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Private Equity Buyouts: A Vehicle to Foster Growth

A Study of the Impact of Buyouts on Companies' Operating Performance and the Effects of Parenting

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ABSTRACT

This paper studies the impact of private equity buyouts on the operating performance of buyout companies, using a sample of 61 buyouts of Swedish companies completed between 2008 and 2012, relative to a control group of non-buyouts. Evidence is provided on two dimensions of operating performance: i) Profitability and ii) growth. The results indicate that buyout companies do not improve profitability in the post-buyout period, but grow faster and increase investments considerably more than their peers.

This paper then explores how private equity firms create value through parenting, by providing evidence consistent with the hypothesis that private equity firms alleviate buyout companies' resource constraints, which allows buyout companies to seize unexploited growth opportunities, and subsequently fosters growth. Firstly, post-buyout growth is concentrated among companies that are more likely to suffer from pre-buyout resource constraints. Secondly, there is a clear pattern that buyouts of resource-constrained companies lead to significant increases in corporate investments. Further, the results indicate that private equity resources such as skills, experience and network are more important than financial resources for value creation.

Overall, the findings of this paper indicate that buyouts are a vehicle to foster growth rather than to improve profitability, as previous studies indicate. In addition, the findings of this paper highlight the importance of parenting effects, as well as the human and social capital factors of private equity firms, for value creation in private equity buyouts.

TABLE OF CONTENT

1. INTRODUCTION

Private equity is responsible for an increasing number of transactions globally, and hence plays an increasingly important role in companies worldwide (Strömberg 2008). It is therefore important to understand the impact of private equity buyouts, not only in terms of financial returns to investors, but also on the companies undergoing a buyout ("buyout companies"). However, in this paper I argue that the impact of buyouts on buyout companies, and the value-creating processes in buyouts, may not be well-understood – at least not in a European context.

Most previous research on the impact of buyouts examine American buyouts of publicly held corporations ("public buyouts"). As former studies primarily focus on public buyouts, which offer scope for improving profitability by reducing agency costs, agency theory is the most prominent theory employed to examine buyouts and their impact on operating performance (Maury 2006, Meuleman, Amess et al. 2009).

According to "the agency perspective", buyouts create value as they lead to renewed mechanisms of corporate governance that reduce agency costs in buyout companies (Berg, Gottschalg 2003, Kaplan 1989). Buyouts combine multiple powerful incentives and introduce improved control, which is expected to change the behaviour of managers and ultimately lead to improvements in operating performance (Jensen 1986, Jensen 1989b, Kaplan 1989). Previous studies show that buyout companies cut costs, improve asset productivity and reduce investments following a buyout (e.g. Kaplan 1989, Muscarella, Vetsuypens 1990, Smith 1990).

The prominence of the agency perspective has led to a general understanding of buyouts as a "governance and control device" with the aim of improving profitability and organisational efficiency (Meuleman, Amess et al. 2009), and has led to private equity firms being accused of asset stripping, layoffs and wage reductions (Wright, Amess et al. 2009).

However, this general understanding of buyouts may not be representative of today's typical buyout as most previous research focus on public buyouts of American corporations. The economic forces driving different types of buyouts are likely to differ from those driving public buyouts (Chung 2011). And while agency theory provides useful insights regarding the buyout impact and value creation in public buyouts, it has limitations when applied to a broader range of private equity buyouts, such as buyouts of private, family-owned companies ("private buyouts") with limited ex ante agency problems (Vinten 2007, Wright, Amess et al. 2009). In fact, public buyouts account for a minority of global buyout activity, and private, family-owned companies are the largest receivers of private equity in major European economies such as Italy, France and the UK (Dawson 2011, Strömberg 2008). This means that previous research may not be representative of modern, European buyouts. Also, since agency theory has limited explanatory power regarding value creation in buyout types other than public buyouts, it seems we lack a proper understanding of the buyout impact and value creation processes in many European buyouts.

In addition, European economies differ from the American economy in several ways, including ownership structures and financial systems, with ownership structures in Europe being more concentrated and dominated by family businesses (e.g. Faccio, Lang 2002, Ughetto 2012). Therefore, there may be fewer gains from changed governance structures in European buyouts as companies have fewer ex ante agency problems, suggesting that we need to look beyond agency perspective in order to understand the impact of European buyouts and how they create value (Vinten 2007).

Due to of the prominence of the agency perspective, research has largely focused on profitability and efficiency, with limited attention to *growth*. As management controls in buyouts may "stifle strategic flexibility and risk-taking associated with growth", the agency perspective offers limited consideration of growth (Meuleman, Amess et al. 2009). Interestingly, more recent research on European buyouts find a positive effect on growth following buyouts (e.g. Boucly, Sraer et al. 2011, Scellato, Ughetto 2013), and furthermore find that revenue growth is an important source of value creation in private equity buyouts (e.g. Capital Dynamics 2014). Since agency theory cannot explain the buyout impact on growth, it is necessary to expand the theoretical focus beyond agency theory in order to understand how buyouts foster growth. However, while several more recent studies examine the buyout impact on growth in buyout companies, few studies examine the *underlying drivers* of growth in buyouts.

According to Boucly, Sraer et al. (2012), private equity firms create value in buyouts by targeting credit-constrained companies, alleviating targets' credit constraints through their competences and network within the financial sector, and in this way foster growth. In this paper, I expand the hypothesis put forward by Boucly, Sraer et al. (2012), and suggest that private equity firms create value in buyouts by alleviating a wider set of resource constraints, which consequently fosters growth in buyout companies. This hypothesis relies on *parenting*, which is the process by which private equity firms add value to their buyout companies by sharing their own resources with buyout companies in a "growth-enhancing and value-creating way" (Gottschalg, Meier 2005, Klier 2009, Landau, Bock 2013). Importantly, these resources include the human and social capital of private equity firms, such as their *skills, experience* and *network*. Parenting effects may be particularly relevant in a European context, as private, family-owned companies, which are the largest receivers of private equity in several European economies, are more likely to suffer from a lack of financial and managerial resources prior to a buyout (Boucly, Sraer et al. 2011, Dawson 2011).

Researchers have to some extent considered value creation mechanisms in private equity based on the resources private equity firms possess. For example, Landau and Bock (2013) find that private equity firms create value by providing buyout companies access to strategic resources, which improve the company's competitive position and performance. And Acharya, Gottschalg et al. (2013) find that private equity professionals with an operational background generate significantly higher performance in deals that focus on internal value creation programs, while private equity professionals with a background in finance generate higher performance in deals with significant M&A activity. Such findings suggest that *skills* and *experience* of private equity firms may be important factors when examining buyout impact and value creation processes. However, there is no comprehensive framework on how private equity create value through *parenting*.

This paper examines the impact of private equity buyouts on buyout companies' operating performance using a sample of 61 buyouts completed in Sweden between 2008 and 2012. The objective is to generate a more nuanced and complete understanding of the buyout impact on operating performance and on value creation in private equity. This is completed in two steps: Firstly, I examine the buyout impact on profitability and growth, respectively. Secondly, I examine the drivers of growth in buyouts. This step is carried out drawing on *parenting* literature and literature on human and social capital factors in private equity, with the purpose of creating a more comprehensive view of value creation in private equity buyouts.

1.1 Research questions

The objective of this paper is to improve the understanding of the impact of private equity buyouts in a European context. This is accomplished by providing empirical evidence on the operating performance of Swedish buyout companies, and providing a more comprehensive analysis of the buyout impact on growth compared with most previous studies, with the purpose of generating more information on why and how *growth* may be a key source of value creation in Swedish buyouts.

This leads to the following research questions:

i) What is the impact of private equity buyouts on companies' operating performance relative to peers?

ii) If there is a positive buyout impact on companies' operating performance relative to peers, is this an effect of *parenting* by private equity firms?

This paper is structured as follows: Section 2 gives a brief introduction to private equity and buyouts. Section 3 reviews relevant literature and empirical evidence, and forms the basis for formulating hypotheses, which are presented in Section 4. Section 5 outlines the methodology, which primarily involves a quantitative analysis. Section 6 presents and discusses empirical results. Results are substantiated by a brief analysis of buyout rationales in Section 7. Finally, Section 8 concludes on key findings.

2. PRIVATE EQUITY AND LEVERAGED BUYOUTS

A buyout is a transaction in which a financial sponsor, often together with a management team, acquires the controlling stake in a company (or a division). Buyouts are typically control investments, meaning that the private equity firm acquires majority control of the buyout company (Berg, Gottschalg 2003). The buyout is usually financed with a small share (10-40%) of equity and a large share of outside debt (60-90%) – hence, referred to as *leveraged* buyouts (Berg, Gottschalg 2003, Kaplan, Strömberg 2009).

Buyouts are "unrelated" acquisitions in the sense that private equity firms usually acquire companies in various industries and manage their portfolio companies completely independent (Gottschalg, Meier 2005). Unlike most other acquisitions, which are motivated by potential synergies, buyouts are executed with the intention of increasing the value of the buyout company on a stand-alone basis, and exiting at a price higher than the acquisition price (Berg, Gottschalg 2003).

Note that private equity is a term used to refer to both venture capital investments and buyout investments (Cumming 2012). A buyout is a late stage investment in existing or mature companies, while venture capital represents early stage investments (Berg, Gottschalg 2003). The former type is the focus of this paper, and private equity is in this paper always used with a reference to buyouts. The term "buyout" is applied to cover various types of buyouts (e.g. management buyout and management buy-in). The important aspect is that it refers to late stage private equity investments.

2.1 The Private Equity Model

Private equity firms source capital for their buyouts through funds. Reputation and track record are key for fundraising, making it important for private equity firms to perform well with each fund (Thomsen, Conyon 2012, Kaplan, Schoar 2005). Private equity funds are typically "closed-end" vehicles where investors commit to provide a certain amount of capital to pay for the buyout investments (Kaplan, Strömberg 2009). The

majority of private equity funds are organised as limited partnerships, with the private equity firm as the general partner and investors as limited partners. Limited partners may include pension funds, investment banks, insurance companies, wealthy individuals, and the fund's managers (Brealey, Myers et al. 2008).

The fund has a fixed life, usually ten years (Brealey, Myers et al. 2008). The private equity firm forms the partnership, screens potential targets, executes buyouts, manages portfolio companies and finally exits within four to six years (SVCA 2015). The objective of the fund is to provide a return for its investors, which materialises when the private equity firm exits its portfolio companies. Exits take place in a number of ways, including trade sales, initial or secondary public offerings or secondary buyouts (Wright, Amess et al. 2009).

The compensation of private equity firms consists of two components. First, a fixed component, which comprises an annual management fee from investors, typically 1-2% of the committed capital (Brealey, Myers et al. 2008). Second, the carried interest (usually 20% of the excess profits of the fund) which is contingent on the private equity firm returning all contributed capital and an agreed rate of return (the hurdle rate, typically 8%) to investors (Brealey, Myers et al. 2008, Kaplan, Strömberg 2009). Note that the compensation is asymmetric; the private equity firm has limited down-side risk (minimum 1-2% management fee) and ample upside potential (20% carry above the hurdle rate), which is a powerful motivator for the private equity firm to deliver a profit to its investors (ibid.). In turn, private equity firms ensure that manages of their buyout companies are similarly incentivised through equity stakes and pay-for-performance compensation, as outlined in Section 3.2.2.

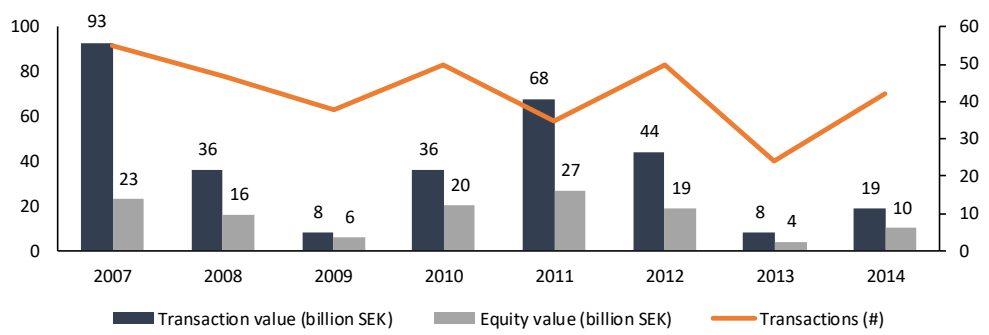
To sum up, the private equity model is built around strong financial incentives for private equity firms and managers of buyout companies. Therefore, companies are managed to maximise value, and there is a strong emphasis on cash flow (Jensen 1989a).

2.2 Private Equity in Sweden

Private equity is a major force in the Swedish economy. In 2013, private equity-backed companies generated 289 billion SEK in revenue and employed nearly 180,000, comparable to 7.6% of the GDP and 3.9% of the employed workforce.

In 2014, buyout investments in Sweden totalled 10 billion SEK in equity value and 19 billion SEK in transaction value (Invest Europe Research 2015, SVCA 2014). As seen in Figure 1, investment activity has decreased significantly from its peak in 2007 following the beginning of the financial crisis, and has yet to recover. Nevertheless, buyout activity increased by 130% in 2014 when measured by transaction value, but divestments still exceeded new investments (SVCA 2014).

Figure 1: Buyout investments in Sweden 2007-2014



In 2014, the average Swedish buyout had a transaction value of less than 500 million SEK. This is a reduction of more than 70% compared to the 2007 average (SVCA 2014, Invest Europe Research 2015). Buyouts take place in a variety of industries, but life sciences, business services, consumer goods and retail, and IT dominate Swedish buyouts (SVCA 2014). Swedish companies are acquired by both local (53%) and foreign (47%) private equity firms (Invest Europe Research 2015).

In a European context, the Swedish buyout market is relatively small, accounting for 3.6% of all European private equity investments in 2015 (Invest Europe Research 2015). However, the ratio of Swedish buyout investments to GDP was among the highest in Europe in the period 2007-13, only surpassed by Luxembourg, and Sweden is viewed as one of the most attractive European countries for private equity investments (Groh, von Liechtenstein et al. 2010, SVCA 2014), which makes it an interesting market to examine.

3. THEORY AND EMPIRICAL EVIDENCE

This section provides a short introduction to operational improvements and value creation in private equity buyouts, as well as a review of two *drivers* of operational improvements: Reduced agency costs and parenting effects. Importantly, reduced agency costs and parenting effects do not have a direct effect on operating performance. Rather, they create a foundation for managers of buyout companies to make decisions that improve operating performance, and hence value, of their companies. Finally, empirical evidence of the buyout impact on operating performance is reviewed.

3.1 Value creation and operating performance in private equity buyouts

The terms *operational improvements* and *value creation* are sometimes used interchangeably in connection with buyouts. However, it is important to understand how operational improvements lead to value creation in buyouts and to acknowledge other sources of value creation in buyouts.

Private equity firms have three main sources of value creation in buyouts: (i) Financial arbitrage, (ii) financial engineering and (iii) improvements in operating performance (Berg, Gottschalg 2003, Bergström, Grubb et al. 2007). Financial arbitrage can be referred to as a "buy low – sell high" strategy as the acquirer takes advantage of differences in the valuation multiple level at time of entry compared to time of exit of a buyout company. This multiple "pick-up" effect may be driven by changes in market valuation, superior market information of the acquirer or simply by the acquirer being "better" at divesting the company down the line. It is purely concerned with the valuation of a business; hence, no real value is created in the buyout company (Berg, Gottschalg 2003).

On the contrary, financial engineering and operational improvements are said to be value-creating as they have direct bottom-line effects (ibid). Financial engineering is the optimisation of capital structure and minimisation of the after-tax cost of capital of the buyout company, and is one of the most widely used methods applied by private equity firms to increase the value of a buyout company (ibid.). However, financial engineering entails no improvement in the buyout company but rather a minimisation of cash outflows to creditors and tax authorities. Hence, from a societal perspective, financial engineering can be seen as redistribution rather than creation of value (Bergström, Grubb et al. 2007). On the contrary, a private equity firm's third source of value creation, improvements in operating performance, entails real changes in the company and its operations, i.e. potential to generate economic efficiency.

Evidence shows that improvements in operating performance is an important source of value creation in private equity buyouts. Achleitner, Braun et al. (2010) find that improvements in operating performance account for 46% of total value creation in a sample of European buyouts, while the multiple effect and financial engineering account for 18% and 32% of total value creation, respectively. Capital Dynamics (2014) and Guo, Hotchkiss et al. (2011) arrive at a similar result using a global sample of exits and a sample of public buyouts in the US, respectively. Furthermore, Capital Dynamics (2014) find that revenue growth is the key driver of operational improvements, accounting for more than 70% of the value generated by improvements in operating performance.

Operating performance can be improved through increased profitability or revenue growth. To increase profitability, private equity firms typically improve buyout companies' cost efficiency and asset productivity (Berg, Gottschalg 2003). Cost efficiency entails cost cutting and margin improvements, which typically are attained by tightening control on corporate spending, reducing production cost and reducing overhead costs (Berg, Gottschalg 2003, Lichtenberg, Siegel 1990). Asset productivity is improved by making more efficient use of buyout companies' assets. This is commonly done through working capital improvements, which can be attained by tightening inventory control and professionalising accounts receivable management (Bergström, Grubb et al. 2007, Easterwood, Seth et al. 1989). Private equity firms can also impose stricter management of capital expenditures, which may lead to divestments of unproductive assets (Berg, Gottschalg 2003). Note that while cost efficiency and asset productivity initiatives can increase profitability and thereby increase the value of a buyout company, it may also have adverse effects if it limits the company's ability to compete effectively (Berg, Gottschalg 2003).

Operating performance can also be improved through growth. Buyouts are generally associated with strategic distinctiveness, and business plans for the buyout company are often developed already in the acquisition phase (Berg, Gottschalg 2003). Revenue-building initiatives may include changes in pricing, product quality, customer service, customer segments and/or distribution channels (Berg, Gottschalg 2003, Mulling, Panas 2014). If these initiatives lead to improved competitiveness, the buyout company is likely to experience an increase in revenue. Following a buyout, the buyout company may also introduce new products or enter new markets, which were not possible prior to the buyout (Amess, Wright 2007). Buyouts are typically followed by a simplification of decision-making processes and an expansion of the resource base, both of which facilitate the necessary investments for product or geographical expansion (Easterwood, Seth et al. 1989). A buyout company may need to carry out investments to expand production facilities, engage in new product development or expand the employee base in order to realise its expansion plans (Mulling, Panas 2014). A common strategy applied by private equity firms is the 'buy-and-build' strategy. This strategy usually occurs in a fragmented market with the aim of building a market leader through a series of bolt-on acquisitions (Berg, Gottschalg 2003). Intuitively and unsurprisingly, this strategy often generates high growth rates.

Cost-reduction and revenue-building initiatives, which lead to operating improvements, have direct effects on the bottom-line of a company, and are hence directly value-creating. The next sections review two drivers of operating improvements: (i) Reduced agency costs and (ii) parenting effects.

3.2 Reduced agency costs

Agency theory is the most prominent theory employed to examine buyouts (Meuleman, Amess et al. 2009). According to agency theory, buyouts result in a superior governance model (Berg, Gottschalg 2003, Jensen

1989b, Kaplan 1989). A buyout is typically accompanied by changes in organisational structure and ownership, which create renewed mechanisms of corporate governance that reduce agency costs (Berg, Gottschalg 2003, Kaplan 1989). This change in corporate governance is expected to affect the behaviour of managers such that they make value-optimising decisions that improve the operating performance of their companies. Hence, the effect of reduced agency costs on operating performance is indirect, and works through changed control and incentives of managers in the buyout company (Berg, Gottschalg 2003).

In an agency relationship, a principal engages an agent to perform a service on his behalf. This involves delegating some decision-making authority to the agent. Because both parties are self-interested and utility-maximising, it is likely that the agent will not always act in the best interest of the principal (Thomsen, Conyon 2012). The principal wants to ensure that the agent will make optimal decisions from the viewpoint of the principal, however, generally this is impossible at zero costs and therefore the agency relationship entails agency costs. Agency costs comprise monitoring expenditures by the principal, bonding expenditures by the agent, and the residual loss, which is "the divergence between the agent's decisions and those decisions that would maximise the welfare of the principal" (Jensen, Meckling 1976).

The owner-manager problem is a generic agency problem (Thomsen, Conyon 2012). It arises with the separation of ownership and control as put forth by Berle and Means (1932), which entails a specialisation of resources, where the owner/investor supplies finance and the manager supplies human capital (Thomsen, Conyon 2012). The owner wants the manager to make value-optimising decisions, but seeing as the owner and manager have different interests, it is likely that the manager do not always make decisions that optimise value for the owner. Instead, the manager may engage in non-value optimising decisions such as consumption of fringe benefits, excess expenditures, empire building or overinvestment (Jensen 1986, Thomsen, Conyon 2012).

According to Jensen (1986, 1989b), buyouts combine powerful incentives that lead to improved performance ("the reduced agency cost hypothesis"). Firstly, high leverage forces managers to find ways to generate cash and prevents them from wasting resources in order to service debt payments (Jensen 1986, Jensen 1989b, Kaplan 1989). Secondly, increased managerial ownership better align managers' incentives to those of investors, and hence the manager has a stronger incentive to devote significant effort to create value (Berg, Gottschalg 2003, Scellato, Ughetto 2013). Finally, buyouts introduce active, high-quality monitoring by private equity firms (Desbrières, Schatt 2002, Kaplan 1989). The mechanisms of the reduced agency cost hypothesis are explained in depth below.

3.2.1 Reduced agency costs of free cash flow

Free cash flow is "the cash flow in excess of that required to fund all projects that have positive net present values" (Jensen 1986). Managers have a limited interest in paying out free cash flow because it reduces the resources under their control and thereby their power. Rather than paying out cash, managers may engage in empire building, overinvestment or excess expenditure (Jensen 1986, Thomsen, Conyon 2012). Growing companies beyond optimal size increases managers' power by increasing the resources under their control, and furthermore increases their compensation as it is positively related to revenue growth. Furthermore, it boosts the social prominence, public prestige and political power of managers (Jensen 1986, Jensen 1989b). Owners prefer that managers pay out cash rather than investing it in unprofitable projects or wasting it on organisational inefficiencies, but it is difficult to force managers to do so. This issue is more severe when the company produces considerable free cash flow (Jensen 1986).

The "control hypothesis for debt creation" comprise the advantages of debt in motivating managers to manage their companies efficiently (Jensen 1986). High leverage in buyouts reduces the agency costs of free cash flow by reducing the cash available for spending by managers (Jensen 1986), which reduces managers' opportunities for wasting free cash flow on fringe benefits or on unprofitable projects. Furthermore, the threat of bankruptcy caused by failure to service debt payments incentivises managers to limit the waste of free cash flow and run the company efficiently (Berg, Gottschalg 2003, Jensen 1986). Thus, high leverage creates incentives for managers to work harder to generate cash, make better investment decisions and restrict the consumption of fringe benefits. Another advantage of debt is outsourced governance, as creditors have incentives to monitor managers' actions to ensure that the company services its debt payments (Berg, Gottschalg 2003).

Importantly, however, high leverage does not always have positive control effects. The effect of debt is not as important in companies with high growth, profitable investment opportunities and no free cash flow (Jensen 1986). Serious concerns have also been raised on the long-term effects of high leverage. High leverage may affect project selection, creating a bias towards low-risk investments, and it may reduce investments in innovation and R&D (Berg, Gottschalg 2003, Bergström, Grubb et al. 2007, Ughetto 2012). Additionally, the control and monitoring created by high leverage may also limit managerial discretion as well as restrain flexibility and risk taking (Meuleman, Amess et al. 2009, Ughetto 2012).

3.2.2 Improved incentive alignment

As mentioned, owners and managers typically have conflicting interests, which lead managers to make non-value optimising decisions. Owners can reduce the divergence in interests by giving managers incentives that better align their interests to those of the owners, which commonly imply changing managers' payoff (Foss 2014, Thomsen, Conyon 2012).

Buyouts typically lead to renewed corporate governance mechanisms that improve the alignment of incentives between managers and owners (Berg, Gottschalg 2003, Scellato, Ughetto 2013). Firstly, private equity firms often encourage or require managers to acquire an equity stake in the buyout company (Renneboog, Simons 2005). Ownership gives managers a stake in any value-creating actions, and will motivate them to work harder and make value-optimising decisions, which ultimately leads to improved operating performance (Jensen, Meckling 1976, Easterwood, Seth et al. 1989, Meuleman, Amess et al. 2009). Additionally, shirking becomes costlier for a manager with an ownership share as it reduces free cash flow, in which the manager has a stake (Hite, Vetsuypens 1989).

Secondly, incentives are aligned by implementing a strong relationship between pay and performance. Managers in private equity-owned companies (ranging from top executives to middle managers) are remunerated with a lower base pay but likewise receive a substantially larger share of compensation through variable pay (Jensen 1989a, Jensen 1989b, Leslie, Oyer 2008). By ensuring that compensation is closely tied to performance, manages can be expected to work harder to improve performance and make value-optimising decisions.

3.2.3 Improving monitoring and control

Monitoring and control aims at changing the information structures in the agency relationship such that information symmetry between agents and principals is reduced (Foss 2014). For owners, monitoring and control activities aim at limiting the opportunities managers have for capturing fringe benefits as well as

ensuring that managers do not pursue their own personal goals rather than the company's goals (Jensen, Meckling 1976, Easterwood, Seth et al. 1989). Monitoring and control activities include auditing, formal control systems and budget restrictions (Jensen, Meckling 1976).

Buyouts change the governance structure in a way that improve the quality of monitoring and control of buyout company managers, which is expected to lead to reduced agency costs and subsequently better operating and investment decisions by managers (Renneboog, Simons 2005). The post-buyout concentration of ownership means that management is responsible to a small but powerful group of owners, which have more information and more authority in their monitoring and control of managers (Easterwood, Seth et al. 1989, Hite, Vetsuypens 1989, Renneboog, Simons 2005). For example, private equity representatives are on the Board of Directors, and managers are hired and fired by the private equity firm (Easterwood, Seth et al. 1989). As discussed in Section 2.1, the compensation structure of private equity firms ensures a strong tie between general partners' financial compensation and the performance of buyout companies, i.e. monitoring and control is carried out by parties with strong incentives to monitor and control managers (Jensen 1989a, Jensen 1989b).

According to the agency perspective, buyouts lead to renewed mechanisms of corporate governance that reduce agency costs. These mechanisms comprise high leverage, managerial ownership and active, high-quality monitoring by private equity firms. They are expected to affect the behaviour of managers so that they optimise the value of their companies. Hence the agency perspective primarily focus on buyouts as a "governance device" with the aim of controlling and incentivising managers.

3.2.4 Empirical evidence on reduced agency costs in buyouts

While many studies on the buyout impact on operating performance refer to agency theory, few studies test the reduced agency cost reduction hypothesis. This section covers evidence on the three mechanisms of the agency costs hypothesis, as discussed in previous sections: Reduced agency costs of free cash flow, incentive realignment and improved monitoring and control.

American evidence appears to provide support for the free cash flow hypothesis. Guo, Hotchkiss et al. (2011) find that larger debt increases have a positive impact on operating performance, which is consistent with the free cash flow hypothesis. Using qualitative methods, Baker and Wruck (1989), Bull (1989) and Phan and Hill (1995) also find support of the free cash flow hypothesis in American buyouts. However, unlike evidence from the US, evidence from Scandinavia find little or no support for the free cash flow hypothesis. Bergström, Grubb et al. (2007) cannot find any support that increasing leverage has a significant positive impact on buyout companies' operating performance, and while Vinten (2007) finds that 70% of buyout companies experience an increase in leverage, he finds that increased leverage has a significant negative impact on profitability.

While there is ample evidence documenting improved incentive alignment in buyouts (e.g. Kaplan 1989, Leslie, Oyer 2008), there is little evidence regarding its effect on operating performance. Guo, Hotchkiss et al. (2011) do not find that management incentives, proxied by management equity holdings, improve operating performance in American buyouts and Bergström, Grubb et al. (2007) cannot find any evidence that increased management ownership interests in Swedish buyout companies lead to improved operating performance. Bergström, Grubb et al. (2007) explains their findings by executives having a high ownership percentage before the buyout, as they are often the founder(s) of the company, and hence pre-buyout ownership is highly concentrated.

Guo, Hotchkiss et al. (2011) find that gains in operating cash flows are greater for companies where the private equity firm has replaced the CEO, which suggests that monitoring and control improves operating performance in US-based public buyouts. Vinten (2007) finds that Danish buyouts with a post-buyout increase (decrease) in ownership concentration experience a positive but insignificant (negative) effect on profitability. This evidence lends support for the control hypothesis. However, Vinten (2007) also finds that in Danish buyouts buyout ownership concentration decreases following a buyout due to a high pre-buyout ownership concentration.

Overall, evidence on reduced agency costs in buyouts is quite mixed. Generally, American studies tend to support the agency cost reduction hypothesis, while European studies generally do not find that buyouts improve operating performance through reduced agency costs.

3.3 Parenting Effects

While private equity firms can create value in buyout companies by reducing agency costs through governance mechanisms as described in Section 3.2, they can also create value by providing new resources and capabilities to buyout companies, known as *parenting*. This section outlines parenting effects in buyouts.

Originally, the parenting framework focuses on companies that are part of "multi-business companies" and, following, on the benefits a company can derive by being part of a such a multi-business company (Campbell, Goold et al. 1995). Multi-business companies can create value by applying its competencies in its relationship with the businesses it owns. The best parent creates more value than any rival could if they owned the same business. This is the parenting advantage (ibid.). A multi-business company can create value through parenting in multiple ways, including through linkages between its businesses in order to improve efficiency, by sharing capabilities among businesses in order to create synergies or by adding special expertise to the businesses that the parent possesses (ibid).

Similar to the effect of being part of a multi-business company, buyout companies can benefit from having a private equity firm as an owner. In buyouts, there are generally no attempts to generate synergies between businesses. Rather, private equity firms can add value by sharing their own resources and capabilities with buyout companies (Berg, Gottschalg 2003, Klier 2009, Landau, Bock 2013). Particularly intangible resources such as skills, experience and networks have value-creating effects (Landau, Bock 2013).

Previous literature illustrates several parenting mechanisms through which private equity firms can add value to buyout companies, such as restoring entrepreneurial spirit (e.g. Wright, Hoskisson et al. 2001a) or providing access to strategic resources (Landau, Bock 2013). However, previous literature only to a minor extent applies a structured approach to parenting effects. Therefore, I have sought to create a framework that comprises how private equity firms create value through parenting. In order to create a comprehensive framework, I use literature that may not specifically refer to parenting effects, but which I consider to be part of the parenting perspective.

The following sections cover two aspects of parenting: (i) Access to managerial resources and (ii) alleviation of financial constraints.

3.3.1 Access to managerial resources

A company's access to resources and capabilities is important for improving operating performance, especially growth-related performance (Ireland, Hitt et al. 2003). Private equity firms can support growth and value

creation in buyout companies by sharing its managerial resources (i.e. skills, experience and network) with the buyout company (Bergström, Grubb et al. 2007, Gottschalg, Meier 2005, Meuleman, Amess et al. 2009).

In this section, I cover two main advantages stemming from access to managerial resources: "Coaching, advisory and support" and "Exploiting network and relationships". Finally, I outline how private equity firms foster growth through coaching, advisory and support as well as the use of network and relationships.

3.3.1.1 Coaching, advisory and support

Private equity firms may bring management expertise and industry experience acquired in previous buyouts (Hite, Vetsuypens 1989). Thus, a key area in which private equity firms help buyout companies improve performance is through coaching, advisory and support of buyout company managers (Gottschalg, Meier 2005, Klier 2009).

Coaching, advisory and support takes place via formal and informal channels. Private equity firms can provide knowledge and experience to buyout companies via representatives who serve on the buyout company's Board of Directors (Landau, Bock 2013). Skills and experience can also be transferred to the buyout company through direct and unbureaucratic channels (Berg, Gottschalg 2003). For example, the lead representative of the private equity firm may serve as the top management's sounding board on long-term decisions (ibid.). The lead representative is able to provide additional perspectives and knowledge on strategy, markets and external conditions, and may provide managers with critical knowledge for an operational or strategic decision. This "cross -utilisation of managerial talent" may bring valuable and otherwise unavailable resources to the buyout company (Hite, Vetsuypens 1989).

Furthermore, private equity firms may contribute to management decision-making by keeping strategy on track, assisting with M&A, broadening market focus, and reviewing R&D, budgets and marketing plans (Bruining, Wright 2002, Meuleman, Amess et al. 2009).

3.3.1.2 Exploiting network and relationships

Another source of value creation through parenting comes from the private equity firm's network and relationships (Berg, Gottschalg 2003, Bergström, Grubb et al. 2007). The private equity firm may not possess all the resources and knowledge that the buyout company needs, but may have access to it through its network (Meuleman, Amess et al. 2009). Private equity firms can import advanced management skills from its networks into the buyout company, for example by introducing an expert from its network of industrial advisors as an advisor to management or as a representative on the Board of Directors (Chung 2011, Matthews, Bye et al. 2009).

The private equity firm may also select new members to the management team after the buyout if they find that the current management lacks the necessary expertise and experience (Anders 1992). For example, a company's founder may be successful at starting a business but lacks the necessary skills to manage a larger and more complex company (Wright, Hoskisson et al. 2001a). The private equity firm's network helps identify and recruit professional managers and other necessary human capital to the buyout company (Wright, Hoskisson et al. 2001a, Gottschalg, Meier 2005).

The private equity firm's network can also add value by e.g. finding a business partner, or identifying potential targets for a buy-and-build strategy. In some situations, the private equity firm's contacts may be an important success factor for the buyout company (Berg, Gottschalg 2003, Bergström, Grubb et al. 2007). Other than providing intangible assets such as skills and experience, the private equity firm may also apply their extensive

networks in the financial sector in order to arrange additional financing to the buyout companies that are in need of financial resources. This topic is discussed further in Section 3.3.2.

3.3.1.3 Fostering growth

The managerial resources imported into the buyout company via coaching, advisory and support as well as through networks may improve the company's competitive position through a change in pricing, product quality, distribution channels etc. (Berg, Gottschalg 2003, Landau, Bock 2013). Buyout companies may also benefit from counselling and advice on the strategic direction and development of business plans leading to an improvement in the company's strategic distinctiveness (Anders 1992, Gottschalg, Meier 2005). Improved competitiveness and strategic distinctiveness are likely to result in revenue growth.

Companies with profitable opportunities, which they are incapable of exploiting because of a lack of resources and capabilities, are foregoing possible growth (Ireland, Hitt et al. 2003). For example, management may not possess the necessary knowledge and expertise required to execute a new investment or seize opportunities, such as the development and introduction of a new good or service. Companies can access these resources and capabilities from a private equity owner through a buyout (Meuleman, Amess et al. 2009, Dawson 2011). The private equity firm has expertise and competencies regarding strategy, operational and financial management, human resources, marketing policy as well as M&A (Meuleman, Amess et al. 2009). The private equity firm's network may also facilitate access to resources and knowledge that is important in realising growth opportunities (Ireland, Hitt et al. 2003). These skills, experience and network enable the buyout company to seize new opportunities and in this way, the private equity firm's resources and competences help create value for the buyout company (Meuleman, Amess et al. 2009).

3.3.2 Alleviation of financial constraints

Besides skills and experience, companies require capital to grow (Ireland, Hitt et al. 2003). If a company has limited or no access to external capital, it may be severely constrained in its ability to make the necessary investments to pursue growth opportunities (Rahaman 2011). Private equity firms can create value in buyout companies by alleviating financial constraints, hence allowing buyout companies to make investments that improve operating performance. Especially in buyout companies with ample growth opportunities, the private equity owner can add value by sourcing the financial capital needed to take advantage of these opportunities (Meuleman, Amess et al. 2009).

Access to capital through a buyout can be especially important in countries where financial markets are less developed, which may be the case in Continental Europe, where financial markets generally are less developed compared to the US and the UK (Boucly, Sraer et al. 2011). For example, the US and the UK have a ratio of private credit plus stock market capitalisation to GDP of 2.8 (Beck, Demirgüç-Kunt et al. 2015). In comparison, major European countries such as France (1.6) and Germany (1.2) lack behind (ibid.). Consequently, Continental European companies may be more financially constrained compared to companies in the US or the UK.

Generally, private equity firms do not provide direct financing, but can help buyout companies get access to outside financing (Boucly, Sraer et al. 2011). Private equity firms may apply their financial skills in the contact and negotiation with financial institutions, and typically have extensive networks in the financial community, through which they may be able to arrange additional financing for the buyout company (Klier 2009, Meuleman, Amess et al. 2009, Wright, Hoskisson et al. 2001a).

Furthermore, private equity firms may increase buyout companies' debt capacity. Private equity firms help make their buyout companies more credible borrowers by reducing information uncertainty of buyout companies through their reputation in the capital market, as private equity firms are perceived as activist shareholders that are better monitors than previous owners (Boucly, Sraer et al. 2011, Chung 2011). Hence, private equity firms "exert a positive externality on debt holders", which makes debt safer and more attractive to creditors (ibid.). Finally, private equity firms may introduce more competent and professional managers to the management team, which may reassure creditors (ibid.).

Parenting effects comprise the advantages a buyout company enjoys by having a private equity owner. Private equity firms can engage in two different forms of parenting: (i) Managerial resources-related parenting, where private equity firms share their skills, experience and network with buyout companies, and (ii) financial resources-related parenting, where private equity firms alleviate buyout companies' financial constraints. If parenting results in improved competitive position or strategic direction, or fosters the exploitation of growth opportunities, it can improve operating performance through growth. Hence, buyouts should be seen as more than a tool to facilitate gains from profitability improvements, but also as a vehicle to foster growth through parenting.

3.3.3 Empirical evidence on parenting effects in buyouts

Generally, evidence regarding parenting effects, and particularly the effect of human capital, in private equity buyouts is very limited (Acharya, Gottschalg et al. 2013). Nevertheless, this section outlines evidence on some aspects of parenting in buyouts.

Evidence collected by BVCA (2008) in a survey of private equity-backed companies find that these companies identify financial advice, strategic direction and help with contacts (49%, 47% and 45% of respondents, respectively) as being the key ways private equity firms help develop their companies. Furthermore, 50% said that under private equity ownership, their level of investments was higher than would otherwise have been possible.

Hence, it appears that private equity firms engage in parenting of their buyout companies. According to evidence by Gottschalg and Meier (2005) and Landau and Bock (2013), such parenting activities are value-adding. Gottschalg and Meier (2005) find that involvement in buyout companies' operations is positively linked to buyout company performance, and that "experienced" private equity firms can add value to buyout companies through involvement in financial and strategic decisions. Landau and Bock (2013) find that private equity firms can create value by providing buyout companies access to strategic resources, which improve the company's competitive position and performance. Value-creating activities by private equity firms include involvement provision of access to external sources of funds, involvement in the company's strategy and establishment of contacts to potential transaction partners for acquisitions, divestitures or strategic alliances (Landau, Bock 2013).

According to evidence by Acharya, Gottschalg et al. (2013) and Meuleman, Amess et al. (2009), private equity knowledge and experience is important for value creation, particularly with regards to growth. In their analysis of private equity firm characteristics, Acharya, Gottschalg et al. (2013) find that general partners with an operational background generate significantly higher performance in deals that focus on internal value-creation programs. In contrast, general partners with a background in finance generate higher performance in deals with significant M&A activity. They conclude that private equity partners add value to buyout companies by

applying skills they have accumulated over time. Meuleman, Amess et al. (2009) analyse the impact of private equity firm experience on operating performance. They find that private equity firm experience has a positive impact on growth. According to Meuleman, Amess et al. (2009), their results emphasise the importance of the resources and capabilities that private equity firms bring with regards to advising buyout companies, and show that private equity owners can play a major role in fostering growth in buyout companies.

Finally, Boucly, Sraer et al. (2011) and Chung (2011) find that alleviation of investment and credit constraints fosters growth in buyout companies. More specifically, both studies find that companies that are more likely to be financially constrained prior to a buyout, grow substantially following the buyout. Boucly, Sraer et al. (2011) also find that post-buyout growth is concentrated among private companies, which are more likely to be financially constrained. Buyout companies are also found to issue additional debt following the buyout to finance asset growth (ibid.). This evidence suggests that private equity firms help companies that were previously financially constrained take on additional debt to take advantage of unexploited growth opportunities (ibid.).

Overall, evidence on parenting in private equity buyouts suggests that private equity firms apply their resources such as skills, experience and networks to buyout companies in a value-creating way. It appears that parenting is particularly advantageous in cases where the private equity firm can share its skills and experience with buyout companies through advice and coaching on matters such as the companies' operations and strategy, and in cases where buyout companies are financially constrained, such that the private equity firm can apply its competences and network to source additional financing.

3.4 Empirical evidence on the buyout impact on operating performance

Substantial literature has been developed showing that buyouts have a positive impact on the operating performance of buyout companies. The evidence from the US, which is mainly focused on public buyouts in the 1980s, suggests that buyouts result in improved profitability, while results for European buyouts are more mixed.

The first wave of private equity buyouts in the 1980s in the US has been subject to numerous studies. The majority of these studies focus on public buyouts, and generally assess the post-buyout performance of buyout companies compared to an industry average or simply compare the companies' pre-buyout and post-buyout performance. These studies find a positive effect on profitability following a buyout (Bull 1989, Kaplan 1989, Muscarella, Vetsuypens 1990, Opler 1992, Smith 1990). Increased profitability is found to stem from e.g. reduced production costs (Muscarella, Vetsuypens 1990) and reductions in working capital (Smith 1990). Several studies also find a decrease in capital expenditures following a buyout (Kaplan 1989, Opler 1992).

More recent studies have been less conclusive on the buyout impact on operating performance, deriving from the fact that they examine a wider set of performance measures and use samples of multiple buyout types. Among studies that do not specify buyout types or pool different buyout types in their samples, several find a positive effect on profitability following a buyout (Bergström, Grubb et al. 2007, Cressy, Munari et al. 2007) or a positive effect on both profitability and growth (Boucly, Sraer et al. 2011). However, Vinten (2007) finds a negative effect on both profitability and growth in a sample of Danish buyouts, and Amess and Wright (2007) cannot find a significant effect on employee growth in UK buyouts.

Studies that examine the buyout impact on private buyouts generally find that these buyouts experience a positive impact on growth (Boucly, Sraer et al. 2011, Chung 2011, Scellato, Ughetto 2013, Ughetto 2012). Boucly, Sraer et al. (2011) also find that the impact on growth larger in private buyouts compared to divisional, public and secondary buyouts. Furthermore, Boucly, Sraer et al. (2011) and Chung (2011) find that capital expenditures increases following the buyout, which contrasts with the findings by Kaplan (1989) and Opler (1992).

Scellato and Ughetto (2013) and Chung (2011) find that while post-buyout growth increase, profitability deteriorates following the buyout. According to Chung (2011), profitability drops because the rate of revenue growth exceeds that of EBITDA growth after the buyout. Analysing a sample of French family and divisional buyouts, Desbrières and Schatt (2002) also find that profitability deteriorates following a buyout, which is explained by the large fraction of family buyouts in their sample, i.e. companies with high pre-buyout ownership concentration.

Overall, evidence from the US finds a positive buyout impact on profitability, while the evidence from Europe is more mixed. This difference may stem from different samples of buyout types. Most American studies examine public buyouts, while European studies sample a larger variety of buyouts, particularly private and family buyouts. This makes sense as family businesses are the largest receivers of private equity in some major European economies, including Italy, France and the UK (Dawson 2011). The economic forces driving different types of buyouts are likely to be different (Chung 2011). Unlike public companies, private companies involve low or no agency costs, as there typically is no separation of ownership and control prior to the buyout, and hence they offer less scope for profitability improvements through agency cost reductions (Maury 2006, Meuleman, Amess et al. 2009). Perhaps this is why there is limited support for the reduced agency costs hypothesis in a European context, as outlined in Section 3.2.4.

In addition, European economies differ from Anglo-Saxon economies (such as the US) in several ways, including ownership structures and financial systems (Ughetto 2012). Ownership structures in Europe are to a large extent more concentrated and dominated by family businesses (Faccio, Lang 2002, La Porta, Lopez de Silanes et al. 1999, Vinten 2007). Thus, there may be fewer gains from changed governance structures in European buyouts as companies have fewer ex ante agency problems, suggesting that the agency perspective may be less relevant in a European context (Vinten 2007). On the contrary, since European buyouts are dominated by private, family-owned companies, which are more likely to suffer from a lack of managerial and financial resources prior to a buyout (Boucly, Sraer et al. 2011, Dawson 2011), European buyouts may offer scope for improving value by fostering growth through parenting.

In summary, evidence suggests European buyouts lead to an increase in growth, while the effect on profitability is less clear. This is in contrast to private equity buyouts in the US, which have been shown to lead to profitability improvements. This difference may stem from different potential for reducing agency costs in the post-buyout company, which is more prevalent in US buyouts. On the contrary, buyout companies in Europe may suffer from resource constrains, rather than high agency costs, for which reason parenting may be a source of value creation in private equity in this geographical area.

3.4.1 Empirical evidence on buyouts in Sweden

Bergström, Grubb et al. (2007) analyse a sample of 73 Swedish private equity-sponsored exits in the period 1998 to 2006. They find improvements in EBITDA margin (significant), ROIC (significant) and revenue

growth (insignificant). Hence, they find a significant, positive change in operating profitability over the holding period relative to peers, but no significant change in growth.

Bergström, Grubb et al. (2007) cannot find support that increasing leverage has a significant positive impact on post-buyout operating performance. Neither do they find that increasing management ownership in buyout companies have any explanatory power on operating performance. Hence, the findings by Bergström, Grubb et al. (2007) suggest that reduced agency costs may not be the explanatory factor in improved operating performance in Swedish buyouts.

Since this is one of few studies on operational impact in Swedish buyouts, it is important to note that this study has at least two methodological issues. Firstly, the sample consists of private equity-sponsored exits, and hence it excludes buyout companies that went bankrupt during the holding period, which introduces a potential survivorship bias. Secondly, control groups were built selecting the 20 largest Swedish companies with the same four-digit NACE industry codes, and hence the construction of control groups fails to account for mean reversion as pre-buyout performance is ignored (Barber, Lyon 1996).

SVCA (2015) analyse a sample of private equity portfolio companies in Sweden. They find that private equity portfolio companies have an annual employee growth rate of 10% and hence outperform large cap public companies (2%), mid cap public companies (7%) and small cap public companies (5%) in terms of employee growth. They also find that private equity-backed companies grow revenue at a rate of 16% annually, compared to large cap (4%), mid cap (12%) and small cap (10%). SVCA (2015) find that growth stems from expansion of products and markets. They also find that the private equity governance model allows for flexibility in strategic decision-making that drive expansion, and that private equity ownership eases companies' access to sources of funding.

Swedish evidence suggest that buyouts result in improved profitability and to some extent growth. It also suggests that governance mechanisms meant to reduce agency costs are less important in a Swedish context. Rather, it appears that more flexibility and access to capital play an important role.

In summary, I have reviewed empirical studies from the US, Europe and Sweden on operational improvements and drivers of operational improvements (i.e. reduced agency costs and parenting effects) in private equity buyouts. Research suggests that there is a difference between how operating performance is improved in the different geographical areas. In the US, operations appear to be improved through increased profitability, whilst in Europe it is generally improved through growth.

4. HYPOTHESIS DEVELOPMENT

In the previous section, relevant theory and empirical evidence is reviewed. The empirical evidence has no definite conclusions regarding operating performance of buyout companies. While profitability seems to improve following buyouts in the US, the conclusion is less clear for European buyouts, but evidence points to an improvement in growth. The objective of this section is to formulate hypotheses to test the pervious theory and empirical findings, and furthermore to expand the general focus on agency cost reductions and profitability to also include parenting effects and growth.

According to the agency perspective, buyouts lead to a change in mechanisms of corporate governance that reduce agency costs. Increased leverage reduces the agency costs of free cash flow, management ownership

better aligns incentives between owners and managers, and finally, active and high-quality monitoring is introduced. These governance mechanisms induce managers to work hard and make value-optimising decisions that improve operating performance. As a result, the majority of previous research has found that profitability is improved following a buyout. Based on generally accepted theory and the body of evidence supporting the agency cost perspective, the first hypothesis put forth in this paper is:

> **Hypothesis 1:** Buyout companies experience an increase in profitability in the post-buyout period relative to peers

Most previous literature take on an agency perspective to examine buyouts (Meuleman, Amess et al. 2009, Wright, Hoskisson et al. 2001b). While an agency perspective does not rule out growth, the management controls involved in buyouts, such as high leverage, may limit "strategic flexibility and risk-taking associated with growth" (Meuleman, Amess et al. 2009). More recent research on European buyouts finds a positive impact on growth following a buyout. This indicates that reduced agency costs are not necessarily the only driver of improved operating performance in buyouts.

Another possible driver of value creation in buyouts is parenting effects. Private equity firms are expected to add value to buyout companies by sharing their own resources with buyout companies in a "growth-enhancing and value-creating way" (Gottschalg, Meier 2005, Klier 2009, Landau, Bock 2013). Resources may include skills, experience and network. If resources provided by private equity firms lead to improvements in the buyout company's competitive position or an expansion of the business, they are likely to foster growth. In fact, access to resources and expertise may be a key explanation for post-buyout growth of buyout companies (Scellato, Ughetto 2013). This leads to the second hypothesis:

> **Hypothesis 2:** Buyout companies experience higher levels of growth in the post-buyout period relative to peers

According to the parenting perspective, value creation depends both on the resources of the private equity firm and the buyout company's need for these resources (Gottschalg, Meier 2005). Companies with profitable opportunities, which they cannot exploit due to a lack of resources and capabilities, are foregoing possible growth (Ireland, Hitt et al. 2003). Companies can access these resources from a private equity firm through a buyout (Meuleman, Amess et al. 2009, Dawson 2011), which may enable the buyout company to seize hitherto unexploited opportunities. In this way, buyouts foster growth through parenting (Meuleman, Amess et al. 2009).

It follows that, according to the parenting perspective, companies with a lack of resources and capabilities as well as unexploited growth opportunities, are expected to benefit the most from parenting in the post-buyout period. This leads to Hypothesis 3:

> **Hypothesis 3:** Buyout companies more likely to have unexploited growth opportunities and suffer from resource constraints prior to a buyout experience higher post-buyout growth relative to their peers and other buyouts

This hypothesis is an extension of the hypothesis put forward by Boucly, Sraer et al. (2011) that private equity firms help buyout companies, which were previously credit-constrained, increase their debt capacity and consequently take advantage of unexploited growth opportunities. However, where Boucly, Sraer et al. (2011)

solely consider financial resources, I expand the perspective to include other resources of private equity firms, such as managerial resources, which comprise the skills, experience and network of private equity firms.

Companies may be foregoing growth opportunities not just because of financial constraints, but also because the company's management do not possess the necessary knowledge and expertise required to execute a new investment or to seize new opportunities (Dawson 2001). Companies may also lack the right network to find a business partner or to identify suitable acquisition targets. A private equity firm may bring critical resources that enable the company to exploit hitherto unexploited growth opportunities. Hence, it is hypothesised that private equity firms can add value to buyout companies with pre-buyout resource constraints by providing critical resources, which enable buyout companies to take advantage of hitherto unexploited growth opportunities and subsequently achieve growth, i.e. that private equity firms improve operating performance through parenting.

Since it is difficult to test Hypothesis 3 directly, I create two sub-hypotheses, Hypothesis 3a and Hypothesis 3b, as described below, which test Hypothesis 3 using two different approaches.

According to Boucly, Sraer et al. (2011), private companies are more likely to suffer from credit constrains compared to subsidiaries of larger companies, public companies or private equity-owned companies, as they have access to internal capital markets, the public capital market and private equity owner's financial skills and network, respectively. Consequently, Boucly, Sraer et al. (2011) expect private buyout companies to grow after the buyout, while divisional, public and secondary buyouts not are expected to grow.

However, private companies are not only prone to suffer from credit constraints, as put forward by Boucly, Sraer et al. (2011). Especially private, family-managed companies are disposed to suffer from a lack of managerial skills, experience and network needed to obtain or sustain a competitive advantage, or to exploit growth opportunities (Boucly, Sraer et al. 2011, Dawson 2011). Family-managed companies tend to have challenges attracting professional managers (Dawson 2001) and have poor management practices (Bloom, Van Reenen 2007). Hence, many private, family-owned companies do not have the necessary resources and capabilities to grow (Dawson 2001). Based on these perspectives, buyout types do not only proxy for credit constraints, but rather for a wider set of resource constraints, including managerial resources and capabilities.

Since private companies are more likely to suffer from pre-buyout resource constraints, they are also expected to benefit relatively more from added resources by a private equity owner. Therefore, to test the hypothesis that private equity firms provide buyout companies with critical resources that allows them to seize growth opportunities, I put forth Hypothesis 3a:

> **Hypothesis 3a:** Private buyout companies experience higher post-buyout growth relative to their peers and other types of buyouts

Another test of the hypothesis that private equity firms alleviate buyout companies' resource constraints through parenting and hence fosters growth is based on whether a company has growth opportunities. A buyout company with abundant growth opportunities provides the private equity firm with a better opportunity to add value by sourcing the resources necessary to take advantage of these growth opportunities (Meuleman, Amess et al. 2009). Hence, a company with ample growth opportunities is more likely to benefit from parenting in the post-buyout period, thus introducing Hypothesis 3b:

Hypothesis 3b: Buyout companies having indicated that they have growth opportunities experience higher post-buyout growth relative to their peers and other buyouts

In Hypothesis 3, 3a and 3b, the resources provided by private equity firms to buyout companies are unspecified. The remaining hypotheses segment parenting effects into the two types of parenting: (i) Financial resources-related parenting and (ii) managerial resources-related parenting, which entail the skills, experience and network of the private equity firm.

Without adequate access to financing, the "staying power" of a company and its potential for growth is jeopardised (Rahaman 2011). Financial resources can be generated internally or sourced externally on capital markets. A company with limited access to external capital has to rely on internally generated cash flow for corporate investments, and may hence be seriously constrained in its ability to pursue growth opportunities (Ireland, Hitt et al. 2003, Rahaman 2011). Thus, there may be value-creating opportunities for private equity firms to target financially constrained companies and alleviate financial constraints following a buyout. On this basis, private equity firms may foster growth by alleviating financial constraints, allowing buyout companies to take advantage of hitherto unexploited growth opportunities. Hence, companies that are financially constrained prior to a buyout are expected to benefit relatively more following the buyout, leading to the fourth hypothesis:

Hypothesis 4: Buyout companies more likely to have suffered from financial constraints prior to a buyout experience higher post-buyout growth relative to their peers and other buyouts

This hypothesis derives from the hypothesis put forward by Boucly, Sraer et al. (2011) that buyouts alleviate credit constraints, and subsequently foster growth in buyout companies.

Since it is challenging to measure financial constraints, I create three sub-hypotheses, which test Hypothesis 4 using three different measures for financial constraints.

Companies have uneven access to external capital (Rahaman 2011). Particularly small companies encounter difficulties in obtaining financing at affordable rates and "fair terms" (Donati 2016, Rahaman 2011). Consequently, small companies are more likely to have to rely on internal cash flow generation as a way to finance growth, which may not be sufficient, especially in companies with high-growth potential (Donati 2016, Wright, Hoskisson et al. 2001b). Thus, small companies are more likely to suffer from financial constraints. In fact, company size is a widely accepted indicator of financial constraints (Rahaman 2011). Therefore, in order to test the hypothesis that companies more likely to suffer from pre-buyout financial constraints experience higher post-buyout growth, I test Hypothesis 4a:

Hypothesis 4a: Small buyout companies experience higher post-buyout growth relative to their peers and other buyouts

Another test of the hypothesis that buyouts foster growth through alleviation of financial constraints is applied using industry-level financial dependence. Financial dependence is a measure of an industry's need for external finance (Rajan, Zingales 1998). Companies in 'financially dependent' industries tend to suffer more from financial constraints (Boucly, Sraer et al. 2011). Consequently, buyout companies that operate in financially dependent industries are expected to benefit from access to capital provided through a private equity buyout. Therefore:

Hypothesis 4b: Buyout companies in financially dependent industries experience higher post-buyout growth relative to their peers

A final test of the hypothesis that private equity firms foster growth through the alleviation of financial constraints is completed with the use of buyout rationales. Companies with a motive regarding access to financial resources are assumed more likely to suffer from financial constraints, leading to Hypothesis 4c:

Hypothesis 4c: Buyout companies having indicated that they have a "financial resources motive" experience higher post-buyout growth relative to their peers and other buyouts

The knowledge and skills of a company's employees and managers are imperative factors for the company's abilities to achieve growth (Ireland, Hitt et al. 2003). If a company lacks critical managerial resources and capabilities required to execute a new investment or to seize new opportunities, the company may be limited in its abilities to grow (Dawson 2011, Macpherson, Holt 2007). As previously mentioned, private equity firms may provide access to critical managerial resources, either directly or through its network, which enables the company to improve its competitive position or exploit hitherto unexploited growth opportunities (Meuleman, Amess et al. 2009, Dawson 2011). Hence, buyouts are expected to foster growth by providing the buyout company with managerial resources through parenting. In this way, the private equity firm's skills, experience and network foster growth and help create value for the buyout company (Bergström, Grubb et al. 2007, Meuleman, Amess et al. 2009, Gottschalg, Meier 2005).

Companies that suffer from a lack of managerial resources prior to a buyout are expected to benefit relatively more from parenting following the buyout, thus introducing the fifth hypothesis:

Hypothesis 5: Buyout companies more likely to have suffered from a lack of managerial resources prior to a buyout experience higher post-buyout growth relative to their peers and other buyouts

As it generally is not possible to obtain information regarding managerial resources of a company, I use buyout rationales to test Hypothesis 5. Companies with a motive regarding access to managerial resources are assumed to be more likely to lack critical managerial resources. This leads to Hypothesis 5a:

Hypothesis 5a: Buyout companies having indicated that they have a "managerial resources motive" experience higher post-buyout growth relative to their peers and other buyouts

The following Section 5 outlines the methodical approach applied in this paper to test the hypotheses put forward in this section.

5. METHODOLOGY

This section outlines the methodology applied in this paper, which primarily involves a quantitative analysis. The section is structured as follows: (i) Description of the data set and the sample of target firms (i.e. 61 companies subject to a private equity buyout) (ii) description of the measures of companies' operating performance (iii) description of the selection of the control group of 254 companies and (iv) an outline of the empirical specification.

*5.*1 Sample selection

To analyse the effect of private equity buyouts on companies' operating performance, a sample consisting of 61 buyouts of Swedish companies completed between 2008 and 2012 is constructed. The chosen sample

consists of buyouts that fulfil a range of criteria (for more, see below) and a number of cross-checks with the purpose of ensuring the validity of the sample. The sample period was limited to a range of five years due to the availability of accounting data, which is provided for the 10 most recent years.

First, buyout deals are retrieved from the Mergermarket database, which is widely used and one of the most extensive deal databases. Buyout deals with the following characteristics are retrieved from the database: (i) Deal completed between January 2008 and December 2012, (ii) target incorporated in Sweden and (iii) deal classified as "Buyout". This selection results in 248 buyout deals. The coverage is expanded by including buyout deals that satisfy the same criteria from the Zephyr database. The two data sources overlap to a large extent. Nevertheless, by combining Zephyr and Mergermarket, I am able to increase the sample by 20 deals to a final sample of 268 deals.

The buyout deals are then selected based on the following criteria: (i) Buyout deal sponsored by a private equity firm and (ii) control investment. The initial sample of 268 buyout deals includes all types of buyouts including those that are independent or sponsored by e.g. venture capital firms. Since the aim is to examine the effect of private equity ownership, only buyout deals with a private equity sponsor are included in the sample. This reduces the sample to 203 buyout deals. Secondly, only control investments are included. These are the buyouts where the private equity firm acquires a majority stake, and hence where the private equity firms acquires significant influence over the target company (Lerner, Speen et al. 2015). This reduces the sample to 176 relevant buyout deals.

Financial data is then extracted from the Orbis database. Deal data from Mergermarket and Zephyr and financial data from Orbis do not have unique identifiers. Therefore, buyout companies are matched by company names. Company names are often not identical in the various databases and therefore buyouts are cross-referenced using buyout company websites, addresses and private equity firm websites. Buyouts are also cross-checked using press releases, which are often released by the private equity firm and buyout company in connection with the buyout. Press releases often contain financial information about the buyout company, which enables me to cross-check financials in the Orbis database to confirm that the right entity has been identified.

Importantly, data for each buyout is collected for the parent company rather than for the holding company. This is important as the holding company is established at the time of the buyout, for which reason there is no pre-buyout data for the holding company (Vinten 2007). Also, the parent company is the entity where "most real activity" exists, and which continues to exist after the private equity firm exits the investment (Vinten 2007, Boucly, Sraer et al. 2011).

At this point, buyouts are excluded for one of three reasons: (i) It is not possible to find the right entity in the Orbis database, (ii) the buyout company changed legal structure during the holding company (e.g. by being acquired), making it impossible to trace performance and (iii) the buyout company did not report financials for three years prior to the buyout and three years after the buyout (except companies that went bankrupt in the post-buyout period). Based on this, I end up with a sample of 105 buyouts.

A concern is that some buyout companies may have subsidiaries for which financials are not consolidated at the parent level. Financial information for these companies may not be a good indicator of the company's real financial situation. This introduces two potential concerns: Firstly, if the buyout is followed by a simplification of the corporate structure, it will lead to a consolidation of all assets of the buyout company, resulting in an

overestimation of the post-buyout growth of the buyout company (Boucly, Sraer et al. 2011). Secondly, if a buyout company has unconsolidated accounts and one or more subsidiaries, any growth that takes place at the subsidiary level may be ignored in the parent company accounts. This may lead to an underestimation of the post-buyout growth of the buyout company. For these reasons, for companies that report only unconsolidated financials and have one or more subsidiaries, I have applied a double-checking procedure based on the company's financials from buyout press releases with the financials in the Orbis database to evaluate if there are too large discrepancies to rely on the financial data from Orbis for analyses. 35 buyouts are excluded in this process. The majority of these deals are excluded because the financial accounts in the Orbis database severely understate the size of the company (revenue and employees), as compared with press releases. Importantly, financial data for these companies ignore any potential growth generated in subsidiaries. Including these buyout deals would hence bias the growth estimate downwards.

This final cross-checking process results in a sample of 70 buyouts. Table 1 provides an overview of the sample selection procedure. As is described in Section 5.3, the matching process for the selection of control firms reduces the final sample to 61 buyouts. This is a suitable sample, as similar sample sizes have been used in previous literature (e.g. Bergström, Grubb et al. 2007, Vinten 2007, Kaplan 1989).

Table 1
Sample selection procedure

	Number of deals in sample
Total number of deals from Mergermarket and Zephyr	*268*
Excluding buyout deals not sponsored by a private equity firm	203
Excluding minority investments	176
Excluding companies with no available financial data	105
Excluding compaanies without reliable financial data (fails double-checking procedure related to unconsolidated data)	70
Excluding companies with no control firm (= *final sample*)	61

For each buyout company, data is collected for a time period extending from three years before to three years after the buyout, following previous studies. The event window has been limited by the availability of accounting data, which is available 10 years back. Private equity holding periods are typically four to six years (SVCA 2015) and hence the ±3-year event window could be problematic if it is too short to capture the effect of the changes implemented by the private equity firm. According to the J-curve effect, buyout companies have a tendency to deliver negative returns and cash flows in the first years following the buyout, and increasing returns and positive cash flows later in the holding period as investments are realising (Diller, Herger et al. 2009). If the ±3-year event window is not the proper time to evaluate the operating performance of buyout companies, the result will be biased by measurement errors (Vinten 2007). However, (Vinten 2007) finds little support for the outperformance in the later years of ownership and concludes that such measurement errors do not seem to be important. Additionally, SVCA (2015) find that most operational improvements materialise in the first years of private equity ownership. Finally, tracing operating performance three years after the buyout is widely used in earlier studies, including Scellato and Ughetto (2013), Kaplan (1989) and Chung (2011).

The data set is unbalanced in order to avoid a potential survivorship bias in the data and to increase the sample size (Vinten 2007). The buyout year is excluded to avoid noise as the buyout year includes both pre and post-buyout operations and hence it would be difficult to separate pre and post-buyout performance (Kaplan 1989).

5.2 Measuring operating performance

Two categories of operating variables are used to measure operating performance: (i) Profitability, and (ii) size and growth. Profitability is measured as return on assets (ROA) and return on sales (ROS). ROA is a good measure of the productivity of a company's operating assets. It is defined as EBITDA scaled by total assets. Following Boucly, Sraer et al. (2011), total assets are measured as fixed assets plus working capital. This measure excludes cash and marketable securities, which is useful because a large fraction of the time-series variation in cash balances is produced by the financing activities of a company. Therefore, fixed assets plus working capital is a more accurate measure of a company's operating assets (Barber, Lyon 1996).

One concern using ROA is how it is affected by asset write-ups and goodwill adjustments. Typically, asset write-ups are carried out when a company is acquired, which entails that assets are restated to fair market value. This increase in assets leads to a reduction in ROA and therefore the impact from private equity ownership might be underestimated (Kaplan 1989). At the same time, asset write-ups are likely followed by an acceleration in depreciation. This leads to an increase in ROA without any real change, and as a result the impact from private equity ownership might be overestimated (Boucly, Sraer et al. 2011). Using ROA might also introduce a bias because of goodwill adjustments. Buyout accounting frequently leads to an increase in the book value of assets, which represents the difference between the book value of the company and the realised acquisition price. Hence, ROA is reduced without any changes in operating performance (Vinten 2007, Kaplan 1989).

According to Vinten (2007), most of the potential asset boosting deriving from goodwill adjustments takes place at the holding company level, and hence ROA of the buyout company is not likely to be affected. Nevertheless, return on sales (ROS) is added as a profitability measure. ROS is immune to balance sheet changes such as asset write-ups and goodwill adjustments and is also unaffected by changes in the depreciation schedule (Boucly, Sraer et al. 2011). ROS is defined as EBITDA scaled by operating revenue following previous studies (e.g. Boucly, Sraer et al. 2011), and is a good measure of a company's cost efficiency (Barber, Lyon 1996). Another advantage of ROS is that both the numerator and denominator are from a company's income statement. This is not the case with ROA, where total assets (from the balance sheet) is recorded at historical cost, while EBITDA (from the income statement) is recorded in current prices. Hence the numerator and denominator of ROS are more appropriately matched (ibid.).

Both profitability measures, ROA and ROS, are computed using EBITDA in the numerator. EBITDA has the advantage of being unaffected by financing activities. This is important because buyouts are accompanied by major changes in the capital structure, which affect interest expenses and tax payments (Kaplan 1989, Barber, Lyon 1996). Since the aim is to measure changes in the operating performance, it is advantageous to exclude the effects of financing and tax payments by using EBITDA. However, using accrual-based measures of income such as EBITDA may lead to a bias since these measures might be subject to earnings manipulation. Therefore, ROA and ROS, in addition to being scaled by EBITDA, are also scaled by operating cash flow. Using operating cash flow as a measure of operating income mitigates the potential bias stemming from managers' abilities to over- or understate accrual-based measures of income (Barber, Lyon 1996).

Furthermore, private equity firms consider cash flow to be the primary measure of performance of buyout companies (Bull 1989), and therefore it is relevant to include. Operating cash flow is measured as EBITDA less capital expenditures, following Kaplan (1989) and Guo, Hotchkiss et al. (2011). Operating cash flow measures the net cash produced from a company's operations before depreciation, interest and taxes. Therefore, managerial operating decisions, rather than taxes or financing decisions, influence operating cash flow (Kaplan 1989), which deems it an appropriate measure in this context.

Size and growth of operations is measured by operating revenue, EBITDA, total assets and the number of employees, following e.g. Boucly, Sraer et al. (2011) and Kaplan (1989). Following other studies, I use these values in logarithms. Note that, as in the measurement of profitability, total assets may be affected by asset boosting and goodwill adjustments. This means that there might be a potential upward bias in the estimated impact of buyouts on growth when using this measure (Chung 2011). Capital expenditures (CAPEX) is also used as a proxy for growth, following Boucly, Sraer et al. (2012) and Kaplan (1989). Capital expenditures measures new investments by the buyout company, such as property, industrial buildings or equipment. Since capital expenditures are not available for private companies in the Orbis database, it is estimated as follows: CAPEX = ΔFixed Assets + Depreciation and Amortization, where ΔFixed Assets = Fixed Assets_{t+1} – Fixed Assets_t. Importantly, capital expenditures are estimated using fixed assets rather than total assets, which includes inventory and cash balances, since capital expenditures are used to buy or improve *physical* assets.

Using financial data from Orbis the following variables were retrieved: Fixed assets, tangible fixed assets, total debt (measured as long term debt plus loans), working capital (measured as trade receivables plus inventories minus payables), number of employees, operating revenue, depreciation and amortization, earnings before interest, taxes, depreciation and amortization (EBITDA) as well as industry classification (two and four digit NACE). All variables are winsorized at the 1st and 99th percentile following Barber and Lyon (1996).

5.3 Building the control group

In order to estimate the impact of private equity buyouts on the operating performance of buyout companies it is necessary to specify the performance that would be expected in the absence of a buyout (Barber, Lyon 1996). To do this, the development of buyout companies is compared with a carefully constructed control group of comparable companies, which have not been subject to a buyout.

The process of constructing the control group closely follows that of Boucly, Sraer et al (2011). Specifically, the control firms are found based on three criteria: (i) The company belongs to the same industry as the buyout company, using two-digit NACE classifications, (ii) the number of employees one year prior to the buyout is in the ±50% bracket of the number of employees of the buyout company and (iii) ROA one year before the buyout is in the ±50% bracket of the ROA of the buyout company. The industry criterion is included based on the assumption that some of the cross-section variation in operating performance can be explained by an industry benchmark (Barber, Lyon 1996). Industry matching is based on two-digit industry codes, which might appear to be a broad comparison. However, matching on four-digit industry codes yields no improvement in the explanatory power of regressions (Barber, Lyon 1996). ROA and employment are used for matching to take profitability and size into consideration, as accounting-based measures of operating performance tend to mean-revert over time (Barber, Lyon 1996, Boucly, Sraer et al. 2011). By matching buyout companies to companies with similar profitability and size before the buyout, it is possible to control for the mean-reversion tendency of these performance measures (ibid.). The ±50% brackets are selected based on a trade-off between

the matching accuracy and providing at least one control firm for as many buyout companies as possible, to avoid reducing the sample size. At the 50% level, nine companies have no control firms, and are therefore dropped from the sample.

If there are more than five possible control firms after the initial selection process, the five closest neighbours to the buyout company are kept. Distance is defined as the sum of the squares of the difference between the buyout company's and the control firm's ROA and the buyout company's and the control firm's number of employees. If a control firm does not have enough data to make a comparison with the buyout company, the control firm is excluded and the next-best match is chosen. Using up to five control firms inhibits a bias-variance trade-off. Using a single (best) match results in the least biased and most credible estimates, but the estimates are also less precise. Therefore, the aim is to identify as many matches as possible without sacrificing too much accuracy (Roberts, Whited 2012). For this reason, up to five matches are sampled for each buyout company, which is the same approach as Boucly Sraer et al. (2011). Control firms are matched with replacement, meaning that each control firm may be used more than once, which is recommended by Roberts and Whited (2012). Matching with replacement allows for better matches and less bias, but with less precision (Roberts, Whited 2012). The control groups are held constant over time as recommended by Barber and Lyon (1996).

Using this matching process, 254 control firms are added to the sample, equivalent to 4.2 control firms per buyout.

Buyouts are not exogenous events. Private equity firms typically spend a lot of time screening potential targets and may select companies with certain characteristics (e.g. abundant cash flows, high growth or turnarounds) and based on expectations regarding the return on investment they can generate. Because of this, the results of the empirical analysis might suffer from an endogeneity bias. By identifying control firms that are as comparable as possible to the sample of buyout companies, I partly control for the pre-buyout characteristics, thereby reducing the endogeneity concerns (Boucly, Sraer et al. 2011, Vinten 2007). Still, the unobserved differences between buyout companies and control firms remain an issue. This means that results should be interpreted as descriptive more than causal (Boucly, Sraer et al. 2011).

5.4 Empirical specification

Hypotheses are tested using the Difference-in-Difference (DiD) estimation, which is one of the most applied methods in previous literature (including Boucly, Sraer et al. 2911, Desbrières, Schatt 2002, Kaplan 1989, Guo, Hotchkiss et al. 2011). The DiD estimator is a powerful estimator that includes both cross-sectional and time series comparisons. The cross-sectional comparison removes the problem of omitted trends by comparing two groups over the same time period. The time series comparison avoids the problem of unobserved differences between two different groups by looking at the same companies before and after the buyout (Roberts, Whited 2012). Using DiD estimation, outcomes are observed for two groups (buyout group and control group) for two time periods (pre and post-buyout). The buyout group is exposed to a treatment (private equity buyout) in the second period. The DiD estimate is:

$$\hat{\delta}_1 = (\bar{y}_{buyout,post} - \bar{y}_{buyout,pre}) - (\bar{y}_{control,post} - \bar{y}_{control,pre}) \qquad \text{(Eq. 1)}$$

Where $\bar{y}$ is the performance variable (e.g. ROA). The DiD estimate, $\hat{\delta}_1$, can be interpreted as the average buyout effect (Wooldridge 2013).

The regression model for the DiD estimation is defined as:

$$Y_{it} = \alpha_i + \delta_t + POST_{it} + POST_{it}LBO_i + \varepsilon_{it} \quad \text{(Eq. 2)}$$

Where i is a company index and t is a time index. Y_{it} is the performance variable. $POST_{it}$ and LBO_i are dummy variables:

$POST_{it} \in \{0, 1\}$ (Time indicator: 1 if post-buyout, 0 if pre-buyout)

$LBO_i \in \{0, 1\}$ (Group indicator: 1 if buyout company, 0 if control firm)

The $POST_{it}$ dummy controls for trends common to both buyout and control groups, while the LBO_i dummy captures any time-invariant differences between the buyout group and control group (Roberts, Whited 2012, Wooldridge 2007). This regression includes firm and time fixed effects.

DiD estimation is subject to a possible serial correlation problem. As a result, the DiD standard errors might understate the standard errors of the DiD estimate, which could lead to an overestimation of t-statistics and significance levels (Bertrand, Duflo et al. 2004). Therefore, pre and post-buyout data are collapsed into a pre-buyout average and post-buyout average following the recommendations by Bertrand, Duflo et al. (2004) and Roberts and Whited (2012). The disadvantage is a smaller sample size. However, aggregating data into pre and post-buyout periods performs well even for a small sample size (Bertrand, Duflo et al. 2004). Therefore, the small sample size is not considered to be an issue.

A key assumption of DiD estimation is that buyout companies and control firms follow the same trend prior to the buyout. This means that in the absence of a buyout, the changes in the performance variable would have been the same in the buyout and control groups. This is the "parallel trends" assumption (Roberts, Whited 2012, Bertrand, Duflo et al. 2004). If there are differential trends among the buyout and control groups, the coefficient estimates will be inconsistent.

Another key assumption is random interventions (Bertrand, Duflo et al. 2004). However, as discussed in Section 5.3, buyouts are not random seeing as private equity firms thoroughly screen potential targets and select companies with certain characteristics. This non-random assignment means that the sample will be subject to endogeneity which might lead to a biased estimator and erroneous conclusions. This is why it is important to match buyout group and control group as in Section 5.3, as it should mitigate this concern (Boucly, Sraer et al. 2011).

In summary, the impact of private equity buyouts on buyout companies' operating performance will be estimated using the DiD approach with a sample of 61 buyouts completed in Sweden between 2008 and 2012 and a control group of 254 companies. Operating performance is measured using several proxies for profitability and growth. The next section proceeds with the empirical results obtained using this methodology.

6. EMPIRICAL RESULTS

6.1 Descriptive sample characteristics and pre-buyout characteristics

The types of buyouts in the sample and their distribution are presented in Table 2. The majority of buyouts are private. This is not surprising, as private buyouts account for the majority of buyouts globally (Strömberg 2008). The distribution of buyout types is similar to that of previous studies. For example, Strömberg (2008) finds that 37% of all buyout deals globally from 2001 to 2007 were private, 36% were divisional, 7% were

public and 17% were secondary. For French buyouts, Boucly, Sraer et al. (2011) finds a higher fraction of private buyouts and lower fraction of divisional buyouts compared to Strömberg (2008). The distribution presented in Table 2 resemble that of Boucly, Sraer et al. (2011) and Strömberg (2008), but this sample has a somewhat higher fraction of secondary buyouts. However, this is similar to findings by SVCA (2014) that 26% of private equity exits in Sweden in the period 2007-2013 took place through a sale to another private equity fund (i.e. secondary buyout).

As shown in Table 3, the majority of the buyouts in the sample take place in manufacturing, wholesaling, and information and communication. This is somewhat similar to findings of Invest Europe Research (2015) and SVCA (2014).

Table 2

Types of buyouts in the sample (n = 61).

	Private	**Divisional**	**Public**	**Secondary**	**Total**
Number of deals	26	16	3	16	61
Percentage of sample	*43%*	*26%*	*5%*	*26%*	*100%*

Table 3

Industry distribution for the sample (n = 61).

	Number of deals	***Percentage of sample***
Manufacturing	18	*30%*
Wholesaling	10	*16%*
Information and communication	9	*15%*
Retailing	4	*7%*
Consultancy services	4	*7%*
Education	3	*5%*
Healthcare	3	*5%*
Transport and storage	2	*3%*
Accomodation and food service	2	*3%*
Utilities	2	*3%*
Construction	1	*2%*
Financial and insurance activities	1	*2%*
Other	2	*3%*

Table 4 presents a comparison of buyout companies and control groups prior to the buyout. The comparison shows that buyout companies tend to be somewhat larger, invest more, grow faster and be slightly more profitable. Buyout companies also appear to be slightly less indebted compared to control firms. The discrepancy in growth rates between buyout companies and control firms introduce a concern with regard to the parallel trends assumption of the DiD estimation as outlined in Section 5.4. However, the discrepancy is similar to that of Boucly, Sraer et al. (2011).

Table 4

Sample of buyout companies and their control firms for the sample period 2008-2012. The table shows the distribution of pre-buyout operating performance for buyout companies ('Targets', n = 61) and for the median of each group of control firms ('Control firms', n = 61). For each buyout company and for each control group, variables are averaged over the three years preceding the buyout. Growth rates are calculated as annual growth rates. Leverage is debt divided by total assets.

	Median	Mean	S.D.	Q1	Q3
Targets					
Revenue (SEKm)	189.62	423.55	852.53	100.77	350.99
Employment	70	208	556	39	167
Total assets (SEKm)	53.69	228.35	618.14	23.75	111.08
Capital expenditures (SEKm)	6.09	30.43	93.79	1.57	14.80
Revenue growth	0.11	0.38	1.66	0.04	0.21
Employment growth	0.08	0.14	0.19	0.03	0.22
Asset growth	0.04	0.20	0.46	-0.06	0.25
ROA	0.35	0.52	0.54	0.22	0.61
Leverage (SEKm)	0.04	0.15	0.20	0.00	0.26
Control firms					
Revenue (SEKm)	126.04	297.93	641.80	60.66	259.04
Employment	71	187	541	34	130
Total assets (SEKm)	21.91	112.99	299.07	7.77	81.34
Capital expenditures (SEKm)	1.92	14.34	46.03	0.61	8.37
Revenue growth	0.07	0.09	0.15	0.00	0.14
Employment growth	0.03	0.05	0.07	0.00	0.09
Asset growth	0.03	0.07	0.25	-0.09	0.17
ROA	0.32	0.41	0.29	0.20	0.55
Leverage (SEKm)	0.05	0.12	0.16	0.00	0.20

6.2 Buyout impact on operating performance

The following two sections examine the buyout impact on profitability and growth, respectively. The aim is to evaluate, and to some extent compare, these two sources of value creation in buyouts.

6.2.1 Buyout impact on profitability

The first hypothesis tested is that buyout companies experience an increase in profitability in the post-buyout period relative to their peers. This hypothesis is based on the reduced agency costs hypothesis, which predicts that buyouts lead to a reduction in agency costs and subsequently are expected to lead to improvements in operating performance. Profitability is at the core of the majority of evidence on post-buyout operating performance (e.g. Kaplan 1989, Smith 1990), as the agency perspective mainly focuses on profitability and efficiency.

Table 5 presents the results of estimating equation 2. The dependent variables are the profitability measures outlined in Section 5.2: ROS, based on EBITDA and cash flow, respectively, and ROA, based on EBITDA and cash flow, respectively.

Table 5

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ROS (EBITDA/Revenue)	ROS (Cash flow/Revenue)	ROA (EBITDA/Assets)	ROA (Cash flow/Assets)
post x LBO	-.014	-.021	-.119	-.110
	(.012)	(.014)	(.095)	(.109)
post	-.002	-.002	-.036	-.027
	(.008)	(.011)	(.056)	(.064)
Observations	849	832	837	820
Number of deals	61	61	61	61
Adj. R^2	.034	.046	.030	.028

For the sample of buyouts, there is a decrease in profitability based on all profitability measures. ROS exhibits a decrease in the post-buyout period of 1.4 percentage points (pp) and 2.1pp, based on EBITDA and cash flow, respectively. However, the development in the two ROS measures are not statistically significant. Hence, I cannot conclude that ROS develop differently for buyout companies and peers in the post-buyout period. These results contrast with previous research (e.g. Bull 1989, Opler 1992), which find that buyouts are followed by improvements in ROS.

ROA decrease by 11.9pp and 11.0pp, based on EBITDA and cash flow, respectively. As in the case of ROS, the estimated decreases in ROA are not statistically significant, and hence ROA cannot be said to develop differently for buyout companies and their peers. This result contrasts with the majority of research (e.g. Bull 1989, Smith 1990), which find that ROA improves following a buyout.

ROA decreases considerably more than ROS. This may indicate that the majority of the negative effect on ROA derives from an increase in assets in the post-buyout period. Assets may increase because buyout companies carry out investments in fixed assets or due to a working capital increase. However, it may also be the result of asset boosting following the transaction. For more on asset boosting, see Section 6.4.1.

The overall results suggest that there is no impact on buyout companies' average profitability in the post-buyout period. Hence, the findings do not provide support for Hypothesis 1. This result is not in line with much of previous research (e.g. Boucly, Sraer et al. 2011, Kaplan 1989), which find that buyouts are followed by improvements in profitability. Nevertheless, this result is consistent with findings by Chung (2011), Desbrières and Schatt (2002) and Scellato and Ughetto (2013).

The studies by Chung (2011), Desbrières and Schatt (2002) and Scellato and Ughetto (2013) primarily use samples of private buyouts. This introduces a concern that private buyouts in the sample "drive" the negative (and insignificant) results presented in Table 5. For this reason, I also test Hypothesis 1 using two subsamples: (i) Private buyouts and (ii) divisional, public and secondary buyouts ("other buyouts"). The results are presented in Table A1 in Appendix A. Table A1 shows that for private buyouts ROS decrease marginally while ROA increase by 6.3pp and 5.4pp, based on EBITDA and cash flow, respectively. This is surprising, since there are less ex ante agency costs in private companies (Maury 2006, Meuleman, Amess et al. 2009). However, these results are not statistically significant. Overall, private buyouts do not seem to "drive" the negative results presented in Table 5. Thus, the conclusion remains that there is no support for Hypothesis 1.

The evidence presented in this section do not support the hypothesis that buyout companies experience an increase in profitability in the post-buyout period relative to peers. This result is consistent when splitting the sample into buyout types. Hence, it seems profitability improvements is not a source of value creation in buyouts in Sweden, which may be because European buyouts offer less scope for reduced agency costs and subsequently less scope for improving profitability (see Section 3.4. for a discussion on this topic).

6.2.2 Buyout impact on growth

Profitability has been the main focus in studies on the post-buyout operating performance of buyout companies, as buyouts primarily have been seen as a vehicle to improve inefficient public companies in mature industries with limited growth opportunities (i.e. companies with scope for agency cost reductions). However, more recent studies acknowledge buyouts as a vehicle to foster growth, and have found evidence that buyouts have a positive impact on post-buyout growth (e.g. Boucly, Sraer et al. 2011, Scellato, Ughetto 2013).

On this basis, it is hypothesised that buyout companies experience higher levels of growth in the post-buyout period relative to peers (Hypothesis 2). This hypothesis relies primarily on parenting effects, which predict that buyouts have a positive impact on growth because private equity firms provide a variety of resources to their buyout companies in a way that fosters growth and create value (Gottschalg, Meier 2005, Klier 2009, Landau, Bock 2013).

Table 6 presents the results of estimating equation 2. The dependent variables are the size and growth measures outlined in Section 5.2: The natural logarithm (ln) of revenue, ln of EBITDA, ln of fixed assets plus working capital ("assets"), ln of employees and ln of capital expenditures.

Table 6

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	ln (EBITDA)	ln (Assets)	ln (Employees)	ln (CAPEX)
post x LBO	.160***	.151	.211**	.231***	.344*
	(.059)	(.110)	(.097)	(.058)	(.210)
post	-.075*	-.192**	-.090	-.067*	-.193
	(.041)	(.083)	(.063)	(.034)	(.180)
Observations	849	783	834	849	751
Number of deals	61	61	61	61	60
Adj. R^2	.273	.065	.110	.233	.039

The results presented in Table 6 show that buyouts have a positive impact on buyout companies' average growth in the post-buyout period. Revenue, assets, employees and capital expenditures increase by an average 16.0%, 21.1%, 23.1% and 34.4%, respectively, relative to the control group in the post-buyout period. These coefficients are statistically significant and of economic importance.

Interestingly, capital expenditures exhibit the largest increase (34.4%) of all growth measures, indicating that the increase in revenue is achieved through investments. Additionally, increases in assets (21.1%) and employees (23.1%) are larger than the revenue increase (16.0%), which indicates that in addition to investments in fixed assets (i.e. capital expenditures), buyout companies carry out considerable investments in assets and staff. Buyout companies may need to carry out corporate investments, such as an expansion of production facilities or hiring more sales staff, to realise growth. Such investments take time to materialise,

and this may be why the increase in revenue lags that of assets and employees. Overall, it appears that buyouts are followed by an increase in corporate investments, which subsequently results in revenue growth.

EBITDA increase by 15.1%, but this result is not statistically significant. Hence, buyout companies do not outperform peers in EBITDA growth in the post-buyout period. Meanwhile, buyout companies experience an increase in revenue and assets in the post-buyout period, which may explain the decrease in profitability observed in Table 5. According to Chung (2011), post-buyout profitability decrease because revenue and assets grow at a faster rate compared to EBITDA.

The observed growth in Table 6 is inconsistent with some former studies, for example Kaplan (1989), who finds a decrease in capital expenditures. The findings by Kaplan (1989) are in line with the reduced agency cost hypothesis, which predicts that post-buyout companies reduce inefficient capital expenditures in order to make debt payments. Nevertheless, the results presented in Table 6 are consistent with more recent evidence from Europe (e.g. Boucly, Sraer et al. 2011). One possible reason for this discrepancy is that many former studies (e.g. Kaplan 1989) use samples of public buyouts, where gains primarily stem from reduced agency costs. On the contrary, this study, and other more recent studies such as Boucly, Sraer et al. (2011), use samples with multiple buyout types, where agency costs may not be as prevalent.

The evidence presented in this section lends support for the hypothesis that buyout companies experience higher levels of growth in the post-buyout period relative to comparable peers. Furthermore, results indicate that following a buyout, buyout companies engage in corporate investments to foster revenue growth.

Since results in the previous section indicate that buyouts are not accompanied by an improvement in profitability, it seems that growth, rather than profitability improvements, is the key source of value creation in buyouts in Sweden. As discussed earlier, the agency perspective offers limited consideration of growth (Meuleman, Amess et al. 2009). Therefore, to improve the understanding of value creation in Swedish buyouts, it is necessary to expand beyond the agency perspective. The next section examines parenting effects.

6.3 Parenting effects and buyout impacts

This section examines whether parenting in the post-buyout period has an effect on the impact of a buyout on companies' operating performance. The aim is to evaluate the value-creating effects of parenting in buyouts, and determine whether parenting effects are a *driver* of operating improvements and hence value creation in Swedish buyouts. Since growth is established as the main source of value creation in buyouts in Section 6.2, this section concentrates on the buyout impact on growth. Section 6.3.1 examines parenting effects, while Sections 6.3.2 and 6.3.3 examines two types of parenting effects.

6.3.1 Parenting Effects

Companies may be foregoing growth if they do not possess the necessary financial or managerial resources required to execute a new investment or seize new opportunities (Boucly, Sraer et al. 2011, Dawson 2011). Buyouts may foster growth through parenting if the acquiring private equity firm can provide buyout companies with the critical resources required to seize unexploited growth opportunities (Gottschalg, Meier 2005, Meuleman, Amess et al. 2009).

Based on the parenting perspective, I hypothesise that companies with that are more likely of having suffered from resource constraints and with unexploited growth opportunities prior to a buyout experience higher post-

buyout growth relative to peers (Hypothesis 3), i.e. that parenting effects drive operational improvements and hence value creation in buyouts.

To test Hypothesis 3, I carry out two tests based on: (i) Buyout type and (ii) availability of growth opportunities.

6.3.1.1 Buyout types

Private companies are more likely to suffer from financial constraints as well as a lack of managerial resources and capabilities needed to exploit available growth opportunities (Boucly, Sraer et al. 2011, Dawson 2011). For this reason, private buyouts seem more likely to suffer from pre-buyout resource constraints compared to other buyout types. Therefore, in the following regressions I apply buyout types as a proxy for pre-buyout resource constraints.

To test the hypothesis that private equity firms foster growth in resource-constrained companies by providing access to necessary resources in order to take advantage of unexploited growth opportunities, I test the hypothesis that private companies experience higher post-buyout growth compared to their peers and other types of buyouts (Hypothesis 3a).

Table 7 presents the results of estimating equation 2 on two subsamples: (i) Private buyouts and (ii) divisional, public and secondary buyouts ("other buyouts"). The dependent variables are revenue, EBITDA, assets, employees and capital expenditures.

Table 7

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Private buyouts					
post x LBO	.273***	.346**	.217	.327***	.737**
	(.104)	(.173)	(.176)	(.103)	(.360)
post	-.147*	-.441***	-.083	-.083	-.096
	(.078)	(.147)	(.112)	(.068)	(.280)
Observations	360	329	350	359	317
Number of deals	26	26	26	26	25
Adj. R^2	.342	.141	.129	.313	.094
Other buyouts					
post x LBO	.079	.019	.209*	.163**	.032
	(.065)	(.141)	(.111)	(.064)	(.242)
post	-0.011	-.040	-.089	-.048	-.313
	(.044)	(.097)	(.080)	(.038)	(.241)
Observations	489	454	484	490	434
Number of deals	35	35	35	35	35
Adj. R^2	.252	.052	.113	.191	.044

The results presented in Table 7 show that private buyout companies on average outperform their peers on growth in the post-buyout period. These findings are in accordance to much recent, European evidence on private buyouts (e.g. Boucly, Sraer et al. 2011, Chung 2011, Scellato, Ughetto 2013).

Private buyout companies increase revenue by an average 27.3% more than peers. This result is statistically significant at the 1% level and economically significant, and similar to the results by Boucly, Sraer et al. (2011) and Chung (2011), with increases in revenue of 18% and 34%, respectively, for private buyout companies.

Private buyout companies increase EBITDA by 34.6%. Interestingly, EBITDA increases more than revenue in the post-buyout period, which indicates that private buyout companies do not sacrifice profitability to generate revenue growth. This is in line with findings by Boucly, Sraer et al. (2011), but inconsistent with findings by Chung (2011).

Capital expenditures increase by 73.7% more than their peers in the post-buyout period, an economically very large effect, which is statistically significant at the 5% level. This estimate is similar to the effect estimated by Chung (2011), who estimates an increase in capital expenditures of 69%. Note that revenue (27.3%) increases at a lower rate than employees (32.7%) and capital expenditures (73.7%). Employees and capital expenditures are essentially investments in staff and fixed assets, and are to some extent prerequisites for growth. Hence, it appears that private buyout companies engage in investments in the post-buyout period, which subsequently foster growth. The increase in revenue may be lagged because investments need to materialise before the full effect on revenue can be detected.

Divisional, public and secondary buyouts experience increase in assets and employees of 20.9% and 16.3%, respectively, in the post-buyout period. Both results are statistically significant. These findings are in contrast to the public view on buyouts, namely that buyouts are followed by asset stripping and layoffs (Wright, Amess et al. 2009). However, there may some concern that the estimated increase in assets derives from asset boosting (see Section 6.4.1 for more on this).

As shown in Table 7, private buyouts experience a larger increase in terms of all growth measures compared to other buyouts. In order to test whether the observed differences are significantly different from zero, I re-estimate the regressions on the entire sample, while adding a triple interaction term Private x post x LBO. This coefficient measures the differences between the buyout impacts in private buyouts, compared to other buyouts. The results are presented in Table 8.

Table 8

Estimates of the impact of a buyout on buyout companies' operating performance. Robust standard errors. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Private	-.827***	-.972***	-1.128***	-.446***	-1.171***
	(.098)	(.110)	(.147)	(.107)	(.194)
post x LBO	.405***	.622***	.826***	.245**	.832***
	(.105)	(.146)	(.166)	(.119)	(.226)
Private x post	-.042	-.327**	-.366**	.077	-.228
	(.114)	(.130)	(.181)	(.189)	(.231)
Private x post x LBO	.267*	.438**	.464*	.085	.565*
	(.160)	(.210)	(.247)	(.065)	(.330)
Observations	849	783	834	849	751
R^2	.162	.204	.178	.040	.126

The results in Table 8 show that the estimated interaction term Private x post x LBO is significantly different from zero in the cases of revenue, EBITDA, assets and capital expenditures. Hence I can conclude that the

impact of buyouts is significantly different between the two subsamples of buyouts and furthermore that private buyouts grow significantly more compared to divisional, public and secondary buyouts, except on employment growth. This result is similar to that of Boucly, Sraer et al. (2011), who find that growth is concentrated among private targets on several measures, including revenue, assets, employees and capital expenditures.

Based on the results presented in Table 7 and Table 8, Hypothesis 3a is supported. Hence, this analysis lends support to the hypothesis that buyouts foster growth through alleviation of buyout companies' resource constraints, which allows buyout companies to take advantage of hitherto unexploited growth opportunities. Additionally, it seems that the influx of resources following the buyout enables buyout companies to make investments necessary to seize growth opportunities. These results indicate that the positive buyout impact on buyout companies' growth may be effect of *parenting* by private equity owners, and that *parenting effects* may be a key value driver in buyouts in Sweden.

6.3.1.2 Availability of growth opportunities

Another test of the hypothesis that alleviation of resource constraints through parenting fosters growth, is based on whether the buyout company has growth opportunities. In buyouts with growth opportunities, private equity firms can play a significant role in adding value to the buyout company, as these companies demand skills such as skills, experience and networks (Meuleman, Amess et al. 2009). Hence, buyout companies with growth opportunities are expected to benefit more from parenting in the post-buyout period. Therefore, I hypothesise that buyout companies having indicated that they have growth opportunities experience higher post-buyout growth compared to their peers and other buyouts (Hypothesis 3b).

Since it is very difficult to access information regarding a company's growth opportunities, I collect buyout rationales from press releases, which are released by the private equity firm or the buyout company in connection with a buyout (for more information on collection of buyout rationales, see Section 7). Buyout rationales are useful as they often convey information about growth opportunities of a buyout company. For this analysis, I collect statements regarding the buyout company's growth opportunities and growth plans, and use this information to interpret whether there are indications that the buyout company has growth opportunities. If it is indicated that a buyout company has growth opportunities, the buyout is categorised as "growth opportunities". An example: *"I am confident that Perusa will be a very good owner for SEM and an owner that can focus on developing SEM and taking advantage of their growth opportunities"* (SEM, acquired by Perusa Partners).

If there are no indications in the buyout rationales that a buyout company has growth opportunities, the buyout is categorised as "no growth opportunities". The omission of indications of growth opportunities do not necessarily mean that the buyout company has no growth opportunities, however, for this analysis I use it as a proxy for the buyout company's growth opportunities. Buyouts for which no relevant press releases are available are excluded from this sample.

Table 9 presents the results of estimating equation 2 using as dependent variables revenue, EBITDA, assets, employees and capital expenditures. The estimation is carried out using two subsamples based on the analysis of buyout rationales as described above: (i) Growth opportunities and (ii) no growth opportunities.

Table 9

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	ln (EBITDA)	ln (Assets)	ln (Employees)	ln (CAPEX)
Growth opportunities					
post x LBO	.281***	.315**	.314**	.339***	.528*
	(.085)	(.142)	(.137)	(.086)	(.308)
post	-.144**	-.0221**	-.166**	-.138***	-.315
	(.060)	(.111)	(.075)	(.049)	(.294)
Observations	433	412	422	433	394
Number of deals	31	31	31	31	31
Adj. R^2	.370	.139	.202	.361	.061
No growth opportunities					
post x LBO	-.031	-.042	.039	.086	.649
	(.128)	(.276)	(.171)	(.138)	(.452)
post	.061	.088	.059	.018	-.687
	(.088)	(.178)	(.187)	(.062)	(.438)
Observations	168	141	167	168	144
Number of deals	12	12	12	12	12
Adj. R^2	.140	.096	.097	.042	.114

For the sample of buyouts with growth opportunities, I find that all measures increase in the post-buyout period. These increases are statistically and economically significant. Overall, I can conclude that the sample of buyouts with growth opportunities outperform their peers in terms of growth in the post-buyout period.

Interestingly, capital expenditures increase by 52.8%, the largest increase of all growth measures, indicating that growth primarily takes place through investments. Assets (31.4%), employees (33.9%) and capital expenditures (52.8%) increase considerably more than revenue (28.1%), indicating that buyout companies carry out investments in the post-buyout period in order to boost revenue growth. In addition, EBITDA increase by 31.5% in the post-buyout period, compared to 28.1% for revenue. Hence, buyouts with growth opportunities seem to improve profitability while investing for future growth.

The sample of buyouts with no growth opportunities experience an average decrease in revenue and EBITDA in the post-buyout period relative to peers. However, seeing as none of the estimated coefficients are statistically significant, I cannot conclude that the "no growth opportunities" sample of buyouts develop differently in terms of growth compared to peers. Note that the sample size for this subsample is quite small (n = 12), which may explain why results are insignificant.

When comparing the two subsamples, buyouts with growth opportunities outperform their peers in terms of growth, while there is no effect on growth in the "no growth opportunities" sample. In order to test whether the observed differences are different from zero, Table 10 presents the results of re-estimating the regressions on the entire sample, while adding a triple interaction term Growth x post x LBO.

Table 10

Estimates of the impact of a buyout on buyout companies' operating performance. Robust standard errors. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Growth	-.129	.076	-.039	.050	.191
	(.118)	(.145)	(.196)	(.130)	(.235)
post x LBO	.285***	.526	.701***	.123	.676*
	(.103)	(.230)	(.247)	(.139)	(.346)
Growth x post	-.033	-.313*	-.468**	.038	-.634**
	(.152)	(.178)	(.224)	(.153)	(.271)
Growth x post x LBO	.378**	.595**	.822**	.295	1.053**
	(.067)	(.295)	(.330)	(.216)	(.446)
Observations	601	553	589	601	538
R^2	.051	.079	.089	.023	.079

Based on the results in Table 10, I find that the buyout impact is significantly different for the two subsamples, with the exception of employment, and that buyouts with growth opportunities grow significantly more than buyouts with no growth opportunities.

Based on the results in Table 9 and Table 10, there is support for Hypothesis 3b. It appears that buyouts foster growth by alleviating resource constraints, leading to increased investments and subsequently revenue growth. Overall, the analysis carried out in this section lends support for Hypothesis 3.

Two analyses have been carried out to test Hypothesis 3. Both analyses test whether a subsample of buyouts, which is expected to benefit the most from parenting, experience higher growth in the post-buyout period relative to peers and other buyouts. The analyses find that private buyouts and buyouts with growth opportunities, respectively, outperform their peers and other buyouts in terms of growth. Hence, both analyses provide support for the hypothesis that parenting effects foster growth in buyout companies with pre-buyout resource constraints through the provision of resources, which enables buyout companies to take advantage of hitherto unexploited growth opportunities (Hypothesis 3).

Interestingly, on several measures, the estimated coefficients for the two samples, private buyouts and buyouts with growth opportunities, are very similar. This may indicate that buyout companies with hitherto unexploited growth opportunities tend to be resource-constrained prior to the buyout, and this is why the buyout company's growth opportunities are unexploited.

For the two subsamples, which were expected to benefit the most from parenting, both analyses find that, in addition to revenue growth, buyouts are followed by a large increase in capital expenditures, which indicates that growth is achieved through investments. For both subsamples, corporate investments increase in the post-buyout period. This makes sense, because in order to seize growth opportunities, it is typically necessary to make investments such as establishment of overseas production facilities, employment of sales staff etc. However, in order to make such investments, a company must have the necessary financial capital as well as skills, experience and networks. Hence, one interpretation of these results is that buyout companies, through parenting in the post-buyout period, gain access to resources that enable them to make the necessary investments to seize growth opportunities, which subsequently foster revenue growth.

Overall, the two analyses based on buyout types and availability of growth opportunities provide support for Hypothesis 3, and indicate that the positive buyout impact on buyout companies' post-buyout growth is an effect of parenting, which suggests that parenting effects may be a key driver of value creation in Swedish buyouts.

Thus far, the resources applied to buyout companies through parenting in the post-buyout period have not been specified. The remaining analyses segment parenting effects into the two types of parenting: (i) Financial resources-related parenting and (ii) managerial resources-related parenting. Segmenting parenting effects in this way allows for an analysis of what types of parenting effects drive value creation in buyouts.

6.3.2 Alleviation of financial constraints

Based on the hypothesis put forth by Boucly, Sraer et al. (2011), I hypothesise that buyouts foster growth by alleviating buyout companies' financial constraints, which prior to the buyout restrict companies from exploiting growth opportunities. Following the buyout, buyout companies gain access to financial resources, which subsequently fosters growth. On this basis, I hypothesise that buyout companies that are more likely of having suffered from financial constraints prior to a buyout experience higher post-buyout growth compared to their peers and other buyouts (Hypothesis 4).

As it is challenging to measure financial constraints, I create three sub-hypotheses, which test Hypothesis 4 using three different measures for financial constraints: (i) Pre-buyout company size, (ii) industry-level financial dependence and (iii) financial resources motive.

6.3.2.1 Pre-buyout company size

In this section, I test Hypothesis 4 using company size as a measure of financial constraints. I hypothesised that small buyout companies experience higher post-buyout growth relative to their peers and large buyouts (Hypothesis 4a), seeing as particularly small companies are likely to encounter difficulties in obtaining external financing, as well as they may also be less able to generate cash flow internally for investments (Donati 2016, Rahaman 2011, Wright, Hoskisson et al. 2001b).

To test Hypothesis 4a, I divide the sample of buyouts into two subsamples by pre-buyout company size: (i) Small buyouts and (ii) large buyouts. The division into small and large buyouts is based on number of employees one year prior to the buyout, with "large buyouts" being larger than the median and "small buyouts" being equal to or smaller than the median. This methodology follows that of Boucly, Sraer et al. (2011).

Table 11 presents the results of estimating equation 2 on the "small buyouts" and "large buyouts" subsamples, using as dependent variables: Revenue, EBITDA, assets, employees and capital expenditures.

Table 11

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	ln (EBITDA)	ln (Assets)	ln (Employees)	ln (CAPEX)
Small buyouts					
post x LBO	.282***	.273*	.272*	.339***	.480
	(.097)	(.165)	(.148)	(.096)	(.326)
post	-.172***	-.351***	-.080	-.160***	-.187
	(.062)	(.125)	(.110)	(.062)	(.263)
Observations	430	402	418	429	370
Number of deals	31	31	31	31	31
Adj. R^2	.334	.095	.161	.323	.054
Large buyouts					
post x LBO	.037	.022	.160	.125**	.225
	(.059)	(.141)	(.121)	(.058)	(.270)
post	.030	-.005	-.102	.020	-.238
	(.049)	(.102)	(.073)	(.033)	(.250)
Observations	419	381	416	420	381
Number of deals	30	30	30	30	30
Adj. R^2	.290	.082	.095	.177	.061

The results in Table 11 show that post-buyout growth in small buyouts is large and statistically significant, except for capital expenditures. Hence, small buyouts outperform their peers in terms of growth in the post-buyout period.

Interestingly, small buyout companies increase revenue, EBITDA and assets at approximately the same rate (28.2%, 27.3% and 27.2%, respectively). The increase in capital expenditures is larger (48.0%), but not statistically significant. Overall, it does not seem that growth in small buyouts is solely the result of investments. Nevertheless, employees increase by 33.9% in the post-buyout period.

Since are few indications that post-buyout growth is driven by investments, these results somewhat contrast with the results in Section 6.3.1, where there are strong indications that growth is driven by investments. Since it seems that growth in small buyouts may not be fostered by investments, growth in small buyouts may not solely derive from access to financial capital (which would be expected to foster growth through investments).

For large buyouts, only one coefficient is statistically significant - employment increase by 12.5%, which is statistically significant at the 5% level. This means that, with the exception of employment, large buyouts do not outperform peers in terms of growth, which is in contrast to small buyouts.

The results in Table 11 show that the estimated buyout impacts for small and large buyouts differ, with small buyouts experiencing a more significant impact on growth. To test whether small buyouts outperform large buyouts, I re-estimate the regressions on the entire sample, while adding the triple interaction term Small x post x LBO. The results are presented in Table 12.

Table 12

Estimates of the impact of a buyout on buyout companies' operating performance. Robust standard errors. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	ln (EBITDA)	ln (Assets)	ln (Employees)	ln (CAPEX)
Small	-1.472***	-1.126***	-1.941***	-1.817***	-1.923***
	(.081)	(.111)	(.135)	(.068)	(.178)
post x LBO	.271***	.473***	.535***	.244***	.703***
	(.097)	(.150)	(.144)	(.095)	(.212)
Small x post	-.132	-.380***	-.457***	.103	-.223
	(.089)	(.127)	(.176)	(.071)	(.230)
Small x post x LBO	.541***	.702***	1.030***	.028	.752**
	(.135)	(.213)	(.233)	(.126)	(.325)
Observations	849	783	834	849	751
R^2	.439	.249	.372	.577	.253

As seen in Table 12, the coefficients for the interaction term Small x post x LBO are significantly different from zero, except for employment, and I can conclude that small buyouts experience a significantly larger impact on growth compared to large buyouts. This result is in accordance with Boucly, Sraer et al. (2011), who find that post-buyout growth is significantly larger in small companies compared to large companies.

Overall, it appears that post-buyout growth is concentrated among small buyouts. Note that the differences in growth rates between small and large buyouts are not a return-to-the-mean effect, as the higher post-buyout growth for small buyouts is relative to control firms, which are similar in size to buyout companies in order to prevent mean reversion effects.

The results presented in Table 11 and Table 12 provide support for Hypothesis 4a, that small buyouts outperform peers and large buyouts in terms of growth in the post-buyout period. Likewise, they lend support for the hypothesis that buyouts alleviate financial constraints and hence foster growth, which is in accordance with findings by Boucly, Sraer et al. (2011). However, there are indications that growth in small buyouts is not solely fostered by alleviation of financial constraints, since there are few indications that post-buyout growth is driven by investments.

6.3.2.2 Industry-level financial dependence

I carry out an additional test of the hypothesis that buyouts foster growth through alleviation of financial constraints using industry-level financial dependence. According to Rajan and Zingales (1998), financial dependence is a measure of a company's need for external finance. It measures the fraction of investments that cannot be financed through internal cash flows generated by the company, and which consequently are financed externally (Boucly, Sraer et al. 2011, Rajan, Zingales 1998). Some industries rely more on external finance, and hence companies in these industries are more "financially dependent" and tend to suffer more from financial constraints (Boucly, Sraer et al. 2011, Rajan, Zingales 1998). Consequently, buyout companies that operate in financially dependent industries are expected to benefit relatively more from access to capital provided through a private equity buyout compared to buyout companies in less financially dependent industries. On this basis, I hypothesise that buyout companies in financially dependent industries experience higher post-buyout growth relative to their peers.

Financial dependence is computed using the universe of Swedish companies in the Orbis database with available financials in the measurement period (most recent nine years available in Orbis) and more than 100 employees. The sample is restricted to companies with more than 100 employees, as financial dependence of an industry should be computed using companies that are less likely to be credit-constrained (i.e. large companies) in order to capture the "technological" reason why some industries depend more on external finance than others (Boucly, Sraer et al. 2011, Rajan, Zingales 1998).

Financial dependence is computed as:

$$FD = \frac{Capital\ expenditures - Gross\ cash\ flow}{Capital\ expenditres} \quad \text{(Eq. 3)}$$

As outlined in Section 5.2, capital expenditures is estimated as Fixed $Assets_{t+1}$ – Fixed $Assets_t$ + Depreciation & Amortization, and gross cash flow is computed as the sum of net income and depreciation & amortization, as Boucly, Sraer et al. (2011).

For each company, I compute financial dependence as total use of external finance (i.e. capital expenditures less gross cash flow) over the measurement period, divided by total capital expenditures over the same period. This procedure smooths temporal fluctuations and reduces the effect of outliers (Rajan, Zingales 1998). To compute industry-level financial dependence, I use industry medians to summarise ratios across companies (based on two-digit NACE classifications). Using the industry median prevents large companies from screwing the result (ibid.). This methodology of calculating financial dependence closely resembles that of Boucly, Sraer et al. (2011) and Rajan and Zingales (1998).

Using this measure of financial dependence, the following set of regressions are run:

$$Y_{jt} = \alpha_j + \delta_t + POST_{jt} + POST_{jt}LBO_j + POST_{jt}FD_j + POST_{jt}LBO_jFD_j + \varepsilon_{jt} \quad \text{(Eq. 4)}$$

Where j is a company index and t is a time index. Y_{jt} is ln of revenue, ln of EBITDA, ln of employees, ln of assets and ln of capital expenditures. The triple interaction term post x LBO x FD is added to capture the buyout impact depending on the industry-level of financial dependency. Results are presented in Table 13.

Table 13

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
post x LBO x FD	-.019	-.115	.239**	.050	.115
	(.093)	(.191)	(.140)	(.096)	(.325)
post x LBO	.173*	.054	.454***	.273***	.440
	(.096)	(.194)	(.167)	(.092)	(.345)
post x FD	.069*	.154	.061	.014	.069
	(.038)	(.108)	(.074)	(.025)	(.177)
post	-.018	-.065	-.041	-.056	-.139
	(.050)	(.107)	(.089)	(.039)	(.245)
Observations	849	783	834	849	751
Number of deals	61	61	61	61	60
Adj. R^2	.281	.070	.146	.237	.041

Table 13 shows that financial dependence has little explanatory power on post-buyout growth. The estimates of the interaction term post x LBO x FD are all statistically insignificant, except for assets. Thus, the results do not provide support for the hypothesis that buyout companies operating in financially dependent industries experience higher post-buyout growth. There is no support for Hypothesis 4b, and consequently this evidence lends no support to the hypothesis that buyouts create value through alleviation of financial constraints.

Boucly, Sraer et al. (2011) carry out a similar analysis, but report results segmented by buyout type. According to Boucly, Sraer et al. (2011), private buyout companies' post-buyout growth is concentrated among buyout companies that operate in more financially dependent industries, whereas this is not the case for other buyout types. For this reason, I re-estimate equation 4 using two subsamples: (i) Private buyouts and (ii) divisional, public and secondary buyouts. Results are presented in Table B1 in Appendix B. Using this approach, none of the estimated interaction terms post x LBO x FD are significant. Hence, the conclusion regarding Hypothesis 4b remains unchanged.

The results in Table 13 and Table B1 contrast with findings by Boucly, Sraer et al. (2011), who find that post-buyout growth is concentrated among private buyouts in financially dependent industries. The discrepancy in results may be explained by private companies' access to external finance in Sweden compared to France (which forms the basis of the study by Boucly, Sraer et al. 2011). Sweden has a ratio of private credit to GDP of 1.3, compared to 0.95 for France (Beck, Demirgüç-Kunt et al. 2015). In comparison, the ratios for the UK and the US, which are generally recognised as having well-developed capital markets, are 1.4 and 1.6, respectively (ibid.). Hence, in Sweden, private buyout companies may not be financially constrained prior to buyouts, as compared with private buyout companies in France, which could limit the scope for fostering growth through alleviation of financial constraints.

The lack of support for Hypothesis 4 contrasts with results in the previous section using pre-buyout company size as a measure of financial constraints. This may be because industry-level financial dependence is not a precise measure of financial constraints. Financial dependence measures the fraction of capital expenditures that are financed externally. Hence, while this measure is meant to capture a company's dependence on external finance, it may actually measure a company's debt capacity, since it essentially measures the fraction of investments for which the company has obtained external financing. For this reason, it is uncertain to what extent industry-level financial dependence succeeds in capturing a company's likelihood of being financially constrained. Therefore, I proceed with a test of Hypothesis 4 using a third measure of financial constraints.

6.3.2.3 Financial resources motive

In this section, I carry out a third test of Hypothesis 4 using buyout rationales (for more information on collection of buyout rationales, see Section 7). Hence, this analysis is based on an assessment of qualitative data, rather than financial data, as in the two former analyses. Based on the information available in buyout rationales, it was hypothesised that buyout companies with a "financial resources motive" experience higher post-buyout growth relative to their peers and other buyouts.

Buyout rationales contain statements regarding motives for the buyout. I use these motives to interpret whether there are indications that a buyout company was financially constrained prior to a buyout. If a buyout company, or the acquiring private equity firm, indicate in buyout rationales that the motive for the buyout is access to financial resources, the buyout company it considered more likely of having been financially constrained prior to the buyout ("financial resources motive"). Examples include: *"With Karnell as the new owner, there are*

financial prerequisites for continued aggressive development" (Kasthall Mattor och Golv AB, acquired by Karnell) and *"With Valedo as a new co-owner, Cambio will have additional resources, in the form of competence and capital, to further drive growth…"* (Cambio Healthcare Systems, acquired by Valedo Partners). Indicating access to financial resources as a buyout motive does not necessarily imply that a buyout company suffers from pre-buyout financial constraints, but it signals that a buyout company may not have the necessary financial resources to fully exploit all profitable opportunities available to the company.

If there are no indications in the buyout rationales that a buyout motive was access to financial resources, the buyout is categorised as "no financial resources motive". The omission of any indications regarding financial resources do not necessarily indicate that the buyout company is financially unconstrained. Still, for this analysis it is used as a proxy for the buyout company's financial situation. Finally, buyouts with no relevant press releases are excluded from the sample.

Table 14 presents the results of estimating equation 2 using two subsamples: (i) "Financial resources motive" and (ii) "no financial resources motive", which are assumed to be more and less likely, respectively, of suffering from financial constraints prior to the buyout. The dependent variables are revenue, EBITDA, assets, employees and capital expenditures.

Table 14

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Financial resources motive					
post x LBO	.123	.120	.367	.249*	.811
	(.140)	(.262)	(.235)	(.133)	(.486)
post	-.042	.071	-.287**	-.053	-.161
	(.107)	(.158)	(.131)	(.081)	(.414)
Observations	168	148	166	167	150
Number of deals	12	12	12	12	12
Adj. R^2	.308	.091	.231	.245	.102
No financial resources motive					
post x LBO	.220***	.258*	.184	.275***	0.434
	(.085)	(.146)	(.119)	(.092)	(.301)
post	-.052	-.229**	-.017	-.095*	-.413
	(.052)	(.114)	(.083)	(.052)	(.279)
Observations	433	406	423	434	388
Number of deals	31	31	31	31	31
Adj. R^2	.326	.107	.138	.245	.057

For the subsample of buyouts with a financial resources motive, the only statistically significant estimate is an increase of 24.9% in employment, which is statistically significant at the 10% level. Based on the results in Table 14, buyouts with a financial resources motive do not outperform their peers in terms of growth in the post-buyout period. Note that the sample size for the "financial resources motive" sample is quite small (n = 12), which may explain why results are insignificant.

Surprisingly, buyouts without financial resources motives experience growth that is economically larger compared to the sample of buyouts with financial resources motives. Furthermore, increases in revenue, EBITDA and employees of 22.0%, 25.8% and 27.5% are statistically significant. Hence, buyout companies with no financial resources motive appear to outperform peers, and buyouts with a financial resources motive, with regards to revenue, EBITDA and employee growth.

Overall, when comparing buyouts that are more and less likely of having been financially constrained prior to the buyout, it seems that the latter group experience higher growth in the post-buyout period compared to the former group. To test whether the observed differences are significantly different from zero, I in Table 15 re-estimate the regressions on the entire sample, while adding a triple interaction term Motive x post x LBO.

Table 15

Estimates of the impact of a buyout on buyout companies' operating performance. Robust standard errors. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Motive	-.099	.025	.636***	-.109	.349
	(.139)	(.164)	(.1878)	(.129)	(.251)
post x LBO	.575***	.890***	1.157***	.355**	1.109**
	(.116)	(.154)	(.176)	(.141)	(.242)
Motive x post	.039	-.229	-.284	-.012	-.254
	(.181)	(.209)	(.228)	(.153)	(.284)
Motive x post x LBO	-.136	-.116	-.082	-.009	.430
	(.199)	(.273)	(.295)	(.212)	(.384)
Observations	601	553	589	601	538
R^2	.049	.073	.091	.019	.069

Since none of the estimated coefficients for the interaction term Motive x post x LBO are significantly different from zero, I cannot conclude that the buyout impacts on buyouts with and without a financial resources motive are different.

Based on the results in Table 14 and Table 15, buyouts with a financial resources motive do not experience higher growth compared to peers and other buyouts, and hence there is no support for Hypothesis 4c.

In the previous section, results based on financial dependence provide no support for Hypothesis 4b. Hence, based on financial dependence and buyout motives, Hypothesis 4 is not supported. It seems that buyout companies more likely of having suffered from financial constraints prior to a buyout do not experience higher post-buyout growth compared to peers and other buyouts. This contrasts with findings by Boucly, Sraer et al. (2011), which support the hypothesis that buyouts alleviate pre-buyout financial constraints and hence foster corporate investments and growth.

According to Boucly, Sraer et al. (2011), alleviation of financial constraints through buyouts can be particularly important in countries that do not have large and well-functioning financial markets, and where buyout companies therefore are more likely to suffer from financial constraints. Hence, alleviation of financial constraints may primarily be a driver of buyout value creation in countries with less developed capital markets. In fact, it is difficult to argue that Swedish capital markets are underdeveloped. The ratio of private credit plus stock market capitalisation to GDP in Sweden is 2.2, as opposed to e.g. 1.6 in France (Beck, Demirgüç-Kunt et al. 2015). In comparison, in the US and the UK, countries with large and well-functioning markets, the same

ratio is 2.8 (ibid.). Hence, while Swedish financial markets lack behind those of the US and the UK, they are ahead of e.g. France, which forms the basis for the study by Boucly, Sraer et al. (2011). Hence, Swedish buyout companies may not be financially constrained, which would explain why results do not confirm the hypothesis that buyouts alleviate pre-buyout financial constraints and hence foster growth (Hypothesis 4).

However, unlike the results using financial dependence and buyout rationales, the results in Section 6.3.2.1 using pre-buyout company size provide evidence consistent with Hypothesis 4a: Small companies outperform their peers and other buyouts in terms of growth in the post-buyout period. Hence, the analysis using pre-buyout company size provides support for Hypothesis 4.

Note that the results in Section 6.3.2.1 using pre-buyout company size provide few indications that post-buyout growth is the result of increased investments. This suggests that growth in small buyouts may not solely be fostered by alleviation of financial constraints. In fact, small companies' ability to grow may also be undermined by a lack of managerial resources and knowledge (Macpherson, Holt 2007). For example, small companies may be at a disadvantage vis-à-vis large companies in attracting talent due to less prestige (no name recognition) and an inability to offer high salaries. Hence, results in Section 6.3.2.1 may rather be explained by an influx of managerial resources. This could explain why Section 6.3.2.1 provide few indications that buyout companies invest to foster growth, as managerial resources and capabilities can foster growth without corporate investments, for example by changing pricing or distribution channels, resulting in improved competitiveness. Parenting effects deriving from the access to managerial resources is further examined in the next section.

6.3.3 Access to managerial resources

Buyouts can foster growth by providing buyout companies with necessary resources and capabilities that the buyout company lacks (Meuleman, Amess et al. 2009, Gottschalg, Meier 2005). Through advisory and support, and through its extensive networks, the private equity firm can provide buyout companies with the necessary skills, experience and network to exploit growth opportunities. Companies with a lack of managerial resources and capabilities prior to a buyout are expected to benefit more from the advice and support by a private equity owner in the post-buyout period. On this basis, I hypothesise that buyout companies that are more likely to have suffered from a lack of managerial resources prior to a buyout experience higher post-buyout growth relative to peers and other buyouts (Hypothesis 5). In the following section, I test Hypothesis 5 using buyout rationales.

6.3.3.1 Managerial resources motive

It is difficult to obtain information regarding the managerial resources of a company, including managers' skills and expertise. For this reason, I have collected buyout rationales from press releases from the relevant buyouts in order to test the hypothesis that buyouts foster growth by providing buyout companies with the necessary managerial resources to seize growth opportunities (for more information on collection of buyout rationales, see Section 7).

I use buyout motives from press releases to interpret whether there are indications that a buyout company lacks managerial resources prior to the buyout. If a buyout company, or the acquiring private equity firm, indicate that the motive for the buyout is to provide the buyout company with managerial resources, the buyout company is considered as more likely to suffer from a lack of managerial resources prior to the buyout ("managerial resources motive"). An examples include: *"With Litorina as new majority owner, Eton has the*

relevant competences and resources to take the next step in our development…" (Eton Fashion, acquired by Litorina).

If there are no indications in the buyout rationales that the buyout motive was access to managerial resources, the buyout company is considered less likely to suffer from a lack of managerial resources prior to the buyout ("no managerial resources motive"). Of course, not indicating that managerial resources is an important factor in the buyout does not necessarily mean that the buyout company does not lack managerial resources prior to the buyout. Therefore, it is simply used as a proxy for the buyout company's managerial resources and capabilities. Buyouts where I could not find relevant press releases are excluded from the sample.

Based on buyout rationales, I hypothesise that buyout companies with a "managerial resources motive" experience higher post-buyout growth relative to their peers and other buyouts (Hypothesis 5a).

Table 16 presents the results of estimating equation 2 using as dependent variables revenue, EBITDA, assets, employees and capital expenditures. The estimation is carried out using two subsamples based on the analysis of buyout rationales as described above: (i) "Managerial resources motive" and (ii) "no managerial resources motive", which are assumed to be more and less likely, respectively, of suffering from a lack of managerial resources prior to the buyout.

Table 16

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Managerial resources motive					
post x LBO	.340***	.323	.404*	.393***	1.005**
	(.130)	(.228)	(.220)	(.129)	(.452)
post	-.186**	-.206	-0.351***	-.183***	-.475
	(.082)	(.181)	(.106)	(.071)	(.429)
Observations	238	222	231	237	215
Number of deals	17	17	17	17	17
Adj. R^2	.392	.130	.209	.383	.116
No managerial resources motive					
post x LBO	.097	.148	.128	.187**	.240
	(.083)	(.149)	(.112)	(.090)	(.204)
post	.018	-.078	.047	-.022	-.324
	(.056)	(.010)	(.094)	(.053)	(.313)
Observations	363	331	358	364	323
Number of deals	26	26	26	26	26
Adj. R^2	.251	.072	.144	.150	.048

Post-buyout growth in the sample with a managerial resources motive is large and statistically significant, except for EBITDA. The increase in capital expenditures is particularly remarkable, with an increase of 100.5% in the post-buyout period relative to peers. This result is statistically significant at the 5% level.

Assets (40.4%), employment (39.3%) and capital expenditures (100.5%), which are different types of corporate investments, increase considerably more than revenue (34.0%). This indicates that following a

buyout, buyout companies that are more likely to have suffered from a lack of managerial resources prior to the buyout, engage in significant corporate investments. These corporate investments may be the result of advice, support and access to networks that facilitate necessary investments, and which consequently fosters revenue growth through the exploitation of hitherto unexploited growth opportunities.

The increase in EBITDA is statistically insignificant, and hence it is not possible to say whether investments and subsequent revenue growth also leads to an increase in operating profits (EBITDA).

For the sample with no managerial resources motive, there is no clear growth pattern following a buyout. The only statistically significant estimate is an increase in employment of 18.7%. Results in Table 16 show that buyout companies with no managerial resources motive do not grow significantly relative to their peers following a buyout, except for employment.

When comparing the two subsamples, buyouts with a managerial resources motive seem to outperform buyouts with no managerial resources motive. To test this, I re-estimate regressions on the entire sample, while adding a triple interaction term Motive x post x LBO. This coefficient measures the differences between the buyout impacts in buyouts with a managerial resources motive and buyouts with no such motive. Results are presented in Table 17.

Table 17

Estimates of the impact of a buyout on buyout companies' operating performance. Robust standard errors. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Motive	.248	.333*	.526**	.298*	.619**
	(.154)	(.172)	(.208)	(.156)	(.257)
post x LBO	.446***	.767***	1.004***	.264**	.819***
	(.096)	(.138)	(.178)	(.126)	(.241)
Motive x post	-.054	-.293	-.523**	.033	-.788**
	(.219)	(.259)	.263	(.213)	(.341)
Motive x post x LBO	.279	.329	.513	.205	1.335***
	(.235)	(.317)	(.317)	(.257)	.426
Observations	601	553	589	601	538
R^2	.065	.081	.093	.041	.097

Table 17 shows that, with the exception of capital expenditures, the coefficients for the interaction term Motive x post x LBO are not statistically different from zero. However, I find that the buyout impact on capital expenditures is significantly stronger for buyouts with a managerial resources motive than for buyouts without a managerial resources motive.

The results in Table 16 seem to support Hypothesis 5b that buyout companies with a managerial resources motive experience higher post-buyout growth relative to their peers and other buyouts, while Table 17 provides limited support for this hypothesis. Overall, results partly lend support to the hypothesis that buyouts foster growth by providing buyout companies with the necessary managerial resources to seize growth opportunities.

A possible interpretation of the results is that private equity firms provide buyout companies with managerial resources, through advisory, coaching and support as well as through their networks, which fosters growth through investments, which allows buyout companies to seize growth opportunities. This is supported by the

significant increase in corporate investments following buyouts of companies that are more likely to suffer from pre-buyout managerial resource constraints. Overall, results suggest that managerial resources-related parenting, i.e. access to private equity firms' skills, experience and network, may be an important driver of value creation in Swedish private equity buyouts.

6.4 Alternative measures and robustness check

6.4.1 Alternative measures

Because of goodwill adjustments, which are common in connection with buyouts, intangible fixed assets may increase at the time of the buyout transaction. Throughout this paper, regression analyses have been carried out using measures of assets, which include intangible fixed assets. This raises a concern that results in previous sections using assets are affected by goodwill adjustments. This would lead to an underestimation of ROA and an overestimation of asset growth in the post-buyout period.

To exclude the effect of goodwill adjustments, I estimate buyout impact on profitability and growth using measures based on tangible fixed assets. Tangible fixed assets are essentially property, plant and equipment (PPE), and include buildings, equipment, machinery etc. This measure excludes goodwill, and hence has the advantage of excluding the effect of any potential goodwill adjustments. This ensures a fair comparison between assets in the pre-buyout period and post-buyout period.

Note that using this method also excludes other intangible fixed assets than goodwill, including trademarks, copyrights and patents, which contribute to a company's profit-generating abilities. This means that excluding intangible fixed assets to some extent gives an inaccurate view of a company's ability to generate profits, and somewhat distorts comparisons of profitability across companies.

Unfortunately, tangible fixed assets are not immune to asset write-ups. Furthermore, tangible fixed assets are assets than can be consolidated between a parent company and its subsidiaries (Boucly, Sraer et al. 2011). Hence, while using tangible fixed assets excludes the effect of goodwill adjustments, it is still subject to increases in assets resulting from asset write-ups and consolidation of parent and subsidiary financials.

Table 18 presents the results of estimating equation 2. The dependent variables in column 1 and 2 are return on tangible fixed assets (ROTA), which is EBITDA and cash flow, respectively, scaled by tangible fixed assets (PPE). The dependent variable in column 3 is the natural logarithm of tangible fixed assets (PPE).

Table 18

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ROTA (EBITDA/PPE)	**ROTA (cash flow/PPE)**	**ln (PPE)**
post x LBO	-.287	-.568	.118
	(.467)	(1.195)	(.119)
post	-.189	-.408	-.047
	(.480)	(1.09)	(.088)
Observations	849	830	849
Number of deals	61	61	61
Adj. R^2	.022	.023	.018

The results in Table 18 show that based on either of the ROTA measures, buyout companies' average profitability does not change significantly following a buyout. This result is similar to that of Section 6.2.1, which showed that decreases in ROA are not statistically significant. Thus, excluding the possible effect of goodwill adjustments does not alter the conclusion regarding the buyout impact on profitability, which is that buyouts have no impact on profitability.

The estimated increase in tangible fixed assets is not statistically significant, which may indicate that the statistically significant increase in assets of 21.1% estimated in Section 6.2.2 derives from goodwill generation. Nevertheless, I also include other measures of growth, and generally assets, revenue and employees tend to follow a similar growth pattern.

6.4.2 Robustness check

As outlined in Section 5.3, private equity firms typically spend considerable time screening possible targets, and tend to select companies with certain characteristics. This raises a concern that private equity firms simply target companies with very high growth rates even before the buyout. This concern can partially be addressed by including the interaction term post x GR, which controls for pre-buyout growth:

$$Y_{jt} = \alpha_j + \delta_t + post_{jt} + post_{jt}LBO_j + post_{jt}GR_j + \varepsilon_{jt} \quad \text{(Eq. 5)}$$

Where GR_j is average revenue growth in the three years preceding the buyout. The interaction term $post_{jt}GR_j$ is designed to capture that buyout companies may initially grow faster compared to their control firms.

The results of estimating equation 5 are presented in Table 19. The dependent variables are revenue, EBITDA, assets, employees and capital expenditures.

Table 19

Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	ln (EBITDA)	ln (Assets)	ln (Employees)	ln (CAPEX)
post x LBO	.141**	.160	.212**	.223***	.320
	(.057)	(.111)	(.098)	(.057)	(.212)
post x GR	.062**	-.033	-.003	.028	.095**
	(.025)	(.026)	(.038)	(.030)	(.047)
post	-.080**	-.189**	-.090	-.069**	-.207
	(.040)	(.083)	(.063)	(.035)	(.181)
Observations	849	783	834	849	751
Number of deals	61	61	61	61	60
Adj. R^2	.289	.066	.110	.238	.041

The results in Table 19 show that including a control for pre-buyout growth does not affect my initial estimates, except for the increase in capital expenditures, which is now insignificant. The interaction term post x GR is statistically significant at the 5% level for revenue (6.2%) and capital expenditures (9.5%), while it is insignificant for the remaining growth measures. Based on the results in Table 19, pre-buyout growth is not a strong predictor post-buyout growth. Therefore, the conclusion that buyouts have a significantly positive impact on buyout companies' growth is unchanged.

7. ANALYSIS OF BUYOUT RATIONALES

The acquiring private equity firm and/or the buyout company normally release press releases as a way of publicising the transaction. Press releases often contain information on buyout rationales, such as comments by the managers of the private equity firm indicating the motives for the buyout and plans for the company. Press releases also usually include comments by parties in the buyout company on why they enter into the buyout and why they have chosen the acquiring private equity firm as the future owner of the company.

I have collected press releases for 43 buyouts, for which I have gathered buyout rationales. For the remaining 18 buyouts, it is not possible to find any relevant press releases by the buying or selling party. Buyout rationales from press releases are qualitative information that require subjective judgement. They are often very optimistic and may include plans for the buyout company that do not materialise after the buyout. In addition, private equity firms may have an interest "tailoring" their communication in press releases for CSR-related reasons. For example, it is more accepted by investors, media, politicians etc. to communicate messages of growth (i.e. creating jobs) rather than messages of improving margins e.g. cost cutting and downsizing (i.e. cutting jobs). For this reason, buyout rationales should be interpreted with caution.

Only one buyout rationale refers to intentions regarding profitability improvements. Interestingly, in 31 cases (72% of buyout rationales), the selling or the buying party refers to growth opportunities or existing growth plans. More specifically, growth opportunities or growth plans include geographical expansion (37%), product expansion (26%) and/or growth through acquisitions (21%). This indicates that growth is a prominent goal of private equity buyouts.

In addition, 40% of buyout rationales refer to the skills and experience of the private equity firm as a buyout motive, while 28% refer to access to financial resources as a motivational factor.

Examining the comments made by buyout participants confirms the conclusion that growth, often through geographical expansion, is a key goal of buyouts. Examples include: *"The aim of CapMan's investment is to continue value creation in MPT by increasing resources for growth… MPT provides solid preconditions for value creation mainly through geographical expansion, increased sales resources, as well as possible strategic add-on acquisitions."* (Metals and Powders Holding, acquired by CapMan) and *"We are looking forward to further developing Björnkläder together with Litorina. With a strong and experienced owner as Litorina, we have assured the needed resources to continue our planned business expansion"* (Björnkläder, acquired by Litorina).

While buyout rationales suggest that growth through expansion is a key goal, some buyouts are also motivated by improvements in the current business that may create a competitive advantage, for example through product development: *"With Valedo as a new co-owner, Cambio will have additional resources, in the form of competence and capital, to further drive growth and continue to make long-term investments in developing its product- and service offering…"* (Cambio Healthcare Systems, acquired by Valedo).

Buyout participants frequently refer to the resources the acquiring private equity firm can provide, including financial resources, knowledge and expertise, and networks. For example: *"I strongly believe that CapMan is an excellent partner for us who will bring in new capital, extensive networks and expertise in business development of Nordic companies"* (Metals and Powders Holding, acquired by CapMan) and *"We are proud to have such an iconic brand in our portfolio and are convinced that with solid financial support and a suitable*

growth strategy, Ventizz can further strengthen Hasselblad's position as the first class producer of medium format digital camera systems" (Hasselblad Group, acquired by Ventizz Capital).

In line with Gottschalg and Meier (2005), it seems that private equity firms can provide resources, which the buyout companies generally lack: *"We at Järnforsen are technicians who are good at thermal calculations, but Alder has the required competence to build the kind of company needed for us to take our next step"* (Järnforsen Energy Group, acquired by Alder.

Finally, buyout participants also frequently refer to existing growth opportunities available to the buyout company, and seem to suggest that buyouts take place with the objective of providing the buyout company with the necessary resources to exploit these growth opportunities, for example: *"With Segulah as its new main owner, Scan Coin will have the necessary resources for exploiting the potential on the market"* (Scancoin, acquired by Segulah).

Based on the information available in buyout rationales, it seems that growth is the most prominent goal of private equity buyouts. Growth can take place in several ways, but particularly geographical expansion appears to be an important goal for buyout companies and their acquiring private equity firms. Access to financial resources as well as skills, experience and networks seem to be an important and motivational factor for buyout companies. This makes sense, as an expansion of the business requires these types of resources. Overall, it seems that private equity firms acquire companies with unexploited growth opportunities, and that the motive for the buyout is to realise these hitherto unexploited opportunities. In addition, the resources of the acquiring private equity owner seem to be very important to the participants in the buyout company, which could indicate that buyouts act as a vehicle to access the necessary resources in order to seize growth opportunities.

8. CONCLUSION

This paper examines the buyout impact on the operational performance of Swedish buyout companies using a sample of buyouts from the period 2008-2012. The objective is to improve the understanding of value creation in buyouts in a European context as well as to expand the general focus on agency theory and profitability through inclusion of the value-creating aspects of *parenting* in buyouts, which are expected to lead to *growth* rather than profitability improvements.

The majority of previous research applies agency theory as the theoretical lens to examine buyouts. The agency perspective has been prevalent as previous studies primarily focus on public buyouts, which offer scope for profitability improvements by reducing agency costs (Maury 2006, Meuleman, Amess et al. 2009). Thus, in general, focus of buyouts has been characterised by the agency perspective and consequently on profitability.

Interestingly, European research find limited support for the reduced agency costs hypothesis (e.g. Bergström, Grubb et al. 2007, Vinten 2007). In addition, European ownership structures and private equity activity are dominated by private companies and family businesses, which have fewer ex ante agency problems (Chung 2011, Meuleman, Amess et al. 2009, Vinten 2007). Consequently, the agency perspective, and the accompanying focus on profitability, may be less relevant in a European context. In fact, when comparing previous evidence, it appears there is a difference between how operating performance is improved in buyouts in the US and Europe: Profitability improvements appear to be prevalent in American buyouts, while growth seems to be more important in European buyouts. Since the agency perspective offers limited scope for

explaining growth in buyouts (Meuleman, Amess et al. 2009), it seems we lack a proper understanding of the buyout impact on operating performance, and consequently of value creation process, in European buyouts.

This paper argues that *parenting* is an important, and overlooked, aspect of value creation. Parenting effects are relevant in a European context, as private, family-owned companies are the largest receivers of private equity in several European economies (Dawson 2001) and the dominant ownership structure in Europe (e.g. Vinten 2007). Since private companies are more likely to suffer from a lack of financial and managerial resources (Boucly, Sraer et al. 2011, Dawson 2011), European buyouts seem to offer great potential for private equity firms to support growth and value creation by providing buyout companies new resources and capabilities.

On this basis, I hypothesise that buyout companies generally suffer from resource constraints prior to a buyout, which are alleviated through parenting by the acquiring private equity firms. These additional resources are expected to foster growth by allowing buyout companies to seize hitherto unexploited growth opportunities. Essentially, this is a hypothesis that *parenting effects* – and the *growth* they foster – are the key drivers of value creation in buyouts.

First, I examine the buyout impact on two performance dimensions: (i) Profitability and (ii) growth. The findings suggest there is no impact on buyout companies' profitability, as the estimated coefficients on all measures of profitability are statistically insignificant. This contrasts with much of previous research, particularly evidence based on public buyouts, but is consistent with more recent research on European buyouts. Findings also indicate that buyout companies grow faster and invest more than their peers, as buyout companies experience statistically significant increases in revenue, assets, employment and capital expenditures relative to peers in the post-buyout period. This evidence suggests that *growth,* rather *profitability improvements,* is a key source of value creation in Swedish buyouts.

The brief analysis of buyout rationales provided in Section 7 suggests that buyouts are seen as a vehicle to foster growth rather than to improve profitability, as 72% of buyout rationales refer to growth opportunities or existing growth plans, and comments by buyout participants indicate that growth, often through geographical expansion, is the key goal of buyouts.

Thus, evidence suggests that buyouts are carried out with an intention to achieve growth. Consequently, buyouts lead to significant increases in investments in the post-buyout period, which subsequently foster revenue growth. Hence, a key finding of this paper is that growth, rather than profitability, is the main source of value creation in Swedish buyouts, and hence indicates that the general focus on profitability may be misguided.

Second, I explore how private equity firms create value through parenting. The idea is that private equity firms create value by sharing resources with buyout companies in a way that enhances growth and creates value (Gottschalg, Meier 2005, Klier 2009, Landau, Bock 2013). Companies with pre-buyout resource constraints and unexploited growth opportunities offer the greatest scope for value creation through parenting, as private equity firms can help these types of companies seize their unexploited growth opportunities by providing the necessary resources to do so.

To examine the effect of parenting, I estimate the buyout impact on two subsamples of buyouts, which are more likely to benefit from parenting: (i) Private buyouts and (ii) buyouts with growth opportunities.

The findings provide evidence consistent with the hypothesis that parenting effects create value in buyouts through the alleviation of resource constraints, which allows buyout companies to seize growth opportunities. Firstly, growth is concentrated among companies that offer greater scope for parenting effects, as private buyouts and buyout companies with growth opportunities outperform their peers and other buyouts in terms of growth. Secondly, I find that for both subsamples, buyouts are followed by a significant increase in corporate investments. Such investments are typically critical to seize growth opportunities. For example, a company may need to expand production facilities or hire overseas sales staff to expand geographically. Such investments typically require financial capital as well as skills, experience and networks, which are resources that private equity firms typically possess.

These findings are supported by the brief analysis of buyout rationales provided in Section 7. For example, access to financial resources as well as skills, experience and networks seems to be an important and motivational factor for buyout companies. In addition, buyout participants frequently refer to existing growth opportunities available to their buyout companies, and suggest that the buyout provides them with the necessary resources to exploit these opportunities.

Overall, findings provide evidence in support of the hypothesis that buyouts alleviate resource constrains and hence allows for increased investments to take advantage of hitherto unexploited growth opportunities, which consequently fosters growth. These results indicate that the positive buyout impact on companies' post-buyout growth is an effect of parenting by the acquiring private equity firms, which means that parenting effects have a positive, indirect effect on value creation. Thus, a key finding of this paper is that parenting effects appears to be a key driver of value creation in Swedish buyouts.

To improve the understanding of parenting in buyouts, I segment parenting effects into the two types of parenting: (i) Financial resources-related parenting and (ii) managerial resources-related parenting.

The examination of financial resources-related parenting effects is carried out using three measures of financial constraints: (i) Pre-buyout company size, (ii) industry-level financial dependence and (iii) financial resources motive.

Results using industry-level financial dependence and financial resources motives suggest that buyout companies more likely to have been financially constrained companies prior to the buyout do not outperform their peers and other buyouts in terms of growth. Thus, it appears that the buyout impact on post-buyout growth is not an effect of financial resources-related parenting. This may be because Swedish capital markets are well-developed, and hence Swedish buyouts may not offer scope for value creation through the alleviation of financial constraints. I conclude that parenting in the form of alleviation of financial constraints does not appear to be a key value driver in Swedish buyouts.

Nevertheless, using pre-buyout company size, I find that small companies outperform their peers and other (large) buyouts in terms of growth in the post-buyout period – providing support for the hypothesis alleviation of financial constraints drives growth and hence value creation in buyouts. However, other "small firm characteristics" could be the root cause of this result. In fact, especially small companies' ability to grow may be undermined by a lack of managerial resources and knowledge (Macpherson, Holt 2007), meaning that small, Swedish buyout companies may suffer from a lack of skills and experience, rather than a lack of financial resources. Thus, parenting in the form of access to managerial resources may explain the results in Section 6.3.2.1 using pre-buyout company size.

Buyout rationales are employed to further examine the parenting effects stemming from access to managerial resources (i.e. skills, experience and network). This analysis provides evidence supporting the hypothesis that managerial resources-related parenting is value-creating. I find that buyout companies with a managerial resources motive grow faster and invest more than their peers – and to some extent more than other buyouts. Hence, it appears that private equity firms provide buyout companies with managerial resources through advisory and coaching as well as through their networks, which enables buyout companies to take advantage of growth opportunities. Results also indicate that managerial resources-related parenting leads to an increase in investments. This supports the hypothesis that buyouts enable buyout companies to seize hitherto unexploited growth opportunities, as such opportunities would typically require investments.

Overall, evidence using managerial resources motives – and to some extent using pre-buyout company size – indicates that the positive buyout impact on companies' post-buyout growth is to some extent an effect of managerial resources-related parenting. Hence, parenting effects related to private equity firms' skills, experience and network may be an important driver of value creation in buyouts in Sweden.

Previous evidence on public buyouts and the prominence of the agency perspective has led to a general understanding of buyouts as a "governance and control device", with an emphasis on profitability improvements, and has led to private equity firms being accused of asset stripping, layoffs and wage reductions (Wright, Amess et al. 2009). Contrary to the general view of buyouts, this paper provides evidence that buyouts are a vehicle to foster *growth*, rather than to improve profitability, as there is a significant positive buyout impact on growth in buyout companies. Hence, the findings indicate that *growth,* rather than improved profitability, is a key source of value creation in private equity.

In addition, this paper provides evidence consistent with the hypothesis that private equity firms create value through parenting, i.e. by providing buyout companies with critical resources that subsequently fosters growth, as resource-constrained companies outperform their peers and other buyouts in terms of growth in the post-buyout period. The findings also suggest that parenting in the form of alleviation of financial constraints does not drive buyout companies' post-buyout growth. Rather, findings indicate that managerial resources-related parenting has an effect on buyout companies' post-buyout growth, and can therefore be considered as an important driver of value creation in private equity. It appears that particularly the advice and coaching by private equity firms and their networks create value in buyout companies. It seems that private equity firms and their networks provide buyout companies with the adequate skills, experience, and relations to make the necessary investments to seize growth opportunities. This highlights the importance of *human and social capital* factors of private equity firms, as well as their ability to share these resources in a performance-enhancing way, for the value creation processes in buyouts.

To sum up, this paper provides evidence that growth, rather than improved profitability, is the key source of value creation in private equity buyouts. In addition, evidence indicates that parenting effects, especially parenting effects stemming from private equity firm's skills, experience and network, foster growth in buyout companies, and are hence a key driver of value creation in buyouts in a Swedish context.

Few studies examine the underlying drivers of post-buyout growth in European buyouts, which means that we currently have a limited understanding of how buyouts create growth. Based on parenting perspectives, this paper contributes with an examination of how growth is created in the post-buyout period. Since findings show that parenting effects are an important driver of value creation in buyouts, and that especially human and social

capital factors of private equity firms (i.e. expertise and skills provided by private equity firms and their networks) are important for parenting-related growth, it is relevant for future research to develop an enhanced understanding of the contributions of parenting effects as well as human and social capital related factors.

It seems that especially European buyouts "suffer" from a misguided understanding of how value is created. Therefore, it is important to provide further evidence on how value is created in European buyouts, and examine how private equity firms contribute to growth in buyout companies. For practical purposes, this may be important to e.g. avoid law makers over-regulating the industry based on evidence that may not be representative of today's typical buyout in Europe.

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APPENDICES

Appendix A

Additional test of Hypothesis 1 using split samples. Table A1 presents the results of estimating equation 2 on two sub-samples: (i) Private buyouts and (ii) Divisional, public and secondary buyouts ("other buyouts"). The dependent variables are ROS, based on EBITDA and cash flow, respectively, and ROA, based on EBITDA and cash flow, respectively.

Table A1

Sample of buyout companies and their control firms for the sample period 2008-2012. Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. post is a dummy equal to one for the three years following the buyout and zero for the three years prior to the buyout. LBO is a dummy equal to one if the observation is a buyout target and zero if it is a control firm. 'Other buyouts' include divisional, public and secondary buyouts. Assets are the sum of fixed assets and working capital. Cash flow are EBITDA less capital expenditures. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ROS (EBITDA/Revenue)	**ROS (Cash flow/Revenue)**	**ROA (EBITDA/Assets)**	**ROA (Cash flow/Assets)**
Private buyouts				
post x LBO	-.007	-.012	.063	.054
	(.019)	(.018)	(.147)	(.167)
post	-.009	-.016	-.130	-.174
	(.011)	(.016)	(.124)	(.136)
Observations	360	353	351	344
Number of deals	26	26	26	26
Adj. R^2	.045	0.085	0.031	0.035
Other buyouts				
post x LBO	-.019	-.027	-.246*	-.222
	(.016)	.021	(.123)	(.145)
post	.003	.011	.028	.076
	(.011)	(.015)	(.058)	(.073)
Observations	489	479	486	476
Number of deals	35	35	35	35
Adj. R^2	.044	.052	.065	0.048

Appendix B

Supplementary test for section 6.5.2.2, following the methodology by Boucly, Sraer et al. (2011). Table B1 presents the results of estimating equation 4 on two sub-samples: (i) Private buyouts and (ii) Divisional, public and secondary buyouts ("other buyouts"). Dependent variables are various measures of size and growth: ln of revenue, ln of EBITDA, ln of fixed assets plus working capital, ln of employees and ln capital expenditures.

Table B1

Sample of buyout companies and their control firms for the sample period 2008-2012. Estimates of the impact of a buyout on buyout companies' operating performance using the DiD approach. All regressions include firm and year fixed effects. post is a dummy equal to one for the three years following the buyout and zero for the three years prior to the buyout. LBO is a dummy equal to one if the observation is a buyout target and zero if it is a control firm. FD is a measure of industry-level financial dependency. 'Other buyouts' include divisional, public and secondary buyouts. ln(Assets) is the natural logarithm of fixed assets + working capital. CAPEX is capital expenditures. Other variables are self-explanatory. Error terms are clustered at the firm level. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

	ln (Revenue)	**ln (EBITDA)**	**ln (Assets)**	**ln (Employees)**	**ln (CAPEX)**
Private buyouts					
post x LBO x FD	-.055	-.318	.380	-.913	-.076
	(.152)	(.270)	(.245)	(.137)	(.506)
post x LBO	.227	.086	.516*	.316*	.672
	(.167)	(.303)	(.295)	(.163)	(.577)
post x FD	.056	.134	.017	.022	-.053
	(.064)	(.177)	(.101)	(.031)	(.340)
post	-.101	-.331**	-.069	-.065	-.139
	.088	(146)	(140)	(.067)	(.419)
Observations	360	329	350	359	317
Number of deals	26	26	26	26	25
Adj. R^2	.244	.151	.163	.314	.095
Other buyouts					
post x LBO x FD	.076	.024	.232	.104	.307
	(.098)	(.239)	(.178)	(.111)	(.363)
post x LBO	.143	.041	.400**	.250***	.282
	(.104)	(.239)	(.199)	(.091)	(.378)
post x FD	0.081	0.177	0.092	0.004	0.185
	-0.051	-0.239	-0.122	-0.038	-0.378
post	0.055	0.101	-0.017	-0.046	-0.182
	-0.06	-0.148	-0.129	-0.05	-0.298
Observations	489	454	484	490	434
Number of deals	35	35	35	35	35
Adj. R^2	0.28	0.065	0.15	0.203	0.055