The influence of deal process characteristics on Private Equity returns

Evidence from the Nordics

BIANCA MERCKLING & MICHAEL BALLARD

Master Thesis in Finance

Stockholm School of Economics

May 2020

ABSTRACT

This paper examines the influence of deal process characteristics on Private Equity (PE) returns and deal sourcing in the Nordics. We conducted a quantitative survey with eight Nordic PE firms supplemented by in-depth interviews to understand what sourcing looks like today as well as identifying favorable deal process characteristics. The analysis is underpinned by a sample of 63 PE sponsored transactions in the Nordics between 1998 and 2019. In addition, four qualitative interviews have been conducted to understand sourcing strategies at greater depth. Findings from our research include: 1. Deals where the PE firms proactively followed the company prior to a formal process and when there was a pre-existing relationship with the target firms produce significantly higher returns and higher variance. 2. Deals with more bidders produce higher returns with higher variance. 3. Deals that are perceived as more complex produce higher returns with a higher variance. 4. Deals where the firms have more experience in the sector produce superior returns. 5. Deals where the firms describe themselves as being more knowledgeable in the sector produce higher returns. 6. Lastly, deals where the highest bidder did not win the deal produce superior returns. This study adds value in five ways. Firstly, it deepens our understanding of the value drivers in Private Equity from a deal process perspective. Secondly, the composition and analysis of a unique, proprietary dataset on Private Equity transactions and their deal process characteristics. Thirdly, it defines concepts and structures the field of sourcing through the proprietary framework constructed to assess beneficial deal process characteristics. Fourthly, our research challenges some common assumptions about value drivers in PE. Lastly, the results impact the strategy for PE firms, LPs, intermediaries and potential target firms. The results suggest that certain deal process characteristics may have an impact on PE returns and hence deserve more attention.

Keywords: Private Equity, Deal Process Characteristics, Deal Sourcing, Value Drivers, Agency Conflicts, Social Networks

---

Acknowledgments: We would like to express great gratitude to our supervisor, Professor Per Strömberg at the Swedish House of Finance at the Stockholm School of Economics, for his valuable guidance, insightful input and contribution to this thesis. We are also grateful to all the participating Private Equity firms in the Nordics for sharing their data and contributing with interviews.

Correspondence: to: Bianca Merckling: 23402@student.hhs.se; Michael Ballard: 41479@student.hhs.se

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. Introduction

Since the emergence of the Private Equity industry in the 1980s, the landscape has become increasingly complex. In recent years we have witnessed the longest bull market in history in which the number of PE houses has increased, interest rates have decreased to record lows, competition has risen and prices have surged. Traditionally, PEs drive returns from three main levers; pricing, operational improvements and leverage. In the early days of PE, returns could be driven from arbitrage alone with little to no improvements in the underlying business as unanimously confirmed through our interviews with firms. Given the difficulty in finding arbitrage opportunities and the standard nature of debt usage, firms have been left to find ways to drive operational improvements and seek deals where they are capable of doing so. As the level of competition is increasing, fund managers are refining their deal process to create an edge in pursuit of superior returns.

The Nordic PE landscape is unique due to the strong entrepreneurial tradition, economic circumstances and friendly and innovative environment for entrepreneurs. However, unlike public markets, the private markets suffer from severe frictions, due to the lack of transparency. Entrepreneurs traditionally were not aware of PE as a partner for their growth and liquidation of their equity. Due to the spread of PE houses we now have a market where PEs are becoming a viable option for many entrepreneurs to sell to. PEs hope to create value through sourcing strategies that establish them as the best partner for these entrepreneurs. They work to show entrepreneurs that they have the best growth story for their company as well as bringing advanced operational and M&A skills into the entrepreneur's playbook such as bolt-on acquisitions and effective use of debt to drive growth. This deep experience and skill in multiple aspects of driving growth paint a compelling picture for entrepreneurs who often were not aware that these methods of growth were even available to them.

The type of sourcing that often comes to mind in the context of Private Equity is structured auctions led by investment banks. Arguably, this is the least sophisticated deal origination method and is generally believed to push up prices as it is intentionally led by an advisor who is paid for maximizing the price. Mechanics that advisors use to achieve that outcome include making the process competitive with multiple buyers, creating urgency to force a decision and presenting the company in a polished way (e.g. an Information Memorandum (IM), rehearsed management meetings and advisor guidance in addressing investors' requests).

On the other side of the spectrum we have deals that are bilateral, supported by well-developed relationships giving extensive access to management and information that is presented as-is rather than in the polished fashion typically presented by investment banks. Many firms take pride in their ability to source proprietary deals through their networks and there is a general perception that these deals produce superior returns. With this in mind, as shown through our interviews, many PE firms spend a fair amount of time on proactively building relationships rather than solely participating in auctions.

In an even more extreme end of this spectrum there are complex deals that not only are proprietary but also novel, difficult or even more time consuming. This could for example be an acquisition by a PE of two companies in the same niche simultaneously to create a joint company, which is more complex than acquiring solely one company through a bilateral deal. Another example could be a Public-to-Private (P2P), which adds two main layers of complexity due to the public and volatile nature of the stock and the need to perform an outside-in evaluation of the business due to the insider nature.

To tackle the challenges of a growing scarcity of potential targets, firms resort to novel sourcing strategies to sustain a competitive advantage over other PEs. One example of this is theme-or sector-based funds. As evidenced in our interview by developing an edge within a vertical these firms are able to identify potential targets and develop a stronger relationship, which enable bilateral deals to be pursued. In addition to this, these funds attract inbound requests due to their edge. Ultimately, this enables these firms to win deals without being the highest bidders (according to our sample 30% of buyers win despite not being the highest bidder) if the target company believes that partnering up with a specialized owner will enable them to grow their business more than with a generalist partner. Similar evidence in Venture Capital shows entrepreneurs are often willing to sell to certain reputable VCs at a lower price (Hsu, 2004). Also, there are several new funds that target complex situations showing the continued pursuit of more novel sourcing strategies.

LPs are likely familiar with the notion of ‘Proprietary’ deals and ’Auctions’ as these notions are often presented in fund raisings. However, there are a number of definitions we have found that have no global definition. The lack of understanding around these factors leads to a bias that may or may not be true. Through our research we aim to inform LPs as to which factors have a material impact on returns.

This paper aims to fill the gap in literature about Private Equity deal process characteristics and sourcing strategies by answering the following questions:

1. What sourcing strategies do Private Equity firms follow?
2. What factors create favorable deal process characteristic that produce superior returns?

First, we document significantly higher returns and higher variance for deals where the PE firms proactively followed the company prior to a formal process when there was a pre-existing relationship with the target firm. This could be explained by a better ability of firms to get to know the company and learn about the industry prior to the deal. However, a long relationship could cause the PEs to develop a positive bias for the target firm, thus resulting in higher variance. Alternatively, some fund managers might simply be better than others at running effective proprietary processes.

Second, deals with more bidders produce higher returns with higher variance. This can be explained as due to the high number of bidders it is likely an attractive investment giving more potential upside. Attractive investments present numerous opportunities for upside potential although all of these plans are not always realized, thus resulting in a larger variance in returns. We could also see evidence of the "Winner's curse" in which you exceed the intrinsic value or true worth of the investment.

Third, deals that are perceived as more complex produce higher returns with a higher variance. We explain this result by the common understanding that more risk implies more reward and therefore a complex deal would need to produce higher returns in order to be attractive since there is more risk.

Fourth, deals where the firms have more experience in terms of number of prior deals in the sector produce superior returns. This question is quite in line with common beliefs that sector experience is important to deliver returns. Fifth, deals where the firms describe themselves as being more knowledgeable in the sector produce higher returns. This finding is also in line with the previous result, perceived experience in a sector produces higher returns.

Finally, deals where the highest bidder did not win the deal produce superior returns. The most obvious explanation to some would be the discounted price that the firm is able to take advantage of, although we believe this effect to be marginal. Instead, we believe that this is due to the fact that firms that are believed to be a preferred partner will not only win the deal at a lower price but also deliver superior operational results throughout the holding.

Some of our hypotheses that were not supported in the data present an interesting narrative as well. For example, the general perception that more access to management allows firms to better assess and conduct due diligence on firms, therefore, producing higher returns was not supported in our sample. That is, neither more hours spent with management, a greater number of times at company site, nor more weeks of exclusivity produce higher returns. Deals with more competition should result in less access to management. Also, we do not find that the strength of the relationships with people at the target firms impacts returns.

One major goal of our survey was to understand the state of PE today and to explore trends over time. We see the breakdown of how the deal was sourced, how much relationship factors vary, the different levels of complexity, competition, and other select factors that are relevant towards our understanding of the state of Private Equity deal process characteristics. Our sample reveals that more than a quarter of the deals were bilateral, and the majority of the rest were limited auctions. When asking about how the strategy that was pursued during the holding period was developed, we find that the large majority of strategies were from a collaboration between management and the PE firm. One interesting finding from our descriptive statistics is that a large share of deals are done without considerable experience in a similar sector. We hypothesize that this is due to the relative lack of specialist firms in the Nordics.

When grouping our data by deal size we notice a trend that PEs spend more time following firms that are larger. When looking at the number of years firms spend with companies, we notice a slight difference before and after the previous two financial crises in 2000 and 2008. I.e. the time spent is shorter prior to 2000 and prior to 2008 and higher in the following periods, respectively. Furthermore, we also reveal an upward trend over time of more access to management in terms of hours spent in meetings. Finally, when plotting the complexity and alignment with strategy over time we notice a similar trend as for the length of relationship: with lower complexity and alignment before the crises and higher complexity and alignment after the crises. We attribute this to the lower number of targets in the market; in good times you can take the low hanging fruit whereas in difficult time you may need to take on more complex and difficult assets.

Through our qualitative interviews we were able to supplement our survey with valuable insights and perspectives both through our survey results and the details of how firms gain favorable deal process characteristics. These interviews shed light on common perceptions about what drives value, how each firm thinks about building their edge, what are the most important factors to winning a deal, what drives value in sourcing, what PE strategies will survive in the future, and more. These insights from professionals with years of experience in the PE industry enrich our research design and give some perspective behind the survey results. Additionally, we gain valuable insight as to where Private Equity deals and strategy are at today and where they may go in the next 10 years. We find that sourcing differs greatly from firm to firm, specialization is a growing theme and novel strategies are being pursued in order to seek an edge.

Due to the private nature of PE, there is a general lack of data and a void of previous research in the area of deal sourcing. Our contribution is five-fold. First, it deepens our understanding of the value drivers in Private Equity from a deal sourcing perspective and the strategic implications. Secondly, the composition and analysis of a unique, proprietary dataset combining an extensive array of information on Private Equity transactions the respective deal process characteristics. Thirdly, it defines concepts and structures the fields in sourcing through the proprietary framework constructed to assess beneficial deal process characteristics. Fourthly, it challenges some common assumptions about what drives value in Private Equity through relationships we would have expected to drive returns that in fact did not. In addition to the contribution in research, our results should be informative for PE firms, LPs, intermediaries and potential target firms.

The remainder of this study is organized as follows. Section 2 provides a background to sourcing in practice. Section 4 explores the theory behind this paper as well as previous literature in the space. Section 4 outlines the test logic and general hypotheses. Section 5 describes the data sample, data collection and methodology. Section 6 presents the results of the paper including the descriptive statistics, the test results and interview results. Section 7 is where we analyze and discuss the results. Section 8 discusses potential areas for future research and the final section discusses research limitations.

II. Sourcing in practice

The following chapter is designed to provide context and a basic understanding of how deals are sourced in practice. Furthermore, it introduces some concepts that are relevant to understanding the narrative of this thesis.

Definition

Deal sourcing is a term that refers to the practice by finance professionals including PE professionals to identify new investment opportunities. To ensure a steady deal flow it is imperative for firms to build a proactive funnel of opportunities. This thesis focuses on a term that we choose to refer to as 'Deal Process Characteristics'. That is, how firms find their deals, how the process is run, who is running the process, and how firms position themselves in a process towards target firms etc..

Where do PE firms find their deals?

Sourcing can be categorized into two main categories 1. Outbound sourcing and 2. Inbound sourcing. These two categories can both be proactive and non-proactive, and it is not uncommon for deals to be sourced via a mix. For example, when a PE firm proactively reaches out to meet a potential target prior to a process later receives an inbound when a formal process is launched.

Inbound contact	*Via M&A advisor or other intermediary*	Traditional methods of sourcing deals include searching within the network including from investment banks or other intermediaries including consulting firms and law firms that have an interest in presenting deals to PEs. Intermediaries will sometimes do work for Private Equity firms on e.g. specific sectors when they present targets that are rumored to be sold or that could be of general interest to the PE firm. This could include both privately owned firms, secondary opportunities and public companies to conduct public to private deals (P2Ps).
	Direct inbound from potential target company	Sometimes target firm will reach out to PE firms prior to a formal process to establish a relationship.
Outbound contact	*Via network*	Firms will use their network of industry experts as well as their personal and professional network to look for interesting opportunities. Also, firms will maintain a dialogue with intermediaries to be considered in processes that are relevant to their firm.

	Directly to potential target company	PE firms conduct internal work of trying to find potential targets. Common practices include using online platforms to find potential targets, looking into portfolios of other companies to find secondary opportunities etc.. Firms would typically reach out via cold calling practices such as using LinkedIn, phone or email in case they do not have a common contact that can introduce them.

Some types of deal processes can fall into multiple different categories. E.g. P2Ps could be sourced from the network, directly by approaching the target company etc..

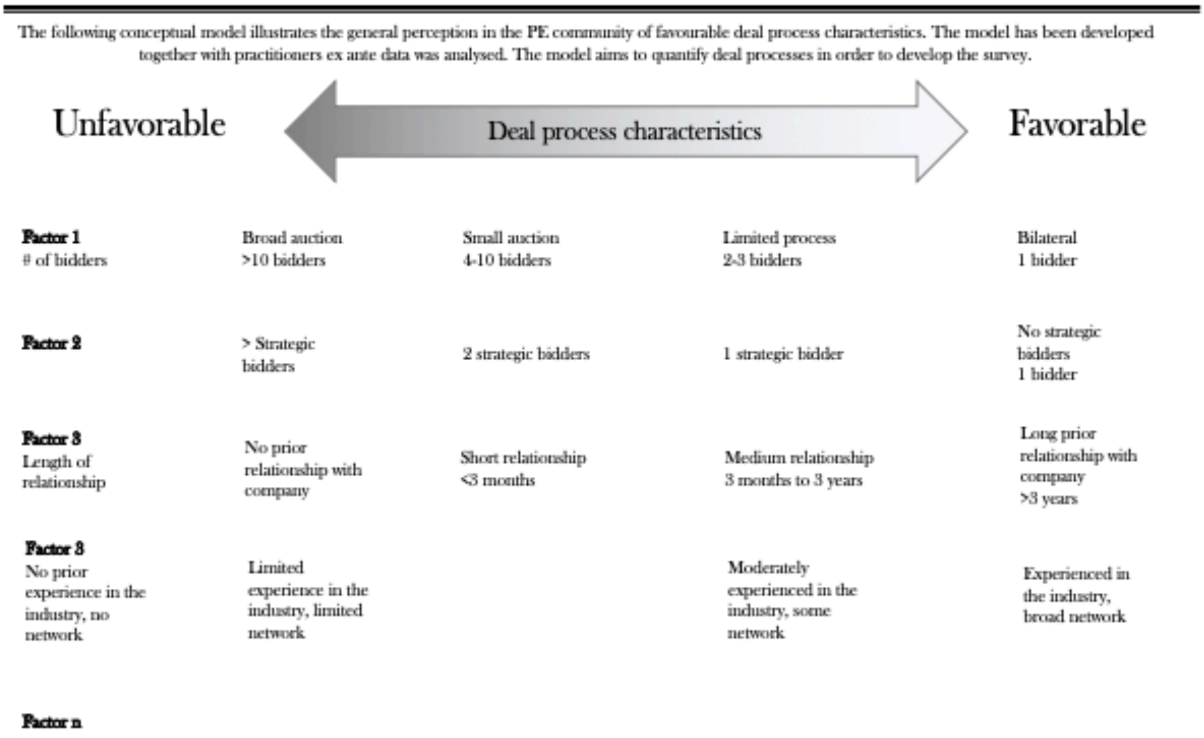
How are processes run?

The three categories of processes that are typically referred to in the industry are: 1. Proprietary deals, 2. Limited auctions and 3. Auctions.

Figure I outlines a framework for mapping deal process characteristics.

Figure I

Presumed favorable deal process characteristics



Proprietary deals are characterized by a bilateral nature and are typically sourced either from proactive origination from the PE firm or from inbounds from target firms. One PE firm choose to define it as follows:

“A proprietary deal allows a specific buyer the first opportunity to purchase a company before the company is presented to other buyers by the owner or an investment banker. Proprietary deals are often presented to specific buyers based on their perceived fit with the seller.” (Lakelet Capital, 2020).

Some of the benefits of this type of process are as follows; A. The fewer hours that management has to spend on the process given the fewer number of bidders and consequently less business disruption. B. The higher likelihood of deal certainty from the perspective of the PE firm. C. This process requires less work for the M&A advisor given that there is only one bidder. D. Firms would typically expect to have more access to management and looser timeline for this type of process. E. The more candid picture that can be painted of the company given the lack of prepared and structured material that would be produced together with the M&A advisor and lastly F. PE firms can through a looser timeline push the need to hire external intermediaries for diligence and form their own view by conducting internal diligence and therefore keep down costs. Some disadvantages include 1. The tendency of some target firms not to hire M&A advisors 2. Less structured material provided by the target firm 3. The higher likelihood that the process is called off completely and lastly 4. The lower external validation of the asset and the pricing. Typically, this process makes sense when there are buyers that are perceived to have a good fit and are likely to pay the highest price. Proprietary deals could be both of private companies and of public companies.

On the other end of the spectrum there are auctions. Auctions typically include a handful of bidders, a tightly run timeline and consequently the need to involve external advisors fairly quickly and limited access to management. The dynamics set out by the M&A advisors that run the process, that is by creating urgency, facilitating efficient information sharing, creating competition and sunk costs aim at guaranteeing the highest price. The main advantage of this type of process includes testing the market for the highest price. The disadvantages include the need for high commitment by management, the lower deal certainty from the perspective of a PE and the resources that have to be invested to participate. Limited auctions fall in-between these two categories.

Typically in both proprietary deals, limited auctions and auctions the chosen bidder will be requiring a period of exclusivity. Exclusivity in the context of M&A can be described as a length of time during which the seller is prohibited from carrying out or furthering activities that relate to the sale of a firm with parties other than the prospective buyer with whom they have signed a letter of intent. The scope and duration of the exclusivity period varies. This period will most likely be negotiated to be longer in a proprietary situation whereas in an auction it will be shorter only to allow the bidder to conduct confirmatory diligence and complete formalities related to the acquisition. Naturally, the seller will want to limit this period in an auction if the offer would fall through.

Our interviews reveal that it is rather the rule than the exception that you are aware of a deal coming to market in the Nordics. Typically, firms will try to meet the firm prior to a formal process to not only learn about the company, management and the industry, but also to position themselves as a preferred partner when the process is launched. Also, we find support from our interviews that the market has changed over time. E.g. that it was easier to find proprietary deals before and that both advisors and auctions are more common today than 20 years ago. Additionally, our interviews reveal that smaller and smaller deals are using advisors, which is partly explained by the existence of smaller M&A advisors and boutiques that only charge a success fee.

Given the costliness of M&A processes of hiring advisors and the amount of time and commitment that goes into running a broad process there should be a correlation between size of the deal and what type of process that is run. I.e. larger companies will benefit more from running an auction. Similarly, secondaries that are bigger firms will gain more from running dual-track processes than smaller firms.

III. Theory and Previous Literature

There is a plethora of papers raising several of the central elements of this paper including articles about information asymmetries, agency conflicts and Private Equity performance measures. This research contributes to the development of the methodology, generation of our hypotheses and the analysis throughout this thesis. However, the previous research in deal sourcing is particularly limited. This thesis fills the void in elaborating on the theme of sourcing including both strategies and superiority of certain deal process characteristics.

Previous literature

Deal sourcing

Due to the challenge for researchers caused by the private nature of PE, there is a void in research in many subtopics with sourcing being one example. Sourcing is something that many GPs and LPs discuss regularly as a competitive advantage but we find little to no evidence to support many of these claims in previous literature. To our knowledge, the only previous studies of PE sourcing are:

Farmer and Teten (2010). In their study, they research the superiority of different sourcing strategies on a fund basis. The authors test if Private Equity and Venture Capital (VC) funds that invest more time in proactive sourcing on average produce superior returns. Additionally, they research what trigger events there might be for firms to be more likely to be contacted by a PE. They find that funds that spend more time on proactive sourcing deliver higher returns. However, the big shortcoming of analyzing the data on a fund basis rather than on a deal basis is that the impact of e.g. who the fund manager is, and its vintage cannot be controlled for. I.e. the performance of a fund could to a large extent depend on the person and the timing of the fund rather than its sourcing strategy. Also, Farmer and Teten detail ten different sourcing strategies in order to describe the development of sourcing in PE and VC. Similar research presented by (Gompers et al 2016) supports that PEs invest significant time in sourcing and that better PE investors are more selective in the deal consideration process. In a study by Batjargal and Liu (2004) social relationships in the Chinese PE and VC market are studied to understand the effects of entrepreneurs' social capital in growth potential and access to funding. The results of the study show that social relationships have a significant impact on the investment decisions by venture capitalists. Also, the authors find significant differences in contractual terms, covenants and valuations. Although the Chinese market might suffer from more intense market imperfections and in effect a more pronounced need for social relationships, the paper suggests that the previous relationships between PE investors and companies might be important for sourcing and deal performance.

Freiburg et al. (2011) research the influence of social ties between institutional investors and Private Equity funds. The authors test the influence on investment decisions of institutional investors with direct and indirect social ties to Private Equity fund managers. They find that direct social ties transfer information and increase trust whereas indirect relationships transfer information but does not increase trust. The findings of the paper suggest that social relationships serve as a mechanism to reduce information asymmetries and facilitate financing.

In a paper by Stuart et al. (2008) board interlocks and the propensity to receive PE offers are analyzed. By investigating whether directors have prior deal exposure to joining the directorship the writers test the likelihood of receiving bids. The results show that firms with directors with PE deal exposure from interlocking directorships are 42 percent more likely to receive PE offers. The key finding of the paper is that the social network of board members influences the likelihood of a change-of-control transaction.

These papers provide a theoretical background to forming our hypotheses and designing our survey. That is, they present indications of what might drive in Private Equity and what sourcing methods there are. However, unlike previous literature we study this phenomenon on a deal by deal basis, which is completely novel in the research area.

Value drivers in Private Equity

When examining the importance of sourcing to returns, it is important to control for other value drivers in private equity investing. Achleitner (2010) examines value drivers of Private Equity returns in a European sample of 206 deals. In her paper, she develops a methodology to distinguish the value contribution of leverage on returns from operational improvements and market effects. The study shows that one third of the returns can be attributed to leverage and two thirds can be attributed to operational and market effects. However, sourcing and potential underpricing is not separated from other potential sources of returns.

In a study by Acharya, Gottschalg, Hahn and Kehoe (2013) Private Equity deal returns are analyzed in relation to corporate governance. The study finds that General Partners who are ex-consultants or ex-industry managers are associated with outperforming deals focused on internal value-creation programs whereas ex-bankers are associated with high performing deals involving significant M&A activity.

Axelson et al (2013) looks into the determinants of leverage and pricing in buyouts. With the key finding that credit usage is largely determined by economy-wide credit conditions. In a study by Degeorge et al (2013) secondary buyouts are compared to primary buyouts with the finding that secondary buyouts underperform primary buyouts. Finally, Kaplan and Strömberg (2009) considers both firms and transactions in the PE industry over time to outline the changing dynamics of the industry.

Our study aims to expand the understanding of value drivers in Private Equity by testing sourcing as a parameter. The previous research about value drivers provides a critical perspective to our study as returns can be attributed to multiple factors beyond sourcing.

Information asymmetries

The Private Equity market is clearly an example of a market that suffers from severe imperfections. Conversely, market imperfections are also the reason behind PE firms' existence (Hassan and Leece, 2007). I.e. they bridge the gap between companies that are seeking capital or owners and investors (the PEs). Although the market suffers from severe difficulties in acquiring information and hence uncertainties in making investment decisions, PEs invest immense amounts of time in gathering information to make a sound investment decision. (Hassan and Leece, 2007). As information about the target company is likely biased to a large extent, PEs spend heavy resources in acquiring independent external information about the company to limit the information asymmetries (Van Osnabrugge, 2000).

Cummings et al (2009) argue that it is a prerequisite for PE firms to reduce information asymmetries to the largest possible extent in order to make a successful investment decision. Arguably, effective sourcing could serve as a means to reduce these asymmetries.

The research on information asymmetries provide a lens of looking at the Private Equity investment process and its inefficiencies that presents an interesting narrative as to why some deal process characteristics are potentially superior to others.

Agency conflicts

Principal-agent theories

The prevailing definition of agency conflicts as presented by Jensen & Meckling (1976) is a contractual relationship in which one party (the principal) engages another party (the agent) to perform services on its behalf for which they delegate certain control rights and decision-making authority. Assuming that both parties will act only in their best interest, it is reasonable to assume that the agent's and principal's actions will not always be fully aligned.

By looking at PE through the lens of agency conflicts, three parties can be identified, and two principal agent relationships can be identified; the limited partners (LPs), the PE firm or general partner (GP) and the target firms. The first principal agent relationship is between the LP and the GP in which the LP is the principal as it provides the funds, and the GP is the agent as it manages the funds. Although this relationship is the natural way funds are structured, it is of secondary focus in this thesis as LPs are passive owners and hence do not take part in sourcing. However, when GPs fundraise the sourcing is considered as an edge. The second principal agent relationship is between the GP and the target firm in which the target is the agent as it holds the information advantage. The latter relationship will be the primary focus of this discussion.

As discussed by Jensen and Meckling (1976) principals typically have to incur costs in order to optimize the behavior of the agent. In the context of Private Equity deal sourcing this cost could be seen as time and money invested in due diligence and the quality of that due diligence.

Signaling theories

A number of learnings from the agency conflicts literature can be applied to this thesis. First, there could potentially be a reason why firms choose to have a limited process or bilateral process in case they attempt to hide information about the company. Information asymmetries allow entrepreneurs to engage in opportunistic behavior (Fried and Hisrich, 1994). On the other end of the spectrum, firms that know that they are good will signal this through a formal auction as they will be comfortable with multiple buyers pursuing due diligence. Naturally, in many deals this statement may not be true as there are a number of reasons why a firm would prefer a bilateral deal compared to an auction. For example, time could be scarce or the seller could be an entrepreneur who is looking for a partner rather than the highest bidder.

Contracts – Trust and control

Manigart et al. (2006) present another perspective on agency conflicts in the field of Private Equity. In their article they address the impact of trust on Private Equity contracts. The authors find that for parties that are faced with potentially large agency problems (investors), trust and control play complementary roles. On the other hand, for parties faced with smaller agency problems (entrepreneurs), trust seems to be a substitute for control. From the sourcing perspective this could be seen as an additional layer on top of the additional time from a relationship backed deal.

The research on agency conflicts present a theoretical perspective on the reasonings behind the design of different deal processes and a framework of understanding the different interests of the stakeholders in the investment process.

Performance metrics in Private Equity

Private Equity returns are notoriously known to be difficult to measure in a fair and comparable way due to the private nature of the industry and the associated lesser standards and regulations to present information. Also, the lack of market prices which makes it hard to measure and benchmark returns. A common practice is to identify funds whose performance is "top quartile" among the funds started in the same "vintage" year (Harris, Jenkinson and Stucke, 2014). The top quartile of funds tends to get special attention as research has shown that outperformance by a certain GP show some consistency over time. LPs then select funds to invest in at least partly based on this measure. In the paper by Harris, Jenkinson and Stucke, the authors discuss the many pitfalls encountered when measuring Private Equity performance. They mention IRR and money multiple to be the industry practice that is consequently ranked into quartiles. However, they outline why being the top quartile does not necessarily mean that the market has been beaten. Also, the authors highlight that varying practices may result in more than 25% of funds being 'Top quartile' as firms classify in a biased manner.

Moreover, IRRs and MOIC can be calculated in various ways. Investors should care about the returns net of fees however GPs sometimes report measures that average the IRRs on the individual investments in various ways. E.g. the different investments can be weighed evenly, by size of investment or the timing of investment during the holding.

Several academic papers have found accumulating evidence that PE as an asset class has outperformed benchmark indices. Harris, Jenkinson and Kaplan (2014), Higson and Stucke (2013), Robinson and Sensoy (2013) and Ang et al. (2013) all find evidence that PE has outperformed public equity markets net of fees over the last three decades. Harrison et al. find this outperformance to be in the order of 20 percent over the entire fund life and 4 percent annually versus the S&P 500. Gross of fees, Sorensen, and Strömberg (2013) find the equivalent outperformance to be 8 percent annually.

The research on performance metrics present the reasoning behind choosing MOIC and IRR as the performance metrics of this study and the respective shortcomings of using these metrics. Moreover, it presents a background of the performance of PE as an asset class in order set into perspective the performance over time as this study expands over two decades.

IV. Test logic and general hypotheses

The theory and previous literature presented in the second part of chapter III of the thesis establish the context from which this paper will take its starting point. This provides a theoretical framework needed to formulate well-informed and relevant hypotheses based on the following presented economic intuition.

Firstly, we choose to test a wider, more open-ended hypothesis that is more of an exploratory nature given the lack of prior research in the field.

Hypothesis I: Deal process characteristics impact deal returns

Secondly, in line with the theories on information asymmetries and social networks, deals that are sourced with more access to management should produce superior returns as the relationship serves as a mechanism to reduce information asymmetries. Therefore, processes with limited competition and with good access to management should result in more informed decision due to a more in-depth due diligence.

Hypothesis II: Deals that possess proprietary deal process characteristics reduce information asymmetries for the buyer and in effect produce superior returns on average

Lastly, in line with the agency theories on adverse selection, proprietary deals might present a lemons problem. That is, if the target firm intentionally chooses not to initiate an auction in the belief that less formal due diligence will be performed if there are fewer bidders looking into the company. Although there could be other motives of not initiating an auction (including trust in the interested bidder, costliness of an auction in terms of both time and money and the risk of an auction going bust) the impact of adverse selection is believed to produce a larger spread in the returns of these proprietary deals.

Hypothesis III: Volatility is higher in proprietary and complex deals due to the adverse selection of firms choosing not to initiate auctions

Fourthly, in line with common perceptions in the industry, we test if the level of specialization in certain industries, situations or segments produce superior returns.

Hypothesis IV: Specialization as an edge in sourcing creates superior returns

Lastly, in line with anecdotal evidence from our interviews we test if certain deal process characteristics have changed over time and if any are more common today.

Hypothesis V: Deal process characteristics have changed over time and vary depending on the market conditions

V. Data & Methodology

Data

Choice of data collection

Quantitative survey

As the information necessary for our analysis is proprietary and the knowledge about the deal process characteristics is restricted to the deal team, our sample size has been limited by the willingness to share data by PE firms.

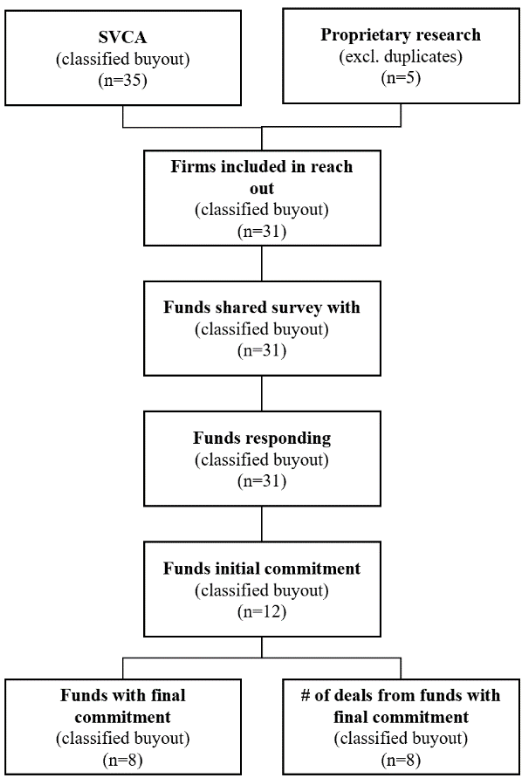
The data for the analysis has been collected through a survey (see Appendix I) sent to all participating firms that have requested to be presented on an anonymized basis. The initial response rate of the reach out was 52% of firms, the initial commitment rate was 39% of firms and the final rate of firms that actually supplied data was 26%. The total sample of exited deals for our analysis was 63. Similar survey work was done by Gompers, Kaplan, Mukharlyamov (2016).

Figure II

Sample size and definition

This figure summarizes the delimitation of the PE-exit sample underpinning this study. The list of firms that were to be contacted were collected from SVCA. In total 31 firms were included in the reach out. The delimitation of these firms were 1. They should have an office in Stockholm Sweden. 2. They should be Buyout investors, meaning that they have a primary focus on investing in secondary shares although primary shares can be part of the mandate.

Fund level

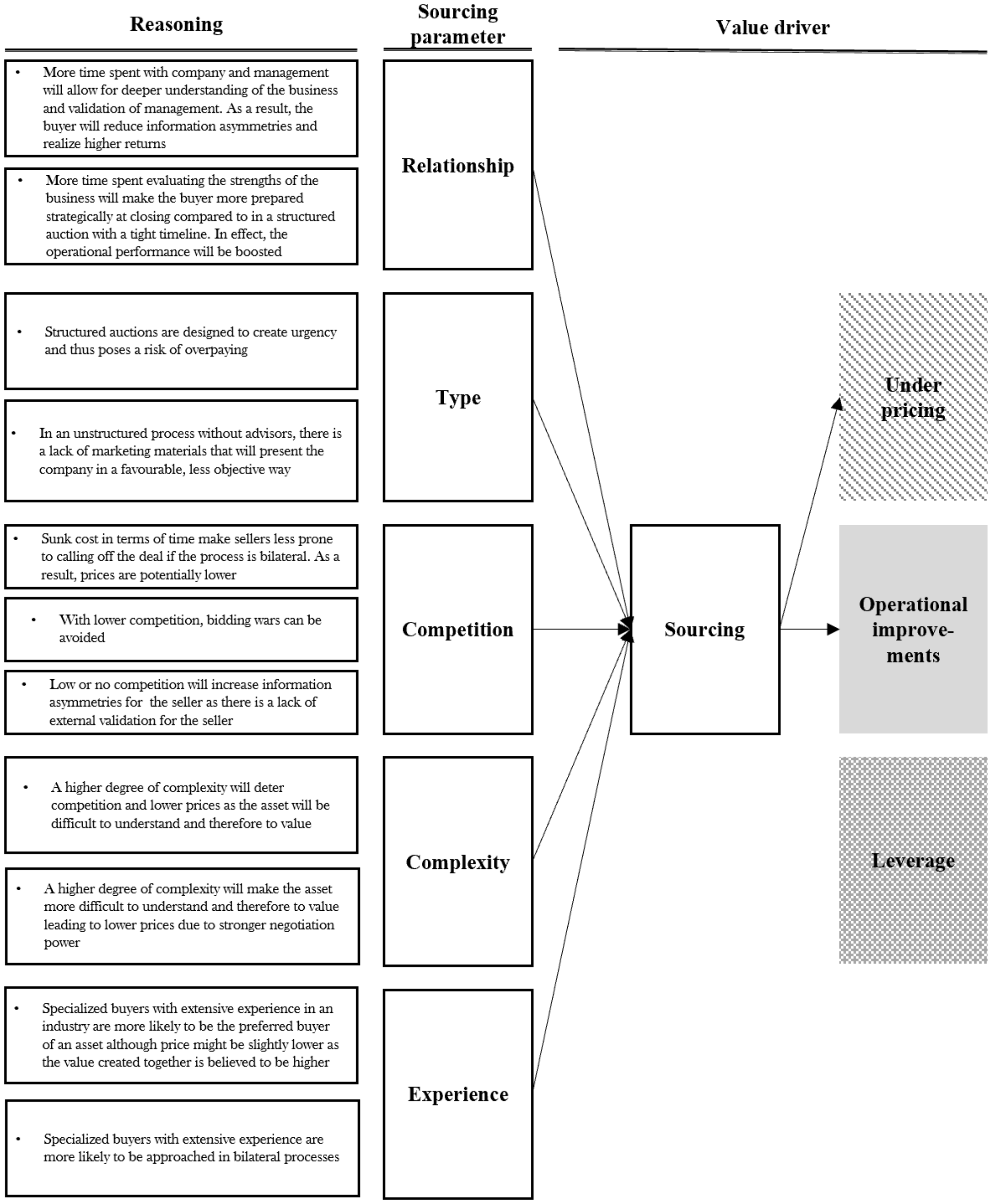


The survey was developed using the conceptual framework presented in Figure III, which has been developed using existing theory alongside feedback with several experienced Private Equity professionals in the Nordic market.

Figure III

Conceptual framework for analyzing deal process characteristics

The following conceptual model presents an overview of the hypotheses and reasoning behind the survey design of this study. Theoretical justifications for these hypotheses will be elaborated on further in this chapter. The figure also presents sourcing's believed impact on value drivers.



The questions in the survey addressed nine core themes;

1. Company information: *E.g. date of entry, enterprise value at entry, sector etc.*

2. Performance: *Return metrics including IRR and MOIC.*

3. Relationship: *E.g. length and characteristics of relationship with the firm to understand the access to management.*

4. Competition: *E.g. number of first and second round bidders.*

5. Complexity: *E.g. level of transformational change made.*

6. Industry knowledge: *E.g. familiarity and experience in the given sector of the deal.*

7. Value drivers: *E.g. main sources of value creation according to respondent.*

8. Other: *E.g. who the seller of the company was etc..*

9. Optional: *To ask if the firm was open to further inquiries about the specific deal.*

Qualitative interviews

In addition to the quantitative survey, several qualitative interviews have been conducted to develop an understanding of the sourcing strategies used by different PEs. In order to fully reflect on the strategic reasoning, representatives who had developed the strategy, as opposed to people who execute on the strategy have primarily been interviewed. Representatives interviewed include the CFO, Founder, Investment Professional, Controller and Partners. Due to the seniority of these individuals we were able to leverage their deep experience and drill down into our findings for novel insights into what drives successful returns in regard to the deal process. See Appendix II for an excerpt of interview questions.

Through our qualitative interviews we first drilled down into three areas; the firms' own strategy, deal process & strategy as a value driver and finally the future of PE deal process and strategy.

Your strategy	Deal process & strategy as a value driver	The future of PE deal process & strategy

These interviews served as a critical component to enrich and augment our survey results. They allowed them to build and support a strong narrative around the state and norms of PE deal sourcing and strategy today as well as look into the future of what is to come. This aim to fill the research gap into the evolution of the Nordic PE market with supporting interviews from professionals who have watched the evolution firsthand.

In addition to the above section we were able to dive into the survey results during our interviews to build a narrative around each finding. This allowed them to enrich our results with context as to why certain situations may produce superior returns and the relevant factors at play such as psychological biases.

Methodology

Determining the attractiveness of deal process characteristics

In order to test which deal process characteristics that are favorable, the results from the survey have been organized into sub-buckets and each factor has been tested separately. I.e. each factor has discrete values e.g. binary yes/no answers on a scale basis. Consequently, the subgroups of each factor have been tested against return measures by comparing if there is a significant difference between the returns of the subgroups.

To test our hypotheses, we use only parametric tests rather than non-parametric. Our sample size falls outside of the range for the tables that use these approaches. For studies with a large sample size, t-tests and their confidence intervals should be used even for data that is heavily skewed.

In the parametric test in which we assume that the population is normally distributed we run t-tests to compare the means of each sub-sample for each factor. The statistical tests are outlined in Appendix III.

Performance metrics

In line with the two most common used metrics used by PE investors, we choose to use MOIC and IRR due to the availability of the data and application in practice.

Money on invested capital (MOIC)

The MOIC is the ratio of cash received from proceeds at exit divided by the initial cash invested at entry and during the holding.

$$\text{MOIC} = \frac{Cash\ proceeds\ recieved\ when\ exiting\ the\ company}{Cash\ invested\ by\ the\ PE\ fund\ in\ the\ company}$$

Gross Internal rate of return (IRR)

The IRR is the discount rate at which the MOIC is equal to the initial investment for a given period. It complements the use of the MOIC as holding companies for a longer period would dilute the IRR.

$$\text{IRR} = \left(\frac{MOIC}{(1+IRR)^t}\right) - 1 = 0$$

Where MOIC is the cash multiple of the deal and t is the holding period.

Some shortcomings in these measures can potentially affect the interpretation of our results. E.g. the type of deal process characteristics could potentially affect the holding period, which in turn tends will affect IRR and MOIC in opposite ways. Therefore, these measures could potentially cloud the interpretation. Also, given the rather high correlation between deal returns and PME (Harris, Jenkinson, Kaplan, 2014), timing could complicate the interpretation.

Hypothesis testing

The aforementioned data set consisting of the survey results was used to test the hypotheses.

Hypothesis I: Deal process characteristics impact deal returns

To test the first hypothesis, we test each factor in our framework separately to determine if any factors impact deal returns in which we group the returns data into buckets based on the survey answers. Our null hypothesis for the t-test is that the difference in the mean for all factors is zero. Conversely, the alternative hypothesis is that it is different from zero.

$$H_0: \mu_0 = 0 \ and \ H_1: \mu_1 \neq 0$$

We use the decision rule to reject the null hypothesis when the t-value is greater than the critical value or the p-value is less than 0.10.

The test that is run can be denoted as:

$$H_0\text{: IRR}_{\text{presumed favorable characteristics}} - \text{IRR}_{\text{presumed unfavorable characteristics}} = 0$$

and

$$H_0\text{: MOIC}_{\text{presumed favorable characteristics}} - \text{MOIC}_{\text{presumed unfavorable characteristics}} = 0$$

For questions with multiple question categories where we are unable to group multiple answers into one category and therefore see smaller subsamples, we choose to not perform t-test but rather compare descriptive statistics between the groups.

Hypothesis II: Deals that possess proprietary deal process characteristics reduce information asymmetries for the buyer and in effect produce superior returns on average

To test the second hypothesis, we test each factor related to 'relationship' and 'competition' as these survey questions aim to gauge to what extent the process possesses proprietary deal process characteristics. Consequently, we test if there is a difference between the mean of returns of the subsamples for each question. Our null hypothesis for the t-test is that the difference in the mean for all factors that indicate good access to management and deep relationship and poor access to management and poor relationships is zero. Conversely, the alternative hypothesis is that it is different from zero.

$$H_0: \mu_0 = 0 \; and \; H_1: \mu_1 \neq 0$$

We use the decision rule to reject the null hypothesis when the t-value is greater than the critical value or the p-value is less than 0.10.

The test that is run can be denoted as:

$$H_0\text{: IRR}_{deep\ relationship} - \text{IRR}_{poor\ relationship} = 0$$

and

$$H_0\text{: MOIC}_{deep\ relationship} - \text{MOIC}_{poor\ relationship} = 0$$

Hypothesis III: Volatility is higher in proprietary and complex deals due to the adverse selection of firms choosing not to initiate auctions

To test the third hypothesis, we test all factors from the survey by comparing the answers using a two-sample f-test to determine if the variances differ. Our null hypothesis for the f-test is that the difference in the variance for all factors (with subsamples from both ends of the spectrum for every factor) is zero. Conversely, the alternative hypothesis is that it is different from zero.

$$H_0: \sigma_1^2 = \sigma_2^2 \ and \ H_1: \sigma_1^2 \neq \sigma_2^2$$

We use the decision rule to reject the null hypothesis when the p-value is less than 0.10.

Hypothesis IV: Specialization as an edge in sourcing creates superior returns

To test the fourth hypothesis, we test each factor related to 'Knowledge and Experience' as well as 'Other'. Consequently, we test if there is a difference between the mean of returns of the subsamples for each question. Our null hypothesis for the t-test is that the difference in the mean for all factors that indicate a specialized focused firm and generalists is zero. Conversely, the alternative hypothesis is that it is different from zero.

$$H_0: \mu_0 = 0 \ and \ H_1: \mu_1 \neq 0$$

We use the decision rule to reject the null hypothesis when the t-value is greater than the critical value or the p-value is less than 0.10.

The test that is run can be denoted as:

$$H_0: \mathrm{IRR}_{specialized} - \mathrm{IRR}_{generalist} = 0$$

and

$$H_0: \mathrm{MOIC}_{specialized} - \mathrm{MOIC}_{generalist} = 0$$

Hypothesis V: Deal process characteristics have changed over time and vary depending on the market conditions

To test the fifth hypothesis, we plot the different metrics over time to find patterns before, during and after financial crises.

Our null hypothesis is that there is no change in deal process characteristics over. Conversely, the alternative hypothesis is that there is a difference.

$$H_0: \mu_0 = 0 \; and \; H_1: \mu_1 \neq 0$$

We use the decision rule to reject the null hypothesis when there is a clear trend over time.

Reliability and validity

Given our choice of methodology there could be biases that affect the reliability of our study. Given our choice to complement solely objective questions in our survey with questions of a subjective nature some questions have a lower validity. Also, there could be a bias in our data collection methodology in terms of which firms chose to participate. E.g. firms that perform well or firms that spend a lot of time on identifying attractive deal process characteristic. Also, the interviews are subject to interpretation which is why both of us attended all interviews to reduce the potential interpretation bias. Also, we have a potential selection bias as some firms only picked a sub-sample in order to facilitate data gathering. Naturally, deals selected were only exited deals which could result in some bias related to the exit behavior of successful deals.

Also, the fact that our sample exceeds the limit to be able to perform non-parametric test while being on the lower end in terms of size for parametric test lowers the reliability of the results. Due to our limited dataset we were discouraged from running a regression of our survey results. That is, given that we would have had a bigger dataset, running a regression would have been a suitable means to test the different nuances of the survey responses with the respective returns.

VI. Empirical results

Descriptive statistics

Survey results

The following chapter presents the descriptive statistics from the survey, in the same order as they were asked. All results are presented as given to give a clear picture of the data that has been used in the following chapter which presents the test statistics. In the second part of this chapter, cross-tabulations of the most interesting groupings are presented to analyze some the survey results by size, equity stake and over time.

Figure IV shows that the sample is more or less evenly distributed except the overweight of deals in recent years.

Figure IV

Sample characteristics: Sample distribution over time

This figure presents the yearly distribution of the sample from the survey. The primary axis presents number of entries for the deals in the sample as bars. The secondary axis presents number of exit for the deals in a given year, presented as a line

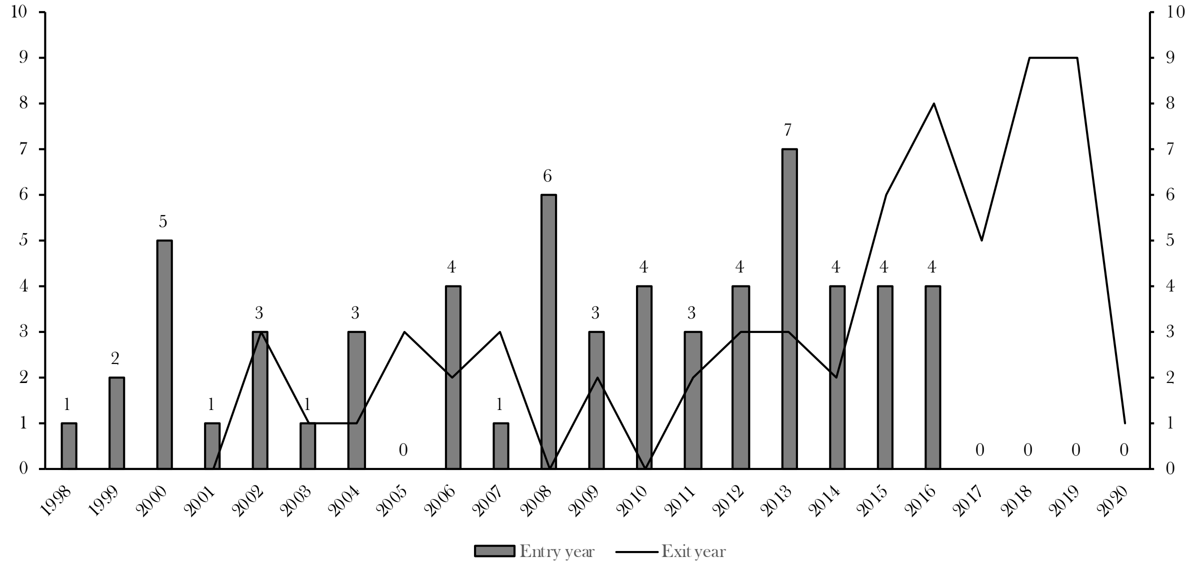


Figure V shows that their two industries that are overrepresented in the sample are 'Industrials' and 'Other'.

Figure V

Sample characteristics: Sample distribution by industry

This figure presents the yearly distribution of the sample by industry. The graph aims to illustrate the breadth of the sample and lack of dependency on one single industry.

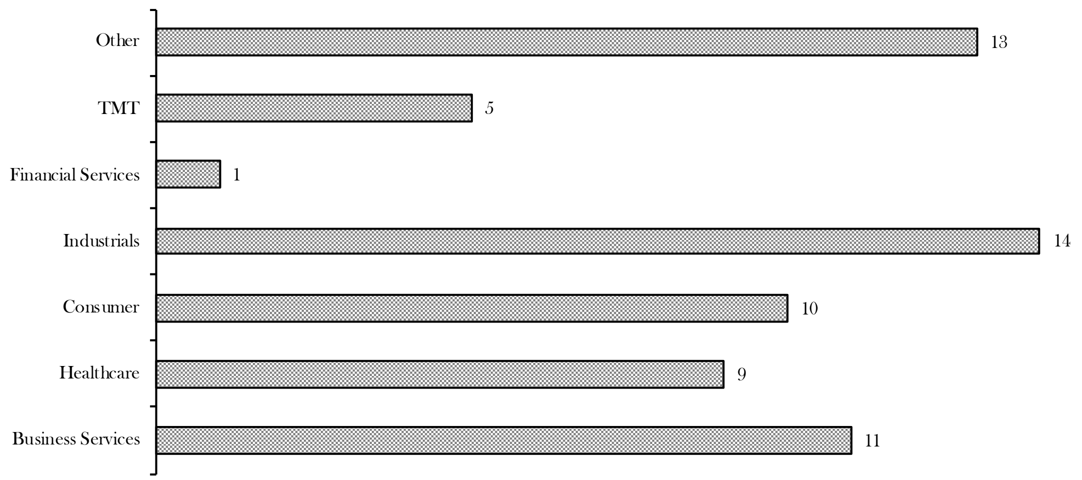
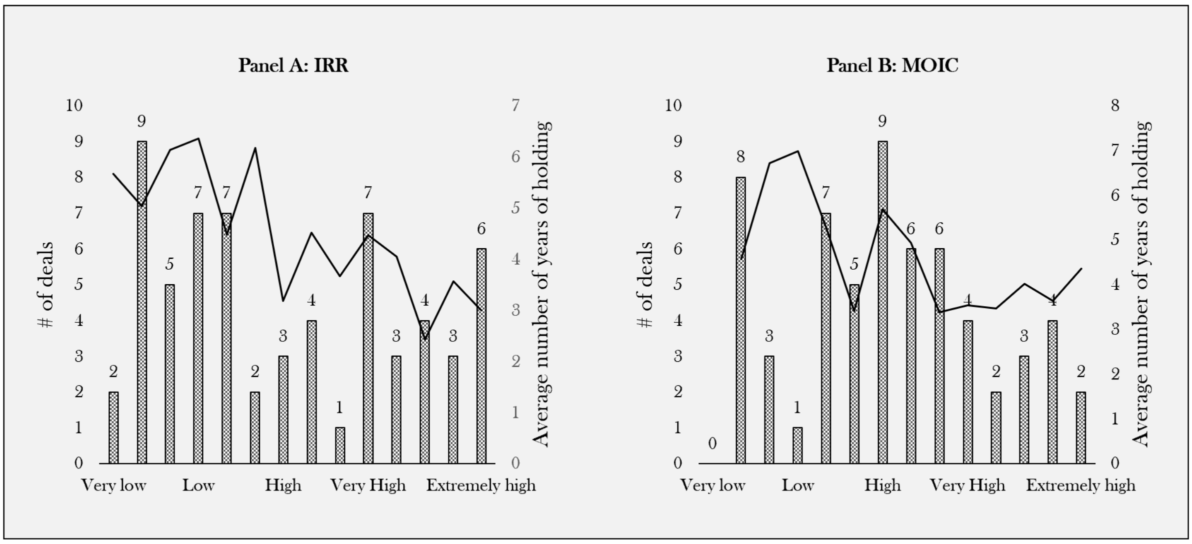


Figure VI

Sample characteristics: Distribution of returns across sample

This figure presents the distribution of the returns across the sample. Panel A displays the IRRs across the sample and Panel B displays the cash multiples. Due to the sensitive nature of these returns we have anonymized them and present them relative to the distribution. E.g. 'Extremely high' is relative to the sample and does not necessarily represent an extremely high return in the population of Private Equity returns. The secondary axes present the average number of years holding.



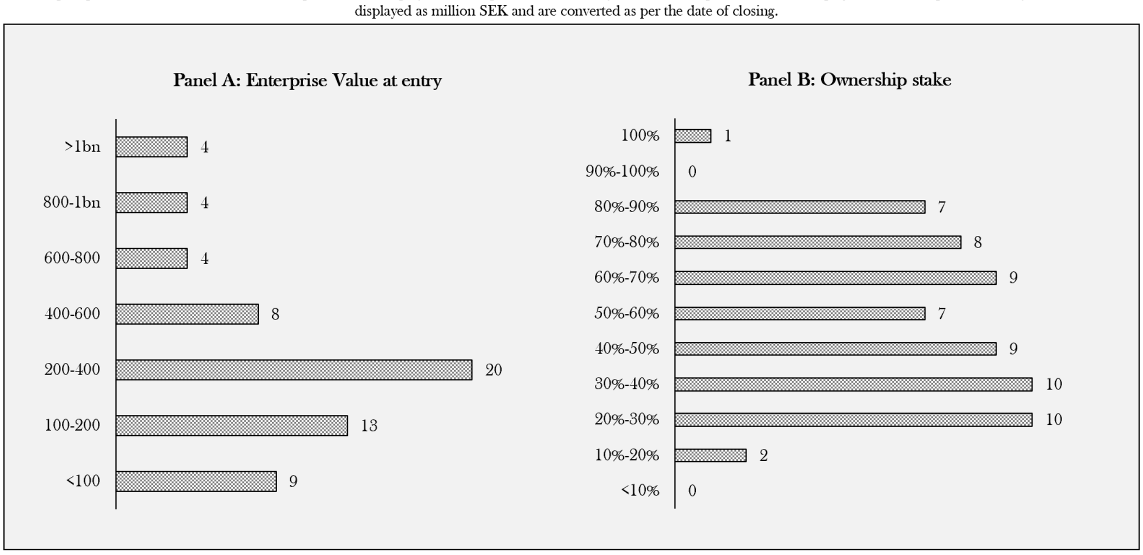
The figure above shows the returns of the sample on an anonymized basis. The sample shows what looks similar to a normal distribution for MOIC except for the spike in the very low category. The IRRs are somewhat evenly spread out over the different ranges. We also reveal a trend in lower number of years of holding for higher IRRs and MOICs.

Figure VII presents the enterprise value at entry and the equity share at entry. There is an overrepresentation in smaller deals with in the small and mid-cap segment with 42 deals being less than SEK 400m in enterprise value at entry. Also, 31 out of the 63 deals were minority deals with less than 50% of the equity.

Figure VII

Sample characteristics: Size and ownership

This figure presents size of the deals in the sample. Panel A displays the Enterprise Values at entry across the sample and Panel B displays the ownership stake at entry. All values are displayed as million SEK and are converted as per the date of closing.

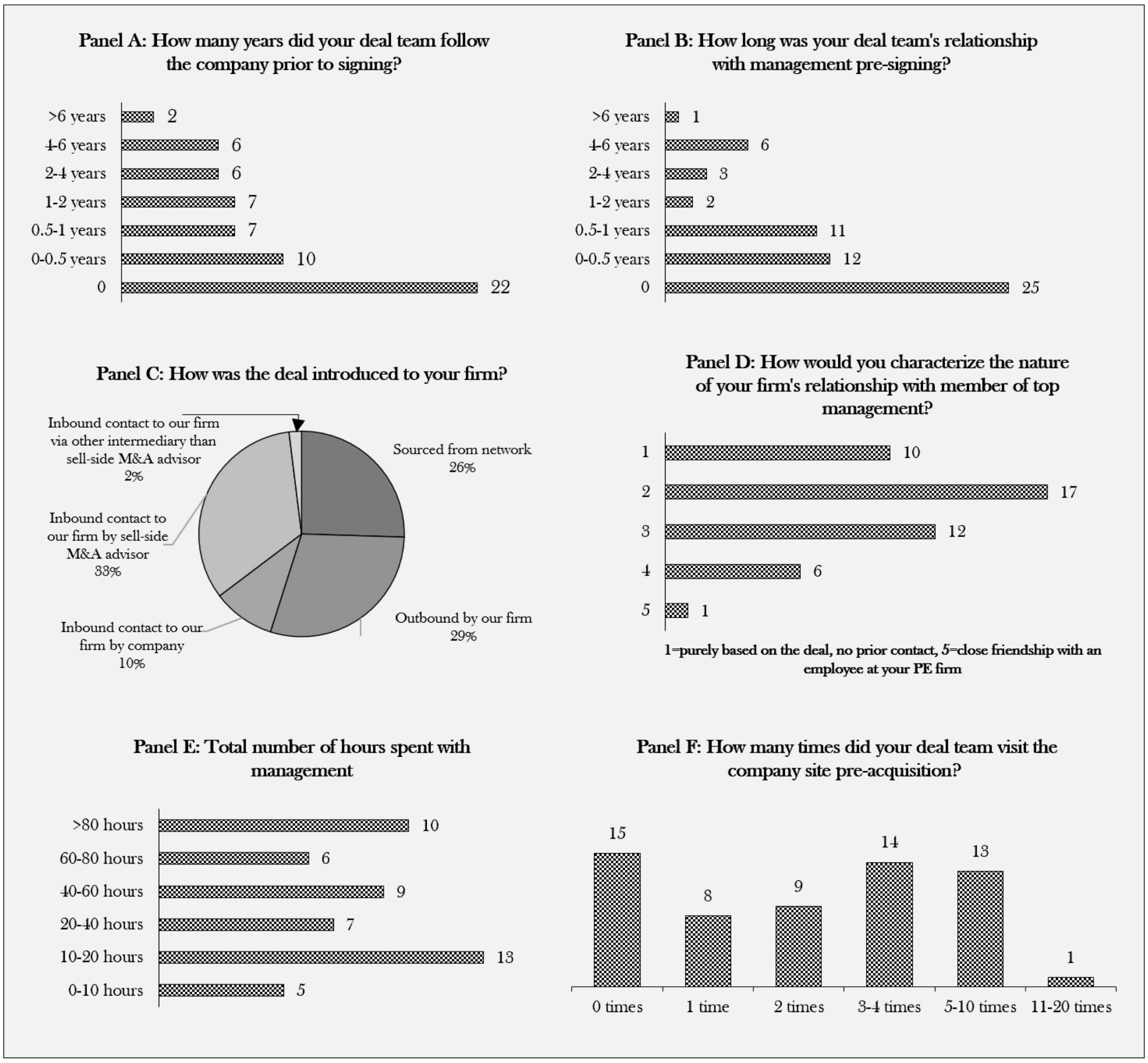


The following figure presents the survey results for metrics relating to 'Relationship'. We find that less than 50% of deals are made when there was a pre-existing relationship or when the firm followed the company prior to the transaction. Also, we find that more than 50% of the deals are sourced via outbound contacts. Moreover, the sample reveals a wide spread in the number of hours spent together with management although 50% of the deals have less than 40 hours together with management. Similarly, we find a wide spread in the number of interactions at company site.

Figure VIII

Survey results: Relationship metrics

This following figure presents survey results of questions relating to 'Relationship'. Panel A displays the answers for question 9, Panel B displays the answers for question 10, Panel C question 11, Panel D question 12, and finally Panel E outlines the answers for question 13. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers.



We test the correlation of all sourcing metrics, presented in Appendix IV. We find a strong positive correlation between question 9 and 10 with an R^2 of 0.9. I.e. between number of years following the company and number of years that the firm had a relationship with the company prior to the transaction, respectively. Similarly, we find some correlation between the number of times at company site and a deeper type of relationship with an R^2 of 0.6.

The next figure presents the survey results for metrics relating to 'Competition'. The sample reveals a wide spread in the number of weeks of exclusivity between deals. Furthermore, we find that more than a quarter of the deals in our sample came from bilateral deals and the majority of the rest were limited auctions. Due to the large number of omitted responses on question 18, we choose to not further discuss as we consider the results unreliable.

As presented in Appendix IV, we find a positive correlation between the number of bidders in the first and second round, which does not come as a surprise.

Figure IX

Survey results: Competition metrics

This following figure presents survey results of questions relating to 'Competition'. Panel A displays the answers for question 14, Panel B displays the answers for question 15, Panel C question 16, and finally Panel D outlines the answers for question 17. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers.

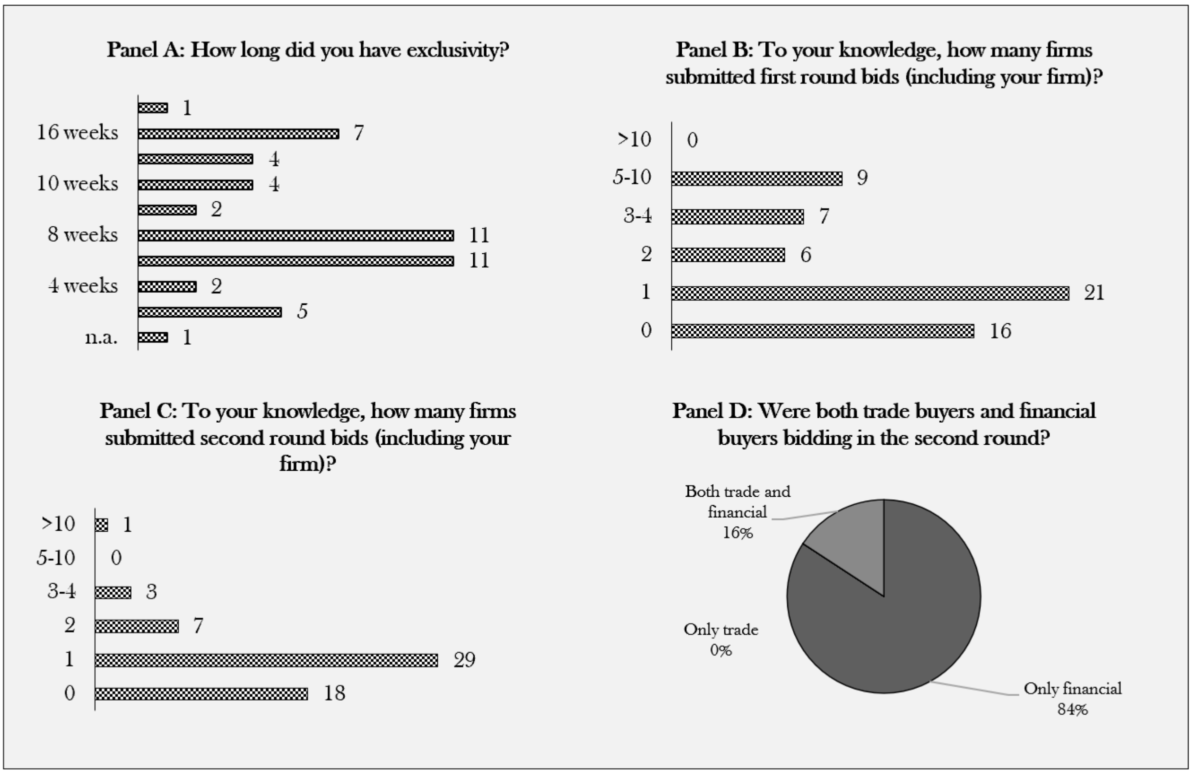


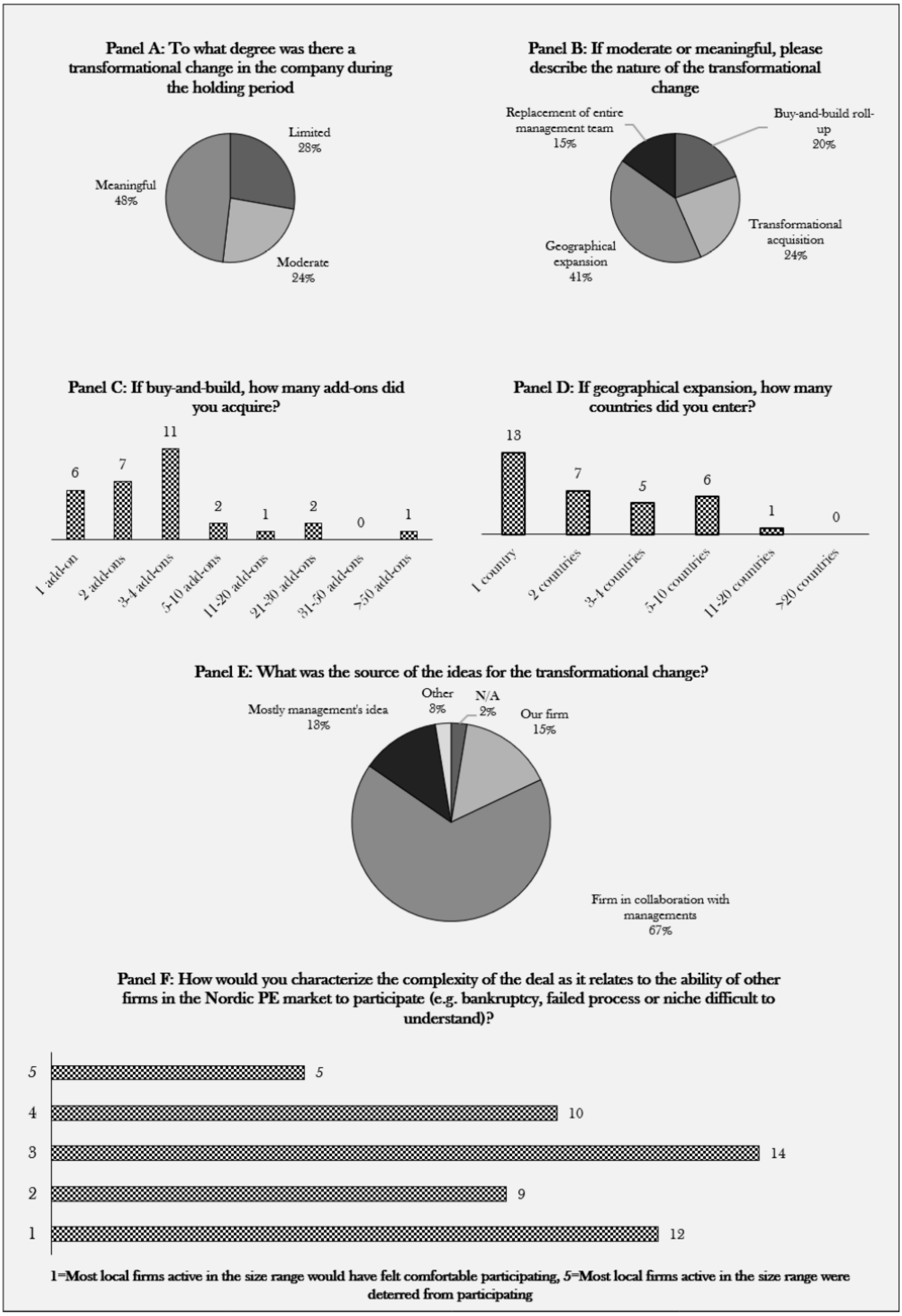
Figure X presents the survey results for metrics relating to 'Complexity, Knowledge and Experience'. The survey reveals that more than half of the deals are described as transformational by the firms. Out of those deals, more than 50% are from bolt-on and transformational acquisitions. Looking at the number of acquisitions that response constituted of we find the majority to be up to 4 deals. Similarly, looking at the number of countries a firm entered shows that a majority is up to 4 countries. To better understand how the idea was developed we asked who was behind the idea. We find that the large majority came from a collaboration between management and the PE firm. Interestingly, we find that the distribution of responses concerning the complexity of the deal is surprisingly even.

When testing the correlation between the metrics, as presented in Appendix IV, we find a positive correlation between level of knowledge prior to the transaction and the alignment with strategy of the firms. We find the correlation to be an R^2 of 0.7.

Figure X

Survey results: Complexity knowledge & experience metrics

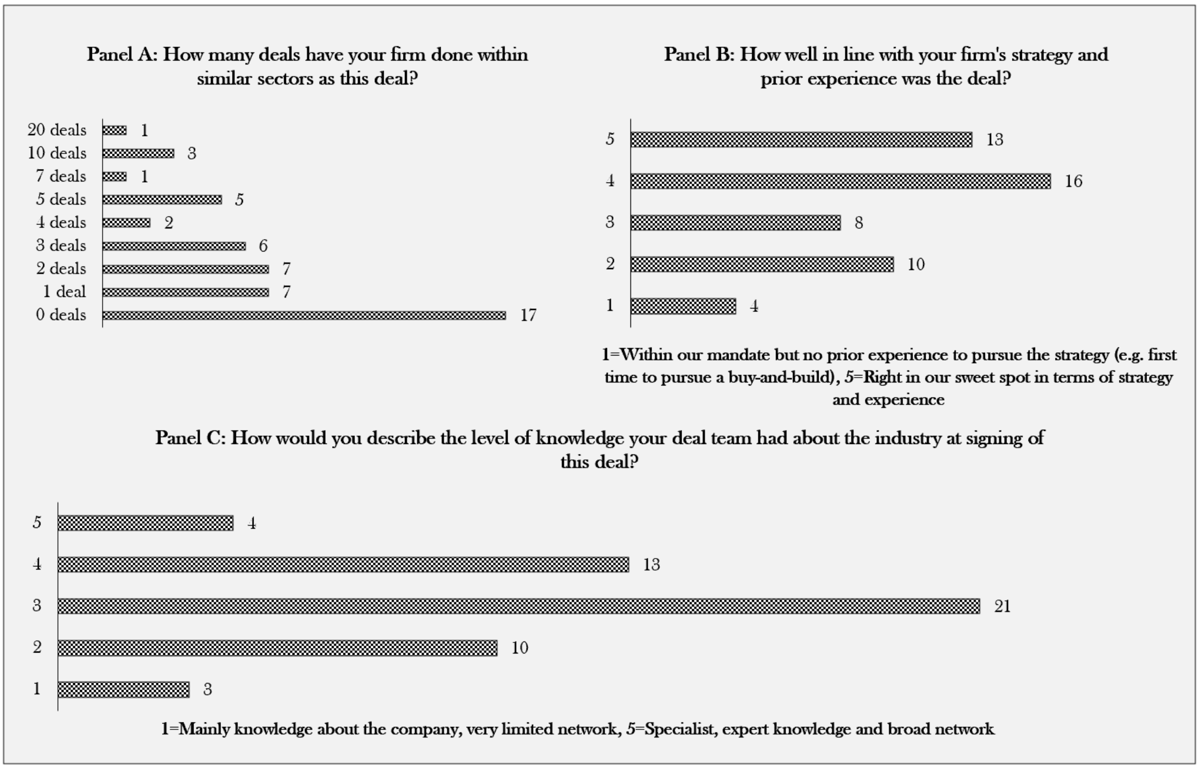
This following figure presents survey results of questions relating to 'Complexity knowledge & experience metrics'. Panel A displays the answers for question 18, Panel B displays the answers for question 19, Panel C question 19A, Panel D question 19B., Panel E question 20, and finally Panel F outlines the answers for question 21. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers.



We find that a large share of deals are done without considerable experience in a similar sector. Also, we find a large spread in the answers to question 22. That is, concerning how well in line with the firm's strategy and experience the deal was. Similarly, we find a wide distribution in the level of knowledge firms had prior to a deal.

Figure XI
Survey results: Knowledge and experience metrics

This following figure presents survey results of questions relating to 'Knowledge and Experience'. Panel A displays the answers for question 22, Panel B displays the answers for question 23,, and finally Panel C outlines the answers for question 24. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers.

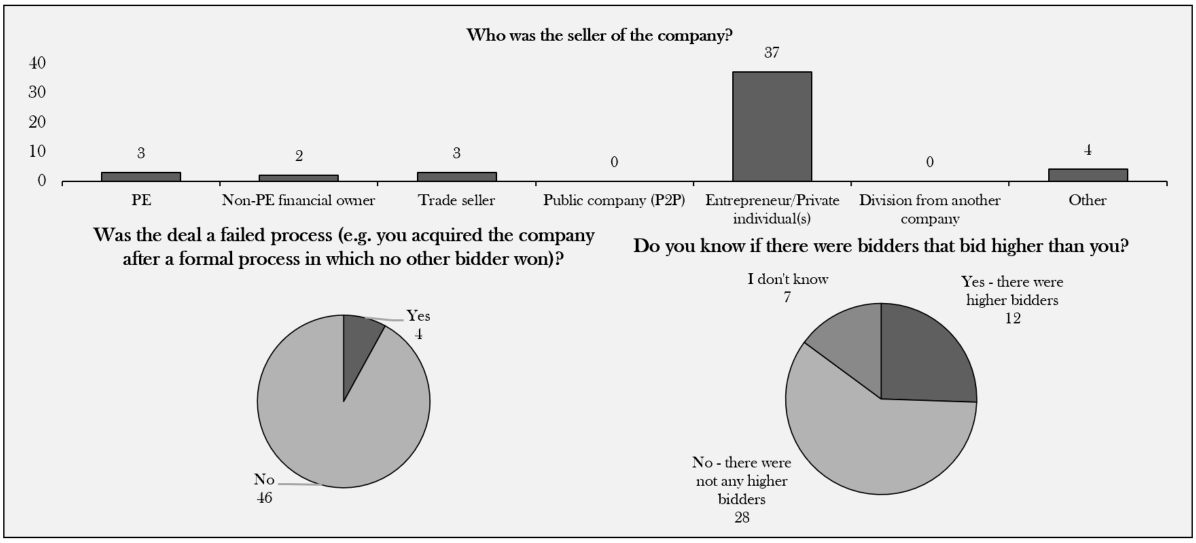


Lastly, looking at the next graph presenting 'Other metrics' we find that our sample is heavily overweight on deals where the seller was a private individual/entrepreneur. We find that a small number of acquisitions happen after a failed auction. Also, we find that the occurrence of deals when the highest bidder did not win to be fairly common.

Figure XII

Survey results: Other metrics

This following figure presents survey results of questions relating to 'Other metrics'. Panel A displays the answers for question 26, Panel B displays the answers for question 27,, and finally Panel C outlines the answers for question 28. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers.

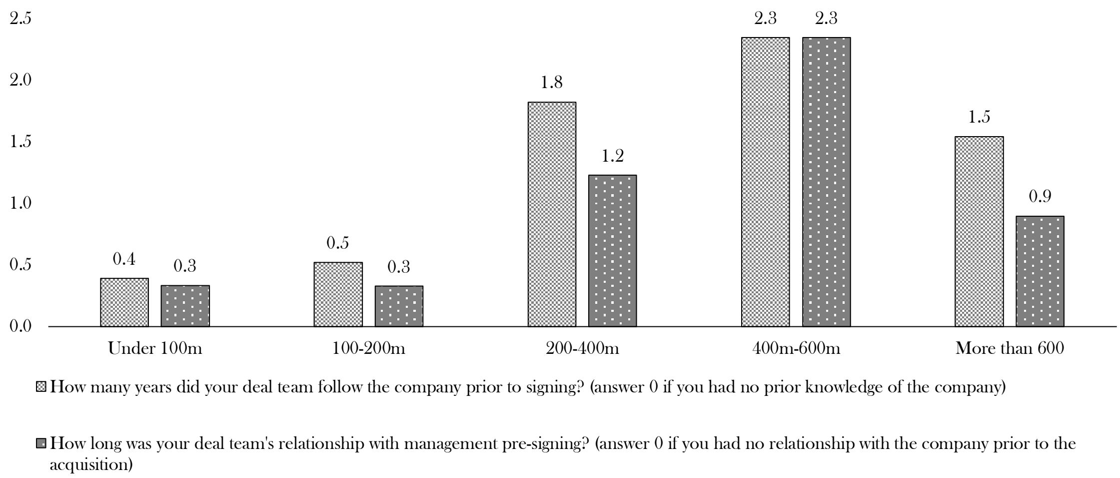


Crosstabulations

Figure XIII

Average number of years following the company by deal size

This figure presents the number of years that PE firms followed the company and formed a relationship prior to the deal distributed by deal size. The figure aims to illustrate the differences in sourcing practices depending on the deal size.



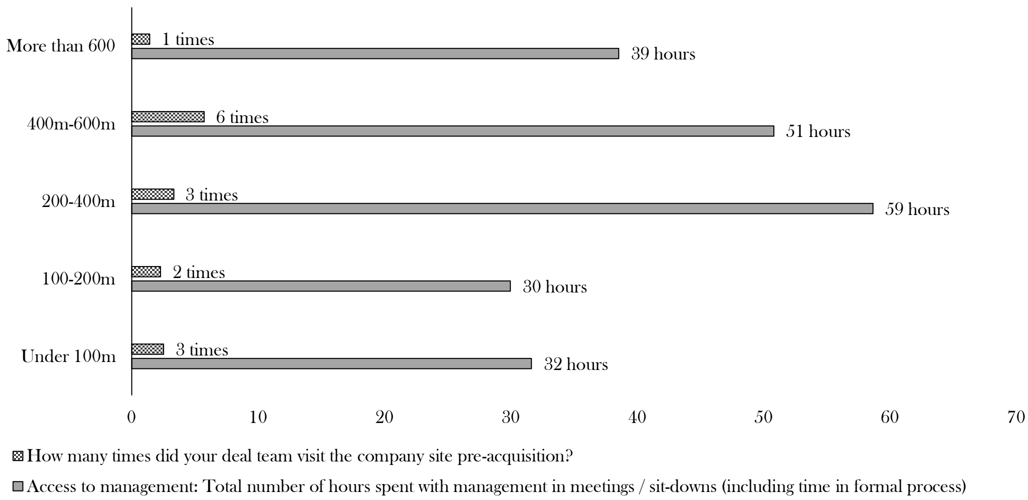
We notice a slight difference in the degree of complexity and alignment with strategy for larger deals.

However, we do not discover any material difference in the number of hours spent with management. There should be a natural supply vs demand relationship with larger deals vs smaller deals and their respective supply of access to management. I.e. in large deals there is presumably firms would like to spend more time and it should typically be more competition. However, this results in a process when the supply of access is limited. Conversely, for small deals it is easier to get access, but the return on invested time of diligence is not as high given the smaller scale. Also, for smaller deals that are typically less sophisticated than more mature firms, there is more "low-hanging fruit" in terms of operating and governance improvements and hence less time is needed. Whereas for larger deals firms will have to put more effort into gaining an edge, and it would hence be useful to discuss more with management. Given this supply and demand it is not surprising that most time is spent in medium size deals.

Figure XIV

Access to management by deal size

This figure presents the number of hours spent with management and number of times at company site to the deal distributed by deal size. The figure aims to illustrate the differences in sourcing practices depending on the deal size.

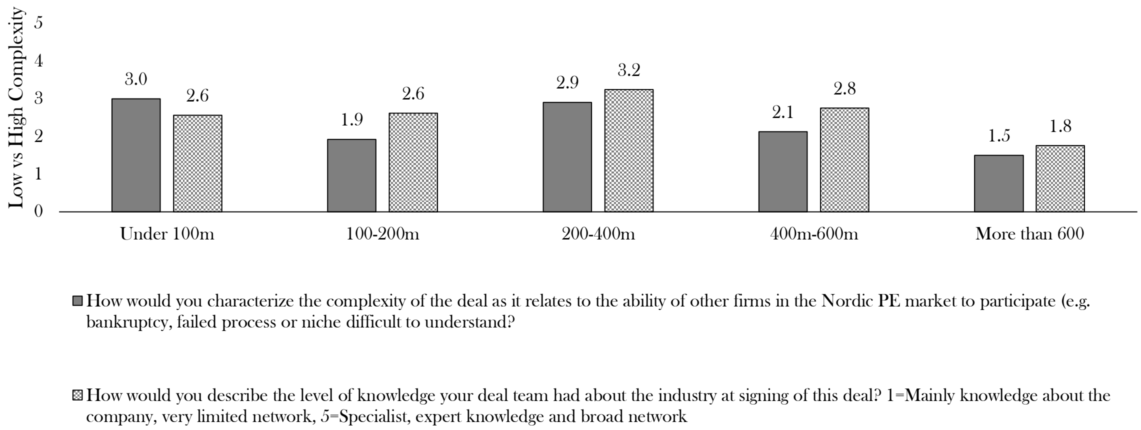


We notice a slight difference in the degree of complexity and alignment with strategy for larger deals.

Figure XV

Complexity and alignment with strategy by deal size

This figure presents the level of complexity and alignment with firm strategy by deal size. The figure aims to illustrate the differences in sourcing practices depending on the deal size.

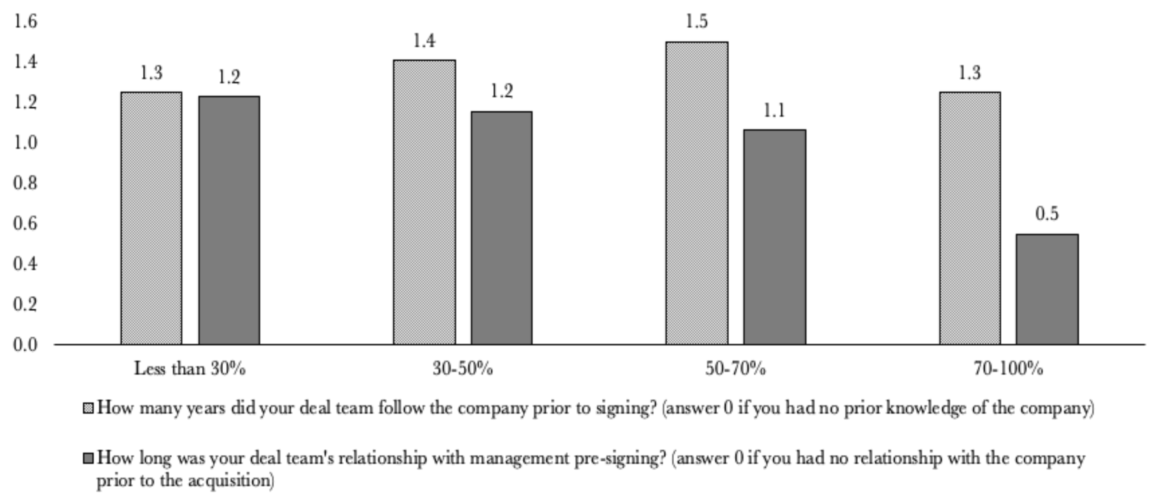


When grouping our data by equity stake we do not notice a clear trend on the number of years firms spend on following companies.

Figure XVI

Average number of years following the company by equity stake

This figure presents the number of years that PE firms followed the company and formed a relationship prior to the deal distributed by equity stake. The figure aims to illustrate the differences in sourcing practices depending on the equity stake.

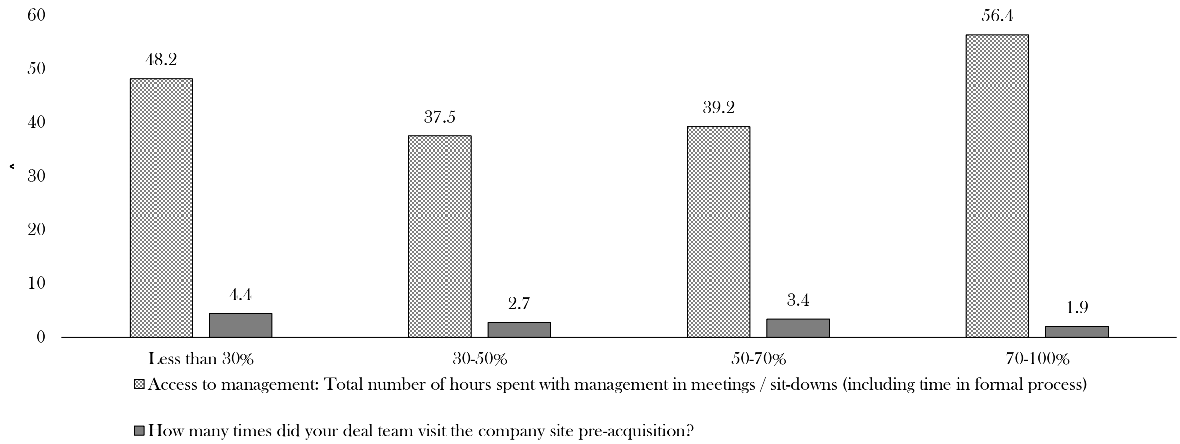


We find that the larger equity stake that is invested, the fewer times the company site is visited. However, we do not find a relationship when it comes to number of hours spent with management.

Figure XVII

Access to management by equity stake

This figure presents the number of hours spent with management and number of times at company site to the deal distributed by equity stake. The figure aims to illustrate the differences in sourcing practices depending on the equity stake.



We notice a slightly lower degree of complexity for larger equity stakes. We do not, however, find any material differences when it comes to alignment with strategy.

Figure XVIII

Complexity and alignment with strategy by equity stake

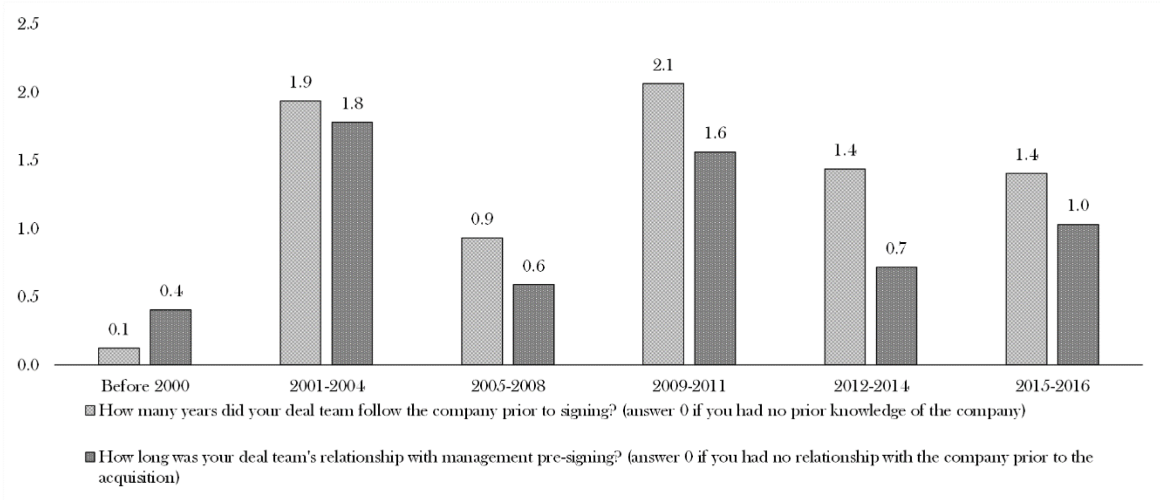
This figure presents the level of complexity and alignment with firm strategy by equity stake. The figure aims to illustrate the differences in sourcing practices depending on the equity stake.

When looking at the number of years firms spent with companies we notice a slight difference prior and post financial crises. I.e. the time spent is shorter prior to 2000 and prior to 2008 and higher in the following periods, respectively.

Figure XIX

Average number of years following the company over time

This figure presents the number of years that PE firms followed the company and formed a relationship prior to the deal distributed over time. The figure aims to illustrate the differences in sourcing practices over time.

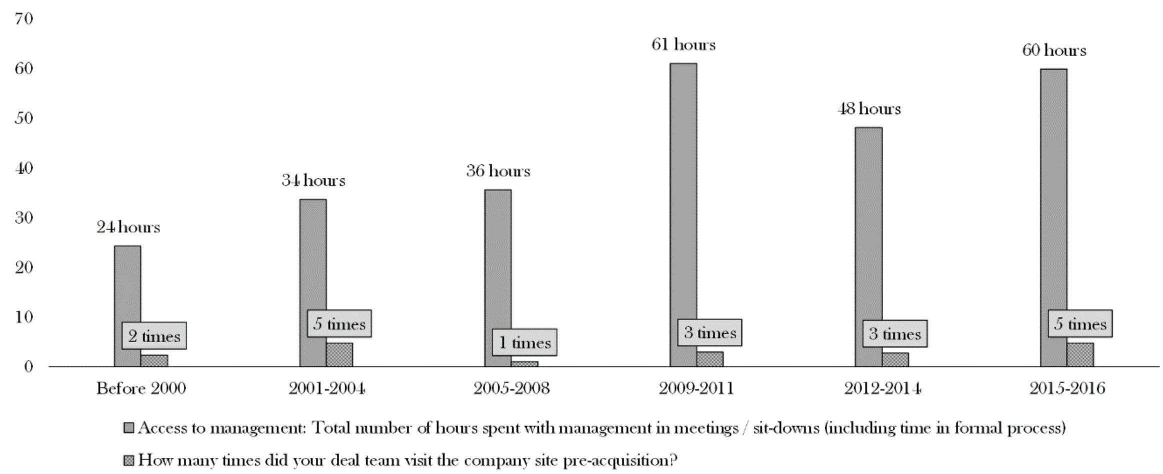


We also reveal a trend of more access to management in terms of hours spent. For the number of times at company site we do not reveal a relationship.

Figure XX

Access to management over time

This figure presents the number of hours spent with management and number of times at company site to the deal distributed over time. The figure aims to illustrate the differences in sourcing practices over time.

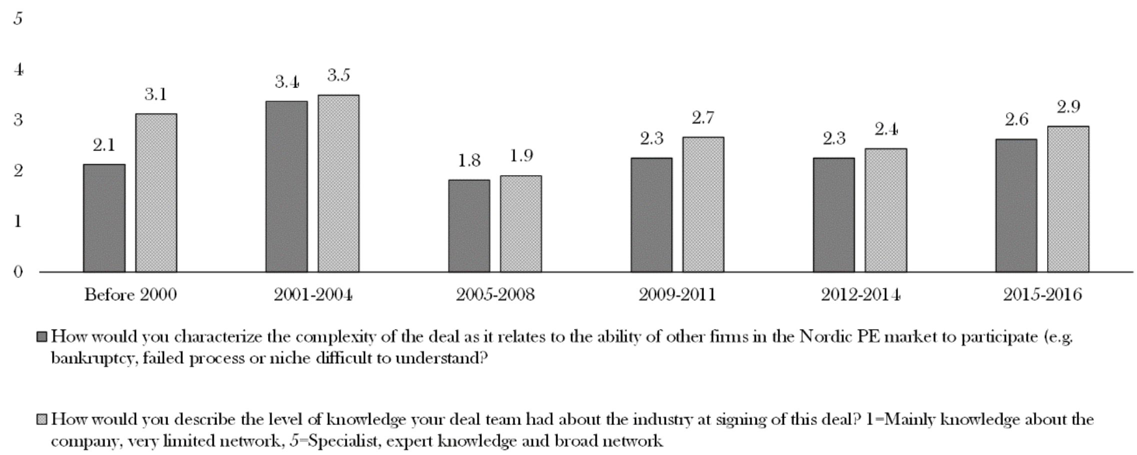


When plotting the complexity and alignment with strategy over time we notice a similar trend as for the length of relationship. I.e. lower complexity and alignment prior to crises and higher complexity and alignment post crises.

Figure XXI

Complexity and alignment with strategy over time

This figure presents the level of complexity and alignment with firm strategy over time. The figure aims to illustrate the differences in sourcing practices over time.



Test results

Results from hypothesis I

Hypothesis I: Deal process characteristics impact deal returns

At the 5 % significance level, the sample shows that firms that follow targets prior to the transaction produce higher returns. Also, firms with an existing relationship with the firm produce higher returns. Question 11 addressed the type of introduction the deal was sourced from. Looking at the IRRs we see that outbounds by the firm produces the highest return with a mean of 0.52 and 'Inbound contact to our firm' the lowest with a mean of 0.29. Looking at the MOIC, this category of sourcing produces the lowest return with a mean of 2.20. When firms were asked about the strength of the contact from a scale from Strong, meaning 'Close friends' and Weak referring to a non-existing relationship, we do not find a significant different in returns between these two groups.

We hypothesized that there would be differences in returns between deals with greater access to management. However, we could not find any significant differences. That is, more hours spent with management, greater number of times at company site, nor more weeks of exclusivity produce higher returns. The t-tests for metrics related to 'Relationship' are presented in Panel A and Panel B in Table I.

Table I

Sourcing metrics: Two-sample t-test

This table summarizes the output of several two-sample t-tests analyzing differences in returns. The first column presents the question number it pertains to in the survey, the following columns outline the descriptive statistics of the sourcing metric analyzed. The final two columns show t-test outputs. Asterisks dentote significance level: 10%-level(*), 5%-level (**) and 1%-level (***).

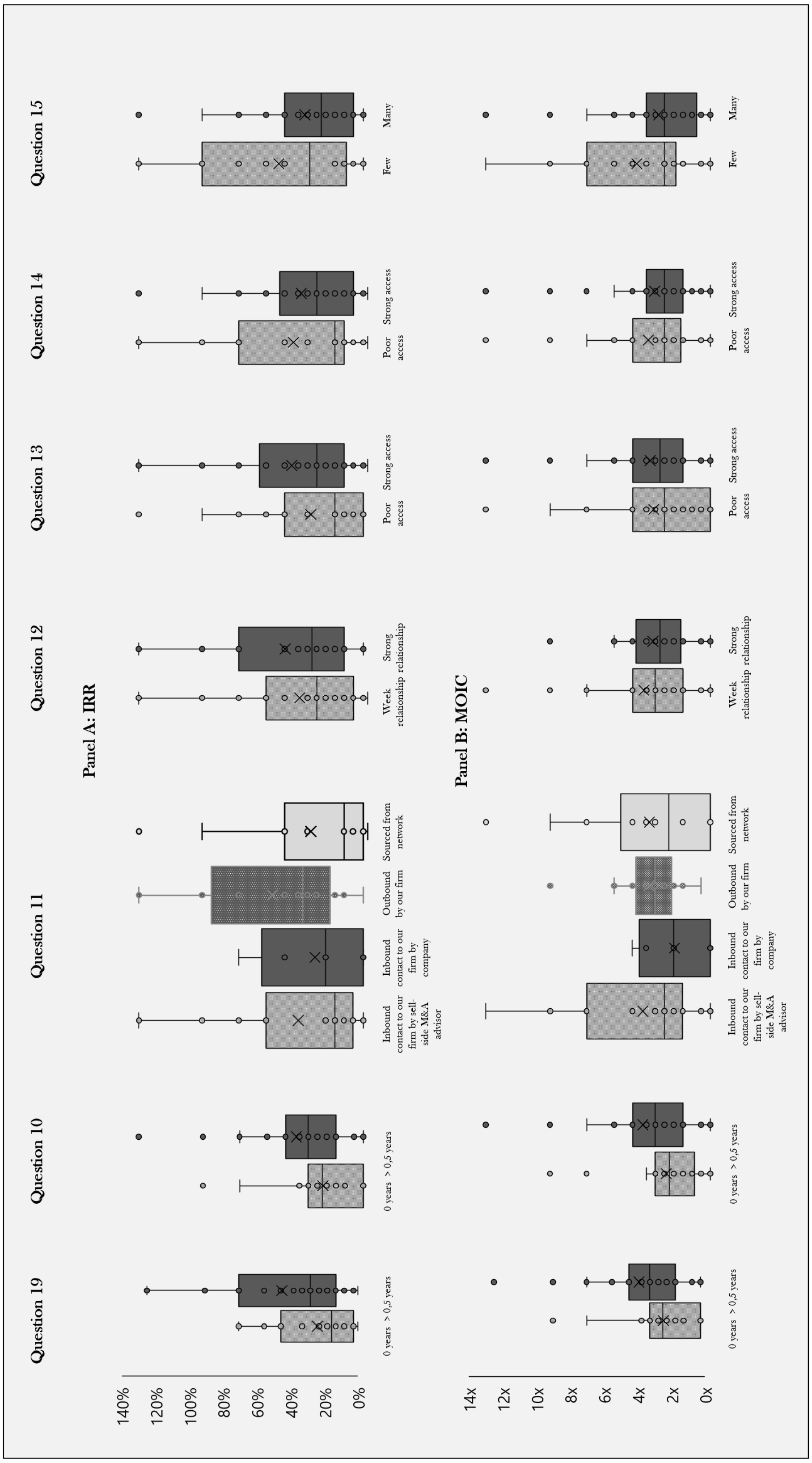
Panel A: Sourcing metrics pertaining to Relationship, IRR							Panel B: Sourcing metrics pertaining to Relationship, MOIC				
Question number	**Sourcing metric**	**Mean**	**Median**	**Obs.**	**Two tailed, unequal variance P > |t|**	**Two tailed, equal variance P > |t|**	**Mean**	**Median**	**Obs.**	**Two tailed, unequal variance P > |t|**	**Two tailed, equal variance P > |t|**
9	Number of years firm spent following the company prior to signing				0.01**	0.03**				0.03**	0.05**
	0 years	0.24	0.16	22			2.45	2.50	22		
	> 0,5 years	0.45	0.28	41			3.90	3.25	41		
10	Number of years deal team had a relationship with management prior to signing				0.02**	0.03**				0.06*	0.07*
	0 years	0.26	0.18	26			2.64	2.50	26		
	> 0,5 years	0.46	0.33	37			3.93	3.25	37		
11	Strength of introduction										
	Inbound contact to our firm by sell-side M&A advisor	0.38	0.18	19			3.93	2.75	19		
	Inbound contact to our firm by company	0.29	0.23	5			2.20	2.25	5		
	Outbound by our firm	0.52	0.36	16			3.59	3.25	16		
	Sourced from network	0.31	0.13	14			3.57	2.50	14		
12	Strength of relationship				0.50	0.48				0.54	0.57
	Weak	0.37	0.28	29			3.88	3.25	29		
	Strong	0.45	0.31	20			3.39	3.00	20		
13	Access to management				0.32	0.34				0.83	0.82
	Poor access	0.31	0.18	19			3.34	2.75	19		
	Strong access	0.42	0.28	34			3.54	3.00	34		
14	Ability to assess operations on site				0.68	0.67				0.65	0.64
	Poor access	0.41	0.18	24			3.64	2.75	24		
	Strong access	0.36	0.28	38			3.29	2.75	38		
15	Weeks of exclusivity 1)				0.23	0.20				0.22	0.20
	Few	0.485	0.318	18			4.264	2.750	18		
	Many	0.333	0.230	29			3.078	2.750	29		

Alternatively, the metrics are presented graphically in Figure XXII through boxplots which display the data from minimum to maximum bounds, the interquartile range within the boxed area and the median line within the box.

Figure XXII

Graphical representation of test results: Relationship metrics

This following figure displays a graphical representation of the test results relating to 'Relationship'. Panel A presents mean and distribution of returns for question 9-15 and Panel B displays the MOIC. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers and to Appendix II for t-test and f-test output



In the question category ‘Competition’, presented in Panel C and Panel D and graphically in Figure XXIII, we ask firms about the number of known first and second round bidders to gauge if the process was broad or limited. We find that deals when there were more rather than few bidders produce higher returns. The sample reveals that the difference in returns is significant at the 5% level for MOIC.

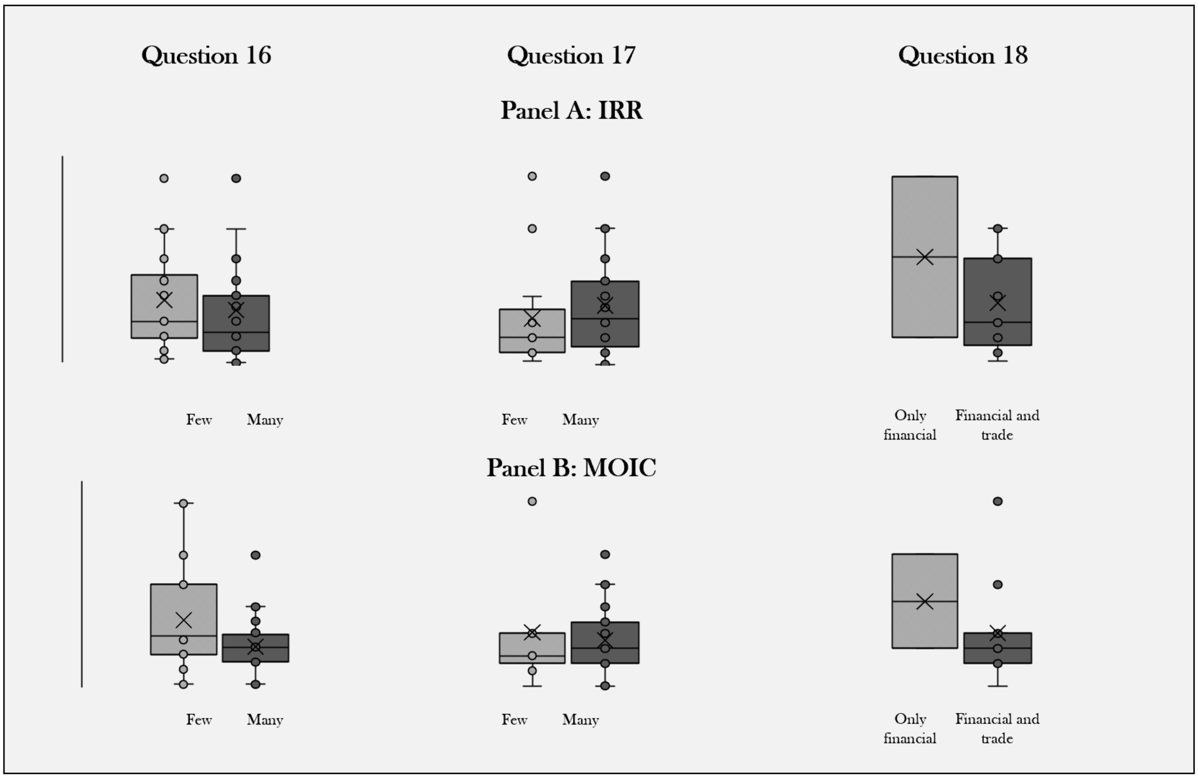
Due to the large number of omitted responses on question 18 (Panel C), we choose to not further discuss as we consider the results unreliable.

	Panel C: Sourcing metrics pertaining to Competition, IRR						Panel D: Sourcing metrics pertaining to Competition, MOIC				
Question number	Sourcing metric	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|
16	Number of firms that submitted first round bids				0.50	0.50				0.04**	0.01**
	Many	0.42	0.28	22			4.58	3.50	22		
	Few	0.36	0.21	40			2.79	2.75	40		
17	Number of firms that submitted second round bids				0.46	0.47				0.64	0.54
	Many	0.31	0.18	13			3.83	2.25	13		
	Few	0.39	0.31	50			3.29	2.75	50		
18	Category of bidders 2)								0		
	Only financial			2					2		
	Both trade and financial			11					11		
	N/A			50					50		

Figure XXIII

Graphical representation of test results: Competition metrics

This following figure displays a graphical representation of the test results relating to 'Competition'. Panel A presents mean and distribution of returns for question 16-18 and Panel B displays the MOIC. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers and to Appendix II for t-test and f-test output



Question 19-24, presented in Panel E and Panel F aim to gauge the level of 'complexity knowledge and experience' of the deal. For question 19 we can deduce that deals with a higher degree of transformation produce higher returns. I.e. hard work by the PE firm pays off. Question 19 aims to discern to what degree the idea was novel. I.e. we expect an idea solely invented by the PE firm to produce higher returns as other firms might not have identified the same potential in the process. However, we find that situations where the management team was the brain behind the idea produce distinctly higher returns with an average IRR of 0.89 and a MOIC of 7.55x. Although, the subsample of five observations leaves us cautious to draw any major conclusions from the results.

Concerning question 21, for IRRs we find that deals that are perceived in retrospect as more complex by the PE firm produce higher returns. However, we do not reject the null hypothesis for the MOIC. We also find a significant difference in means between firms that are experienced in the sector on the 10% level for IRRs. I.e. firms that have more experience in the sector produce higher returns.

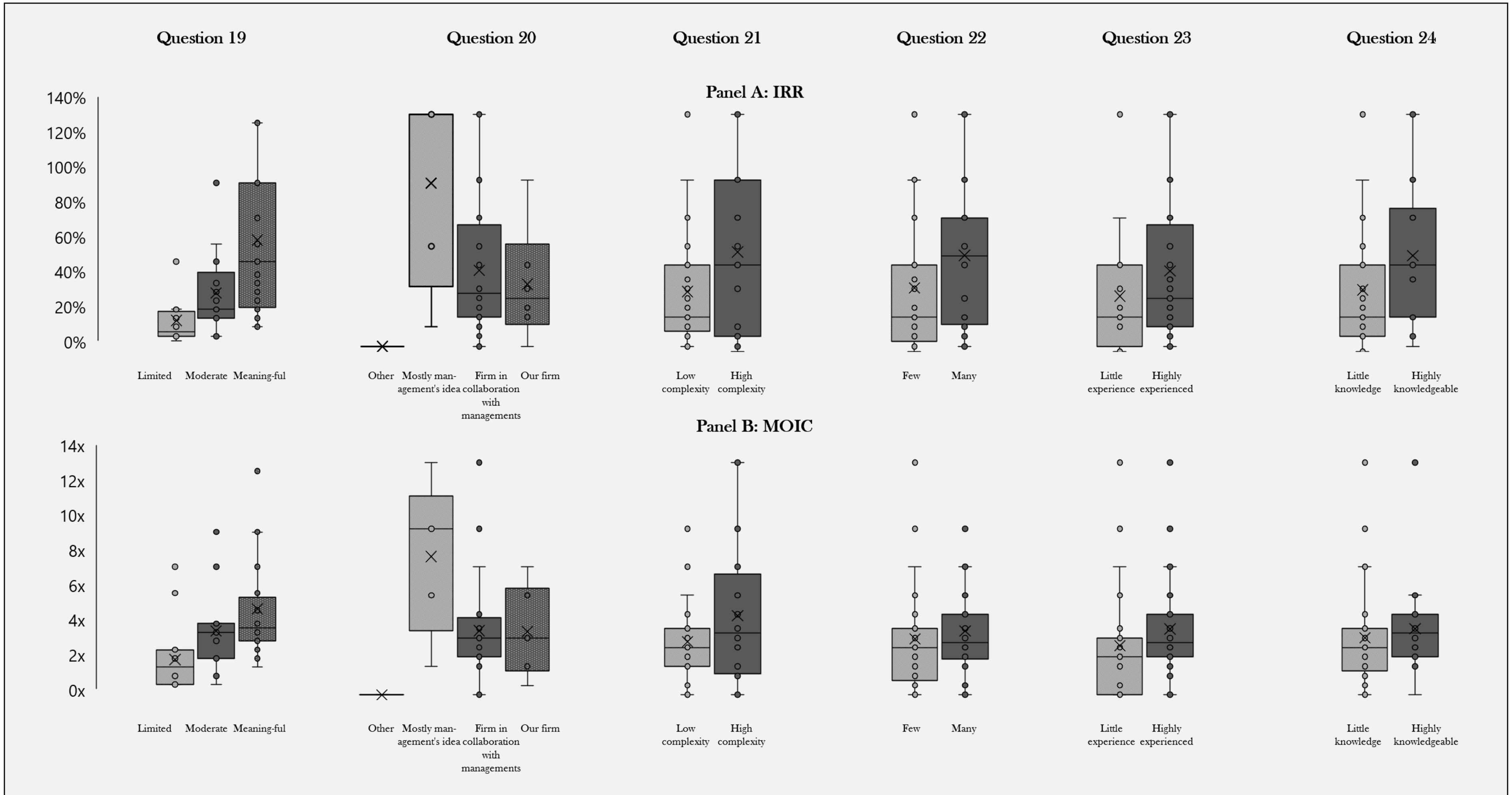
We are surprised to find that deals that the PE firms describe as ‘Well in line with our firm’s strategy’ do not produce higher returns. This could be due to the firms being focused on a size bracket rather than a specific industry.

Panel E: Sourcing metrics pertaining to Complexity, IRR							Panel F: Sourcing metrics pertaining to Complexity, MOIC				
Question number	Sourcing metric	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|
19	Degree of transformation during holding 3)										
	Limited	0.12	0.05	16			1.69	1.25	16		
	Moderate	0.27	0.18	13			3.33	3.25	13		
	Meaningful	0.58	0.46	28			4.58	3.50	28		
20	What was the source of the ideas for the transformational change? 4)										
	Mostly management's idea	0.89	1.25	5			7.55	9.00	5		
	Firm in collaboration with managements	0.43	0.31	28			3.63	3.25	28		
	Our firm	0.35	0.28	6			3.58	3.25	6		
	Other	0.03	0.03	1			0.25	0.25	1		
21	How would you characterize the complexity of the deal as it relates to the ability of other firms in the Nordic PE market to participate (e.g.				0.12	0.06*				0.21	0.12
	Low complexity	0.32	0.18	37			3.05	2.75	37		
	High complexity	0.53	0.46	16			4.42	3.50	16		
22	How many deals has your firm done within similar sectors as tihis deal?				0.07*	0.07*				0.55	0.56
	Few	0.34	0.18	33			3.20	2.75	33		
	Many	0.51	0.51	32			3.62	3.00	32		
23	How well in line with your firm's strategy and prior experience was the deal?				0.17	0.18				0.26	0.23
	Little experience	0.29	0.18	23			2.84	2.25	23		
	Highly experienced	0.42	0.28	40			3.72	3.00	40		
24	How would you describe the level of knowledge your deal team had abou the industry at signing of this deal?				0.09*	0.08*				0.53	0.55
	Little knowledge	0.32	0.18	45			3.26	2.75	45		
	Highly knowledgeable										

Figure XXIV

Graphical representation of test results: Complexity knowledge & experience metrics

This following figure displays a graphical representation of the test results relating to 'Complexity knowledge & experience'. Panel A presents mean and distribution of returns for question 9-15 and Panel B displays the MOIC. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers and to Appendix II for t-test and f-test output



The last question category presented in Panel G and H (question 26-28) addresses some additional aspects of the deal process characteristics that do not fall naturally in any of the above 3 categories. Question 26 looks into who the seller of the company was. Due to the large number of answers in the category 'Entrepreneur/Private Individual(s)' we choose not to look further into this question as we consider the subsample size of the other categories insufficient. Similarly, we choose to omit question 27 (Panel G). At the 10 % significance level, the sample reveals that processes where the highest bidder did not end up being the buyer produce significantly higher returns.

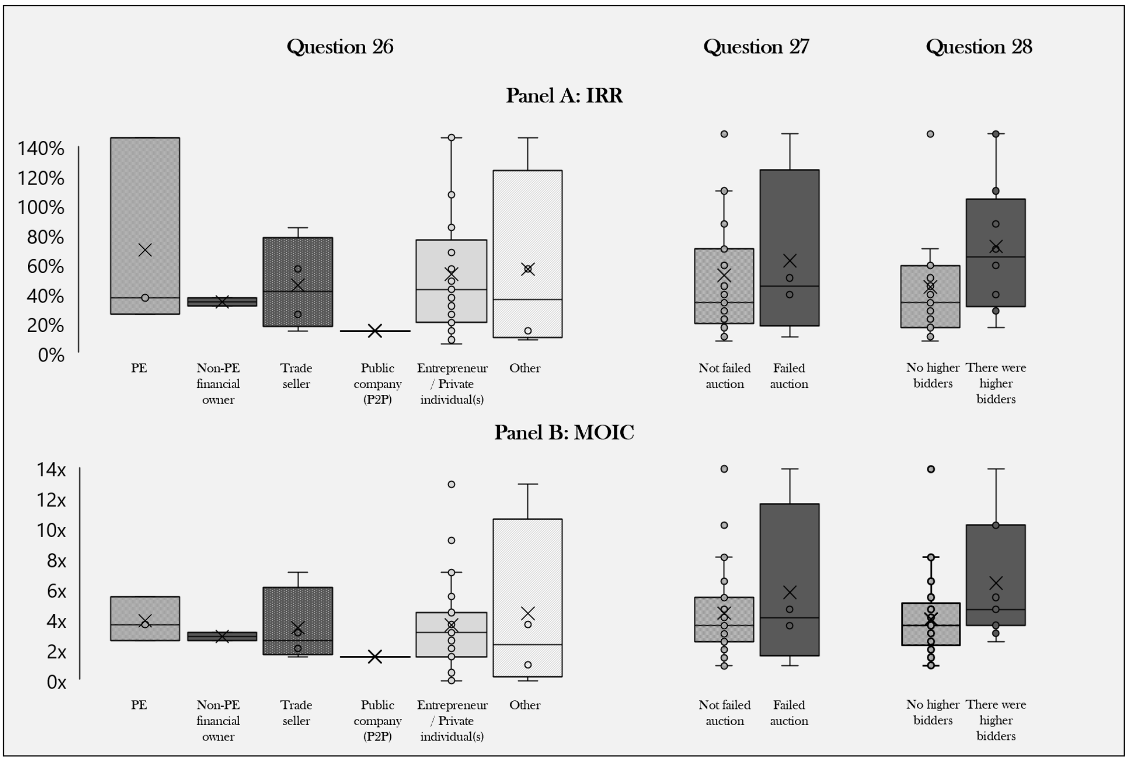
		Panel G: Sourcing metrics pertaining to Other, IRR					Panel H: Sourcing metrics pertaining to Other, MOIC				
Question number	Sourcing metric	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|	Mean	Median	Obs.	Two tailed, unequal variance P > |t|	Two tailed, equal variance P > |t|
26	Who was the seller of the company?										
	PE	0.57	0.28	3			4.00	3.75	3		
	Non-PE financial owner	0.26	0.26	2			3.00	3.00	2		
	Trade seller	0.36	0.32	4			3.56	2.75	4		
	Public company (P2P)	0.08	0.08	1			1.75	1.75	1		
	Entrepreneur/Private individual(s)	0.42	0.33	37			3.72	3.25	37		
	Other	0.45	0.27	4			4.44	2.50	4		
27	Was the deal a failed process (e.g. you acquired the company after a formal process in which no other bidder won)?										
	No	0.40	0.23	49			3.53	2.75	49		
	Yes	0.48	0.33	4			4.81	3.25	4		
28	Do you know if there were bidders that bid higher than you?				0.08*	0.06*				0.06*	0.03**
	No - there were not any higher bidders	0.32	0.23	29			3.14	2.75	29		
	Yes - there were higher bidders	0.57	0.51	12			5.40	3.75	12		

Notes: 1) Exclusivity defined as time pre-signing with formal or de-facto option to buy the company at an agreed price/pricing formula. 2) Inability to answer question 18 has led us to refrain from sharing the result as it can be misleading due to few responses. 3) Please refer to table II for the subquestions for question 19. 4) Given that there are multiple

Figure XXV

Graphical representation of test results: Other metrics

This following figure displays a graphical representation of the test results relating to 'Other'. Panel A presents mean and distribution of returns for question 26-28 and Panel B displays the MOIC. Please refer to Appendix I: Survey question for a complete presentation of the survey questions and answers and to Appendix II for t-test and f-test output



Based on the discussion above, our results indicate that deal process characteristics have an impact on returns.

Results from hypothesis II

Hypothesis II: Deals that possess proprietary deal process characteristics reduce information asymmetries for the buyer and in effect produce superior returns on average

Based on the discussion of metrics relating to 'Relationship' and 'Competition' in the discussion for Hypothesis I, we fail to reject the hypothesis given the spread in results in the question categories 'Relationship' and 'Competition' that aim to gauge to what extent the process possessed proprietary deal process characteristics.

Results from hypothesis III

Hypothesis III: Volatility is higher in proprietary and complex deals due to the adverse selection of firms choosing not to initiate auctions

Our sample reveals that firms that have followed the company and that have a relationship prior to the transaction have a higher variance in returns. That is, we can reject the null hypothesis for both questions for IRR on the 1% significance level. We find that the type of introduction produces slightly different variances.

We do not find any significant differences in variance for question 12-15.

Table II

Sourcing metrics: Two-sample f-test

This table summarizes the output of several two-sample f-tests analyzing differences in variance of return. The first column presents the question number it pertains to in the survey, the following columns outline the descriptive statistics of the sourcing metric analyzed. The final column show the f-test outputs. Asterisks dentote significance level: 10%-level(*), 5%-level (**) and 1%-level (***).

	Panel A: Sourcing metrics pertaining to Relationship, IRR				Panel B: Sourcing metrics pertaining		
Question number	**Sourcing metric**	**Obs.**	**Standard deviation**	**F-test P > |t|**	**Obs.**	**Standard deviation**	**F-test P > |t|**
9	Number of years firm spent following the company prior to signing			0.00***			0.13
	0 years	22	0.23		22	2.17	
	> 0,5 years	41	0.42		41	2.97	
10	Number of years deal team had a relationship with management prior to signing			0.01***			0.07*
	0 years	26	0.25		26	2.16	
	> 0,5 years	37	0.42		37	3.08	
11	Strength of introduction						
	Inbound contact to our firm by sell-side M&A advisor	19	0.40		19	3.38	
	Inbound contact to our firm by company	5	0.29		5	1.96	
	Outbound by our firm	16	0.42		16	1.93	
	Sourced from network	14	0.37		14	3.68	
12	Strength of relationship			0.39			0.19
	Weak	29	0.35		29	3.23	
	Strong	20	0.42		20	2.41	
13	Access to management			0.61			0.20
	Poor access	19	0.35		19	3.40	
	Strong access	34	0.39		34	2.63	
14	Ability to assess operations on site			0.28			0.52
	Poor access	24	0.42		24	3.02	
	Strong access	38	0.35		38	2.69	
15	Weeks of exclusivity 1)			0.19			0.33
	Few	18	0.45		18	3.41	
	Many	29	0.34		29	2.78	

Panel C and D of Table II present the f-tests for metrics relating to 'Competition'. Contrary to our assumptions, processes in which there were more bidders produce a higher variance looking at the money multiple. However, looking at the IRR we see no difference.

	Panel C: Sourcing metrics pertaining to Competition, IRR				Panel D: Sourcing metrics pertaining		
Question number	**Sourcing metric**	**Obs.**	**Standard deviation**	**F-test P > |t|**	**Obs.**	**Standard deviation**	**F-test P > |t|**
16	Number of firms that submitted first round bids			0.97			0.00***
	Many	22	0.37		22	3.58	
	Few	40	0.38		40	2.06	
17	Number of firms that submitted second round bids			0.97			0.02**
	Many	13	0.37		13	3.96	
	Few	50	0.38		50	2.44	
18	Category of bidders 2)				0		
	Only financial	2			2		
	Both trade and financial	11			11		
	N/A	50			50		

F-test for metrics that are concerning 'Complexity, knowledge and experience' are presented in Panel E and F below. The sample reveals that deals with a greater degree of transformational change are more volatile. Also, we find that when the idea was presented by the management returns are more spread out and the spread is lowest when the PE firm was behind the idea.

The variance in returns proves to be higher for deals that the PE firms themselves describe as more complex on the 5% level for IRR and 1% level for MOIC. Contrary to our beliefs, the variance in returns does not differ between deals when the firm had done more deals rather than few similar to the deal. Also, we find no difference in the spread of returns for deals when the firms describe the deal to be well in line with their strategy as opposed to not in line with their strategy. Similarly, we do not find a difference in the spread of returns for deals when the firm describe themselves as having extensive knowledge about the industry prior to the deal.

<table>
<tr><th colspan="5">Panel E: Sourcing metrics pertaining to Complexity, IRR</th><th colspan="3">Panel F: Sourcing metrics pertaining</th></tr>
<tr><th>Question number</th><th>Sourcing metric</th><th>Obs.</th><th>Standard deviation</th><th>F-test P > |t|</th><th>Obs.</th><th>Standard deviation</th><th>F-test P > |t|</th></tr>
<tr><td>19</td><td>Degree of transformation during holding 3)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Limited</td><td>16</td><td>0.14</td><td></td><td>16</td><td>1.98</td><td></td></tr>
<tr><td></td><td>Moderate</td><td>13</td><td>0.24</td><td></td><td>13</td><td>2.38</td><td></td></tr>
<tr><td></td><td>Meaningful</td><td>28</td><td>0.43</td><td></td><td>28</td><td>3.11</td><td></td></tr>
<tr><td>20</td><td>What was the source of the ideas for the transformational change? 4)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Mostly management's idea</td><td>5</td><td>0.52</td><td></td><td>5</td><td>4.08</td><td></td></tr>
<tr><td></td><td>Firm in collaboration with managements</td><td>28</td><td>0.34</td><td></td><td>28</td><td>2.47</td><td></td></tr>
<tr><td></td><td>Our firm</td><td>6</td><td>0.31</td><td></td><td>6</td><td>2.32</td><td></td></tr>
<tr><td></td><td>Other</td><td>1</td><td>-</td><td></td><td>1</td><td>-</td><td></td></tr>
<tr><td>21</td><td>How would you characterize the complexity of the deal as it relates to the ability of other firms in the Nordic PE market to participate (e.g. bankruptcy, failed process or</td><td></td><td></td><td>0.05*</td><td></td><td></td><td>0.00***</td></tr>
<tr><td></td><td>Low complexity</td><td>37</td><td>0.31</td><td></td><td>37</td><td>2.20</td><td></td></tr>
<tr><td></td><td>High complexity</td><td>16</td><td>0.47</td><td></td><td>16</td><td>4.00</td><td></td></tr>
<tr><td>22</td><td>How many deals has your firm done within similar sectors as tihis deal?</td><td></td><td></td><td>0.93</td><td></td><td></td><td>0.18</td></tr>
<tr><td></td><td>Few</td><td>33</td><td>0.38</td><td></td><td>33</td><td>3.11</td><td></td></tr>
<tr><td></td><td>Many</td><td>32</td><td>0.39</td><td></td><td>32</td><td>2.43</td><td></td></tr>
<tr><td>23</td><td>How well in line with your firm's strategy and prior experience was the deal?</td><td></td><td></td><td>0.87</td><td></td><td></td><td>0.30</td></tr>
<tr><td></td><td>Little experience</td><td>23</td><td>0.36</td><td></td><td>23</td><td>3.11</td><td></td></tr>
<tr><td></td><td>Highly experienced</td><td>40</td><td>0.37</td><td></td><td>40</td><td>2.58</td><td></td></tr>
<tr><td>24</td><td>How would you describe the level of knowledge your deal team had abou the industry at signing of this deal?</td><td></td><td></td><td>0.76</td><td></td><td></td><td>0.60</td></tr>
<tr><td></td><td>Little knowledge</td><td>45</td><td>0.36</td><td></td><td>45</td><td>2.89</td><td></td></tr>
<tr><td></td><td>Highly knowledgeable</td><td>18</td><td>0.38</td><td></td><td></td><td>2.56</td><td></td></tr>
</table>

The last question category ‘Other’ is presented in Panel G and H (question 26-28). Due to the large number of answers in the category ‘Entrepreneur/Private Individual(s)’ we choose not to look further into this question as we consider the subsample size of the other categories insufficient. Similarly, we choose to omit question 27. For the final question we find no difference in the variance of returns between deals when the highest bidder did not win.

Panel G: Sourcing metrics pertaining to Other, IRR					Panel H: Sourcing metrics		
Question number	Sourcing metric	Obs.	Standard deviation	F-test P > |t|	Obs.	Standard deviation	F-test P > |t|
26	Who was the seller of the company?						
	PE	3	0.59		3	1.39	
	Non-PE financial owner	2	0.04		2	0.35	
	Trade seller	4	0.28		4	2.38	
	Public company (P2P)	1	-		1	-	
	Entrepreneur/Private individual(s)	37	0.39		37	3.00	
	Other	4	0.56		4	5.57	
27	Was the deal a failed process (e.g. you acquired the company after a formal process in which no other bidder won)?						
	No	49	0.38		49	2.76	
	Yes	4	0.53		4	5.33	
28	Do you know if there were bidders that bid higher than you?			0.64			0.21
	No - there were not any higher bidders	29	0.36		29	2.76	
	Yes - there were higher bidders	12	0.39		12	2.76	

Notes: 1) Exclusivity defined as time pre-signing with formal or de-facto option to buy the company at an agreed price/pricing formula. 2) Inability to answer question 18 has led us to refrain from sharing the result as it can be misleading due to few responses. 3) Please refer

Based on the discussion above we have some support for the conjecture that volatility is higher for proprietary and complex deals. We believe this is an interesting avenue for further research. Suggestions on further research will be presented in chapter VIII of this paper. I.e. we find some evidence that the volatility is higher for proprietary and complex deals.

Hypothesis IV: Specialization as an edge in sourcing creates superior returns

Based on the discussion of metrics relating to 'Complexity, Experience and Knowledge' in the discussion for Hypothesis I, we choose to neither fail to reject nor reject the hypothesis given the spread in results in the question categories ''Complexity, Experience and Knowledge'.

Hypothesis V: Deal process characteristics have changed over time and vary depending on the market conditions

When plotting the data over time, as presented in figure XIX, XX and XXI we notice a clear pattern before and after crises. For example, we find a slight difference in the number of years firms spend with companies prior and post financial crises. I.e. the time spent is shorter prior to 2000 and prior to 2008 and higher in the following periods, respectively. One explanation to this could be risk-averse behavior after crises.

We also find a trend of more access to management in terms of hours spent. That is, firms have more access to management now than before. A reason for this could be the maturity of PE firms in the Nordics. Finally, when plotting the complexity and alignment with strategy over time we notice a similar trend as for the length of relationship. I.e. lower complexity and alignment prior to crises and higher complexity and alignment post crises. We hypothesize that the reason for this is the supply of targets. That is, in good times there plenty of targets and lots of low-hanging fruit, whereas in difficult times deals more work is required by the PE firm to earn their returns. Also, we explain this by the natural effects of a poor market in terms of securing debt, pursuing bolt-ons etc.

Interview Results

The following section outlines the results of our interviews with participating PE firms. Upon completing our survey we conducted interviews with firms in order to enrich our understanding of the survey results and develop an understanding of how PEs view the deal process firsthand. Through our interviews we cover three main topics: ‘The deal process & strategy of your firm’, ‘Does a favorable deal process add value?’, ‘The present and future of PE deal process & strategy’ as well as some firm specific discussions that are relevant to our hypotheses.

Priveq

The deal process & strategy of your firm

At Priveq they focus on entrepreneur-lead companies with a growth story. This makes it relatively easy for them to have a rich discussion when they get the first meetings with entrepreneurs, although getting these meetings is the hard part. Sometimes these conversations lead to something and sometimes they don’t. It is their job to be well positioned if a sale/investment opportunity becomes a possibility. They then need to be prepared with who to bring on from Priveq’s industrial network and also a growth story such as add-ons, geographical expansion, broadening the product line, etc. depending on the business. This makes them more interesting to have a continuous dialog with and shows their potential strength as a partner. The most important work then is the proactive work they do to find these deals and to do their homework in preparing their growth story for them.

At Priveq each year they look at around 100 opportunities, 30 that are relevant, 10 that they would be interested in doing, and in the end around 3 deals that they close.

Being that sourcing is something that is always ongoing it is hard to say when you are sourcing They try to come up with ideas and indications of where you can find new ideas and opportunities every day. Every individual in the investment organization have 25-30 different prospects where they try to establish relationships. They do not have a dedicated resource for sourcing as they all take responsibility. Some KPIs that they measure for sourcing are 1. New relationships that they have built and 2. Actions taken to maintain a relationship.

Priveq believes that their long history is an important competitive advantage. They have been around for over 35 years and have done over 130 investments, 100 exits, and 27 IPOs. This is important for them as they are approaching entrepreneurial led companies, 75% of the deals that they do are in a partnership setup therefore they need to show that they can be a trusted partner. Being that they have such deep experience they can show this to their partners in many ways.

Does a favorable deal process add value

It is important to spend time before you end up in a structured process to know the company, however value today is more about getting a fair price and getting the right companies. In this environment you have entrepreneurs handing over their baby to you and therefore you need to show that you can be a great trusted partner who is best suited to grow their company. Usually if you know someone then it is easier to figure out how someone will react when you do certain things. Given that you have a time frame of 4-7 years to realize your returns then you know what buttons to push and what not to push.

What is most important is to have a really good management team, if you know them or not. If they are good then they are good. That's the important part and you will quickly learn this as you start working with them regularly once the deal is closed.

Putting together the right deal teams is very important to fit the company or entrepreneur as this is the foundation for the partnership. This is part of getting to know the company and the management.

The present & future of PE deal process & strategy

In the current environment it is very common to use an intermediary when doing a deal. In many ways it can make the deal more efficient as sellers are more prepared and educated on how to present themselves and all of the relevant questions are addressed. In their previous fund they found 1 of 12 deals was done in a full auction, 3 were proprietary, and the rest were advisor led transactions, although Priveq became exclusive before to have to take on external due diligence costs.

15-20 years ago there were very few intermediaries and therefore the prospects were not educated on what it meant to sell a company. Therefore, you could purchase companies at a discount. These days you have a very hard time finding underpriced companies and have to work much harder to get your return on investment. A problem with entrepreneurs who do not have an intermediary is that Priveq might do all the work and then they decide not to do anything. When they have an intermediary they are committed, also the intermediary can educate the entrepreneur on what they need to have in order to sell their company to a professional investor. This also gives them a large amount of certainty that the deal will in fact get done if they want to do it. One problem that can arise with having an intermediary is that all the seller's responses are prepared and good, however, once you start working with them you might realize it was the intermediary who was pushing them to prepare this or even preparing the answers for them.

Those intermediaries that offer only success fees or only small retainer fees usually have a bit more stable situation from the beginning. The larger deals also have success fees but the intermediaries that handle larger deals normally do not take on small fees (deals). In the long run Priveq will continuously see the structure of success fees and also possibly retainers to keep the firms going. This along with more deals being in a structured process are what they expect in the future.

In order to succeed in the future you must be excellent at doing your homework on deals and coming prepared with a growth or value creation plan. You will continue to need to be proactive in finding and building relationships, even as more deals are led by intermediaries.

Adelis

The deal process & strategy of your firm

At Adelis their deal process & sourcing is aimed at identifying situations that exhibit actual or potential improvements in process inefficiencies. They look for companies that are profitable with good growth. These companies are typically run by entrepreneurs. They find that there is higher likelihood that an entrepreneur will have process inefficiencies in their business than a general financial transaction. They look into industries and companies that they think are interesting or that they hear about through their network. They have a broad network that helps bring potential deals to their attention. They make sure to keep good relationships within the PE community, they make sure they know who they are and what they stand for. It is important for them to show that they will be good owners for their companies. It is important for them to stay on top of deals that are coming in and make sure that they prepare for every deal. This is what most firms do in terms of how they find deals. Being that they have built a good reputation, they find that intermediaries will bring deals to only them in situations where they think it would be a great fit.

Given that they have an extensive track record of doing deals with entrepreneurs that have been successful overall, this track record helps them and creates value through their sourcing. They also have certain sectors that they are particularly good at that they focus on. They do a lot of buy and builds that they are particularly skilled at. This has ended up in several great stories where they have taken firms from a small presence to being market leaders. These M&A driven growth stories are often quite compelling for entrepreneurs.

Does a favorable process add value?

Sourcing is important as defined as getting deal flow. Their sourcing is not particularly differentiated in the toolset they use but rather in what they look for. They also see that they have a high proportion of inbound deals. In terms of how much time they put into this a director will spend a couple days of their week on sourcing work.

For them, the sourcing process is not a primary driver of how a portfolio company will develop financially during their ownership, but it is a key driver of returns nonetheless as it facilities buying attractive companies at good valuations. The amount of time you spend with management the first 3 months of ownership is much more than before you own it. Whatever lead you had before the purchase you quickly validate or prove wrong in your first months of operations. They do find that it is difficult to find deals that are more limited. Although it can also be very difficult in deals without an intermediary as the seller is not familiar with the process.

The present & future of PE deal process & strategy

In the past building relationships was the main way to find deals. Now, you see that almost all deals have a financial intermediary. The trick is to get to the deals early. They have seen that Private Equity is a common option for companies now to sell, before it was rare and unknown. As the PE market is becoming more efficient more deals are going into formal processes.

They see more and more companies in the future having had interactions with PE firms and an increased awareness of this option. Also, sector focus will continue to be important, however, in the Nordics you might not have enough deal flow in many sectors. Within their team they see that their professionals move towards 1 or 2 sectors where they naturally develop an edge.

Summa

The deal process & strategy of your firm

At Summa their starting point is to invest to solve global challenges. They think about these societal and environmental challenges. The business idea is to then invest in the firms that solve these problems. From this they have developed a strategy. The strategy is based on their three themes: resource efficiency, changing demographics and technology-enabled businesses. These themes drive their investments & process. Within each of the three main themes there are teams that focus on that theme and break it down further. Within the theme there is a strategy and a view for what that theme is and breaking it down since these themes can be quite broad. They typically break down the theme into the solution spaces within the theme. The challenges are usually the same globally, but the nuances vary from region to region. Summa also identifies the major drivers of change within the theme and subsections. These waves of change help them shape their strategy and focus towards where they see opportunity. Based on this view of subsections within the themes as well as the major waves of change they can target the most attractive companies that work in these areas.

For Summa their deal process starts with their philosophy and strategy, then goes into their themes, subthemes and investments. So, from this perspective the deal process it is very important to them. A major advantage of the Summa sources deals is that they do not meet businesses that they are not familiar with. They have a view of the industry and the strategy they have. They have experience and a view on where things are going. Given this it makes them extremely relevant to the management as they can have an intelligent and engaging conversation. Therefore, the process they follow might not add value in terms of the price they pay but it certainly adds value in helping them to show their competence and complete the deal.

Summa has received more inbound interest than they initially expected. They believe this is related to their philosophy their strategy or both. They have heard of Summa somewhere and are very interested in the way they invest as a purpose driven investor. They also get inbound interest from companies within their themes. For instance, Summa has deep experience in niche healthcare areas and they are one of the only investors in the Nordics who understands what some of these niche firms do. This experience is deeply valued by the firms when they are looking for a partner.

Summa has this strategy because they believe it will lead them to the right type of investments. Due to this strategy they tend to get more positive reception in their sourcing dialog. If you are competent in your strategy, then you will find the right companies. These companies will then perceive you better and you will have a more informed conversation.

Does a favorable deal process add value?

Summa finds they are sufficiently often the preferred buyer due to their method. Typically, it is related to the philosophy and their competence in the topics that they engage in. Many times, they get sellers telling them they want to sell to them because they are by far the most competent in this field. Since the market is often very efficient on price it is not that their sourcing gets them a better price, however, their method does help them win the deal.

The process is important. When they go through their process even in the deal phase it is very focused on aligning with management. They come at their deals because they think the topics and space are important. They have a lot of perspectives on what can drive value in the space. During their due diligence they bring these views into some strategy meetings that are part of their due diligence phase. Then when they get to the deal they already have their strategy finished and done before they sign the deal. Many times in this industry you buy the company and then you start working with the management and maybe you find out that you have different views. By making the strategy first they prevent this from happening.

One specific focus for them is to get great commercial advisors, often they look to industry or network with individuals who really know the spaces. They not only do super specialized deals, they also do things that everyone else does. But when it comes to the specialized deals they need to make sure they find the right advisors to help them.

The present & future of PE deal process & strategy

Summa thinks it is going to be harder and harder to be a generalist. Specialization will continue to increase over time. One interesting thought experiment is to ask yourself "do you know any other industries where business people have not specialized? It just doesn't make sense, you must develop competence."

In terms of PEs the professionals within these firms they are typically consulting or banking people. In some VC firms you see more of the tech people actually being the investors as well. When it comes to the large generalist firms, they have some specialized legs to stand on where most of their business is. You might really question strategies in the future that are just based on being a large firm and being super generalist. You need good arguments for why you will win in 10 years, not just this year. Being smarter or past success is not a great argument.

"In order to really follow and live out your strategy you must be genuine, people can see it. Do you mean what you say? Do you behave in accordance with your words on these things?"

Increasingly people are becoming more aware of the major challenges that the world is facing. The role of capital is starting to shift and people are becoming aware of the need for change. Even in a situation where you only care about the business value you still need to be aware of how to do business in these changing times. The only sustainable way to make money in the 10-20-year perspective is to align yourself with these perspectives. More and more you see people no longer want exposure to fossil fuels, not because of the ethics but because it is simply going to be a bad business in the future. In 2019 they have seen some strong words from BlackRock around sustainable investing. You are starting to see some of the largest investors in the world shift their strategies. They know that this shift will happen for purely economic reasons let alone the ethical reasons. They are also starting to see a shift from shareholder value being the primary metric to businesses starting to look at all the stakeholders they impact. They have seen the USA Business Roundtable shift to this new stakeholder perspective with 181 CEOs committing to lead their companies for the benefit of all stakeholders – customers, employees, suppliers, communities and shareholders.

It also comes down to competence in this industry. They are nothing more than people and computers. It is all about building your competence and executing on it. Can you build a real team around this that really knows and has competence in this space? The CEO of these firms are super competent in their space, they can see if you also know what you are talking about.

EQT

The deal process & strategy of your firm

EQT's sourcing strategy is a mix of them being proactive as well as doing their homework on the deals that come to them. They have four main themes with which they invest being Healthcare, TMT, Services and Industrial Technology. Within these EQT has identified subsectors that are thematic, i.e. driven by long-term macroeconomic trends. Each investment professional within EQT will be dedicated to one or two of these themes, this allows them to build their competency and experience around this area. Therefore, sourcing is split among the professionals within EQT.

By focusing themselves to specific themes they can become more knowledgeable and build a more dedicated network within those sectors. EQT has an extensive network of over 500 professionals that they can tap into to learn more about the themes that they invest in. EQT has become known as investors who focuses on these specific areas by entrepreneurs, other investors and bankers. Thus, when deals come up within these themes EQT often has experience that they can refence in doing similar deals. It is easier to win deals when you have a trademark within a sector, as you can illustrate with clear examples what you can offer and achieve together the counterpart in the transaction.

Being public might have some advantages for their firm as it does put them in a unique position. More people now know who they are and what they do. There is also much more transparency to show who EQT is and what they do. Another advantage of being public is that they are in a strong financial situation and can be more flexible in making investments quickly, even without having a specific fund ready to deploy the funds given their strong balance sheet.

They continue to try to be proactive in their sourcing. There are two things that EQT is focused on regarding sourcing 1. Trying to be proactive in finding deals. 2. Finding primary deals that have not been through a PE before. They believe that generally if a firm has not been through the PE process before there is more new initiatives to drive and hence potentially more value to be realized.

Another significant advantage for EQT is their local and global network. This allows them to tap into a deep group of experienced professionals throughout their themes. These professionals have worked numerous years in industry and thus have far more hands-on operational experience than individuals could have on the deal team. Additionally, if they are looking into a niche area that is quite complex, they can look into their global team to find a similar deal or sourcing effort and get in touch with the deal team from that deal or project as well as talk to their industry network to better understand the space. This allows them to gain perspectives that you could only gain after buying or working on a similar asset. EQT will bring in executives / industry professionals from this network into Chairperson roles rather than someone internally, as they want someone with deep experience to be at the helm.

Motherbrain is very in line with the thematic focus they have. They are able to pinpoint specific companies & sectors to get detailed datasets of companies within their specifications to explore both explore market trends as well as potential new targets and add-ons to existing companies. They can inquire for instance about a selected niche sector and then get a detailed set of reports, collected from thousands of data sources, right away on this. By having this quicker collection of information, they can move faster to find the best deals and develop their edge.

Motherbrain

Motherbrain started out as a proof of concept for the EQT Ventures Team to find better ways to source deals using cutting edge technology. They started out with 3 crowdsourced data sources (Crunchbase & Dealroom to name a couple). They were looking for heuristics by trying to score companies and their probability of being interesting for the ventures fund. What they were able to prove was that we could find interesting companies that the Venture Team invested in. They were also to prove that Motherbrain was the “finder” or first touchpoint for many deals.

After this initial proof of concept EQT continued to iterate on what Motherbrain could do. They began finding ways to augment their deal professionals even further by giving them custom notifications around key information that was interesting to them. This improved their ability to be proactive and source deals. So far EQT Ventures has several deals that are 100% attributed to Motherbrain and some are top 20% performing deals.

Being that Private Equity is not the most technically advanced industry EQT is certainly on the forefront of using this technology with the PE Deal Team. Here they help augment the professionals as they have for the Venture Team. Finding people, trends and basically any proxies for growth that will help them identify the winners.

An example of a proxy of growth they look at is web traffic that for the right business is a very good proxy for their growth. They can look into the flow of people into and out of companies, this is often very interesting when the right people join forces. They really try to look at everything they can, social media for instance is another great space. The digital footprints can give you millions of data points in a much more granular view that using data science they can identify trends with. This heavy lifting that Motherbrain can do is starting to find ways to give the traditional PE teams an edge. Since many of the companies EQT's PE Team purchases are larger and they may know most of the players in the space they can still find ways to add value through the deal process with Motherbrain & the skills of their internal digital team.

Another very interest area for Motherbrain is making their decision-making process digital and testing it for bias and success. At EQT they are serious about sustainability and Motherbrain has been finding ways to contribute to find the right companies that fit these standards.

EQT sees Motherbrain continuing to add value in the deal process and take a larger role in measuring decision making and outcomes within EQT. They don't see many in the PE or investing space who are really doing what they are doing. When it comes to their peers they look to some of the best technology companies to see what they are doing with data and how they are gaining insights (Spotify, Klarna, Google). EQT's goal with Motherbrain is to make EQT the smartest investor and build the best dataset in the world, that is what they are working toward every day.

The deal process & strategy of your firm

There are not many PEs in the Nordics who have an internal digital team like they have. It is really an advantage for them throughout the deal process. From the very first due diligence their digital team can help them assess the company and their digital presence and future potential. They also serve as a great resource for their portfolio companies that can help with any holding where they can add value by developing the digital angle (for example go-to-market strategies, accessing marketing strategies, presence on digital channels, help with assessing, recommending and implementing new technical platforms etc.), and hence often increasing the efficiency and value of the company throughout the holding period.

The digital team has an investors mindset and understands everything about the company, and often takes the role as an extended deal team resource. They know how the investment professionals work and how they think, therefore they can add more value than an external consultant on the project.

EQT is continuing to explore not just how the digital team can help them add value to companies but more and more how they can help the Private Equity team source deals. Motherbrain is the primary initiative of this digital sourcing.

EQT also has an internal sustainability team that is similar to the digital team in that it helps them to evaluate companies as we are doing their due diligence as well as make them more sustainable throughout the holding.

Additionally, EQT also has an internal financing team that helps to make sure that the financing is done for each portfolio company.

The present & future of PE deal process & strategy

You have to be a bit humble that these sector trends will evolve over time. Being super focused might not be the best way to go as things might change in a couple of years. When they do invest outside of their thematic focus they have a framework for how to assess these deals to make sure they understand them and they fit into EQT's investing principles. Sometimes by being too focused you can become a bit narrow in the way you see things and hence potentially miss opportunities.

One trend that they see within EQT is the new skillsets and professionals they have in the firm. For example the Digital and Sustainability Teams are adding value in new ways and giving a glimpse into how PEs of the future might diversify the type of talent they hire.

Looking at where the world is going it seems that it will be much more data and digital driven. They find that within EQT they are exploring more proxies for growth than the traditional investment and financial numbers. This digital native skillset will be core to the leaders of the future.

Being that EQT is a global firm they have a different view than some of the pure Nordic funds. They have a network and reach that they can leverage to allow them to do a broader set of deals. EQT has individuals within every market and every industry that they operate in who know all the relevant professionals and details that they need to consider for that specific investment. When leveraging these people it is all about coordinating and communication, they make sure to leverage this in every deal.

VII. Analysis and discussion

In the following section we discuss the results presented in the previous section, both from the data and interviews, and analyze to draw conclusions based on this analysis. The chapter will be structured as follows: Firstly, we present the analysis and conclusion from the quantitative part of the thesis by analyzing our three hypotheses. Secondly, we discuss the implications of our qualitative results.

Quantitative aspects

In the results section we find that deal process characteristics do impact deal returns, both in terms of average return and in terms of the spread of returns. Our first finding, that firms that follow targets prior to the transaction and that have a relationship prior to the transaction produce higher returns, we have multiple potential explanations for this. First, we believe that one explanation could be the higher return by the fact that PE firms have more time to form an opinion and deeper understanding for the industry and therefore make a sounder investment decision. Second, we believe that it could be due to the fact that PE firms have more opportunities to meet management, get to know the target firm in an informal setting and therefore conduct better diligence of the team. Lastly, the PE firms have more time to position themselves as the best partners to grow with and therefore create a superior position in negotiations. Our next finding is that the variance in returns is higher of deals where the PE firm has followed the company and formed a relationship. The results suggest that this may be due to the risk of PE firms becoming attached to companies during the investment process and the mental bias of having sunk costs. Also, by the fact that some fund managers are simply better than others at running effective proprietary processes.

The implication of this finding presents high strategic value to PE firms as it encourages firms to form relationships with target firms in their proactive sourcing. However, it suggests that this should be done with caution and firms should consider adding mechanisms to avoid psychological biases. E.g. by introducing controls by external team members that have not been part of the investment process or changing investment teams mid process. For entrepreneurs and management of potential target firms it proves that spending time with multiple firms prior to a process should be highly prioritized. For LPs, this finding is particularly interesting as the notion of PE firms having proprietary deals should be thoroughly questions. I.e. LPs should question what the variance in returns has been for that particular firm, what mechanisms the firm has to avoid biases and how their pipeline of proactive deals looks going forward.

The second major finding contradicts the common assumption that more access to management is better. That is, we find that more hours spent with management, more times visiting the company site and more weeks of exclusivity do not produce superior returns. In a structured process when access to management is limited, information is shared in an efficient and professional way allowing investors to have all their questions answered. As supported by our interviews, excessive access to management will often times result in less efficient meetings, which results in less efficient assessment of the management and the company. Therefore, more time does not necessarily result in more information shared.

The lesson for PEs is to make sure that meeting time is effectively managed and that the process remains tightly run by an advisor to ensure preparations and deliverables are performed in time even if the process is run over a longer period of time. In tandem, PE firms should prioritize spending informal time with management outside of management meetings as management meetings are often rehearsed with the M&A advisor and do not necessarily present a truthful picture of the firm. For intermediaries this finding supports their method of holding tightly run processes.

Our third key finding is that deals that have more rather than few bidders produce higher returns and higher variance. This finding contradicted our initial belief that less competition would result in higher returns along with higher variance. One way to explain this is by the likely attractiveness of a target with more bidders giving more potential upside and therefore larger variance in returns. One of the reasons we expected a lower variance in returns for processes with more bidders was the fact that in a virtual data room (VDR) bidder would be able to see questions posed by other bidders and their respective advisors. Therefore, one would expect the diligence to be altogether more thorough and therefore produce lower variance in returns.

For Private Equity professionals this finding should present some comfort in participating in broader processes and naturally it should incentivize entrepreneurs, management of target firms, and M&A advisors to hold broader processes.

The fourth finding is that deals with a higher degree of transformation produce higher returns but are also more volatile. In tandem, we expect that if the idea to perform a transformational change is proprietary, i.e. invented by the PE firm, returns should be higher but more volatile. However, we find that situations where the management team was the brain behind the idea produce distinctly higher returns although the spread is larger. Also, we find that when the idea was presented by the management returns are more spread out and the spread is lowest when the PE firm was behind the idea.

Being aware of this, firms should primarily look for situations where the management team itself has ideas on how to transform the companies rather than situations when they need to impose their own ideas although with great caution and heavy controls. In turn, entrepreneurs should favor trying to build their own ideas prior to initiating a process. For LPs that favor more consistent performance the ideas produced by the PE firm by itself should be favored.

The penultimate finding is that deals that are perceived as more complex produce higher returns and more volatility. Similarly, deals where the firm has more experience produce higher returns although not along with a higher variance. These findings come as no surprise as the rationale is very straight forward and follow the risk-reward relationship we would expect.

One learning is to take caution when firms take excessive pride in dealing with more complex situations or sectors as it comes at the price of higher volatility.

The final finding from the data is that processes where the highest bidder did not end up being the buyer produce significantly higher returns and we find no difference in the variance. The most obvious explanation to some would be the arbitrage that the firm is able to take advantage of although we believe this effect to be marginal. Instead, we believe this to be explained by a successful partnership throughout the holding that facilitates the value creation process throughout the holding.

Naturally, this finding provides great comfort for firms that are able to create situations when they are the preferred bidder allowing them to win at a lower valuation. For example, firms that are able to create a strong brand, reputation or that specialize in a sector or certain types of situations will be able to position themselves in a favorable way. Also, presenting this type of statistic is powerful as an indication of the strength of the partnership at the outset, which can be presented to LPs. Naturally, the learning for entrepreneurs is to carefully weigh the benefits of choosing the higher price and creating joint value with the right partner.

Qualitative aspects

PE sourcing strategies of the future

Specialization as an edge in sourcing

One major theme we had suspected and confirmed through our qualitative interviews was the pursuit of specialization as an edge. In an industry where people and knowledge are the leverage in creating returns, we see that firms seek to find their competency and build upon it. Firms can be deeply specialized in terms of industry, value creation strategy, or type of seller to name a few. One consistent theme is that all the firms speak to an edge they have created in one way or another. Just as most things in life this continued perfection of what one is good at seems to be the path many investors are taking. Some would go as far as to say that being a generalist is going to get harder and harder in the future. We also see this specialization starting to impact the types of teams within PEs. Some new trends for firms traditionally filled with bankers and consultants are the presence of digital teams and members with a technology skillset.

Relationships at the core

Building relationships plays just as critical a role as it ever has in Private Equity. Throughout our interviews we were again and again told the importance of showing yourself to be a strong partner with a unique view of the company and the strategy. It was stated that almost all senior members of the firm spend a significant amount of their time building and maintaining relationships with companies, intermediaries, industry experts, etc. The strongest relationships are built with sellers when a PE can show a deep competency in their business and show that they would be the best partner for the seller to realize their vision for growth. Often the CEOs of these companies are some of the most knowledgeable people in the world on their particular industry which makes it easy for them to spot someone who knows what they are talking about from the average investor.

Complexity and innovation

Complexity is something that allows those that can see through it to drive returns. We have found this belief to also hold true in our survey results. Complex deals keep many others out and often require years of work just to understand how to navigate, however, the rewards are often better. Firms that can find complexities that they understand better than others will continue to succeed as long as those situations continue to arise. Firms must seek to be "smarter" than the rest in an area that will continue to be valuable.

Dedicated digital strategies

With the success of the technology sector in recent years we have seen more and more industries become tech industries as software has improved their capabilities. This is the case for investors as well as we have seen tools like Bloomberg terminals aid the financial industry for years now. We are now starting to see PE firms deploy technology to source deals. As more and more of our life and actions go digital, we allow computers to spot signals in the noise and identify opportunities in a dataset too vast for any one person to survey.

Additional factors: Long-term perspective as an edge

Long-term perspective is critical to a firm's ability to thrive and develop a view for the future. All the firms that we worked with have a unique edge that they continue to perfect. They are positioning themselves to continue to add value into the future and in some cases are taking major steps to differentiate themselves in key areas. Very few players in the market today are just opportunistic buyers, they have a skill and they perfect it as well as look to the future to understand how they must evolve.

VIII. Further research

Naturally, we are aware that our ability to draw conclusions from our data suffer from a small sample size. Therefore, one obvious suggestion for future research is to expand the dataset to include more observations both for a Nordic and a wider sample as well more deals with bigger tickets as this sample consisted mainly of smaller transactions.

Another suggestion would be to deepen the survey with a short interview for every deal to truly understand all aspects of the relationship, competition and complexity as some nuances might have been left out given the multiple choice nature of survey.

To form an even greater understanding, additional suggestions would be to include interviews with 1. Target companies that have chosen different methods of selling their companies (i.e. both owners and management), to understand what the process is perceived like and why they chose to pursue a certain strategy, and 2. LPs, to understand how they look at sourcing as a means of GPs to drive sustainable and superior returns. Additionally, it would be interesting to compliment the research with 1. Study board interlocks and the connection with souring. 2. Investigate the relationship between sourcing and management turnover 3. Study the exit behavior in relation to the sourcing method. 4. Deepen our study by looking at deal process characteristics on an individual fund manager basis.

Lastly, we encourage more future research to be conducted in the area of deal dynamics and sourcing within Private Equity. For example, it would be interesting to link the findings of our research with management turnover to better understand the role of relationships. Also, it would be interesting to test fee levels of M&A advisors to better understand if the process advisors run truly maximize the price. Finally, it would be interesting to research the evolution over time of what firms consider the primary driver of returns to understand the future of deal process characteristics.

IX. Research limitations

Despite that the aim has been to present all data and other research in a material and fair way, some research limitations have to be discussed. Given the data collection methodology our research was limited by the number of respondents, the depth of the survey and interviews and the number of questions to be mindful of the PE firms' time and contribution. Also, given that firms that pursue clearly defined sourcing strategies might be more keen to participate, there might be a bias in the sample. Therefore, the sample of respondents may not be representative for the Nordic market. Furthermore, the nature of the Nordic PE market, i.e. the tight knit nature likely differs from other markets and might not be representative for those markets.

As has been mentioned earlier in the thesis, the choice to keep the sample within one market was made to make the analysis on a ceteris paribus basis to the extent possible. However, it has not been possible to take differences over time into account.

Due to the lack of responses from firms that compete in the larger size brackets, there is an overrepresentation of deals with smaller equity tickets and minority deals. This could potentially have resulted in more deals that were acquired at certain deal process characteristics and therefore the descriptive statistics could be misleading to show a fair representation of the Nordic market.

X. References

1. Acharya, Gottschalg, Hahn and Kehoe (2013), "*Corporate Governance and Value Creation: Evidence from Private Equity*", The Review of Financial Studies, Vol. 26, No. 2 (February 2013), pp. 368-402
2. Achleitner, Ann-Kristin (2010), *"Value Creation Drivers in Private Equity"*, Journal of Private Equity, Spring 2010; 13, 2; Business Premium Collection, pp. 17
3. Ang, Chen, Goetzmann and Phalippou, 2018, *"Estimating Private Equity Returns from Limited Partner Cash Flows"*, Journal of Finance
4. Axelson et al (2013), *"Borrow Cheap, Buy High? The Determinants of Leverage and Pricing in Buyouts"*, Journal of Finance
5. Batjargal and Liu (2004), *"Entrepreneurs' Access to Private Equity in China: The Role of Social Capital"*, Organization Science
6. Cumming, D., Gill, A. and Walz, U (2009), *"International PE and disclosure",* Northwestern Journal of International Law and Business, vol.29, pp.617-642
7. Degeorge et al (2013), *"The Performance of Secondary Buyouts"*
8. Farmer and Teten (2010), *"Where Are the Deals? Private Equity and Venture Capital Funds' Best Practices in Sourcing New Investments",* The Journal of Private Equity, Vol. 14, No. 1 (WINTER 2010), pp. 32-52
9. Freiburg (2011), *"Institutional Investments in Private Equity Funds: Social Ties and the Reduction of Information Asymmetry",* Venture Capital, Vol. 14, No. 1, January 2012, 1–26
10. Fried and Hisrich (1994), *"Towards a Model of Venture Capital Investment Decision Making",* Financial Management, Vol. 23, No. 3 Autumn 1994, pp 28-37
11. Gohil, Raviraj Karmvir; Vyas, Vijay (2016), *"Factors Driving Abnormal Returns in Private Equity Industry: A New Perspective",* The Journal of Private Equity, Vol. 19, No. 3 (SUMMER 2016), pp. 30-36
12. Gompers, Kaplan, Mukharlyamov (2016) *"What do private equity firms say they do?"*, Journal of Financial Economics, Vol. 121, No. 3, Section 6.1
13. Harris, Jenkinson and Kaplan (2014), *"Private Equity Performance: What Do We Know?",* Journal of Finance, Vol.. LXIX, No. 5, October 2014
14. Harris, Jenkinson and Stucke (2012), *"Are Too Many Private Equity Funds Top Quartile?",* Applied Corporate Finance, a Morgan Stanley Publication, Vol. 24, No. 4, Fall 2012

15. Hassan and Leece (2007), *"Agency and Information Problems in Venture Capital Markets: An Empirical Study of the Information Needs of U.K. Investors and the Demand for Accounting Information",* The Journal of Private Equity, Vol. 10, No. 2, Special Turnaround Management Issue (Spring 2007), pp. 93-112
16. Higson, Chris and Stucke, Rüdiger, "*The Performance of Private Equity"* (March 2, 2012). Available at SSRN: https://ssrn.com/abstract=2009067 or http://dx.doi.org/10.2139/ssrn.2009067
17. Hsu, David (2004) *"What Do Entrepreneurs Pay for Venture Capital Affiliation?"*. Journal of Finance, vol.59, issue 4
18. Jensen, M., and Meckling, W. (1976). *"Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure"*. Journal of Financial Economics, vol.3, pp.305-360
19. Kaplan & Strömberg (2009), *"Leveraged Buyouts and Private Equity"*, Journal of Economic Perspectives, Vol. 3, No. 1
20. Lakelet Capital (2020), "*Proprietary vs non-Proprietary deals",* Article on website. Accessed on March 20th 2020. Available at: <https://lakeletcapital.com/proprietary-vs-non-proprietary-deals/≥
21. Manigart, Sophie & Korsgaard, M. & Folger, Robert & Sapienza, Harry & Baeyens, Katleen. (2002). *"The Impact of Trust on Private Equity Contracts"*.
22. Robinson, David T., and Berk A. Sensoy (2011), *"Private Equity in the 21st Century: Liquidity, Cash Flows and Performance from 1984-2010",* NBER Working Paper.
23. Robinson and Van Osnabrugge (2000), *"Angel Investing : Matching Start-up Funds with Start-up Companies : A Guide for Entrepreneurs and Individual Investors"*, Printed book
24. Sorensen and Strömberg (2013)
25. Stuart (2010), *"Board Interlocks and the Propensity to be Targeted in a Private Equity Transaction"*, Journal of Financial Economics, Vol. 97, Issue 1, July 2010, Pages 174-189

XI. Appendix

Appendix I

Survey questions

This table presents the 29 questions and selections of anwers to choose from for the participating PE for their respective deals. For the majority of questions alternatives were prented although for a couple of questions free text answers were allowed. Enterprise values converted to Euro at spot rate on date of acquisition for each firm.

Question category	Question #	Data item	Options
Company information	1	Date of entry	Exact date
	2	Date of exit	Exact date
	3	Sector	Business Services; Healthcare; Consumer; Industrials; Financial Services; TMT; Oil & Gas; Other
	4	EV at entry	Converted to EUR
	5	Ownership stake	Percentage
	6	Was it a club deal?	Yes; No
Performance	7	Realized return (gross IRR)	0-5%;6-10%;11-15%;16-20%;21-25%;26-30%;31-35%;36-40%;41-50%;51-60%;61-80%;81-100%;>100%
	8	Money multiple	0x-0.5x;0.5x-1x;1x-1.5x;1.5x-2x;2x-2.5x;2.5x-3x;3x-3.5x;3.5x-4x;4x-5x;5x-6x;6x-8x;8x-10x;>10x
Relationship	9	How many years did your deal team follow the company prior to signing? (answer 0 if you had no prior knowledge of the company)	0;0-0.5 years; 0.5-1 years;1-2 years;2-4 years;4-6 years;>6 years
	10	How long was your deal team's relationship with management pre-signing?	0;0-0.5 years; 0.5-1 years;1-2 years;2-4 years;4-6 years;>6 years
	11	How was the deal introduced to your firm?	Sourced from network; Outbound by our firm; Inbound contact to our firm by company; Inbound contact to our firm by sell-side M&A advisor; Inbound contact to our firm via other intermediary than sell-side M&A advisor
	12	How would you characterize the nature of your firm's relationship with member of top management? 1=purely based on the deal, no prior contact, 5=close friendship with an employee at your PE firm	1;2;3;4;5
	13	Access to management: Total number of hours spent with management in meetings / sit-downs (including time in formal process)	0-10 hours; 10-20 hours;20-40 hours;40-60 hours;60-80 hours;>80 hours
	14	How many times did your deal team visit the company site pre-acquisition?	x # of times
	15	How long did you have exclusivity? (Exclusivity defined as time pre-signing with formal or de-facto option to buy the company at an agreed price/pricing formula)	x # of weeks
Competition	16	To your knowledge, how many firms submitted first round bids (including your firm)?	0; 1; 2; 3-4; '5-10; >10
	17	To your knowledge, how many firms submitted second round bids (including your firm)?	0; 1; 2; 3-4; 5-10; >10
	18	Were both trade buyers and financial buyers bidding in the second round?	Only trade; Both trade and financial
Complexity	19	To what degree was there a transformational change in the company during the holding period	Limited; Moderate; Meaningful
		If moderate or meaningful, please describe the nature of the transformational change	Buy-and-build roll-up; Transformational acquisition; Geographical expansion; Replacement of entire management team
		A. If buy-and-build, how many add-ons did you acquire?	1 add-on; 2 add-ons; '3-4 add-ons; '5-10 add-ons; 11-20 add-ons; 21-30 add-ons; 31-50 add-ons; >50 add-ons
		B. If geographical expansion, how many countries did you enter?	1 country; 2 countries; '3-4 countries; '5-10 countries; 11-20 countries; >20 countries
	20	What was the source of the ideas for the transformational change?	N/A; Our firm; Firm in collaboration with managements; Mostly management's idea; Other
	21	How would you characterize the complexity of the deal as it relates to the ability of other firms in the Nordic PE market to participate (e.g. bankruptcy, failed process or niche difficult to understand? 1=Most local firms active in the size range would have felt comfortable participating, 5=Most local firms active in the size range were deterred from participating	1;2;3;4;5
Industry knowledge	22	How many deals have your firm done within similar sectors as this deal?	x # of deals
	23	How well in line with your firm's strategy and prior experience was the deal? 1=Within our mandate but no prior experience to pursue the strategy (e.g. first time to pursue a buy-and-build) , 5=Right in our sweet spot in terms of strategy and experience	1;2;3;4;5
	24	How would you describe the level of knowledge your deal team had about the industry at signing of this deal? 1=Mainly knowledge about the company, very limited network, 5=Specialist, expert knowledge and broad network	1;2;3;4;5
Value drivers	25	What do you think were the two primary drivers of returns for this deal?	
		A. Primary driver of returns:	Organic growth; M&A from transformational acquisition; M&A from multiple add-ons; Margin improvement; Multiple expansion; Debt repayment; None of the above; n.a.
		B. Secondary driver of returns:	Organic growth; M&A from transformational acquisition; M&A from multiple add-ons; Margin improvement; Multiple expansion; Debt repayment; None of the above; n.a.
Other	26	Who was the seller of the company?	PE; Non-PE financial owner; Trade seller; Public company (P2P); Entrepreneur/Private individual(s); Division from another company; Other
	27	Was the deal a failed process (e.g. you acquired the company after a formal process in which no other bidder won)?	Yes; No
	28	Do you know if there were bidders that bid higher than you?	Yes - there were higher bidders; No - there were not any higher bidders; I don't know
		Reason you won the deal despite not bidding the highest price:	Free text answer
Optional	29	Are you open to further inquiries on specific deals that are particularly relevant for testing our hypothesis?	Yes; No

Appendix II

Interview questions

This table presents the 14 interview questions. In addition to these questions firms were presented with the results from the survey and were also asked to give their view on what sourcing looks like in the Nordics.

Question category	Question
The sourcing strategy of your firm	1. How would you describe your sourcing strategy? a. How important do you think sourcing is for your firm's success? b. How much time per week do you spend on sourcing on average? 2. How do you market your strategy to LPs? 3. What is the competitive advantage of your strategy? 4. There is a common belief that sourcing has changed over time due to competitiveness. Has your strategy changed over time?
Sourcing as a value driver	1. Do you think that efficient sourcing adds value throughout the holding? 2. What type of sourcing is easiest from your perspective as a GP (e.g. auctions or proprietary)? 3. What would you consider the biggest difficulties when sourcing deals?
The future of sourcing	1. How do you think the future of PE deal sourcing will look like? a. Why? 2. Which strategies do you think will survive in the future? a. Why?

Appendix III

Test statistics

Testing the difference in means

The test statistic ($t_{\bar{d}}$) used is:

$$t_{\bar{d}} = \frac{\bar{d}-0}{s_{\bar{d}}} \sim t(n-1) \text{ where}$$

$$d_i = y_{1i} - y_{2i}, \bar{d} = \frac{\sum d_i}{n}, s_d^2 = \frac{\sum(d_i-\bar{d})^2}{n-1}, s_{\bar{d}} = \frac{s_d}{\sqrt{n}}$$

where

d_i= the pairwise difference in values of matched observations of two samples

$\bar{d}$= the mean of the variable to be tested

s_d^2= the variance of d

$s_{\bar{d}}$= the standard error

n = the number of observations

We assume the t-statistic follows a Student's t distribution with n-1 degrees of freedom. The null hypothesis (H_0) is that the population mean of individual differences of paired observations is zero. We run all tests two-tailed and the p-values reported are to be interpreted as the smallest significance level at which H_0 hypothesis can be rejected.

To complement the t-test, we run Welch's t-test which is more reliable when the two samples that we test have unequal variances and/or unequal sample sizes.

The test statistic (t) used is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

where $\bar{X}_j$ = Sample mean, s_j^2= Sample standard deviation, N_j= Sample size

And the degrees of freedom associated with this variance is defined as:

$$v = \frac{\left(\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}\right)^2}{\frac{s_1^4}{N_1^2 v_1} + \frac{s_2^4}{N_2^2 v_2}}$$

where $v_1 = N_1 - 1$, the degrees of freedom associated with the first variance estimate and $v_2 = N_2 - 1$ is the degrees of freedom for the second variance estimate.

Testing the variance of returns

To test whether the variance of one subsample is greater than the variance of another subsample we run f-test under the assumption that the population is normally distributed.

The test statistic (F) used is:

$$F = \frac{s_1^2}{s_2^2}$$

Where the degrees of freedom to collect the critical f statistic is $df_1 = n_1 - 1$ and $df_2 = n_2 - 1$

Appendix IV

This table presents the correlation between the answers from the survey where 1 shows a perfect correlation and lower values represent a lower correlation. Negative values show an inverse relationship between the factors.

Survey question	Realized return	Money multiple	How many years did your deal team follow the company prior to signing?	How long was your deal team's relationship with management pre-signing?	How was the deal introduced to your firm?	How would you characterize the nature of your firm's relationship with member of top management?	Access to management: Total number of hours spent with management in meetings	How many times did your deal team visit the company site pre-acquisition?	How long did you have exclusivity?	To your knowledge, how many firms submitted first round bids (including your firm)?	To your knowledge, how many firms submitted second round bids (including your firm)?	To what degree was there a transformational change in the company during the holding period	If moderate or meaningful, please describe the nature of the transformational change	If buy-and-build, how many add-ons did you acquire?	If geographical expansion, how many countries did you enter?	What was the source of the ideas for the transformational change?	How would you characterize the complexity of the deal?	How many deals have your firm done within similar sectors as this deal?	How well in line with your firm's strategy and prior experience was the deal?	How would you describe the level of knowledge your deal team had about the industry at signing of this deal?	Primary driver of returns:	Secondary driver of returns:	Who was the seller of the company?	Was the deal a failed process?	Do you know if there were bidders that bid higher than you?
Realized return	1																								
Money multiple	0.8	1																							
How many years did your deal team follow the company prior to signing?	0.1	0.1	1																						
How long was your deal team's relationship with management pre-signing?	0.2	0.1	0.9	1																					
How was the deal introduced to your firm?	0.0	-0.1	0.1	0.2	1																				
How would you characterize the nature of your firm's relationship with member of top management?	0.1	0.1	0.2	0.2	0.2	1																			
Access to management: Total number of hours spent with management in meetings	0.2	0.1	0.4	0.3	0.0	0.6	1																		
How many times did your deal team visit the company site pre-acquisition?	0.2	0.0	0.2	0.3	0.1	0.4	0.4	1																	
How long did you have exclusivity?	-0.1	-0.2	0.1	0.1	0.2	0.3	0.4	0.2	1																
To your knowledge, how many firms submitted first round bids (including your firm)?	0.1	0.3	0.0	0.0	-0.4	0.0	-0.1	0.1	-0.4	1															
To your knowledge, how many firms submitted second round bids (including your firm)?	-0.1	-0.1	0.0	0.0	-0.2	-0.1	-0.2	0.0	-0.3	0.6	1														
To what degree was there a transformational change in the company during the holding period	0.5	0.4	0.0	0.0	0.1	-0.1	0.0	0.2	-0.1	-0.1	-0.2	1													
If moderate or meaningful, please describe the nature of the transformational change	-0.1	0.0	0.1	0.0	-0.3	0.0	0.1	0.0	-0.1	0.2	0.2	-0.2	1												
If buy-and-build, how many add-ons did you acquire?	0.3	0.4	0.0	0.0	-0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.2	-0.3	1											
If geographical expansion, how many countries did you enter?	0.3	0.4	0.1	0.0	-0.2	0.2	0.3	0.4	0.1	0.2	-0.1	0.2	0.2	0.0	1										
What was the source of the ideas for the transformational change?	0.0	0.0	0.1	0.0	0.0	0.3	0.2	0.1	0.4	0.0	-0.1	-0.2	0.0	-0.1	0.3	1									
How would you characterize the complexity of the deal?	0.2	0.1	0.1	0.1	0.3	0.4	0.2	0.4	0.2	0.0	0.2	0.0	-0.1	0.1	0.2	-0.2	1								
How many deals have your firm done within similar sectors as this deal?	-0.1	-0.1	0.2	0.2	-0.2	0.1	0.4	0.1	-0.2	0.1	0.0	-0.2	-0.1	0.1	0.3	0.1	-0.1	1							
How well in line with your firm's strategy and prior experience was the deal?	0.1	0.0	0.3	0.2	-0.1	0.4	0.1	0.4	-0.1	0.2	0.1	0.1	-0.1	0.0	0.2	0.0	0.4	0.1	1						
How would you describe the level of knowledge your deal team had about the industry at signing of this deal?	0.1	0.0	0.2	0.2	0.1	0.5	0.1	0.3	-0.1	0.2	0.2	0.0	-0.2	0.1	0.2	0.1	0.4	0.0	0.7	1					
Primary driver of returns:	-0.3	-0.3	-0.3	-0.3	0.2	-0.1	-0.2	-0.2	0.1	-0.1	-0.1	-0.4	0.0	0.0	-0.2	-0.1	-0.1	-0.1	-0.4	-0.2	1				
Secondary driver of returns:	-0.2	-0.2	0.1	0.0	0.0	0.1	0.0	0.1	-0.4	0.0	0.3	-0.2	0.3	-0.3	0.0	-0.1	0.2	0.0	0.2	0.3	-0.1	1			
Who was the seller of the company?	0.0	0.0	-0.1	-0.1	0.0	0.1	-0.1	0.0	0.1	0.1	0.2	-0.1	0.2	0.1	-0.1	-0.1	0.0	-0.4	-0.3	-0.1	0.1	0.4	1		
Was the deal a failed process?	0.1	0.1	0.0	-0.1	0.1	-0.2	0.0	0.1	0.1	0.0	0.0	0.1	-0.3	0.5	-0.1	-0.1	0.1	-0.1	-0.1	0.0	0.1	-0.3	-0.1	1	
Do you know if there were bidders that bid higher than you?	0.2	0.3	0.4	0.4	0.0	0.1	0.3	0.4	0.0	0.4	0.1	0.1	0.2	0.0	0.2	0.1	-0.1	0.1	0.1	0.0	-0.3	0.1	0.1	0.0	1

Appendix V

List of Abbreviations

B&B	Buy-&-build
CEO	Chief Executive Officer
GP	General Partner
Gross IRR	Gross Internal rate of return
IM	Information memorandum
IRR	Internal rate of return
LBO	Leveraged buyout
LP	Limited Partner
MOIC	(Gross) Money multiple
PE	Private Equity
PME	Public Market equivalent
P2P	Public to private
PE	Private Equity
SVCA	Swedish Venture Capital Association
VDR	Virtual Data Room