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Value Creation in Growth Capital and Buyout Transactions

„A comparative Analysis between different private equity investment types“

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Abstract

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Key words: Private Equity, Value Creation, Active Ownership, Investment Determinants

Purpose: To investigate the financial firm characteristics determining investment decisions alongside value creation differences across different investment types and whether private equity investors have a treatment effect on operating firm performance.

Theoretical perspectives: The theoretical perspectives of this paper consist of contracting related theories applicable in the private equity environment (asymmetric information, agency theory and free cashflow hypothesis) which set the framework for the different value creation mechanisms applied by private equity sponsors to overcome previous inefficiencies in firms.

Methodology: This study uses a quasi-experimental setting derived from two different control group matchings (PSM and calipermatch), after which a Difference-in-Differences technique is applied to evaluate the causal impact of the private equity sponsor's investment on operating firm performance. The regressions use financial statement metrics as main dependent variables, as well as additional pre-investment control variables to control for firm heterogeneity.

Empirical foundation: The empirical foundation consists of a unique dataset of Swedish private firms (Serrano Database), covering more than 600,000 companies between 1998 and 2022. This data is merged with a sample of transactions from S&P Capital IQ Pro containing growth capital, leveraged buyouts and secondary buyouts, leading us to analyze a total of 516 transactions in our main specification.

Conclusions: The study confirms that value creation across growth capital, leveraged buyouts and secondary buyouts is not uniform, especially based on different operational engineering mechanisms. We find moderate support for financial engineering motives for the two primary investment types. Additionally, albeit the ongoing academic debate whether secondary buyouts are an exit strategy for "lemons", our results indicate that private equity investors can create value for target companies, through EBITDA expansion.

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Abbreviations

CAGR	Compound Annual Growth Rate
CEO	Chief Executive Officer
CIQ	Standard & Poor's Capital IQ Pro
DiD	Differences-in-Differences
EBITDA	Earnings before interest taxes and depreciation
EBT	Earnings before taxes
FE	Fixed Effects
GC	Growth Capital
GDP	Gross Domestic Product
GP	General Partner
IT	Information Technology
LBO	Leveraged Buyout
LP	Limited Partner
MBO	Management Buyout
OLS	Ordinary Least Squares
PE	Private Equity
PSM	Propensity Score Matching
ROA	Return on Assets
ROE	Return on Equity
SBO	Secondary Buyout
SEK k	Swedish krona depicted in thousands
SEK m	Swedish krona depicted in millions
SME	Small and Medium-sized Enterprises
SNI	Standard för svensk näringsgrensindelning
SVCA	Swedish Private Equity & Venture Capital Association
UK	United Kingdom
US	United States of America
VC	Venture Capital

1. Introduction

1.1 Background and motivation

Private equity (PE) markets in the Nordics have been long renowned for superior performance due to a mix of high-quality investment opportunities, institutional stability, and innovative entrepreneurship (Stepstone, 2023). Stepstone (2023) reports that, since 2003, the average realized buyout returns in the Nordics reached a multiple of 2.7x, outperforming Western Europe (2.3x) and North America (2.4x). Sweden as the largest Nordic PE market, ranks third in Europe on a GDP-adjusted basis (SVCA, 2022) and is integral to this outperformance. Therefore, PE ownership in Sweden may be linked to unique value creation mechanisms in target firms, making it a compelling setting to examine post-investment firm performance. While historically, the Swedish PE market was dominated by buyout investors in terms of deal volume, a structural shift after 2020 occurred, with growth capital investments gaining in relative importance (see section 2.1.1). Invest Europe data indicates that in 2023, the overall volume in growth capital investments accounted for 43% of total buyout investment volume. The attractiveness of the Swedish high-growth private company sector is further emphasized through the 2024 Global Innovation Index, ranking Sweden second among 133 developed economies worldwide (Dealroom, 2025). Invest Europe data highlights a compound annual growth rate (CAGR) of 12.7% in investment volume (2007-2023) for growth capital transactions, underlining the increased importance in the Swedish PE market.

1.2 Problematization

The rising prominence of growth capital in the Swedish PE landscape calls for its recognition as a distinct class of private capital. Despite growth capital funds quadrupling in size from 2015 to 2021 (Lattanzio et al., 2023), this segment remains under-researched globally and entirely unexplored in Sweden. This limited coverage as a distinct investment class leaves the value creation mechanisms open for academic debate (Lavery et al., 2023). In particular, how growth capital compares to other PE investment types in driving firm performance and value creation remains largely unexamined. While leveraged buyouts are well studied for their debt-driven governance mechanisms (Guo et al., 2011) and short-term profitability boosts (Singh, 1990), only one prior study by Bonini (2015) comparatively analyzed the performance differentials between the primary buyout and secondary buyout in a European sample. With the academic debate centering around agency issues and complementary skills of PE investors, the question posed by Achleitner and Figge (2014) - whether secondary buyouts serve as exit routes for

"lemons" in the PE market - remains unresolved. To address these gaps, this study investigates whether and through which mechanisms, growth capital, leveraged buyout, and secondary buyout investors create value in Swedish private companies.

1.3 Purpose and research question

The purpose of this study is to investigate how value creation differs across the different private equity investment types, namely, *growth capital (GC)*, *primary leveraged buyouts (LBOs),* and *secondary buyouts (SBOs)*. Therefore, we perform a preliminary assessment for growth capital and leveraged buyouts to determine the pre-deal firm characteristics that attract PE investors in the Swedish market. Using a fixed effects regression model, we aim to analyze whether leverage is a distinguishable characteristic between firms receiving GC and firms undergoing an LBO, as implied in the academic literature and based on financial engineering motives. At the core of this study, we conduct a Difference-in-Difference (DiD) approach for each investment type to investigate whether the value creation mechanisms outlined in our theoretical background result in a treatment effect that is observable in the target firm performance and driven by the investment. Therefore, the following research questions arise for this study:

RQ1: Is leverage in the target company a distinguishable characteristic and differs between the primary investment types, as indicated by the financial engineering motive?

RQ2: Do private equity investors have a treatment effect on the target company, and how do these differ across the different investment types?

1.4 Main findings

The initial assessment of the determinants shows that firms targeted by different PE strategies possess distinct characteristics. Whilst GC-backed firms tend to be smaller, with high pre-deals sales growth, LBO target firms showcase a combination of sufficient net sales, higher EBITDA margins and lower leverage, both compared to their matched control groups. Further, our analysis reveals clear heterogeneity in value creation across the different investment types. Growth capital investments lead to subsequent treatment effects in net sales (44,292k SEK) and total assets (49,021k SEK), allowing GC-backed firms to achieve higher scalability and expansion. Leveraged buyout transactions generate significant increases in net sales (62,171k SEK), total assets (72,613k SEK), and most notably EBITDA (11,592k SEK), driven by operational efficiency increases and potential add-on acquisitions while making inferences

based on net income remains inconclusive. This indicates that the focus of LBO investors lies on EBITDA, aligning with PE literature. Although secondary buyouts show no improvements in sales as those firms are in a more mature stage, they enable total assets (142,269k SEK) and EBITDA (26,159k SEK) improvements by acquiring unfinished platforms and enhancing margins beyond those of similar mature firms.

1.5 Contribution

Our primary contribution to the existing research is by providing a comparison of value creation across different investment types. While the main body of existing research focuses solely on PE as a homogeneous group or solely at individual investment types, we offer a detailed separation, highlighting that value creation in Swedish PE transactions is not uniform. A methodological contribution of this study lies in the construction of the control group for the DiD regression and matching procedures. The reliability of causal inferences in such settings depends on the pool of potential control firms. By having access to a database with over 600,000 Swedish private companies, this study mitigates limitations noted in prior literature that frequently relied on public comparable companies (Guo et al., 2011; Cohn et al., 2014; Kick & Schwetzler, 2025). The scope of the dataset enables the formation of a control group that mirrors the characteristics of PE target firms regarding financials, and industry classification. Lastly, we investigate a distinct sample of 71 SBO transactions, for which we also analyze the corresponding primary buyouts in the sample. This allows us to follow the same companies over time, tracking their full history under PE ownership, and assess long-term value creation in the Swedish PE industry. Despite the deviating sample sizes between primary and secondary buyouts, the results provide a meaningful contribution to the ongoing academic debate.

1.6 Outline

The remainder of the paper is divided into the following sections. Section two provides an overview of the Swedish PE market and the different investment types. Section three reviews the theoretical and empirical background relevant to the private equity research field. Section four establishes our empirical hypotheses. Sections five and six discuss the data collection process and methods used to test the hypotheses. Finally, section seven includes the empirical analysis, while section eight concludes the main findings and highlights future research.

2. The Swedish private equity market and investment types

2.1.1 Overview of the Swedish private equity market

The Swedish PE market is attractive to study, given its importance for the overall economy. According to the *Swedish Venture Capital & Private Equity Association* (SVCA), Sweden has the third-largest private equity market in Europe relative to GDP (SVCA, 2022). The study estimates that the total volume of PE investments increases the Swedish GDP by 3-5% permanently, underpinning the integral role of PE-owned companies in the Swedish economy. With over 240,000 employees working in Swedish PE-owned private companies, understanding the implications of PE investments is also relevant for society (SVCA, 2022). Having access to a confidential dataset from Invest Europe, we analyze trends in Swedish growth capital and buyout transactions. Figure 1 shows the total investment volume of GC transactions, which grew at a CAGR of 12.7% (2007-2023), with a substantial increase post-2020. With 71 transactions in 2023, the number of GC investments more than doubled compared to 2016. Overall, this reflects a favorable market development and underpins the strong pipeline of high-growth Swedish companies attracting growth capital investments (SVCA, 2022). Similarly, figure 2 presents the development of buyout transactions for Swedish companies. Generally, buyout markets are more mature in Sweden compared to growth capital, demonstrated by the higher average deal volume which fluctuates less over time. Historically, the number and total volume of buyout transactions were substantially above growth capital. However, this appears to change after 2020, with the number of buyout transactions for the first time being below the GC investments in 2023. Similarly, by 2023 total investment volume in growth capital transactions has increased to 43% of buyout investment volume. This indicates a structural change with growth capital gaining in relative importance. In light of this development, the following section seeks to deepen the understanding of key subcategories of private equity transactions most relevant to Sweden.

2.1.2 Investment types

Both growth capital and buyout investments possess distinct characteristics. Growth capital investments can be reclassified into growth equity investments and growth buyouts, distinguished by the acquired stake (Lattanzio et al., 2023). While growth equity investments involve minority stake ownerships through preferred shares, growth buyouts aim to gain control over the target company through a majority stake. Lattanzio et al. (2023) identify that target firms are managed by their founders without a history of previous PE ownership.

Moreover, they possess a proven business model with substantial revenue growth potential, and they are either EBITDA positive already or expected to be soon. For growth buyouts, academia agrees that the acquisition may be partially debt financed while the debt portion in acquisition financing is substantially lower compared to LBOs (Ayash et al., 2017). In previous buyout literature (Cohn et al., 2014; Smith, 1990; Boucly et al., 2011), growth buyouts are usually not treated as a subcategory of growth capital. However, the data in this study from S&P Capital IQ Pro indicates that PE firms undertaking growth equity investments also engage in growth buyouts, which we accordingly reclassify as growth capital.

Furthermore, this study focuses on mature PE investments known as LBOs and SBOs. LBOs are often full-control acquisitions of either public or private firms, with the majority being debt-financed, requiring target firms to have a higher debt servicing capacity (Gruener & Marbuger, 2022). LBOs and their implications on operating firm performance are extensively studied. Thus, this study adds another dimension by focusing on previously bought out companies that are in a later stage exited via a secondary buyout. According to Bonini (2015), SBOs are defined as transactions in which a target firm that previously underwent a buyout is sold to another private equity investor. Therefore, control shifts from the exiting private equity sponsor to the new PE investor. This exit form gained popularity in the early 2000s, increasing substantially to 40% of all private equity exits, underpinning their relevance (Strömberg, 2008).

3. Literature review

The literature review is divided into a theoretical and an empirical section. The theoretical part discusses the core concepts relevant to PE ownership, evolving around contracting-related theories such as agency theory and asymmetric information, which set the framework for the different value creation mechanisms of private equity. Thereafter, we discuss contemporary empirical research findings on the impact of private equity on value creation and firm performance, functioning as the foundation for the hypothesis development.

3.1 Theoretical background

3.1.1 Contracting related theories

3.1.1.1 Information Asymmetry

In the well-renowned “Market for Lemons” paper, Akerlof (1970) introduces the concept of adverse selection, highlighting how varying degrees of information can result in inefficient

market outcomes. In extension, Holmström (1979) develops the concept of moral hazard, demonstrating that after contract completion, unobservable agent effort creates incentives to shirk or use resources for their benefit by exacerbating private information. These information asymmetries can arise before an investment (ex-ante) and after an investment has been made (ex-post). In the ex-ante situation, financial investors cannot fully assess the quality of a firm or its management, whilst ex-post managers possess superior private information about future performance that they are unwilling to share (Sood, 2003). Private equity sponsors mitigate ex-ante and ex-post information asymmetries through careful due diligence, covenants, and further measures discussed in section 3.1.2 (Wynant et al., 2023; Gompers & Lerner, 1996).

3.1.1.2 Agency theory

The conditions of information asymmetry and the nature of incomplete contracts (Grossman & Hart, 1986; Hart & Moore, 1990) create incentives for managers to act in their own interests rather than in those of shareholders, thereby setting the foundation for agency conflicts. Jensen and Meckling (1976) elaborate on this by describing the principal-agent theory as a consequence of the separation between ownership and control. Owners (principals) delegate decision rights to managers (agents), whose unobservable actions may diverge from the principal's interests (Jensen & Meckling, 1976; Eisenhardt, 1989). This separation between ownership and control introduces agency frictions, including monitoring costs incurred by the principal to oversee management actions, bonding costs borne by the agent to omit opportunistic behavior, and a residual loss reflecting the remaining divergence between agent decisions and the principal's best interest (Jensen & Meckling, 1976). The authors suggest that as managers hold smaller equity stakes, their incentive to maximize shareholder value diminishes, especially in firms with dispersed ownership where effective monitoring is costly. Such misalignment can result in underperformance and inefficiencies, as managers lack sufficient incentives to align with shareholder interests. This friction is particularly pronounced in a private firm context, where limited external financing and the absence of capital market discipline increase managerial entrenchment (Diamond, 1984; Fama & Jensen, 1983). These dynamics underscore the importance of active investors, which combine concentrated ownership with active governance, thereby enhancing their capacity to mitigate agency costs (Meuleman, 2009;Kaplan & Stein, 1993; Wood & Wright, 2009).

3.1.1.3 Free cashflow hypothesis

Jensen (1986) introduces the Free Cashflow hypothesis, arguing that managers in mature, cash-generating firms may invest in negative net present value projects, thereby reducing firm value. PE firms address this through increased leverage, which imposes external discipline through debt repayments and limits managerial entrenchment over internal funds (Jensen, 1986; Kaplan & Strömberg, 2009). Further, PE sponsors reinforce alignment by granting equity stakes to the management, reducing agency costs and enabling efficient capital allocation. Contrary to LBOs, minority investors avoid high leverage, which limits their ability to enforce financial discipline through capital structure (Kaplan & Strömberg, 2003). Nevertheless, these investors use alternative mechanisms to reduce frictions. They commonly hold substantial equity positions, exert board influence, engage actively in monitoring and strategic decision-making (Bottazzi, Da Rin & Hellman, 2009; Kaplan & Strömberg, 2003; Gorman & Sahlman, 1989). These efforts help ensure alignment between managers and investors even without formal control rights. GC investors often complement governance involvement with strategic advice, operational support, network access, and follow-on financing (Chemmanur et al., 2011; Hellmann & Puri, 2002).

3.1.2 Private equity and value creation

According to Ljungqvist (2024), value creation of PE remains controversial with studies showing mixed results. While the private equity industry prides itself on creating value for investors and society, critics argue that PE investors prioritize short-term gains by restructuring the workforce or using excessive debt at the expense of long-term value (Ljungqvist, 2024). In line with Ljungqvist (2024), we identify three main strategies how investors aim to create value in target companies: (1) financial engineering, (2) governance engineering, (3) operational engineering. We build on these categories as the main drivers for firm performance in the post-investment period.

3.1.2.1 Financial engineering

Modigliani and Miller's (1958) irrelevance theory lies at the core of financial engineering. The authors posit that in perfect frictionless markets, the value of a firm does not depend on its financing decisions, arguing that capital structure is irrelevant to firm value. Later studies (Modigliani & Miller, 1963; Stiglitz, 1969; Miller, 1977; DeAngelo & Masulis, 1980) show that in reality, market frictions (e.g., taxes, bankruptcy, and agency costs) undermine their

original implications and capital structure choices impact firm value. Early studies on management buyouts (MBOs) in the US extended on this, highlighting that by leveraging portfolio companies, PE firms could increase firm value through increasing interest-related tax deductions associated with a higher debt balance (Lowenstein, 1985; Kaplan, 1989; Schipper & Smith, 1991). Nevertheless, levering the target firm remains a balancing act for PE investors since benefits from interest-related tax deductions may be outweighed by increased costs of financial distress (Kaplan & Strömberg, 2009). Recent research on LBOs (Guo et al., 2011; Cohn et al., 2014) highlights that financial engineering remains a vital value creation mechanism for PE investors.

3.1.2.2 Governance engineering

Private equity investors employ different governance mechanisms to reduce agency costs and issues stemming from incomplete contracts (Wynant et al., 2023). While private equity is a heterogeneous concept, different investment types commonly rely on mechanisms to align agent and principal interests (Eisenhardt, 1989). Interest alignment is generally achieved through increasing managerial ownership in the firm post-acquisition, particularly for previously public companies where separation of ownership and control entails incentive alignment issues (Wright et al., 2009; Jensen, 1989). Gompers et al. (2016) document that PE investors allocate 17% of equity to management and employees, substantially higher than common inside equity ownership in public companies. In previously private companies with limited separation of ownership and control pre-transaction, interest alignment can be achieved by allowing management to retain minority equity stakes (Wynant et al., 2023). However, these transactions offer less scope for governance improvements since agency issues beforehand are minimal due to limited separation of ownership and control (Chrisman, Chua, & Litz, 2004). In addition, PE firms require management to make a meaningful private investment in the company, exposing their personal wealth to the downside of bad management decisions (Kaplan & Strömberg, 2009; Castellaneta et al., 2019).

Regarding the post-investment period, monitoring target improvements is central. To reduce asymmetric information, management provides periodic financial information on operational and financial metrics (Wynant et al., 2023). This enables the PE firm to react timely to diversions from the original business plan and adjust operating strategies. Besides that, PE investors require board representation to enable sufficient monitoring (Nikoskelainen & Wright, 2007). Manne's (1965) market for corporate control hypothesis suggests a corrective

mechanism to replace underperforming management teams. Jensen and Ruback (1983) argue that PE firms replace inefficient management teams, enabling a new path for value creation. Cornelli et al. (2013) support this by establishing a causal link between forced CEO turnover in PE-backed firms and improved firm performance.

Recent surveys highlight that governance engineering is central to practitioner's value creation strategies (Gompers et al., 2016; Acharya et al., 2009a). Although Gompers et al. (2016) document that most PE investors do not replace the management team at acquisition, 30% still do. Management replacement rises to 50% post-investment, verifying their active role in enacting governance changes. Similarly, Acharya et al. (2009a) document that CEO changes occurred in 69% of UK buyout deals. Both surveys note that boards are restructured to be smaller with a mix of insiders and outsiders. Acharya et al. (2009a) further establish a correlation between PE deal performance and governance interventions, where frequent CEO meetings and interactions with management appear to drive abnormal performance. Overall, academia agrees that governance engineering is essential for value creation by solving agency issues and asymmetric information.

3.1.2.3 Operational engineering

Additionally, PE firms aim to create value through operational engineering, which can be clustered into three categories. First, PE firms apply superior industry-specific knowledge to portfolio companies (Kaplan & Strömberg, 2009; Bernstein & Sheen, 2016; Acharya et al., 2013). Central to this is the general partners (GPs) expertise, typically exercised through board seat in the target, facilitating effective knowledge transfer (Schmidt, Nowak & Knigge 2004; Jelic, Zhou & Wright, 2018). Fitzpatrick, Kellner, and Williams (2016) outline that PE firms typically develop detailed strategic plans that contain business-unit related, longer-term performance metrics, e.g., EBITDA and free cashflow measures, rather than commonly used "one-metric-fits-all" approaches, such as earnings per share, to improve operational efficiency. Biesinger, Bircan, and Ljungqvist (2023) further argue that PE firms implement strategic value creation plans that contain, amongst others, acquisition possibilities and productivity improvements.

Secondly, PE firms implement a variety of operational performance improvements. Singh (1990) finds that LBO-backed firms reduce inventory levels and receivables, while Holthausen and Larcker (1996) identify working capital improvements. Niemeyer and Simpson (2008) show that capital utilization becomes more efficient post buyout by extending accounts

payable, shortening receivables, and tightening inventory. Cost reductions represent another measure of operational engineering and are initiated following a buyout (Muscarella & Vetsuypens, 1990). Davis et al. (2014) suggest that cost-cutting often involves job destruction and reduced earnings per worker, though some of these effects are offset by job creation at new establishments. Conversely, Olsson and Tåg (2012) find that buyouts in Sweden are associated with lower unemployment risk and higher wages during the four years following the buyout, emphasizing a more nuanced view on employee and productivity effects. Kaplan (1989) outlines that capital expenditures decline post-buyout, consistent with Fox and Marcus (1992), who attribute this to LBOs crowding out discretionary spending.

The third measure of operational engineering involves strategic refocusing of the business model. Research studies suggest that unrelated business units underperform, and divestments of underutilized assets lead to higher operational performance (Phan & Hill, 1995). Beyond focusing on core operations, PE firms often implement buy-and-build strategies, acquiring a platform company and expanding it through follow-on acquisitions to realize economies of scale and scope (Smit, 2001). Hammer et al. (2022) find that buy-and-build strategies yield above-average equity returns and business expansion by creating synergies and driving market consolidation. These forms of direct interventions and knowledge transfer are described as the parenting advantage in which the PE firm, unlike other ownership forms, has the resources and strategic control to actively develop the portfolio company's operations (Bergström, Grubb & Jonsson, 2007; Wright et al. 2000).

3.2 Empirical literature

The following section is divided into relevant empirical research regarding growth capital and private equity. The latter is subsequently divided into primary buyouts and secondary buyouts.

3.2.1 Growth capital and firm performance

Lavery et al. (2023) provide the first study on growth equity as a distinct asset class, comparing firm performance to buyouts and VC investments using a DiD approach on 1,512 UK firms (2000-2021). The study reveals that GE-backed firms outperform control firms in terms of growth in sales, asset, and earnings, but at a lower rate than LBO and VC-backed firms.

Given the lack of empirical studies on growth equity and growth buyouts, the VC literature provides another reference for understanding growth equity. Both investment types target growing companies rather than mature businesses, acquire minority stakes, and rarely rely on

significant amounts of debt. Chemmanur et al. (2011) find that 1,881 VC-backed U.S. firms exhibit improved firm performance over the 4-year post-investment period. Using PSM matching and regression discontinuity analysis, improvements are driven by active VC involvement rather than selection effects. Their findings align with Puri and Zarutskie (2012), investigating approx. 6,000 US VC-backed firms and matched control groups from 1981 to 2005. The former experience significantly higher sales growth than their non-VC-backed counterparts. The authors show that treated firms are not more profitable at exit, concluding that investors emphasize growth over short-term profitability.

3.2.2 Private equity and firm performance

3.2.2.1 Primary buyout transactions

In a seminal study on buyouts and firm performance, Kaplan (1989) examined 48 management buyouts (MBOs) in the 1980s and found that buyouts significantly improve operating returns and firm value. Similarly, Smith (1990) reports significant improvements in operating returns for 58 public firms between 1977 and 1986, comparing pre- and post-buyout performance. Cohn et al. (2014) examined 317 US public-to-private buyouts between 1995 and 2007, finding limited evidence of post-buyout operating improvements, specifically reporting no significant changes in return on assets (ROA) or operating margins relative to industry peers. However, the increased leverage and reduced tax payments suggest financial engineering motives. Further, Kärnä and Myers (2025) conduct a DiD setting on Swedish LBO targets experiencing higher revenues and total assets post-buyout. However, they find no improvements in EBITDA or earnings, reinforcing the difficulty of improving operational efficiency. Badunenko et al. (2010) examine how holding periods influence performance in European firms, finding short-term underperformance among buyout firms relative to control firms. However, after a six-year holding period, gaps diminish, indicating more favorable long-term effects.

Desbrières and Schatt (2002) report lower ROE improvements in French LBOs compared to the US and UK, attributing this to lower debt levels, reducing managerial pressure and cash flow constraints. In contrast, Boucly et al. (2011) analyzing French buyouts find significant growth in sales, employment, and assets compared to control firms. The authors argue that PE firms act as growth accelerators by alleviating financial constraints. Additionally, Bernstein et al. (2019) find that sponsor-backed firms performed better during financial crises, while Hotchkiss et al. (2021) show that PE-backed firms restructure 35% faster in severe distress. Boucly et al. (2011) attribute this advantage to sponsors' capital infusion and greater access to

capital markets, while Bernstein et al. (2019) also highlight reduced investment activity as a stabilizing factor.

3.2.2.2 Secondary buyout transactions

Since the emergence of SBOs in the mid-2000s, academics tried to understand the implications of value creation (Wang, 2012; Bonini, 2015). Academia acknowledges that in previously PE-owned companies, most value creation drivers have been levered, raising the question of how a new investor contributes value. In this light, Achleitner and Figge (2014) question whether SBOs are the exit strategy for "lemons". Several studies (Arcot et al. 2015; Degeorge et al. 2016) document agency issues in SBOs relating to unsolved agency conflicts between limited- (LP) and general partners (GP). Conflicts center around GPs gambling with LPs money with the PE earning carry if the transaction is successful but losing LPs money if not (Ljungqvist, 2024). Moreover, the GP avoids substantial amounts of unspent capital in previous funds through SBOs, highlighting that incentive conflicts might lead to acquisitions with limited value creation potential (Arcot et al. 2015).

However, the theoretical arguments on value creation in SBOs are ambiguous. Achleitner and Figge (2014) argue that the value creation potential exceeds the holding period of primary transactions. This is particularly relevant for the discussed buy-and-build strategies. Hammer et al. (2022) argue that since building a platform company and integrating add-on acquisitions take more time than the average holding period, the first investor may not capture the full value. Moreover, PE investors may have complementary skills and resources in geographic reach, business networks, and industry expertise (Achleitner & Figge, 2014; Sousa, 2010).

Empirical results on value creation in SBO transactions show mixed results. Achleitner and Figge (2014) analyzed 2,456 European transactions (1990-2010), finding no indication that SBOs offer lower equity returns (ROE) and operational improvement potential. Analyzing a sample of 140 SBOs and 465 primary buyouts in the UK from 1997 to 2008, Wang (2012) finds mixed support for his efficiency gains hypothesis. While operating profits increase post-SBO, the size of the firm increases as well, leading to lower profitability metrics in the post-SBO period (Wang, 2012). Bonini (2015) followed 163 European companies to assess operational improvements over time. Applying a two-stage matching process with industry peers, the first buyout generates significant operating performance improvements, while the secondary buyout indicates limited improvements (Bonini, 2015).

4. Hypotheses development

Building on investment type characteristics, insights from contracting-related theories, value creation mechanisms, and empirical findings we formulate hypotheses on value creation in private equity.

4.1 Hypotheses for primary transactions and value creation

Grounded in capital structure theory, growth capital investments limit debt usage and rely on new equity issuance (Lattanzio et al., 2023). Minority ownerships entail limited abilities to enforce managerial discipline through capital structure, to reduce agency costs and impose fiscal discipline (Kaplan & Strömberg, 2003). Hence, GC investors rely on operational and governance engineering over financial engineering motives to create value in the target company. Financial discipline in minority stake transactions is enforced through board representation and staged financing (Sahlman, 1990; Gompers, 1995). Furthermore, high-growth firms require sufficient cash reserves to exploit unforeseen market opportunities. Hence, investors avoid leverage to preserve financial flexibility (Denis & McKeon, 2011).

In contrast, the free cashflow hypothesis (Jensen, 1986) posits that LBO investors use leverage to enforce financial discipline and crowd out discretionary spending, mitigating overinvestment and managerial entrenchment, thereby reducing agency costs (Kaplan & Strömberg, 2009). Ljungqvist (2024) suggests that while the importance of financial engineering may have decreased compared to the 1980s, levering up target companies to generate excess returns remains part of the PE business model. A recent study by Sveriges Riksbank (2025) highlights that despite more conservative lending practices in Sweden, LBO targets exhibit significantly higher leverage with an average debt-to-assets ratio of 52% in 2023. In conclusion, we hypothesize that the effect of the investment on leverage in the transaction year differs between the two investment types:

H1a: Growth capital investments negatively affect the leverage of the portfolio company in the transaction year.
H1b: Buyout transactions (LBOs) positively affect the leverage of the portfolio company in the transaction year.

By alleviating monetary constraints, growth capital investors enable firms to scale operations, enter new markets, and enhance revenue generation (Lavery et al., 2023). Moreover, the experience and network of the investors provide firms with access to new distribution channels and partnerships that can accelerate product commercialization (Hochberg et al., 2007). Additionally, through staged financing and operating targets set by the PE board representatives, the management team faces pressure to grow the company to secure future funding and maintain investor confidence (Sahlman, 1990; Gompers, 1995). Lavery et al. (2023) found that growth equity-backed firms in the UK outperformed control firms regarding revenue growth post-investment. Similarly, Puri and Zarutskie (2012) showed that VC-backed firms experienced higher sales growth than non-VC-backed firms due to active investor involvement.

For mature companies targeted by LBO investors, strategic redirection and business-unit strategies result in the divestment of underperforming segments and an improved focus on core markets, thereby enhancing revenue potential (Fitzpatrick, Kellner & Williams, 2016; Phan and Hill, 1995). Improvements in working capital management (Singh, 1990; Niemeyer & Simpson, 2008), increase capital efficiency, enabling excess funds to be reinvested in high-growth segments. Furthermore, buy-and-build strategies create economies of scale and scope with complementary firms providing improved geographic reach, broadened product offerings, or new customer segments (Smit, 2001; Hammer et al., 2022). Empirical evidence supports this argumentation, with Kärnä and Myers (2025) showing that Swedish LBOs support revenue expansion. Similarly, Boucly et al. (2011) find significant sales growth in French buyouts. However, the mixed results operating improvements in Cohn et al. (2014) and Desbrières and Schatt (2002), who attribute value creation to financial engineering, suggests limited top-line expansion potential for mature companies. In conclusion, we hypothesize that the effect of the investment on sales expansion is similar for the two investment types:

H2a: Growth capital investments positively affect sales expansion of the portfolio company in the post-transaction period
H2b: Buyout transactions (LBOs) positively affect sales expansion of the portfolio company in the post-transaction period

Agency theory posits that active investors enhance firm performance by aligning incentives and reducing managerial inefficiencies (Jensen & Meckling, 1976). Unlike traditional buyout funds, which improve profitability through cost-cutting and financial restructuring (Kaplan, 1989; Smith, 1990), growth capital funds focus on long-term growth prospects. This often involves heavy reinvestment in expansion, leading to short-term profitability fluctuations. The study by Lavery et al. (2023) suggest that GE-backed firms experience earnings growth but face higher financial distress due to increased leverage in the years following the transaction. Puri and Zarutskie (2012) observed no bottom-line growth as firms focus on scaling.

In contrast, LBOs aim to improve profitability through efficiency gains, cost reductions, and financial discipline (Muscarella & Vetsuypens, 1990; Fox & Marcus, 1992). The increased managerial incentives (Gompers et al., 2016), tighter monitoring, and board restructuring to reduce agency conflicts (Nikoskelainen & Wright, 2007) contribute to improved profitability. In addition, cost-cutting initiatives implemented by private equity sponsors support this expectation (Davis et al., 2014). However, we acknowledge mixed empirical evidence, with Cohn et al. (2014) finding no significant changes in ROA, while Kärnä and Myers (2025) report no improvements in profitability among Swedish targets. In conclusion, we hypothesize that the effect of the investment on profitability differs between the two investment types:

H3a: Growth capital investments negatively affect profitability of the portfolio company in the post transaction period
H3b: Buyout transactions (LBOs) positively affect profitability of the portfolio company in the post-transaction period

In line with Barney (1991), growth capital investments may facilitate the acquisition of tangible and intangible assets to enable expansion. The required board representation of growth capital investors enables monitoring capital allocation and reducing ex-post information asymmetries. This mitigates underinvestment problems, particularly relevant in high-growth firms, by aligning asset expansion with investor expectations to ensure continued growth (Kaplan & Strömberg, 2003). John et al. (2008) show that improved governance mechanisms for US companies reduce managerial conservatism and enable value-enhancing risk-taking. Empirically, this translates to increased asset growth in their firm sample. Similarly, Lavery et al. (2023) documented that GE-backed firms in the UK expanded their asset base faster than control firms.

In the context of LBOs, a common approach in Sweden is implementing buy-and-build strategies due to fragmented industries (Døskeland & Strömberg, 2018). Generally, the portfolio company is complemented by acquiring corresponding firms in the same industry, leading to acquisitive growth (Smit, 2001; Hammer et al., 2022). This approach increases the size of the platform company through market consolidation, resulting in a higher asset base. While LBOs are associated with fiscal discipline in the form of reductions in capex (Kaplan, 1989; Fox & Marcus, 1992) and working capital (Singh, 1990; Niemeyer & Simpson, 2008), these measures are targeted at eliminating inefficiencies in underperforming segments. Simultaneously, divestments of underutilized or non-core assets enable firms to reallocate capital to promising business segments (Phan & Hill, 1995). This strategy can result in an asset increase aligned with the new firm's core strategic focus. Lavery et al. (2023) highlight positive significant asset growth post-buyout, suggesting investors act as growth accelerators. In conclusion, we hypothesize that the effect of the investment on asset expansion is similar for the two investment types:

H4a: Growth capital investments positively affect total asset expansion of the portfolio company in the post-transaction period.
H4b: Buyout transactions (LBOs) positively affect total asset expansion of the portfolio company in the post-transaction period.

4.2 Hypothesis for secondary buyout transactions (SBOs)

Similar to Bonini (2015), we compare the operating performance improvements in target companies during their first buyout with the second buyout to assess the long-term value creation dynamics. While the author documented no operating improvements, still a second investor may have complementary skills to create additional value (Achleitner & Figge, 2014; Sousa, 2010). Additionally, the holding period in primary transactions may not be long enough to unleash the full value potential since some PE investors are pressured to sell firms early (Hammer et al., 2022). Therefore, the discourse on value creation in SBOs remains incomplete, and our analysis can provide more nuanced insights for Swedish PE-backed companies.

H5: Operational performance improvements differ between the first- and second buyout

5. Dataset and data collection process

5.1 Specific criteria for growth capital investments

We construct a treatment group of Swedish firms that received growth capital using transaction data from S&P Capital IQ Pro (CIQ) and financial data from the Serrano database (Swedish House of Finance). Selection criteria in CIQ include:

i. The target firm is incorporated in Sweden.
ii. The transaction was completed between January 2000 and December 2020
iii. The investment round type classifies as "growth", excluding other PE transactions.
iv. The sponsor classifies as "private equity" or "venture capital" excluding strategic buyers.
v. The transaction is not a follow-on investment where another sponsor previously had majority control.

From the 467 initial transactions, 110 were excluded due to the following criteria. First, we only retain the initial transaction when a target company receives multiple GC investments. Second, despite applying an investor-type filter, transactions involving strategic buyers were still present and consequently removed. Third, we exclude early-stage VC investments since they lack inclusion in the outlined definition of growth capital.

To enhance coverage, we supplement the sample using information from SVCA (SVCA, n.d), containing a list of Swedish GC sponsors, allowing us to identify 63 additional transactions. CIQ captures the transactions but lacks sufficient information to include them in our initial sample. We verified each transaction in CIQ and supplemented it using data disclosed by the respective sponsors. A potential concern with the validation and exclusion process is the introduction of selection bias, as it involves subjective judgment. Nevertheless, the exclusions are based on clear criteria, such as misclassified transactions, rather than post-investment outcomes. Therefore, the process does not systematically favor certain firms or results.

We retrieved organization numbers from CIQ and supplemented missing values with Retriever Business to match the target companies with Serrano. We crosschecked company names and key financial statement metrics to ensure accurate linkage, excluding firms we could not reliably identify in Serrano. Moreover, Serrano data requires excluding non-private or state-owned companies and municipalities due to their deviating nature. The Serrano database offers comprehensive financial data on Swedish private firms and tracks changes in company names over time, enabling a panel data analysis. This allowed us to match 340 firms from CIQ with

Serrano. Requiring -3 and +4 years of financial data yields 242 firms (for ±2 years 305 treated firms; for ±3 years 255 treated firms).

5.2 Specific criteria for private equity investments

For Swedish target firms that underwent an LBO, selection criteria in CIQ include:

i. The target firm is incorporated in Sweden.
ii. The transaction was completed between January 2000 and December 2020.
iii. The transaction classifies as a Leveraged Buyout.
iv. The investor is classified as a private equity firm, excluding strategic buyers.
v. The transaction involves the acquisition of the whole company or a majority stake.

From the 712 initial transactions retrieved from CIQ, 256 were excluded due to missing firm-level data or unreliable matching to Serrano. Out of the remaining 456 transactions, we removed 84 growth buyouts and reclassified them to the GC treatment group. Furthermore, the initial sample includes 81 SBO transactions, which are tracked separately for the subsequent comparative analysis. Lastly, we remove 38 transactions involving either long-term strategic investment holdings or GP-led secondary transactions.

The final LBO treatment group consists of 253 transactions. Requiring ±4 years of financial data yields 203 firms (for ±2 years 222 treated firms; for ±3 years 239 treated firms). In contrast to our growth capital sample, many LBO targets operate within complex group structures. We identify the entity that reflects the operating business rather than the legal holding company, applying a similar matching to Serrano. Furthermore, we use the CIQ deal summary, which contains financial information of the acquired company in the transaction year, supporting accurate firm matching to the Serrano database. Additionally, we verify transactions through cross-checks with financial information from the homepages of the respective private equity investors since they often publish investment years and exit information. These details aided us in determining the appropriate entity to link to firm-level financial data and the correct investment horizon for each LBO transaction.

6. Methodology

6.1 Fixed effects regression models

We apply a consistent methodology across investment types to ensure comparability in findings. We begin with logit and probit regressions to examine the determinants of being an attractive growth capital or LBO target. Additionally, for LBOs and GC transactions, we perform a fixed effects regression to assess significant leverage changes in the transaction year. Afterward, the growth regression models function to detect performance disparities between treated and control companies. To disentangle between the pre- and the post-period and identify causal treatment effects, we will perform DiD regressions based on two matching methods (1) propensity score matching (2) caliper match. Finally, we perform an extended DiD regression with additional pre-investment controls to further increase the robustness of our results.

6.1.1 Logit and Probit Model

As a first step, this study is interested in the determinants of a firm's receiving growth capital or undergoing an LBO. We analyze the determinants of an investment using financial data for the target's pre-investment year, as investor decisions rely on historical information. PE literature applies logit and probit models to understand target selection patterns before evaluating post-investment performance (Heinrich, 2023; Burth & Reißig-Thust, 2019; Wilson et al., 2022; Lavery et al., 2023). Both models are estimated using the following equation:

$$(1)\ \text{Prob (PE} > 0) = \alpha_t + \alpha_f + \theta X_{it-1} + \epsilon_{it}$$

The regressions capture the probability of a firm receiving a private equity investment. The variables α_t and α_f capture the year-fixed effects and industry-fixed effects. The explanatory variables X_{it-1} are the one-year lagged financial statement entries for total assets, net income, net sales, leverage and EBITDA margin. The main explanatory variables are logged in order to interpret them as percentage increases on the probability changes rather than in absolute value changes. Standard errors are clustered at the firm-level. We calculate the marginal effects evaluated at the means to interpret the coefficients derived from these regressions.

6.1.2 Leverage fixed effects regressions

In line with contemporary research on LBOs (Brown et al., 2021) we analyze capital structure changes in the transaction year. We try to capture the dynamic change in the transaction year

through the relative change in leverage. We isolate the leverage effect of the transaction by controlling for firm size, EBITDA margin, liquidity, asset tangibility and pre-period sales growth (Brown et al., 2021; De Maeseneire & Brinkhuis, 2012).

$$(2)\Delta\text{Leverage} = \beta_0 + \beta_1 DummyYear_t + \beta_2 Ln\,(Total\ assets)_t + \beta_3 Quick\ ratio_t + \beta_4 EBITDA\ margin_t + \beta_5 Asset\ tangibility_t + \beta_6 sales\ growth_{t-1} + \alpha_t + \alpha_f + \epsilon_{it}$$

The variable $DummyYear_t$ is equal to 1 for the year of the transaction and zero for all other years. Thereby, we can observe whether our data indicates a significant increase in leverage in the transaction year compared to other year observations for treated and control companies. Additionally, including industry and year-fixed effects in our regression setup absorbs industry-specific leverage trends and macroeconomic shocks in certain years of our sample period. Standard errors are clustered at the firm-level.

6.1.3 Growth fixed effects regression

We apply fixed effects regressions, an approach used in the PE literature on firm performance (Salerno, 2019; Meles, 2014; Margaritis & Psillaki, 2010) and venture capital (Croce et al., 2013; Tian, 2011). We maintain the variables employed by Lavery et al. (2023), Boucly et al. (2011), and Bernstein et al. (2019). In our analysis, we study the relationship between the treatment indicator $DummyPE_{it}$ (1 for PE-backed firms) and four dependent variables: (3) sales growth (4) total assets growth, (5) total earnings growth and (6) EBITDA growth. Each regression is estimated using fixed effects to control for unobserved time-invariant and industry-specific characteristics that could bias our results. Standard errors are clustered at the firm-level to account for serial correlation. The regression models are as follows:

$$(3)\ Sales\ growth = \beta_0 + \beta_1 DummyPE_{it} + \beta_2 Ln(Net\ sales)_t + \beta_3 Ln(Total\ assets)_t + \beta_4 Ln(EBIT)_t + \beta_5 ROA_t + \beta_6 Leverage_t + \beta_7 Cash\ holdings_t + \alpha_t + \alpha_f + \epsilon_{it}$$

$$(4)\ Asset\ growth = \beta_0 + \beta_1 DummyPE_{it} + \beta_2 Ln(Total\ assets)_t + \beta_3 ROA_t + \beta_4 Leverage_t + \beta_5 Cash\ holdings_t + \alpha_t + \alpha_f + \epsilon_{it}$$

$$(5)\ Earnings\ growth = \beta_0 + \beta_1 DummyPE_{it} + \beta_2 Ln(Total\ assets)_t + \beta_3 ROA_t + \beta_4 Sales\ growth_t + \beta_5 Leverage_t + \beta_6 Cash\ holdings_t + \alpha_t + \alpha_f + \epsilon_{it}$$

$$(6)\ EBITDA\,growth = \beta_0 + \beta_1 DummyPE_{it} + \beta_2 Ln(Total\ assets)_t + \beta_3 ROA_t + \beta_4 Sales\ growth_t + \beta_4 Leverage_t + \beta_5 Cash\ holdings_t + \alpha_t + \alpha_f + \epsilon_{it}$$

The intuition is to compare treated with control firms over the financial window, providing insights into systematic operating performance differences. However, since this regression setup does not separate between the pre- and post-treatment periods, it cannot identify causal treatment effects. Any observed differences may reflect selection effects, i.e., target companies of PE investors already have stronger growth trajectories before the investment. Generally, we expect endogeneity problems with those regressions because investor behavior is not truly exogenous. Investment decisions capitalize on expected returns, which tie to firm performance, risk, and future growth. Thus, the investment decision of PE investors is influenced by the same variables that determine firm performance, rendering it endogenous.[1] Following Lavery et al. (2023), we account for this issue by applying DiD regressions in a quasi-experimental setting.

6.2 Differences-in-Differences

6.2.1 PSM Matching

The central tenet within the DiD setting is to ensure that firms are comparable in the pre-treatment period. Otherwise, inherent differences may explain statistical results rather than the causal impact of the PE investment. In line with Espenlaub et al. (2014), we mitigate this by ensuring that control and treated firms are on similar paths in net sales, total assets, EBITDA, and net income before receiving the investment. For growth capital investments, we match companies on industry classification, net sales, total assets, ROA, EBITDA, and total asset growth based on the respective values in the year before the transaction. Our PSM matching criteria for LBO and SBO firms are industry classification, net sales, total assets, ROA, EBITDA, and net income based on the pre-transaction year. These matching criteria reinforce that the PE investment is the only difference between treatment and control groups and align with literature (Lavery et al., 2023; Boucly et al., 2011). Given the distinctive characteristics of growth capital investments, the nearest neighbor matching increases the likelihood of comparability between the treatment and control groups. For LBOs and SBOs, the Serrano database contains a larger pool of comparable companies, enabling us to perform a five-nearest-neighbor matching. Five-nearest-neighbor matching is the standard practice to balance sample

[1] A detailed discussion of the DiD setting and the limitations can be found in the appendix on pages 53-54.

size and precision in buyout studies, improving the reliability of DiD estimates (Boucly et al., 2011; Cohn et al., 2014).

6.2.2 Difference-in-Differences regressions

In our baseline DiD analysis, we estimate the following regression model:

$$(7)\ y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \alpha_t + \alpha_f + \epsilon_{it}$$

where $y_{it}$is firm sales, assets, EBITDA and earnings for firm i at time t. PE_i is a dummy variable equal to 1 for PE-backed firms and 0 for control firms. $Post_{it}$ is a dummy variable equal to 1 in the transaction period and 0 for the pre-period. For control firms, $Post_{it}$ is assigned based on the matched treated firm's transaction year. Lastly, α_t denotes year fixed effects and α_f controls for industry fixed effects. Furthermore, standard errors are clustered at the firm level. Following prior PE literature (e.g., Cohn et al., 2022), our main model includes four years before and after the transaction. While this model estimates the average treatment effect, it does not capture the timing (Bernstein et al., 2019). To address this, we estimate the following model specification:

$$(8)\ y_{it} = \sum \beta_k (\text{YearRelDeal}_{it}) + \sum \gamma_k (PE_i \times \text{YearRelDeal}_{it}) + \alpha_t + \alpha_f + \epsilon_{it}$$

where $K = -4, -3, -2, \ldots, 4$ represents the years relative to the transaction year. The coefficients γ_k capture differences of financial firm characteristics in year K relative to the pre-transaction period. Significant coefficients γ_k should emerge in the post-transaction years if the private equity investment causally affects firm performance. Additionally, this model verifies the assumption of parallel trends. In the pre-transaction period, coefficients should be insignificant, as firms were not PE-owned, thus allowing no treatment effects.

6.2.3 Difference-in-Differences regressions with pre-investment controls

Since we acknowledge that identifying correct treatment effects strongly depends on the matching quality and the resulting applicability of parallel trends, we perform a second DiD specification incorporating additional control variables to account for existing firm heterogeneities (Davis et al., 2014; Bernstein et al., 2019). Thus, adding pre-investment controls, we minimize shortcomings in matching criteria, enhancing the robustness of our treatment coefficients by removing leftover pre-period firm heterogeneity from the regression.

$$(9)\ y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \beta_4 X_{i;pre-invest} + \alpha_t + \alpha_f + \epsilon_{it}$$

Additional controls ($X_{i;pre-invest}$) contain sales growth, asset growth, asset tangibility, leverage, EBITDA margins, and liquidity proxied by the quick ratio. These controls add another dimension to our treatment effect estimation by letting control variables explain potential cross-sectional variation in our dependent variable, which might bias the treatment estimate.

6.3 Robustness checks

6.3.1 Calipermatch function

Another matching procedure is STATAs calipermatch function. While PSM is inaccurate in fulfilling the exact match based on industry, calipermatch precisely fulfills exact match requirements. Given the stricter matching requirements, the calipermatch function provides an additional robustness check since the control groups deviate from PSM. Applying the calipermatch function to our GC sample in the main financial window specification, we generated 122 matches, substantially below the 242 treated firms in the PSM matching. Similarly, the number of treated firms for LBO investments drops from 203 to 165, indicating a final matching rate in calipermatch of 65%. Regarding SBOs, the number of treated firms remained stable, with 71 firms for PSM and 70 firms for calipermatch, indicating a match rate of roughly 85% compared to the base sample of SBOs. This lower reduction is explained through widened caliper widths to leave an acceptable sample size of SBOs.

6.3.2 Falsification tests and different financial windows

Beyond the different matching processes, we apply a set of robustness checks to strengthen our findings. While matching mitigates some concerns related to the FE regressions, such as asymptotic biases due to endogeneity or self-selection, it does not fully resolve endogeneity issues (Roberts & Whited, 2013). To ensure that observed firm performance changes are driven by the PE investment rather than confounding factors, we assess the timing of behavior change following Roberts and Whited (2013). If the PE investment has a causal impact, performance should shift around the onset of treatment rather than at arbitrary points in time. We test this by varying the observed financial windows from [-2;2] and [-3;3] to verify that treatment effects emerge only post-investment, reinforcing the parallel trends assumption and ruling out spurious correlations.

7. Empirical analysis

Our empirical analysis evolves around the investment types. We start with sample descriptions, followed by investment determinants and fixed effect regressions. Finally, the DiD regressions and robustness checks enable a discussion of value creation.

7.1 Growth capital investments

7.1.1 Sample description

Table 1 reports the unwinsorized summary statistics for 242 unique Swedish growth capital-backed firms consisting of approx. 1936 firm-year observations, and a control group of 226 unique Swedish firms with approx. 1730 firm-year observations. Allowing control firms to be matched with replacement explains the difference in number of firms and firm-year observations. The unwinsorized summary statistics reveal high dispersion and right-tail skewness, as indicated by large deviations between mean and median values, across several variables driven by a few firm observations. For instance, total assets in the treatment group span from 1,008k SEK up to 23,632,941k SEK (mean: 122,892k SEK; median: 38,913k SEK) with a standard deviation of 1,099,801k SEK. Further, the minimum and maximum values are difficult to interpret economically, which transfer to unreasonable ratios and growth rates. Severe outliers are common when working with private company financial statement data due to firm heterogeneities. To mitigate the influence, we winsorize all variables except firm age at the 2nd and 98th percentiles to obtain more reliable and interpretable values, following Lavery et al. (2023). As similar challenges occur for all investment types, we will not discuss them separately in greater detail and continuously winsorize the financial statement data.

The winsorized summary statistics are in Table 2. Even after winsorization, some firms exhibit zero net sales, either due to part of the treatment group not having sales in the pre-investment period, despite a proven business model at the investment date, or firms going bankrupt during the financial window. The minimum age of three for treated and control firms highlights that the sample contains young companies. Treated and control firms exhibit similar size profiles, as GC-backed firms have median total assets of 38,913k SEK and median net sales of 48,973k SEK compared with 32,758k SEK and 26,560k SEK for controls. However, means and standard deviations reveal greater dispersion as GC-backed firms have an average in total assets of 122,892k SEK (SD: 247,701k SEK) compared to 173,649k SEK (SD: 363,841k SEK) for matched controls. This reflects a significantly lower but remaining right-tail skewness in the

size distribution. EBITDA is positive, with an average of 210k SEK (median: 815.5k SEK) for GC-backed firms and a mean of 3,762k SEK (median 1,1582k SEK) for control firms. These characteristics align with the outlined description of GC investments by Lattanzio et al. (2023). Profitability ratios, such as ROA, ranges from -13% to 3% across both groups. The average cash-to-assets ratio is higher for growth capital-backed firms at 18% compared to 15% for the control group, indicating that treated firms have larger liquidity buffers to exacerbate future growth opportunities. This divergence becomes more pronounced when comparing the medians, amounting to 11% for the treatment group and 6% for the control group. Average growth rates in net sales and total assets are markedly higher for the treatment group being at 47% and 34% compared to 20% and 12%, suggesting that GC investors tend to target or support firms that are on a high growth trajectory.

The sample distributions are shown in Table 3. Panel A reports the number and percentage distribution of firms by industry for the treatment and control group. The largest sectors among GC-backed firms are IT & Electronics (24.8%), Industrial Goods (19.4%), and Shopping Goods (15.3%). Those industries, particularly the IT & Electronics sector, are renowned in finance literature for higher growth potential (Pinkowitz & Williamson, 2007). Panel B depicts the investment year alongside the matched control firm observation. The number of GC transactions was modest in the early 2000s due to the dotcom crisis but recovered rapidly by 2003-2004. Similarly, the number of GC transactions decreased by 50% during the financial crisis, whereafter, the deal flow recovered and peaked in 2011 and 2012. These years are marked by renewed investor confidence and supportive Swedish policy initiatives (SVCA, 2017). After 2012, the number of transactions remained elevated compared to the pre-crisis period. Overall, the industry and year distributions confirm that our sample captures GC investments in high-growth sectors and aligns with the Swedish private equity market overview outlined in section 2.1.1.

7.1.2 Logit and probit model

We apply logit and probit models to determine financial characteristics that increase the investment probability (see Table 4). The average marginal effect of total assets is -0.0087, which implies that a marginal increase in assets reduces the probability of receiving growth capital by 0.87%, which is highly statistically significant (logit: 0.84%). GC investors require firms to be sufficiently large enough to demonstrate operating scale but still small to offer meaningful upside potential, aligning with the findings of Lavery et al. (2023). In contrast,

larger firms are less likely to sustain rapid expansion and rely on organic expansion or cheaper external financing than growth capital. The coefficient for net income implies that a marginal increase increases the probability of receiving a GC investment by 0.692%, which is highly statistically significant (logit: 0.0069; $p<0.01$). Economically, this finding reflects GC investors' preference for profitable firms, as operational health is a favorable signal given their equity stake, which aligns with the findings of Lavery et al. (2023). Net sales, leverage, and EBITDA margin do not significantly affect the probability of a firm receiving growth capital, indicating that investors do not rely on their investment decisions based on these financial metrics. We acknowledge that investment decisions may be grounded in factors not observable in financial statement data, such as market potential and business model specificities (scalability of technology), consistent with theoretical arguments by Hellmann and Puri (2002).

7.1.3 OLS fixed effects regression

7.1.3.1 Leverage regression

The leverage fixed effects regression is presented in Table 5. The investment-year coefficient of -0.016 indicates that GC-backed firms experience a 1.6% decrease in their year-over-year change in leverage in the transaction year compared to non-transaction years. Similarly, Lavery et al. (2023) find that growth equity-backed firms are not associated with substantially deviating leverage in the transaction year. However, the authors document an 8.5% increase in leverage post-investment period, driven by new financing required for growth ambitions. In line with, Kaplan and Strömberg (2003) GC investors may focus on operational and governance improvements to curb agency costs, using larger equity stakes rather than financial engineering motives. However, the coefficient is not statistically significant, and *we cannot reject or confirm our hypothesis, H1a*.

Amongst control variables, firms with higher EBITDA margins tend to have lower leverage increases (coefficient: -0.019, $p<0.05$). In economic terms, more profitable firms appear less inclined to issue additional debt as they generate sufficient internal cash flows. The coefficient for the liquidity measure implies that a marginal increase in the quick ratio corresponds to a 3% reduction in year-over-year leverage change ($p<0.01$). Both coefficients align with the pecking order theory introduced by Myers (1984), where firms prefer internal cash flows and liquidity reserves before relying on external financing sources, avoiding information asymmetry challenges between management and external investors. Asset tangibility and lagged sales growth are statistically insignificant in this model.

7.1.3.2 Baseline growth regression

Further, we perform fixed effects regression to compare growth trends in sales, total assets, earnings, and EBITDA amongst GC-backed and control firms over the financial window (see results in Table 6). The first specification highlights that GC-backed firms are associated with 19.4% higher sales growth, which is highly statistically significant and provides two possible indications. First, it might demonstrate that treated firms outgrow the control group after obtaining the investment. Secondly, it could imply that GC-backed firms were on a higher sales growth trajectory in their pre-period, suggesting that high-quality firms signal their ability to expand before the investment. In the second specification, GC-backed firms exhibit 22.8% higher total asset growth than controls, statistically significant at the 1% level. Accordingly, this may reflect both the deployment of GC to accelerate expansion and/or the possibility that targeted firms are on steeper asset growth paths before investment.

Model (3) and (4) on growth in net income and EBITDA suggest that treated firms do not significantly differ from the control group, which may imply two opposing explanations. First, unlike traditional LBO investors, GC investors do not provide systematic profitability improvements consistent with the stricter operational engineering motive but instead focus on scaling the business at the expense of profits (Puri and Zarutskie, 2012). Secondly, the longer time horizon could confound investment effects. Overall, these patterns may arise through two mechanisms. First, the selection effect, where GC investors have superior skills in identifying scalable businesses through careful due diligence, reducing ex-ante information asymmetry. Secondly, a treatment effect, where the investment itself drives the outperformance.

7.1.4 Difference-in-Differences

7.1.4.1 DiD with year-by-year effects

At the core of our analysis, we perform a DiD regression (Panel A), including a year-by-year analysis (Panel B) with year and industry FE (see results in Table 7). While the DiD measures treatment effects of the investment for the entire post-period, the year-by-year analysis shows the specific period in which the effects materialize. However, the exact magnitude of the coefficients cannot be reconciled to the average treatment effect. In line with Lavery et al. (2023), the methodology only verifies parallel trends and indicates the timing of treatment effects. Therefore, only the statistical significance and sign of the coefficient matters.

The GC dummy in the first model regarding net sales is statistically insignificant, indicating comparability between treated and control firms before the investment. The interaction term indicates an average treatment effect of 42,616k SEK, statistically significant at 1%. Enabling the conclusion that receiving GC substantially enhances revenue generation in the post-investment period. Similarly, Lavery et al. (2023) highlight that GC-backed firms outgrow their matched counterparts by 20.9%, whilst Puri and Zarutski (2012) and Chemmanur et al. (2011) show a 21.1% and 22.0% increase in the VC context. Panel B reveals no systematic pre-treatment divergence, except a marginal difference in year three before investment, supporting the parallel trends overall (see Figure 3). GC-backed firms exhibit an immediate treatment effect, lasting over the entire financial window at a highly significant level. Overall, the results support the notion of operational engineering, *enabling us to confirm hypothesis H2a*.

In the second model, the GC dummy coefficient shows that GC-backed firms have 73,855k SEK lower assets compared to control firms in the pre-transaction period, which is highly statistically significant, highlighting the uniqueness of firm characteristics of GC-backed firms revealed by the matching, making it challenging to identify firms in the same size category. Despite the size differences, the interaction term indicates that GC-backed firms experience a superior average total asset increase of 45,239k SEK in the post-investment period. The year-by-year analysis opposingly reveals no significant pre-treatment divergence and confirms the positive treatment effect emerging from the first post-transaction year onward. Correspondingly, Lavery et al. (2023) document a 25.6% increase in asset growth following the investment. The results reinforce that GC financing drives substantial asset growth, enabling post-investment expansion reflecting operational engineering mechanisms, *leading us to confirm hypothesis H4a*.

Further, net income decreases caused by the GC transaction by -4,022k SEK, which is statistically significant at 5%. This result contradicts Lavery et al. (2023) identifying an earnings growth of 14.2%, whilst Puri and Zarutskie (2012) highlight no significant effect on profitability. Generally, our result underscores that GC-backed firms' costs increase disproportionately compared to their control group to finance asset and sales expansion. Lastly, we cannot observe an overall treatment effect for EBITDA, which could indicate a lower focus on EBITDA improvements contrary to traditional LBOs. The marginally significant decline in EBITDA in the transaction year parallels the net-income drop, reflecting elevated costs and investments as a characteristic of GC engagements. Overall, *we find weak support for*

hypothesis H3a since we observe moderately significant negative treatment effects on net income but no effects on EBITDA.

7.1.4.2 DiD with pre-treatment controls

To strengthen the validity of our results, we incorporate pre-treatment controls to address matching limitations and capture additional firm heterogeneity (see results in Table 8). The impact of GC investments on total assets remains highly statistically significant and increases in magnitude to 49,021k SEK. This reflects reduced omitted-variable bias and ensures robustness. Among the controls, pre-treatment firm size and sales growth have positive and significant coefficients, indicating that larger and faster-growing firms continue to scale independently of the investment. Similarly, the treatment coefficient of net sales slightly increases from 42,616k SEK to 44,292k SEK. Pre-transaction firm size is a positive and significant driver of sales growth, alongside asset tangibility, indicating that firms with more collateral and resources tend to grow sales even without receiving growth capital. Negative net income effects of growth capital investments remain but decrease in statistical significance to 10%. Among the additional covariates, the lagged EBITDA margin has a positive and statistically significant coefficient, suggesting that more profitable firms can better absorb post-deal cost increases. Lastly, EBITDA remains statistically insignificant. Overall, the persistence and slight amplification of the interaction terms demonstrate that controlling for pre-deal heterogeneity strengthens the observed impact of growth capital on value creation.

7.1.5 Robustness checks

Changing the matching method to calipermatch, our results remain robust. The calipermatch function matches younger and smaller firms, reflecting the treatment group's lower end-tail and reducing the sample size from 242 to 122 unique firms (see Table 9). Despite this, the firm characteristics align with the outlined definition of growth capital. Regarding the DiD results (see Table 10-11), the coefficients of net sales and total assets remain in terms of their sign and significance but reduce in magnitude, caused by the aforementioned reduction in firm size. The treatment coefficient of net income loses statistical significance, underscoring earnings volatility and consequently requiring a cautious interpretation of the coefficient. Although statistically insignificant, the coefficient supports GC investors' focus on scaling and expansion over short-term profitability.

Varying the financial window with PSM matching to [-3,3] and [-2,2] strengthens the robustness of our results. The treatment coefficients for net sales and total assets remain positive, comparable in magnitude and statistical significance across all specifications independent of the incorporation of control variables (see Table 12-15). Interestingly, the treatment coefficient of net income remains negative and becomes statistically significant at the 1% level for the financial window [-2,2], indicating that the operational engineering mechanism employed by GC investors occurs at the cost of short-term profitability. This result aligns with the findings of the year-by-year analysis for net income (section 7.1.4.1). As for our main financial window, the treatment coefficient for EBITDA in model (4) remains statistically insignificant in both variations.

7.2 LBO transactions

7.2.1 Sample description

The winsorized summary statistics based on the financial window [-4,4] are separated into treatment and control groups and shown in Table 17. At buyout, firms are 27 years old, showing that LBO targets are generally older than GC-backed firms. LBO-backed firms average total assets of 372m SEK, whereas the control group has a mean of 448m SEK, highlighting their comparability. For net sales, treated firms document a mean of 529m SEK (median: 236m SEK), in line with typical mid-market Swedish LBOs (SVCA, 2017), with control firms falling in the same size category. The mean EBITDA for treated firms amounts to 51m SEK (median: 22m SEK), implying an average EBITDA margin for the whole financial window of approx. 10%, where the control group demonstrates similar patterns.

Key financial metrics among treated and control companies indicate high comparability. The average leverage ratio is slightly higher for treated firms, amounting to 0.62, compared to the control group's mean of 0.60. Similarly, cash holdings are aligned with control firms averaging 13%, with treated firms averaging 11%. LBO-backed firms have a mean ROA of 9% (median: 8%), compared to control firms averaging 10% (median: 7%). Overall, the comparability underscores that treated and control firms would have been suitable LBO candidates, suggesting an effective matching. Moreover, the treatment group averages net sales growth of 14% (median 9%), considerably higher than the control group averaging 8% (median: 5%). Similarly, the mean total asset growth of 16% among treated firms is higher than 9% for the control group. These inherent differences between both groups are reasonable, given the inclusion of the pre- and post-transaction years, effectively capturing value creation

mechanisms by the sponsor. Earnings growth exhibits right-skewness indicated by large growth rates with a mean of 122% (median: 14%) for the treatment group and a mean of 85% (median 9%) for the control group, caused by high earnings volatility for private companies.

The sample distribution table is depicted in Table 18. Panel A shows that most targets cluster in the following sectors: Industrial goods (24.63%), Shopping goods (19.21%), Corporate services (13.30%), and Healthcare (10.34%). These sectors align with the preference for stable cash flow-generating businesses in mature but fragmented markets. Moreover, the Industrial, Healthcare, and Consumer sectors offer potential for buy-and-build strategies. Further, corporate services and healthcare sectors are known for their recurring steady income streams with limited cyclicality due to non-discretionary demand, making them ideal LBO candidates (Cochrane et al., 2017). Panel B shows the distribution by year and demonstrates that from 2005 onwards, the Swedish LBO market expanded until the financial crisis. The investment activity dropped during the crisis, followed by a recovery in 2010, likely driven by dry powder among investors and an abundance of mid-market distressed targets (SVCA, 2017). Overall, our transaction pattern aligns with the outlined Swedish private equity market, providing a balanced sample of transactions.

7.2.2 Logit and probit model

Next, we estimate the buyout probability using pre-buyout financials to assess the respective firm characteristics (see results Table 19). Our probit regression results indicate that a 1% increase in net sales is associated with a 1.8% increase in the probability of a buyout (logit: 1.9%). The result aligns with existing literature findings such as Acharya et al. (2009b), whilst Wilson et al. (2022) document that larger revenue streams are associated with lower probabilities of undergoing an LBO. Our result suggests a minimum size requirement for becoming an attractive LBO candidate, as only firms with a strong market presence can be a platform for potential bolt-on acquisitions. Additionally, an increase in net income increases the buyout probability (logit and probit 1%).

Regarding EBITDA margins, we observe that a 1% higher EBITDA margin increases the probability of being bought out by 2.9% in the probit model (logit: 2.4%), which aligns with Acharya et al. (2009b), whilst Heinrich (2023) notes contrary results. Higher EBITDA margins increase the ability of a firm to service debt, making it particularly attractive for LBO investors. For leverage, we observe that a 1% higher leverage pre-transaction decreases the buyout probability by 5.9% (logit: 5.4%). Therefore, the results indicate that LBO investors prefer

target companies with less leverage and higher spare debt capacity (Wilson et al., 2022). Lastly, our probit model suggests that a 1% increase in total assets decreases the buyout probability by 2.1% (logit: 2.2%). Since size is rather proxied by net sales (Wilson et al. 2022), the coefficient for total assets may underscore that LBO investors avoid capital-intensive firms with limited capex potential due to a high asset base. All discussed coefficients are statistically significant at the 1% level.

7.2.3 OLS fixed effects regression

7.2.3.1 Leverage regressions

The leverage fixed effects regression results are shown in Table 5, next to growth capital. In the transaction year, leverage increases on average by 4% higher compared to non-transaction years, highlighting a moderate increase in leverage, which is statistically significant at the 5% level. Guo et al. (2011) document a 45.7% increase in leverage for US public-to-private transactions. This likely reflects that public firms typically have lower initial leverage and higher valuation premiums, requiring larger debt components than private companies (Cohn et al., 2014; Cohn et al., 2022). Kärnä and Myers (2025) document a leverage increase of 20% for Swedish LBOs, which is still notably higher than our results but more in line with our coefficient. While the direction and statistical significance *support hypothesis H1b, the economic magnitude is marginal*. One explanation is that private firms in our sample already carry substantial pre-buyout leverage, hence the investor may refinance debt at better terms, limiting leverage increases in the transaction year (Kaplan & Strömberg, 2009). Additionally, complex holding structures may keep debt off the operating company's balance sheet, understating the observed leverage effect (Axelson et al., 2013).

Control variables align with predictions from capital structure theory. Larger firms proxied by ln (assets) tend to have higher leverage growth (coefficient: 0.037, $p<0.01$) due to better access to debt markets. Companies with higher EBITDA margins tend to have lower leverage increases (coefficient: -0.210, $p<0.01$), consistent with pecking order theory (Myers, 1984) where sufficient internal cashflows eliminate external financing needs and the associated information asymmetries. Similarly, companies with higher liquidity proxied by the quick ratio increase leverage less (coefficient: -0.069, $p<0.01$), since cash and debt act as financing substitutes (Myers, 1984). Higher tangible assets (coefficient: -0.159, $p<0.01$) may reflect that firms already collateralized assets and hence face covenants, restricting additional debt issuance. Lastly, the negative coefficient of -0.075 for lagged net sales growth suggests that

firms that grew topline strongly in the previous year want to preserve financial flexibility, resulting in lower leverage increases.

7.2.3.2 Baseline growth regressions

Our growth regression results are presented in Table 20. Overall, LBO-backed firms exhibit higher growth in net sales, total assets, and net income compared to controls, adjusting for firm size, profitability, leverage, and cash holdings. We observe no significant differences for EBITDA growth. Considering net sales growth and total asset growth, LBO-backed companies document 5.5% higher sales growth and 7.4% higher asset growth, statistically significant at the 1% level. Lastly, looking at total earnings growth, treatment firms have a 30.9% higher earnings average earnings growth, statistically significant at 5%. Similarly, Boucly et al. (2011) report sales growth of 12% and capex increases of 24%, highlighting asset expansion. However, their results reflect causal treatment effects, while this setup does not allow for causal conclusions.

The results indicate that LBOs could improve net sales through potential geographic expansion, adjusted product pricing strategies, or new customer segments. The higher asset growth may suggest that LBO investors do not cut back capex but instead focus on strategic acquisitions combined with asset replacements. The earnings growth coefficient suggests that treated firms improve profitability, potentially due to more stringent cost controls and capital budgeting.

The patterns observed in control variables suggest that ROA and leverage positively explain the growth trends statistically significant at the 1% level across all growth rates. PE investors may target firms with high operational efficiency and debt capacity, where post-acquisition debt is a growth enabler for mature companies. The incorporation of net sales growth as a control in model (3) and (4) might explain the insignificance of the main explanatory variable, which suggests that the absolute value increases in topline tend to translate into higher EBITDA rather than LBO investors being able to increase margins. However, the final evaluation for all effects will rely on the DiD regressions since this comparative regression model combines selection and treatment effects.

7.2.4 Difference-in-Differences

7.2.4.1 DiD with year-by-year effects

The DiD regression results without control variables are shown in Table 21. The parallel trends for the DiD regression on LBOs are visualized in Figure 4. The LBO dummy indicates that LBO-backed firms have, on average, 144,275k SEK lower net sales than control firms in the pre-transaction period. While the difference is moderately statistically significant, both groups follow similar pre-treatment trends, satisfying the parallel trends assumption. The post coefficient implies that control firms exhibit an average sales increase of 170,855k SEK compared to their pre-period, statistically significant at 1%. The interaction term suggests no significant treatment effects on net sales for LBO-backed firms. The year-by-year analysis reveals no significant pre-treatment effects but uncovers post-treatment effects not captured by the regular DiD setting, highlighting the importance of the extended DiD with pre-buyout controls for a more nuanced view. Given the mixed results, *we cannot confirm hypothesis H2b*. Guo et al. (2011) and Cohn et al. (2014) similarly find no systematic improvement in sales expansion following PE buyouts. Kärnä and Myers (2025) show up to 40% cumulative sales growth in Swedish LBOs, suggesting treatment effects may arise when controlling for additional firm heterogeneity.

The second specification shows that LBO-backed firms have, on average, lower total assets than control firms in the pre-treatment period, which is statistically insignificant. The interaction term indicates that firms exhibit an average increase of 58m SEK in total assets causally related to the LBO investment. The analysis of year-by-year effects reveals no significant pre-treatment divergence but highlights that treated firms begin to outpace the control group from the first post-transaction year. These findings reinforce that LBO investments translate into substantially larger asset growth over the investment horizon, potentially due to add-on acquisitions, reflecting value creation through operational engineering, *confirming hypothesis H4b*. Consistent with this, Kärnä and Myers (2025) report cumulative total assets growth of up to 20% relative to the pre-investment year. Similarly, Lavery et al. (2023) find post-LBO asset growth of 80% relative to matched controls.

The third regression model indicates no significant treatment effect in net income, which may reflect investors' focus on alternative profitability metrics more relevant for exit valuations, such as EBITDA. The significant treatment effects in year 4 suggest that post-buyout measures take time to materialize, consistent with LBO holding periods in our firm sample often

exceeding six years. Lastly, the fourth specification suggests an average treatment effect of 10m SEK for EBITDA, statistically significant at the 5% level. Increasing the absolute EBITDA lies at the core of operational value creation measures applied by LBO investors. The year-by-year analysis reveals EBITDA treatment effects appear in the first post-transaction year with no pre-treatment divergence. Our results for profitability are inconclusive when looking at both net income and EBITDA treatment effects, but strong evidence for EBITDA *leads us to confirm hypothesis H3b*. While Kärnä and Myers (2025) report that EBITDA declines following the buyout, Bergström, Grubb, and Jonsson (2007) document significant improvements in EBITDA margins of 3.1% without increases in net sales growth. Consistent with our results, their study suggests that profitability gains rather than revenue expansion drive value creation in Swedish LBOs.

7.2.4.2 DiD with pre-treatment Controls

The extended DiD regression results with pre-buyout controls are shown in Table 22. In the first model on net sales, the treatment coefficient becomes significant at the 5% level, consistent with the post-treatment effects presented in Table 21, Panel B. Additionally, the interaction term rises to 62m SEK while the LBO dummy, capturing pre-treatment differences in sales, drops substantially. Adding these control variables leads to pre-period differences being explained by the additional controls, indicating a shift of omitted variable bias in the DiD without control variables. This specification explains a larger share of cross-sectional variation and improves estimation reliability.

Regarding the second specification, the impact of the LBO investment on total assets becomes highly statistically significant and increases in magnitude from 58m SEK to 73m SEK. Differing balance sheet profiles are better absorbed since the LBO- and post-dummy decrease in magnitude. The control for prior transaction year asset growth is statistically significant at 1%, reducing omitted variable bias and enhancing treatment effect identification.

Adding the additional pre-buyout controls to the third model, no changes can be observed for net income, highlighting that bottom-line profitability improvements by the sponsor may take longer to materialize than our post-financial window. Lastly, the EBITDA treatment effect increases in statistical significance to 1% while only marginally increasing in magnitude to 11m SEK. Overall, the additional controls enable us to better control for pre-deal heterogeneity in firm characteristics, confirming value creation in LBO investments.

7.2.5 Robustness checks

Our estimated treatment effects remain robust concerning the applied matching mechanism. Across all treatment coefficients, economic magnitude decreases, while statistical significance increases after using calipermatch. The winsorized summary statistics (Table 23) showcase that the caliber match function primarily matches smaller LBO firms, explaining the magnitude decrease in treatment effects compared to the base DiD. However, this diversity in the matched sample combined with consistent treatment effects reinforces that value creation in LBOs is robust. Treatment coefficients for both DiD models using the calipermatch function are consistently significant at the 1% level (Table 24 and 25).

Varying the financial window requirement in the PSM matching to [-2;2] (see Table 26 and 27) and [-3;3] (see Table 28 and 29) reinforces that treatment coefficients for total assets and EBITDA remain robust in both economic magnitude and statistical significance. In contrast, net sales demonstrate no significant treatment effect in either of the windows, underscoring the sensitivity to the time horizon. Since net sales depend on external factors (e.g., product demand), it may be harder for the private equity investor to influence this metric. On the other hand, asset restructurings and strategic investment decisions are under direct control of the investor. Similarly, the persistent EBITDA improvement can be interpreted as robust. Acknowledging the limited impact on top-line revenue generation in mature industries, cost control, and margin preservation are the main levers to ensure operational efficiency. Our robustness checks confirm the treatment effects on profitability and asset expansion. However, recognizing the lack of consistent treatment effects on net sales based on the different financial windows, inferences on revenue-enhancing investor impacts are limited.

7.3 SBO transactions

7.3.1 Sample description

Table 30 reports the unwinsorized summary statistics for 71 unique Swedish SBO firms consisting of approx. 639 firm-year observations, and a control group of 335 unique Swedish firms with approx. 2991 firm-year observations. Summary statistics are based on winsorized variables and shown in Table 31.

Firms undergoing secondary buyouts are 32 years old at the investment, whilst the LBO sample averages 27 years, indicating a five-year holding period. Treated firms' total assets average 662m SEK compared to 761m SEK for the control group, showing slight disbursement in size.

Net sales of treated firms document a mean of 800m SEK (median: 345m SEK), whilst the control group mean exceeds 1.1bn SEK (median: 397m SEK), indicating a clear size difference from analyzed primary transactions. Further, the maximum value of 7.7bn SEK reflects that SBO transactions occur amongst the largest private companies in Sweden. As anticipated, EBITDA increases markedly relative to earlier stages of ownership, where treated firms have an average of 103m SEK (median: 43m SEK), and the control group averages 140m SEK (median: 35m SEK).

Profitability ratios such as ROA span from -13% to + 44% across treated and control companies, with both groups having a mean ROA of 8%. The average growth rates in net sales, total assets, and net income decrease as the companies mature. While observing average net sales and total assets growth rates of 47% and 34% in the GC sample (LBO sample: 14% and 16%), the SBO firm's growth rates further decreased to 11% and 14%. The control group's growth rates in net sales and total assets are 7% and 8%, respectively. Similar to the patterns observed in LBO transactions, net income growth remains right-skewed for treated and control companies. While treated firms have an average earnings growth of 105% (median: 9%), control firms average 108% (median: 5%), which appears extreme but logical given the aforementioned earnings volatility of private companies in Sweden.

The sample distribution tables are in Table 32. Panel A shows the largest sectors are Industrial Goods (33.8%), Shopping Goods (21.1%), and Corporate Services (14.1%), resembling the industry focus of LBO investors documented earlier, which is intuitive since SBO transactions are comparable to LBOs in transaction structures and target requirements. With the emergence of SBOs as an alternative exit path in the early 2000s (Strömberg, 2008), it makes sense to have limited observations from 2002 to 2004 (see Panel B). However, the number of transactions increased between 2005 and 2007, supported by the early expansion of the Swedish PE market. As for the other investment types, a drop occurred during the financial crisis, followed by a recovery in 2010 and a flourishing SBO market from 2015 onwards.

7.3.2 OLS fixed effects regression

Since SBOs are included to compare operational performance improvements with primary transactions, we start with the baseline growth regression to identify different patterns between treated- and control companies (see Table 33). Similar to LBOs, our regression results suggest that the treatment group outperforms the control group regarding net sales and total asset growth. We find no significant outperformance for earnings and EBITDA growth compared to

the control group. Outgrowing peers in those metrics may be difficult to achieve, especially when companies reach a certain size. Overall, Kick and Schwetzler (2025) showcase similar results, highlighting that SBO targets grow operating profitability metrics in line with peers.

Treated firms, experience on average 3.5% higher sales- and 6.7% higher asset-growth compared to controls, statistically significant at 1%. Regarding the control variables, ROA is positively associated with all growth metrics at a highly significant level for asset, earnings, and EBITDA growth. We interpret this as firms with high ROA efficiently converting assets into earnings, increasing investment and expansion capacity. Further, leverage is statistically significant at 1% and implies that a mature firm's debt can function as a catalyst for growth ambitions. Lastly, we recognize that the insignificant earnings and EBITDA growth do not indicate that SBOs fail to create value in their target companies. Instead, it verifies that SBOs typically buy mature, already-scaled companies that operate in mature industries where incremental growth improvements are difficult to realize.

7.3.3 Difference-in-Differences

7.3.3.1 DiD with year-by-year effects

The DiD regression results without control variables are in Table 34. The parallel trends for the DiD regression on SBOs are visualized in Figure 5. The SBO dummy in our first model indicates that SBO-backed firms, on average, have 387,833k SEK lower net sales than control firms in the pre-treatment period, which is highly statistically significant. Despite the considerable difference, firms follow the same net sales trend, thereby not violating the parallel trends assumption. The post coefficient implies that control firms exhibit an average sales increase of 363,959k SEK in the post-treatment period relative to their pre-period, significant at 1%. The treatment coefficient for net sales is insignificant, which indicates that SBO investors have no causal impact on this metric in the portfolio company as these firms are already mature and scaled after the primary buyout. The year-by-year analysis confirms the parallel trends, with no significant coefficients in the pre-period. Similar to our results, Bonini (2015) finds no significant treatment effects in net sales and argues that firms grow in line with pre-existing trends. Wang (2012) observes significant sales growth post-SBO but attributes it to pre-existing trends rather than continued value creation.

The interaction term in the second specification suggests an average treatment effect of 148m SEK in total assets (significant at 5%), highlighting that SBO investors may focus on scaling platform companies through additional bolt-on acquisitions. Suppose the primary investors' holding period was too short to complete the platform due to fund-life constraints. In that case, an SBO investor can acquire the company and add value through targeted bolt-on acquisitions (Hammer et al., 2022). The year-by-year analysis in Panel B showcases that the first marginally significant treatment effects arise in the transaction year. While Wang (2012) documents a median fixed asset growth of 113% post-SBO, Bonini (2015) shows that total assets continue to increase after the SBO but attributes this to SBO firms inheriting prior expansion rather than reinforced asset growth.

We observe no significant treatment effects for net income (model 3), similar to LBO investments. Again, this may reflect investors' emphasis on alternative profitability metrics (e.g., EBITDA) that are more decisive for exit valuations, rather than a focus on value-creation measures aimed at increasing earnings. Examining EBITDA in model four, the coefficient implies an average treatment effect of 26m SEK, statistically significant at 5%. Although treatment effects on net sales are insignificant, we observe improvements in operating profitability relative to the control group. Thus, PE-owned firms are better at preserving operating margins through disciplined cost budgeting. Rather than focusing on top-line growth, SBO investors focus on preserving operational efficiency by achieving relatively better cost structure improvements, enabling EBITDA improvements in the treatment group even as revenues followed similar trends compared to the control group. Parallel trends for SBOs (see Figure 5) support this notion, visually highlighting the post-transaction divergence in EBITDA, confirming that profitability gains stem from operational efficiencies rather than revenue expansion.

Interestingly, this finding contradicts Bonini (2015), Wang (2012), and Kick and Schwetzler (2025), with all of them showing minimal or no profitability improvements in EBITDA margins. If the first investor was pressured to sell early and could not extract profitability and synergy gains, the SBO investor can (Hammer et al., 2022). Given the outlined importance of buy-and-build strategies in Swedish PE (Døskeland & Strömberg, 2018), this may be an explanation for why results differ. Overall, *we find support for hypothesis H5 that SBOs offer continued value creation potential* regarding total assets and EBITDA expansion. While LBO investors in some models have a treatment effect on net sales, this cannot be observed for SBOs.

7.3.3.2 DiD with pre-treatment controls

By adding pre-buyout transaction controls as for the other investment types, we account for firm heterogeneity not fully absorbed by the matching procedure (see Table 35). The interaction term for net sales remains insignificant, while the SBO dummy drops substantially, capturing diverging sales levels between treated and control firms in the pre-period. Since the treatment coefficient remains insignificant, omitted variable bias might not be the primary challenge in the original DiD. In model (2), the impact of the SBO investment on total assets remains significant at 5%, while decreasing in magnitude to 142m SEK. As with LBOs, differing balance sheet profiles between treated and control firms are now better absorbed, reducing the magnitude of the SBO dummy. The control for pre-treatment asset growth is highly statistically significant, enabling us to identify a robust treatment effect. Following the incorporation of controls, R-squared rises from 7% to 92%, ensuring we better capture the variation in total assets and isolate the impact of PE ownership. Adding pre-buyout controls to model (3), no changes can be observed for net income, underpinning the notion that improvements by the SBO investor may take longer to materialize than our post-financial window. Lastly, the EBITDA treatment coefficient remains unchanged and statistically significant at the 5% level, suggesting that the matching already captured pre-deal heterogeneity in firms.

7.3.4 Robustness checks

Our estimated treatment effects remain robust considering the applied matching mechanism. Across the significant treatment coefficients for total assets and EBITDA, we again observe that the economic magnitude decreases while statistical significance increases. Similar to LBOs, we interpret this as driven by the new control group, since the calipermatch only excludes one previously matched treated firm, but results in smaller control firms (see Table 36). Again, this can be interpreted as strong evidence for value creation, as both matching methods yield significant treatment coefficients, highlighting the robustness of the results (see Table 37 and 38).

Varying the financial window in the PSM matching to [-2;2] (Table 39 and 40) and [-3;3] (Table 41 and 42), the results suggest that smaller financial windows reduce the statistical significance of treatment contrasting LBOs, where we observe significant treatment effects across financial window variations. LBO investors target underperforming firms where rapidly enacted changes aim to restructure the asset base and improve profitability. On the contrary, SBO target companies are already optimized and scaled by the previous PE owner, limiting the potential

to apply standard short-term measures. With the "low-hanging fruits" already being exploited by the first investor, changes that will translate into immediate performance gains are hard to identify (Kick & Schwetzler, 2025). Therefore, value creation in SBOs arises from longer time-horizon initiatives such as buy-and-build strategies. The derived implications are further aligned with the results of Bonini (2015), investigating a post-investment period of 2 years, the author documents no significant operating performance improvements. The author's financial window choice is motivated by previous LBO studies, showcasing that value creation tends to occur early in the holding period (Guo et al., 2011). Our results imply that there may be an inherent difference not captured by Bonini (2015); based on a window of [-2;2], we similarly would not observe treatment effects in operating performance. Therefore, evaluating performance based on short post-windows may understate the actual treatment impact of the SBO investor.

8. Conclusion

This study investigates the value creation of different private equity investment types – namely, *growth capital, leveraged buyouts,* and *secondary buyouts* within the Swedish PE market. Drawing from the value creation framework on financial, governance, and operational engineering, this paper leverages an S&P Capital IQ Pro transaction dataset, linking it to private company financial statement data using Serrano. This superior data access enhances our matching - a crucial step in determining causal PE treatment effects. Whereas other studies rely on public companies, we access a potential control group of over 600,000 private Swedish firms, allowing us to generate superior control groups. With this advantage, the paper aims to provide new insights into the following research questions:

RQ1: Is leverage in the target company a distinguishable characteristic and differs between the investment types, as indicated by the financial engineering motive?

RQ2: Do private equity investors have a treatment effect on the target company and how do these differ across the different investment types?

Our analysis confirms the heterogeneity in value creation across the different investment types. For GC, we document significant treatment effects for net sales and total assets, leading GC-backed companies to outgrow their control group. In contrast, while LBOs in our sample only show modest increases in leverage, we document significant treatment effects regarding total assets and EBITDA, suggesting that LBO investors drive value through operational efficiencies

combined with strategic initiatives like add-on acquisitions. Yet, we find limited impact on net income, implying that PE sponsors prioritize EBITDA expansion over bottom-line profitability. Moreover, evidence for net sales expansion is mixed. Regarding SBOs, our results indicate that further top-line expansion becomes harder as companies mature. However, contrary to the general academic belief that SBOs have minimal value creation opportunities, our findings indicate that investors can still create value by potentially buying unfinished platform companies and improving EBITDA through targeted margin preservation. Mid-market Swedish PE investors may draw on these findings, tailoring their strategies to specific investment types, reinforcing SBO transactions with buy-and-build strategies. Policymakers may recognize the importance of growth capital structures to support the attractive SME pipeline in Sweden, further enabling financially constrained firms to grow.

The main limitation lies in concretely reconciling which exact value-creation mechanisms causally led to these post-investment improvements. Additionally, although applying a quasi-experimental setting to identify treatment effects is the empirical state of the art, the counterfactual situation of the firm not receiving the PE investment cannot be observed, noting an unsolved empirical issue. More studies could follow Biesinger, Bircan, and Ljungqvist (2023), using confidential data on private equity playbooks with a narrative identification strategy to disentangle between selection and treatment effects. By comparing the stated plans of the PE with the outcomes of value creation actions undertaken, this approach enables a direct disentanglement between treatment and selection effects without relying on the quasi-experimental setting and empirical matching methods.

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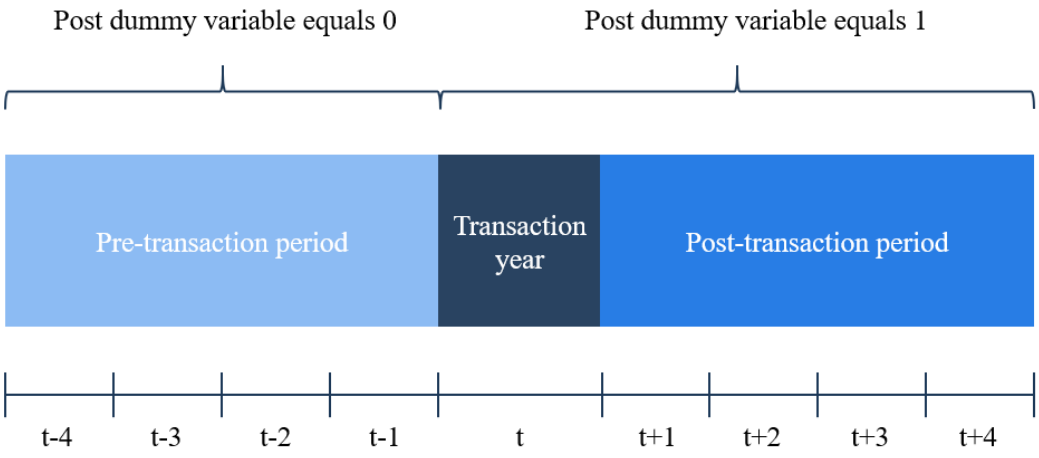
Appendices

Variable definition table

Variable	*Definitions*
Firm age at Treatment	The firm age at which a company received its investment and proxied as the difference between the year of the investment and registration year.
Firm age at Match	The firm age at which a company was selected to be a control firm (pseudo treatment year), proxied as the difference between the year of the investment and registration year.
Total Equity	Book Value of Equity
EBITDA	EBITDA = Operating Profit + Depreciation and Amortization
EBITDA margin	EBITDA margin = EBITDA / Net Sales
Leverage	Leverage = (Equity-to-Assets) * (Debt-to-Equity) = Debt / Total Assets
Cash holdings	Cash holdings = Cash and Cash equivalents / Total Assets
Return on Assets	Return on Assets = Net income / Total Assets
Return on Equity	Return on Equity = Net income / Book Value of Equity
Net sales growth	Net sales growth = (Net Sales $_{t+1}$ – Net Sales $_{t}$) / Net Sales $_{t}$
Total earnings growth	Total earnings growth = (Net Income $_{t+1}$ – Net Income $_{t}$) / Net Income $_{t}$
Total assets growth	Total assets growth = (Total Assets $_{t+1}$ – Total Assets $_{t}$) / Total Assets $_{t}$
Leverage growth	Leverage growth = (Leverage $_{t+1}$ – Leverage $_{t}$) / Leverage $_{t}$
Asset Tangibility	Asset Tangibility = Total Fixed Assets / Total Assets
Quick Ratio	Quick Ratio = (Total Current Assets – Total Inventories) / (Total Current Liabilities)
GC (dummy)	Equals 1 for firms that received growth capital and 0 for matched control firms.
LBO (dummy)	Equals 1 for firms that underwent an LBO and 0 for matched control firms.
SBO (dummy)	Equals 1 for firms that underwent an SBO and 0 for matched control firms.
Post (dummy)	Equals 1 for the post-transaction period, including the transaction year, and 0 for the pre-transaction period.
YearRelDeal (dummy)	Equals 1 for the respective year relative to the transaction and 0 otherwise, for e.g. YearRelDeal 0 equals to 1 for the treatment and control group in the investment year and 0 for all remaining years relative to the transaction.

Study Design and Discussion of Limitations

The graphic below functions as a visualization of our study DiD design. Since the transaction year already allows for treatment effects at year end, we included the year-end financial statement data for the estimation of treatment effects, similar to Boucly et al. (2011) and Bernstein et al. (2019). We acknowledge, that on the other hand potentially treatment effects from transactions occurring at the end of the transaction year will be falsely overstated, however both effects should weigh off each other, not distorting our main analysis, especially since four post years are included to increase the observed post-investment time horizon.

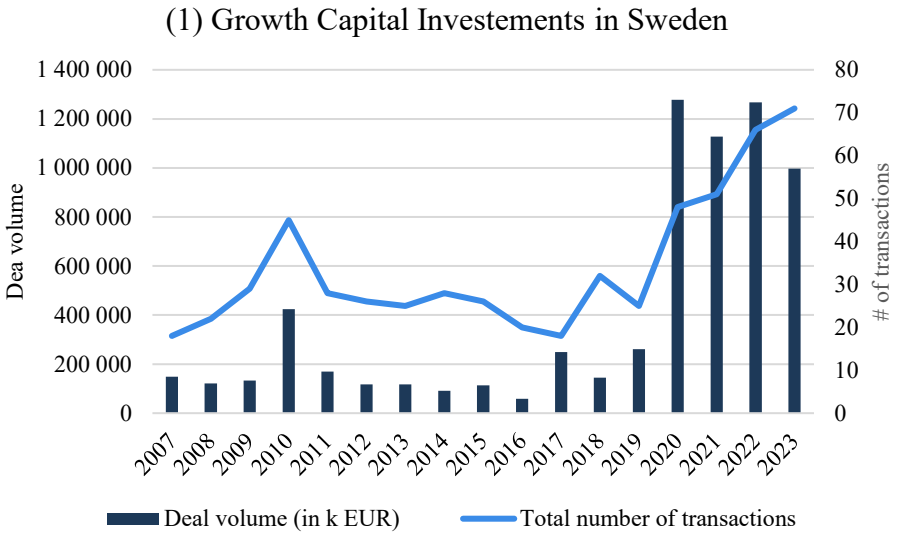


The validity of our chosen methodology is primarily driven by the reliance on a Difference-in-Differences regression design to identify the causal effects of PE ownership on firm-level performance metrics. While the DiD approach is a quasi-experimental setting and frequently applied in contemporary PE literature, it critically relies on the validity of the parallel trends assumption (Lavery, et al., 2023). The underlying assumption poses that, in the absence of the treatment, the treated and control group would have followed similar trends (Roberts & Whited, 2013). This confounding assumption has been tested through pre-treatment analyses for each dependent variable following two matching methods and financial window variation. Given the extensive appendix, only the parallel trends assumption for the main financial window specifications is depicted (Figure 3-5). Any deviations through visual inspections of the parallel

trends in the main financial window and all coefficients that are intertwined with the assumption have been critically reflected in the empirical analyses section.

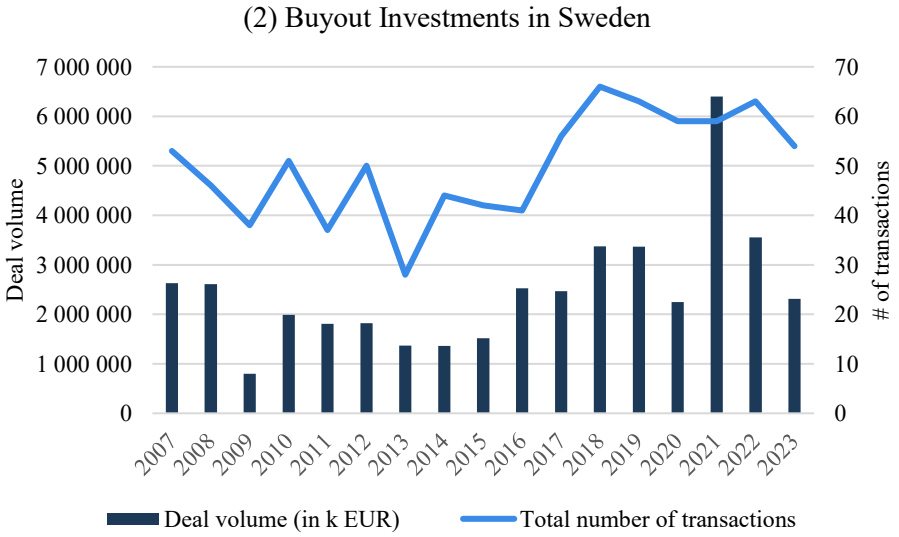
Another underlying limitation of this study is the presence of selection bias. While the Difference-in-Differences model assumes random assignment of the treatment (Roberts & Whited, 2013), a private equity transaction is not an entirely exogenous (Boucly et al., 2011; Davis et al., 2014). PE firms engage in extensive ex-ante due diligence, selecting targets based on thorough analysis (Gompers et al., 2016). The challenge of separating selection effects from treatment effects is discussed in contemporary PE literature (Biesinger et al., 2023; Ljungqvist 2024). To address this limitation from a statistical perspective, access to confidential deal-level data would be required (for e.g., Biesinger et al., 2023), which is beyond the scope of this master thesis. In conclusion, while this study carefully addresses deviations and discusses their implications in depth, causal inferences about the impact of PE treatment effects should be made with caution.

Figure 1: Development of growth capital transactions for Swedish portfolio companies



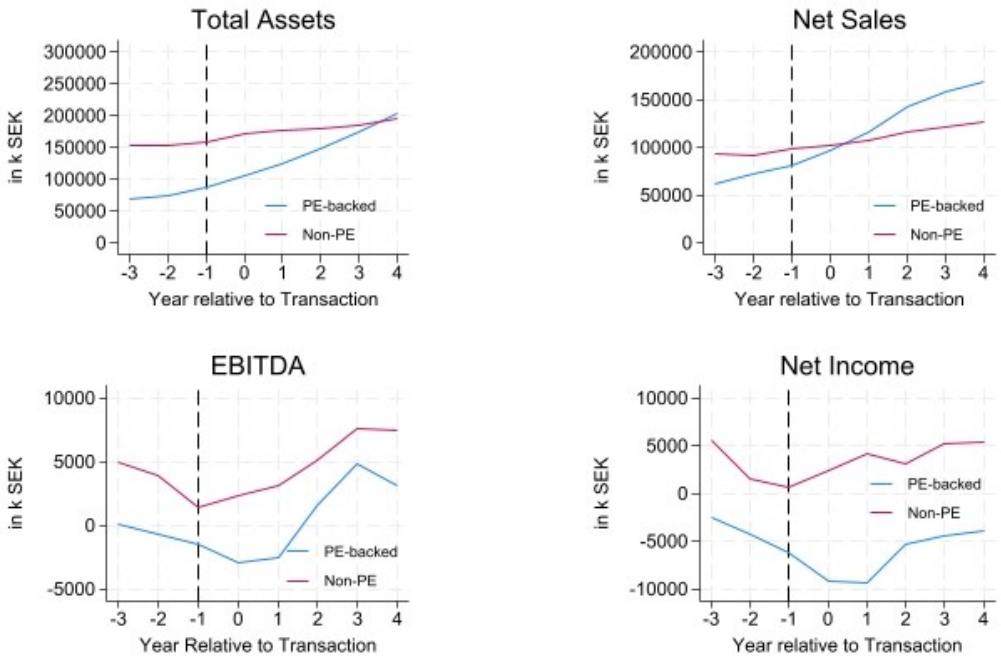
The graph above base on a confidential dataset from InvestEurope, that we received in the course Equity Financing and Governance. The figure showcases the development in deal volume and number of transactions based on the market statistics of Invest Europe for growth capital investments in Swedish portfolio companies.

Figure 2: Development of buyout transactions for Swedish portfolio companies



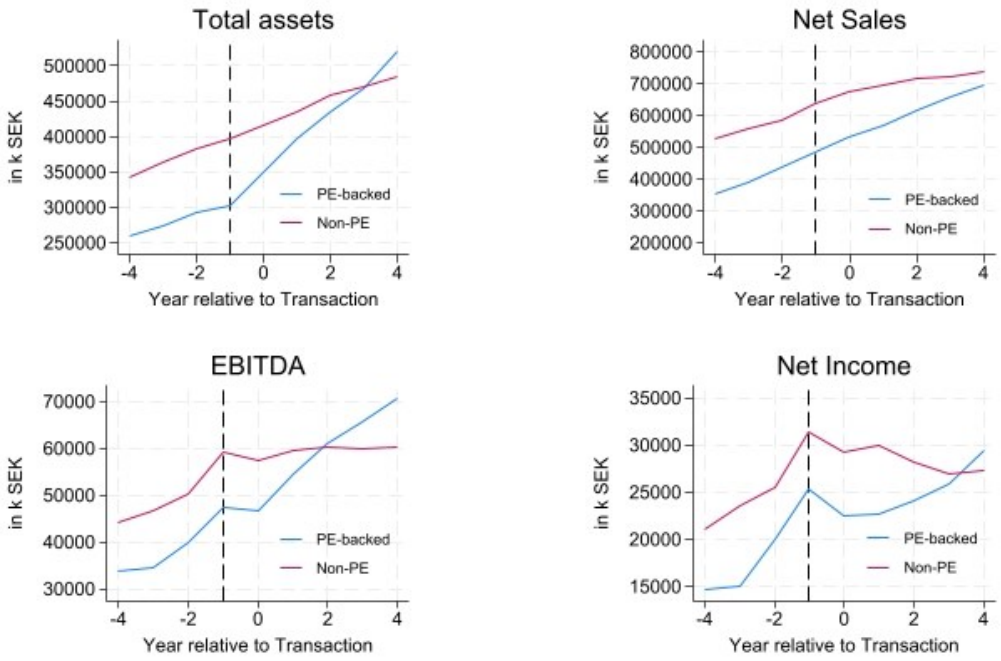
The graph above base on a confidential dataset from InvestEurope, that we received in the course Equity Financing and Governance. The figure showcases the development in deal volume and number of transactions based on the market statistics of Invest Europe for buyout investments in Swedish portfolio companies.

Figure 3: Parallel trends assumption – Growth Capital



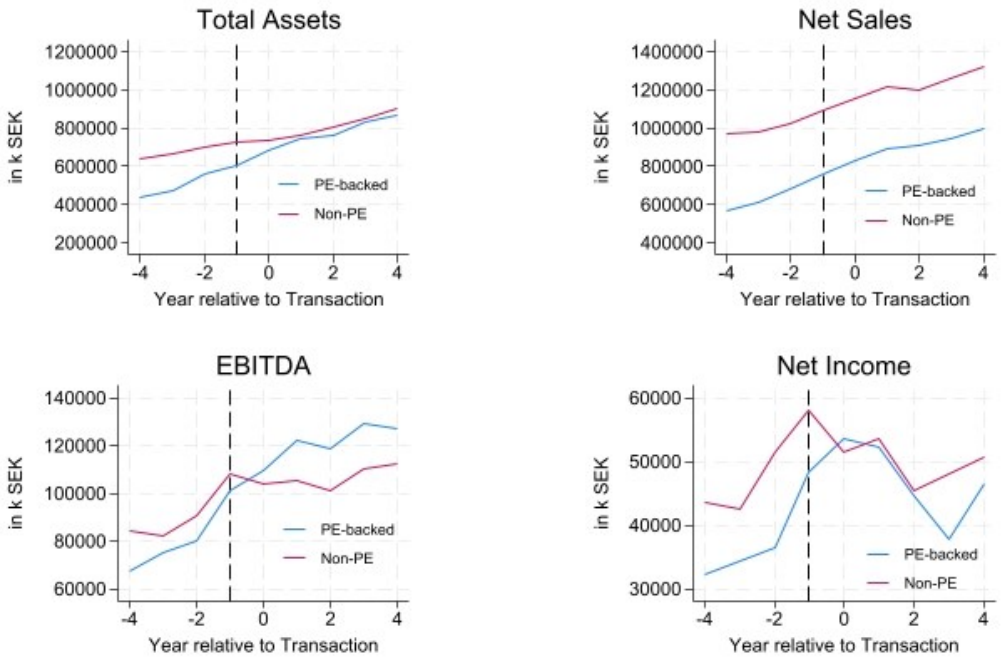
The graphs above show the development of the main variables of interest for the DiD for the sample of matched GC-backed firms and the matched control group before and after the transaction, for the main specification of our financial window [-3,4]. Since the matching was conducted in the year prior to the transaction (t-1) and immediate actions by the GC investor including resulting treatment effects can occur within the transaction year, the parallel trends assumption should be fulfilled until the pre-transaction year. We show the parallel trends graphs based on winsorized absolute values [2nd and 98th percentile] since these are the identical variables that are of interest in the DiD setting.

Figure 4: Parallel trends assumption – Leveraged Buyouts



The graphs above illustrate the development of the main variables of interest for the DiD for the sample of matched firms that underwent an LBO (PE-backed) and the matched control group (Non-PE) before and after the transaction, for the main financial window [-4,4]. As the matching was conducted in the year prior to the transaction (t-1) and immediate actions by the investor including resulting treatment effects can occur within the transaction year, the parallel trends assumption should be fulfilled until the pre-transaction year. We show the parallel trends graphs based on winsorized absolute values [2nd and 98th percentile] since these are the identical variables that are of interest in the DiD setting.

Figure 5: Parallel trends assumption – Secondary Buyouts



The graphs above illustrate the development of the main variables of interest for the DiD for the sample of matched firms that underwent a secondary buyout (PE-backed) and the matched control group (Non-PE) before and after the transaction, for the main financial window [-4,4]. As the matching was conducted in the year prior to the transaction (t-1) and immediate actions by the investor including resulting treatment effects can occur within the transaction year, the parallel trends assumption should be fulfilled until the pre-transaction year. We show the parallel trends graphs based on winsorized absolute values [2nd and 98th percentile] since these are the identical variables that are of interest in the DiD setting.

Table 1: Unwinsorized summary statistics (in k SEK) – Growth Capital

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	14.31	10.5	13.18	3	94	242
Total assets	185,501.63	38,913	1,099,081.7	1,008	23,632,941	1936
Total current assets	82,206.69	26,249.5	347,380.18	35	12,934,722	1936
Cash and cash equivalents	15,712.98	2,934.5	49,885.06	0	1,113,558	1936
Total equity	67,202.71	12,359	353,362.84	-108,531	10,104,513	1936
Net sales	127,797.26	48,973	307,483.15	0	5,224,485	1936
EBITDA	6,381.25	815.5	263,979.52	-437,482	11,445,363	1936
EBT	1,051.95	107.5	311,912.53	-1,542,389	11,958,894	1936
Net income	101.86	42.5	263,780.27	-1,161,578	9,812,183	1936
Leverage	0.56	0.58	0.24	0	1.24	1936
Cash holdings	0.18	0.11	0.21	0	0.97	1936
ROA	-0.16	0	0.64	-13.81	0.74	1936
ROE	-3.09	0.01	72.59	-2,789.84	68.5	1936
Net sales growth	4	0.16	120.22	-1	5,186.34	1936
Total assets growth	0.63	0.14	6.62	-0.95	246.1	1936
Total earnings growth	-7.36	-0.04	439.66	-17,915	5172	1936

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	27.61	19.5	27.67	3	143	226
Total assets	313,576.27	32,758.5	1,394,693.5	1,003	2,5968,392	1730
Total current assets	117,813.85	1,9743.5	454,740.37	0	7,366,691	1730
Cash and cash equivalents	13,204	1,373	48,760.38	0	1,018,403	1730
Total equity	154,802.67	10,251	798,250.15	-155,662	8,820,545	1730
Net sales	151,019.03	2,6560.5	603,738.94	0	9,416,366	1730
EBITDA	3,762.32	1158	57,895.45	-1,059,678	538,784	1730
EBT	1,1434.18	988.5	159,318.41	-1,352,006	3,928,758	1730
Net income	12,660.05	540	151,340.04	-134,9817	3,936,086	1730
Leverage	0.53	0.55	0.27	0	1	1730
Cash holdings	0.15	0.06	0.21	0	1	1730
ROA	-0.03	0.03	0.48	-7.06	1	1730
ROE	-1.06	0.11	26.20	-1,039.02	94.38	1730
Net sales growth	3.83	0.02	80.54	-1	2,608.14	1730
Total assets growth	0.75	0.03	17.76	-0.99	703.38	1730
Total earnings growth	15.16	0.04	448.41	-584.67	17,873	1730

Table 1 shows the unwinsorized summary statistics for the final sample of GC-backed and matched control firms of the financial window [-3,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 2: Winsorized summary statistics (in k SEK) – Growth Capital

Summary Statistics – Financial window (Treatment Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	14.31	10.5	13.18	3	94	242
Total assets	122,892.46	38,913	247,700.15	1,673	1,671,707	1936
Total current assets	68,804.56	26,249.5	123,016.71	571	764,359	1936
Cash and cash equivalents	12,669.05	2,934.5	25,163.17	0	128,606	1936
Total equity	48,881.25	12,359	114,834.76	52	803,200	1936
Net sales	111,819.64	48,973	195,334.42	0	1,073,797	1936
EBITDA	210.3	815.5	27,713.31	-86,392	90,186	1936
EBT	-4,223.44	107.5	33,008.04	-118,694	112,457	1936
Net income	-5,675.88	42.5	27,909.78	-106,131	90,001	1936
Leverage	0.56	0.58	0.24	0.03	0.97	1936
Cash holdings	0.18	0.11	0.20	0	0.78	1936
ROA	-0.13	0	0.39	-1.57	0.41	1936
ROE	-0.45	0.01	1.72	-8.58	1.87	1936
Net sales growth	0.47	0.16	1.16	-0.91	6.07	1936
Total assets growth	0.34	0.14	0.69	-0.54	3.08	1936
Total earnings growth	-0.22	-0.04	6.82	-26.7	26.8	1936

Summary Statistics – Financial window (Control Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	27.61	19.5	27.67	3	143	226
Total assets	173,649.22	32,758.5	363,844.81	1,673	1,671,707	1730
Total current assets	80,189.54	19,743.5	158,115.78	571	764,359	1730
Cash and cash equivalents	10,715.17	1,373	24,603.30	0	128,606	1730
Total equity	70,964.74	10,251	168,992.49	52	803,200	1730
Net sales	106,718.25	26,560.5	206,745.80	0	1,073,797	1730
EBITDA	3,762.32	1,158	57,895.45	-1,059,678	538,784	1730
EBT	5,083.37	988.5	33,664.42	-118,694	112,457	1730
Net income	3,396.72	540	27,658.10	-106,131	90,001	1730
Leverage	0.53	0.55	0.27	0.03	0.97	1730
Cash holdings	0.15	0.06	0.20	0	0.78	1730
ROA	-0.02	0.03	0.31	-1.57	0.41	1730
ROE	-0.13	0.11	1.52	-8.58	1.87	1730
Net sales growth	0.2	0.02	0.98	-0.91	6.07	1730
Total assets growth	0.12	0.03	0.51	-0.54	3.08	1730
Total earnings growth	0.25	0.04	5.97	-26.7	26.8	1730

Table 2 shows the winsorized summary statistics [winsorized at the 2nd and 98th percentile] for the final sample of GC-backed and matched control firms of the financial window [-3,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 3: Industry and year distribution table – Growth Capital

Panel A: Sample distribution table by industry

	Treatment Group		Control Group	
Industry	**N**	**N (in %)**	**N**	**N (in %)**
Energy & Environment	1	0.41%	1	0.44%
Materials	2	0.83%	2	0.88%
Industrial Goods	47	19.42%	52	23.01%
Construction	9	3.72%	6	2.65%
Shopping goods	37	15.29%	33	14.60%
Convenience goods	2	0.83%	2	0.88%
Health & Education	24	9.92%	23	10.18%
Finance & Real Estate	10	4.13%	8	3.54%
IT & Electronics	60	24.79%	53	23.45%
Telecom & Media	9	3.72%	8	3.54%
Corporate Services	35	14.46%	31	13.72%
Industry Classification Unknown	6	2.48%	7	3.10%
Total	**242**	**100.00%**	**226**	**100.00%**

Panel A of Table 3 shows the sample distribution by industries separated into treatment (GC-backed) and control firms. The classifications were retrieved from the serrano documentation and are based on the standard för svensk näringsgrensindelning (SNI 2007) classification, that were grouped by the Serrano data providers into eleven overarching sectors.

Panel B: Sample distribution table by year

	Treatment Group		Control Group	
Year	**N**	**N (in %)**	**N**	**N (in %)**
2001	9	3.72%	9	3.98%
2002	7	2.89%	7	3.10%
2003	14	5.79%	13	5.75%
2004	14	5.79%	14	6.19%
2005	10	4.13%	10	4.42%
2006	14	5.79%	14	6.19%
2007	7	2.89%	7	3.10%
2008	9	3.72%	9	3.98%
2009	11	4.55%	11	4.87%
2010	14	5.79%	14	6.19%
2011	23	9.50%	22	9.73%
2012	23	9.50%	23	10.18%
2013	10	4.13%	10	4.42%
2014	15	6.20%	15	6.64%
2015	12	4.96%	12	5.31%
2016	11	4.55%	11	4.87%
2017	20	8.26%	6	2.65%
2018	19	7.85%	19	8.41%
Total	**242**	**100.00%**	**226**	**100.00%**

Panel B of Table 3 shows the sample distribution across financial years for all firms, seperated between treatment (GC-backed) and control firms. Years span from 2001 to 2018 and reflect the years for which the treatment firms received the GC-investment. The deviation between the treatment and control group is caused by the with replacement design, as only the first match is depicted within this table.

Table 4: Investment determinants - Growth Capital

Panel A: Marginal Effects

Marginal effects after Probit				
Variables	**dy/dx**	**SD**	**z**	**p-value**
Ln (Total assets)	-0.0087	0.0032	-2.69	0.007
Ln (Net income)	0.0069	0.0021	3.27	0.001
Ln (Net sales)	-0.0011	0.0024	-0.46	0.645
Leverage	-0.0204	0.0212	-0.96	0.335
EBITDA margin	0.0000	0.0000	-0.63	0.532
Marginal effects after Logit				
Variables	**dy/dx**	**SD**	**z**	**p-value**
Ln (Total assets)	-0.0084	0.0032	-2.61	0.009
Ln (Net income)	0.0069	0.0021	3.24	0.001
Ln (Net sales)	-0.0012	0.0023	-0.52	0.606
Leverage	-0.0205	0.0206	-0.99	0.320
EBITDA margin	0.0000	0.0000	-0.6	0.546

Panel A of Table 4 shows the marginal effects evaluated at the means that we perform to assess the determinants of GC-backed firms and are based on the regression sepcifications below. The coefficients of the explanatory variables above are the ones discussed in section 7.1.2, given their greater economic interpretability. *** p<.01, ** p<.05, * p<.1.

Panel B: Regression results

	(1)	(2)
	Probit	Logit
Variables	Dummy GC	Dummy GC
Ln (Total assets)	-0.077***	-0.160**
	(0.029)	(0.063)
Ln (Net income)	0.061***	0.132***
	(0.019)	(0.042)
Ln (Net sales)	-0.010	-0.022
	(0.021)	(0.043)
Leverage	-0.181	-0.390
	(0.187)	(0.392)
EBITDA margin	-0.000	-0.000
	(0.000)	(0.000)
Constant	-0.965***	-1.527***
	(0.202)	(0.427)
Observations	3990	3990
Pseudo R^2	0.014	0.014
Industry FE	Yes	Yes
Year FE	Yes	Yes
Standard errors	Clustered	Clustered
Method	Probit	Logit

Panel B of Table 4 shows the results for the probit and logit regressions to assess the determinants of GC-backed firms. The logic is as follows: Prob (GE > 0) = $\alpha_t + \alpha_f + \theta X_{it-1} + \varepsilon_{it}$. α_t captures year fixed effects, α_f captures industry fixed effects, and X_{it-1} denotes the explanatory variables in the model. The explanatory variables are log normal transformed and lagged to interpret them as percentage increases or decreases on the probability changes. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 5: Leverage fixed effects regressions – Primary Transactions

Leverage regressions

Investment Type	Growth Capital	LBO
	(1)	(2)
	Leverage	Leverage
Variables	Growth	Growth
Dummy Investment Year	-0.016	0.040**
	(0.033)	(0.017)
Ln (Total assets)	-0.046*	0.037***
	(0.027)	(0.010)
EBITDA margin	-0.019**	-0.210***
	(0.009)	(0.054)
Asset tangibility	0.052	-0.159***
	(0.095)	(0.033)
Quick Ratio	-0.030***	-0.069***
	(0.005)	(0.005)
Lagged Net sales growth	-0.010	-0.075***
	(0.013)	(0.011)
Constant	0.126	-0.196
	(0.334)	(0.130)
Observations	2891	8582
R-squared	0.080	0.110
Year FE	Yes	Yes
Industry FE	Yes	Yes
Standard errors	Clustered	Clustered
Method	FE	FE

Table 5 shows the leverage regression results with indusry and year fixed effects for the two primary investment types, i.e. growth capital-backed firms and companies that underwent an LBO. Each regression is performed based on each treatment and respective control group, and therefore runned for each inveestment type individually. α_t captures year fixed effects, α_f captures industry fixed effects. The variable $DummyYear_t$ equals 1 for the transaction year and 0 otherwise. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1.

Table 6: Baseline regression model – Growth Capital

Baseline Regression Growth Capital and growth metrics

Variables	(1) Sales Growth	(2) Total Assets Growth	(3) Earning Growth	(4) EBITDA Growth
Dummy GC	0.194***	0.228***	0.069	0.095
	(0.039)	(0.025)	(0.220)	(0.085)
Ln (Net sales)	-0.028			
	(0.029)			
Ln (Total assets)	-0.031	0.026***	0.010	-0.036
	(0.033)	(0.007)	(0.074)	(0.028)
Ln (Operating profit)	0.049*			
	(0.029)			
ROA	0.009	0.152***	4.965***	2.383***
	(0.589)	(0.043)	(0.497)	(0.226)
Leverage	0.147	-0.047	-0.928**	0.234
	(0.125)	(0.050)	(0.454)	(0.196)
Cash holdings	0.313**	0.494***	1.010*	0.234
	(0.128)	(0.083)	(0.561)	(0.257)
Net sales growth			0.373***	0.278***
			(0.134)	(0.072)
Constant	0.526*	0.046	1.136	-1.220
	(0.304)	(0.189)	(1.408)	(0.799)
Observations	3666	3666	3666	3666
R-squared	0.046	0.080	0.073	0.098
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Standard errors	Clustered	Clustered	Clustered	Clustered
Method	POLS	POLS	POLS	POLS

Table 6 shows the baseline regression results, including industry ($\alpha_{f.}$) and year fixed effects ($\alpha_{t.}$). The dummy variable outlined in section 6.1.3 "$DummyPE_{it}$ " is named Dummy GC in order to be able to distinguish the different investment types (which equals to 1 for a growth capital-treated firm and 0 for control firms). Growth rates are calculated on a year-by-year basis. This regression design thereby captures a treatment indication for the entire financial window by comparing the treatment and control group, which purposely does not distinguish between the pre-transaction and post-transaction period. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1.

Table 7: Baseline Difference in Differences with year-by-year analysis – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
GC	-20,167	-73,855***	-6,163***	-3,583**
	(15151)	(23956)	(1829)	(1801)
Post	10,382	14,950	1,521	877
	(8346)	(12971)	(1433)	(1366)
GC*Post	42,616***	45,239***	-4,022**	-423
	(9910)	(14172)	(1944)	(1706)
Constant	-5,982	887,503	382	-41,821***
	(20605)	(539930)	(18381)	(10036)
Observations	3660	3660	3660	3660
R-squared	0.058	0.080	0.085	0.086
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
GC*YearRelDeal -3	-9,928*	-7,715	-582	-1,056
	(5930)	(8225)	(2243)	(1953)
GC*YearRelDeal -2	-1,408	-4,852	1,196	-1,313
	(3082)	(5961)	(1900)	(1774)
GC*YearRelDeal 0	9,237***	4,695	-4,578**	-2,198*
	(3345)	(8569)	(2284)	(1249)
GC*YearRelDeal 1	25,633***	20,041*	-6,232***	-1,934
	(7172)	(11303)	(2082)	(2027)
GC*YearRelDeal 2	45,346***	43,773***	-1,221	88
	(11256)	(13615)	(2597)	(2236)
GC*YearRelDeal 3	55,984***	63,144***	-2,407	671
	(12746)	(17245)	(2915)	(2685)
GC*YearRelDeal 4	66,845***	88,023***	-1,588	-70
	(13876)	(20461)	(3270)	(2831)
Observations	3660	3660	3660	3660
R-squared	0.058	0.080	0.085	0.086
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 7 illustrates the results for our baseline DiD regression, $y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \alpha_t + \alpha_f + \epsilon_{it}$. PE_i is noted as GC for this investment type and equals 1 for growth capital backed firms and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Panel B shows the regression results for the year relative DiD effects, which we perform to assess in which year (relative to the transaction and noted as YearRelDeal) the significant treatment effect occurs. As outlined in the empirical analysis, the statistical significance and sign is only relevant in Panel B, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 8: Difference in Differences with pre-treatment control variables – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
GC	4,014	-6,516	-5,550***	-2,608
	(12236)	(5022)	(1662)	(1809)
Post	11,350	18,912**	1,581	706
	(8003)	(9208)	(1453)	(1433)
GC*Post	44,292***	49,021***	-3,835*	318
	(10279)	(14110)	(1980)	(1747)
Firm size pre-transaction	0.334***	1.000***	0.016**	0.001
	(0.072)	(0.036)	(0.007)	(0.007)
Sales growth pre-transaction	-3,154			
	(6750)			
Firm age pre-transaction	229			110**
	(470)			(54)
Asset tangibility pre-transaction		21,349		
		(17188)		
Leverage pre-transaction		-4,786	4,190	7,868*
		(20792)	(3970)	(4595)
Asset growth pre-transaction		8,127		
		(7605)		
EBITDA margin pre-transaction				1,227***
				(256)
Quick ratio pre-transaction				3.294
				(199)
Constant	-316,244*	-51,241	-15,788	-45,872***
	(189342)	(38919)	(12509)	(11383)
Observations	3577	3577	3577	3577
R-squared	0.249	0.815	0.106	0.153
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 8 shows the regression results for our DiD with incorporated pre-investment controls, $y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \beta_4 X_{i;pre-invest} + \alpha_t + \alpha_f + \epsilon_{it}$. PE_i is noted as GC for this investment type and equals 1 for growth capital backed firms and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 9: Winsorized summary statistics using calipermatch – Growth Capital

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	15.89	13	11.41	3	65	122
Total assets	52,691.47	32,279	65,145.13	2,529	295,701	976
Total current assets	35,963.73	21,932.5	42,639.63	1,258	204,167	976
Cash and cash equivalents	6,908.58	2,057.5	10,899.34	0	47,634	976
Total equity	18,089.03	8,581.5	24,455.16	159	106,479	976
Net sales	80,888.19	51,862	96,744.89	1,569	476,684	976
EBITDA	4,367.6	2,207	11,981.25	-19,929	46,189	976
EBT	2,484.5	1,060	11,888.92	-24,064	42,390	976
Net income	726.32	527	8,864.65	-22,916	28,587	976
Leverage	0.59	0.61	0.21	0.15	0.97	976
Cash holdings	0.17	0.1	0.19	0	0.73	976
ROA	-0.01	0.03	0.22	-0.69	0.38	976
ROE	-0.11	0.1	0.92	-3.68	1.11	976
Net sales growth	0.25	0.14	0.46	-0.48	2.13	976
Total assets growth	0.25	0.14	0.44	-0.43	1.74	976
Total earnings growth	0.58	0.03	6.98	-16.94	38.18	976

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	15.94	13	11.34	2	64	122
Total assets	41,961.28	24,401	53,241.14	2,529	295,701	958
Total current assets	28,282.12	15,519.5	37,421.57	1,258	204,167	958
Cash and cash equivalents	4,773.12	1,610	8,367.15	0	47,634	958
Total equity	12,186.72	6,552.5	15,864.24	159	106,479	958
Net sales	70,422.68	39,133.5	90,028.51	1,569	476,684	958
EBITDA	6,204.67	2,798	11,828.35	-47,977	98,509	958
EBT	4,414.03	1,706	9,642.96	-24,064	42,390	958
Net income	2,439.85	853	6,166.78	-22,916	28,587	958
Leverage	0.6	0.61	0.22	0.15	0.97	958
Cash holdings	0.17	0.09	0.20	0	0.73	958
ROA	0.06	0.05	0.13	-0.69	0.38	958
ROE	0.18	0.18	0.57	-3.68	1.11	958
Net sales growth	0.12	0.05	0.41	-0.48	2.13	958
Total assets growth	0.12	0.05	0.34	-0.43	1.74	958
Total earnings growth	1.21	0.02	6.73	-16.94	38.18	958

Table 9 shows the winsorized summary statistics [winsorized at the 2nd and 98th percentile] for the final sample of GC-backed and matched control firms of the financial window [-3,4] using caliper match. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 10: Baseline Difference in Differences with year-by-year analysis using calipermatch [-3,4] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
GC	-4,464	-808	-1,188**	-1,751*
	(9434)	(5642)	(596)	(908.325)
Post	8,853*	6,261	-439	-113
	(5317)	(3847)	(515)	(761)
GC*Post	23,408***	18,281***	-880	268
	(6102)	(4896)	(750)	(1026)
Constant	49,972***	26,960***	3,761***	9,967***
	(15039)	(8772)	(894)	(1498)
Observations	1934	1934	1934	1934
R-squared	0.120	0.106	0.069	0.074
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
GC*YearRelDeal -3	-6,241*	-2,196	-322	-839
	(3306)	(1773)	(723)	(822)
GC*YearRelDeal -2	-2,341	-157	45	-97
	(1999)	(1202)	(600)	(588)
GC*YearRelDeal 0	2,639	4,475**	-1,927**	-858
	(2207)	(2157)	(747)	(793)
GC*YearRelDeal 1	11,460***	9,125***	-1,119	-616
	(3999)	(3412)	(910)	(1152)
GC*YearRelDeal 2	24,363***	17,454***	-609	24
	(5920)	(5682)	(930)	(1206)
GC*YearRelDeal 3	29,640***	23,072***	-887	692
	(7373)	(6390)	(1113)	(1488)
GC*YearRelDeal 4	37,464***	34,485***	-229	651
	(9592)	(7614)	(1138)	(1524)
Observations	1934	1934	1934	1934
R-squared	0.284	0.276	0.022	0.053
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 10 illustrates the results for the baseline DiD regression using caliper match, to ensure robustness. Panel B presents the year by year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 11: Difference in Differences with pre-treatment control variables using calipermatch [-3,4] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
GC	-4,766	-853	-1,185**	-545
	(4669)	(1301)	(544)	(783)
Post	9,175**	6440**	-383	-23
	(3741)	(2902)	(520)	(730)
GC*Post	23,770***	18,581***	-858	273
	(6045)	(4895.878)	(758)	(1032)
Firm size pre-transaction	1.642***	1.048***	0.030**	0.094***
	(0.153)	(0.044)	(0.014)	(0.028)
Sales growth pre-transaction	-556			
	(6506)			
Firm age pre-transaction	-552			27
	(414)			(60)
Asset tangibility pre-transaction		1,467		
		(5189)		
Leverage pre-transaction		4,004	-1,720	-969.975
		(7058)	(1698)	(3393)
Asset growth pre-transaction		3,099		
		(4073)		
EBITDA margin pre-transaction				16,234***
				(2498)
Quick ratio pre-transaction				-432
				(665)
Constant	-7,017	-17,951**	3,441***	2,733
	(15275)	(7622)	(1285)	(2729)
Observations	1909	1909	1909	1909
R-squared	0.673	0.676	0.099	0.293
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 11 shows the regression results for the DiD with incorporated pre-investment controls using caliper match as a variation of the matching method. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 12: Baseline Difference in Differences with year-by-year analysis using PSM [-2,2] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
GC	-21,274**	17,640*	-5,394***	-4,566***
	(10818)	(9109.579)	(1230)	(1278)
Post	11,987***	5,588	614	1,232
	(4592)	(4031)	(852)	(782)
GC*Post	21,995***	24,450***	-3,776***	-1,865
	(6024)	(5726)	(1255)	(1174)
Constant	399,779	358,728*	-28,051***	-16,244
	(279217)	(212899)	(2434)	(10735)
Observations	3015	3015	3015	3015
R-squared	0.088	0.103	0.104	0.093
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
GC*YearRelDeal -2	-418	-6,103	736	385
	(2517)	(3835)	(989)	(911)
GC*YearRelDeal 0	6,690**	10,728**	-4,222***	-2,835***
	(2904)	(4495)	(1245)	(1028)
GC*YearRelDeal 1	20,259***	21,628***	-4,379***	-2,308*
	(5892.707)	(5544)	(1543)	(1329)
GC*YearRelDeal 2	39,729***	37,747***	-1,584	375
	(8070)	(7226)	(1764)	(1606)
Observations	3015	3015	3015	3015
R-squared	0.168	0.184	0.052	0.058
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 12 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-2,2]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 13: Difference in Differences with pre-treatment control variables using PSM [-2,2] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
GC	-33,809***	-2,835	-4,608***	-2,637**
	(8178)	(2091)	(1273)	(1208)
Post	13,319***	7,173**	294	879
	(4289.213)	(3318)	(851)	(779)
GC*Post	23,330***	26,204***	-3,382***	-1,142
	(6075)	(5881)	(1276)	(1197)
Firm size pre-transaction	0.748***	0.987***	-0.025***	0.022*
	(0.112)	(0.029)	(0.010)	(0.013)
Sales growth pre-transaction	-4344			
	(4185)			
Firm age pre-transaction	983*			185***
	(519)			(58)
Asset tangibility pre-transaction		5,087		
		(7593)		
Leverage pre-transaction		10,964	7,752***	4,132
		(7731)	(2695)	(3004)
Asset growth pre-transaction		-1,928		
		(3211)		
EBITDA margin pre-transaction				2,342***
				(409)
Quick ratio pre-transaction				-310
				(278)
Constant	97,913	-39,265**	-23,912***	-30,259***
	(120042)	(18856)	(8256)	(7601)
Observations	2910	2910	2910	2910
R-squared	0.400	0.811	0.130	0.227
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 13 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-2,2]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 14: Baseline Difference in Differences with year-by-year analysis using PSM [-3,3] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
GC	-24815*	8,780	-5,209***	-4,415***
	(13204)	(11206)	(1112)	(1399)
Post	16,966***	13,701***	-239	965
	(6387)	(4801)	(720)	(917)
GC*Post	35,903***	30,090***	-1,831	319
	(7736)	(7454)	(1196)	(1239)
Constant	-17,916	49,716***	-31,343***	-29,084***
	(18518)	(15844)	(1837)	(2386)
Observations	3507	3507	3507	3507
R-squared	0.041	0.051	0.092	0.065
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
GC*YearRelDeal -3	-2,499	-4,958	2,430**	393
	(6629)	(5086)	(1212)	(1289)
GC*YearRelDeal -2	389	-3,368	432	-365
	(4052)	(4166)	(962)	(887)
GC*YearRelDeal 0	12,455***	9,613**	-2,891**	-1,720
	(3564)	(4534.460)	(1267)	(1081)
GC*YearRelDeal 1	23,488***	16,817***	-1,877	-629
	(6579)	(5806.409)	(1447)	(1373)
GC*YearRelDeal 2	46,971***	32,870***	341	1,666
	(9074)	(7797.735)	(1717)	(1712)
GC*YearRelDeal 3	57,409***	45,565***	1,021	3,268*
	(10198)	(9471)	(1918)	(1963)
Observations	3507	3507	3507	3507
R-squared	0.155	0.172	0.049	0.052
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 14 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-3,3]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 15: Difference in Differences with pre-treatment control variables using PSM [-3,3] – Growth Capital

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
GC	-32,103***	-1,469	-5,192***	-3,222***
	(9514)	(2978)	(1106)	(1236)
Post	15,022***	9,851**	-330	784
	(5457)	(4109)	(705)	(875)
GC*Post	37,206***	32,653***	-1,733	559
	(7716)	(7548)	(1210)	(1265)
Firm size pre-transaction	0.820***	0.979***	0.010	0.040***
	(0.112)	(0.024)	(0.007)	(0.010)
Sales growth pre-transaction	-4,293			
	(5651)			
Firm age pre-transaction	1,410*			187***
	(730)			(53)
Asset tangibility pre-transaction		-10,385		
		(6992)		
Leverage pre-transaction		15,894*	7,760***	8,490**
		(8708)	(2532)	(3568)
Asset growth pre-transaction		-4,690		
		(3815)		
EBITDA margin pre-transaction				1,924***
				(378)
Quick ratio pre-transaction				200
				(305)
Constant	-106,835***	-47,928***	-36,638***	-38,197***
	(23837)	(13979)	(2271)	(3397)
Observations	3442	3442	3442	3442
R-squared	0.452	0.795	0.110	0.236
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 15 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-3,3]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_t) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 16: Unwinsorized summary statistics (in k SEK) – Leveraged Buyouts

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	27.06	21	18.53	4	97	203
Total assets	691,227.3	138,640	4,572,275.2	2,375	86,459,000	1823
Total current assets	219,095	92,933	520,965.80	0	9,869,626	1823
Cash and cash equivalents	26,888.8	6,461	101,562.89	0	1,796,877	1823
Total equity	142,580.02	36,058	556,098.30	73	7,820,270	1823
Net sales	561,661.5	235,552	1,165,035.4	0	15,657,885	1823
EBITDA	69,372.46	22,503	276,312.19	-79,312	4,208,000	1823
EBT	45,534.71	16,411	183,425.63	-1,369,000	3,536,724	1823
Net income	36,812.35	8,290	386,766.42	-1,248,000	15,463,417	1823
Leverage	0.62	0.63	0.19	0	1	1823
Cash holdings	0.11	0.05	0.13	0	0.74	1823
ROA	0.09	0.08	0.13	-1.65	0.91	1823
ROE	0.85	0.26	13.91	-17.04	425.61	1823
Net sales growth	0.67	0.09	15.71	-1	643.67	1823
Total assets growth	0.23	0.11	1.18	-0.89	42	1823
Total earnings growth	30.06	0.14	605.12	-2,186.06	22,535	1823

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	31.56	23	24.88	1	138	920
Total assets	664,378.68	107,903	2,877,227.7	1,012	63,830,932	8354
Total current assets	338,944.07	75,571	1,285,455.7	0	38,483,359	8354
Cash and cash equivalents	37,500.9	3,575.5	233,793.20	0	8,862,489	8354
Total equity	235,008.37	26,716.5	1,437,107.0	43	44,618,000	8354
Net sales	792,141.2	202,633.5	1,911,514.9	0	29,978,206	8354
EBITDA	77,721.17	14,548.5	290,069.90	-2,157,500	7,403,358	8354
EBT	75,795.82	10,406	573,481.54	-2,781,300	18,912,000	8354
Net income	53,168.08	5,701	514,497.63	-2,239,518	16,195,167	8354
Leverage	0.6	0.63	0.23	0	1	8354
Cash holdings	0.13	0.05	0.18	0	1	8354
ROA	0.1	0.07	0.24	-8.38	9.99	8354
ROE	0.89	0.25	16.35	-729.04	677.42	8354
Net sales growth	0.58	0.05	28.66	-1	2,379.16	8354
Total assets growth	0.25	0.05	6.60	-0.99	551.79	8354
Total earnings growth	11.82	0.06	879.15	-30,517.33	61,538.5	8354

Table 16 shows the unwinsorized summary statistics for the final sample of firms that underwent an LBO and matched control group of the financial window [-4,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 17: Winsorized summary statistics (in k SEK) – Leveraged Buyouts

Summary Statistics – Financial window (Treatment Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	27.06	21	18.53	4	97	203
Total assets	372,159.93	138,640	759,147.90	4,226	5,208,000	1823
Total current assets	199,629.71	92,933	349,784.63	2,072	2,431,300	1823
Cash and cash equivalents	20,866.6	6,461	41,488.79	0	279,163	1823
Total equity	107,097.54	36,058	238,065.08	454	1,553,300	1823
Net sales	529,124.54	235,552	885,504.24	2,840	6,132,300	1823
EBITDA	50,898.54	22,503	94,893.86	-14,126	624,073	1823
EBT	38,572.51	16,411	83,008.27	-48,086	588,305	1823
Net income	22,633.51	8,290	54,727.59	-42,758	372,000	1823
Leverage	0.62	0.63	0.19	0.12	0.97	1823
Cash holdings	0.11	0.05	0.13	0	0.65	1823
ROA	0.09	0.08	0.11	-0.14	0.48	1823
ROE	0.34	0.26	0.62	-1.2	3.7	1823
Net sales growth	0.14	0.09	0.25	-0.49	1.12	1823
Total assets growth	0.16	0.11	0.29	-0.4	1.1	1823
Total earnings growth	1.22	0.14	4.96	-5.25	24.81	1823

Summary Statistics – Financial window (Control Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	31.56	23	24.88	1	138	920
Total assets	447,779.01	107,903	967,233.24	4,226	5,208,000	8354
Total current assets	259,590.14	75,571	488,409.02	2,072	2,431,300	8354
Cash and cash equivalents	23,313.32	3,575.5	53,280.66	0	279,163	8354
Total equity	124,884.82	26,716.5	283,663.50	454	1,553,300	8354
Net sales	701,038.2	202,633.5	1,257,182.9	2,840	6,132,300	8354
EBITDA	77,721.17	14,548.5	290,069.90	-2,157,500	7,403,358	8354
EBT	47,642.65	10,406	111,033.99	-48,086	588,305	8354
Net income	29,283.41	5,701	71,256.04	-42,758	372,000	8354
Leverage	0.6	0.63	0.22	0.12	0.97	8354
Cash holdings	0.13	0.05	0.17	0	0.65	8354
ROA	0.1	0.07	0.12	-0.14	0.48	8354
ROE	0.38	0.25	0.70	-1.2	3.7	8354
Net sales growth	0.08	0.05	0.26	-0.49	1.12	8354
Total assets growth	0.09	0.05	0.26	-0.4	1.1	8354
Total earnings growth	0.85	0.06	4.07	-5.25	24.81	8354

Table 17 shows the winsorized summary statistics [winsorized at the 2nd and 98th percentile] for the final sample of firms that underwent an LBO and the matched control group of the financial window [-4,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 18: Industry and year distribution table – Leveraged Buyouts

Panel A: Sample distribution table by industry

	Treatment Group		Control Group	
Industry	**N**	**N (in %)**	**N**	**N (in %)**
Energy & Environment	2	0.99%	8	0.87%
Materials	4	1.97%	19	2.07%
Industrial Goods	50	24.63%	253	27.50%
Construction	13	6.40%	44	4.78%
Shopping goods	39	19.21%	162	17.61%
Convenience goods	15	7.39%	85	9.24%
Health & Education	21	10.34%	89	9.67%
Finance & Real Estate	6	2.96%	18	1.96%
IT & Electronics	19	9.36%	102	11.09%
Telecom & Media	5	2.46%	19	2.07%
Corporate Services	27	13.30%	110	11.96%
Industry Classification Unknown	2	0.99%	11	1.20%
Total	**203**	**100.00%**	**920**	**100.00%**

Panel A of Table 18 shows the sample distribution by industries separated into treatment (LBO-backed) and control firms. The classifications were retrieved from the serrano documentation and are based on the standard för svensk näringsgrensindelning (SNI 2007) classification, that were grouped by the Serrano data providers into eleven overarching sectors.

Panel B: Sample distribution table by year

	Treatment Group		Control Group	
Year	**N**	**N (in %)**	**N**	**N (in %)**
2002	3	1.48%	15	1.63%
2003	7	3.45%	35	3.80%
2004	11	5.42%	52	5.65%
2005	11	5.42%	53	5.76%
2006	16	7.88%	71	7.72%
2007	20	9.85%	91	9.89%
2008	15	7.39%	71	7.72%
2009	9	4.43%	44	4.78%
2010	18	8.87%	81	8.80%
2011	14	6.90%	60	6.52%
2012	11	5.42%	48	5.22%
2013	9	4.43%	44	4.78%
2014	9	4.43%	37	4.02%
2015	17	8.37%	77	8.37%
2016	12	5.91%	49	5.33%
2017	10	4.93%	44	4.78%
2018	11	5.42%	48	5.22%
Total	**203**	**100.00%**	**920**	**100.00%**

Panel B of Table 18 shows the sample distribution across financial years for all firms, seperated between treatment (LBO-portfolio companies) and control firms. Years span from 2002 to 2018 and reflect the years for which the treatment firms underwent the LBO-transaction. The deviation between the treatment and control group is reasonable and due to the five nearest neighbour matching method.

Table 19: Investment determinants – Leveraged Buyouts

Panel A: Marginal Effects

Marginal effects after Probit				
Variables	**dy/dx**	**SD**	**z**	**p-value**
Ln (Total assets)	-0.0211	0.0048	-4.44	0.000
Ln (Net income)	0.0073	0.0021	3.45	0.001
Ln (Net sales)	0.0184	0.0051	3.61	0.000
Leverage	-0.0581	0.0200	-2.90	0.004
EBITDA margin	0.0292	0.0097	3.01	0.003
Marginal effects after Logit				
Variables	**dy/dx**	**SD**	**z**	**p-value**
Ln (Total assets)	-0.0220	0.0039	-5.58	0.000
Ln (Net income)	0.0080	0.0021	3.72	0.000
Ln (Net sales)	0.0190	0.0043	4.44	0.000
Leverage	-0.0535	0.0190	-2.82	0.005
EBITDA margin	0.0239	0.0069	3.46	0.001

Panel A of Table 19 shows the marginal effects evaluated at the means that we perform to assess the determinants of firms that underwent an LBO and are based on the regression sepcifications below. The coefficients of the explanatory variables above are the ones discussed in section 7.1.2, given their greater economic interpretability. *** p<.01, ** p<.05, * p<.1.

Panel B: Regression results

	(1)	(2)
	Probit	Logit
Variables	Dummy LBO	Dummy LBO
Ln (Total assets)	-0.238***	-0.565***
	(0.060)	(0.119)
Ln (Net income)	0.083***	0.203***
	(0.026)	(0.060)
Ln (Net sales)	0.207***	0.488***
	(0.062)	(0.121)
Leverage	-0.655***	-1.374***
	(0.225)	(0.486)
EBITDA margin	0.329***	0.615***
	(0.112)	(0.183)
Constant	-1.900***	-3.547***
	(0.215)	(0.467)
Observations	4364	4364
Pseudo R^2	0.028	0.029
Industry FE	Yes	Yes
Year FE	Yes	Yes
Standard errors	Clustered	Clustered
Method	Probit	Logit

Panel B of Table 19 shows the results for the probit and logit regressions to assess the determinants of firms that underwent an LBO. The logic is as follows: Prob (GE > 0) = $\alpha_t + \alpha_f + \theta X_{it-1} + \varepsilon_{it}$. α_t captures year fixed effects, α_f captures industry fixed effects, and X_{it-1} denotes the explanatory variables in the model. The explanatory variables are log normal transformed and lagged to interpret them as percentage increases or decreases on the probability changes. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 20: Baseline regression model – Leveraged Buyouts

Baseline Regression LBO and growth metrics

Variables	(1) Sales Growth	(2) Total Assets Growth	(3) Earning Growth	(4) EBITDA Growth
Dummy LBO	0.055***	0.074***	0.309**	-0.026
	(0.009)	(0.009)	(0.126)	(0.032)
Ln (Net sales)	0.004			
	(0.006)			
Ln (Total assets)	-0.024***	0.010***	-0.011	0.003
	(0.007)	(0.002)	(0.029)	(0.009)
Ln (Operating profit)	0.021***			
	(0.004)			
ROA	0.113***	0.322***	5.839***	1.179***
	(0.042)	(0.034)	(0.496)	(0.156)
Leverage	0.155***	0.168***	0.647***	0.163**
	(0.017)	(0.016)	(0.216)	(0.070)
Cash holdings	0.081***	0.173***	-1.272***	-0.083
	(0.026)	(0.025)	(0.300)	(0.101)
Net sales growth			1.800***	1.775***
			(0.207)	(0.086)
Constant	0.121**	-0.009	0.680	0.101
	(0.049)	(0.051)	(0.798)	(0.260)
Observations	10,177	10,177	10,177	10,177
R-squared	0.075	0.069	0.049	0.127
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Standard errors	Clustered	Clustered	Clustered	Clustered
Method	POLS	POLS	POLS	POLS

Table 20 shows the baseline regression results, including industry and year fixed effects. The dummy variable outlined in section 6.1.3 "$DummyPE_{it}$ " is named Dummy LBO in order to be able to distinguish the different investment types (which equals to 1 for firms that underwent an LBO and 0 for control firms). Growth rates are calculated on a year-by-year basis. This regression design thereby captures a treatment indication for the entire financial window by comparing the treatment and control group, which purposely does not distinguish between the pre-transaction and post-transaction period. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1.

Table 21: Baseline Difference in Differences with year-by-year analysis - Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
LBO	-144,275**	-79,650	-6,474**	-10,593*
	(59768)	(48646)	(3219)	(5808)
Post	170,855***	101,363***	6,771***	11,698***
	(36239)	(27479)	(2259)	(3567)
LBO*Post	43,543	57,530**	3,047	10,255**
	(32614)	(24859)	(2729)	(4219)
Constant	2,030,055***	2,543,530***	104,103***	237,052***
	(677976)	(676402)	(30517)	(77778)
Observations	10,177	10,177	10,177	10,177
R-squared	0.071	0.078	0.028	0.072
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
LBO*YearRelDeal -4	-10,039	17,369	96	1,684
	(26090)	(17944)	(3476)	(3400)
LBO*YearRelDeal -3	-11,313	9,393	-2,035	289
	(23141)	(15684)	(3324)	(3072)
LBO*YearRelDeal -2	6,178	6,444	552	1,511
	(18588)	(15050)	(3042)	(2557)
LBO*YearRelDeal 0	12,608	27,991**	-493	988
	(9773)	(13598)	(3786)	(2944)
LBO*YearRelDeal 1	36,290**	58,943***	-906	7,265**
	(16585)	(18795)	(3349)	(3508)
LBO*YearRelDeal 2	65,305***	77,353***	2,696	13,350***
	(24004)	(23758)	(3954)	(4374)
LBO*YearRelDeal 3	102,528***	99,145***	5916.903	18,623***
	(30808)	(27696)	(4054)	(5009)
LBO*YearRelDeal 4	136,249***	141,914***	9,171*	23,936***
	(34735)	(34197)	(4686)	(5397)
Observations	10,177	10,177	10,177	10,177
R-squared	0.090	0.073	0.026	0.043
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 21 illustrates the results for our baseline DiD regression. PE_i is noted as LBO for this investment type and equals 1 for firms that underwent an LBO and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Panel B shows the regression results for the year relative DiD effects, which we perform to assess in which year (relative to the transaction and noted as YearRelDeal) the significant treatment effect occurs. As outlined in the empirical analysis, the statistical significance and sign is only matters, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 22: Difference in Differences with pre-treatment control variables – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
LBO	-46,716*	7,080	-2,869	-1,831
	(28105)	(11379)	(2053)	(2980.623)
Post	132,445***	71,528***	5,748***	8,281***
	(25204)	(10892)	(1796)	(2514)
LBO*Post	62,171**	72,613***	3,869	11,592***
	(31316)	(24333)	(2666)	(4105)
Firm size pre-transaction	0.986***	0.987***	0.045***	0.094***
	(0.070)	(0.014)	(0.004)	(0.006)
Sales growth pre-transaction	-40,244			
	(80684)			
Firm age pre-transaction	3,829***			199**
	(1269)			(98)
Asset tangibility pre-transaction		49,506		
		(30574)		
Leverage pre-transaction		-10,958	-20,893***	2,587
		(25184)	(6036)	(12412)
Asset growth pre-transaction		-88,886***		
		(22181)		
EBITDA margin pre-transaction				130,854***
				(23833)
Quick ratio pre-transaction				-6,074***
				(1801)
Constant	-759,378	-63,102	-1,095	-53,341*
	(480992)	(157961)	(21289)	(31427)
Observations	9896	9896	9896	9896
R-squared	0.595	0.901	0.361	0.580
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 22 shows the regression results for our DiD with incorporated pre-investment controls, $y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \beta_4 X_{i;pre-invest} + \alpha_t + \alpha_f + \epsilon_{it}$. PE_i is a dummy variable, noted as LBO within this DiD model, equals 1 for firms that underwent an LBO and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Include industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 23: Winsorized summary statistics using calipermatch – Leveraged Buyouts

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	25.42	20	17.46	4	88	165
Total assets	190,761.92	117,937	208,178.92	11,313	858,444	1481
Total current assets	126,783.64	80,672	135,319.67	7,181	580,921	1481
Cash and cash equivalents	15,329.6	6,234	23,057.28	0	100,985	1481
Total equity	53,368.43	29,679	65,750.26	1,200	280,406	1481
Net sales	340,045.18	206,088	340,487.97	15,400	1,404,359	1481
EBITDA	31,312.67	19,851	35,179.82	-6,799	162,064	1481
EBT	25,231.24	15,395	32,241.60	-15,590	143,165	1481
Net income	15,016.3	8,002	21,624.67	-11,903	92,296	1481
Leverage	0.61	0.62	0.18	0.17	0.95	1481
Cash holdings	0.12	0.07	0.13	0	0.62	1481
ROA	0.1	0.09	0.10	-0.1	0.39	1481
ROE	0.37	0.3	0.54	-0.9	2.77	1481
Net sales growth	0.14	0.1	0.25	-0.39	1.05	1481
Total assets growth	0.17	0.12	0.28	-0.34	1.04	1481
Total earnings growth	1.46	0.15	5.89	-3.58	32.71	1481

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	29.57	23	21.96	1	140	624
Total assets	138,904.7	86,175	159,863.47	11,313	858,444	5299
Total current assets	99,696.29	64,006	107,794.82	7,181	580,921	5299
Cash and cash equivalents	13,432.82	4,946	20,992.52	0	100,985	5299
Total equity	43,116.4	24,556	51,979.27	1,200	280,406	5299
Net sales	263,584.97	165,057	276,982.63	15,400	1,404,359	5299
EBITDA	25,613.15	14,579	41,686.07	-600,460	986,765	5299
EBT	20,287.23	11,762	28,129.04	-15,590	143,165	5299
Net income	12,819.78	7,262	18,232.05	-11,903	92,296	5299
Leverage	0.58	0.59	0.20	0.17	0.95	5299
Cash holdings	0.14	0.07	0.17	0	0.62	5299
ROA	0.11	0.09	0.10	-0.1	0.39	5299
ROE	0.39	0.28	0.54	-0.9	2.77	5299
Net sales growth	0.1	0.06	0.24	-0.39	1.05	5299
Total assets growth	0.1	0.07	0.25	-0.34	1.04	5299
Total earnings growth	1.13	0.09	5.09	-3.58	32.71	5299

Table 23 shows the winsorized summary statistics [winsorized at the 2nd and 98th percentile] for the final sample of firms that underwent an LBO and matched control firms of the financial window [-4,4] using caliper match. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 24: Baseline Difference in Differences with year-by-year analysis using calipermatch [-4,4] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
LBO	45,216**	27,374*	1,083	3,449
	(22905)	(13971.901)	(1313)	(2248)
Post	92,036***	59,142***	3,818***	8,142***
	(12276)	(7213)	(766.664)	(1319)
LBO*Post	57,690***	44,726***	2,144	5,850***
	(13441)	(9266)	(1521)	(2174)
Constant	45,216**	27,374*	1,083	3,449
	(22905)	(13971)	(1313)	(2248)
Observations	6780	6780	6780	6780
R-squared	0.082	0.089	0.056	0.087
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
LBO*YearRelDeal -4	-29,209	-19,216*	-2,630	-3,536
	(27034)	(13756)	(1228)	(3214)
LBO*YearRelDeal -3	-27,036	-11,028	-2,334*	-3,139
	(28145)	(12431)	(2831)	(2987)
LBO*YearRelDeal -2	16,090	-6917	-2,590	-1,693
	(17973)	(7492)	(2631)	(1520)
LBO*YearRelDeal 0	13,638***	11,729***	-1,293	100
	(5069.028)	(4541)	(1320)	(1428)
LBO*YearRelDeal 1	30,493***	26,272***	-1,643	1332
	(8791)	(7332)	(1660)	(1881)
LBO*YearRelDeal 2	44,304***	39,672***	851	5,087**
	(12,419)	(9398)	(1837)	(2365)
LBO*YearRelDeal 3	56,066***	48,317***	1,276	4,570*
	(16012)	(11237)	(1983)	(2686)
LBO*YearRelDeal 4	70,380***	61,846***	2,124	8,463***
	(17555)	(13213)	(2197)	(3033)
Observations	6780	6780	6780	6780
R-squared	0.214	0.218	0.054	0.090
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 24 illustrates the results for the baseline DiD regression using caliper match, to ensure robustness. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the mains specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 25: Difference in Differences with pre-treatment control variables using calipermatch [-4,4] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
LBO	-5,256	-7,208**	-1,215	-1,690
	(11628)	(2959)	(917)	(1232)
Post	53,465***	32,298***	2,240***	4,690***
	(7768)	(3511)	(618)	(890)
LBO*Post	60,552***	46,601***	2,248	5,972***
	(12731)	(8810)	(1496)	(2104)
Firm size pre-transaction	1.435***	0.976***	0.065***	0.136***
	(0.080)	(0.020)	(0.005)	(0.010)
Sales growth pre-transaction	-25,716			
	(23484)			
Firm age pre-transaction	-143.064			-10.330
	(344.386)			(42.005)
Asset tangibility pre-transaction		12,336		
		(8568)		
Leverage pre-transaction		15,900	-5,854**	5,654
		(10472)	(2269)	(5250)
Asset growth pre-transaction		-3,660		
		(8423)		
EBITDA margin pre-transaction				93,863***
				(10145)
Quick ratio pre-transaction				-1,989**
				(902)
Constant	-285,814**	-182,203***	2,606	-32,544**
	(130165)	(59827)	(8838)	(12758)
Observations	6676	6676	6676	6676
R-squared	0.621	0.812	0.315	0.499
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 25 shows the regression results for the DiD with incorporated pre-investment controls using caliper match as a variation of the matching method. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 26: Baseline Difference in Differences with year-by-year analysis using PSM [-2,2] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
LBO	-146,619**	-96,070*	-5,317	-11,185*
	(60782)	(55524)	(3305)	(6331)
Post	135,213***	78,757***	1,508	5,659**
	(23620)	(18916)	(1457)	(2564)
LBO*Post	20,309	69,665***	1,849	9,612***
	(22417)	(25219)	(2680)	(3231)
Constant	1,701,327***	1,999,330***	45,872**	242,303***
	(595701)	(597930)	(23229)	(68916)
Observations	6622	6622	6622	6622
R-squared	0.062	0.072	0.041	0.066
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
LBO*YearRelDeal -2	7,003	-4,809	-3,216	-1,747
	(16239)	(14556)	(2986)	(2439)
LBO*YearRelDeal 0	7,751	36,654**	-1,963	49.453
	(9504)	(17323)	(3581)	(2694)
LBO*YearRelDeal 1	29,231*	74,771***	-125	10,850***
	(16108)	(25404)	(3336)	(3538)
LBO*YearRelDeal 2	62,384***	95,778***	3,288	15,800***
	(23286)	(29090)	(4038)	(4341)
Observations	6622	6622	6622	6622
R-squared	0.102	0.060	0.022	0.031
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 26 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-2,2]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 27: Difference in Differences with pre-treatment control variables using PSM [-2,2] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
LBO	-50,807	2,021	-1,807	-1,842
	(33515)	(7813)	(2251)	(3609)
Post	94,203***	46,673***	642.718	3,029
	(16009)	(9388)	(1355)	(2014)
LBO*Post	30,777	72,523***	2,073	9,737***
	(20523)	(23808)	(2613)	(3087)
Firm size pre-transaction	0.899***	1.014***	0.041***	0.095***
	(0.064)	(0.013)	(0.003)	(0.005)
Sales growth pre-transaction	40,161			
	(79187)			
Firm age pre-transaction	3,756***			196.170**
	(1234)			(93.335)
Asset tangibility pre-transaction		-13,909		
		(26920)		
Leverage pre-transaction		34,844*	-28,811***	-2,616
		(20015)	(5741)	(11579)
Asset growth pre-transaction		-36,579**		
		(16174)		
EBITDA margin pre-transaction				120,448***
				(21355)
Quick ratio pre-transaction				-4,633***
				(1658)
Constant	-256,146	-131,127	-19,962	4,128
	(354873)	(88166)	(18896)	(34510)
Observations	6570	6570	6570	6570
R-squared	0.584	0.944	0.409	0.658
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 27 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-2,2]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 28: Baseline Difference in Differences with year-by-year analysis using PSM [-3,3] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
LBO	-183,342***	-121,772**	-4,386	-12,693*
	(61962)	(57199)	(3267)	(6489)
Post	173,718***	82,497***	5,923***	7,873**
	(31061)	(25267)	(1830)	(3129)
LBO*Post	32,314	89,685***	286	11,518***
	(29866)	(31295)	(2735)	(3801)
Constant	1,253,349**	1,762,103***	34,810*	169,242**
	(591928)	(644242)	(20867)	(71766)
Observations	8630	8630	8630	8630
R-squared	0.057	0.073	0.033	0.063
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
LBO*YearRelDeal -3	-1,620	-5,564	-5,268	-1,496
	(21477)	(25236)	(3706)	(3897)
LBO*YearRelDeal -2	5,005	74.634	-2,746	-1,165
	(18007)	(16564)	(3371)	(2806)
LBO*YearRelDeal 0	-1,399	38,993**	-4,841	-607
	(11354)	(19444)	(4126)	(2925)
LBO*YearRelDeal 1	27,990	85,590***	-2,953	8,254**
	(17353)	(27104)	(3486)	(3577)
LBO*YearRelDeal 2	70,044***	124,519***	-1,514	15,268***
	(24794)	(32264)	(4246)	(4312)
LBO*YearRelDeal 3	94,886***	136,530***	2,020	22,081***
	(31063)	(35019)	(4343)	(4979)
Observations	8630	8630	8630	8630
R-squared	0.115	0.074	0.024	0.035
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 28 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-3,3]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 29: Difference in Differences with pre-treatment control variables using PSM [-3,3] – Leveraged Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
LBO	-67,017*	-2,846	-486	-1,469
	(37343)	(13556)	(2172)	(3643)
Post	142,143***	53,771***	5,335***	5,613**
	(22575)	(8834)	(1632)	(2266)
LBO*Post	43706	98,862***	669	12,334***
	(28032)	(30258)	(2676)	(3693)
Firm size pre-transaction	0.852***	0.988***	0.035***	0.086***
	(0.063)	(0.012)	(0.003)	(0.005)
Sales growth pre-transaction	19,216			
	(69472)			
Firm age pre-transaction	4,733***			352***
	(1365.250)			(113)
Asset tangibility pre-transaction		26,916		
		(27582)		
Leverage pre-transaction		5974	-21,307***	11,961
		(21011)	(6284)	(12645)
Asset growth pre-transaction		-68,137***		
		(15638)		
EBITDA margin pre-transaction				139,330***
				(22841)
Quick ratio pre-transaction				-3060
				(2153)
Constant	-504,237	-44,735	-14,418	-38,747*
	(333255)	(69152)	(14926)	(20983)
Observations	8571	8571	8571	8571
R-squared	0.568	0.942	0.323	0.615
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 29 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-3,3]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_t) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 30: Unwinsorized summary statistics (in k SEK) – Secondary Buyouts

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	32.42	26	20.58	7	92	71
Total assets	708,843.59	260,450	1,485,295.5	10,570	13,648,000	639
Total current assets	311,279.62	160,760	449,280.31	10,237	2,961,534	639
Cash and cash equivalents	41,131.12	10,378	102,945.21	0	916,949	639
Total equity	184,219.11	79,597	365,568.44	345	3,713,633	639
Net sales	799,075.73	345,806	1,214,689.3	27,937	7,675,700	639
EBITDA	117,529.57	42,542	267,881.45	-108,580	2,181,500	639
EBT	89,699.28	31,034	208,768.41	-324,884	1,691,500	639
Net income	47,189.31	12,977	144,116.28	-346,515	1,263,600	639
Leverage	0.61	0.61	0.19	0.14	0.99	639
Cash holdings	0.08	0.05	0.10	0	0.7	639
ROA	0.08	0.07	0.11	-0.47	0.97	639
ROE	0.89	0.2	7.00	-3.17	147.88	639
Net sales growth	0.11	0.08	0.22	-0.64	1.97	639
Total assets growth	0.16	0.1	0.35	-0.49	4.36	639
Total earnings growth	4.62	0.09	79.62	-181.65	1,951.67	639

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	37.39	29	27.89	2	129	335
Total assets	1,194,555.9	248,401	5,147,479.4	1,041	91,009,993	2991
Total current assets	587,363.93	156,054	1,915,744.1	0	51,738,750	2991
Cash and cash equivalents	32,034.03	2,911	102,650.26	0	1,909,888	2991
Total equity	316,839.41	55,323	1,670,942.5	33	43,653,083	2991
Net sales	138,8254.6	397,439	3,837,962.0	0	68,497,706	2991
EBITDA	139,839.98	34,793	495,853.94	-63,8626	7,044,045	2991
EBT	129,084.29	23,942	907,043.43	-350,9529	36,348,417	2991
Net income	91,624.38	9,443	848,608.65	-249,9470	35,081,167	2991
Leverage	0.63	0.65	0.23	0	1	2991
Cash holdings	0.09	0.02	0.15	0	1	2991
ROA	0.08	0.06	0.16	-3.52	0.94	2991
ROE	0.98	0.22	12.12	-176.61	326.64	2991
Net sales growth	0.16	0.05	1.62	-1	56.05	2991
Total assets growth	0.13	0.04	1.04	-.093	41.45	2991
Total earnings growth	6.82	0.05	235.08	-3,493.87	11,333.75	2991

Table 30 presents the unwinsorized summary statistics for the final sample of firms that underwent a secondary buyout transaction and matched control firms of the financial window [-4,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 31: Winsorized summary statistics (in k SEK) – Secondary Buyouts

Summary Statistics – Financial window (Treatment Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	32.42	26	20.58	7	92	71
Total assets	661,802.87	260,450	1,176,346.8	10,570	7,064,424	639
Total current assets	311,279.62	160,760	449,280.31	10,237	2,961,534	639
Cash and cash equivalents	34,004.43	10,378	64,040.93	0	319,115	639
Total equity	174,269.69	79,597	301,423.15	440	1,822,275	639
Net sales	799,075.73	345,806	1,214,689.3	27,937	7,675,700	639
EBITDA	103,388.73	42,542	183,938.20	-25,751	1,003,309	639
EBT	82,143.26	31,034	159,691.16	-65,382	838,500	639
Net income	42,849.54	12,977	106,945.99	-55,187	600,754	639
Leverage	0.61	0.61	0.19	0.15	0.98	639
Cash holdings	0.08	0.05	0.09	0	0.52	639
ROA	0.08	0.07	0.09	-0.13	0.44	639
ROE	0.4	0.2	1.11	-1.66	7.23	639
Net sales growth	0.11	0.08	0.20	-0.46	1.02	639
Total assets growth	0.14	0.1	0.25	-0.39	1.07	639
Total earnings growth	1.05	0.09	4.90	-5.22	28.92	639

Summary Statistics – Financial window (Control Group)

Winsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	37.39	29	27.89	2	129	335
Total assets	761,289.61	248,401	1,315,269.0	6,460	7,064,424	2991
Total current assets	441,967.08	156,054	701,092.67	3,344	3,261,794	2991
Cash and cash equivalents	26,493.91	2,911	59,539.04	0	319,115	2991
Total equity	189,819.29	55,323	342,158.50	440	1,822,275	2991
Net sales	1,169,153	397,439	1,897,032.6	12,762	8,631,683	2991
EBITDA	139,839.98	34,793	495,853.94	-638,626	7,044,045	2991
EBT	80,825.81	23,942	161,134.28	-65,382	838,500	2991
Net income	49,797.76	9,443	111,699.21	-55,187	600,754	2991
Leverage	0.63	0.65	0.22	0.15	0.98	2991
Cash holdings	0.08	0.02	0.13	0	0.52	2991
ROA	0.08	0.06	0.11	-0.13	0.44	2991
ROE	0.5	0.22	1.33	-1.66	7.23	2991
Net sales growth	0.07	0.05	0.23	-0.46	1.02	2991
Total assets growth	0.08	0.04	0.25	-0.39	1.07	2991
Total earnings growth	1.08	0.05	4.93	-5.22	28.92	2991

Table 31 presents the winsorized summary statistics [2nd and 98th percentile] for the final sample of firms that underwent a secondary buyout transaction and the matched control group of the financial window [-4,4], including all financial years that fall within this window specification. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 32: Industry and year distribution table – Secondary Buyouts

Panel A: Sample distribution table by industry

	Treatment Group		Control Group	
Industry	**N**	**N (in %)**	**N**	**N (in %)**
Energy & Environment	0	0%	0	0%
Materials	2	2.82%	9	2.69%
Industrial Goods	24	33.80%	123	36.72%
Construction	3	4.23%	11	3.28%
Shopping goods	15	21.13%	72	21.49%
Convenience goods	1	1.41%	6	1.79%
Health & Education	7	9.86%	30	8.96%
Finance & Real Estate	2	2.82%	4	1.19%
IT & Electronics	3	4.23%	17	5.07%
Telecom & Media	3	4.23%	11	3.28%
Corporate Services	10	14.08%	46	13.73%
Industry Classification Unknown	1	1.41%	6	1.79%
Total	**71**	**100.00%**	**335**	**100.00%**

Panel A of Table 32 shows the sample distribution by industries separated into treatment (SBO-backed) and control firms. The classifications were retrieved from the serrano documentation and are based on the standard för svensk näringsgrensindelning (SNI 2007) classification, that were grouped by the Serrano data providers into eleven overarching sectors.

Panel B: Sample distribution table by year

	Treatment Group		Control Group	
Year	**N**	**N (in %)**	**N**	**N (in %)**
2002	0	0%	0	0%
2003	2	2.82%	10	2.99%
2004	0	0%	0	0%
2005	4	5.63%	20	5.97%
2006	4	5.63%	20	5.97%
2007	9	12.68%	42	12.54%
2008	0	0%	0	0%
2009	1	1.41%	5	1.49%
2010	5	7.04%	23	6.87%
2011	5	7.04%	23	6.87%
2012	7	9.86%	33	9.85%
2013	5	7.04%	24	7.16%
2014	4	5.63%	19	5.67%
2015	1	1.41%	5	1.49%
2016	11	15.49%	47	14.03%
2017	6	8.45%	29	8.66%
2018	7	9.86%	35	10.45%
Total	**71**	**100.00%**	**335**	**100.00%**

Panel B of Table 32 shows the sample distribution across financial years for all firms, seperated between treatment (SBO-backed firms) and control firms. Years span from 2002 to 2018 and reflect the years for which the treatment firms underwent the SBO-transaction. The deviation between the treatment and control group is explained reasonable and due to the five nearest neighbour matching method.

Table 33: Baseline regression model – Secondary Buyouts

Baseline Regression SBO and growth metrics

Variables	(1) Sales Growth	(2) Total Assets Growth	(3) Earning Growth	(4) EBITDA Growth
Dummy SBO	0.035***	0.067***	-0.015	-0.003
	(0.012)	(0.013)	(0.199)	(0.046)
Ln (Net sales)	-0.006			
	(0.009)			
Ln (Total assets)	-0.018**	0.002	-0.002	-0.016
	(0.009)	(0.003)	(0.055)	(0.013)
Ln (Operating profit)	0.018***			
	(0.005)			
ROA	0.075	0.264***	6.354***	1.241***
	(0.061)	(0.060)	(1.034)	(0.234)
Leverage	0.143***	0.164***	1.360***	0.266***
	(0.025)	(0.026)	(0.412)	(0.086)
Cash holdings	0.121***	0.181***	-1.634**	-0.031
	(0.042)	(0.048)	(0.688)	(0.156)
Net sales growth			2.925***	2.063***
			(0.503)	(0.146)
Constant	0.040	-0.082	3.684	1.148*
	(0.056)	(0.072)	(3.389)	(0.688)
Observations	3630	3630	3630	3630
R-squared	0.085	0.059	0.054	0.195
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Standard errors	Clustered	Clustered	Clustered	Clustered
Method	POLS	POLS	POLS	POLS

Table 33 shows the basline regression results, including industry and year fixed effects. The dummy variable outlined in section 6.1.3 "$DummyPE_{it}$ " is named Dummy SBO in order to be able to distinguish the different investment types (which equals to 1 for firms that underwent a secondary buyout and 0 for control firms). Growth rates are calculated on a year-by-year basis. This regression design thereby captures a treatment indication for the entire financial window by comparing the treatment and control group, which purposely does not distinguish between the pre-transaction and post-transaction period. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1.

Table 34: Baseline Difference in Differences with year-by-year analysis – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
SBO	-387,833***	-201,116	-11,340	-13,899
	(145146)	(128342)	(10861)	(17645)
Post	363,959***	176,128***	8,670	26,202***
	(81049)	(58015)	(5738)	(8263)
SBO*Post	55,325	148,295**	8,438	26,057**
	(67227)	(62206)	(9277)	(12856)
Constant	851,274**	1,372,948**	3,334	158,216
	(390952)	(692360)	(8537)	(117775)
Observations	3630	3630	3630	3630
R-squared	0.064	0.073	0.062	0.083
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
SBO*YearRelDeal -4	-52,948	-54,263	-290	-8,125
	(47742)	(41115)	(8047)	(8317)
SBO*YearRelDeal -3	-23,165	-53,101	2,299	2,103
	(42581)	(36423)	(7992)	(9092)
SBO*YearRelDeal -2	-14,418	-13,309	-5,182	-2,767
	(26849)	(20801)	(10232)	(10649)
SBO*YearRelDeal 0	10,538	76,048*	11,906	12,860**
	(26149)	(42395)	(7604)	(6155)
SBO*YearRelDeal 1	15,825	114,478**	9,134	25,262***
	(40354)	(48349)	(11021)	(8684)
SBO*YearRelDeal 2	54,742	97,674*	9,860	26,737***
	(49533)	(55319)	(11013)	(9970)
SBO*YearRelDeal 3	36,613	131,469*	789	29,150**
	(63865)	(68404)	(15067)	(12015)
SBO*YearRelDeal 4	60,450	126,214*	8,529	26,831**
	(72859)	(67383)	(14960)	(13220)
Observations	3630	3630	3630	3630
R-squared	0.127	0.112	0.040	0.059
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 34 illustrates the results for our baseline DiD regression. PE_i is noted as SBO for this investment type and equals 1 for firms that underwent a secondary buyout and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Panel B shows the regression results for the year relative DiD effects, which we perform to assess in which year (relative to the transaction and noted as YearRelDeal) the significant treatment effect occurs. As outlined in the empirical analysis, the statistical significance and sign is only matters, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 35: Difference in Differences with pre-treatment control variables – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
SBO	-222,161**	-31,892	-4,533	2,318
	(90555)	(21451)	(6632)	(8079)
Post	295,674***	123,758***	7,209	18,736***
	(62439)	(26177)	(4913)	(6335)
SBO*Post	61,178	142,269**	8,118	26,159**
	(63669)	(59723)	(9205)	(12485)
Firm size pre-transaction	0.991***	0.961***	0.057***	0.106***
	(0.109)	(0.025)	(0.007)	(0.010)
Sales growth pre-transaction	-346,204**			
	(161598)			
Firm age pre-transaction	4,901*			258
	(2757)			(217)
Asset tangibility pre-transaction		-22,943		
		(61856)		
Leverage pre-transaction		47,129	-51,092***	-47,138
		(50343)	(17273)	(36670)
Asset growth pre-transaction		-178,793**		
		(70827)		
EBITDA margin pre-transaction				210,624***
				(50747)
Quick ratio pre-transaction				-16,773*
				(8667)
Constant	-600,884	236,503	-32,714	40,531
	(386598)	(356390)	(25489)	(86245)
Observations	3548	3548	3548	3548
R-squared	0.565	0.918	0.464	0.622
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 35 shows the regression results for our DiD with incorporated pre-investment controls, $y_{it} = \beta_0 + \beta_1 PE_i + \beta_2 Post_{it} + \beta_3 (PE_i \times Post_{it}) + \beta_4 X_{i;pre-invest} + \alpha_t + \alpha_f + \epsilon_{it}$. PE_i is a dummy variable, noted as SBO within this DiD model, equals 1 for firms that underwent an SBO and 0 for control firms. $Post_{it}$ is a dummy variable that equals to 1 for the post-investment period and 0 for the pre-transaction period, for treated and control firms. Include industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 36: Winsorized summary statistics using calipermatch – Secondary Buyouts

Summary Statistics – Financial window (Treatment Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Treatment	32.33	25.5	20.72	7	92	70
Total assets	511,399.87	254,643	634,789.40	19,014	2,614,383	630
Total current assets	282,709.91	158,517	361,976.98	11,438	1,73,0677	630
Cash and cash equivalents	29,589.39	10,180	52,807.80	0	299,526	630
Total equity	145,193.12	78,069.5	189,680.04	1,571	886,439	630
Net sales	716,219.35	339,757	991,306.71	31,096	4,75,7556	630
EBITDA	80,096.62	42,232	104,622.63	-28,195	428,296	630
EBT	63,196.81	30,735.5	96,295.71	-51,820	388,229	630
Net income	30,238.68	12,631.5	56,871.40	-38,172	244,880	630
Leverage	0.6	0.61	0.19	0.14	0.97	630
Cash holdings	0.08	0.04	0.10	0	0.57	630
ROA	0.08	0.07	0.09	-0.12	0.37	630
ROE	0.29	0.2	0.48	-0.7	1.94	630
Net sales growth	0.1	0.08	0.20	-0.48	0.95	630
Total assets growth	0.14	0.1	0.24	-0.38	0.94	630
Total earnings growth	1.09	0.09	5.14	-4.82	31.98	630

Summary Statistics – Financial window (Control Group)

Unwinsorized Variables	Mean	Median	SD	Min	Max	N
Firm age at Match	35.03	28	23.37	2	116	308
Total assets	380,327.95	202,364	486,135.39	19,014	2,614,383	2680
Total current assets	246,529.44	126,295.5	333,201.60	11,438	1,730,677	2680
Cash and cash equivalents	29,220.5	5,139	58,857.13	0	299,526	2680
Total equity	125,186.95	56,326	179,011.07	1,571	886,439	2680
Net sales	555,689.07	304,015	817,914.08	31,096	4,757,556	2680
EBITDA	59,449.72	30,585	107,550.58	-357,898	2,338,198	2680
EBT	46,220.79	20,978	77,411.81	-51,820	388,229	2680
Net income	25,891.66	8,620	50,031.96	-38,172	244,880	2680
Leverage	0.57	0.59	0.22	0.13	0.97	2680
Cash holdings	0.1	0.03	0.14	0	0.57	2680
ROA	0.08	0.06	0.10	-0.12	0.37	2680
ROE	0.26	0.17	0.42	-0.7	1.94	2680
Net sales growth	0.07	0.05	0.24	-0.48	0.95	2680
Total assets growth	0.08	0.05	0.23	-0.38	0.94	2680
Total earnings growth	1.17	0.04	5.37	-4.82	31.98	2680

Table 36 shows the winsorized summary statistics [winsorized at the 2nd and 98th percentile] for the final sample of firms that underwent an SBO and matched control firms of the financial window [-4,4] using caliper match. All absolute values are denoted in k SEK, whilst ratios and growth rates are depicted in their decimal form.

Table 37: Baseline Difference in Differences with year-by-year analysis using calipermatch [-4,4] – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
SBO	39,898	47,550	-542	8,994
	(94098)	(61956)	(5315)	(8886)
Post	154,465***	96,842***	2984	9,160**
	(38190)	(22882)	(2815)	(4622)
SBO*Post	121,949	105,472***	5,113	18,950***
	(12443)	(38961)	(5592)	(6699)
Constant	39,898	47,550	-542.446	8,994
	(94098)	(61956)	(5315)	(8886)
Observations	3310	3310	3310	3310
R-squared	0.235	0.216	0.109	0.199
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
SBO*YearRelDeal -4	-81,223	-65,972	720	-6897.468
	(74471)	(63432)	(4788)	(6361.300)
SBO*YearRelDeal -3	-71,765*	-58469	-64.402	-7570.624
	(56647)	(54963)	(4489)	(6595.908)
SBO*YearRelDeal -2	-52,995	-14,840	-775	-10301.477
	(24290)	(14049)	(5557)	(7040.721)
SBO*YearRelDeal 0	44,365	-586	15,233***	10219.112*
	(51023)	(13175)	(4840)	(5261.042)
SBO*YearRelDeal 1	56,933	39,446	6,634	11876.049**
	(49243)	(26855)	(6524)	(5818.697)
SBO*YearRelDeal 2	85,421	66,312**	958	14472.453**
	(91643)	(31714)	(6288)	(5658.164)
SBO*YearRelDeal 3	70,624	120,254**	3055	17317.143**
	(75378)	(46880)	(7422)	(7217.967)
SBO*YearRelDeal 4	93,157	149,946***	794	14475.543*
	(91275)	(49455)	(7104)	(8010.232)
Observations	3310	3310	3310	3310
R-squared	0.142	0.142	0.035	0.069
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 37 illustrates the results for the baseline DiD regression using caliper match, to ensure robustness. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the mains specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 38: Difference in Differences with pre-treatment control variables using calipermatch [-4,4] – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
SBO	-46,482*	-29,674*	-4,910	-4,973
	(23650)	(16187)	(3887)	(467)
Post	70,841***	46,825***	-31.747	4,340
	(15880)	(12290)	(2433)	(3598)
SBO*Post	93,732	110,600***	5,419	19,975***
	(91915)	(36939)	(5552)	(6460.363)
Firm size pre-transaction	0.071	0.913***	0.063***	0.133***
	(0.049)	(0.053)	(0.006)	(0.008)
Sales growth pre-transaction	-80,015**			
	(31730)			
Firm age pre-transaction	-357.427			28.872
	(276)			(91.313)
Asset tangibility pre-transaction		83,216**		
		(32319)		
Leverage pre-transaction		-98,955***	-34,901***	13,449
		(34331)	(7376)	(11696)
Asset growth pre-transaction		8,536		
		(58329.009)		
EBITDA margin pre-transaction				228,268***
				(30788)
Quick ratio pre-transaction				-181
				(1976)
Constant	-130,960***	-43,068	-13,826	-61,125***
	(43653)	(51668)	(9256)	(12975)
Observations	3272	3272	3272	3272
R-squared	0.929	0.851	0.396	0.657
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 38 shows the regression results for the DiD with incorporated pre-investment controls using caliper match as a variation of the matching method. All variables are defined in accordance to the mains specification. Industry (α_t) and year fixed effects (α_f) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 39: Baseline Difference in Differences with year-by-year analysis using PSM [-2,2] – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
SBO	-329,497*	-114,027	-13,796	-1,306
	(186840)	(199812)	(14025)	(29296)
Post	175,071***	77,757	3,171	7,115
	(66406)	(61574)	(4308)	(10180)
SBO*Post	23,365	121,042	2,039	13,859
	(49161)	(84952)	(11553)	(12260)
Constant	720,116***	637,234***	28,705	39,179*
	(188276)	(222274)	(22213)	(22595)
Observations	2205	2205	2205	2205
R-squared	0.055	0.053	0.065	0.065
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
SBO*YearRelDeal -2	-9,824	-27,470	-9,149	-2,648
	(26478)	(25082)	(10467)	(10719)
SBO*YearRelDeal 0	2,067	78,870	-2,913	4,969
	(23085)	(57666)	(12535)	(6169)
SBO*YearRelDeal 1	-23,634	123,823	-4,245	12,006
	(44094)	(87944)	(14611)	(9632)
SBO*YearRelDeal 2	5635	118,081	-2,974	17,998
	(52506)	(90653)	(14393)	(13642)
Observations	2205	2205	2205	2205
R-squared	0.115	0.064	0.039	0.055
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 39 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-2,2]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 40: Difference in Differences with pre-treatment control variables using PSM [-2,2] – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
SBO	-261,332***	-13,559	-10,413	6,581
	(84273)	(17319)	(7655)	(10512)
Post	159,205***	68,449***	3,088	5,143
	(42206)	(20570)	(4506)	(6295)
SBO*Post	3,895	120,078	1,960	15,151
	(47444)	(82875)	(11353)	(11783)
Firm size pre-transaction	0.800***	1.025***	0.059***	0.129***
	(0.100)	(0.014)	(0.006)	(0.006)
Sales growth pre-transaction	-521,377***			
	(193263)			
Firm age pre-transaction	9,038***			24.345
	(3108)			(235.783)
Asset tangibility pre-transaction		34,776		
		(49427)		
Leverage pre-transaction		66,543	-55,412***	-29,819
		(42682)	(19998)	(29860)
Asset growth pre-transaction		-46,312		
		(32051)		
EBITDA margin pre-transaction				241,825***
				(68487)
Quick ratio pre-transaction				-15,054***
				(5400)
Constant	-75,175	-5,929	31,849	-16,030
	(188171)	(67767)	(22471)	(30656)
Observations	2196	2196	2196	2196
R-squared	0.573	0.958	0.560	0.776
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 40 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-2,2]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_t) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 41: Baseline Difference in Differences with year-by-year analysis using PSM [-3,3] – secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD without Controls				
SBO	-390,077*	-301,679	-12,380	-14,815
	(206268)	(252299)	(12568)	(34960)
Post	233,978***	144,724	8,729	12,105
	(84097)	(97883)	(5583)	(13970)
SBO*Post	40,800	176,425*	829	28,055*
	(58619)	(93434)	(11257)	(15087)
Constant	822,277**	1,257,022*	4,434	134,641
	(373687)	(652973)	(11581)	(104736)
Observations	2969	2969	2969	2969
R-squared	0.063	0.070	0.061	0.081
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD
Panel B: Year-by-year effects				
SBO*YearRelDeal -3	-2,844	-82,911*	-732	3,559
	(43227)	(44552)	(11602)	(9823)
SBO*YearRelDeal -2	-36,380	-31,984	-8418	-8,855
	(38237)	(33598)	(11547)	(12841)
SBO*YearRelDeal 0	22,157	100,551	1,034	14,411**
	(23882)	(63121)	(13109)	(6535)
SBO*YearRelDeal 1	34,285	182,096	323	27,244**
	(41856)	(128984)	(15257)	(10569)
SBO*YearRelDeal 2	71,882	139,614*	2,016	28,398**
	(47944)	(75758)	(14978)	(14080)
SBO*YearRelDeal 3	63,530	122,911**	-13,716	35,409**
	(61927)	(52198)	(18141)	(16275)
Observations	2969	2969	2969	2969
R-squared	0.096	0.058	0.045	0.050
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Panel A of Table 41 illustrates the results for the baseline DiD regression using PSM and the variation of the financial window to [-3,3]. Panel B presents the year-by-year effects respectively. All variables are defined in accordance to the main specification. For Panel B, the statistical significance and sign is relevant, as the model in Panel B by design is not able to capture the exact treatment effect for the respective year. Both specifications include industry (α_t) and year fixed effects (α_f). Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Table 42: Difference in Differences with pre-treatment control variables using PSM [-3,3] – Secondary Buyouts

Variables	(1) Net Sales	(2) Total assets	(3) Net Income	(4) EBITDA
Panel A: DiD with Pre-Treatment Controls				
SBO	-241,742**	-20,886	-6,369	10,845
	(105416)	(26779)	(8477)	(14950)
Post	200,416***	122,730***	8,715*	6,734
	(59082)	(41832)	(5268)	(9015)
SBO*Post	52,936	172,026*	603	29,790**
	(58569)	(96322)	(11138)	(14555)
Firm size pre-transaction	0.532***	1.006***	0.034***	0.106***
	(0.085)	(0.021)	(0.005)	(0.011)
Sales growth pre-transaction	-405,533			
	(251091)			
Firm age pre-transaction	10,528***			105
	(3346)			(305)
Asset tangibility pre-transaction		-47,589		
		(99017)		
Leverage pre-transaction		169,785**	-56,044**	-6,115
		(84823)	(23993)	(68593)
Asset growth pre-transaction		-163,252**		
		(72373)		
EBITDA margin pre-transaction				139,118
				(85257)
Quick ratio pre-transaction				-778
				(15215)
Constant	-244,998	259,715	1,934	19,762
	(259620)	(297927)	(21995)	(87467)
Observations	2955	2955	2955	2955
R-squared	0.432	0.934	0.385	0.668
Standard errors	Clustered	Clustered	Clustered	Clustered
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Method	DiD	DiD	DiD	DiD

Table 42 shows the regression results for the DiD with incorporated pre-investment controls using PSM and a variation of the financial window to [-3,3]. All variables are defined in accordance to the main specification. Industry (α_t) and year fixed effects (α_t) are incorporated. Standard errors are clustered at the firm-level and in parentheses. *** p<.01, ** p<.05, * p<.1

Statement of generative AI usage

Artificial intelligence (AI) played a role in the creation of this thesis, operating within the permitted boundaries to maintain academic integrity. The AI tool employed was limited to Chat GPT. This AI tool aided in information gathering of how to practically work with Stata as well as wording, spelling, and sentence structure checks. As a result, single AI assisted revisions may appear across different sections, though limited to single sentences for readability improvements and concise formulation. However, the ideas, analysis, structure of the thesis and texts are entirely original by both authors and has been checked for plagiarism.

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