbes Global 2000 list of the world's largest PLCs? Can the NCG

model explain this strong performance? Paper III analyses whether Finnish PLCs follow the pan-Nordic doctrine, where strong owners effectively control and take long-term responsibility for the company by nurturing their investment for the benefit of all shareholders (Lekvall, 2018).

The general aim of this dissertation is to highlight that agency problems differ based on the company's life cycle, and the roles of the principal and agent change depending on the firm's stage of development.[8] Figure 1 depicts the agency relationships examined in my thesis. The upper row denotes the principal, the middle row the agent, and the bottom row the stage of development.

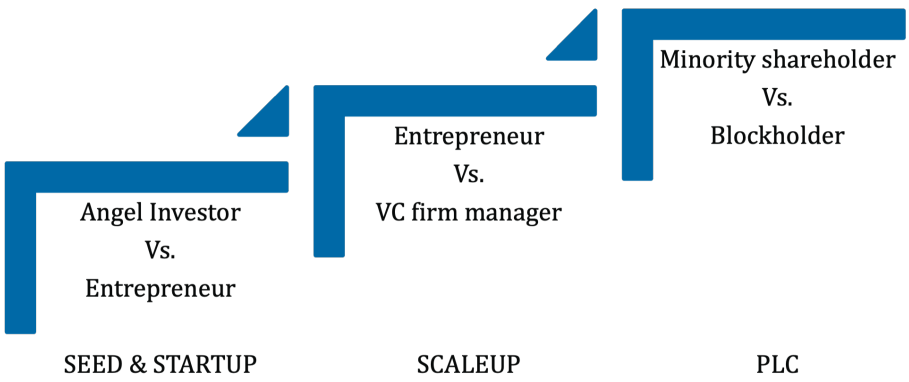

Figure 1 Agency problems examined in the dissertation (principal vs. agent)

As suggested earlier, in the seed and startup stages entrepreneurs might give BAs false information about their venture. This has consequences *ex-ante* (adverse selection) and *ex-post* (moral hazard).

[8] The research design of this thesis is not longitudinal, meaning that it follows a firm throughout its life cycle, but it consists of three independent studies, which each use different data in three different settings.

Ex-ante, if an investor is unable to distinguish between poor and good quality investment opportunities, problems of adverse selection may emerge and lead to a shortage of financing, since the problems cannot be resolved. *Ex-post*, moral hazard problems are likely to occur, if the entrepreneur misuses the investment or exerts insufficient effort on behalf of the venture.

In the scaleup stage, entrepreneurs may select a poor quality investor (adverse selection), or the VCs may force the entrepreneur to take excessive risks, hence endangering the entrepreneur's personal wealth (moral hazard). It is also possible that the entrepreneur provides the investor with false information about the venture (e.g. Van Osnabrugge, 2000). This kind of misrepresentation by one or both parties is likely to result in conflicts in the post-investment relationship, when the entrepreneur's/venture's/VC's true qualities are revealed (Cable & Shane, 1997; Shane & Cable, 2002).

Finally, problems may exist in PLCs when majority owners abuse their power and incite against minority shareholders, and foreign investors, extracting undue private rents from the company (moral hazard). These rents can be either pecuniary (monetary) or non-pecuniary. If foreign investors, aware of blockholders' misbehaviour, start eschewing investment in PLCs, the foreign investment market may fail in this context (adverse selection). Also, minority shareholders, who are important for stock liquidity, may start avoiding investments in companies with strong owners, for fear of their misbehaviour.

Papers I and II focus on entrepreneurs and investors, whereas Paper III focuses on owners in PLCs. Hence, the general research question is:

> *What are the agency problems among entrepreneurial ventures and publicly listed companies? Are these problems similar in nature, and can these problems be prevented or cured?*

The papers provide an understanding of situations, involving asymmetric information, where the two parties to the relationship are encouraged to cooperate for their mutual benefit. The papers aim to understand agency problems in startups, scaleups and PLCs. Some of their key insights related to the agency theory are presented in the following.

Paper I is a descriptive study focusing on seed and startup stage entrepreneurs and angel investors. It provides an overview of BANs, different BAN types, and their revenue models. Also, it highlights the important role played by high-quality BANs in reducing information asymmetries between entrepreneurs and investors. First, those BANs run investment readiness programmes that help entrepreneurs improve their written materials and oral presentations to attract BAs' interest. Hence, it becomes easier for BAs to understand a venture's potential. Second, they help BAs mange investments by educating them on the 'tricks of the trade'. Third, they provide BAs and entrepreneurs with standardized contract templates and access to affordable advisory services. Fourth, and most importantly, they ensure weak projects are filtered out at an initial/pre-screen stage, which saves BAs time and money, and prevents potential instances of adverse selection. All four value-adding roles contribute to mitigating the risks of agency problems arising.

Paper II focuses on entrepreneurs' criteria for VC selection. The data were gathered from Israel, which is home to the most dynamic and competitive technology cluster outside the US. The extant research shows that VC firms typically take into account two main attributes in the entrepreneurial selection process, namely the team and the market potential (e.g. Macmillan et al., 1985; Hirsch & Jankowicz, 1990; Zachakis & Meyer, 1998; De Leon Lopez & Guild, 2003; Cope et al., 2004). In this paper, we suggested that an improved understanding of what entrepreneurs look for in a funding partner assists VCs in targeting their offerings. VC funds that succeed in improving the

services offered to entrepreneurs should benefit from an enhanced reputation and deal flow. Finding the right kind of ventures and supporting the entrepreneurs, instead of forcing them to take excessive risks, would be a Pareto improvement for VCs. Similarly, in order to find a proper VC, entrepreneurs must improve their team and offering or market potential. When both parties are better equipped to target their offerings to each other, fewer agency problems are expected to emerge. This might also increase the number of successful ventures, as entrepreneurs could steer their businesses in a more agile way.

Paper III examines agency problems between majority and minority shareholders in Finnish PLCs during a period of economic stability. The results of the paper indicate that ownership concentration is negatively associated with company valuation. The negative effect is attributable to specifically state ownership. It derives from the possibility that blockholders may exchange their monitoring and control function for extraction of the private benefits of control from the company, at other shareholders' expense (Shleifer, 1998; Lekvall, 2018). The paper makes recommendations on how to prevent moral hazard behaviour. A summary of the papers, their contributions, and the overall conclusion is illustrated in Table 1.

Table 1 Synopsis of the Three Dissertation papers

	Paper I	**Paper II**	**Paper III**
Title	Business angel networks: a review and assessment of their value to entrepreneurship	Does startup experience matter? Venture capital selection criteria among Israeli entrepreneurs	Blockholders and Firm Performance within the Nordic Corporate Governance Model: Finnish Evidence
Authors	Tom Lahti, Henrik Keinonen	Yakir Falik, Tom Lahti, Henrik Keinonen	Henrik Keinonen
Status	Published	Published	Published
Accepted	9th October 2016	2nd March 2016	29th March 2021
Published	October 2016	March 2016	August 2021

Research Question	**What are the agency problems among entrepreneurial ventures and publicly listed companies? Are these problems similar in nature, and can these problems be prevented or cured?**

	Paper I	**Paper II**	**Paper III**
Theme	Review of Business Angel Networks (BANs) and their value to entrepreneurs, investors and society.	Evidence on the criteria Israeli entrepreneurs exploit when choosing a venture capital (VC) firm.	Evidence on blockholders' negative impact on company valuation in Finland during a period of economic stability, using the NCG model in the analysis.
Key words	Business Angel Networks, entrepreneurship, FiBAN, EBAN, investments, funding, venture capital, startup, Business Angel	Israel, venture capital, entrepreneurship, experience, selection, valuation	Blockholders, ownership structure, firm performance, Nordic corporate governance model
Research methods	Descriptive research, statistics from BANs. Data provided by EBAN. Supported by analysis of socioeconomic value of BANs; suggestions for policy makers.	Quantitative study using ordered logit regression model with STATA, to test interview data comprising 144 questionnaires answered by Israeli entrepreneurs, who are in the process of acquiring or had secured VC funding.	Quantitative study using longitudinal panel data comprising 714 cross-sectional and time-series observations. Tested on Ordinary Least Squares regression (OLS) with STATA.
Major findings	Reveals the need for financing and external resources for startups. Besides funding, BANs provide business experience, networks and contacts (resource dependence perspective); but also a matching network for entrepreneurs to present and angels examine investment opportunities, to reduce information asymmetry between the parties.	Compared with more experienced entrepreneurs, the less experienced attach relatively more importance to valuation when seeking VC financing. Importance attached to valuation is moderated by VC network and reputation, which are more important to novice than serial entrepreneurs. Less reputable VC firms need to compensate in valuation to become selected by more experienced entrepreneurs.	Ownership concentration has a negative impact on firm value. Large domestic owners, especially the state, render listed companies unattractive to foreign and minority investors, due to their private benefits of control.

Major contributions	Highlights the importance of BAN service quality in reducing information asymmetries.	Provides suggestions for VC firms and entrepreneurs on how to improve their offerings to each other, in reducing information asymmetries.	Shows that large owners compensate their monitoring and control role by extracting private benefits from the company at other shareholders' expense.
Data period	1999–2013	2011–2012	2001–2006

Conclusion	**Agency problems are common in firms of any size, but take different forms based on firm development stage. In startups, the problems often lie between the entrepreneur(s) and angel investor(s), where the entrepreneur might give investor(s) false information about the investment opportunity, or misuse the funding. BANs have both positive and negative socioeconomic effects. The quality of their services is important in reducing information asymmetries on an entrepreneurial venture's quality. BANs in more mature BA markets tend to offer more high-quality services than those in less mature markets. In scale-ups, agency problems might manifest between VC firms and entrepreneurs, where VC managers may push entrepreneurs to take excessive risks that endanger the entrepreneur's personal wealth. Entrepreneurial experience has a negative relationship with the importance entrepreneurs attach to valuation, which is moderated by the importance they attach to VC networks and reputation. In PLCs, the problems are observed between majority and minority shareholders, where the majority shareholders might abuse their power and insight to extract undue private rents from the company at the expense of other shareholders. Large owners have a negative impact on company valuation. The moral hazard behaviour is mainly driven by state-controlled ownership.**

1.4 Structure of the Thesis

The first chapter of the thesis comprises the introduction, motivation for the study, research problem, and the aim. The second chapter introduces the key actors in the research articles. The third chapter discusses the theory, and connects it to the individual papers and the earlier research. The chapter starts with the separation of ownership and control, and defines the need for CG as a framework for how to run the company in the best interests of its owners. Then, the agency theory and agency costs, resource dependence perspective, moral hazard, adverse selection, as well as BAs and BANs are discussed. Finally, I present an overview of the ownership research. Chapter four delivers the methodology and data. The fifth chapter provides

the summaries. The study concludes with chapter six presenting the contributions, implications, and suggestions for future research. Table 2 below summarises the main agency problems.

Table 2 Individual papers and the agency problems

Study	Problem type	Stage	Key actors	Main problem
Paper I	Information asymmetry, Moral hazard, Adverse selection	Seed and Startup	Business Angel(s) BANs, Entrepreneur	Entrepreneur might act hazardously towards investor *ex-ante* or *ex-post*
Paper II	Information asymmetry, Moral hazard, Adverse selection	Scaleup	Entrepreneur, VC manager(s), VC firm	VC firm/VC firm manager might act hazardously towards the entrepreneur, *ex-ante* or *ex-post*
Paper III	Information asymmetry, Moral hazard, Adverse selection	PLC	Minority shareholders, Blockholder(s), the state, Foreign shareholders	Blockholder(s) might act hazardously towards minority, and foreign, shareholders *ex-post*

2 KEY ACTORS IN THE STUDY

This chapter briefly introduces the key actors relevant to this dissertation, and includes descriptions of entrepreneurial ventures and entrepreneurs, VC firms and VC managers, and majority and minority shareholders in PLCs.

2.1 Entrepreneurs and Entrepreneurial Ventures

Due to the scope and limitations of this study, I focus on entrepreneurs who have established, or are about to establish, a high-growth venture and seek capital for their project, either from business angels, angel syndicates, or VCs. This group is a high-growth oriented subset of all entrepreneurs (cf. St.-Jean & Julien, 2008). In the text, we classify entrepreneurs as novice, nascent, and serial, following Valliere and Peterson (2007). Novice entrepreneurs are individuals who have a business idea but have not founded a company (e.g. Smith, 2001). Nascent entrepreneurs have either owned a business or currently own one, while serial entrepreneurs are individuals who own more than one firm and have exited one or more ventures (Falik et al., 2016).

The definition of entrepreneurship varies in the literature (e.g. Landström, 2005). In his seminal definition via economics, Schumpeter (1934) considered entrepreneurship an important function in the economy, where entrepreneurs acted as innovation creators who could change the market equilibrium. Kirzner (1973) added that entrepreneurs are individuals with access to specific information sets and able to identify business opportunities that lead to disequilibrium. According to various management scholars, entrepreneurs are considered individuals who take a certain action to develop new organisations (e.g. Gartner, 1998). Shane and Venkataraman (2000) provided a conceptual framework for entrepreneurship by looking at the processes through which entrepreneurs develop new opportunities. Landström (2017) defined entrepreneurial ventures as “new and growing”, and

crystallised entrepreneurship as “the process of changing ideas into commercial opportunities through the creation of new and growing ventures” [1, pp. 6].

2.2 VC Markets, BAs, VC firms, and VC firm managers

Landström (2017) defined three different VC markets: crowdfunding, informal investors, such as BAs, and formal VC (e.g. Drover et al., 2017). Crowdfunding refers to raising capital from the “crowd of individuals” who invest small amounts of money through online platforms (e.g. Landström, 2017), but are not necessarily sacrificing scarce resources to the firm (e.g. Winborg & Landström, 2001; Mollick, 2014; Ahlers et al., 2015). Figure 2 depicts various forms of risk capital from seed phase to IPO.[9]

BAs invest equity capital in non-listed firms where they have no family connections (e.g. Mason & Harrison, 2008). They provide the firms in which they invest with their experience, know-how, business network, and play a hands-on role (Mason & Harrison, 1995). BAs are sometimes hard to find, as they are a heterogeneous group of private people. BANs bring together entrepreneurs, who are seeking funding for their business opportunities, and BAs, who want to invest, and function as a communication channel between them (Lahti & Keinonen, 2016). BANs also aim to reduce information asymmetries between the parties (ibid.). They do not invest *per se*, but provide startups with valuable services, which are especially vital to less experienced entrepreneurs (e.g. Politis, 2008).

[9] Firm revenue is plotted on the figurative vertical axis and firm age on the horizontal axis.

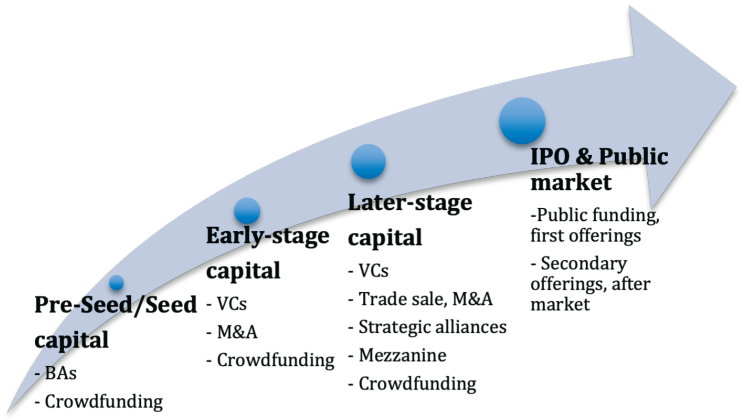

Figure 2 Forms of Risk Capital

Formal VC firms comprise full-time finance professionals who follow strict investment and exit policies. VC firm managers, i.e. GPs, predominantly invest other investors' (LPs[10]) capital through a limited partnership VC fund (Figure 3). The investments are commonly allocated to scalable, early- and later-stage, high-growth ventures that have market potential.

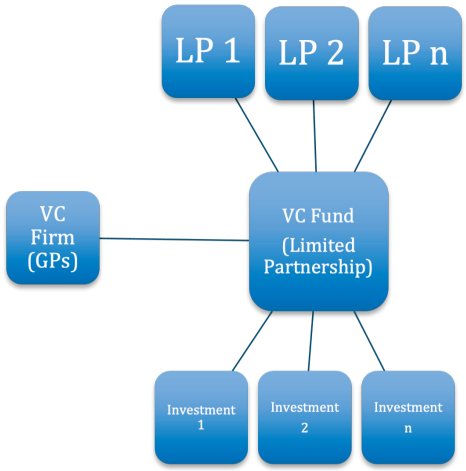

Figure 3 Venture Capital Fund Structure

[10] LP investors consist of wealthy individuals, public pension funds, insurance firms, foundations, corporate funds, and other funds (e.g. Mason & Harrison, 2008).

Mason (2009) observed that VC firms commonly invest more than €200,000 per venture, due to fixed investment costs (i.e. due diligence and monitoring). VCs also provide non-pecuniary services that can add firm value, such as strategic advice, consultation, mentoring, networks, and acting as a sounding board for the entrepreneur to improve their business model and marketing strategies (e.g. Sapienza et al., 1996). VCs commonly look for two specific criteria when they select an investment object: the team and the growth potential (e.g. De Leon Lopez & Guild, 2003; Cope et al., 2004). VCs can manage several funds, where they raise money from different LPs. Statistically, one or two out of ten VC investments become extremely successful, while the remainder recoup the investment or go bankrupt (e.g. Sapienza, 1994). Since VC firm managers must generate a high rate of return on the invested capital, due to high-tech ventures' greater risk premium, they need to steer entrepreneurs towards risk-taking (Lahti, 2014). This may, however, endanger entrepreneurs' personal wealth (ibid.). Young VC firms also need to build a reputation and exit their investments quickly, which leads to unfavourable terms being offered to entrepreneurs on exit (e.g. Lee & Wahal, 2004). GPs charge a fixed 1.5-3% management fee on fund size, and commonly collect a 15–25% carry (i.e. profit share) on exits, once the LPs have been paid back their invested capital. Taken together, VC managers are less dependent on the success or failure of a single investment in the portfolio, whereas in a bankruptcy the entrepreneur may forfeit their net worth due to collateral obligations (e.g. Sahlman, 1990). These asymmetric risk expectations and risk-taking abilities between the parties are the source of various agency problems.

2.3 Minority and Majority Owners of PLCs

Minority owners are defined herein as those who own less than 10 per cent of the shares outstanding in a PLC[11], and majority owners as shareholders who own 10 per cent or more[12] (cf. Claessens et al., 2002; La Porta et al., 2002b; Maury & Pajuste, 2005; Maury, 2006).

Unlike those who invest in entrepreneurial ventures, blockholders taking a stake in listed companies have secondary markets on which to trade their shares. The separation of ownership and control is an obvious and necessary evolution for listed companies, but may lead to managerial discretion and managers' opportunistic behaviour. Blockholders can take an active role in the company to prevent this. The downside is they may maximise their private utility, which would not necessarily coincide with shareholder value maximisation. Blockholders represent various identities, and the owners are not identical in terms of their goals. For instance, state owners may have a political agenda rather than be looking to maximise company value, which can lead to agency problems between the state owner and other shareholders.

It is acknowledged in this thesis that the agency theory comprises several basic assumptions, such as economic rationality and wealth maximisation, which are not thoroughly discussed therein. Moreover, firms may undergo numerous stages of development, which are important but not addressed here. Finally, due to limitations on the length of this work, critical elaboration of agency theoretic frameworks

[11] When reference is made to PLCs, we refer to Finnish listed companies organised according to the Finnish Act of Companies (624/2006).

[12] 10% ownership in a PLC or Ltd. company entitles the holder to e.g. require an additional shareholders meeting, nominate members to the BOD, require a minimum dividend. See Airaksinen et al. (2010; 2018) and the Finnish Limited Liability Act (624/2006). See also research on dividends and dividend signalling in Lintner (1956), Bhattacharya (1979), Woolridge and Ghosh (1985), Healy and Palepu (1988), Lang and Litzenberger (1989), Michaely et al. (1995).

and assumptions is more limited. It is noted, for instance, that firms undergo a set of development stages, and not all ventures are successful in attracting venture capital funding. Nor do firms follow a specific path of development as depicted here. However, this thesis aims to provide a sufficient framework to understand the basic agency problems in entrepreneurial ventures and publicly listed companies.

Chapter 3 presents the theoretical background.

3 THEORETICAL BACKGROUND

In this chapter, the two central theories of the dissertation, that is, the agency theory and resource dependence perspective[13] are discussed.

Agency theory relates to problems in the relationship between a principal and an agent. In this framework, the agent does not always act in the principal's best interest (see Jensen & Meckling, 1976; Denis et al., 1997; Ang et al., 2000). Deviation from the principal's interest is at the core of agency cost (Fama, 1980). Two agency problems are caused by information asymmetries between the parties (e.g. Landström, 2017). First, adverse selection occurs when BAs cannot judge between poor and high quality investments, an entrepreneur selects an unqualified VC, or potential foreign investors fear that domestic blockholders will start advancing their private agenda at other shareholders' expense (Berglund & Westerholm, 2010; Lahti & Keinonen, 2016; Falik et al., 2016). Second, moral hazard occurs when the parties' interests and expectations are not perfectly aligned, which can lead to opportunistic behaviour on the part of the other party *ex-post* (e.g. Cable & Shane, 1997). For instance, an entrepreneur might misuse the investment, VC manager challenge the entrepreneur to take risks that are too high and endanger the entrepreneur's wealth, or majority owners extract undue private benefits from the company at other shareholders' expense.

According to the resource dependence perspective, organisations depend on resources, which form the basis of power in firms. The dependency is contextual and relative to the firm's stage of development (e.g. Pfeffer & Salancik, 1978). BAs, VCs and blockholders can be seen as resource providers. They port critical resources to firms that cannot

[13] Also known as Resource Dependence Theory (RDT). However, the RDT should not be confused with the resource-based view (RBV), which considers the factors firms need in order to maintain a sustainable competitive advantage. See discussion on RBV by Penrose (1959), Wernefelt (1984), and Barney (1991).

be generated internally (e.g. Sapienza et al., 1996; Hellman & Puri, 2000; Hillman & Dalziel, 2003). However, not all resources add value.

Both the agency theory and resource dependence perspective assume that only certain activities and resources add firm value. It is important to map out and aim to prevent value-decreasing endeavours. This research serves that purpose.

The next section starts by defining the separation of ownership and control in modern corporations, essentially describing CG. In this respect, agency theory, agency costs, and the resource dependence perspective are examined. A discussion on BAs and BANs follows, and the section ends by discussing ownership.

3.1 Defining Corporate Governance

The separation of ownership and control is an obvious development as companies grow or become listed on the stock exchange (Fama & Jensen, 1983a). It is not uncommon for shareholders in large public corporations to adopt a merely passive role, especially if the company's ownership structure is diffused (e.g. Jaditz, 1992; Rebel et al., 2000). Then, small individual shareholders have only limited power and incentives to influence company matters vis-à-vis the majority owners (e.g. Demsetz, 1983). If ownership is dispersed, owners surrender control of the company to the managers, who make critical decisions on their behalf. This is especially so in the US and UK. In the Nordics, blockholders can protect minority owners from managers but may have private interests (Lekvall, 2014). Private interests build potential for agency problems (Berle & Means, 1932).

Due to the separation of ownership and control, Corporate Governance (CG) is critical to protecting owners' interests. Adam Smith (1776) was probably the first to define CG. He discussed agency relations between

the "partners in co-partnery" (principals) and the "joint-stock firm managers" (agents), and suggested the agents were less cautious about watching over other people's money than their own. Berle and Means (1932) rephrased this as: "Ownership of wealth without appreciable control and control of wealth without appreciable ownership appear to be the logical outcome of corporate development." [4, p. 69]. From this perspective, CG deals with measures investors employ when aiming to receive a (fair) return on their investment, by forcing managers (agents) to redistribute a share of the firm's profits back to the investors. Wealth distribution reduces management's capital appropriation, since there will be fewer assets for agents' private consumption, and diversion to other less profitable purposes. Thus, limiting available assets effectively controls managerial activities and reduces agency problems (e.g. Shleifer & Vishny, 1986b; Shleifer & Vishny, 1997).

Coase (1937), and Jensen and Meckling (1976), described CG as processes by which investors attempt to minimise "transaction costs" and "agency costs", that is, steering agents' activities towards principals, interests. The CG literature discusses shareholder interest protection (Tirole, 2001), mechanisms and processes by which corporations are governed (Macey, 1997), and "conflict of interest resolution between company stakeholders" (Damijan et al., 2004).

The five universal CG control mechanisms are: 1) Board of Directors (BOD), 2) legal protection of investors, 3) blockholders, 4) shareholder proxy fights, and 5) the takeover market (i.e. market for corporate control[14]). The six control measures of the NCG model are: 1) equal treatment of shareholders, 2) extensive individual shareholder rights

[14] In fully competitive product, labour and capital markets, managers are expected to act for the company's and especially the owners' benefit (e.g. Fama, 1970; 1991). However, since markets are not always competitive, owners need to make use of additional mechanisms to discipline managers to decrease agency problems. These mechanisms are *inter alia* managerial shareholdings, concentrated outside ownership, debt financing, outsider representation on the BOD, managerial labour market, and the market for corporate control (e.g. Fama, 1980; Jensen & Ruback, 1983; Grossman & Hart, 1988; Agrawal & Knoeber, 1996).

to participate in the Ordinary General Meeting (hereinafter OGM) and take legal action, 3) majority vote requirements, 4) minority powers to take action, 5) strict rules for related-party transactions, and 6) high degree of transparency (Lekvall, 2014).

3.2 The Agency Theory

Agency theory deals principally with means of aligning two parties' interests: the agent's with the principal's (e.g. Ross, 1973; Fama & Jensen, 1983a,b). Jensen and Meckling (1976) argued that if both parties to the relationship are utility maximisers, then the agent maximising their utility will not always act in the principal's best interests. In theory, the agent is expected to act according to the principal's best interest if, and only if, the interests or preferences of the two actors are identical, or the principal has complete information on the agent's decisions, along with all their consequences (Gravelle & Rees, 1992). In reality, a startup entrepreneur might use the investor's money for private consumption (e.g. Landström, 2017), a VC firm aiming to maximise its portfolio returns might push the entrepreneur to take more risks than they can financially bear (e.g. Falik et al., 2016), or large controlling shareholders might advance their private agenda (e.g. La Porta et al., 2002b).

The means for aligning the parties' interests differ. BAs aim to establish personal relationships with entrepreneur(s) by providing them with valuable, non-monetary resources, such as their personal networks and contacts (e.g. Politis, 2008). Through personal ties, they can reduce information asymmetry vis-à-vis the entrepreneur, in order to obtain more truthful information about the venture. VCs, on the other hand, might want to control the entrepreneur through rigorous agreements. They commonly stipulate strict contract terms and/or impose harsh covenants, in order to steer the entrepreneur's behaviour towards greater risk-taking (e.g. Cable & Shane, 1997). It is, however, doubtful whether this is morally acceptable, as the entrepreneur is involuntarily

pushed into risk-taking, and whether it leads to the best outcome.
In PLCs, stock options plans and/or company shares can be used to align the agent's activities with the principal's, especially if the company's ownership structure is fragmented (e.g. Fama, 1980). A stock option has a vesting period and an expiry date. The options provide the recipient with the right, but commonly not an obligation, to purchase shares in the target company at a pre-agreed price. Thus, the agent is made a residual claimant of the company's success and failure, which is expected to align their interests with other shareholders (e.g. Jensen & Meckling, 1976; Agrawal & Knoeber, 1996).

Jensen and Meckling (1976) argued that growing agent share-ownership aligns incentives to maximise company value. This is because the agent shares a greater cost of on-the-job consumption ("*convergence-of-interests*" hypothesis) with other shareholders (Morck et al., 1988). But company performance can improve with managerial ownership only up to a certain point, and, again due to on-the-job consumption, begins to decline once that ownership reaches a certain threshold and managers become entrenched (*"entrenchment"* hypothesis). Due to substantial equity ownership, and voting power, managers are no longer subject to market discipline, which guarantees them a future with the company at a high salary. They also know that other shareholders will share part of the cost of their private on-the-job consumption, which provides them a further incentive to consume.

There is a variety of principal agent relationships. In this dissertation, I examine relations between entrepreneurs and angel investors, VC firms and entrepreneurs, and majority and minority owners. The separation of ownership and control is expected to provide the best result in dispersedly owned companies (e.g. Fama & Jensen, 1983a). In those with a concentrated ownership structure, the separation of ownership might cause problems due to large controlling owners' private interests (e.g. Fama & Jensen, 1983b). Nevertheless, according to the NCG model, strong owners are accepted as they protect all shareholders'

interests, develop the company in the long-term, and reduce agency costs originating from managerial opportunism (e.g. Lekvall, 2014). Blockholders can signal to other investors, such as foreign and minority, that it is safe to invest in the company (e.g. Berglund & Westerholm, 2010), though large owners might also utilise their power and insight to endorse goals other than company value maximisation. Extracting undue private benefits from the company is not uncommon (e.g. La Porta et al., 1999a; Cronqvist & Nilsson, 2003; Lekvall, 2018). Stock illiquidity and dual class shares, for instance, make funds transfer possible from a voting-rights company to one where the investor holds cash-flow rights (e.g. Zingales, 1994). Fortunately, minority investors improve stock liquidity (Maug, 1998), and removing the dual class share structure makes funds transfer more difficult (Zingales, 1995).

Asymmetric information is information failure, present when one market participant possesses information that others do not (Bator, 1958). It is an imperfection that may lead to economic inefficiency (Stiglitz, 1989). There are two types of agency problem caused by asymmetric information, namely *adverse selection* and *moral hazard* (Amit et al., 1990). Adverse selection issues may arise *ex-ante* due to hidden information (e.g. Leland & Pyle, 1977), while moral hazard refers to hidden action *ex-post* (e.g. Lambert, 2001; Landström, 2017). The term moral hazard was originally coined in the 17th century and later used in the insurance industry (Dembe & Boden, 2000). Following Ross (1973), moral hazard is an *ex-post* problem that occurs when the private marginal cost falls below the marginal social cost of the same action, since someone else is covering part of that cost. For instance, an entrepreneur might utilise an investment for purposes other than those arranged with the investor. The parties may have agreed that the investment will be used for recruitment, sales and marketing, but the entrepreneur chooses to spend it on expensive travel, parties, and staying in luxurious hotels. Private consumption may provide the entrepreneur with more utility than following the investment plan, and the entrepreneur bears only a fraction of the cost. This type of behaviour

can ultimately lead to market gaps in entrepreneurial financing, if investors, having observed the behaviour more systematically, start avoiding investment in early-stage ventures.

The next section comprises a brief discussion on agency cost. Each article is then presented, followed by the articles' specific focus on agency problems.

3.2.1 Agency Costs

Agency costs are expected to be lowest in entrepreneurial ventures, where the entrepreneur owns all the shares, and highest among dispersedly owned firms, where on average the owner has no more than a fraction of the shares/votes, and the management is offered options or shares in the company (e.g. Jensen, 1986; Rebel et al., 2000).

Jensen and Meckling (1976) identified agency costs as the sum of 1) principals' monitoring expenditures, 2) agents' bonding expenditures, and 3) residual loss. Principal's monitoring expenditures included the measurement cost of compensation policies, budgets that restrict agents' deviant behaviour, operating rules, and other necessary measures (Jensen & Meckling, 1976). The bonding expenditures comprised agents' investments in reputation, auditing, and incentive contracts. The residual loss was borne in the model by the initial owner, the shareholder.

Paper I discusses the agency relationship between BAs and startup entrepreneurs, and the BANs who mediate the relationships. Due to asymmetric information, seed and startup investors have less information than the entrepreneurs on venture specificities (Lahti & Keinonen, 2016), especially in technological ventures (Landström, 2017). Entrepreneurs may want to hide negative information about their venture from the investor *ex-ante*. However, this gives rise to adverse selection, as investors learn from entrepreneurs' behaviour, and

refrain from investing in entrepreneurial ventures for fear of investing in a "lemon" (cf. Akerlof, 1970). Hidden action, on the other hand, gives rise to moral hazard (Landström, 2017). If the entrepreneur utilises the invested capital *ex-post* to take a very high salary, buy an expensive company car, or in other ways that were not agreed with the investor, problems of moral hazard are expected to arise. Both adverse selection and moral hazard originate from information asymmetries in entrepreneurial ventures (Lahti & Keinonen, 2016). BAN services, such as coaching, polishing business plans, and developing revenue models, are intended to reduce information asymmetries on the quality of entrepreneurial ventures (ibid.). However, some researchers have claimed that BAN services increase the risk of adverse selection by homogenising the business opportunities, which raises the valuation of poor opportunities (e.g. Knyphausen-Aufsess & Westphal, 2008). BAs aim to decrease information asymmetry, and hence agency problems, by building a close relationship with the entrepreneur and familiarising themselves with the venture in detail (e.g. DeClercq et al., 2006). Close relations are important for other reasons, too. As entrepreneurs may need further injections at a later date, they are expected to talk to the investors they already know. Thus, it is advisable for VCs to start building relationships with entrepreneurs at the seed and startup phases, otherwise they might miss out on the best opportunities.

Paper II is concerned with entrepreneurs who seek funding from VC firms, and the criteria they use in the selection process. For entrepreneurs, it is important to secure funding from the right kind of investors with the right skills, and whose interests are aligned with the entrepreneur from the outset (e.g. Sahlman, 1997). For investors, searching out new investment opportunities and monitoring entrepreneurial behaviour requires a more or less fixed amount of time, whatever the size of the investment (Landström, 2017). VCs look to appoint their own representative to the BOD, in order to influence decisions made in the firm, and to monitor their investment (ibid.). VC managers also aim to instruct the entrepreneur on how the firm should

be run from their standpoint. In this respect, they attempt to impose disciplinary covenants and punitive contract terms that in some cases can be interpreted as hostile from the entrepreneur's perspective (e.g. Lahti, 2014). These actions may be driven by portfolio risk management policy, and/or the fact that high-tech ventures must pay a higher risk premium. In this context, VC funds require a higher premium on invested capital, as high-tech firms typically have no collateral to compensate for the information asymmetries. In reality, VC managers advance their self-interest rather than collaborate, which leads them into disputes with entrepreneurs (e.g. Cable & Shane, 1997).

Unlike entrepreneurs, who have typically invested a substantial part of their net worth in one firm, VC firms can diversify their risk by investing in several ventures (Falik et al., 2016). Fund general managers also earn a fixed 1.5–3% management fee and 15–20% carry. They aim for very substantial exits, which require high risk-taking, as their model predicts that only one or two out of ten investments are extremely successful (e.g. Sahlman, 1990; Sapienza, 1994). Needless to say, high-value exits are also preferred due to higher carry (i.e. profit based revenue). All in all, VC managers may be inclined to push entrepreneurs into taking excessively high risks. This might increase the odds of a substantial exit, but the entrepreneur risks losing a large part of their personal assets through bankruptcy. If the VCs' and entrepreneur's interests and expectations on risk-taking and firm development are not aligned from the start, moral hazard problems are set in place (Falik et al., 2016).

Paper III discusses agency problems between large owners and minority shareholders. It tests empirically the relationship between ownership concentrations and firm performance, which consists of valuation and profitability. Valuation is measured by Tobin's Q, while return on assets (ROA) measures profitability. Large owners forgo the benefits of portfolio diversification to invest a significant share of their assets in a single company, so they are better incentivised to nurture their investment than are minority investors, who hold a diversified

portfolio (Schleifer & Vishny, 1986b). Blockholders who have invested a substantial amount of their capital in one company should also have an incentive to monitor, and mentor, the management in order to increase company value. Minority shareholders, on the other hand, suffer from other small shareholders' free-riding (Black, 1990), and cannot perform the monitoring function as efficiently as large owners (e.g. La Porta et al., 2002b). Blockholders' monitoring aims to reduce managerial opportunism and benefit all shareholders (e.g. Lekvall, 2018). There are, however, various types of blockholder. State owners might advance a strategic political agenda (Putniņš, 2015) or social peace (Roe, 2002), which may lead to a decrease in company value (Keinonen, 2021). Bethel et al. (1998) maintained that only active blockholders increase company value, while domestic blockholders are better equipped with information on domestic companies than are foreign investors, who suffer from home bias and asymmetric information (Cooper & Kaplanis, 1994; Lewis, 1999). The downside of having a controlling owner is that large domestic investors might utilise their position against minority shareholders and scare away potential foreign investors (Berglund & Westerholm, 2010). If foreign investors start expecting that domestic blockholders have a hidden agenda that is likely to disbenefit them, the market for foreign investors might suffer or even fail (Johnson et al., 2000). Thus, it is important to understand blockholders' motives and aim to prevent any misbehaviour that may have a negative effect on company value.

The common thread in the agency problems depicted above, regardless of company age or stage, is that one party to the relationship has private information, which is not visible to or shared with the others. If that party intends to misuse the information to the disadvantage of others, agency costs are likely to ensue.

The next section discusses the resource dependence perspective.

3.3 Resource Dependence Perspective

According to the resource dependence perspective, firms need specific skills and resources for each development stage, which they cannot produce themselves (e.g. Pfeffer & Salancik, 1978). Angel investors and VCs can provide advice to help entrepreneurs, especially in the early stages of firm development, on how, for instance, to avoid bankruptcy (Hillman, 2009). Experienced business angels and VCs are also capable of providing entrepreneurs with critical resources that can positively impact the firm's performance (e.g. Sapienza et al., 1996; Hellmann & Puri, 2000; Hillman & Daziel, 2003), and influence the venture's future success (Mason, 2006).

VCs are most valuable to entrepreneurs when they can reduce the venture's critical uncertainties (e.g. Pfeffer & Salancik, 1978), and provide it with resources (Mason & Harrison, 1999). Sapienza et al. (1996) has separated out and classified the three conditions under which VC firms can deliver value-added to ventures: when the venture's capacities fall short of its needs, when the venture is uncertain about its strategies and their implementation, and when the VC firm can provide a source of valuable information. VCs are, however, more constrained than BAs on investment policies, since they largely invest "other people's money" that has a minimum return target.

Bretherton and Chaston (2005) documented that when small and medium-sized firms (hereinafter SMEs) had access to scarce resources and capabilities, they clearly outperformed SMEs that lacked such resources. The outperformers were engaged in strategic alliances at various stages of the value chain, rather than forming only structural ties. A firm's acquisition of critical resources can lead to sustainable competitive advantage and over-performance in their industry (ibid.). As the Bretherton and Chaston (2005) study was conducted on a sample of SMEs, it may be inferred that also entrepreneurial ventures can benefit from similar procedures. However, SMEs differ from

entrepreneurial ventures in how they acquire finance, as investors in entrepreneurial ventures typically deal with greater information asymmetry (Cassar, 2004). Information asymmetries lead to higher financing costs, which have an impact on the firm's capital structure (ibid.).[15] Securing external long-term financing is important but difficult for small businesses, and it is therefore advisable to acquire funding when it is not badly needed but available. Pfeffer and Salancik (1978), and Sapienza et al. (1996), found that most skilled VCs are able to reduce firms' critical uncertainties. This underlines the fact that high valuation is not necessarily the most important criterion but who makes the investment (Sahlman, 1997). It can be argued that skilled board members, who have contacts amongst wealthy BAs, VCs or even for relationship lending, might accelerate the funding process (e.g. Berger & Udell, 2006; Avdeitchikova et al., 2008). Also, independent of firm size, having a set of skilled outsiders on the BOD with contacts amongst powerful societal actors is a value-increasing factor (Huse, 2018).

The next section presents a discussion on BAs and their importance to entrepreneurs.

3.4 Business Angels and Business Angel Networks

BAs commonly use their private assets to invest in startup ventures. Wetzel (1983) was among the first authors to point out that BAs play an important role in the high-tech venture sector, and provide probably the largest pool of risk capital for entrepreneurial firms. Angel investors were identified as middle-aged males with previous startup experience who made one "arm's length" investment per year (ibid.). Mason and Harrison (1999) later defined BAs as high net worth individuals, men

[15] See Ang (1991) for a more comprehensive discussion on small firm finance vs. larger firms. Relating to signalling effects of capital structure change, see Masulis (1980), Dann and Mikkelson (1984), and Eckbo (1986). Fama & French (1998) also provide results on how taxes affect financing decisions and firm value.

and women, who make equity investments in non-listed ventures in which they have no family relationships (cf. Landström, 2007). BAs invest mainly in startup ventures, and set lower performance standards than professional VCs (e.g. Freear et al., 1994; Avdeitchikova, et al., 2008; Politis, 2008). In addition to injecting a larger number of small amounts of less conditional capital, business angels' value lies in providing non-monetary resources such as business expertise, networks, industry-specific contacts, and a willingness to develop a firm to the next level (e.g. Ardichvili et al., 2002). More recently, Mason and Harrison (2008) defined BAs as "individuals, acting alone or in a formal or informal syndicate, who invest their own money directly in an unquoted business in which there is no family connection, and who after making the investment, takes an active role in the business, in the hope of financial gain". As explained earlier, this definition is used throughout the dissertation when referring to BAs.

BANs facilitate angels' investments in non-listed high-growth firms but do not invest as an entity *per se* (e.g. Knyphausen-Aufsess & Westphal, 2008). The prior research shows that for-profit, compared with not-for-profit, BANs provide BAs with more active screening and a wider range of services, also facilitating later-stage investments, and thereby earning their management fees (e.g. Mason & Harrison, 1997). Figure 4 below illustrates BANs activities.

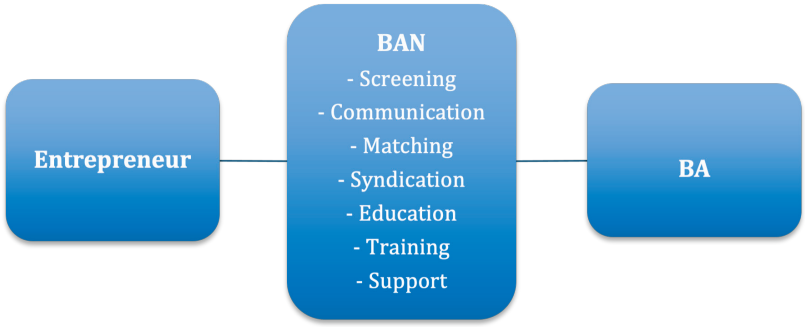

Figure 4 Active BANs as Financial Intermediaries between Entrepreneurs and BAs

Since high-tech startup ventures are difficult to assess, BANs provide services to reduce information asymmetries regarding venture quality (e.g. Lahti, 2014). BANs function also as "business tinder", helping entrepreneurs and investors find the right match and reduce search costs. "Angel portal" refers to various communication channels between investors and entrepreneurs (Sohl, 2007). Of these portals, European BANs make use of the digital matching networks, whereas informal angel groups and formal angel alliances are more popular in the US (Lahti & Keinonen, 2016). The three core functions of a matching network are to provide: 1) a matching database, 2) an investment forum, and 3) educational seminars (ibid.).

The next section provides a discussion on blockholders and their impact.

3.5 The Impact of Ownership on Firm Performance

Large owners can promote a positive (e.g. Oswald & Jahera, 1991) or negative (e.g. Cronqvist & Nilsson, 2003) effect on company performance, depending on their motive. If they are incapable of monitoring the management, executives might in the worst case deploy company assets (e.g. Demsetz, 1983; Belkaoui & Pavlik, 1992; Ang et al., 2000; Hartzell & Starks, 2003). Further, they need to be able match the company's latest resource needs and requirements (e.g. Barclay & Holderness, 1991).

Concentrated ownership structure has its benefits but it is contextual. An active blockholder should precipitate, for instance, reduced agency costs and lower company-specific risk (e.g. Coffee, 1991; Burkart et al., 1997b). Most importantly, large owners are incentivised to monitor and control the management on behalf of minority owners (Jensen & Meckling, 1976; Lekvall, 2014). Monitoring improves control, which decreases agency problems between owners and managers, and should add company value (e.g. Coase, 1937; Ross, 1973). Efficient monitoring also reduces managerial shirking, which can lead to increased investment value (Alchian & Demsetz, 1972). In nurturing their investment, strong owners can develop the company, engage in CG, and create long-term value for all shareholders (Lekvall, 2018).

A concentrated ownership structure enables large shareholders to coordinate their actions, and insist more efficiently than minority owners on the management's provision of information, which can reduce information disadvantage through the management (Berle & Means, 1932). Efficient managerial monitoring also alleviates agency problems between minority shareholders and the management (Shleifer & Vishny, 1986b). Increasing ownership concentration can provide incentives for outside blockholders to develop the value of their investment, due to lower asset diversification and higher company-specific risk (Denis et al., 1999). Increased company-specific risk forces

owners to guarantee that the management properly looks after their investment, otherwise the management will be replaced in the short-term (Barclay & Holderness, 1991).[16] In a diffusely owned company, it is disadvantageous for a single small shareholder to challenge the management on poor performance due to other shareholders' free riding (Black, 1990).

There are, however, reasons why large shareholders are not beneficial for the company. First and foremost, blockholders might have private interests that are not aligned with those of other owners (e.g. Cable & Shane, 1997; Pagano & Röell, 1998; Gomes, 2000; La Porta et al., 2002b; Maury & Pajuste, 2005; Lekvall, 2014). Advocating a private agenda at the minority owners' expense also renders the company less attractive to prospective foreign shareholders, who, compared with domestic investors, are disadvantaged by asymmetric information (Johnson et al., 2000; Berglund & Westerholm, 2010). The decisive factor is whether the controlling investor is active or passive, especially in disciplining the management for poor performance and unrelated diversification (Bethel et al., 1998). The identity of the largest owner is also important (e.g. Cubbin & Leech, 1983; McConnell & Servaes, 1990; Nickel et al., 1997).

Maury (2006) found that passive family control does not support company performance as well as active family members who exercise control. Burkart et al. (1997b) found that high ownership concentration is only beneficial from the minority owners' perspective, if the gains from managerial monitoring exceed the losses of managerial incentives. Controlling shareholders might have managerial ties that allow them to influence important decisions and exploit company assets for purposes other than value maximisation (La Porta et al.,

[16] However, Barclay and Holderness (1991) point out that sole ownership concentration does not contribute to firm value increase but blockholders' specific skills.

1999a; Cronqvist & Nilsson, 2003).[17] For example, dual-class share structures enable controlling owners to divert company assets from a voting-rights company to a cash-flow rights company (Zingales, 1994).[18] Claessens et al. (2002) found that consistent with the positive incentive effect, company value increases with the largest owner's cash flow ownership. However, the value starts to decrease as the control rights exceed the cash flow rights, which is consistent with the entrenchment effect.[19] Expropriation risk is a problem in many countries, which might be due to the low quality of a banking system, legal and judicial protection of individual shareholders, and the degree of financial disclosure requirements (ibid.). The dual-class problem can be avoided by allowing only one share class with equal voting rights (Zingales, 1995).[20] Finally, blockholder type plays an important role. For example, a state owner might promote social peace (Roe, 2002), a strategic industrial agenda, or political goals (Putniņš, 2015), which may be detrimental to company value (Keinonen, 2021).

In sum, ownership structure matters. Large shareholders may contribute positively to company value, if they perform the monitoring and control function on behalf of other shareholders, and bring valuable resources to the company (e.g. McConnell & Servaes, 1990). However, there is a risk that certain blockholders may reward themselves for the monitoring role by extracting undue private rents from the company, which are not shared with other investors (e.g. Burkart & Panunzi, 2005).

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[17] Morck et al. (1988) found an inverse U-shaped relationship between managerial and equity ownership. Thus, company performance first increases with managerial ownership but starts to decrease beyond a certain threshold as managers become entrenched.

[18] Rents can be either pecuniary or non-pecuniary (see e.g. Demsetz & Lehn, 1985; Gilson 2006).

[19] De Miguel et al. (2004) found evidence of both monitoring and expropriation by the large owners.

[20] Interestingly, dual class shares are strongly recommended by the EU (Becht & Röell, 1999), and entrepreneurs would like to have two different securities, one with dividend rights and no votes, and vice versa (Milton & Raviv, 1988).

For example, a state owner does not necessarily maximise company value, as stipulated by the Finnish Limited Liability Companies Act (LLCA) 624/2006, but may, instead, advance a government's political goals or leave the management uncontrolled.

Chapter 4 presents this study's data and methods.

4 DATA AND METHODS

Table 3 describes the data sets and research methods used in each research paper. The papers provide a normative view of their subject matter.

Table 3 Research Methods of the papers

Study	Type	Sample	Main variables	Data analysis
Paper I	Descriptive research; extant research and materials assessment	n=3998	BANs, countries, business angels	Descriptive statistics with SPSS 21
Paper II	Quantitative; interview data	n=144	Startup experience, importance of network access and reputation	Ordered Logit regression with STATA 11.2
Paper III	Quantitative; longitudinal panel data	n=714	Ownership of the largest owner, Tobin's Q, ROA	OLS regression with STATA 11.2

Paper I is a descriptive study providing comparative statistics on BANs in Europe and in the US from 1999–2013. The data were drawn directly from the European Business Angel Network (henceforth EBAN), which is the main BAN organisation and responsible for collecting data from other BANs. Thus the data are expected to be non-biased. We employed standard statistical software (SPSS) to calculate the descriptive statistics.

Paper II utilises survey data, which were gathered from Israeli entrepreneurial associations and societies during the summer and autumn of 2012. We employed Ordered Logit regression in the analysis, as the independent variable is an ordinal distributed into three groups. We regressed the independent variable *startup experience* against two dependent variables, *importance entrepreneurs attach to*

valuation and *importance entrepreneurs attach to contractual terms offered by a VC*. The paper also utilises two moderating variables: *the importance entrepreneurs attach to access to VC firm's network*, and *the importance entrepreneurs attach to a VC firm's reputation*. The three control variables are *entrepreneurs' experience in approaching VC firms for funding, stage of development of the venture*, and *size of investment*.

Paper III analyses the relationship between ownership concentration and firm performance. It employs longitudinal balanced panel data from Finnish PLCs and their respective owners, comprising cross-sectional and time-series observations. Four distinctive ownership definitions are regressed against the dependent variables *profitability* (ROA) and *valuation* (Tobin's Q). The control variables are *beta coefficient*, *dividend payout ratio*, *price volatility*, *capital turnover*, *leverage*, and *size*. Dummy variables are used in the regressions to control for year, industry, economic cycles, and investor identity effects. ROE and ROTC are used in robustness checks of profitability (ROA).

The research context, data collection, and methodology employed in the studies are now presented in more detail.

4.1 Research Context

This research focuses on agency problems in three different stages of business evolution. Contextually, the focus of the first two papers is on nascent, novice and serial entrepreneurs, as well as BAs, BANs, and VCs, respectively. The business stages examined in papers I and II range from seed to later-stage, that is, from startups to scaleups, whereas Paper III focuses on PLCs. The research design is not longitudinal but studies agency problems in three independent settings.

4.2 Data Collection and Measures

The data for Paper I were drawn directly from the BAN roof organisation, EBAN, in 2014. Together with associate professor Tom Lahti at Hanken School of Economics, we contacted the founder of the Finnish BAN, FiBAN, Mr. Ari Korhonen, who introduced us to Mr. Luis Galveias and his EBAN office manager Mr. Pablo Garrido, from whom we received the complete data set. The EBAN data cover all BANs in Europe for the period 1999–2013, and are expected to be non-biased. EBAN represents the interests of European BANs, many of which form its membership (Lahti & Keinonen, 2016). The data were used to depict descriptive statistics of BANs in Europe and the US and their activities.

The data for Paper II were gathered manually, directly from Israeli entrepreneurs at a number of entrepreneurial events in Israel during the year 2012. To meet the criteria, entrepreneurs needed either to have applied for VC funding within the past two years or be in the process of applying. The questions were mostly adopted from earlier research, with some minor scale modifications (e.g. Smith, 2001; Valliere & Peterson, 2007). Prior to gathering the data, a pre-questionnaire was tested on two Israeli entrepreneurs who had secured VC funding. Based on their feedback, we improved the questionnaire's wording. In order to ensure that the respondents understood the questions correctly, they were formulated in both English and Hebrew. The questionnaire comprised two separate question sets: *characteristics* (entrepreneurs, their ventures, amount of VC funding to be applied for), and *investment criteria* (the criteria entrepreneurs considered in the funding application process). The dependent variables *importance attached to valuation when selecting a VC* and *importance attached to contractual terms offered by a VC*, were used in direct analogy to Smith (2001), and Valliere and Peterson (2007). Hence, we employed a five-point Likert scale ranging from one (not important) to five (very important). The independent variable *startup experience* is an ordinal variable, which is a modified version of Valliere and Peterson (2007).

We divided entrepreneurial experience into three groups, namely, nascent, novice and serial. Experience was divided thus, whether or not the entrepreneur owned a firm (no=0, one firm=1, more than one=2). Nascent entrepreneurs were coded as 0, novice as 1, and serial as 2. The moderating variables *importance entrepreneurs attach to access to a VC firm's network* and *importance entrepreneurs attach to VC firm's reputation* were measured using the same Likert scale as for the dependent variables.

Following Lahti (2014), it was important to control for whether entrepreneurs have experience of dealing with VCs' investment processes. Hence, we used *entrepreneurs' experience in approaching VC firms for funding* (no=0, yes=1, more than once=2) as the control variable. Since the selection criteria are dynamic over time (e.g. Smith, 2001; Valliere & Peterson, 2007), the second control variable *stage of development of the venture* was divided into five stages: seed, launch, rapid growth, expansion, and maturity. The third control variable, *size of investment*, was included as it was likely that firm size would influence investment criteria, especially on valuation. The data were gathered by participating in various entrepreneurial events in Israel, organized by bodies such as the Israeli High-Tech Association (IHTA), TechAviv, Tel Aviv University (TAU), and IDC Elevator. All the organisers are reputable actors in their specific field. Out of 626 event participants from five funding events, we received a total of 163 responses, of which six were excluded due to missing data. Finally, we removed 13 responses, as they did not fit our selection criteria. Hence, we had 144 completed questionnaires. During 2011–2012, a total of 509 VC deals materialised in Israel. Our final population of 144 interviews is a fair representation of those who acquired VC funding during the two-year period.

The data for Paper III, analysing the largest owners' impact on firm performance, were gathered from two sources. The first data set, covering ownership (i.e. single largest owner percentage, and three

largest owners' percentages), was manually collected from *Pörssitieto*, a Finnish yearbook, which itself relies on data from the Finnish Central Securities Depository (Ltd). Additionally, each company's personal ownership register, and individual company yearbook (where available) was included. The full data set covers a six-year period 2001–2006 for all OMX Helsinki listed companies with 177 annual observations. As the goal of the paper was to focus on the impact of ownership structure, it was important to eliminate any potential market disturbances that could have been inherited in the data. Thus, the time series was chosen so that it provides observations unaffected by economic crises during stable economic growth. Banks and insurance companies were omitted from this sample due to their non-comparable valuation ratios in accordance with earlier ownership research (e.g. Maury & Pajuste, 2005; Maury, 2006; Ekholm & Maury, 2014). Companies with incomplete data sets also were truncated. Hence, the final data set resulted in 119 annual yearly observations. The second data set on firm performance, as well as the control variables, was obtained from FactSet Europe Ltd[21]. The investor category classification data were drawn from both *Pörssitieto* and FactSet.

4.3 Methodology

Paper I adopts the descriptive research method employing data from EBAN. It utilises the extant research in assessing BANs socioeconomic contributions, and provides an overview of BANs in Europe and the US. We use basic descriptive statistics to illustrate the central tendencies of BANs in Europe: number of extant BANs 1999–2013, number of BANs as a percentage of number of business angels, and sources of income for BANs and their services by percentage. SPSS software (version 21) was employed in calculating the descriptive statistics.

Paper II tests multiple hypotheses on Israeli interview data, with Ordered

[21] http://www.factset.com/.

Logit models employing STATA software (version 11.2). The dependent variables (five-point Likert scale), *the importance entrepreneurs attach to valuation when selecting a VC firm* and *the importance entrepreneurs attach to contractual terms offered by a VC firm*, are regressed against the independent variable *startup experience* (ordinal variable). Ordered Logit regression is employed as the independent variable is an ordinal variable and distributed into three groups. We also employ two moderating variables, *importance entrepreneurs attach to access to VC firm's network* and *the importance entrepreneurs attach to access to VC firm's reputation*, using the five-point Likert scale. The three control variables are: *entrepreneurs' experience in approaching VC firms for funding*, *stage of development of the venture*, and *size of investment*. The controls are coded as 0=no, 1=once, and 2=more than once. We also include two interaction terms in the model: *startup experience* multiplied by *importance of network access*, and *startup experience* multiplied by *importance of VC reputation*. In the first model, we regress the dependent variable (*importance attached to valuation*) against the control variables. In the second regression model, we bring in the two moderating variables. In the third model, we add in the independent variable *startup experience* with all the aforesaid variables. Our fourth model includes the independent variable, two moderators, three controls, and two interaction terms. The regression models are then repeated with the dependent variable *importance attached to contractual terms*. In addition, we plot the interaction effect *importance of access to a VC firm's network* with *startup experience* on the probability of little importance (=2) and very important (=5), that is, the entrepreneur's evaluation of the *importance of valuation in the selection of a VC*. Next, we plot *importance of a VC firm's reputation*, repeating the aforementioned procedure with probabilities. Finally, we use contractual terms in the probabilities plot and repeat the regression models.

Paper III employs longitudinal balanced panel data from 2001–2006, comprising 714 cross-sectional and time-series observations

of Finnish PLCs during a period of economic stability.[22] The paper utilises Ordinary Least Squares regression (OLS) in establishing a linear relationship between the explained and explanatory variables. STATA software (version 11.2) is used in the regression runs, as it is well-suited to analysing large panel data, and routinely tests normality, heteroscedasticity, and multicollinearity.[23] Firm fixed-effects were not used to estimate the regressions in reducing endogeneity problems (e.g. Fahlenbrach & Stulz, 2009), since fixed-effects models are better suited for dynamic data sets. Two hypotheses were developed using the agency theory and the NCG model, and subsequently tested. The first hypothesis tests whether increasing ownership has a negative relationship with Tobin's Q and ROA, due to large owners' private benefits of control. The second tests whether the impact of Tobin's Q is negative due to (increasing) state ownership. The second hypothesis posits that the state owner may promote political goals instead of maximising company value. Dummy variables are employed to control for size, industry sector, and economic cycle effects. Tobin's Q measures valuation, whereas ROA measures profitability. Return on equity (ROE), and return on average total capital (ROTC), are employed in the robustness checks. An interaction term regression model is employed in examining whether state ownership has an impact on Tobin's Q.

Chapter 5 presents a summary of the three research papers, which form the backbone of this dissertation.

[22] A potential problem with balanced panel data is survivorship bias. See e.g. Grinblatt and Titman (1989), or Brown et al. (1992), regarding survivorship bias and mutual fund performance.

[23] Normality is detected from the residual plots, which need to be normally distributed in order for the t-tests to be valid. Heteroskedasticity refers to non-constant error variance. Multicollinearity denotes correlation between the independent variables (Gujarati, 2003).

5 SUMMARY OF RESEARCH PAPERS

The focus of Paper I is on BANs in Europe. We employ data from EBAN to illustrate the value of BANs to entrepreneurs and society among seed and startup stage ventures. Paper II investigates Israeli entrepreneurs who are in the process of applying for or have received VC funding. Paper III analyses the relationship between ownership concentration and firm performance in Finland during a period of economic stability. We derive the hypotheses from agency theory and the NCG model. All three papers disentangle agency problems from different angles and settings. We encounter problems of adverse selection and moral hazard that arise from information asymmetries. Agency theory, the NCG model, and resource dependence perspective are used as theoretical frameworks of the papers.

5.1 Paper I: Business angel networks: a review and assessment of their value to entrepreneurship

Paper I aims to provide an overview of European and US BANs, as well as their benefits and drawbacks for entrepreneurs and society, employing data from EBAN. BANs' goal is to connect business angels (BAs) and entrepreneurs, and eliminate information asymmetries between them. Angel investors are defined as individuals who invest their private assets, acting alone or in a formal or informal syndicate, directly in unlisted ventures in which they have no family ties, and take an active role in the firm (Mason & Harrison, 1997; Mason & Harrison, 2008; Mason, 2009; Lahti & Keinonen, 2016). These investors also provide a network of contacts and experience, which accelerate the ventures' business advancement (e.g. Politis, 2008; Avdeitchikova et al., 2008).

The first BANs were established in 1979 in the US and the early 1990s in Europe (Sohl, 1999; Mason, 2009). BANs' core function is

to provide an *angel portal*[24] consisting of channels for entrepreneurs and angels to meet and facilitate the investment process (Sohl, 2007; Knyphausen-Aufsess & Westphal, 2008). Unlike in the US, European BANs assist angel investors through a *matching network* database, where entrepreneurs can put their business plans to investors based on certain screening criteria (Sohl, 1999). Due to some institutional reasons that limit the supply of angels, and the Securities Act that prevents BAN managers from actively helping investors, BANs function more easily in Europe than in the US (Wetzel, 1987; Acs & Tarpley, 1998; Sohl, 1999).

In Europe, BANs provide a forum for ventures' presentations and members' education. They can improve ventures' investment readiness directly or via their advisory services. The advisory services range from making business plans and coaching for sales pitches to improving revenue models (Lahti, 2014). BANs also assist potential and less experienced investors, for example by providing model contracts, which improve the market for angel capital (Christensen, 2011). Overall, these activities not only help to reduce information asymmetries between investors and entrepreneurs, but also to raise societal awareness of angel investing (Lahti, 2014). Profit oriented BANs provide more active screening and broader support services than not-for-profit BANs. They also facilitate investments from later-stage to management buyouts, looking to earn higher success fees (Mason & Harrison, 1997).

Public sector support has had a positive impact on BANs' size (Mason, 2009). They have grown larger in Finland, Spain and France, but shrunk in the UK, Germany, Sweden and Norway during 1999–2013. Since 2007, new BANs have been established in Serbia, Croatia, Cyprus, Romania, and the Ukraine, the total number being 468 in 2013 (EBAN, 2014b). Newly established BANs aim to co-operate actively

[24] The six angel portals are: matching networks, facilitators, informal angel groups, formal angel alliances, electronic networks, and collection of individual investors (Sohl, 2007).

with internationally experienced BANs to learn their best practices. Established in 2012, Estonian BAN (EstBAN) has been the most active collaborator with both Finland (FiBAN) and Russia (SOBA), facilitating more than 80 ventures' funding in 24 months.

Regarding BANs' Key Performance Indicators (KPIs), the focus is on hands-on doing. It is more important that BANs teach entrepreneurs how to tell a convincing story than to measure BANs' deal flow size, invested capital or matches found (Mason & Harrison, 2004). Consequently, when measuring BAN performance, investment readiness services should be used as the main KPI (Mason & Harrison, 2010). BANs' value lies in helping young, innovative startup companies secure funding (Collewaert et al., 2010). Some authors maintain that publicly supported BANs do not compete with private BANs, as the commercial BANs are solving the second equity gap problem between seed and VC stages (Mason & Harrison, 1997; Mason & Harrison, 2002). Direct socioeconomic effects of BAN-backed firms are: positive net job creation, value-added government spending, and public improvements in sector cost-efficiency. Indirectly, BANs also provide hands-on involvement in training, standardising documents, and deal flow screening for their angel investor members, as well as investment readiness training for the entrepreneurs (Christensen, 2011). The negative critique of public sector intervention, compared to commercial BANs, goes to BANs' managerial competencies, screening abilities, services to angels, and overly comprehensive contracts, which together create a risk of adverse selection (e.g. Van Osnabrugge, 2000; Knyphausen-Aufsess & Westphal, 2008). In assessing whether or not to support BANs through public funding, a country's angel investor market should first be critically evaluated. If the market is underdeveloped, the use of public funding to build awareness of angel investing is warranted. Measuring the quality of BANs' services provides a good proxy to assess angel investor market development.

5.2 Paper II: Does startup experience matter? Venture capital selection criteria among Israeli entrepreneurs

Paper II empirically examines scaleup entrepreneurs' VC selection criteria. There is a vast array of research on how VC firms select their investments and organise their decision-making processes (e.g. Macmillan et al., 1985; Hirsch & Jankowicz, 1990; Zachakis & Meyer, 1998; De Leon & Guild, 2003; Cope et al., 2004). However, there is considerably less research on entrepreneurs' preferences related to VC firm selection. This paper fills that research gap using Israeli data, where the VC market has since the 1990s developed into one of the most dynamic tech clusters outside the US.

How an entrepreneur selects a VC depends on several criteria, and the history of the VC industry in a particular country has an impact on these. Using data from the US, Smith (2001) defined entrepreneurs' criteria on the selection of a VC as valuation, value-added services, VC firm reputation, and VC firm characteristic (e.g. industry specialisation). These criteria are related in part to the entrepreneur's experience, as well as the VC firm's life cycle (ibid.). Valliere and Peterson (2007) found that less experienced entrepreneurs are more concerned about getting a high valuation, good investment terms, and conditions, but from the VCs' perspective a lack of entrepreneurial experience has a negative influence on these criteria (Macmillan et al., 1985).

Moral hazard problems may occur post investment, as VC firm managers encourage less experienced entrepreneurs to increase their venture's risk level. More experienced entrepreneurs are aware of this, and consequently look for the right VC match as opposed to high valuation. Experienced entrepreneurs also know they can turn down VC offerings more easily, or even make VC firms compete to invest in their firm (see e.g. Amit et al., 1990). Seasoned entrepreneurs benefit less from VC reputation, which has an impact on contractual terms.

Given the aforementioned, we distinguish between two selection criteria that are important to entrepreneurs based on their previous experience: 1) resource related (VC contact network and VC reputation), and 2) deal conditions (valuation and contractual terms). According to agency theory and the resource-dependence perspective, there is a trade-off between these criteria. Less experienced entrepreneurs, who look for access to a reputable VC network, need to abandon hope of a higher valuation and better contractual terms. Hence, we expected VC reputation to compensate for valuation and contractual terms among less experienced entrepreneurs, whereas seasoned entrepreneurs do not necessarily benefit from VC reputation, and do not need to make concessions. For the same reason, VC reputation was not assumed to moderate contractual terms to the same extent in our empirical analysis. Experienced VCs know their value and will not invest unless there is sufficient compensation for them, in terms of lower valuation and stringent contractual terms. Less experienced entrepreneurs know they must accept a lower valuation and strict covenants, if they aim to attract a reputable investor (e.g. Kaplan et al., 2007). According to the agency theory, the parties signal their qualities to each other, and, hence, decrease the risk of adverse selection (e.g. Lange et al., 2001; Hsu, 2004). *Asymmetric information* gives rise to adverse selection, if an entrepreneur selects an unqualified VC firm based on insufficient information (ibid.). From the resource dependence perspective, reputable VC firms can compensate for entrepreneurs' lack of experience. For example, an entrepreneur may have an excellent business idea but little know-how on how to scale it. VCs can provide expertise and contact networks to help the entrepreneur scale the business internationally.

Israel has a long tradition of government supporting VC market development, cooperation between Israeli and US firms, and in R&D activities (e.g. Ber, 2002; Breznitz, 2007; Engel & Del-Palacio, 2011). Through the Yozma (Hebrew for "initiative") programme, started in 1993, the Israeli government invested $100 million over three years

in nine VC firms, which the private sector matched with $150 million (Jeng & Wells, 2000). This has set the pace for future investments and successful exits in the country (Isenberg, 2011). Also, legislative changes, including tax-free investments for foreign VC firms and individual investors, have created a healthy and liquid stock market backed by foreign capital (Jeng & Wells, 2000). Finally, bilateral contacts with US startup ecosystems have accelerated Israeli firms' internationalisation (Friedman, 2008).

In line with the hypotheses of Paper II, and the theory, we find that startup experience has a negative relation with the importance entrepreneurs attach to valuation, and that VC firm network and reputation moderate this relationship. The importance attached to VC firm network moderates the relationship between startup experience and contractual terms. Thus, less experienced entrepreneurs are more concerned about firm valuation, but are willing to downgrade to some degree, if the VC can provide a contact network. If the VC firm is less reputable, valuation seems to carry more weight in VC selection, especially among more experienced entrepreneurs.

5.3 Paper III: Blockholders and Firm Performance within the Nordic Corporate Governance Model: Finnish Evidence

The research on controlling owners has concentrated on employing US (e.g. Barclay & Holderness, 1991; Claessens et al., 2002), international (La Porta et al., 1998; La Porta et al., 2000b; La Porta et al., 2002b), European (e.g. Becht & Röell, 1999; Thomsen & Pedersen, 2000), and Swedish data (e.g. Cronqvist & Nilsson; 2003). However, the research on blockholders, adopting the NCG model perspective, has been more limited. The goal of Paper III is to investigate empirically the impact of ownership concentration on firm performance in the Nordics. We use agency theory and the NCG model in deriving the hypotheses. According to the extant CG research, the largest owners are incentivised

to perform the managerial monitoring and control function (e.g. Coase, 1937) to suppress the agency costs between owners and managers (e.g. Ross, 1973; Schleifer & Vishny, 1986b). Since blockholders often suffer from low asset diversification, they have higher company-specific risk and an incentive to discipline the management, if their investment is not properly employed (e.g. Alchian & Demsetz, 1972; Barclay & Holderness, 1991; Denis et al., 1999).

There is a difference between active and passive owners. Active owners create value (e.g. Coffee, 1991; Burkart et al., 1997b; Bethel et al., 1998; Maury, 2006), and active institutional owners reduce agency problems (Hartzell & Starks, 2003). According to the NCG model, large owners control and take long-term responsibility for the company on behalf of the minority owners. By watching over their investment, they in fact create value for all shareholders in the long-term (Lekvall, 2018). Notwithstanding the advantages, the risk attached to the model is that blockholders might extract undue private benefits from the company, which can lead to a negative impact on firm performance (Gomes, 2000; La Porta et al., 2002b; Cronqvist & Nilsson, 2003; Maury & Pajuste, 2005; Lekvall, 2014). Large owners might have other goals than company value maximisation, which may negatively influence company valuation itself (e.g. Gilson, 2006). In particular, a state owner might promote social peace (Roe, 2002), a government's strategic industrial political agenda (Putniņš, 2015), or political goals *per se* (Hart et al., 1997).

We find that ownership concentration is negatively related to Tobin's Q. Employing multiple ownership concentration and performance definitions corroborates this result. The relationship holds even after controlling for company size, riskiness, and leverage. A state owner is always negative and significant in the regressions against Tobin's Q, and the interaction term regression model confirms this result. The result, in turn, confirms the risk of the NCG model that a large owner may extract private benefits from the company at other shareholders'

expense. Overall, the results indicate that firm value is a function of ownership structure, and ownership concentration is negatively related to Tobin's Q during a period of economic stability. In particular, this result might owe to state ownership. The results of the paper should, however, be viewed in the Nordic context, and not applied universally.

Chapter 6 provides the discussion, contributions and conclusions.

6 DISCUSSION: AGENCY PROBLEMS IN ENTREPRENEURIAL VENTURES ANDPUBLICLY LISTED COMPANIES

This chapter describes the limitations, reliability and validity of the papers, and briefly comments on the limitations of the agency theory, which is the central theory of this research. Next, the contributions of each paper are presented, followed by a reflection on the overall contribution of the dissertation. Subsequently, each manuscript's agency problems are presented, and the possibility of mitigating them discussed. The final section points to the practical implications of the study, and avenues for future research. The aim of the papers is illustrated in Table 4 below.

Table 4 Aim of the research papers

	Paper I	**Paper II**	**Paper III**
Title	Business angel networks (BANs): a review and assessment of their value to entrepreneurship	Does startup experience matter? Venture capital selection criteria among Israeli entrepreneurs	Blockholders and Firm Performance within the Nordic Corporate Gover-nance Model: Finnish Evidence
Aim of the paper	To review BANs and their value to entrepreneurs, investors and society. Identify potential agency problems between entrepreneurs and BAs.	To evidence the criteria that Israeli entrepreneurs employ in choosing a venture capital (VC) firm. To identify potential agency problems between entrepreneurs and VCs.	To evidence that certain strong owners have a negative impact on PLCs' valuation in Finland. Use the NCG model to understand agency problems between minority owners and blockholders.
Stage*	Pre-seed and seed; startup	Early stage and later stage; scaleup	Publicly listed company (PLC)

') Adapting Sohl (2003, pp. 7).

6.1 Limitations, reliability and validity

Paper I is a descriptive study of BANs in Europe and the US. We assume that the data are non-biased as they were provided by the BAN roof organisation EBAN, which collects the data directly from national BANs in a similar fashion as e.g. the World Bank collects data from its country management units.

Paper II relies on self-reported survey data from questionnaires and interviews. This type of data has its limitations, as criticised by Shepherd and Zacharakis (1999), since the respondents are not always truly introspective in their replies, nor can they recall everything from memory. Hence, there might be some bias that skews the data. To resolve this in the survey, we focused on asking the respondent about their latest investment or on-going activities. This procedure significantly reduces bias.

Second, our study might suffer from success bias, as entrepreneurs who receive negative responses from VCs are expected to be less willing to provide answers on the importance of valuation, and to questions about contractual terms. Hence, the importance entrepreneurs attach to valuation and contractual terms is expected to be slightly higher, due to some missing values from those respondents. However, we considered that to be marginal and that it would not affect the end results significantly, as it concerned a very small subgroup of the respondents.

Third, since we collected the responses from various forums that were open to the public, our respondents, who were members of various entrepreneurial associations, were more likely to be active and have more connections than the average entrepreneur. They likely had better connections to VCs than did non-members, which manifests as less value attached to access to a VC firm network, and would affect the ratings provided in the questionnaire. Hence, we should have asked

whether or not the respondent was a member of a society or association. Since members are better connected, they would be expected to be less dependent than non-members on VC networks, which should have been controlled for in the regressions.

Finally, as our data were gathered from entrepreneurial events, it is reasonable to assume that the sample would comprise mostly novice and/or nascent entrepreneurs, and early-stage ventures. This was considered in our analysis and the generalizability of the results. Further, we gave the respondents the opportunity to answer in both Hebrew and English language to reduce language bias. The questionnaires were pre-tested on a small subgroup with experience of raising VC financing to verify that the respondents understood the questions correctly. From a total of 626 event participants, we obtained 163 responses. From this group we eliminated six responses due to missing values, and 13 respondents, as they did not fit our selection criteria. Hence, we obtained 144 completed questionnaires.

As mentioned earlier, regarding methods, we used Ordered Logit regression, since the independent variable, startup experience, is an ordinal variable and distributed into three groups. The dependent variables were measured on a five-point Likert scale, in direct analogy to Smith (2001), and Valliere and Peterson (2007). Also, our study made use of three control variables, two moderating variables, and two interaction terms in the analysis, which adds robustness to the analysis.

In writing Paper III, four issues stood out. First, the well-documented endogeneity problem, since ownership, investment opportunities, and company value may be jointly determined (e.g. Demsetz & Villalonga, 2001). This problem can, however, be resolved by instrumenting the ownership variable, or using the event-study methodology. The Granger causality test also provides a good basis for event-study investigation. Unfortunately, I could not find a proper instrument for ownership,

and the ownership data are not dynamic and sufficiently extensive to employ firm fixed-effects regression.

The second possible issue is survivorship bias, which can plague many studies (e.g. Blake et al., 1993; Elton et al., 1996; Lemmon & Lins, 2003). Survivorship bias might be inherited in the sample due to balanced panel data. It refers to the tendency for failed companies to be excluded from the sample because they no longer exist. Only surviving companies remain at the end of the period, which may skew the central tendencies of the data. It is therefore recommended that the study be replicated using a different time period to see whether the results hold.

Third, there were extremely large and small values in the data, which is both inevitable and typical when drawing on the Finnish market. The data could have been capped at the 95th and 5th percentiles to reduce the extreme values, but the procedure also removes important information on the central tendencies of the data. Further, it would have reduced the sample size and led to less robust estimates, or made it harder to reject the zero hypotheses. The data were truncated and analysed. However, the changes in the results were trifling. Furthermore, a logarithm was taken of the assets to normalise the variability in company size. Control variables, industry, and year effect dummies were also used in the analysis, which should reduce the probability of false conclusions based on abnormal observations. Hence, the presence of these data would not have a significant impact on the conclusions.

Finally, caution must be exercised over the choice of data and variables. Finnish data are small compared, for instance, with US data, and Finland is a border market characterised by stock market illiquidity and volatility. The time period was, however, chosen to depict stable economic growth, providing observations unaffected by crises. The period before 2001 was volatile, and after 2007 dominated by the financial crisis of 2008–2010 and slow economic growth thereafter. As several regression models were used in the analysis, providing

identical outcomes, the results can be said to be robust. This paper did not apply share prices as a performance measure, since they contain all publicly available information, and should be analysed only in an event study where the impact of ownership change is examined.[25] The control variables were chosen in the expectation that they would impact the results but not be part of the investigated hypothesis. Severe multicollinearity was not present, since the correlation coefficients of the explanatory variables were systematically below 0.8, and the VIF values were below 2. The T-test values were based on robust standard errors.

This study applies the resource dependence perspective to complement some of the shortcomings of the agency theory, specifically its limitations of too narrow assumptions and failure to account for organisational complexity. Including various stages of business development in the analysis and considering agency problems from different perspectives also complements some of these limitations. Another approach to agency theory is suggested by Lambert (2001). In that setup, the principal-agent conflict arises from the agent's shirking activities or diverting the principals' resources for private consumption. Lambert's theory also takes into consideration actors' differing time horizons and differential risk aversions.

6.2 Contributions of individual papers

This dissertation examines agency problems in startups, scaleups and PLCs, and possibilities to prevent them. The aim is to provide answers to the general research question: *What are the agency problems among entrepreneurial ventures and publicly listed companies? Are these problems similar in nature, and can these problems be prevented or cured?* As discussed earlier, two types of agency problem can be identified, namely adverse selection and moral hazard. The

[25] This is an old measurement technique. See for new information e.g. Fama et al. (1969) on stock price adjustment.

papers have been written to provide answers to the specific questions advanced in the research, while touching on the general topic of this dissertation.

Paper I presents a review and assessment of BANs and their value to entrepreneurship. It adopts the descriptive research method to provide statistics on data drawn from EBAN, and a discussion based on the extant BA research. The paper contributes to this dissertation by discussing the relationships between business angels and entrepreneurs, and the value of BANs' activities to entrepreneurs, investors, and the society within which they operate.

The main contribution of the paper is its emphasis on the importance of BAN services in reducing information asymmetries regarding the quality of investment opportunities. It is more important for BANs to learn to educate entrepreneurs on how to tell a convincing and truthful story about their business opportunity, than simply to rely on traditional measures of BAN performance, such as invested capital, matches found or deal flow size. The paper also shows that BAN activities help to raise societal awareness of angel investing, which is important as having more business angels helps to bridge equity gaps in the startup market, as observed by e.g. Sohl (2003). The paper points out that BAN services need to be at an adequate level to avoid the risk of adverse selection of entrepreneurial ventures. In this respect, BAN managers should be trained to evaluate investment opportunities better, especially if there is a high level of innovative projects. The implication for the public sector is that where governments consider supporting and investing in BAN activities, they need to ensure they are enhancing the quality of BAN services, even in more developed angel investor markets. More advanced activities support in reducing agency problems between entrepreneurs and investors, producing better quality investments that create innovation, jobs and growth.

Paper II looks to understand the selection criteria Israeli entrepreneurs employ on selecting a VC firm. The results show that startup experience is decisive in terms of the importance entrepreneurs attach to valuation and contractual terms. Less experienced entrepreneurs are more vulnerable to VCs' moral hazard and adverse selection problems than seasoned entrepreneurs, who are better equipped with entrepreneurial experience, confidence and understanding of VC firms' terms and conditions. Also, more experienced entrepreneurs do not need to accept poor contract terms to compensate for VC reputation, since reputation does not benefit them as much as it does novice entrepreneurs.

Novice entrepreneurs are more concerned than their experienced counterparts about firm valuation. They also lack business network and external resources. Hence, their startup ecosystems need more services that support network and resource building. Less experienced entrepreneurs have to compensate VC firms in terms of valuation to attract a reputable investor and, thus, must sacrifice more equity. This lowers the entrepreneur's motivation in the medium-term but also reduces total funding, forcing them into additional financing rounds. Further, they have to pass more control to VC firm managers by accepting contract terms that protect the VCs from entrepreneurial uncertainty, which can lead to VC managers' moral hazard.

Seasoned entrepreneurs, on the other hand, know they can make VC firms compete for their offering, and are thus less concerned about higher valuation as they will ultimately secure funding. As is customary in the Finnish gaming industry, they should mentor less experienced entrepreneurs, otherwise novices, wishing to garner investment from a reputable VC, need to accept unfavourable contract terms and a lower firm valuation. To confront agency problems, the parties need better to signal their qualities to each other, which reduces adverse selection risk, that is, the risk that an entrepreneur selects a VC of insufficient quality, or vice versa. Based on the results, and the extant research, it seems that in Israel it is far more important whose money the entrepreneur

receives than how much they must pay for funding. Lower valuation is also the price novice entrepreneurs pay to find a suitable VC firm with an extensive contact network, and to avoid adverse selection problems. Finally, if a VC's reputation is poor, and a VC firm inexperienced, valuation matters to both novice and seasoned entrepreneurs.
Paper III investigates the impact of ownership concentration on firm performance. The main result of the paper is that ownership concentration has a negative, and statistically significant, impact on company valuation. The results indicate that the negative impact is driven by state-controlled majority ownership. This implies large owners in PLCs can cause agency problems between majority shareholders and minority owners. The results suggest that a concentrated ownership structure may lead to a decrease in company valuation, which is in line with the finding that large owners may promote interests other than company value maximisation. Certain large owners also render the company less attractive to prospective foreign investors. They might be hiding some important information that is not observable to minority investors, only to themselves and the management.

In sum, certain large owners, on average, may decrease company value and render the company less attractive to potential minority and foreign investors. This is because such owners may promote interests other than company value maximisation, and obscure essential information. It also sends a negative signal to potential foreign and minority investors. The results of Paper III should be viewed in the Nordic context only, and not applied universally.

6.3 Contributions of the Dissertation

The aim of this research was to examine agency problems among entrepreneurial ventures and in PLCs. Agency problems that stem from information asymmetries between the principal and the agent cause redundant costs and inefficiency for the company and its stakeholders. During the course of writing this dissertation, I observed various problems among firms in different stages of development. The problems are unique in each three settings and they differ among startups, scaleups and listed companies. Moreover, the principal-agent roles change at different stages of firm development and investment needs.

In the seed and startup stages, entrepreneurs may behave hazardously towards angel investors. They have the possibility to use private information to the disadvantage of the investor, who lacks absolute knowledge of the investment opportunity, especially regarding novel ideas and new technology, and certainty of the entrepreneur's true motives. In the case of moral hazard, the entrepreneur might utilise invested funds for different purposes than those agreed with the investor. In adverse selection, the investor may select a poor investment object due to false information provided by the entrepreneur *ex-ante*. If investors in general become suspicious of investing in startups due to moral hazard and adverse selection problems, the market for startup finance may suffer or fail to provide an efficient allocation of funding, should the leading investors start avoiding the startup finance market.

In the scaleup phase, VC firm managers might compel entrepreneurs to take more risks than they can economically bear. Through harsh covenants and strict contract terms, VCs can force entrepreneurs to take excessive risks or complicate their daily business (e.g. changing the strategic direction of the firm). As a result, the firms might suffer economically, need to relinquish control, or in the worst-case scenario go bankrupt. The entrepreneurs can also provide false information to VCs.

Agency problems in PLCs may be found between majority and minority owners. Large owners who have the power to monitor the management and exact discipline also expect to be compensated for their effort. Compensation can be in form of private rents extracted from the company. This manifests as lower company valuation. Exercising private benefits of control also scares away minority owners, who are important for stock liquidity, and potential foreign shareholders who can inject capital into the company.

The whole economy of a country may suffer from the abovementioned inefficiencies. The problems between startups and BAs can, however, be ameliorated by acquiring stronger signals from the entrepreneurs in terms of their reputation, track record, and the investment opportunity, in order for the investor to screen the ventures and the teams more effectively. This assists investors in selecting projects where they can provide most value added, in terms of offering their business experience and access to personal networks. BANs, as intermediaries of investment opportunities, are important in reducing information asymmetries between angel investors and entrepreneurs. However, not-for-profit BANs cannot offer as broad and extensive range of services and screening as for-profit BANs. Therefore, BANs need financial support, but selectively. They should be measured based on their performance and investment readiness services for angels and entrepreneurs, rather than merely using traditional market metrics, such as jobs created. It would be important for governments that consider supporting BANs to focus on service quality rather than end results. Looking only at investments facilitated, deal flow size, or jobs created might give a false interpretation of angel investment market readiness. A focus on improving the quality of BAN services would not only help investors encounter the right kind of firms, but also build trust between investors and entrepreneurs to create close personal relationships, which are important in preventing agency problems also in later stages.

Regarding VC firms and scaleups, we know that VC managers may impose harsh covenants and contract terms on entrepreneurs due to their lack of security, information asymmetries, lack of collateral, and the higher risk premiums required by the investors in their funds. VCs might also push entrepreneurs to take higher risks than they would otherwise be willing to, thus endangering the entrepreneur's personal wealth. This type of VC-side behaviour complicates changes in, for instance, firm strategy, which might not be beneficial to either party. Hindering the entrepreneur's ability to change direction, if the market or user preferences change, might be perilous, and in the worst case lead to bankruptcy. The problems between VCs and entrepreneurs appear to stem from information asymmetries and a lack of trust. It is understandable that VC firms need to yield results for their LPs, but it would be preferable for the parties to cooperate. VCs could help entrepreneurs in holistic business development, which would accelerate their business growth, even globally, and benefit both parties. VCs who invest in later-stage ventures do not necessarily get to know the teams and people that operated the firm in the seed phase, as there is commonly no connection between them. Entrepreneurs who do not get to know the VCs may prefer meeting past investors, and seek advice from people who invested early on in their venture. Consequently, VC firms do not necessarily encounter the complete deal flow on the market, which implies they must invest in a thinner cohort of ventures.

Entrepreneurs commonly talk to VCs, if they have been active with them before, and have a good reputation in the startup ecosystem. Thus, it is important for VC firms to form alliances with BANs who can mediate the entrepreneur-VC relationship. Also, I recommended syndicating investments, and partnering when necessary, to find firms that are otherwise invisible to VCs. Further, VCs can get to know entrepreneurs by actively participating in startup events as sponsors or mentors. It is constructive to offer entrepreneur-friendly funding and partnership at key inflection points, where a fair sharing of the burden and rewards benefits both parties. This could possibly generate more entrepreneurial

activity among VCs, as individuals in the entrepreneurial ecosystem would learn about the "friendly VCs" who assist entrepreneurs, rather than make them behave according to strict rules.

Information asymmetries create problems in listed companies between majority and minority owners. Minority owners are in a free-riding position compared to other small shareholders and must typically accept the decisions made in the company as a given. Large owners, on the other hand, have the power to influence company matters, the CEO, BOD and other important stakeholders, and it is in their interest to wield that power to maximise the value of their investment. Due to blockholders' negative impact on company valuation, there must be some other benefits than company value maximisation that compensate their managerial monitoring and disciplining functions. Proper CG practices form the basis for improving the relationship between majority and minority owners, as well as other stakeholders in the organisation. Shedding light on majority owners' value-decreasing activities might impact their behaviour. For instance, state-controlled companies would benefit from letting the management operate the company without owner intrusion. This would in effect be a Pareto improvement for all of the company's shareholders.

Large international companies could benefit from cooperation with innovative entrepreneurial ventures. PLCs commonly have direct sales channels to customers, which startups and scaleups lack. By combining innovative products/services and distribution channels, both parties would benefit. VCs with contacts to large international clients could work as intermediaries in connecting entrepreneurial ventures and buyers. Finding a revenue-sharing model would undoubtedly encourage entrepreneurial ventures to find new innovations that could also have significant environmental impact on the aggregate level. The idea of large companies helping SMEs is not new. To date, it has not been successful because CEOs in PLCs often come and go rapidly. Whenever a new CEO takes the reigns, s/he typically changes

the previous CEO's agenda. Blockholders could implant this kind of philosophy in PLCs with the help of VCs and BANs who have direct contact with entrepreneurs.

It is noteworthy that agency relationships are dynamic over time. This dissertation strongly suggests that cooperative action can lead to healthier outcomes than private utility maximisation. Financial savings from even the partial prevention of agency problems, as described in this research, would be significant on the aggregate level, let alone in mitigating individual distress caused by, for instance, bankruptcy. Identifying and bringing these problems to public awareness is a part of the solution. A government owner could, for example, consider whether its ownership in non-strategic companies could earn a higher return, if liquidated and re-invested through Exchange Traded Funds (ETFs), which is a typical government procedure in Norway. This would remove the conflict of interest between the state and other shareholders. International PLCs' assistance to entrepreneurial ventures would undoubtedly benefit the startup ecosystem and economic growth. It is left for future researchers to document these observations empirically.

ABBREVIATIONS AND ACRONYMS

AGM	Annual General Meeting
BA	Business Angel
BAN	Business Angel Network
BOD	Board of Directors
CA	Limited Liability Companies' Act (624/2006)*, "OYL, Osakeyhtiölaki" (in Finnish)**[26]
CEO	Chief Executive Officer
CG	Corporate Governance
GP	General Partner
EGM	Extraordinary general Meeting, see CA
ETF	Exchange Traded Fund
IPO	Initial Public Offering
KPI	Key Performance Indicator
LLC	Limited Liability Company
LP	Liquidity Partner
Ltd.	Limited Company
MC	Marginal Cost
NCG	Nordic Corporate Governance
OGM	Ordinary General Meeting, see CA
OLS	Ordinary Least Squares
OMX	Nordic Stock Exchange

[26] * With amendments till 31.12.2018. ** References to CA are made as follows: e.g. 5:4§ refers to chapter 5 section 4.

OYJ	Osakeyhtiö julkinen, Publicly Listed Company
PLC	Publicly Listed Company
PMC	Private Marginal Cost
R&D	Research and Development
ROA	Return on Assets
VC	Venture Capital

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APPENDIX 1 PAPER I

14 Business angel networks: a review and assessment of their value to entrepreneurship

Tom Lahti[1] and Henrik Keinonen[2]

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14.1 INTRODUCTION

Entrepreneurs with young innovative companies can be hard pressed to secure startup and business expansion funding from banks and venture capital funds. Such companies often have few tangible assets and with little that can be used as collateral banks often deduce that these companies are too risky to fund. Venture capitalists for their part are rarely prepared to invest less than €200,000 in a business. Many of the costs that arise from due diligence and investment monitoring are fixed regardless of the size of the investment, which makes such investments uneconomical (Mason, 2009). This is where so-called 'angel investors' step in. Defined as 'individuals acting alone or in a formal or informal syndicate who invest their own money directly in an unquoted business in which there is no family connection, and who after making the investment, take an active role in the business in the hope of financial gain' (for example, Avdeitchikova et al., 2008; Mason and Harrison, 2008), angel investors can join forces with entrepreneurs to create the perfect partnership. And in many cases they provide

[1] Erling-Persson Center of Entrepreneurship, Hanken School of Economics, Finland.
[2] Center of Corporate Governance, Hanken School of Economics, Finland
[3] Lahti, T. and H. Keinonen (2016), 'Business angel networks: a review and assessment of their value to entrepreneurship', in H. Landström and C.M. Mason (eds), *Handbook of Research on Business Angels*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 354-378.

more than just funding, as they can also be a source of valuable business experience and provide a network of business and industry contacts (for example, Ardichvili et al., 2002; Politis, 2008).

For entrepreneurs on the lookout for funding, business angels may be hard to find, particularly those with experience and competences compatible with the venture's specific needs. The investment market is virtually invisible, as there is no record of active angel investors, which makes it difficult for an entrepreneur to identify business angels (for example, Wetzel, 1983). In an effort to overcome this obstacle, business angel networks (BANs) were born. BANs are designed to function as financial intermediaries, meaning they enable and facilitate trading between investors and those in need of capital, but do not invest any funds themselves (Knyphausen-Aufsess and Westphal, 2008). They can be considered similar to 'dating agencies'– providing a channel of communication that enables entrepreneurs seeking financing to gain the attention of business angels. What is more, BANs make it a point to inform angel investors of investment opportunities with no compromise to the investors' privacy (Mason and Harrison, 1996; Mason, 2009). BAN facilitation reduces the costs of searching for the perfect fit for all parties involved.

Yet, increasing numbers of BANs are now expanding their role beyond that of providing a communication channel. This is typically the case in BANs where the angel investors are themselves actively involved in planning and governing the network's activities, usually via board membership. In an effort to meet the demands of a variety of business angels with heterogeneous expectations and investment experience, the networks engage in supplementary activities, like educating less-experienced members or using their social capital to attract competent lecturers for BAN events. Some networks also actively recruit new angel investor members, as many are attracted by the idea of co-investing with other prominent angels. In countries where governmental

support for BANs is on the wane, it is important that BAN offerings are made sufficiently attractive, so as to provide the network with a steady income. Network income is normally derived from membership, registration and success fees, that is, the percentage of the investment paid to the network. In order to establish and maintain sufficient activity, BANs need to appeal to angel investors and entrepreneurs.

The first aim of this chapter is to provide an overview of the BANs currently operating in Europe and the USA. In particular we focus on describing the evolution of BAN activity in European countries. Our second aim is to reflect on the socioeconomic value of BANs by reviewing extant research evaluating their benefits and drawbacks. Researchers have disagreed on the question of whether government should support BAN establishment and operations, as both positive and negative evidence has been found for their role in stimulating investment activity.

In his work, US researcher Jeffrey Sohl (2007) coined the term 'angel portal' to depict the various communication channels that exist between entrepreneurs and angel investors. This chapter specifically focuses on 'matching network' BANs, one of Sohl's angel investor portal modes. A matching network is a BAN that on the one hand provides investors with a mechanism for evaluating opportunities, and on the other provides entrepreneurs with a means to gain access to angel investors (Sohl, 1999). This is done via a database, matching investment preferences with summaries of entrepreneurial business plans. In addition to this connecting function, matching networks also commonly provide venture forums and educational events (see Sohl, 2007). Sohl's other modes of angel portals are also touched on briefly herein.

The chapter begins with an introduction to the BAN functions. This is followed by a description of the various BAN types, an overview of the BANs currently operating in Europe and the USA, and a discussion on BAN performance measurement. After this, we review the extant material assessing the networks' socioeconomic

contributions, followed by a discussion section summarizing the main points and outlining suggestions for policy-makers. The chapter ends with a proposal for future avenues of research.

14.2 FUNCTIONS OF BUSINESS ANGEL NETWORKS

The core function of a BAN is to provide a communication channel that allows angel investors to examine investment proposals. In some BANs, the administrator screens the submitted proposals to ensure that the selection or 'deal flow' the angels encounter is of sufficient quality, in terms of growth potential, for example. BANs can also tailor the deal flow to meet the individual preferences of the angel investors or specific requirements of the entrepreneurial ventures. This communication typically takes place either electronically via the internet, and/or in investment forums, where entrepreneurs make presentations for a potential investor audience (for example, Gullander and Napier, 2003). The communications do not always concern financial investments, however, as some BANs also facilitate service-for-equity investments, whereby angel investors assume managerial and board positions in the ventures – offering their expertise, experience and effort in exchange for ownership (for example, Lange et al., 2003).

In cases where several angels indicate an interest in investing in the same venture, BANs also provide opportunities for investment syndication (Mason and Harrison, 1997). On occasion BANs also facilitate the search for lead syndicate investors, that is, angel investors who agree to assume the main responsibility for managing the investment, as they commonly hold the most relevant knowledge and experience for the investment in question. This deal-brokering service is often complemented by other services, including investment readiness training for the entrepreneurs, training for the investors, standardized contract models for use in

business angel investor-entrepreneur negotiations and affordable advisory services to all parties (see Gullander and Napier, 2003; Aernoudt et al., 2007).

Entrepreneurs with low investment readiness stemming from shortcomings in written or oral material (for example, Mason and Harrison, 2001; Mason and Kwok, 2010) may be deemed not ready to receive angel investor funding. BANs can improve investment readiness by either helping the entrepreneurs directly or by referring them to affordable advisory services. Among other things, these services can help polish up a business plan, tweak a revenue model or coach towards the perfect sales pitch, thereby reducing information asymmetries about the quality of the business opportunity (for example, Lahti, 2014). Likewise, business angel training and coaching helps increase angel investments by lowering the entrance threshold to the business angel market. Potential and inexperienced investors are provided with the tools and knowledge to manage angel investments, increasing overall investment capacity (for example, Christensen, 2011). An underlying objective is also to increase overall awareness about angel investing. By promoting business angel activity, BANs can also play an important role in enhancing market development. The model contracts offered by BANs reduce costs and save time by reducing the need for legal expertise.

14.3 DIFFERENT KINDS OF BUSINESS ANGEL NETWORKS

There are several different kinds of BANs operating in today's market. Lange et al. (2003) developed the following typologies for differentiating between them.

- private vs. public
- for-profit vs. not-for-profit
- early stage focused vs. all stages
- specialist investors vs. generalists

- active screening and support vs. passive
- regional or local geographical reach vs. national or pan-national
- introduction services only vs. a broader range of services offered

Table 1 illustrates these typological dimensions, providing brief descriptions of their implications and demonstrating examples of different BANs from European Business Angel Network's (EBAN) membership information (see EBAN, 2008, 2014a). EBAN is an organization whose mission is to represents the interests of European BANs, most of whom are members of EBAN.

It is worth noting that the modus operandi of private, for-profit BANs is to generate a profit, and hence these types of networks offer very active screening and support, along with a broad range of services. They also often facilitate investments in later stage ventures and management buyouts (Mason and Harrison, 1997). As these are typically large investments, a success fee tied to investment size makes these investments more profitable than fees collected from early stage companies.

Table 1 Typological dimensions of business angel networks

Typological criteria		Description		Description
Financial mode	Private	These BANs are self-sufficient and finance their operations from sources of income such as registration fees, success fees and sponsorship. *Success fees* are commonly 1-2% of the invested capital (e.g. NeBIB in the Netherlands, BAF in Finland).	Public	Public funding is obtained from organizations that seek to spur economic development such as local authorities, government agencies, universities, science parks and business incubators (e.g.Macedonian Business Angels Network, Serbian Business Angels)
Profit Orientation	For Profit	Commercial BANs are established to provide profits for their founders. Socioeconomic benefits are secondary in importance (e.g. Brains ToVentures in Switzerland , BAF in Finland)	Not-for-Profit	To obtain public sector funding and/or sponsorship from corporations, BANs have a not-for-profit status (associations). Socioeconomic benefits are highlighted (e.g. FiBAN in Finland, Almi in Sweden).
Preferred Financing Stage	Early-Stage Preferred	emphasis on the pre-seed, seed, start-up and the early stage (e.g. Angels Den in the UK, BE ANGELS in Belgium)	All stages	considers all stages of development, and even sometimes investments in management buyouts (e.g. the Informal Investors Network in the Netherlands, BCN Business Angels in Spain)
Peferred industry sector	Specialist	may focus on only two industry sectors, such as. Biotech and Telecommunication (e.g. Cyban in Cyprus; Amber Network in Poland)	Generalist	considers investments in many different industry sectors (e.g. Business Angels Network Vlaanderen in Belgium, IESE in Spain)
Screening and support	Active	BAN manager has an active role, screens out investment opportunities of low quality, and provides support functions to angels and/or entrepreneurs (e.g. FiBAN in Finland)	Passive	BANs provide limited support and do not actively engage in screening of investment opportunities (e.g. Huban in Hungary , Ukrainian Business Angel Network)
Geographical reach	Regional or Local	limited geographical scale, serves local angels and entrepreneurs (e.g. the Cambridge Angels in the UK, Maxwell Group in the Netherlands, Sting Business Angels in Sweden and Malaga Business Angels in Spain)	National or Pan-National	geograpic scale in national BANs is a single country (e.g. Lab-X in the Turkey, CatCap GmbH in Germany and Bulgarian Business Angel Network), in Pan-National BANs the scale is two or more countries (e.g. BiD Network in the Netherlands and Go Beyond Ltd. in Switzerland)
Types of Services Ofered	Introduction services	introduces investment opportunities, but do not engage in other functions (e.g. Venture Bonsai in Finland, Huban in Hungary)	Broad range of services	provides a broard range of services, such as business angel training and services that seek to improve investment readiness (e.g. ESTBAN in Estonia, BANC in Spain)

Sources: Adapted from Lange et al. (2003); examples from EBAN (2008, 2014a).

As we mentioned earlier, Sohl (2007) has coined the term 'angel portal' to categorize the various communication channels between business angels and entrepreneurs. The main features of all six of Sohl's portals in the following list are briefly described in Table 2.

- matching networks
- facilitators
- informal angel groups
- formal angel alliance
- electronic networks
- collection of individual investors

Table 2 Different Angel Portals

Portals	Matching Networks	Facilitators	Informal angel groups	Formal angel alliance	Electronic networks	Collection of ind. investors
Description	Based on four fundamental principles: need to protect investor anonymity, to provide access to capital for entrepreneurs, to have an efficient mechanism for business angels to screen investment opportunities and the importance of face-to-face interaction between business angels and entrepreneurs Three tiered approach: (i) matching database, (ii) the venture forum format, and (iii) educational seminars.	Facilitators maintain a list of interested participants, including private investors, entrepreneurs and service providers. They organize events on specific issues, such as valuation, term setting and organizing a business plan. Least organized form of angel portals, considered as event planners.	The informal angel groups consist of a membership that typically ranges from a handful of business angels to fifty business angels. Members themselves bring in the business opportunities "perform the backoffice functions". The venture forum format is the predominant mechanism for assessing investment opportunities.	Have a larger membership per group than the informal angel groups and a higher visibility. As its name indicates, its organisational structure is more formal then in Facilitators and Informal angel groups. As the deal flow is substantial staff is hired to coduct the "back office" work. Have typicallly a board of directors and an executive director. Have criteria for membership and annual membership fees. Membership might imply group decision-making and sufficient investment activity.	An internet platform that enable accredited investors to identify investment opportunities. Entrepreneurs need to submit a two page summary of their business proposal. An efficient method for deal screening, but investment decisions require face-to-face interaction Mostly an unsuccessful investent portal.	The least organized of the angel portals. Individual investors that are not directly affiliated with any angel portal. Draws on referral sources such as trusted friends and business associates to obtain deal flow.

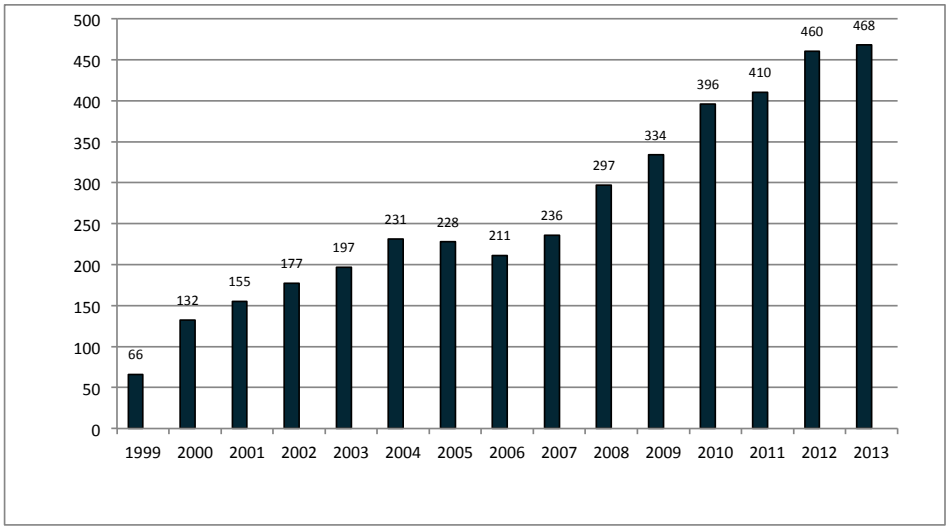
Sources: Adapted from Sohl (2007, 2012).

European countries have adopted the 'matching networks' portal. By and large, most BANs provide the three core functions of a matching network, that is, a matching database, an investment forum and educational seminars. These functions have also been the foundation for the most recent BANs launched in emerging business angel

markets in Eastern Europe, in countries like Estonia and Latvia. The development in the USA has followed very different lines, as the 'matching network' is not the typical angel portal. Informal angel groups and formal angel alliances enjoy much wider popularity. The next two sections look into the evolution of BANs in Europe and the USA.

14.4 AN OVERVIEW OF BUSINESS ANGEL NETWORKS IN EUROPE

The earliest BANs were established in the UK in the early 1990s, followed by the Netherlands (NEBIB) in 1995, Finland (the SITRA Matching Service) in 1996 and Belgium (the Vlerick Business Angels Network) in 1999 (Mason, 2009). The number of BANs in Europe has increased over time. Figure 1 shows the European development from 1999, when there were only 66 BANs in Europe, to 2013, when the corresponding number was 468 (EBAN, 2014b).



Source: EBAN (2014b).

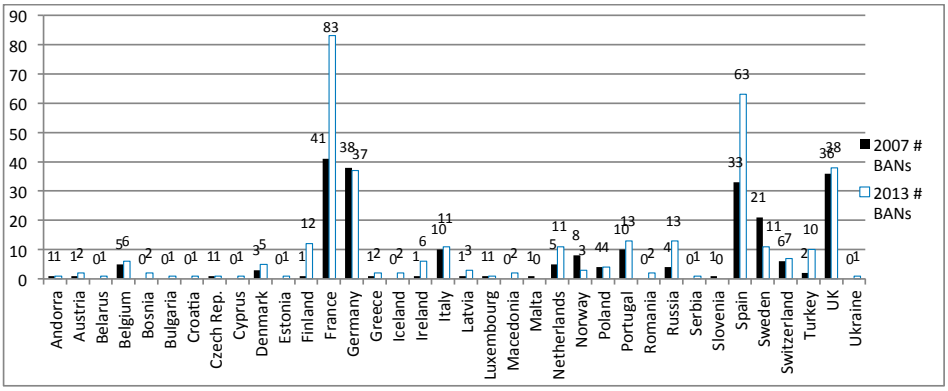
Figure 1 The number of BANs in Europe during the time period 1999–2013

Figure 2 demonstrates the number of BANs currently operating in different European countries, comparing 2013 figures with those from 2007. In some countries, like the UK, Belgium and Germany, the number of BANs has remained relatively stable during this time period, but when examined from a long-term perspective, a decline in all three countries is evident (for example, EBAN, 2008). From 2003 to 2004, the number of BANs in the UK dropped from 51 to 35, while in Germany the number of BANs peaked in 2005 at 40. In Belgium, there were seven BANs in 2003. The strong decline in non-commercial BANs in the UK and Germany has been influenced by reduced public sector support (Mason, 2009).

In contrast, Figure 2 shows that the number of BANs has grown in Finland, Spain and France. This reflects a spike in regional BANs, as these large nations have angel investors spread throughout the country who prefer to invest locally. In Finland, many of the regional BANs were only recently established. The Finnish Business Angel Network (FiBAN) has launched affiliate BANs in many of the country's major cities. At the same time, the number of BANs has declined in Sweden and Norway. Finland and Sweden organize their business angel networks in a similar fashion. In both countries there is a strong national actor – Connect in Sweden and FiBAN in Finland – and there are several regional affiliates.

Since 2007, BANs have been established for the first time in many Central and Eastern European countries. These countries include Estonia (EstBAN), Serbia (SBAN), Croatia (CRANE), Cyprus (CYBAN), Romania (Finantare) and Ukraine (UBAN). In these countries business angel activity is still in its infancy. Estonia's EstBAN, founded in 2012, has been the most active of these recently established networks. It collaborates with FiBAN in Finland and SOBA in St. Petersburg, Russia and has had the opportunity to learn from their best practices. This collaboration also enables investments from Finnish and Russian angels to reach Estonian startups. This

partly explains why 82 ventures have already received network funding – a considerable amount when EBAN statistics report that only 52 angel investors are active in Estonia (EBAN, 2014b).

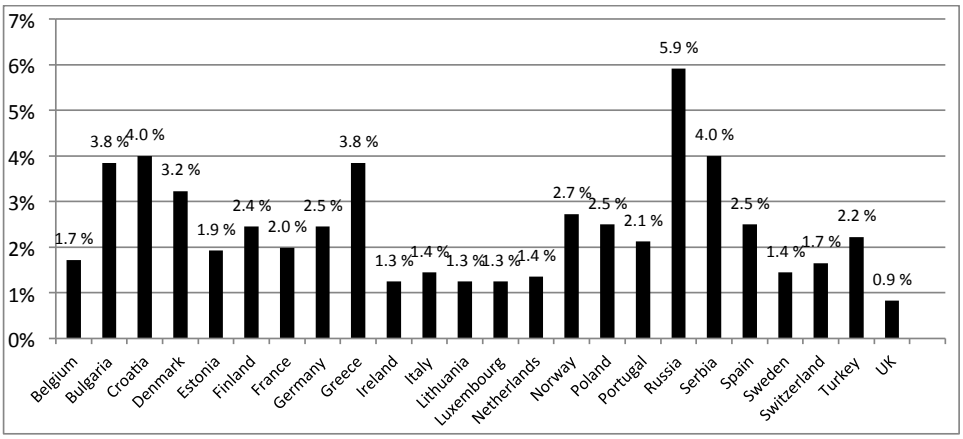


Sources: EBAN (2008, 2014b).

Figure 2 Number of BANs in different European countries

Figure 3 provides an estimate of the number of BANs per business angels in some of the European countries. The estimates for the number of business angels have been adopted from EBAN's 2013 survey on business angel activity (EBAN, 2014b). While the business angel market in the UK is by far the largest in Europe, there is less than one BAN per 100 angel investors. When examining this figure, however, one needs to consider the uniqueness of BANs in the UK. In Scotland BAN activity is concentrated in one big public actor, Local Investment Networking Company (LINC). LINC adopted the strategy of aggregating local enterprises into one national BAN (Sohl, 2007). This large nationwide BAN contains not just individual angels but also a large number of angel syndicates with up to 70 members (see Mason and Harrison, 2010, 2011). Thus, there are many angel groups organized within a single BAN. As these angel groups are not counted as BANs, the number of BANs may not give an accurate picture of the organization of the angel market in the UK. In England, Wales and Northern Ireland, most of the BANs are members of the British Business Angel Association.

Although Russia has 13 BANs, it is estimated that there are only 220 business angels living in the country. The low amount of business angels in Croatia and Serbia also places them high in the Figure 3 comparison. It is important to bear in mind that in many countries, like the UK, Germany, Sweden and Belgium, the trend has been a decline in the number of BANs as the market matured. A large number of BANs are set up with public sector support during the early development of a market, to create visibility for the operation and open up the market. Many of these are reliant on public support to finance their operations. This support may not be warranted in situations where angel investors can encounter superior quality deal flow outside a BAN, or when BANs are not able to provide increased funding additionality. In a country such as Russia, where there is plenty of untapped potential to expand the pool of angel investors, efforts to establish BANs are likely to produce good results.

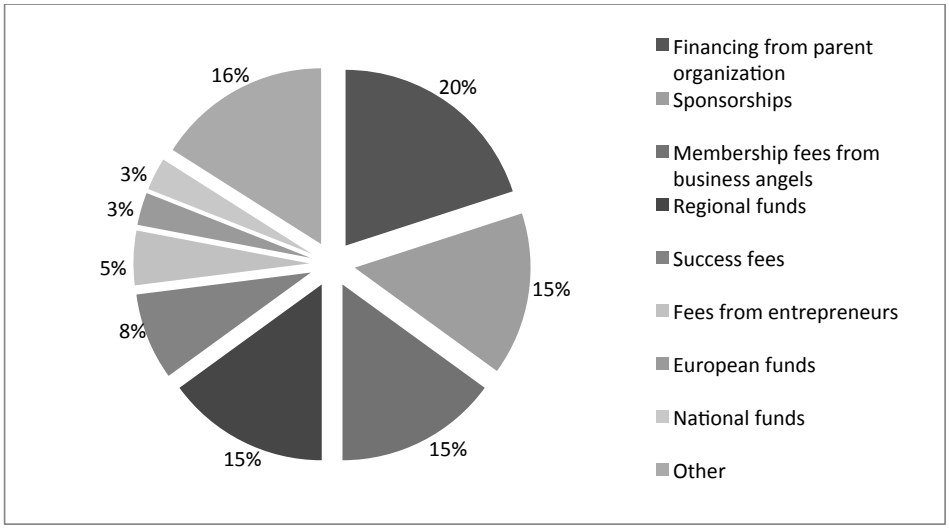


Source: EBAN (2014b).

Figure 3 Number of BANs as a percentage of the number of business angels

Figure 4 shows the sources of funding for European BANs; 20 percent of the funding comes from parent organizations, as many of the BANs are affiliated with a private or public sector actor that aims at promoting entrepreneurship. Another 28 percent is generated by membership fees and success fees. These numbers indicate that

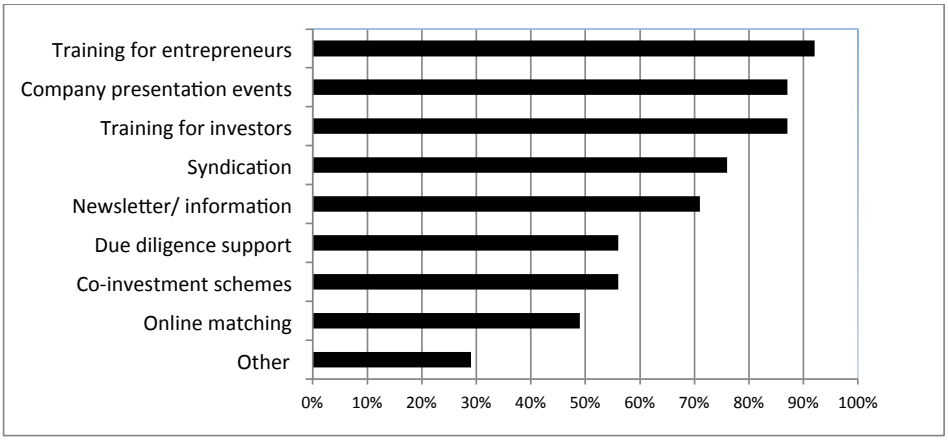
BANs are quite hard-pressed to cover their expenses with revenues from their business activities. Public sources of funding from European funds, national funds and regional funds account for 21 percent of the funding. It would seem that sponsorship would be a suitable source of funding for BANs, but it may be difficult for commercial BANs to rely on sponsorships, as corporations tend to be more willing to associate themselves with non-profit-oriented activities. Based on the figures, it is difficult to extract the relationship between private and public sector funding, just as it is hard to determine the extent to which 'funding from parent organizations' is public or private. Public funding may be injected indirectly, as the parent organization may obtain support for setting up the BAN. Sponsorships can also be had from both private and public sector sources.



Source: EBAN (2014b).

Figure 4 Sources of income for European BANs

Figure 5 illustrates the services provided by BANs. It shows that the European BANs contain the elements required of the aforementioned 'matching network'. Almost all of them feature an educational element, as well as forums for company presentations.



Source: EBAN (2014b).

Figure 5 Services for BANs members

The following section provides an overview of BANs in the US.

14.5 AN OVERVIEW OF BUSINESS ANGEL NETWORKS IN THE USA

The first BAN in the USA was, Venture Capital Network (VCN), founded in 1979 at the University of New Hampshire (Sohl, 1999). It was based on the four fundamental principles of a matching network: 1) the need to protect investor anonymity, 2) the necessity of providing access to capital for entrepreneurs, 3) to create an efficient mechanism for business angels to screen investment opportunities and 4) the importance of face-to-face interaction between business angels and entrepreneurs (Sohl, 2007). VCN maintained a confidential database with information on investment opportunities submitted by entrepreneurs and interest profiles submitted by investors. Business introductions were provided when investment opportunities met the investors' investment criteria (see Wetzel, 1987). VCN complemented this matching service with educational seminars and venture forums. The network targeted entrepreneurs and investors from a variety of states in the USA, and while many

business introductions were made, relatively few deals were signed (Wetzel, 1987).

Another early effort to create a widespread appeal for BANs and increase business angel activity in the USA was the establishment of the ACE-Net in 1996. ACE-Net was an internet-based listing service that brought together entrepreneurs and business angels. Like VCN information services, ACE-Net operators were affiliated with universities and state-based organizations, reliant on public sector support and ran on a not-for-profit basis (see Acs and Tarpley, 1998). ACE-Net operated on a national scale and its business model relied on the assumption that if investors were provided with sufficient information on investments, they would be willing to invest outside their local region. As it has ceased to exist due to the low number deals that were made, this could suggest that angels were not attracted by long-distance investments at this time (Harrison et al., 2010).

As indicated earlier, most 'matching networks' have vanished from the US market. Only 13 of the roughly 200 BAN members of the Angel Capital Association, the leading professional and trade association for US business angels, are 'matching networks', while the rest are angel groups (ACA, 2014). Those few matching networks that still exist have evolved into electronic networks that lack physical presence (Sohl, 2012). However, as business angels' investment decisions require face-to-face interaction such electronic platforms have been relatively unsuccessful in meeting their needs. Matching networks in the USA use the internet as their matching mechanisms, while the European ones make use of investment bulletins and investment forums (Mason, 2006).

There are institutional reasons why traditional BANs are not well suited to the US market. First of all, a potential BAN investor needs to be accredited. To certify as an accredited investor in the USA, these individuals need to display expertise in financial and business matters, a net worth of more than $1 million, and an income of more than

$200,000 in the last two years. These regulations as specified in the US securities laws and regulations (Wetzel, 1987; Acs and Tarpley, 1998) limit the pool of angel investors that are available to invest through a BAN.

Second, the Securities Exchange Act (SEC) restricts the scope of BAN managers' involvement in BAN transactions. Persons running the BAN cannot, for instance, provide advice about the merits of the investment opportunities, receive compensation from BAN users, participate in negotiations between investors and entrepreneurs or assist in the completion of any transaction (Acs and Tarpley, 1998). This means that BAN managers are not able to actively help angel investors in their selection of business opportunities, and their incentive to do so is also hampered by the fact that they cannot receive compensation. For informal angel groups and formal angel alliances these restrictions are not problematic, as the evaluation, due diligence and negotiations are performed by the angel investors themselves. As Table 2 indicates, any personnel are mainly hired for back office work (see Sohl, 1999, 2007).

14.6 MEASURING PERFORMANCE OF A BUSINESS ANGEL NETWORK

There are many different ways in which the performance of a BAN can be assessed. The primary objective of a BAN is to enable investments, and therefore a successful BAN is one in which many entrepreneurial projects secure funding. Thus, the key measure of a BAN's performance is the number of investments it facilitates, the amount of invested capital and the amount of successful matches that are made. Research may then be undertaken analyzing the long-term effects of the investments. Perhaps the best measure of these long-term effects is the number of new jobs created in the BAN funded ventures. This number is of particular interest in research that assesses the benefits and drawbacks of public support for BANs.

Deal flow size may not be the best BAN performance indicator. For instance, a study from Mason and Harrison (2010) of UK BANs found no correlation between the number of business plans received and the number of investments made. Here the four largest BANs that accounted for 67 percent of all business plans received, accounted for only 44 percent of the companies generating funding. A large component of the BAN deal flow may be of insufficient quality to be of any real interest to business angels. For similar reasons, the number of investor members in the BAN is also not the best performance measure.

Mason and Harrison (2010) indicated that successful BANs are those that yield investment opportunities of such high quality that they can be presented to the investors. A strong relationship was discovered between the number of proposals presented to the angel investors and the number of deals. For example, a total of 233 companies secured their funding through the UK BANs. While this figure is only 2.8 percent of all the companies seeking funding, it accounts for 28 percent of those that were eventually presented to investors. As Mason and Harrison (2010) suggest, the key differentiation between networks appears to be in the process used to whittle down the business plans received in order to select the companies that are ready to be presented to the investors. The authors add that once the investment opportunities are presented, the success rates in securing financing are broadly similar among the BANs. A conclusion could be drawn that it would be meaningful to assess the performance of BAN investment readiness services. Mason and Harrison (2010) compare BANs that provide investment readiness training to other BANs in the marketplace. The success ratio, in terms of the ratio of companies raising finance to companies presented to investors, was markedly higher in BANs offering investment readiness training. In these BANs 36 percent of the entrepreneurs that pitched their business idea obtained funding, while the corresponding figure for the other BANs was 23 percent. This would

imply that the actual performance of a BAN is best measured in how well they perform services that increase entrepreneurial readiness. This same investment readiness training increases investment activity. Mason and Harrison (2004) argue that angel investors are turned off by entrepreneurs unable to provide sufficient information on their business idea or tell a compelling story on their business pitch. BANs that provide readiness training can help entrepreneurs to overcome these shortcomings and with that improve their chances of obtaining funding. Given that business angels increase their funding to entrepreneurial ventures if they encounter a deal flow of sufficient quality, measures that improve readiness are effective for increasing angel investment additionality.

BAN-performance is not only reflected in the quality of their investment readiness training, but also in the quality of the BAN's other services, like angel investor education, forum events, syndication practices and matchmaking platforms. Through all of these, BANs can increase the number of investments and the amount invested. Hence, it can be deduced that these are the determinants that influence the quality of a BAN and contribute to its actual performance.

The following section looks into public sector support of BANs to form an opinion on whether there is still a need for public sector involvement.

14.7 AN EVALUATION OF THE IMPACT OF BANS

This section is divided into two subsections. The first provides an overview of research that shows evidence of positive socioeconomic effects of BANs. The second shows evidence of negative socioeconomic effects.

14.7.1 Positive evidence

Aernoudt and Eriksson (2007) argue that public sector support to BANs is often

intended to cover costs arising from efforts to 1) enhance the entrepreneurial culture; 2) recruit new business angels; 3) seek and evaluate entrepreneurs willing to work with a business angel; and 4) match business angels with entrepreneurs. Christensen (2011), Knyphausen-Aufsess and Westphal (2008) and Collewaert et al. (2010) are examples of recent studies that empirically evaluate whether governments should support BANs. Pioneering research on the theme was made by Mason and Harrison (1997) who investigate whether commercial for-profit BANs replace the need of publicly funded BANs. Data were gathered from 17 BANs in the UK that provided information on 100 investments made in 1993-94 and 1994-95. Significant differences were found between investments made through publicly funded and commercial BANs. The commercial BANs were involved with larger investments, later stage deals including management buyouts (MBOs) and "low-tech" manufacturing. Consequently, it would seem that publicly supported BANs do not compete for the same deal flow as commercial BANs. This suggests that the establishment of commercial BANs does not necessarily eliminate the need for publicly supported BANs. They also do not provide a solution to the equity gap that public BANs aim to bridge. Commercial BANs might in fact be more inclined towards bridging a so-called second equity gap arising in situations where seed funds and business angels have commonly exhausted their funds, and yet the company is still too small to attract venture capital (for example, Harrison and Mason, 2000). Moreover, they found that the commercial BANs were not active in the same regions as the publicly funded BANs, which provided further indication of a lack of overlap. The diversity in terms of regions covered by commercial and publicly supported BANs is advantageous, as Avdeitchikova (2009) among others suggests that metropolitan areas often attract the vast majority of capital, while a large number of peripheral regions are virtually deprived of investments.

Collewaert et al. (2010) evaluate whether public sector intervention through the

subsidizing of BANs enhanced regional economic growth in Flanders, Belgium. The data in the study builds on 55 interviews with entrepreneurs and angel investors, in addition to a quantitative performance assessment of 34 companies that have obtained funding through a BAN in comparison with 50 companies that obtained angel funding through another channel. Four publicly supported regional BANs were represented in the quantitative assessment. The BAN-backed companies were matched with non-business angel-backed companies for the variables age, industry and size. The study investigates how well the BANs achieve their objective of reducing market failures by increasing access to angel investments. As indicated in the introduction, young innovative companies suffer from financial constraints because they have difficulty obtaining funding from banks as their value is rarely dependent on tangible assets that can be used as collateral for a loan. Collewaert et al. (2010) show that ventures obtaining funding through the BAN are primarily young high-tech companies that pose great financial risk. The research suggests that BAN funding assists companies that tend to suffer from financial constraints and thus helps in bridging equity gaps. Furthermore, it demonstrates that the entrepreneurs and business angels would not have known about the other without a BAN. This indicates that the BANs increase transparency in the market and generate additionality in funding.

Quantitative assessment suggests that companies seeking funding through BANs are not riskier, nor do they grow less or have lower post-investment returns than companies that obtained angel funding through other channels. It also shows that for every euro spent on government subsidies, €85.39 is obtained in added value. Value added is measured as the return on assets of the companies in year four. It is notable that the value added of companies that obtained business angel funding is higher than for those that did not. Moreover, results demonstrate that 102 net jobs (187 jobs created minus 85 jobs destroyed) were created in the BAN-backed companies from the

year of the business angel investments. Given an estimate that only considers the increase in jobs in the companies in question each job created equals a subsidy of €8399. Under a very positive assumption that considers all 495 jobs in the BAN-backed companies as additional, the subsidy per job drops to €1731. The study compares the cost-efficiency of other public sector initiatives aiming to promote entrepreneurship. Given this positive assumption it compares well with other public sector initiatives. For example, in the "European business incubators initiative" the figure for subsidy per job was €4000 (European Commission, 2002). Similarly to many BANs, European incubators are typically recipients of public support.

Christensen (2011) provides further justification for public sector support of BANs, drawing on an in-depth observation study of the life cycle of a national BAN - the Danish Business Angel Network - and compares it with a similar national BAN in Wales. The main argument is that any evaluation of the effects of public sector BAN support should consider not only the direct socioeconomic effects, but also the indirect effects that materialize. The direct effects include the creation of new jobs and the fueling of innovation and economic growth. A valuable indirect effect is the training they provide for their members. This education is important for the value added, measured in Collewaert et al. (2010) as the return on assets, to emerge. With sufficient training business angels can provide a value-added contribution from their hands-on involvement (for example, Mason and Harrison, 2000). Educating entrepreneurs on how to improve investment readiness and what it means to obtain business angel funding is another important contribution of BANs.

Other important indirect effects of BANs that were addressed in the study were the screening of investment opportunities, the continuous improvement of BAN practices, the creation of awareness regarding angel investing and, their coordinating function and network development. BAN managers' screening of projects saves time

and expenditures for angel investors and is also beneficial for entrepreneurs who get notified abut their business proposal shortcomings. BANs continuously seek to improve their services based on member feedback. As was stated earlier, the BANs also contribute to raising awareness of business angel investing. This is important for many reasons: it encourages individuals to become business angels, promotes business angel activity through policy measures and reduces equity aversion amongst potential recipients of business angel investment. Equity aversion arises when entrepreneurs do not have a sufficient understanding of the different forms of equity financing, leading to a decreased flow of investment opportunities (for example, Mason and Harrison, 2001). Increased awareness of business angel investing from BANs helps to plug this knowledge gap (Harding 2002). Yet another BAN contribution is substantiated by Christensen (2011), who argues that BANs substantially reduce aggregate transaction costs in a society by virtue of 'drawing up standard legal documents and codes of conduct, and providing guidance on questions such as tax problems and so on' (p. 345). Actions such as these add to entrepreneur and angel investor knowledge, and are particularly beneficial for those with limited experience. Finally, membership in BANs helps business angels to leverage their social network. Virgin angels, making their first investments learn from both from the education programs and from syndicating investments with more experienced investors. Events and meetings organized by BANs provide business angels with opportunities for partnering with not only with other investors, but also with different stakeholders affiliated with the network, such as intellectual property (IP) experts, solicitors, accountants and consultants.

In summary, evidence points to the socioeconomic benefits of BANs. For this reason, Collewaert et al. (2010) suggest that public support for BANs is a cost-efficient measure to create new entrepreneurship.

14.7.2 Negative evidence

Knyphausen-Aufsess and Westphal (2008) criticize public sector intervention in BANs. They build a case for why the drawbacks outweigh the benefits. Their empirical analysis is based on the data from one German BAN, The Northern Bavarian Business Angels. First, they argue that the services provided by BANs are often of insufficient quality, as they are dependent on BAN manager competencies. Therefore, they argue, they may not meet the needs of business angels. Accordingly, this lack of BAN manager competence results in services being standardized, rather than tailored to the needs of the various members. The study suggests that BAN services result in a one-sided advantage for young, technology-based ventures, with experienced business angels obtaining few benefits from membership.

Second, they question BAN ability to screen investment opportunities. It is advocated that BAN managers commonly do not have the competences to assess the quality of investment opportunities, which makes it hard for them to distinguish between high and low quality. This would reduce the value of BAN managers' pre-screening that is intended to mitigate the risks of adverse selection and help business angels select less risky projects. It is suggested that BAN managers particularly lack the competences of evaluating investment opportunities where the level of innovativeness is substantial.

Third, Knyphausen-Aufsess and Westphal (2008) claim that BAN services increase rather than decrease the risk of adverse selection. The first argument for this is that services aimed at increasing investment readiness tend to homogenize the offerings that business angels encounter. BAN help to polish business plans may make it more difficult for business angels to assess the entrepreneurs' ability level and the quality of their investment opportunities. BAN help is especially valuable for entrepreneurs unable to come up with material of adequate quality themselves, so

consequently, instances may occur where an angel investor selects a weak project over a good one. The second argument is that these services tend to increase the valuation by creating false value. If window dressing performed by the BAN services increases the perceived quality of an investment opportunity, a business angel may end up paying a high price for an investment opportunity that is in fact of poor quality.

Fourth, the results support findings from Mason and Harrison (2000) that suggest BANs do not attract the highest quality investment opportunities. The closed marketplace of a BAN creates fees that angle investors and entrepreneurs can avoid if they carry out transactions in the open market. Given that the value of BAN-services is limited to experienced entrepreneurs and business angels, they are more likely to find each other in, for example, public business plan contests.

Finally, it is argued that contracts imposed by BANs are more comprehensive than ones angel investors would use without BAN involvement. This contrasts with the 'incomplete contracts approach' that characterizes the business angels' style of managing investments (see Van Osnabrugge, 2000), where the focus is on post-investment involvement as opposed to comprehensive contracting. If emphasis in the investment process is shifted towards contracting, it might reduce the value added that is transferred through the angel investor's hands-on involvement.

In summary it can be argued that given that BANs benefit mainly technology-based ventures their socioeconomic benefits are scarce. According to Knyphausen-Aufsess and Westphal (2008), obtaining investment opportunities through BANs can have immediate negative consequences. In light of their findings, government intervention to support the establishment of BANs and their operations is not motivated.

14.8 DISCUSSION AND SUGGESTIONS FOR POLICY-MAKERS

There is no conclusive answer as to whether there is a need for public sector BAN support. As the preceding section reveals, evidence and opinions are mixed. This chapter, however, provides some food for thought for policy-makers that strive to promote entrepreneurship through suitable measures.

First, when evaluating whether the state should intervene by supporting BAN activity one has to consider the development of the angel investor market. In countries where the market is underdeveloped, as in many of the Eastern European and some of the Central European countries, there might not be sufficient private-sector initiatives to build a well-functioning BAN. In such a context public sector intervention in the angel market involves the greatest benefits. There is also a need to increase awareness of business angel investing in general in these instances. For instance, Russia's population is greater than the UK's, yet EBAN statistics indicate that the number of business angels in Russia is 5 percent of that in the UK (EBAN, 2014b). This implies there is a lot of growth to be achieved in terms of angel investment additionality before the market reaches a point of maturity. As in the example of EstBAN, when new BANs are set up, there is much to be learned from existing ones. This may help in identifying best practices in BAN operations. However, Russia is characterized by an environment with institutional weaknesses such as corruption, weak property rights enforcement and negative informal values towards entrepreneurship (Aidies et al., 2008). In such an environment, trade credit substitutes for bank credit and reinvestment of profits for outside equity (ibid.). BAN establishment could contribute to enhancing the entrepreneurial culture and in such may change the way entrepreneurship is perceived in society. However, the legal system still provides a challenge, as there is limited support for broken contracts. This may make hold back the development of angel investor activity in Russia.

Second, the cost efficiency of public sector support for BANs should be compared to that of other public sector initiatives to support entrepreneurship, as was the case in Collwaert et al. (2010). While the study in question suggests that public sector support of BANs was cost-efficient in the region of Flanders, Belgium, this was dependent on the assumption that companies that obtained funding through the BAN would not have survived without the investments. In a more conservative estimate considering only the net job growth created after the investments, cost efficiency in terms of jobs per subsidy decreases markedly. It is important for policymakers to ensure that that any BAN public funding is injected into a productive use, where researchers are able to evaluate its direct and indirect effects.

Third, as found in Mason and Harrison (2010), it is meaningful to assess BAN service performance for its help in converting BAN deal flow into presentable investment opportunities. It is invaluable for BANs to involve the angel investors in developing these services. Experienced angel investor knowledge helps to ensure that investment readiness programs, angel training and deal brokering platforms meet the real needs of angel investors in the market. This helps to overcome the problem illustrated in Knyphausen-Aufsess and Westphal (2008) whereby BAN services do not appeal to large parts of the angel investor population. To avoid this, policymakers should promote models where angel investors share responsibility with the BAN management in the organization of key tasks. Successful European BANs are obtaining features of angel groups, where angel investor involvement is substantial and BAN management's role is fairly limited.

Finally, one could suggest that public sector intervention in a market should decrease as time passes and eventually be terminated. Successful BANs are able to develop services that their members are willing to pay for and have the potential to cover their expenditures with internally generated funds and sponsorships from

corporations. Their less-successful counterparts may fail to attract high-quality investment opportunities and/or to improve the investment readiness of their deal flow, limiting the number of deals that are made. In a situation where public sector support is terminated, only the most competitive BANs will remain in the marketplace. For policymakers it is important to ensure that these remaining BANs contribute to bridging the equity gaps that exist in the market.

In summary, extant research on BANs is scarce and concentrates on assessing whether the government should support BAN activity. This means that there is a lot of scope for future research. The following section provides four suggestions for future BAN research.

14.9 AVENUES FOR FUTURE RESEARCH

First, one of the suggestions made in this review, and also in Knyphausen-Aufsess and Westphal (2008) for that matter, is that the human capital of those that actively contribute to BAN activities have a great impact on its success in creating socioeconomic value. The human and social capital of BAN management greatly affects the quality of the services provided. An interesting avenue of future research would be to study whether the level of experience that a BAN can draw upon influences its success. Success in this scenario could be both short-term goals like recruiting new business angel members and creating funding additionality, and long-term goals like creating added value in terms of new employment and profitable growth. This kind of analysis would require an access point to the data of several BANs.

Second, Mason and Harrison's (1997) investigation of publicly supported and private BANs goes back more than 15 years. This implies that there is a need for an up-to-date picture on the differences between the roles and activities of publicly supported and private BANs.

Third, research needs to examine how the maturity of a market affects the types of BANs in the marketplace and their performance. As was indicated in the earlier discussions, BANs can significantly increase the additionality of angel investments in a market that is underdeveloped, expanding the number of BAN members and the number and worth of investments made. In more mature markets, angel investor groups and clubs may emerge from outside the BANs and replace them. Consequently, the number of BAN-facilitated deals may decline over time. The number of commercial networks tends to increase with a market's development. It is also worth investigating how business angel involvement in BANs is influenced by the maturity of a market. With the passage of time, the need for a strong public BAN may be eliminated, as angel investors are able to self-organize to promote their interests.

Finally, the effects of public support for BANs should be compared to that of tax breaks for angel investors. Tax breaks exist in the USA and many European countries, such as the UK, Ireland, Finland and Luxembourg. The two policy-measures have the goal of increasing venture growth. It may be relevant to make a comparison of how well they achieve their objectives and their cost-efficiency. However, these are not competing public initiatives. While tax incentives may increase the additionality of angel funding, they do not enable business angels and entrepreneurs to connect (Mason, 2012). Hence, tax incentives are no substitute for the BANs, even if they so increase investment activity.

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Does startup experience matter? Venture capital selection criteria among Israeli entrepreneurs

Yakir Falik[a], Tom Lahti[b] and Henrik Keinonen[c]

[a]Mobile Clinic Inc., Helsinki, Finland; [b]Department of Management and Organisation, Hanken School of Economics, Vaasa, Finland; [c]Department of Economics, Hanken Centre of Corporate Governance, Hanken School of Economics, Helsinki, Finland

ABSTRACT

In this study we are concerned with understanding Israeli entrepreneurs' selection criteria in choosing a venture capital (VC) firm. Our primary aim was to investigate how startup experience impacts entrepreneurs' trade-offs between resource-related criteria and criteria related to the conditions of the deal. Hypotheses are drawn from agency theory, the resource dependence perspective and extant VC research. Data is gleaned from interviews with 144 Israeli entrepreneurs that are either in the process of acquiring VC or have recent experience of raising it. Hypotheses are tested with ordinal logit models. Results demonstrate that there is a negative relationship between startup experience and the importance entrepreneurs attach to valuation, and that the importance attached to a VC firm's network and reputation moderates this relationship. In addition, the importance attached to a VC firm's network moderates the relationship between startup experience and the importance assigned to contractual terms. Furthermore, results indicate that while inexperienced entrepreneurs attach more importance to valuation than experienced ones, they tend to emphasize it less when they seek to gain access to a VC firm's network of contacts. Entrepreneurs are shown to be more concerned about valuation when they approach less reputable VC firms, particularly if the entrepreneur has substantial startup experience.

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Introduction

There is considerable research that examines the investment criteria of venture capital (VC) firms (e.g. Macmillan, Siegel, and Narasimha 1985; Macmillan, Zemann, and Subbanarasimha 1987) and their decision-making procedures (e.g. Boocock and Woods 1997; Van Osnabrugge 2000) in the selection of entrepreneurial projects to fund. Entrepreneurial and management team characteristics (e.g. Hisrich and Jankowicz 1990; De Leó and Guild 2003) and growth potential (e.g. Zacharakis and Meyer 1998; Cope, Cave, and Eccles 2004) are shown to be the key investment considerations.

CONTACT Tom Lahti tom.lahti@hanken.fi

In contrast, we have limited understanding of the reverse situation: what entrepreneurs look for when they screen VC firms. Extant research on the topic can be separated into two streams. The first utilizes studies of VC firms' value-added contribution to indirectly infer that entrepreneurs seek non-financial benefits from VC involvement (Kaiser, Lauterbach, and Verweyen 2007; Zheng 2011). The second asks entrepreneurs directly what they are looking for in a VC firm (Smith 2001; Valliere and Peterson 2007). It is this latter stream of research that this study primarily draws upon.

Smith (2001) was the first to demonstrate that entrepreneurs make a meaningful choice when they decide which VC firms can invest in their companies. When asked how many VC offers they had received, 97% of 136 entrepreneurs questioned said they received more than one, while 53.68% received three or more. The mean number of offers was 3.18. Smith deducted that entrepreneurs consider four criteria when selecting a VC firm: (1) valuation, (2) value-added services, (3) the VC firm's reputation and (4) the VC firm's attributes, such as industry specialization and prior operational experience. Variation in the selection criteria is explained in part by the entrepreneurs' level of business experience and the VC firm's life-cycle stage.

Valliere and Peterson (2007) are interested in how experience influences criteria when selecting a VC firm. Relying on data from 59 entrepreneurs, they evaluate 7 selection criteria: (1) valuation, (2) terms and conditions, (3) value-added services, (4) reputation, (5) skill and independence, (6) personal compatibility and (7) ease of deal making. Whereas Smith (2001) studied business experience, Valliere and Peterson (2007) also measure experience as the number of times entrepreneurs have previously sought VC.

Their study argues that the entrepreneurs' stock of VC wooing experience develops a dominant logic that influences future actions and decisions. Moreover, the authors suggest that this past builds up an expertise that increases the entrepreneurs' credibility from a VC firm's perspective, and adds to their VC firm selection savvy. The study uses conjoint analysis to gain an insight into the entrepreneurs' actual selection criteria in practice. As entrepreneurs tend to make their selection based on a bundle of criteria representing the VC firm's offerings, and not individual criteria, the conjoint analysis provides examples that simulate real decision-making processes. The results from the conjoint analysis are then compared with their espoused criteria.

Valliere and Peterson (2007) found that novice entrepreneurs value the stated criteria differently from more experienced entrepreneurs, and that entrepreneurs tend to value these criteria differently in practice than what they espouse. Results show the most important criteria were valuation and the terms and conditions of the investment. In addition, as entrepreneurs gain experience they appear to attach more importance to personal compatibility with VC firm managers.

The aim of the current study was to investigate the influence of startup experience on entrepreneurs' trade-offs between resource-related criteria and criteria related to the deal's conditions. Resource-related criteria are the perceived importance of access to a VC firm's network of contacts and the perceived importance of a VC firm's reputation. Reputation is understood to be a resource because a reputable actor can potentially certify the quality of an entrepreneurial venture and perhaps improve the entrepreneurs' chances of obtaining resources from relevant actors within their target market. Criteria related to the conditions of the deal are the perceived importance of valuation and contractual terms offered by the VC firm.

We anticipate that less experienced entrepreneurs are more concerned about valuation and contractual terms than their more experienced counterparts. However, inexperienced entrepreneurs looking to obtain value added through access to a VC firm's network and certification cannot put strong demands on the deal's contractual terms and valuation. This is reflected in their lower inclination to assign high importance to these criteria in their selection process. Hence, this study predicts that an entrepreneur's startup experience is negatively related with the importance attached to valuation and contractual terms, but that this relationship is moderated by the importance attached to a VC firm's network of contacts and reputation.

These hypothesized relationships are derived from agency theory and the resource dependence perspective. When we apply agency theory we look specifically into the problem of adverse selection that arises, for instance, if the asymmetric information causes entrepreneurs to select a VC firm of inadequate quality, or conversely, when VC firms turn down entrepreneurs offering high-quality investment opportunities. We strive to answer the following research questions.

- How does startup experience influence the importance entrepreneurs attach to valuation and contractual terms, and how do criteria related to a VC firm's network of contacts and reputation affect this assessment?
- What are the merits of agency theory and the resource dependence perspective in explaining the relationship between Israeli entrepreneurs' startup experience and the importance that they attach to valuation and contractual terms?

The study makes the following contributions. First, it adds to our knowledge of what entrepreneurs consider important when selecting a VC firm. This knowledge is particularly important for VC firms, as they need to target their offerings to entrepreneurs with different characteristics and levels of experience. When it comes to high-quality investment opportunities, VC firms face strong competition within several domains. They compete with other local and foreign VC firms, other sources of capital, such as banks, corporate funds, business angels and governmental funding institutions (e.g. Sohl 2003), as well as actors such as research foundations, academic institutions and professional service providers that fund projects eligible for VC investment (Valliere and Peterson 2007). Further insight about what entrepreneurs consider important better equips a VC firm to respond nimbly to entrepreneurial need, which can provide it with a competitive edge in the marketplace.

Second, while Valliere and Peterson (2007) point out the investment criteria trade-offs that are made in their comparison of various conjoint bundles, there are certain research topics we feel are worth exploring further. The current study is concerned with explaining the importance of two specific criteria: the importance attached to valuation and the importance of the contractual terms. We predict that startup experience determines the importance attached to these two criteria, but argue that this relationship is moderated by the importance the entrepreneur attaches to two other features: the VC firm's reputation and network of contacts. As we look at entrepreneurial perceptions of the importance of selection criteria in relation to the most recent VC investments, inferences can also be drawn about the features of the actual investment that followed the entrepreneurs' selection.

The third contribution of our study is its extension of research on entrepreneurial selection criteria to a new geographical and cultural context, as it focuses on entrepreneurs and the VC market in Israel. Smith (2001) studies US entrepreneurs, whereas Valliere and Peterson

(2007) examine entrepreneurs from the US, Canada and the UK. The Israeli VC market provides an interesting context, as it has been ranked as the most vibrant market in the world in terms of investment activity per GDP (OECD 2015). Most Israeli venture capitalists are former entrepreneurs who have received VC themselves and possess extensive business networks (Honig 2001). For this reason, they are likely to have the means to positively influence the development of a venture. As indicated earlier, if the perceived value added of a VC firm is substantial, less experienced entrepreneurs in particular may be ready to accept less favourable deal terms.

The structure of the paper is as follows. The literature review first looks into the VC market in Israel. In order to understand its nature it is essential to examine how it has emerged and evolved over time. The theoretical underpinnings of this study are then addressed. The subsequent methodology section describes the sample, survey process and study research methods. Thereafter, the empirical results of the study are presented. The final section discusses the key outcomes, evaluates the hypotheses developed in the literature review and concludes the study by making suggestions for future research.

Literature review

This section starts by providing an overview of the evolution of the VC market in Israel. Thereafter follows a presentation of the theoretical lenses used in this study: agency theory and the resource dependence perspective. Based on our knowledge of VC, particularly the VC market in Israel, hypotheses about how entrepreneurs' experience may influence the importance they attach to valuation and contractual terms in the selection of a VC firm are presented next. It ends with a summary of the literature review.

The Israeli VC scene

Since the 1990s, Israel has been host to the most dynamic technology cluster outside the US. This success is the product of an innovative entrepreneurial culture, skilled immigration, prestigious education, a proactive government policy and the presence of a locally managed VC industry (HTIA 2011). The Israeli VC industry experienced substantial growth in the 1990s, when Israel's annual VC outlay rose nearly 60-fold from $58 million to $3.3 billion. Israel ranks first in the world for VC investments as a percentage of GDP (OECD 2015).

The successful emergence and expansion of a VC market has been important in transforming Israel into an innovation cluster: "where the environment favours the creation and development of high potential entrepreneurial ventures and that is characterized by a heightening mobility of resources, including people, capital and information" (Engel and del-Placio 2011). Israel share many similarities with Silicon Valley, where durable network configurations exist between startups, investors, service providers, corporations of all sizes and scope, and institutions like universities and research centres (Friedman 2008).

The Israeli government's strong supportive role has been a distinctive factor in the development of the VC market in Israel since its inception (Ber 2002; Avnimelech, Kenney, and Teubal 2004). Important public institutions were established that would make substantial efforts to promote not only entrepreneurship (e.g. Breznitz 2007) but also cooperation between US and Israeli firms (Jeng and Wells 2000; Engel and del-Palacio 2011; Rosiello, Avnimelech, and Teubal 2011). The Ministry of Trade and Industry's Office of the Chief

Scientist (OCS) provided R&D grants and funding to numerous startups (e.g. Breznitz 2007), while the Bi-National Industrial Research and Development Foundation promoted cooperation between US and Israeli firms (Jeng and Wells 2000; Engel and del-Palacio 2011; Rosiello, Avnimelech, and Teubal 2011). In addition, the Israel Armament Development Authority (RAFAEL) sponsored graduate academic education for a few hundred employees in top US engineering schools to maintain a strong bond between the countries (Engel and del-Palacio 2011).

Yet the most important and influential governmental move took place in 1993 when it established the Yozma programme, a direct initiative to create a domestic VC market. It provided $100 million to establish nine VC firms (Jeng and Wells 2000). Yozma put up 40% of the capital, while two VC firms, one domestic and one foreign, provided the remaining amount. Five years later, the two firms in question bought out the government. By then the operation had $200 million in new funds under management, two dozen experienced VC fund managers and several committed foreign VC firms (Isenberg 2011).

Another factor that fostered VC growth was the Israeli government's indirect support via legislation that allowed for (i) tax-free investment in Israel by foreign VC firms that had tax-free status in their home countries, and (ii) a favourable taxation of individual investors making investments in equity securities (Jeng and Wells 2000). The latter helped produce a healthy stock market that in turn provided an exit route for the Israeli VC industry.

The stock listings were not limited to Israel's stock exchange (TASE), as more than 50 Israeli companies raised funding from US stock exchanges as well (Jeng and Wells 2000). After a string of successful exits, Israeli VC firms enhanced their reputation and attracted companies such as IBM, Cisco, Intel and Nokia to act as limited partners in their funds (Avnimelech and Teubal 2006). Another successful government initiative was OCS development of a programme encouraging US VC firms to come to Israel (Royker 2011).

From 2004 onwards the industry expanded to include other types of actors beyond the traditional VC firms, such as business angels, corporate VC and technology-oriented investment companies (Avnimelech and Teubal 2006). This increased diversity in the marketplace made it important for VC firms to actively market their value-added contributions in order to continue to attract a decent flow of high-quality deals.

Today, the Israeli VC market comprises 38 Israeli and 84 foreign VC firms. Both former entrepreneurs (Honig 2001; Avnimelech and Teubal 2006) and managers of large established companies (Avnimelech and Teubal 2006) now act as VC managers. The non-financial benefits are potentially considerable as the prominent VC firms are strongly embedded in the Israeli startup ecosystem.

This feature of the startup ecosystem provides entrepreneurs with access to a network with numerous links to both domestic and global actors in the local market (Friedman 2008). Many VC firms in Israel have ties to actors in the US startup ecosystems, particularly in Silicon Valley. The presence of global actors in the VC network may substantially improve a new venture's opportunity to capitalize on international opportunities and growth prospects.

In the discussion section our understanding of the context provided by Israeli VC market is utilized to analyse the results. The following section introduces the theories that our article builds on and places them alongside previous VC research to derive hypotheses.

Agency theory and the resource dependence perspective in VC firm selection

During the selection of a VC firm, an entrepreneur can run into what are known as *agency problems*. There are two types of agency problems, namely adverse selection and moral hazard (e.g. Jensen and Meckling 1976; Amit, Glosten, and Muller 1990). *Adverse selection* occurs when an entrepreneur selects a VC firm of insufficient quality. The bad choice is due to an information asymmetry, making entrepreneurs unable to determine the intentions and investment management quality of the VC firm.

Entrepreneurs who are too picky in their selection process face the risk of rejecting offerings from actors that have the means to enhance value, and being left with only unsuitable VC firms. Sahlman (1997) highlights that it is far more important whose money you get, than how much you pay for it. His comment suggests that entrepreneurs cannot afford to get in a relationship with a VC firm if the interests and expectations are not aligned from the start. Under such conditions moral hazard may emerge.

Moral hazard implies that a VC firm's actions are motivated by self-interest instead of mutual benefit. For example, VC firms may impose harsh punitive covenants, claiming adherence to industry standards, leaving entrepreneurs unclear about the implications (Cable and Shane 1997; Lahti 2014). The relationship between the two parties might be characterized by disputes and unethical behaviour, rather than collaborative action and mutual support (see Cable and Shane 1997).

A VC firm has diversified its risks by investing in a portfolio of ventures that sometimes span various industry sectors and phases of development. In contrast, entrepreneurs have often invested much of their time and net worth in one particular venture. Also, firms managing VC aren't as dependent on successful investments for their revenue, as they also charge a fixed capital management fee of typically 1.5–3% (Sahlman 1990; De Clercq et al. 2006). VC firms have less to lose if an investment results in a failure, and for this reason, they might encourage entrepreneurs to pursue strategies that optimize portfolio performance, endangering the fledgling business. Such behaviour by a VC firm is self-absorbed, as it does not consider the standpoint of the entrepreneur.

The VC firm's value-added contribution can also be examined from *a resource dependence theory perspective*, which argues that firms must enter into interorganizational relationships because they cannot generate all the required resources they need internally (e.g. Pfeffer and Salancik 1978; Maula 2001). The relevance of external resources has been found to be particularly high in both companies at an early stage of development and companies that may be facing decline and bankruptcy (see Hillman 2009).

The theory is a fruitful one in the domain of VC, as VC firms may provide several beneficial resources that may positively influence a venture's performance (e.g. Sapienza, Manigart, and Vermeir 1996; Hellmann and Puri 2000; Hillman and Dalziel 2003). According to the *resource dependence theory* a VC firm's value added is a function of the venture's needs. Consistent with the theory, Sapienza, Manigart, and Vermeir (1996) highlight three conditions that increase the VC firm's value added: (1) when venture capacities fall short of venture "needs", (2) when the venture faces great uncertainties about optimal strategies or implementation of the chosen strategies and (3) when the VC firms themselves appear to offer a significant source of information (see also Pfeffer and Salancik 1978).

They add that VC firms are most valuable when they are able to reduce critical venture uncertainties. Entrepreneurs selecting a VC firm therefore evaluate the latter's potential to

contribute value added, particularly when the venture is short of resources, both financial and non-financial, and when there is considerable uncertainty regarding the venture's current and future direction.

In the following, this study makes use of the two theories to hypothesize the impact of startup experience on VC firm's selection criteria. First it looks into the importance attached to valuation and contractual terms, after which the focus shifts to the moderating effects of access to networks and reputation. Our knowledge of the Israeli VC market is utilized for hypotheses building.

Startup experience as a predictor of the importance entrepreneurs attach to valuation and contractual terms

For experienced entrepreneurs "valuation" is a non-compensatory selection criterion (Valliere and Peterson 2007), whereby the price of the investment is a potential deal breaker. Israel has a strong pool of world-class entrepreneurs (Engel and del-Palacio 2011), many of whom have previous experience raising VC. These entrepreneurs are better placed to select among the investors, and sometimes even make them compete for the opportunity to invest.

As was stressed before, there are plenty of VC firms in Israel to choose from. Entrepreneurs are therefore better placed to turn down an investment offering if the price is not right and another investor can provide better valuation. As VC firms tend to perceive entrepreneurial experience as the most important criterion in their selection of investment opportunities (e.g. Macmillan, Siegel, and Narasimha 1985), entrepreneurs with extensive experience basically have their pick of the litter. Conversely, entrepreneurs with little experience have an inferior bargaining position, as previous startup experience is one of the determinants that positively influence the perceived value of a venture (e.g. Amit, Glosten, and Muller 1990).

For the aforementioned reasons, we believe that entrepreneurs with less startup experience are more concerned about valuation and therefore attach relatively more importance to it in their search for a VC firm than those with more experience. They lack a track record that would inspire confidence in VC firms (e.g. Van Osnabrugge 2000), as entrepreneurial business skills are largely obtained from "learning by doing" (Zhang 2011). Thus, we surmise that lack of relevant experience is one determinant that negatively influences venture valuation, and we arrive at our first hypothesis.

> Hypothesis 1a: A negative relationship exists between an entrepreneur's startup experience and the importance attached to a VC firm's valuation.

Entrepreneurs with less startup experience are also expected to have to give up more control by accepting terms and conditions to the deal that provide protection for the VC firm (Kaplan and Stromberg 2003). VC firms see inexperience as a source of uncertainty, and so they strive to alleviate their insecurity by including, for example, veto rights that strongly restrict the entrepreneurs' decision-making authority, and liquidation rights that allow it withdraw if the entrepreneurs do not meet certain performance milestones (e.g. Sahlman 1990). The more control a VC firm has in the venture in terms of board and voting rights, the higher its influence on the chosen strategy (Kaplan and Stromberg 2003). As suggested before, circumstances may arise where a VC firm pushes entrepreneurs to take excessive risks to maximize return. Entrepreneurs may stand to lose a substantial share of their net worth as a result.

Inexperience also impacts an entrepreneur's knowledge of VC firm investment procedures. They may not understand the implications of contractual covenants and negotiating terms in terms of their own best interests. Thus, we predict that entrepreneurs lacking startup experience will be more concerned about the contractual terms a VC firm offers: our second hypothesis.

Hypothesis 2a: A negative relationship exists between an entrepreneur's startup experience and the importance attached to a VC firm's contractual terms.

The moderating effect of the importance attached to a VC firm's network of contacts

From a resource dependence perspective, it can be suggested that entrepreneurs with resource constraints need to attract external resources to guarantee their venture's survival. If they are unable to develop their operations further without the participation of a VC firm, their situation may not allow for selectivity with respect to valuation.

Inexperienced entrepreneurs often suffer from resource constraints, as they commonly do not have an extensive network of contacts to draw on (see Zhang 2011). The lack of a well-developed knowledge base and capital from previous entrepreneurial successes is also a problem. A VC firm's value-added services therefore have a particular appeal to more inexperienced entrepreneurs (e.g. Kelly and Hay 2000; Smith 2001), as the firm can significantly add value by making its network of contacts available. Among other things, a VC firm's network can provide contacts to lawyers, accountants, and potential customers, suppliers and partners (e.g. Fried and Hisrich 1995; Sapienza, Manigart, and Vermeir 1996). A well-connected VC firm can also provide entrepreneurs with access to business facilities and distribution channels. Novices can fill possible knowledge or experience gaps by hiring competent personnel and appointing board members from the VC firms' network of contacts. However, if entrepreneurs become too selective in their search for substantial value, they risk rejecting offerings from the best funding partners, as suggested earlier.

Experienced entrepreneurs may not benefit markedly from a VC firm's contact network, if their previous experience provides them with more ties to relevant stakeholders in the local and international market of their new venture (Honig 2001; Zhang 2011). Their relatively higher access to social capital can then be presumed to reduce their dependence on a VC firm for external resources.

We expect that entrepreneurs with no or limited startup experience are not willing or able to put much emphasis on obtaining favourable valuation or contractual terms when their primary objective is access to a VC firm's network of contacts. We therefore predict that novice entrepreneurs will attach less importance to valuation and contractual terms, hence our next hypothesis.

Hypothesis 1b: The importance an entrepreneur attaches to a VC firm's network moderates the relationship between an entrepreneur's startup experience and the importance attached to valuation: the higher the values entrepreneurs attach to a VC firm's network of contacts, the more positive the influence of startup experience on the importance of valuation.

Hypothesis 2b: The importance an entrepreneur attaches to a VC firm's network moderates the relationship between an entrepreneur's startup experience and the importance attached to contractual terms: the higher the values entrepreneurs attach to a VC firm's network of contacts, the more positive the influence of startup experience on the importance of contractual terms.

The moderating effect of importance attached to a VC firm's reputation

As noted earlier, uncertainty regarding the quality of an investment opportunity is high when entrepreneurs lack a track record from previous entrepreneurial activities. The venture's credibility in the market is then relatively low, as the entrepreneurs have not demonstrated their capability to turn a business idea into a profitable business (e.g. Amit, Glosten, and Muller 1990). Serial entrepreneurs on the other hand may need less convincing in the eyes of stakeholders such as potential customers, employees and suppliers, as their previous experience renders them more reputable actors on the market (e.g. Lahti 2014). However, what novice entrepreneurs lack in terms of reputation, might be found in their association with a top-tier VC firm (Smith 2001).

The fact that a reputable VC firm invests in a venture indicates that their due diligence, or detailed investigation of the business opportunity, has left them with a good impression. For inexperienced entrepreneurs, obtaining VC from a top player in the market conveys a strong signal of quality among the relevant actors within their target market, which assists in reducing uncertainty by legitimizing the venture and its entrepreneurs (Smith 2001; Hsu 2004).

From an agency theory perspective, a credible signal reduces uncertainty among potential stakeholders about the quality of the new venture, and hence the risk of adverse selection (e.g. Lange et al. 2001; Hsu 2004). From a resource dependence perspective, VC firm certification of a venture's quality provides the most value when the reputation of the entrepreneur isn't strong enough to attract sufficient resources. The backing of a VC firm with a good reputation often reduces the liability of inexperience.

Reputable VC firm managers that have accumulated valuable expertise, knowledge and business contacts from previous successes do not have an incentive to participate in an investment if they perceive that they are not sufficiently rewarded in terms of ownership. We assume that entrepreneurs with no previous startup experience will not impose high valuation demands when they choose to approach the most reputable VC firms.

Also, there is evidence to suggest that the most experienced and reputable VC firms tend to make use of more comprehensive contracts (see Kaplan, Martel, and Strömberg 2007). This implies that an entrepreneur that selects a reputable VC firm is forced to give up some decision-making and control rights in exchange for the funding. We expect that, in particular less experienced entrepreneurs are not willing to put a strong emphasis on valuation and contractual terms if they perceive that there are clear benefits to be had from certification. This is to have a better chance of qualifying for funding. It can be assumed that experienced entrepreneurs that have already made a name for themselves may not benefit as much from certification and hence the importance they attach to contractual terms is not affected by a VC firm's perceived reputation to the same extent. Hence, the two following hypotheses:

> Hypothesis 1c: The importance an entrepreneur attaches to a VC firm's reputation moderates the relationship between an entrepreneur's startup experience and the importance attached to valuation: the higher values that entrepreneurs attach to a VC firm's reputation, the more positive the influence of startup experience on the importance of valuation.

> Hypothesis 2c: The importance an entrepreneur attaches to a VC firm's reputation moderates the relationship between an entrepreneur's startup experience and the importance attached to contractual terms: the higher values that entrepreneurs attach to a VC firm's reputation, the more positive the influence of startup experience on the importance of contractual terms.

Methodology

This section reports on the data collection, survey process, methods of analysis, study variables, methodological limitations and characteristics of the sample.

Data collection

Data were gathered in summer and autumn 2012 from entrepreneurs that have been responsible or partly responsible for obtaining VC. To gather it, we participated in events that were organized by the following Israeli entrepreneurial associations and societies: "IHTA (Israel High Tech Association)", "TechAviv", "TAU", "IDC Elevator" and "Microsoft Think Academy".

These organizations give a broad representation of the Israeli startup ecosystem. For example, TAU is an academic society, Microsoft Think Academy is classified as a provider of corporate finance, and IDC Elevator is a private accelerator. The events are designed to foster matchmaking between entrepreneurs and VC firms, and many of the entrepreneurs they host are responsible for obtaining VC. Participation is open to the public, meaning any Israeli entrepreneur can attend, but only members of the organizing associations and societies can pitch their ideas to the investors.

During five startup financing events, printed questionnaires were handed out to the participants. One hundred and sixty-three responses were obtained from a total of 626 event participants. Six responses were eliminated due to missing data and 13 were deemed ineligible, as they did not fit the selection criteria addressed in the following paragraph. This left us with 144 completed questionnaires.

Entrepreneurs had to meet the following two criteria to be eligible for participation in the study: (i) they had either applied for VC within the last 2 years, or (ii) were currently in the process of applying for VC. This is the population that our study seeks to make generalizations about. It may not be possible to establish a figure for the size of the population our sample represents, however, as there is no data on the number of entrepreneurs who were unsuccessful in securing VC. We can only identify a figure for the number of VC deals that materialized during the 2011–2012 time period, when 509 deals were successfully brokered.[1] This figure provides an accurate figure for one segment of our target population, namely those that had acquired VC within the last 2 years.

Survey process

Before data was gathered at the events, the questionnaire was pre-tested with two Israeli entrepreneurs with experience raising VC. Only minor changes were suggested in terms of wording. The pre-tests nevertheless ensured that the respondents would understand the questions correctly.

The two-page questionnaire was made available in English and Hebrew, and featured two series of questions. The first inquired about the characteristics of: (a) the entrepreneurs, (b) their ventures and (c) the amount of VC they applied for from the VC firm. The second asked the respondents about the investment criteria they considered in their funding application process. Most of the questions were directly adopted from extant research, with some requiring slight scale modification. The section below provides more information on the operationalization of the study variables.

The study tested the hypotheses using ordered logit regressions. The statistical software STATA 11.2 was employed in conducting the regression runs.

Study variables

The dependent variables in this study were the *importance entrepreneurs attached to valuation when selecting a VC firm* (clarified in the questionnaire as the amount of equity entrepreneurs will forego in return) and the *importance entrepreneurs attached to contractual terms offered by a VC firm*. The importance was measured on a five-point Likert scale, ranging from not important (=1) to very important (=5), a scale directly adopted from Valliere and Peterson (2007) and Smith (2001). Entrepreneurs were asked to make the assessment with respect to a specific venture for which they had applied for funding, and for this reason, the selection criteria is not meant to represent general investment preferences.

The independent variable in this study is *startup experience*. It is an ordinal variable distributed into the following three groups: (i) nascent, (ii) novice and (iii) serial entrepreneur. Respondents were asked whether they currently owned (or partly owned) a business. The alternatives were no (coded as 0), one (coded as 1) and more than one (coded as 2). Similarly, entrepreneurs were asked whether they have ever sold a business, with alternatives being no (coded as 0), one (coded as 1) and more than one (coded as 2).

Nascent entrepreneurs were those who currently had a business idea and were looking for VC, but had not yet founded a company. They neither owned a business nor had sold one, and therefore ranked lowest in terms of entrepreneurial experience. Novice entrepreneurs were respondents that either owned or had owned one business. Serial entrepreneurs denoted those entrepreneurs who owned more than one company, owned one company and had sold one, or had sold more than one company. This implied they had ownership experience in at least two businesses. The entrepreneurial experience variable we employed in this study is a modification of the one used in Valliere and Peterson (2007).

This study also makes use of two moderating variables. The first is the *importance entrepreneurs attach to access to a VC firm's network*. The second is the *importance entrepreneurs attach to a VC firm's reputation*. Their importance was likewise measured on a five-point Likert scale ranging from not important (=1) to very important (=5), variables adopted from Valliere and Peterson (2007) and Smith (2001). Entrepreneurs were asked to make the assessment with respect to a specific venture for which they had applied for VC.

And lastly, the study made use of three control variables. The first was the *entrepreneurs' experience in approaching VC firms for funding*. This was measured by asking respondents whether they had ever attempted securing VC in the past. Alternatives were no (coded as 0), once (coded as one) and more than once (coded as two). This control was important to include in the study, as it is not only startup experience but also experience in the VC investment process that matters, when it comes to entrepreneurial perception of the importance of the VC firm selection criteria. We assume that more experience may alter entrepreneur preferences with regard to the selection criteria. Thus, it is important to control for its effect on the startup experience. The variable has been modified from a similar one used in Lahti (2014).

The second control variable is the *stage of development of the venture*. In measuring the stage of development, a division was made into (i) seed/startup phase (explained in the questionnaire as the stage when the entrepreneurs develop the initial concept), (ii) launch,

(explained in the questionnaire as the stage when the company seeks the first revenues), (iii) rapid growth (explained in the questionnaire as the stage when the company's revenues and capacity is increasing), (iv) expansion (explained in the questionnaire as the stage when the company is increasing in scale and breath) and (v) maturity (explained in the questionnaire as the phase when a company is able to optimize revenue despite strong growth). The development stage is another important control factor, as both Smith (2001) and Valliere and Peterson (2007) suggest that the importance of the selection criteria varies over time.

The third and final control variable is the *size of the investment*. As with the stage of development, the size of the investment is also likely to influence the importance of investment criteria. It can be assumed that this is especially the case with valuation, as the size of the investment directly influences the amount of equity an investor obtains in exchange for invested capital.

Sample characteristics

Table 1 describes the sample characteristics. It demonstrates that the vast majority of the respondents participating in the study were men between the ages of 18 and 40. Eighty-five per cent of the companies represented were at an early stage of development, engaged in initial concept development (seed/startup) or seeking first revenues (launch). In terms of industry sector distribution, the information technology and telecom (IT) industry was the best represented, accounting for 60% of the sample.

The size of investments sought by the entrepreneurs in this study was relatively small, with more than 70% applying for less than one million euros. Less than half, or 40% of the entrepreneurs, were nascent entrepreneurs with no previous startup or company ownership experience. Yet these entrepreneurs were nonetheless preparing for their first foray into VC and well aware of what they deemed important in terms of selection criteria.

Novice entrepreneurs with past experience in business creation accounted for a slightly larger percentage, at 42%. Although the sample contained fairly inexperienced entrepreneurs, they tended to be relatively familiar with VC funding, as nearly 40% have previously applied for VC or worked in a VC-backed company. While this could indicate that they have a good understanding of VC, only 3% considered themselves to be an expert in the field. Israel is known for its dynamic VC industry, so the average Israeli understanding of its workings could well exceed that found in other parts of the world.

Methodological limitations

Studies that rely on self-reported data from interviews and questionnaires have been criticized by some (e.g. Shepherd 1999; Shepherd and Zacharakis 1999). In the case of this study, it calls into question the respondents' ability to be truly introspective and recall from memory how the VC decision was made. Conjoint (e.g. Shepherd 1999; Valliere and Peterson 2007), repertory grid (e.g. De Leó and Guild 2003) and verbal protocol analysis (e.g. Hall and Hofer 1993) are examples of study methods for capturing more real-time decision-making.

We acknowledge the limitations that may arise from our chosen data-gathering approach and have attempted to reduce the recall bias by asking the respondents to focus on their most recent investment or current activities. In the latter part of the sample, the bias should

Table 1. Sample characteristics.

Sample characteristics	Percentage
Gender	
Male	89
Female	11
Age	
18–30	28
31–40	54
41–50	13
51–60	5
Stage of development	
Seed/startup	59
Launch	26
Rapid growth	7
Expansion	6
Maturity	2
Industry sector	
Information technology	60
Life sciences	1
Service industry	21
Distribution/Wholesale	5
Manufacturing	4
Retail	8
Other	1
Size of the investment	
Up to €100 k	22
€100 k–€300 k	20
€300 k–€700 k	26
€700 k–€1 M	7
>€1 M	26
Currently owns a company	
No	44
Yes	47
More than one	9
Sold or closed a company	
No	65
Yes	28
More than once	7
Experience as an entrepreneur	
Nascent	40
Novice	42
Serial	18
Approached VC firms for funding	
No	61
Yes	29
More than once	10
Ever worked in a VC-backed firm	
No	59
Yes	41
Knowledge of obtaining VC	
Novice	48
Average	33
More than average	15
Expert	3

not exist, as the entrepreneurs' selection process is ongoing. The following paragraphs explore other potential limitations of our data.

Members of entrepreneurship associations and societies taking part in our study are likely to be more active and connected than the average entrepreneur, but this is negated in some part in that these events were also open to the public. We failed to ask our respondents whether they were members, however, and admit that is a limitation of our study, as it is highly likely that members of entrepreneurial associations and societies are better connected than non-members. This might be reflected in a lesser need on their part for (i) access to a VC firm's network of contacts and (ii) venture credibility from a highly reputable VC firm. This would naturally influence their ratings of these criteria.

Our sample includes both respondents that were looking to obtain funding from a VC firm in 2012 and those who had received funding within the past 2 years (2010–2012), making it difficult to establish accurate information on the population that our sample draws from. This is complicated by the fact that there is no record of VC firm deal flow in the Israeli market, i.e. the number of entrepreneurs approaching them for funding. The extent to which our sample is representative of the population under study is therefore hard to conjecture.

If we assume however that all of the entrepreneurs that were in the process of acquiring VC were successful in their endeavour in either 2012 or 2013, we could obtain a figure against which to position our sample. The total population of VC investments from 2010 to the end of 2013 was 915 ventures,[2] so given this scenario, the sample of 144 responses would constitute 16% of these recently made investments.

Our study is also likely to have a success bias. Entrepreneurs whose investment proposals have been rejected by a VC firm are less likely to be willing to reflect on the importance of the selection criteria and would therefore be under-represented in our sample. Such a bias might mean that the values for the importance attached to valuation and contractual covenants are actually greater than they appear. Entrepreneurs that assign low value to criteria about the terms of the deal are unlikely candidates for VC funding. Entrepreneurs with the best ideas are expected to place some importance on valuation, as it impacts how much ownership they are forced to relinquish, although we predict this importance varies according to entrepreneur resource dependence. None of our sample respondents rated a VC firm's valuation or contractual covenants as "not important". Our sample doesn't include those entrepreneurs who are not in need of VC funding. If they were included, they would likely have rated the selection criteria much lower than our current respondents.

A unique feature of the Israeli VC market is that a large share of the investment is made in high-tech ventures in their early stages of development. Statistics indicate that the information technology industry (internet = 21%, communications = 17%, software = 17%) received 55**%** of the total VC investments in 2012.[3] This figure compares well with our sample, where they account for 60% of the ventures.

As Table 1 suggests, life science ventures are underrepresented in our sample, accounting for only 1% of the responses. In the Israeli VC market they tend be one of the more attractive investment sectors. Likewise, although the Israeli VC industry is strongly focused on early-stage deals, our sample more than likely has an underrepresentation of entrepreneurs in mature ventures, as can be seen in Table 1. Since our data has been gathered from startup events, our sample is more than likely skewed towards relatively inexperienced entrepreneurs and ventures in their early phases of development. Our subsequent analysis will bear in mind these limitations when we speak of generalizability.

Results

The test results of the study's hypotheses are found in Tables 2 and 3. In Table 2 the dependent variable is "the importance attached to valuation", whereas in Table 3 it is "the importance attached to the contractual terms". In Model 1, in Tables 2 and 3, we regressed the dependent variable on the control variables ("experience in approaching VC firms for funding", "size of investment" and "development stage", while in Model 2 we include two moderator variables: "importance attached to a VC firm's reputation" and "importance attached to a VC firm's network of contacts".

In Model 3 we add the independent variable "startup experience" to investigate hypothesis 1a and 2a, expecting to find a relationship between "startup experience" and the two dependent variables: "importance attached to valuation" and "importance attached to contractual terms". In Model 4 we test the full model, along with an analysis of two separate variable interactions: first, "importance attached to a VC firm's reputation" and "startup experience", and second, "importance attached a VC firm's reputation" and "startup experience". Hypotheses 1b, 1c, 2b and 2c are tested with the full model results. The *z*-test values in Tables 2 and 3 are based on robust standard errors.

Interaction was plotted on the graph according to the probability of the dependent variables' lowest and highest values, for convenience of interpretation. As mentioned before, no respondents deemed valuation or contractual terms to have "no importance" (=1). Therefore, the lowest value is "little importance" (=2) for both dependent variables. In Figures 1–6, we illustrate the interaction.

Table 2's Model 3 demonstrates a negative relationship between startup experience and the importance attached to valuation ($p < 0.05$). This implies that *hypothesis 1a is supported*

Table 2. Ordered logit regressions on "importance attached to valuation".

	Model 1	Model 2	Model 3	Model 4
Independent variable				
Startup experience			−0.511*	−1.317
			(−2.46)	(−1.32)
Moderators				
Importance of network access		−2,018	−0.298	−1.30**
		(−0.94)	(−1.40)	(−2.66)
Importance of reputation		−0.298^{+}	−0.268^{+}	0.410
		(−1.81)	(−1.65)	(1.20)
Control variables				
Size of the investment	0.035	0.076	0.121	0.130
	(0.30)	(0.63)	(0.95)	(1.01)
Development stage	−0.178	−0.201	−0.176	−0.167
	(−1.32)	(−1.44)	(−1.30)	(−1.24)
Experience dealing with VC	−0.547*	−0.479^{+}	−0.348	−0.313
	(−2.22)	(−1.95)	(−1.32)	(−1.22)
Interaction terms				
Startup experience * importance of network access				0.523 *
				(2.24)
Startup experience * importance of reputation				−0.376*
				(−2.20)
Pseudo R^2	2.22%	4.11%	5.68%	7.41%
Number of obs.	143	143	143	143

$^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$.

Table 3. Ordered logit regressions on "importance attached to contractual terms".

	Model 1	Model 2	Model 3	Model 4
Independent variable				
Startup experience			−0.297	−2.12+
			(−1.32)	(−1.95)
Moderators				
Importance of network access		0.123	0.059	−0.985
		(0.53)	(0.24)	(−1.76)
Importance of reputation		0.172	0.203	0.342
		(0.95)	(1.11)	(0.83)
Control variables				
Size of the investment	0.086	0.064	0.084	0.075
	(0.82)	(0.58)	(0.74)	(0.66)
Development stage	0.190	0.212	0.232	0.241
	(1.26)	(1.37)	(1.57)	(1.56)
Experience dealing with VC	−0.340	−0.369	−0.285	−0.290
	(−1.45)	(−1.60)	(−1.20)	(−1.23)
Interaction terms				
Startup experience * importance of network access				0.521*
				(2.07)
Startup experience * importance of reputation				−0.087
				(−0.42)
Pseudo R^2	1.02%	1.68%	2.22%	3.53%
Number of obs.	143	143	143	143

+$p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

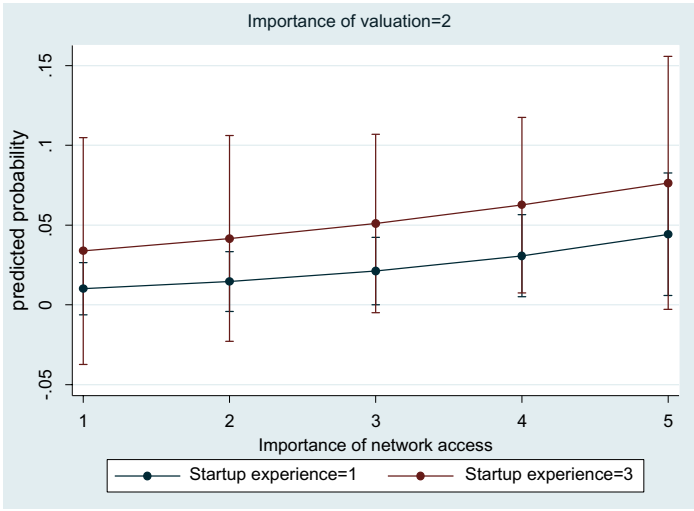

Figure 1. Interaction effect of the *importance of access to a VC firm's networks* with startup experience on the probability of the value of little importance (=2) attached to the entrepreneur's evaluation of the *importance of valuation in the selection of a VC firm.*

by the results. In contrast, as seen in Table 3, our results do not find a significant relationship between startup experience and importance attached to contractual terms, although the relationship has the expected sign. Hence, *hypothesis 2a is not supported.*

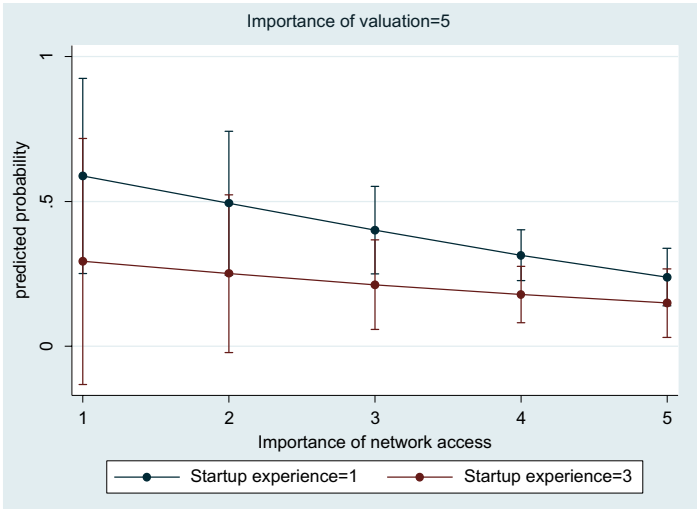

Figure 2. Interaction effect of the *importance of access to a VC firm's networks* with startup experience on the probability of the value of very important (=5) attached to the entrepreneur's evaluation of the *importance of valuation in the selection of a VC firm*.

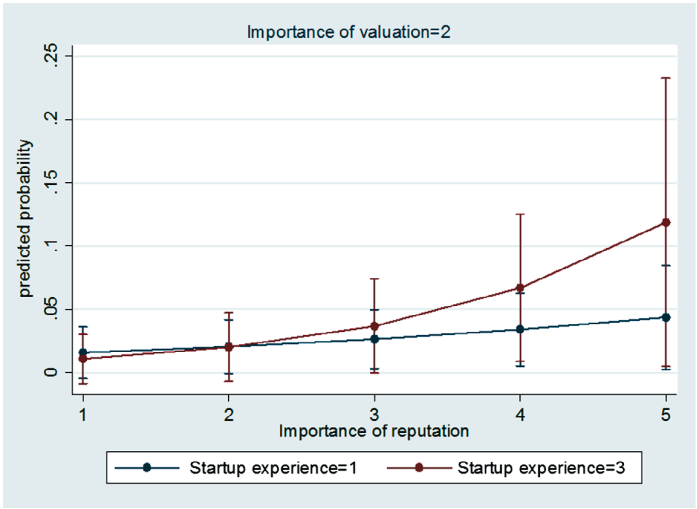

Figure 3. Interaction effect of the *importance of a VC firm's reputation* with startup experience on the probability of the value of little importance (=2) attached to the entrepreneur's evaluation of the *importance of valuation in the selection of a VC firm*.

The full model in Table 2 shows us that both interactions are significant. *Support is found for hypothesis 1b*. As we predicted, the importance an entrepreneur attaches to a VC firm's networks moderates the relationship between an entrepreneur's startup experience and the importance attached to valuation, so that the relationship is weaker for VC firm networks of great value ($p < 0.05$).

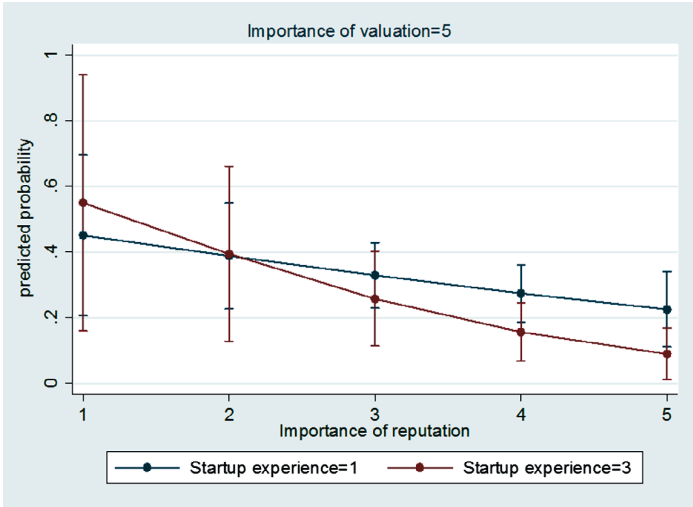

Figure 4. Interaction effect of the *importance of a VC firm's reputation* with startup experience on the probability of the value of very important (=5) attached to the entrepreneur's evaluation of the *importance of valuation in the selection of a VC firm.*

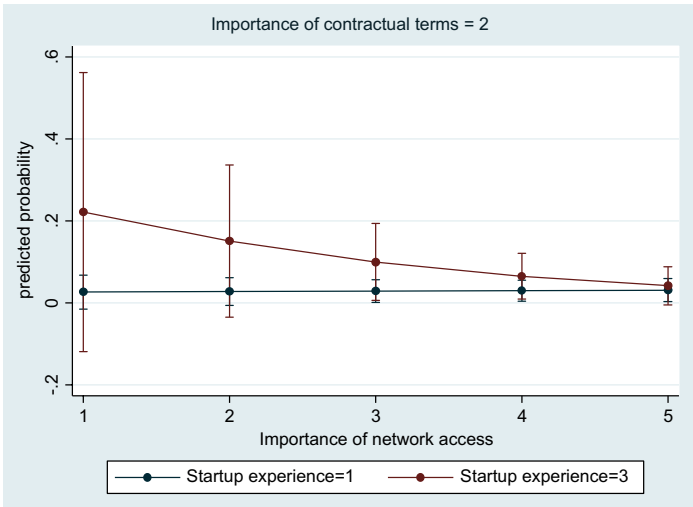

Figure 5. Interaction effect of the *importance of access to a VC firm's networks* with startup experience on the probability of the value of little importance (=2) attached to the entrepreneur's evaluation of *contractual terms in the selection of a VC firm*.

This is further illustrated in Figure 1, which depicts the interaction between the importance of networks and startup experience on the importance attached to valuation. When great importance is attached to a VC firm's valuation, entrepreneurs with no startup experience often pay little importance to network access. Hence, their likelihood of attaching

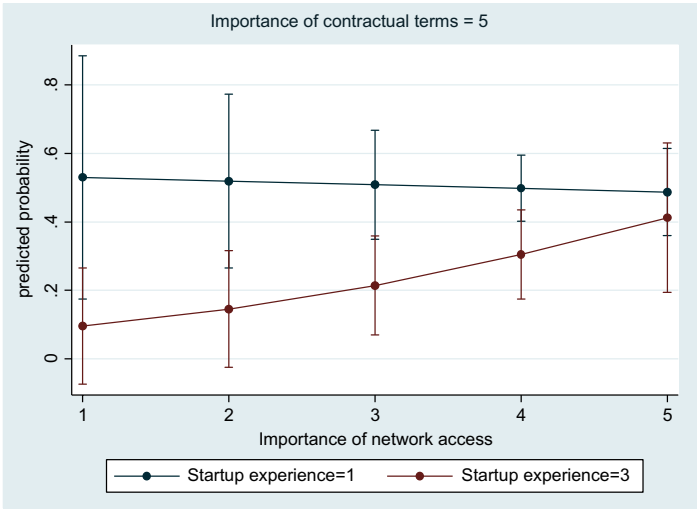

Figure 6. Interaction effect of the *importance of access to a VC firm's networks* with startup experience on the probability of the value of very important (=5) attached to the entrepreneur's evaluation of *contractual terms in the selection of a VC firm*.

Table 4. Correlation matrix of the predictor variables.

	1	2	3	4	5
1. Startup experience					
2. Importance of network access	−0.135				
3. Importance of reputation	0.077	0.322			
4. Experience in approaching VC firms for funding	0.282	0.083	0.114		
5. Size of investment	0.168	0.166	0.141	0.182	
6. Development stage	0.202	−0.140	−0.003	0.213	0.186

great importance to a VC firm's valuation decreases as the importance attached to the network of contacts grows.

However, while the interaction between "startup experience" and the "importance attached to a VC firm's reputation" is significant ($p < 0.05$), its impact on the relationship between startup experience and importance attached to valuation is not in line with our prediction. In fact, the more the entrepreneurs value a VC firm's reputation, the more negative the influence of startup experience is on the importance of valuation. This makes us *reject hypothesis 1c*.

Figures 3 and 4 illustrate the interaction between importance of networks and startup experience on low and, respectively, high determinations of valuation importance. More experienced entrepreneurs are more likely than less experienced ones to assign little importance to valuation if a VC firm has a good reputation. Likewise, they will assign a high importance to valuation when a VC firm's reputation is poor. The importance entrepreneurs with less experience attach to valuation is much less sensitive to a VC firm's perceived reputation.

We find that Table 2's full model has a low pseudo R^2 value, at only 7.41%.

Next, Table 3's full model results are used to test hypothesis 2b and 2c. They show that the more entrepreneurs value a VC firm's network of contacts, the more positive the influence of startup experience is on the importance of contractual terms ($p < 0.05$), in *support of hypothesis 2b.* Figures 5 and 6 illustrate the interaction between the importance of networks and startup experience on the ratings of importance of contractual terms.

The illustrations reveal that the assumptions that led to the hypotheses do not explain the results, as the importance attached to a VC firm's networks of contacts does not appear to indicate the importance attached to contractual terms among inexperienced entrepreneurs. Data from experienced entrepreneurs indicates the opposite: that the importance attached to the contractual terms is highly affected by the deemed importance of a VC firm's network of contacts.

And finally, the interaction between the importance attached to a VC firm's reputation and startup experience is shown to be insignificant. Hence, we find that the importance attached to a VC firm's reputation does not moderate startup experience in explaining importance attached to contractual terms. Based on the evidence, *hypothesis 2c is not supported*. The pseudo R^2 value of the full model is very low, at only 3.53%.

Pearson's coefficients of correlation were estimated for the study variables. Multicollinearity was not detected. The correlation coefficients of the predictor variables are much below 0.8, as seen in Table 4. We also performed a VIF collinearity diagnostic that indicated that multicollinearity is not a problem in this study.

Discussion and conclusions

Our results indicate that startup experience has a significant impact on the importance entrepreneurs attach to valuation, and also some explanatory power when it comes to predicting the importance entrepreneurs attach to contractual terms. As we anticipated, the less experienced entrepreneurs appear to be more concerned about valuation when selecting a VC firm than their more experienced counterparts. We sought explanations for this relationship by drawing on agency theory and the resource dependence perspective.

According to agency theory, entrepreneurs with no or little experience may have difficulties securing favourable valuation. They cannot demonstrate proof of their ability to run an entrepreneurial business successfully, and from a VC firm's perspective, this adds to the uncertainty about the quality of the business proposal (e.g. Van Osnabrugge 2000). To compensate for this uncertainty, VC firms may charge a higher price, which in turn negatively affects the valuation the entrepreneur may be able to attain. Inexperienced entrepreneurs' valuation concern may thus reflect their greater challenge in bargaining for reasonable terms of the deal.

Israeli VC firms in particular may face difficulties determining the quality of investment proposals, as local startups are generally driven by novel ideas relating to new technology (Senor and Singer 2009). Israel is one of the most innovative countries in the world, ranking second in R&D expenditures per capita, fourth in the percentage of the labour force with advanced degrees and the number of research professionals per million population,[4] and it also has more high-tech startups per capita than any other country.[5]

The ventures of Israeli entrepreneurs often contain dense amounts of inscrutable information, and build on the human capital of the entrepreneurial team. Even if the Israeli VC industry specializes in high-tech (e.g. Honig 2001), VC firm managers may find it challenging

to determine the potential of investment proposals, especially when value is often contingent on future expectations. When the potential of a new technology is difficult to ascertain, a VC firm manager focuses on what can be measured, including entrepreneurial experience (e.g. Kollmann and Kuckertz 2010)

Previous startup experience, and in particular success stories, provide an indication that the entrepreneur in question is capable of turning an invention into a successful and viable business. A convincing track record can help entrepreneurs attain a target valuation for the investment. Against this background, it was not surprising that our results found that startup experience is negatively associated with the importance attached to valuation. However, they contrast with Valliere and Peterson (2007)'s study of entrepreneurs in the US, Canada and the UK where the importance attached to valuation is independent of experience.

Access to a VC firm's network was shown to moderate the relationship between startup experience and valuation importance. Among respondents who attached great importance to a VC firm's network of contacts, entrepreneurs with no previous startup experience in particular were less likely to place a high importance on valuation. As stated before, inexperienced entrepreneurs may not have established useful connections that would provide them with resources, and are thus, in terms of investment preferences, more willing than their more experienced counterparts to substitute a favourable valuation for access to a VC firm's network of contacts.

We believe that VC firm network access is especially important in the Israeli market. Statistics show Israel is a world leader when it comes to R&D expenditures per GDP, and while startups in Israel seek to develop radical innovations with significant market potential, they lack a strong domestic market with sufficient demand for their products and services. Thus, it might be extremely important for an entrepreneur with less social capital to secure a world-class VC firm partner, as it helps to launch the business in the US and other large-scale markets, allows their business to grow in scale, and maybe even get the firm listed on the NASDQ stock exchange (e.g. Jeng and Wells 2000; Rosiello, Avnimelech, and Teubal 2011). As Sahlman (1997) points out, in Israel, it often matters more whose money you get, than how much you pay for it. These are some of the reasons VC firms have played an important role in the growth story of Israel.

Results show that entrepreneurs with extensive startup experience attribute much more importance to contractual terms when they also place a higher emphasis on the VC firm's network. In contrast, the perceived importance of contractual terms among inexperienced entrepreneurs is not greatly affected by the importance they attach to a VC firm's network of contacts. One plausible explanation for this might be that experienced entrepreneurs expect that when the demands on a VC firm's value added are higher in terms of access to new contacts, they are more concerned about safeguarding their investment by proposing covenant-rich contracts. Less experienced entrepreneurs may not anticipate such a trade-off in VC firm selection criteria.

Furthermore, as predicted, the results suggest that inexperienced entrepreneurs rarely attach high importance to valuation when they are looking for a reputable VC firm. However, they also indicate that experienced entrepreneurs are even less likely than inexperienced ones to stress the importance of valuation when they are looking for a reputable VC firm. Entrepreneurs may at large perceive that there are benefits from being affiliated with a well-known VC firm, and in such situations be willing to downplay the importance of valuation.

However, results might also reflect a lack of trust in less reputable VC firms, especially among experienced entrepreneurs who are more likely to assign high importance to valuation when approaching a VC firm with a lesser reputation. If there is lack of thrust in the VC firm, entrepreneurs may feel more worried about the process leading up to the deal and its price. As indicated earlier, an entrepreneur can potentially face the risk of being exploited by a VC firm that proposes unfair valuation terms (e.g. Cable and Shane 1997; Lahti 2014).

Reputable Israeli VC firms with successful exits under their belt might be perceived as more trustworthy and have more to lose if their reputation is tarnished by claims of unethical conduct (Van Osnabrugge and Robinson 2001). Less experienced VC firms usually have less of a reputation, and with less of a track record it is more difficult to check their background before approaching them for funding. Such firms may be in a hurry to exit their investments in order to establish a reputation, regardless of whether their investee firms are ready or not (e.g. Gompers 1996; Lee and Wahal 2004). This could result in exits that are not optimal from an entrepreneur's perspective.

This study indicates that there are merits to both agency theory and the resource dependence perspective in explaining entrepreneurs' selection of VC firms. In agency theory, information asymmetry means that it is difficult for one party to a transaction to evaluate its counterpart's qualities (e.g. Van Osnabrugge 2000). As noted earlier, it is difficult for VC firms to ascertain the qualities of an entrepreneur before investing in a business. This is particularly the case when the entrepreneur has little business experience.

The valuation emphasis of more inexperienced entrepreneurs witnessed in this study is assumed to partly reflect their greater difficulty in convincing VC firms of their potential. VC firms perceive inexperience to be a source of uncertainty they compensate for by charging a higher price for the investment, which in turn directly influences the valuation.

In much the same manner, entrepreneurs may not be able to verify the qualities of a VC firm before approaching it for funding. Particularly when the value-added requirements are steep; it is key that entrepreneurs select a suitable VC firm and avoid adverse selection. As noted before, a VC firm with a high value-added contribution has an impact on valuation, and entrepreneurs are therefore often forced to relinquish additional ownership for the invested capital (Sahlman 1990). Accordingly, our results suggest that inexperienced entrepreneurs are less likely to attach high importance to valuation when they seek to obtain value added in the form of VC firm network access.

Because value added comes at a price, it becomes crucial for an entrepreneur to ensure that VC firms deliver on their promises. Also, our results indicate that all entrepreneurs, regardless of experience, are concerned about valuation when approaching less reputable VC firms. We suggest that this is a further indication of an entrepreneur's that an adverse selection will occur. As noted before, given that less reputable VC firms are also less experienced ones with little or no track record, it is difficult determine their qualities in the selection. Overall, results indicate that agency theory provides a useful theory for understanding not only the VC firms' selection of entrepreneurs, but also entrepreneurs' selection of VC firms.

In accordance with the resource dependence perspective, VC firms will prove most valuable to entrepreneurs when they can mitigate critical uncertainties (Pfeffer and Salancik 1978; Sapienza, Manigart, and Vermeir 1996). Against this backdrop, it was no surprise that entrepreneurs facing substantial uncertainties due to liabilities or inexperience are willing to accept lower valuation if the VC firms have a good network of contacts. The resource

dependence perspective complements agency theory in aiding us to understand the entrepreneurs' VC firm selection decisions.

Avenues for future research

The results of this study open up avenues for future research. They indicate that the network of contacts of VC in Israel matters. Therefore, network configurations warrant closer analysis. Friedman (2008) set out to identify whether networks similar to the ones in Silicon Valley exist among Israeli entrepreneurs and their venture capitalists in the area of biotech. He found that the two were linked closely, and both had connections to institutional actors such as hospitals, research institutions, universities, governmental offices and business incubators, resembling those in Silicon Valley. This kind of research could be expanded to encompass a broader industry representation and focus on the networks of VC firms in several different branches of advanced technology.

This article indicates that VC firms in Israel help many startups successfully reach international markets. Given their strong bonds with global actors, particularly in Silicon Valley, they are more than likely influencing the internationalization strategies of their startups as well. Therefore, in terms of future research, it would be meaningful to investigate the effect of Israeli VC firms on the pattern, processes and pace of internationalization.

The VC industry's development stage impinges upon the modus operandi of its actors (e.g. Avnimelech, Kenney, and Teubal 2004; Avnimelech and Schwartz 2009). Thus, entrepreneurs' selection of a VC firm may depend on what stage of development the industry is in, as VC firm's investment procedures tend to become more standardized over time. It would be meaningful to compare what entrepreneurs look for in a VC firm in industries that are at different phases of development.

The entrepreneurs could be selected from Israel, the US and the emerging VC market in northern Africa or the Middle East. As described before, in Israel the VC industry emerged only in the early 1990s, but its development has been very rapid. In many of the countries in the Middle East and northern Africa, such as for instance Egypt and Saudi Arabia, the VC industry is very young, as it was developed in the aftermath of 9/11 (see Subhash 2012). The US VC industry was established already in the 1940s, which makes it the most mature market in the world.

Notes

1. Retrieved from http://www.ivc-online.com/, 1 July 2014.
2. Retrieved from http://www.ivc-online.com/, 1 July 2014.
3. Retrieved from http://www.ivc-online.com/, 1 July 2014.
4. Retrieved from http://nocamels.com/2015/02/bloomberg-innovation-index-israel/, 10 December 2015.
5. Retrieved from http://nocamels.com/2014/12/israel-tech-startup-nation-2014/, 10 December 2015.

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Blockholders and Firm Performance within the Nordic Corporate Governance Model: Finnish Evidence

Henrik Keinonen

Abstract

This paper examines the relationship between ownership concentration and firm performance within the Nordic corporate governance model. Using data on Finnish publicly listed companies (PLCs) during a period of economic growth and stability, we find that the ownership share of the largest owner is negatively related to Tobin's Q. We posit that certain blockholders may exchange their active monitoring and control function of the management for the private benefits of control, which is an inherent risk of the Nordic Corporate Governance (NCG) model. We find that state ownership is negatively associated with Tobin's Q, suggesting that government owners might promote politically desirable goals rather than create long-term value for all shareholders. It is plausible that certain domestic blockholders render PLCs with a concentrated ownership structure less attractive to foreign investors.

Keywords:

Blockholders, ownership structure, firm performance, Nordic corporate governance model

Henrik Keinonen is a Doctoral Student at Hanken School of Economics, Finland.

1. Introduction

According to the Nordic Corporate Governance (hereinafter NCG) model, large owners are important. They control and take long-term responsibility for the company on behalf of the minority owners, play an active role in company governance, watch over their investment, create value for all shareholders, and appoint representatives to the board of directors (BOD), Lekvall (2014). Blockholders influence decisions made by the executives, and exercise voting rights at the annual general meeting (AGM).[1] Empirical evidence shows that substantial ownership in a single company incentivises controlling owners to monitor and control the management (e.g. Shleifer & Vishny, 1986b; Konijn et al., 2011; Ekholm & Maury, 2014). Moreover, strong owners prevent employees from extracting too large part of economic rent from the company (Roe, 2002).

The prior corporate governance (CG) research has shown that efficient monitoring by the owners should, in theory, lead to reduced agency costs (e.g. Coase, 1937; Fama, 1980; Fama & Jensen, 1983a), add company value (Maury & Pajuste, 2005), and increase risk when justified by higher return expectations (Jensen & Meckling, 1976). In line with this, Ekholm and Maury (2014) found a positive relationship between average shareholder portfolio concentration and company's future performance and abnormal stock returns, while Claessens et al. (2002) document that company value increases with the largest owner's cash flow ownership.

However, the risk attached to the NCG model is that large, active owners might extract undue private benefits from the company, which may have a negative influence on firm performance and valuation (cf. La Porta et al., 1998; Gilson, 2006; Lekvall, 2014). Hence, the purpose of this paper is to investigate how high levels of ownership concentration affect firm valuation and performance within the Nordic corporate governance model using data on Finnish publicly listed companies (PLCs). Although the data represent the situation in Finland, there are many similarities shared with the other Nordic countries. These include rules and norms for good governance that closely resemble each other, similar ownership structures for PLCs, and a common governance structure (Lekvall, 2018).

The NCG model differs from the Anglo-American one-tier board model and the German two-tier board model. In the Anglo-American model, power lies within the BOD, due to the dispersed ownership structure, and the model suffers from chief executive officer (CEO) duality, that is, one person holding both the CEO and chair positions (e.g. Rechner & Dalton, 1991). The German model comprises the AGM, a supervisory board, and a management board, whereas the Anglo-American combines the two latter functions, control and executive, in the BOD (e.g. Lekvall, 2014). In the German model, shareholders and the supervisory board have limited powers, which entrenches the management board against the AGM and the supervisory board (e.g. Ringe, 2016). In the US, there are agency problems between managers and shareholders, and in Europe between majority and minority owners (e.g. La Porta et al., 2000b). The typical CG control mechanisms are the BOD, shareholder proxy fights, the takeover market (the market for corporate control), and shareholders' legal protection[2] (e.g. Gilson & Schwartz, 2013).

1 We use large shareholders, controlling owners, strong owners, majority shareholders, influential shareholders, and blockholders concomitantly in this paper. We refer to minority shareholders as small owners, minority owners, and minority investors. This paper observes outside blockholders (i.e. non-officers) instead of inside blockholders (i.e. corporate manager-owners). "Company" and "firm" are used interchangeably in the paper.
2 La Porta et al. (1998) measure investor rights using eight variables: 1. One-share, one-vote. 2. Proxy by mail allowed. 3. Shares not blocked before the meeting. 4. Cumulative voting or proportional representation. 5. Oppressed minorities mechanism. 6. Pre-emptive rights. 7. Percentage of share capital to call an extraordinary shareholders' meeting. 8. Mandatory dividend.

La Porta et al. (2002b) document higher company valuation in countries where minority investors are better protected. The impact is stronger amongst companies that have higher controlling owner's cash-flow ownership. Common law (case law) countries have the strongest investor protection, while French civil law (codified constitution) countries[3] provide the weakest, with German[4] and Scandinavian civil law countries somewhere in between (La Porta et al., 1998). Where minority shareholder protection is strong, even small shareholders can challenge the management (La Porta et al., 2000b). Empirical evidence shows a negative relationship between ownership concentration and investor protection, and that large controlling blockholders substitute for poorer protection (La Porta et al., 1998; La Porta et al., 2000a; La Porta et al., 2002b). However, this paper claims that the latter is not necessarily the case in Finland, as large owners may have private interests not shared by other shareholders of the company. Also, large active owners may neglect minimum dividend payments to minority owners, particularly during times of negative earnings (e.g. Maury, 2004; Kinkki, 2008).

This paper posits that large state ownership may be associated with a negative effect on company valuation (cf. Shleifer, 1998; La Porta et al., 2002a).[5] The reasoning is that political proxies (governmental representatives) might not take responsibility for economic consequences, but exploit their power to advance social peace (Roe, 2002), or a government's strategic industrial, political agenda (Putniņš, 2015), which are typical rationales for state ownership in welfare economics (Arrow, 1969). As a result, foreign and minority investors who fear *ex-ante* that large domestic investors will promote a private agenda at their expense might eschew investments in PLCs (e.g. Gilson, 2006). There are negative consequences for the entire economy if it becomes difficult for companies to attract foreign capital and minority investors, whose investments in the companies contribute to stock liquidity (Coffee, 1991; Zingales, 1994; Maug, 1998; Becht & Röell, 1999; Edmans et al., 2013). We expect the negative effects of ownership concentration to arise from a condition where blockholders' strong control prevents the management from freely operating the company. In this paper, large owners (blockholders) are defined as investors who own 10 percent or more of a company's shares outstanding, and minority owners as shareholders who own less than 10 percent of the shares.

The main empirical contribution of this paper is to show that ownership concentration in the Nordic context may hurt firm performance. The results are in strong contrast with international findings that report on positive effects from concentrated ownership (e.g. Baysinger et al., 1991; Lemmon & Lins, 2003; Atanassov, 2013; Aghion et al., 2013; Appel et al., 2016b; Becht et al., 2017; Gorton et al., 2017). Lekvall (2018) argued that a well-functioning minority investor protection system effectively avoids the NCG model risk. The protection of minority investors' rights also renders foreign investors safe in investing in listed companies (cf. Johnson et al., 2000). Although Finland has fairly efficient law enforcement and good investor protection (e.g. La Porta et al., 1998), this paper shows that the inherent risk of the NCG model materialises, and suggests that it might strengthen the home bias of foreign investors, as observed by Berglund and Westerholm (2010). Home bias refers to a situation where investors underweight foreign shares in their portfolios (Cooper & Kaplanis, 1994). The results also support the notion that a state owner may have harmful effects on listed companies' valuation (cf. Arrow, 1969; Roe, 2002; Putniņš, 2015).

3 I.e. France, the Benelux countries, Italy, Romania, Spain, and its former colonies.
4 I.e. Germany, Austria, Russia, Switzerland, Estonia, Latvia, Bosnia and Herzegovina, Croatia, Kosovo, North Macedonia, Montenegro, Slovenia, Serbia, Greece, Portugal, and its former colonies, Turkey, and East Asia countries including Japan, South Korea, and Taiwan (Republic of China).
5 We use "state" and "government" interchangeably in this paper with reference to state authority. Large ownership defines as 10 percent or more of shares outstanding.

The paper is organised as follows. The next section details the relevant theory, a literature review, and the hypotheses. In this respect, we discuss a comparison of the leading CG models, the NCG model, agency theory and problems, and offer an overview of the ownership-related research. Section three presents the methodology and data. Section four delivers the sample characteristics. Section five provides the results, and the final section our conclusions.

2. Literature review and hypothesis development

2.1. Differences in Legal Origins and the Corporate Governance models

Before going into the specifics of the NCG model, we need to shed light on the differences in legal origins and CG models between the Nordic countries and some other countries. These differences help explicate why large ownership concentrations may yield a less beneficial outcome in Finland than in, for instance, the US, where minority shareholder protection is the strongest (e.g. La Porta et al., 1998; Lekvall, 2018).

Researchers commonly find companies have a concentrated ownership structure in countries where shareholder protection is weak (e.g. Becht & Röell, 1999; La Porta et al., 2002b). Ownership structures are dispersed in the United States (US) and United Kingdom (UK), due to the more developed capital markets, but more concentrated in the Nordics and Germany (La Porta et al., 2000a). Proper minority investor protection improves investor confidence and reduces minority and foreign investors' costs of investment in PLCs (La Porta et al., 1997). According to La Porta et al. (1998), Scandinavian and German civil law origins provide the best law enforcement, French civil law systems the worst, and common law countries fall somewhere in between. Differences in investor protection explain variance in ownership structures (La Porta et al., 1998; Burkart & Panunzi, 2005), encourage companies to list on the stock market (Zingales, 1994; Pagano & Röell, 1998; Gomes, 2000), and relate to safeguarding funding (La Porta et al., 1998). If investor protection is weak, accounting standards become important (La Porta et al., 2002b).[6] As to accounting standards' quality, the Scandinavian system is first-rate, while common law countries are superior to the German civil law countries.

In the traditional Anglo-American model, the supervisory and executive functions are situated in the BOD, which comprises executive and non-executive members (Lekvall, 2018). However, the model may suffer from CEO duality (Lekvall, 2014). Independent board members and the market for corporate control are merely theoretical improvements, since the executive board members are often in conflict with the executive management, and the owners have little power to challenge the CEO through the AGM, due to the dispersed shareholder structure[7] (Gilson, 2006). The German dual-board model comprises a controlling supervisory board and a management board to which it vests all the executive powers (Lekvall, 2014). In the German model, the power of the AGM is, however, reduced to appointing non-employee representatives to the supervisory board, which decreases shareholders' powers over the management. Finally, in the NCG model, owners use their power to nominate the board at the AGM, which appoints and supervises the CEO. It is possible to regulate several shareholder protection measures in a company's articles of association, which further enhances minority shareholders' power (e.g. Airaksinen, 2018). Because of this, the articles are much shorter in the Nordics than in the US,

6 La Porta et al. (1998) define "law and order" as 1. Legal system's efficiency, 2. Rule of law, 3. Corruption, 4. Expropriation risk, and 5. Contract denial probability by the state.

7 Interestingly enough, dual-class shares and concentrated shareholder structure have recently become more popular in the US, particularly among ICT companies (Lekvall, 2018).

which makes them more understandable to minority investors. Yet, there are some problems with minority shareholder protection in the Nordics. As documented by Kinkki (2008), a controlling shareholder increases the tendency for dividend omissions when earnings are negative, and prevents minority owners from forming co-operative coalitions (Maury, 2004).

2.2. The Nordic Corporate Governance model

CG refers to shareholder interest protection (Tirole, 2001), and is defined as a framework by which a company is directed and controlled in the best interests of its owners (Lekvall, 2014). CG measures the effectiveness of mechanisms that minimise managerial opportunism (Shleifer & Vishny, 1997; Burkart & Panunzi, 2005), and processes by which corporations are being governed (Macey, 1997). Resemblances in Nordic countries' CG and norm structures warrant discussion on common CG, which has helped build top-notch Nordic companies (Lekvall, 2014).

The NCG model encourages strong owners to take voluntarily responsibility for the company, and create long-term value for the benefit of all shareholders. The advantage of the model is that it provides a strong chain of the organisational power of the AGM, the BOD, and top management (cf. Airaksinen et al., 2018). The model has six *ex-ante* measures to protect minority shareholders: *1. equal treatment of shareholders, 2. extensive individual shareholder rights to take part in the AGM and take legal action, 3. majority vote requirements, 4. minority powers to take action, 5. strict rules for related-party transactions,* and *6. high transparency* (Lekvall, 2014: p. 18-19).

The NCG model determines a three-norm system: 1. statutory regulation (company law and mandatory governmental rules), 2. self-regulation (defined and enforced by the business sector), and 3. informal norms and practices (CG in practice). The AGM is the shareholders' highest decision-making body, where shareholders nominate the BOD, which appoints the CEO and supervises the activities of the organisation. In the NCG model, the board is strictly accountable to all shareholders of the company. Shareholders also appoint an external auditor at the AGM, which reviews the work of the board and the management on behalf of the owners. Finally, large owners complement company governance in the Nordic model by overseeing the management. They may also appoint a representative on the board or become a board member themselves.

2.3. Agency theory in the NCG setup

According to Doukas et al. (2002), agency problems limit between minority shareholders (principal) and managers (agent) in both the US and the UK, whereas in European CG research, agency problems identify between minority shareholders (principal) and controlling shareholders (agent). Roe (2004) classifies the first instance as vertical governance and the second as horizontal governance. This paper takes the horizontal governance view.

Agency theory deals with means of aligning the agent's interests with those of the principal (e.g. Ross, 1973; Jensen & Meckling, 1976; Fama, 1980). Large owners use voice, learning, and exit to improve company performance and valuation (Kahn & Winton, 1998; Khanna & Sonti, 2004; Edmans, 2009). However, if both parties are aiming to maximise their utility, the agent will not always act in the principal's best interests (Jensen & Meckling, 1976). We expect agency costs to be lowest in firms where the entrepreneur owns all the shares, and highest in dispersedly owned PLCs (Ang et al., 2000).

The risk of the NCG model is that large owners cannot monitor managerial activities. This may separate ownership and control, produce managerial discretion (Stulz, 1990), and lead to managers' opportunistic behaviour (Demsetz, 1983). As the NCG model assumes, large owners

should protect the interests of all shareholders in the company and reduce agency costs (cf. Fama & Jensen, 1983b). In this respect, the signal to others, possibly foreign investors, is that it is secure to invest in a company (Berglund & Westerholm, 2010). Large controlling owners may also use their insight and power to promote goals other than company value maximisation (Claessens et al., 2002). Examples can vary from private rent extraction (Edmans, 2014) to advancing political goals (e.g. Hart et al., 1997; Roe, 2002; Putniņš, 2015).

2.4. Agency problems in the NCG setup

There are two potential agency problems in the NCG model that stem from information asymmetries between the principal and the agent: 1. *adverse selection*, and 2. *moral hazard* (see e.g. Akerlof, 1970; Dembe & Boden, 2000; Landström, 2017). Adverse selection occurs if foreign shareholders eschew investments in listed companies due to a fear of large domestic owners' misbehaviour. This potentially leads to market failure *ex-ante* (e.g. Bator, 1958; Stiglitz, 1989) for foreign investors (Johnson et al., 2000). Moral hazard follows if large domestic investors utilise their power/knowledge to benefit themselves at other shareholders' expense *ex-post* (e.g. Berglund & Westerholm, 2010). To avoid these agency problems, the NCG model has six preventive protection measures as mentioned in subsection 2.2.

2.5. Adverse effects of the NCG model

The root of adverse effects of the NCG model is asymmetric information: large investors might have private interests not shared with all shareholders (cf. La Porta et al., 2002a; Maury & Pajuste, 2005; Lekvall, 2018). In line with Demsetz and Lehn (1985), private benefits can be pecuniary (monetary) or non-pecuniary. In state ownership, the benefits might advance political goals (Shleifer & Vishny, 1997), e.g. save jobs and produce lower output prices (e.g. Arrow, 1969). Claessens et al. (2002) found that company value decreases when blockholders' control rights exceed their cash flow rights, which is consistent with the *entrenchment effect*. Large owners might become entrenched when they have good liaison with the management, and when the management is willing or forced, to carry out their agenda (cf. La Porta et al., 1999a).

Large domestic owners also render the company less interesting to prospective foreign shareholders when they pursue a private agenda (Johnson et al., 2000). Foreign investors, who are disadvantaged compared to domestic blockholders due to asymmetric information, (e.g. Lewis, 1999), might fear that large active owners will advance their private interests. For example, blockholders might prevent value-increasing takeovers (McConnell and Servaes, 1990). This kind of behaviour strengthens the home bias (Berglund & Westerholm, 2010).

Large state shareholders, represented by proxies, might be incapable of monitoring the management. This leads in the worst-case scenario to company asset deployment by the executives (cf. Demsetz; 1983; Belkaoui & Pavlik, 1992; Ang et al., 2000; Hartzell & Starks, 2003). Shleifer and Vishny (1986b), however, argue that it requires some ownership concentration to reward the owners for monitoring and providing proper working conditions for the management.

Gilson (2006) asserts that controlling shareholders who lack the market for corporate control are less responsive to changes in their economic environment. Hence, there might be agency problems in having a controlling blockholder, especially if minority shareholder protection in the country is weak (Shleifer & Vishny, 1997). Overall, we posit the following hypothesis:

Hypothesis 1: Ownership concentration is negatively associated with company valuation and performance.

The state as the largest owner might not maximise profits (Arrow, 1969), and may have the tendency to promote political goals (Hart et al., 1997), or advance social peace (Roe, 2002), rather than create long-term shareholder value. Following Putniņš (2015), the use of State-Owned Enterprises (SOEs) should be limited to market failure circumstances. Notably, state-owned companies have had performance improvements *ex-post* privatisation (e.g. Megginson et al., 1994). Thus, we hypothesise the following:

Hypothesis 2: There is a negative relationship between state ownership and company valuation.

3. Methodology

3.1. Data

The data used in the empirical analysis covers the distinct six-year period 2001-2006, and all OMX Helsinki listed stocks, leaving 177 unfiltered observations per fiscal year. Following Ekholm and Maury (2014), we omit banks and insurance companies from the sample, due to their non-comparable valuation ratios. Also, companies with extreme and incomplete data sets have been truncated. The final sample comprises a balanced panel with 119 annual and 714 total observations. FactSet Europe Ltd. provided the data, except for the ownership data that were manually collected from the yearbook *Pörssitieto*.

3.2. The model and variables

We examine the relationship between ownership concentration and firm performance by estimating the following regression model:

$$y_{it} = a + \hat{b}_1 x_{1it} + \hat{b}_2 x_{2it} + \hat{b}_3 x_{3it} + \hat{b}_4 x_{4it} + \hat{b}_5 x_{5it} + \hat{b}_6 \log x_{6it} + \hat{b}_7 x_{7it} + u_{it} \quad (1)$$

where y_{it} represents the dependent variable (Tobin's Q; ROA), i the entity and t the time interval, which is one year. a is the regression intercept and u_{it} and the error term. The dependent variable *y=valuation (Tobin's Q) and performance (ROA) proxies*, the independent variable x_1*=ownership concentration measures*, and the control variables x_2*=company beta coefficient*, x_3*=dividend payout ratio*, x_4*=return volatility*, x_5*=capital turnover*, x_6*=leverage*, and x_7*=size*. We employ dummies for controlling year, industry, and investor identity effects.

Tobin's Q is the market proxy for valuation and is used in Morck et al. (1988), Maury and Pajuste (2005), Maury (2006), and Ekholm and Maury (2014). Tobin's Q also avoids the estimation of the rate of return or marginal costs (Lindenberg & Ross, 1981; Salinger, 1984). Because of data limitations, we compute Tobin's Q yearly in this paper by dividing the company's total market value (end of period stock prices multiplied by shares outstanding) by the company's book value of total assets.

Return on assets (ROA) serves as a proxy for performance and is used in Maury and Pajuste (2005), Maury (2006), and Ekholm and Maury (2014). ROA captures the company's (historical) profitability relative to its total assets. We calculate ROA for this paper by dividing the compa-

ny's net income by its total averaged assets and expressed in a percentage format.

Ownership of 10 percent provides shareholders in Finland the right to call an extraordinary shareholders' meeting (5:4§), and demand minimum dividend (13:7§), according to the Limited Liability Companies Act (LLCA 624/2006 and section 6). Due to the variation in ownership definitions in CG studies (cf. Claessens et al., 2002; La Porta et al., 2002b; Maury & Pajuste, 2005; Ekholm & Maury, 2014; Edmans & Holderness, 2016), and for robustness, this paper employs four distinctive definitions. First, we employ a discrete ownership dummy to observing whether the company has concentrated ownership or not. The dummy is coded as 0 below 10 percent ownership of the largest owner, and 1 at and above 10 percent. Second, we multiply the ownership dummy by the largest owner percentage to capture the ownership threshold effect. Third, we use a continuous variable, the percentage of the largest owner of the firm, to detecting ownership's relative effect on firm valuation and performance. Finally, we employ traditional company and year-specific Herfindahl index (HFI) to measure ownership concentration, which defines as the squared sum of the three largest owners' ownership share (e.g. Herfindahl, 1950). HFI is used in several ownership studies (e.g. Demsetz & Lehn, 1985; Hill & Snell, 1989; Denis et al., 1997; Goergen & Renneboog, 2001; Ekholm & Maury, 2014).[8]

CG studies traditionally control for several variables, such as company age, size, industry, leverage, long-term debt, sales, tangibility, and total assets (e.g. Gompers et al., 2003; Maury & Pajuste, 2005; Laeven and Levine, 2008; Ekholm & Maury, 2014). This paper utilises the following six control variables. First, the yearly *beta coefficient* measures individual stock's level of systematic risk, or non-diversifiable risk. Betas in this study are approximated using weekly logarithmic stock returns and respective OMX all shares index returns.[9] We expect the beta coefficient to have a positive effect on valuation and performance, as a higher beta implies higher return potential. Second, we employ the percentage of a company's earnings that is paid out, i.e. the *dividend payout ratio* (e.g. Elton et al., 1983). Dividend cut sends a negative signal to the market about the company's future sales growth (e.g. Lintner, 1956; Lang & Litzenberger, 1989; Michaely et al., 1995; La Porta et al., 2000a), and a higher dividend payout ratio associates with stronger minority shareholder rights (La Porta et al., 2000b). We expect the dividend payout ratio to have a positive effect on performance, as companies with a higher dividend payout ratio tend to reproduce sales and be profitable over time. Third, for robustness, we employ one-year *return volatility* as a proxy for company-specific risk. The strong owner's role becomes important in an uncertain environment (Demsetz & Lehn, 1985). We calculate historical *return volatility* as the standard deviation of the company's daily logarithmic return and standardize it for 250 days. We expect *volatility* to have a positive effect on performance, as higher risk associates with higher returns. Fourth, *capital turnover* (CT) measures a company's ability to turn investments into sales. CT computes by dividing the company's yearly sales by total assets. We expect CT to have a negative impact on performance, as it commonly correlates negatively with the profit margin. Fifth, we employ *leverage*, which reduces the free cash flow for managers and, thus, limits their capacity to use managerial power (e.g. Myers & Majluf, 1984; Eckbo, 1986; Jensen, 1986). Following Maury and Pajuste (2005), *leverage* is computed by dividing company's long-term liabilities by the total assets. We expect leverage to have a negative effect on

8 A drawback with the Herfindahl index is that it does not reveal the individual shareholder's relative power, especially where two shareholders out of the three largest can form winning coalitions.

9 Since the betas are *ex-post* variables, they are estimated three years prior to the ownership data for this paper (cf. Bowie & Bradfield, 1998). Notably, the first three-year period, from 1.1.1998 to 31.12.2000, was encountered by a heavy stock price increase at the beginning, followed by a sudden decrease and another increase towards the end period.

performance, due to increasing bankruptcy risk. Finally, *total assets* is employed as the proxy for company size. We take a logarithm of total assets to normalizing the variability in the sample data. Since profits converge over time, we expect company size to have a negative effect on performance.

We use *owner category* dummies[10] to control for different owners' impact on firm performance (cf. Nickel et al., 1997; Thomsen & Pedersen, 2000). The *Year and industry* dummies are used to control for the impact of economic cycles and industry-specific effects. Industry division is per the OMX Helsinki sector classification.[11]

4. Descriptive statistics and correlations

Table 1 below provides summary statistics for the variables used in this paper. The table shows that the mean Tobin's Q exceeds unity. This implies, *ceteris paribus*, that the sample companies' market value exceeds, on average, their recorded assets. Tobin's Q values have steadily increased since 2001, which might signal the stock market rise during 2001-2006.

10 Throughout the regressions we use dummy variables as yes=1 and no=0. Indiv equals one if the largest investor is an individual investor, family or private investment firm and zero otherwise. Inst equals one if the largest investor owns for institutional purposes, is an insurance company, co-operative, pension fund, mutual fund or a PLC and zero otherwise. Found equals one if the owner is classified as firm founder, one of the founders, founder's close relative, board member or the firm CEO and zero otherwise. PLC equals one if the largest owner is the firm subsidiary or a strategic partner and zero otherwise. Govt equals one if the largest owner category is government and zero otherwise. Finally, Endow equals one if the owner is not-for-profit organisation, association or foundation and zero otherwise; source: FactSet (2007) and the Yearbook Pörssitieto (2001 – 2006). Owner categories are not reported in the tables.

11 Throughout the regressions, we used 7 industry classifications. We omitted two groups due to their negligent sample size. These were Utilities and Health Care. The industry sectors are 1. Materials, 2. Industrials, 3. Consumer Discretionary, 4. Consumer Staples, 5. Financials, 6. Information Technology, and 7. Telecommunication Services.

Table 1. Summary statistics of variables employed in the estimated regression equation over the period 2001-2006. n denotes the number of observations. The main dependent variable is Tobin's Q. The second dependent variable is ROA. ROE and ROTC are employed as supplementary dependent variables for robustness of ROA. Independent ownership variables are the percentage of the largest owner and Herfindahl Index. The control variables are: beta coefficient, dividend payout ratio, yearly volatility, capital turnover, company leverage, and log of assets, i.e. size, respectively. Variable abbreviations: Tobin's Q (TobQ), ROA, ROE, ROTC, largest owner dummy: >10% = 1; <10% = 0 (OD), largest owner's percentage ownership (Larg), Herfindahl index (HFI), company beta coefficient (Beta), dividend payout ratio (Div), volatility (Vola), capital turnover (CT), leverage (Lev), logarithm of total assets (logs).

SUMMARY STATISTICS						
MAIN DEPENDENT VARIABLES	**Mean**	**Mini-mum**	**Median**	**Maxi-mum**	**St. dev**	**n**
TobQ	1.054	0.071	0.805	6.490	0.836	714
ROA	3.304	-115.308	5.086	43.324	12.743	714
ADDITIONAL PERFORMANCE VARIABLES						
ROE	5.370	-824.915	10.677	122.340	40.445	714
ROTC	3.804	-733.535	7.041	113.861	33.199	714
OWNERSHIP VARIABLES						
Larg	25.109	0.430	22.055	72.000	16.246	714
HFI	1,093.393	0.410	690.334	5,221.610	1,118.443	714
CONTROL VARIABLES						
Beta	0.356	-2.697	0.303	1.748	0.374	714
Div	68.382	0.000	47.671	6,642.066	260.929	714
Vola	28.074	0.414	19.930	187.695	28.149	714
CT	1.170	0.013	1.133	3.820	0.615	714
Lev	15.200	0.000	13.557	104.311	13.807	714
Logs	2.267	0.174	2.114	5.315	0.904	714

Return on equity (ROE) exceeds the return on total capital (ROTC, i.e. return on investment, ROI), which exceeds ROA. This is because tangible assets bind more capital and generate lower value for ROA. ROE exceeds ROI, since bondholders demand higher fixed interest on capital than do equity holders. The Herfindahl Index mean value at 1093.4 implies that the largest owner's power contestability is implausible.

The largest owner's share has remained moderately stable in Finland. The largest owner owned, on average, 25.1 percent of the company in 2001-2006, the smallest value being 0.4 percent (2002), and the maximum 72 percent (2004). The mean sum of the three largest shareholders ranged between 38.1 (2005) and 41.4 percent (2002). Shareholdings of the largest owners declined steadily in 2001-2006, as e.g. the state had been privatising its shareholdings and/or foreign investors had purchased (part of) the shares of founders in some companies. Though large shareholdings are common in Finland, the high standard deviation shows that the data comprise companies with different ownership structures. Family-owned companies, and transportation industry, process industry, entrepreneur-owned, more mature, and state-owned companies have traditionally had a concentrated ownership structure. In sum, the largest owner share was fairly high and stable during the period 2001-2006. There does not seem to be a general tendency for the largest owners to decrease their shareholding, which is also consistent with Finnish stock market illiquidity.

Table 2 shows that valuation and performance (ROA, ROE, ROTC) correlate negatively with all ownership definitions. The beta coefficient has a negative, but low, correlation with performance variables. Tobin's Q is positively correlated with the beta coefficient. The dividend payout ratio is per expectations throughout company valuation and performance variables. Interestingly, volatility correlated negatively with all accounting multiples but positively with Tobin's Q. CT correlates positively with ROA and Tobin's Q, but negatively with ROE and ROTC. This is probably because ROA has total assets in the denominator, whereas ROE and ROTC do not. Given that the total assets are included in the denominator of CT, ROA and CT correlate with each other, and ROE and ROTC better capture the effect of CT. There is a negative correlation between leverage and valuation and performance. The logarithm of total assets correlates negatively only with Tobin's Q, which is in line with expectations. However, it correlates positively with accounting multiples, suggesting that larger companies have higher profitability. No severe multicollinearity was detected among the independent variables as their VIF values were below 2.

Table 2. Correlations between variables employed in the estimated regression equation over the period 2001-2006. Variable abbreviations: Tobin's Q (TobQ), ROA, ROE, ROTC, largest owner dummy: >10% = 1; <10% = 0 (OD), largest owner's percentage ownership (Larg), Herfindahl index (HFI), company beta coefficient (Beta), dividend payout ratio (Div), volatility (Vola), capital turnover (CT), leverage (Lev), logarithm of total assets (logs). Each regression model includes one ownership definition at a time. ROE, ROE, ROTC are also included separately in the models, not simultaneously.

CORRELATIONS

	TobQ	ROA	ROE	ROTC	OD	Larg	Herf	Beta	Div	Vola	CT	Lev	logs
TobQ	1												
ROA	0.299	1											
ROE	0.118	0.813	1										
ROTC	0.124	0.788	0.978	1									
OD	-0.119	-0.079	-0.067	-0.060	1								
Larg	-0.154	-0.088	-0.089	-0.096	0.534	1							
HFI	-0.147	-0.069	-0.073	-0.085	0.407	0.938	1						
Beta	0.272	-0.079	-0.073	-0.051	-0.127	-0.105	-0.120	1					
Div	0.025	0.047	0.034	0.032	0.023	-0.031	-0.042	-0.062	1				
Vola	0.126	-0.048	-0.030	-0.015	-0.055	-0.050	-0.062	0.169	-0.036	1			
CT	0.153	0.030	-0.043	-0.027	-0.048	-0.214	-0.219	0.033	0.026	0.111	1		
Lev	-0.434	-0.102	-0.029	-0.038	0.080	0.133	0.117	-0.114	-0.040	-0.047	-0.303	1	
logs	-0.216	0.166	0.175	0.151	-0.159	-0.065	-0.067	0.176	0.045	-0.182	-0.186	0.193	1

5. Results

We regress Tobin's Q against all ownership proxies and control variables. We then repeat these steps with ROA as the explained variable. One dummy is automatically omitted in the regressions in order to avoid perfect multicollinearity among the independent variables. Stata routinely omits variables if collinearity is detected and automatically estimates robust standard errors as we employ the robust command. While the explanatory variable (ownership) may correlate with the error term due to omitted variables, or have reverse causality, we regress ROA also against the lagged ownership definitions, following Ekholm and Maury (2014). We did not estimate regressions using firm fixed effects to reduce endogeneity problems, as e.g. in Fahlenbrach and Stulz (2009), as such models are better suited to a dynamic setting. Since the ownership structures change slowly over time, a firm fixed effects regression model would not capture the effect properly (see e.g. Edmans, 2014). Also, adding 119 dummy variables would

lower the degrees of freedom (df) by 118, which is a problem with the current data set comprising 714 observations.

As shown in Table 3, concentrated ownership has a significant negative relationship with Tobin's Q throughout all regressions except with the Herfindahl index, which is statistically insignificant.[12] Thus, the result supports hypothesis 1 and there is no evidence to support the notion that controlling owners improve company governance and reduce agency costs.[13] On the contrary, strong owners might take advantage of minority shareholders by extracting undue private benefits from the company. Regarding owner identities, state owner is negative and statistically significant at the 5% level. It is plausible that foreign investors might eschew investments in listed companies that have large domestic shareholders, particularly if the largest owner is state.

Concerning the controls, only the beta coefficient, leverage, and size (log of assets) are statistically significant. Tobin's Q and beta coefficient have a positive relationship. Thus, higher beta, or stock's level of systematic risk, is associated with a higher company valuation. Leverage is negative and significant at the 1% level, which might signal increasing debt costs. Leverage also has positive implications due to its tax-benefits, and debt disciplines managers by limiting free cash flow (FCF) available to them. Notably, Finnish companies have been able to take on additional debt, as interest rates have been reasonably low during 2001-2006. The size coefficient is negative and significant at the 5% level, indicating that large companies' relative market value is lower compared to smaller firms. Of industry sectors, materials, consumer discretionary, information technology and telecoms were positive and statistically significant. The R^2 is approximately 34 percent, which is a good fit.

12 As regressions were run without the controls, the Herfindahl index was significant and negative. Herfindahl index provided the most negative coefficient -1.096 and highest significance at the 1% level. Since the average Herfindahl index value was not very high, collusion was also possible among the three largest owners. Herfindahl value of 1800 and above defines a concentrated structure (Herfindahl, 1950). Lower initial values result in higher coefficients.

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Table 3. Regressions of Tobin's Q on ownership variables over the period 2001-2006. The dependent variable is Tobin's Q. The independent ownership variables are: concentrated ownership dummy variable (OD), dummy variable multiplied by the largest owner percentage (ODxLarg), percentage of the largest owner (Larg), and Herfindahl Index (HFI). The control variables are: beta coefficient (Beta), dividend payout ratio (Div), yearly return volatility (Vola), capital turnover (CT), company leverage (Lev), and size (Logs). The t-statistics, in parentheses, are based on robust standard errors. Year (not reported), industry (not reported) and owner category effects are controlled for in the regressions. Regression coefficients are computed utilising independent variables' decimal form (i.e. ownership%, dividend payout%, leverage% divided by 100, Herfindahl index by 10,000). Thus, percentage values change from e.g. 15.3% to 0.153, and Herfindahl index values from e.g. 5,500 to 0.550.

VARIABLE	(1)	(2)	(3)	(4)
OD	**-0.224*** **			
ODxLarg	(-2.91)	**-0.365***		
Larg		(-1.83)	**-0.359***	
HFI			(-1.66)	-0.474
				(-1.62)
CONTROLS				
Beta	**0.415*** **	**0.426*** **	**0.427*** **	**0.427*** **
	(3.79)	(3.83)	(3.83)	(3.81)
Div	0.011	0.010	0.010	0.010
	(1.25)	(1.21)	(1.20)	(1.17)
Vola	0.057	0.069	0.072	0.072
	(0.55)	(0.67)	(0.70)	(0.70)
CT	-0.067	-0.069	-0.067	-0.066
	(-1.15)	(-1.18)	(-1.16)	(-1.14)
Lev	**-2.142*** **	**-2.155*** **	**-2.158*** **	**-2.167*** **
	(-10.20)	(-10.28)	(-10.28)	(-10.31)
Logs	**-0.102** **	**-0.096** **	**-0.095** **	**-0.093** **
	(-2.47)	(-2.24)	(-2.23)	(-2.16)
OWNER CATEGORY				
Indiv	-0.055	-0.045	-0.048	-0.059
	(-0.39)	(-0.31)	(-0.33)	(-0.41)
Inst	-0.156	-0.126	-0.124	-0.135
	(-1.11)	(-0.88)	(-0.87)	(-0.94)
Found	-0.007	0.000	-0.006	-0.021
	(-0.05)	(0.00)	(-0.040)	(-0.13)
PLC	0.208	0.224	0.219	0.208
	(0.62)	(0.67)	(0.66)	(0.63)
Govt	**-0.362** **	**-0.350** **	**-0.355** **	**-0.380** **
	(-2.45)	(-2.20)	(-2.25)	(-2.42)
Constant	**1.586*** **	**1.471*** **	**1.469*** **	**1.431*** **
	(5.42)	(4.87)	(4.82)	(4.74)
P-value	0.000	0.000	0.000	0.000
R^2	34.09%	33.71%	33.64%	33.59%
Number of obs.	714	714	714	714

* denotes statistical significance on the 10% level, ** denotes statistical significance on the 5% level, and *** denotes statistical significance on the 1% level. Owner identity Endowment (Endow) has been omitted in the regression to avoid perfect multicollinearity.

Table 4 provides results for including the interaction term (largest owner percentage multiplied by the state dummy) in the full model against Tobin's Q. As revealed by the table, both ownership and the state dummy have a negative and significant relationship with Tobin's Q. However, the interaction term is positive and significant. The immediate interpretation is that state's negative effect becomes less pronounced as its ownership increases. However, a radical increase in ownership decreases stock liquidity, which has a tendency to affect firm value negatively.[14] The alternative explanation is that the negative effect of the state is so pronounced that it is not dependent, *per se*, on the level of ownership if the state is the largest blockholder.

14 State owned companies' mean Tobin's Q value is 0.47 compared to all other companies' (excluding state owned firms) mean Tobin's Q value 1.11 in the sample. Also, the minimum state ownership is 11,07% and maximum 70.74% compared to e.g. endowment 0.45% and 26.38%, respectively, when the state is the largest owner.

Table 4. Interaction term regressions of Tobin's Q on ownership variables over the period 2001-2006. The dependent variable is Tobin's Q. The independent ownership variables are: concentrated ownership dummy multiplied by the largest owner percentage (ODxLarg), percentage of the largest owner (Larg), and Herfindahl Index (HFI). The interaction term is the largest owner percentage multiplied by the government identity dymmy (Largest x Govt). The control variables are: beta coefficient (Beta), dividend payout ratio (Div), yearly return volatility (Vola), capital turnover (CT), company leverage (Lev), and size (Logs). The t-statistics, in parentheses, are based on robust standard errors. Year (not reported), industry (not reported) and owner category effects are controlled for in the regressions. Regression coefficients are computed utilising independent variables' decimal form (i.e. ownership%, dividend payout%, leverage% divided by 100, Herfindahl index by 10,000). Thus, percentage values change from e.g. 15.3% to 0.153, and Herfindahl index values from e.g. 5,500 to 0.550.

VARIABLE	(1)	(2)	(3)
ODxLarg	**-0.434****		
Larg	(-2.02)	**-0.440***	
HFI		(-1.87)	**-0.589***
			(-1.85)
INTERACTION TERM			
Largest x Govt	**0.776*****	**0.783****	**0.760****
	(2.59)	(2.51)	(2.51)
Controls			
Beta	**0.440*****	**0.440*****	**0.439*****
	(3.92)	(3.92)	(3.90)
Div	0.010	0.010	0.010
	(1.23)	(1.23)	(1.19)
Vola	0.067	0.070	0.070
	(0.64)	(0.68)	(0.68)
CT	-0.073	-0.072	-0.071
	(-1.25)	(-1.23)	(-1.21)
Lev	**-2.144*****	**-2.145*****	**-2.158*****
	(-10.29)	(-10.29)	(-10.33)
Logs	**-0.100****	**-0.099****	**-0.097****
	(-2.35)	(-2.34)	(-2.26)
OWNER CATEGORY			
Indiv	-0.036	-0.039	-0.052
	(-0.25)	(-0.27)	(-0.36)
Inst	-0.121	-0.118	-0.131
	(-0.84)	(-0.83)	(-0.91)
Found	0. 012	-0.006	-0.010
	(0.08)	(-0.04)	(-0.07)
PLC	0.223	0.229	0.216
	(0.70)	(0.69)	(0.65)
Govt	**-0.631*****	**-0.637****	**-0.658****
	(-3.31)	(-3.31)	(-3.41)
Constant	**1.447*****	**1.449*****	**1.406*****
	(4.80)	(4.76)	(4.67)
P-value	0.000	0.000	0.000
R^2	33.87%	33.81%	33.74%
Number of obs.	714	714	714

* denotes statistical significance on the 10% level, ** denotes statistical significance on the 5% level, and *** denotes statistical significance on the 1% level. Owner identity Endowment (Endow) has been omitted in the regression to avoid perfect multicollinearity.

Table 5 provides regression results for ROA and ownership. As can be seen from the table, all ownership definitions are statistically insignificant against ROA. Thus, we do not find evidence between concentrated ownership and ROA. The R^2 of the model is rather low, only 14 percent.

Table 5. Regressions of ROA on ownership variables over the period 2001-2006. The dependent variable is ROA. The independent ownership variables are: concentrated ownership dummy variable (OD), dummy variable multiplied by the largest owner percentage (ODxLarg), percentage of the largest owner (Larg), and Herfindahl Index (HFI). The control variables are: beta coefficient (Beta), dividend payout ratio (Div), yearly return volatility (Vola), capital turnover (CT), company leverage (Lev), and size (Logs). The t-statistics, in parentheses, are based on robust standard errors. Year (not reported), industry (not reported) and owner category effects are controlled for in the regressions. Regression coefficients are computed utilising independent variables' decimal form (i.e. ownership %, dividend payout %, leverage % divided by 100, Herfindahl index by 10,000). Thus, percentage values change from e.g. 15.3% to 0.153, and Herfindahl index values from e.g. 5,500 to 0.550.

VARIABLE	(1)	(2)	(3)	(4)
OD	-1.749			
ODxLarg	(-1.26)	-3.905		
Larg		(-1.15)	-4.159	
HFI			(-1.14)	-4.594
				(-0.93)
CONTROLS				
Beta	**-5.463****	**-5.399****	**-5.402****	**-5.389****
	(-2.36)	(-2.32)	(-2.31)	(-2.31)
Div_payout	0.111	0.103	0.103	0.101
	(0.56)	(0.53)	(0.53)	(0.52)
Vola	2.022	2.087	2.113	2.129
	(1.03)	(1.08)	(1.10)	(1.11)
Capital_turn	1.054	1.007	1.013	1.045
	(0.85)	(0.80)	(0.80)	(0.83)
Leverage	**-15.647*****	**-15.686*****	**-15.700*****	**-15.824*****
	(-4.71)	(-4.67)	(-4.67)	(-4.74)
Logsize	**4.380*****	**4.392*****	**4.391*****	**4.432*****
	(4.06)	(4.11)	(4.10)	(4.13)
OWNER CATEGORY				
Indiv	2.390	2.593	2.590	2.413
	(1.48)	(1.59)	(1.60)	(1.49)
Inst	1.688	2.001	2.039	1.882
	(1.35)	(1.57)	(1.60)	(1.48)
Found	2.799	3.029	3.012	2.773
	(1.49)	(1.60)	(1.61)	(1.50)
PLC	4.876	**5.151***	**5.141***	4.948
	(1.59)	(1.66)	(1.66)	(1.62)
Govt	-1.411	-1.088	-1.076	-1.456
	(-0.81)	(-0.63)	(-0.62)	(-0.86)
Constant	**-9.137***	**-9.577***	**-9.474***	**-10.124***
	(-1.80)	(-1.85)	(-1.81)	(-1.95)
P-value	0.000	0.000	0.000	0.000
R^2	14.29%	14.28%	14.28%	14.20%
Number of obs.	714	714	714	714

* denotes statistical significance on the 10% level, ** denotes statistical significance on the 5% level, and *** denotes statistical significance on the 1% level. Owner identity Endowment (Endow) has been omitted in the regression to avoid perfect multicollinearity.

6. Conclusions

This paper examines the relationship between ownership concentration and firm performance within the Nordic corporate governance model. We employ the NCG model and agency theory as theoretical frameworks in understanding agency problems between large and minority shareholders in the Nordic context. Potential benefits of the NCG model are that strong owners effectively engage in maximising shareholder value for all shareholders, and take long-term responsibility for the company (Lekvall, 2018). The main hypothesis of the paper is that ownership concentration is negatively associated with company valuation and performance.

Our final sample comprises a balanced panel with 119 annual and 714 total observations over a period of economic stability. We find that increasing ownership concentration of the single largest owner has a negative and significant relationship with Tobin's Q but our results do not support a similar conclusion for ROA.[15] We also hypothesised that there is a negative relationship between state ownership and Tobin's Q as government owner may have a tendency to promote political goals more than shareholder value (e.g. La Porta et al., 2002a; Putniņš, 2015). Regressions with state interaction term suggest that it is not decisive how much government ownership increases, but the fact that government is the largest owner renders the relationship between state ownership and Tobin's Q negative. The results reveal that the inherent risk of the NCG model materialises in this paper: blockholders' private benefits from control dominate shareholder value maximisation, and/or blockholders waive their managerial control function. Given our results and arguments, it is not surprising that state-owned companies demonstrate performance improvements *ex-post* privatisation (e.g. Megginson et al., 1994). In the present context, large owners in Finland can omit dividend payments to minority shareholders when company performance is weak (e.g. Maury, 2004; Kinkki, 2008). Overall, it seems that having a certain type of blockholder sends a negative signal to the market, which minority owners and foreign investors should take into consideration (cf. Berglund & Westerholm, 2010).

This paper could not properly answer the following. First, endogeneity problems may occur because ownership structure, investment opportunities, and company value can be jointly determined (e.g. Demsetz & Villalonga, 2001; Lemmon & Lins, 2003). Second, it could not be ruled out that state owner might select to support weak companies rather than cause weak performance (cf. Thomsen & Pedersen, 2000). Third, we recognise that there are extreme values inherited in the sample since Finnish data is characterized by an illiquid stock market and concentrated ownership structure (e.g. Hietala & Keloharju, 1995). Regarding the first issue, we were unable to find a proper instrument for ownership concentration, and the data are not sufficiently dynamic for the firm fixed effects model. If we assume valuation to cause changes in ownership, stockholders should buy shares based on companies' realised profitability, which supports the efficient markets hypothesis (see Fama; 1969; 1970; 1991). However, newer research has shown that investor attention plays an important role (e.g. Barber & Odean, 2008; Gargano & Rossi, 2018). Regarding the extreme values, these are pertinent to the Finnish market and contain valuable information. Truncating the outlier values did not alter the results or their significance. The correlations were statistically significant throughout all ownership definitions in the regressions. When we regressed ownership and firm performance in reverse fashion, the outcome was not statistically significant. In analysing the results, we emphasize the value of descriptive research by relying on economic logic and testing alternative hypotheses as suggested by Edmans and Holderness

15 When we employed lagged ownership variables in the regressions against, we found a negative and significant relationship with ownership concentration and ROA. This result is, however, questionable, as we assume that ownership is non-dynamic (cf. Edmans, 2014).

(2016). Accordingly, the results of this paper posit that growing ownership concentration has a negative relationship with Tobin's Q.

We found a negative relationship between state ownership and valuation. However, this argument needs more data and research. It would also be important to distinguish the nationality and age of the largest investor since different tax-schemes influence investor behaviour regarding ownership thresholds and tax benefits (see Fama & French, 1998). Including board characteristics, as control variables, would be informative as, for instance, mandatory gender quotas can reduce value even for well-governed companies (Adams & Ferreira, 2009). We also leave it to future CG researchers to scrutinise whether certain blockholders are more efficient in monitoring managers than are others, and to run a quadratic ownership model to test, with a larger data set, whether ownership has a non-monotonic relationship with firm performance (cf. White & Domowitz, 1984; de Miguel et al., 2004). Finally, it would be beneficial to see results from periods of economic disruption, and whether they affect the behaviour of the largest owner.

In sum, the findings of this paper are consistent with the assumption that company value is a function of the structure of ownership. The results show that ownership concentration has a negative relationship with company valuation during a period of economic stability in the Nordic context, which might be bound to a certain owner's private benefits from control. The paper shows that there are avenues for improvement in listed companies in terms of agency problems between controlling owners and minority shareholders. Publishing these results may also stimulate a fundamental change in management philosophy on how to steer state-controlled PLCs for the benefit of all shareholders. The state could consider liquidating its ownership in certain companies and re-invest the assets through ETF funds. This would be a Pareto improvement. Finally, we recommend viewing these results in the Nordic context, not universally.

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Henrik Keinonen

Essays on agency problems in entrepreneurial ventures and publicly listed companies

The aim of this research is to study agency problems in entrepreneurial ventures and publicly listed companies (PLCs). Agency problems originate from asymmetric information, and can be detrimental to a firm's investment attractiveness, high-growth ventures' financial markets, and listed companies' valuation. The overarching research question is what are the agency problems among entrepreneurial ventures and publicly listed companies, are these problems similar in nature, and can they be prevented or cured?

The question is addressed in three different settings. Paper I reflects on business angel networks' (BANs) value to startup entrepreneurs and their societal context, and provides statistics on BANs in Europe and the US. Paper II empirically investigates the impact of Israeli scaleup entrepreneurs' criteria when selecting a Venture Capital (VC) firm, inverting the typical research order. Paper III contributes by providing answers to why certain blockholders in Finnish PLCs do not take responsibility for the company's long-run development, but instead maximise their private utility. The authors employ descriptive statistics and quantitative research: interview data, an ordered logit regression model, longitudinal panel data with cross-sectional and time-series observations, and ordinary least squares regression.

Agency problems in startups stem from the transactional process between entrepreneur and angel investor. In this setting, the entrepreneur might provide untruthful information to the investor or abuse the funding. BAN service quality may, however, reduce information asymmetries in entrepreneurial venture quality, and build trust between entrepreneurs and investors. BANs in more mature business angel markets tend to offer better quality services than those in less mature markets.

Agency problems in scaleups manifest between VC firms and entrepreneurs, where VC managers may push entrepreneurs to take excessive risks that endanger their personal wealth. Empirically, entrepreneurial experience has a negative relationship with the importance entrepreneurs attach to valuation, which is moderated by the importance they attach to VC networks and reputation. Honest signalling of the parties' qualities may reduce agency problems in the startup and scaleup phases.

Large state ownership and company value are negatively associated, suggesting that government owners may promote political goals rather than long-term value for all shareholders. Liquidating state ownership in non-strategic companies and re-investing the assets through ETF funds would constitute a Pareto improvement.

Ultimately, this study shows that agency problems are contextual and differ on the firm's stage of development, namely startup, scaleup or PLC. But agency problems can be alleviated, which is important to the aggregate economy.

HANKEN SCHOOL OF ECONOMICS

HELSINKI
ARKADIANKATU 22, P.O. BOX 479,
00101 HELSINKI, FINLAND
PHONE: +358 (0)29 431 331

VAASA
KIRJASTONKATU 16, P.O. BOX 287,
65101 VAASA, FINLAND
PHONE: +358 (0)6 3533 700

BIBLIOTEKET@HANKEN.FI
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