

PRIVATE EQUITY OWNERSHIP IN TIMES OF CRISIS

**EXAMINING THE FINANCIAL RESILIENCE OF SWEDISH
PRIVATE EQUITY-BACKED COMPANIES DURING THE
COVID-19 CRISIS**

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Bachelor Thesis

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EXAMINING THE FINANCIAL RESILIENCE OF SWEDISH PRIVATE EQUITY-BACKED COMPANIES DURING THE COVID-19 CRISIS

Abstract:

Whether private equity (PE) ownership enhances or limits firm resilience during times of crisis has been explored in previous studies, particularly using data from British companies. To extend this research, we examine Swedish firms during the Covid-19 crisis, comparing the performance of PE-backed companies to that of closely matched non-PE-backed peers. Our analysis finds no statistically significant differences in financial resilience between the two groups during the pandemic. This contrasts with earlier UK-based findings and may reflect structural differences in national PE markets or the relatively milder economic impact and policy response in Sweden. However, the relatively small sample size in our study may have limited the ability to detect subtle but meaningful effects. These results highlight that the impact of PE ownership on crisis resilience is context-dependent and underscore the importance of region-specific research in understanding these dynamics.

Keywords:

Empirical Corporate Finance, Private Equity, Covid-19 pandemic

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I. Introduction

A common belief is that the saddling of debt on portfolio companies by private equity (PE) investors increases financial fragility. The acquired firms must make large debt repayments for the additional leverage taken on by the PE firm, which may reduce profitability and limit financial flexibility. However, Bernstein, Lerner, and Mezzanotti (2019) challenge this view, showing that PE-backed firms in the UK exhibited higher market share growth and asset expansion compared to non-PE-backed firms during the 2008 financial crisis. These findings indicate that private equity ownership can, in certain instances, strengthen a firm's financial resilience rather than increase its vulnerability.

The broader impact of private equity investment patterns during financial crises, however, remains poorly understood. On the one hand, the cyclical nature of private equity activity, combined with the high leverage imposed on portfolio companies, may amplify financial sector shocks and contribute to economic volatility. On the other hand, private equity firms often provide operational expertise, strategic guidance, and access to capital, which could strengthen portfolio firms in times of crisis. Additionally, the pressure to deploy capital in booming markets may lead to the financing of lower-quality firms (Kaplan and Strömberg, 1993), making PE-backed companies more vulnerable to economic downturns. Moreover, increased fundraising and investment activity in these periods may strain the ability of private equity firms to effectively support and monitor their portfolio companies when financial conditions deteriorate (Bernstein et al. 2019).

Since the 2008 financial crisis, analyzed by Bernstein et al. (2019), the world has faced further challenges, most notably during the Covid-19 pandemic. The pandemic prompted an unprecedented level of policy intervention to mitigate its effects on business and society. Lavery and Wilson (2024) conducted a study similar to Bernstein et al. (2019), focusing on the Covid-19 crisis. They highlight both similarities and key differences between the pandemic and previous downturns like the global financial crisis. While both crises were marked by significant uncertainty, the financial crisis stemmed from imbalances between the financial sector and the real economy, resulting in a contraction of money and credit. In contrast, the Covid-19 downturn was driven by a global health crisis with no such pre-existing financial imbalances. Unlike prior crises, which businesses could somewhat anticipate (e.g., demand drops, financing issues, supply chain disruptions), the pandemic acted as an unexpected shock that radically disrupted both the economy and working practices. Rapid changes in regulations, restrictions on operations, and a shifting business landscape created a more profound and widespread impact than other economic downturns.

Despite vast differences in the nature of the 2008 financial crisis and the crisis during the pandemic, the results of Lavery et al. (2024) and Bernstein et al. (2019) show some striking similarities in the

resilience of PE-backed firms during times of crisis. Both studies found that, in general, PE-backed firms demonstrated stronger financial performance compared to non-PE-backed firms, with higher levels of market share retention and asset growth. However, Lavery et al. (2024) also noted that the specific challenges posed by the pandemic, such as operational restrictions and health-related uncertainty, created new hurdles for businesses, which were not present in the financial crisis. This difference suggests that while PE-backed firms may be more resilient overall, the nature of the crisis, whether financial or health-related, can influence the extent to which their resilience is tested. As a result, understanding the different factors that shape a firm's performance during such crises is crucial for assessing the true impact of private equity ownership on long-term financial stability.

While the studies by Lavery et al. (2024) and Bernstein et al. (2019) focus on the experiences of British companies during the crises, this thesis aims to extend their findings by examining whether PE-backed firms in Sweden showed greater financial resilience during the Covid-19 financial crisis. The economic conditions and policy responses in Sweden differed in significant ways from those in the UK, making it important to test whether the conclusions drawn in the UK context apply elsewhere. For instance, the Swedish government implemented various support measures during the pandemic, such as direct financial aid and loan guarantees, as detailed by Ekholm, Nordström Skans, Persson and Åkerman (2022), which may have had a unique impact on Swedish businesses. By analyzing firm performance across key financial metrics, this study will contribute to the ongoing debate about whether private equity ownership acts as a stabilizing force or a risk amplifier during times of economic distress. The relevance of this question is underscored by the transition from a prolonged period of near-zero or negative interest rates to a higher-rate environment, where rising borrowing costs could disproportionately affect highly leveraged firms. Focusing solely on Swedish companies, this study will offer insights into how local economic policies and conditions influenced the resilience of PE-backed firms during the pandemic.

This thesis investigates whether Swedish private equity (PE)-backed companies demonstrated greater financial resilience during the Covid-19 crisis compared to non-PE-backed companies. This question is particularly relevant given the unique nature of the pandemic, which was marked by a global health emergency, widespread business disruptions, and extensive policy interventions. The distinct Swedish response, markedly different from that of many other countries, makes this context especially valuable for studying how PE ownership may influence firm resilience in times of crisis. The study assesses this by comparing key financial indicators such as profitability, liquidity, and leverage across PE-backed and non-PE-backed firms, as well as examining how these metrics evolved throughout the pandemic period. In addition to financial performance, the analysis considers non-financial aspects of resilience, such as how firms adapted operationally through workforce adjustments or shifts in business models, to understand whether PE ownership played a role in shaping adaptive responses during the crisis.

To examine potential differences in resilience between PE-backed and non-PE-backed firms, a sample of Swedish PE-owned companies was first identified. These firms were then matched with

comparable non-PE-backed Swedish companies based on pre-pandemic characteristics, including industry, equity ratio, total assets, and return on assets, to construct a control group with similar baseline attributes. The financial performance of the two groups during the Covid-19 crisis was subsequently compared using a difference-in-differences regression framework. Unlike previous studies by Bernstein et al. (2019), Lavery et al. (2024), and Kacer, Wilson, Zouari and Cowling, (2025), this analysis found no statistically significant differences in financial resilience between PE-backed and non-PE-backed firms.

Several factors may explain why these findings diverge from those of prior research. Most notably, this study focuses on Swedish firms, whereas the earlier studies investigated British companies, suggesting potential structural differences in the private equity sectors across countries. Moreover, given that Sweden adopted a notably less restrictive response to the pandemic, as emphasized by Andersson and Jonung (2023), the economic shock may have been milder than in countries that implemented strict lockdowns. This may have reduced the scope for private equity ownership to influence firm outcomes. Lastly, the relatively small sample size in this study may have limited the statistical power to detect meaningful differences between the groups.

This study contributes to the existing literature by examining how private equity ownership influences firm resilience during economic crises, specifically within the Swedish context. By focusing exclusively on Swedish companies, the research controls for country-specific factors such as government interventions, economic support policies, and the broader macroeconomic environment. Sweden's distinct approach to managing the Covid-19 pandemic, marked by comparatively lenient restrictions and targeted support measures, sets it apart from countries like the UK, where prior studies have been conducted. Our findings suggest that private equity ownership may not exert the same effect across regions, either due to structural differences in the Swedish PE industry or because the milder economic impact of the pandemic in Sweden reduced the scope for PE ownership to shape firm outcomes. As such, the study highlights the importance of considering national context when evaluating the role of private equity during crises, while also acknowledging the limited generalizability of its findings beyond the Swedish setting.

Literature Review

The resilience of PE-backed firms during economic downturns has been a focal point in financial research. Bernstein, Lerner, and Mezzanotti (2019) investigated this by examining the 2008 financial crisis. Their study revealed that PE-backed companies increased investments relative to their peers during the crisis, supported by greater equity and debt inflows. This effect was more pronounced among financially constrained firms and those whose PE investors had substantial resources at the crisis's onset, leading to higher asset growth and increased market share for these companies during the downturn. It was also shown that even though the PE-backed firms experienced both higher levels of equity and debt financing, their leverage ratios stayed approximately the same throughout the crisis.

Building upon this foundation, recent studies have explored the performance of PE-backed firms during the Covid-19 pandemic. For instance, Kacer, Wilson, Zouari, and Cowling (2025) analyzed British entrepreneurial firms that received equity financing before the pandemic. Their findings suggest that private equity-backed firms, particularly those with active investor involvement, exhibited greater resilience during the crisis, highlighting the importance of investor support in navigating economic challenges.

Similarly, Lavery and Wilson (2024) examined the performance of PE-backed firms during the Covid-19 pandemic. The research indicated that, on average, PE-backed firms were more resilient compared to closely matched industry peers during the pandemic. However, this outperformance was less pronounced than in the pre-pandemic period, suggesting that it was primarily due to investors selecting firms that were already well-positioned to perform better, rather than their active support during the crisis.

While these studies provide valuable insights into the performance of PE-backed firms during economic crises, including both the 2008 financial crisis and the Covid-19 pandemic, they focus solely on British companies. This study aims to contribute to this literature by examining the financial resilience of PE-backed firms throughout the Covid-19 pandemic, with a specific focus on Swedish companies. Given that Sweden implemented different lockdown measures and fiscal policies compared to countries like the UK, the results of this study may be influenced by these contextual differences. This approach may also provide new insights into whether the findings from UK-based studies apply in other national contexts. By narrowing the scope to Sweden, this research will help determine whether the conclusions of previous studies hold in different settings, thereby enriching our understanding of PE-backed firms' performance during times of crisis.

II. Background

Private equity and Financial Fragility

Kaplan et al. (2009) argue that private equity investments tend to be cyclical, with activity peaking when interest rates are low and debt financing inexpensive. Often, this inflow of capital leads to increased competition for deals, which results in acquisition of lower-quality firms and higher leverage levels in the portfolio companies. This elevated leverage along with potentially weaker fundamentals is thought to increase the financial fragility of PE-backed firms, especially during crises.

Nevertheless, the connection between financial resilience and PE ownership is not that simple. Although it can be argued that the high leverage affiliated with PE transactions raises the risk for bankruptcy, De Silva et al. (2022) found no significant increase in bankruptcy rates among PE-backed companies, when controlling for leverage. These findings suggest that the financial structures enacted by PE owners may not inherently lead to distress.

On the other hand, as was outlined by Bernstein et al. (2019), a potential upside of PE investors is that, due to their contacts within the industry, the PE investors may be better positioned to support their portfolio companies in times of crisis. Furthermore, Lavery et al. (2024) argue that the operational expertise and active governance PE owners provide may improve firm efficiency and adaptability. This raises the possibility that PE-backed firms are not only resilient because of external support, but also because they were selectively acquired for their underlying strengths and growth potential.

Covid-19 Financial Crisis

In early 2020, as the coronavirus spread, multiple countries in Europe implemented lockdowns, which had a huge adverse effect on the economy. Muggenthaler et al. (2021) found that the economic impact varied depending on the severity of restrictions, sectoral composition, and fiscal support. The recession was largely driven by a decline in private consumption, as reduced spending opportunities and uncertainty led to increased precautionary savings. Differences in economic structures and policy responses further influenced the pace of recovery, raising concerns about long-term economic divergences across the region.

Sweden, on the other hand, was unique on the world stage by not pursuing especially stringent measures to curb the spread of the virus. Instead of imposing strict lockdowns, the country relied on voluntary social-distancing measures, allowing businesses to remain open and economic activity to continue with fewer disruptions. As a result, Sweden avoided the severe economic

downturns experienced by many of its European counterparts, with relatively small losses in output and a fiscal position that remained notably strong throughout the crisis. As found by Andersson et al. (2023), this approach minimized the economic costs of the pandemic while achieving a comparable outcome in excess mortality.

In Sweden, the PE industry have grown significantly of the past decades, making Sweden one of the most active PE markets in Europe relative to its size. According to Andersson et al. (2025), Swedish PE firms manage large volumes of capital and play a prominent role in both the domestic and international investment landscape. However, while the sector can contribute positively to economic growth by fostering restructuring and innovation, Andersson et al. (2025) also highlight the potential financial risks due to the high leverage often employed in PE transactions, as well as the increasing use of less transparent financing structures such as private credit funds and leveraged loans.

This study will focus exclusively on Swedish companies to control for country-specific factors, such as government interventions and local economic conditions, which may influence firms' resilience during the Covid-19 crisis. Sweden's approach to managing the pandemic differed significantly from that of countries like the UK, with distinct policy measures and business support systems. As a result, the findings from studies based on UK companies may not directly apply to the Swedish context. By concentrating on Swedish firms, this research aims to assess the impact of private equity ownership on financial resilience during a crisis under Sweden's specific economic and policy conditions. However, the findings may be limited in their generalizability to other countries or contexts with different approaches to the pandemic and economic support.

III. Data & Methodology

Data Source Description

The financial data used in this study was extracted from the Serrano database (Weidenman, Per n.d.). This database contains aggregated financial data collected from *Bolagsverket*, *Statistics Sweden (SCB)* and *the Swedish Company Registration Office* on both private and public Swedish companies starting from 1997. The data includes, among other variables, key financial ratios such as leverage ratios and company size. These variables have been used to access financial data of the identified private equity-backed companies and to construct a control group of non-PE-backed firms. Not all Swedish companies have their accounting period set from January first to December 31st, thus the Serrano database has manipulated the financial data to allow for statistical analysis. More precisely, to handle the situations where a company uses a broken financial year or for other reasons does not use the calendar year. All financial statement data is converted into monthly values and then added up to create financial statements for the entire year. Data on which companies were backed by private equity firms have been sourced from CapitalIQ which is a financial information platform that contains data on M&A transactions and IPOs.

The definitions of the main variables used for matching and analysis are presented below. The Investment variable is constructed in the code by dividing capital expenditure by total assets. All other variables have been used without modification and are taken directly from the Serrano database.

$$Equity\ ratio = \frac{Adjusted\ Equity}{Total\ assets}$$

$$ROA = \frac{Adjusted\ Operating\ Profit}{Total\ Assets}$$

$$Investment = \frac{Captial\ Expenditures}{Total\ Assets}$$

$$Quick\ Ratio = \frac{Total\ Current\ Assets - Total\ Inventory}{Total\ Current\ Liabilities}$$

$$Interest\ rate\ on\ Debt = \frac{Financial\ costs - Financial\ expenses\ affecting\ comparability}{Adjusted\ total\ liabilities}$$

$$Asset\ turnover\ ratio = \frac{Net\ Sales}{Total\ Assets}$$

Difference in difference

To estimate the causal effect of private equity ownership on firm performance during the Covid-19 crisis, we apply a difference-in-differences (DiD) regression framework, following the approach of Bernstein et al. (2019). This method compares changes in outcome variables, such as equity ratio, total assets, and return on assets, between a treatment group (PE-backed firms) and a matched control group (non-PE-backed firms) before and after the onset of the crisis.

The DiD model is estimated using the following regression:

$$y_{jt} = \gamma + \gamma_j \cdot PE_j + \gamma_t \cdot Post_t + \beta \cdot (PE_j \cdot Post_t) + \varepsilon_{jt}$$

where y_{jt} is the outcome variable for firm j at time t , PE_j is an indicator for whether the firm is PE-backed and $Post_t$ is an indicator for the post-crisis period. The coefficient β captures the DiD estimate, representing the average effect of PE ownership during the crisis.

To support the key DiD assumption, that both groups would have followed similar trends in the absence of the crisis, we carefully matched the control group based on pre-crisis financial characteristics and confirmed visually and statistically that the groups exhibited parallel trends before the pandemic.

Constructing a group of private equity backed companies

To construct a dataset of companies that were backed by Private equity firms we used CaptialIQ to screen for all transactions where the buyer was a private equity firm between the years of 2011 and 2019. By that means we only included buyouts and excluded Venture capital and growth equity investment. This was done intentionally as different financing structures and strategies are often employed by these kinds of investors. To ensure that the company had not experienced an exit, we did additional screenings on transactions in CapitalIQ for IPO's and exits to non-Private equity firms. If it was found that a portfolio company had made an exit before 2020, we excluded it from the dataset. Furthermore, we also manually looked up companies in case of doubt to find out if they had made an exit by 2020.

CapitalIQ does not have information on national organization numbers which is what the Serrano database uses as an identifier for each company. Thus, we used the LEI number for each of the screened companies and manually looked up the Swedish organization number (*bolagsnummer*) through the website Lei Lookup (n.d.). In the cases where there were no LEI number available in CapitalIQ we manually added the organization number where possible by looking it up on Allabolag (n.d.). In total, we were able to identify 220 private equity backed companies.

The private equity backed companies were then matched to the Serrano database by organization number, excluding companies that did not meet the following criteria. This was done to facilitate the construction of a control group and allow us to conduct a regression analysis.

- (i) There was a match based on the organization-number in the Serrano database
- (ii) There is data available for all years under consideration (2017 - 2022)
- (iii) The legal form of the company was classified as a limited liability company
- (iv) The company was marked as active according to the *ser_aktiv* for all years under consideration

Furthermore, the variable *ser_aktiv* can be either 1 or 0 indicating whether the company is active or not. According to Serrano, a limited liability company was deemed active if one of the following criteria were met.

- Net sales > 10 kSEK
- Other operating income > 10 kSEK
- Financial income > 10 kSEK
- Financial expenses < -10 kSEK
- The dividend amount > 10 kSEK
- Total assets > 500 kSEK

To verify the legal form of each company, we used the Serrano variable *ser_jurform*, which equals 49 for limited liability companies. Additionally, only firms with complete data for all years from 2017 to 2022 were included in order to allow for a consistent comparison of historical performance between PE-backed and non-PE-backed companies before and during the crisis. Companies with missing data were excluded, which included a few that had gone bankrupt and others for which financial data was unavailable despite no record of bankruptcy. These exclusions were necessary to ensure the comparability of time series data and to avoid introducing bias from incomplete observations. As a result, our analysis is limited to firms that remained active and reported data throughout the full period. After applying these filters, data was available for 170 private equity-backed companies.

Constructing a control group

For every private equity company, we matched it with two non-PE-backed companies. We only included companies that met the criteria displayed below. This was done in order to facilitate the creation of a control group and ensure that we had data on all the companies included in the study. In the case that fewer than two companies match with a particular private equity backed company we chose to exclude the private equity company in order to create a control group that was as similar as possible to the treatment group. If more than two companies matched with a private equity backed company, we used the normalized Euclidean distance between the matching variables to find the closest matches. The decision to construct a relatively large control group

(1:2) was made to increase the statistical validity of our analysis, which otherwise may be a problem due to the relatively small group of identified private-equity-backed companies. We chose to base the matching on the year 2019 which was right before the crisis began. This was done to make sure that the control group companies were as similar as possible to their private equity backed counterparts going into the crisis.

- (i) Same Industry based on the Serrano *BRANCH SECTOR* variable.
- (ii) The legal form of the company was a limited liability company
- (iii) Similar equity ratio: equity ratio within 30% of the private equity backed company.
- (iv) Similar amount of total assets: Total assets fell within 30% of the private equity backed company.
- (v) Similar rate of *Return on assets*: Return on assets fell within a bandwidth of 30% of the private equity backed company.
- (vi) The company was marked as active according to the *ser_aktiv* for all years under consideration

Since private equity firms often employ a lot of leverage in their transactions this may tilt them to invest more in certain industries. To avoid any bias that may arise by comparing companies that operate in different industries we only match companies within the same industry.

PE-backed companies that could not be matched based on the criteria described above were excluded from the dataset. In total, matches were found for 94 of the 170 PE-backed companies. Each of these was paired with two non-PE-backed companies, resulting in a control group of 188 firms. The remaining 76 PE-backed companies were excluded because no suitable matches were identified. This yielded a final test set of 282 companies: 94 PE-backed and 188 non-PE-backed.

Characteristics of treatment and control group

Table 1 shows in which industries these 282 selected firms operate, providing an overview of the sectoral distribution of the companies included in the sample. As outlined in the table, the “Industrial goods” sector was the most prevalent constituting 29.8% of the sample, followed by the “Shopping goods” sector constituting 21.3%. In contrast, “Convenience goods”, “Finance and Real estate” as well as “SNI07 missing” constituted only 2.1% of the total sample, respectively. The smallest sector, however, is the sector “Other”. The sector “SNI07 missing” consisted of the 6 companies which did not have data on their SNI07 code.

Industry	Non PE Backed	PE Backed	Total	Share of Total
Construction Industry	8	4	12	4.3%
Convenience goods	4	2	6	2.1%
Corporate services	38	19	57	20.2%
Finance & Real estate	4	2	6	2.1%
Health & Education	6	3	9	3.2%
IT & Electronics	16	8	24	8.5%
Industrial goods	56	28	84	29.8%
Materials	10	5	15	5.3%
Other	2	1	3	1.1%
SNI07 missing	4	2	6	2.1%
Shopping goods	40	20	60	21.3%

Table 1: Sample companies' industries

As illustrated in Table 2, the matching was successful as all of the measured variables very similar between the group of private equity backed companies and non-private equity backed companies. Further, the three variables we used for matching are all very similar between the two groups. To further assess whether the differences in means were statistically significant or not, Welch's t-test was conducted for all variables. As shown in the table, all p-values exceed 0.15, indicating that even at a 15% significance level, none of the mean differences are statistically significant. The variable with the largest relative difference between the two groups is *Number of Employees*, where the PE-backed firms, on average, had nearly 22.9 more employees than the control group. However, the median difference is only 7.5 employees, suggesting that a few larger PE-backed firms are skewing the average and driving most of the apparent difference. A similar pattern is observed for the *Quick ratio*, which shows the second largest relative difference in means between the two groups. However, the median for both groups is closer to each other indicating a good match.

	PE Sample				Matched Sample				Mean Diff.	t-stat	p-value
	N	Mean	Median	SD	N	Mean	Median	SD			
Total Assets (kSEK)	94	472.5	228.4	696.6	188	448.9	217.6	682.1	23.6	0.269	0.788
ROA	94	0.157	0.126	0.141	188	0.151	0.125	0.133	0.007	0.387	0.699
Equity Ratio	94	0.456	0.440	0.212	188	0.448	0.427	0.212	0.008	0.304	0.761
Net Sales (kSEK)	94	379.0	208.2	435.9	188	389.6	157.4	708.2	-10.6	-0.155	0.877
Interest rate on Debt	93	0.022	0.01	0.046	188	0.025	0.008	0.084	-0.003	-0.377	0.706
Number of employees	94	105.2	48.5	150.2	188	82.3	41.0	123.7	22.9	1.278	0.203
Investment	80	0.005	0.0	0.02	154	0.001	0.0	0.011	0.003	1.43	0.156
Quick Ratio	93	26.134	1.177	225.577	186	19.971	1.251	143.643	6.163	0.24	0.811
Asset turnover ratio	94	1.446	1.485	1.042	188	1.618	1.424	1.571	-0.172	-1.095	0.274

Table 2: Firm Characteristics in 2019

Nevertheless, for the difference-in-difference regression to be relevant, the two groups should also have similar pre-crisis trends, not just similar metrics. To evaluate whether this is the case, Figure 1 shows how the mean of the variables *Net Sales*, *ROA*, *Equity Ratio* as well as *Total Assets* have

evolved over the recent years before the pandemic to a couple of years after the pandemic started. As illustrated in the figure, all of these key ratios followed a similar trend before the crisis began. Although, the mean of the *ROA* for the PE-backed firms seems slightly more volatile than for the control group, as it is higher in 2017, lower in 2018 and thereafter slightly higher again in 2019. However, the difference is relatively modest, and both groups exhibited a positive trend leading up to the crisis. This suggests that the groups followed similar pre-crisis trends, further supporting the validity of the matching process.

Similar plots for the other variables *Interest rate on Debt* and *Number of Employees*, are shown in Figure A.1 in the Appendix. The trends for *Number of Employees* appear similar between the two groups, further supporting the validity of the matching procedure. In contrast, the variable *Interest Rate on Debt* shows a downward trend for the control group, while the PE-backed firms display a stable trend. For *Shareholder Contribution per Assets*, the groups follow diverging trends, with the largest discrepancy observed in 2019. Although these differences indicate that the groups are not perfectly aligned, the p-values for Welch's t-test shown in Table 2 for the variables indicate that the groups are similar. Overall, the similarity across key variables suggests that the matching is adequate for the purposes of this study.

Table 3 shows the one and two-year growth rates with 2019 as the base year of multiple financial and non-financial metrics which further solidifies the fact that the companies in the two groups had similar pre-pandemic trends and there is no statistically significant difference between the growth rates between the two groups in any of the metrics measured.

	PE Sample				Matched Sample				Mean Diff.	t-stat	p-value
	N	Mean	Median	SD	N	Mean	Median	SD			
<i>One Year Growth</i>											
Total Assets	85	0.202	0.121	0.545	154	0.099	0.062	0.257	0.103	1.639	0.104
ROA	85	1.078	-0.149	10.988	154	0.41	0.008	3.15	0.668	0.548	0.585
Equity Ratio	85	0.467	0.035	2.651	154	0.126	0.044	0.598	0.341	1.171	0.245
Net Sales	85	0.084	0.061	0.257	154	0.085	0.031	0.573	-0.002	-0.035	0.972
Interest rate on debt	85	3.375	0.018	11.018	154	2.795	-0.02	14.854	0.58	0.343	0.732
Number of employees	85	0.029	0.022	0.292	154	0.046	0.0	0.29	-0.018	-0.453	0.651
Quick Ratio	85	45.506	0.049	417.653	154	0.389	0.016	4.04	45.116	0.996	0.322
<i>Two Year Growth</i>											
Total Assets	85	0.426	0.262	0.979	157	0.293	0.102	0.904	0.133	1.039	0.3
ROA	85	1.507	-0.239	10.551	157	6.076	-0.056	77.01	-4.569	-0.731	0.466
Equity Ratio	85	0.185	0.059	0.723	157	2.453	0.044	28.713	-2.268	-0.989	0.324
Net Sales	85	0.205	0.137	0.452	157	0.338	0.116	1.31	-0.135	-1.148	0.252
Interest rate on debt	85	3.353	-0.031	16.733	157	15.974	0.016	167.301	-12.622	-0.937	0.35
Number of employees	85	0.212	0.067	0.951	157	0.12	0.042	0.486	0.092	0.848	0.404
Quick Ratio	85	80.919	0.014	741.77	157	0.829	0.022	6.281	80.089	0.995	0.322

Table 3: Firm Growth rates in 2019

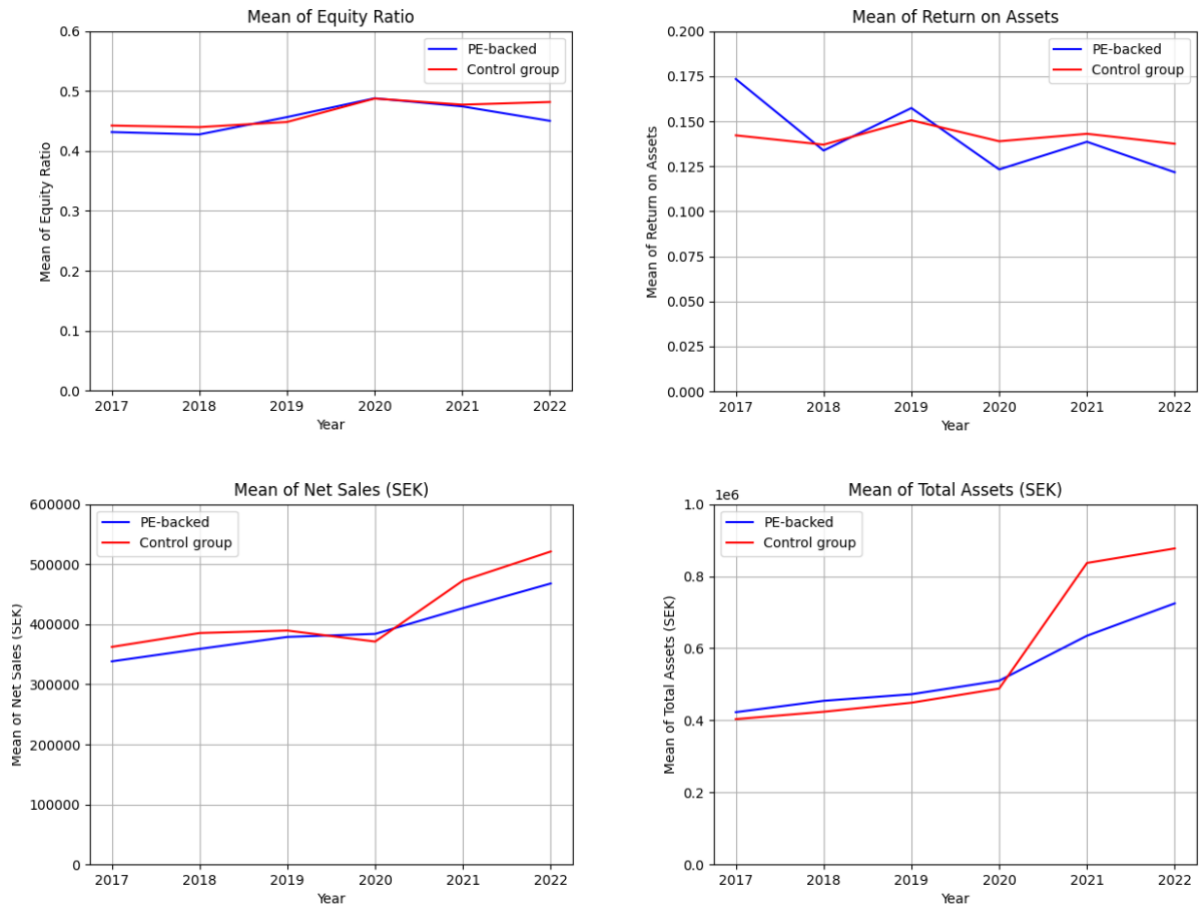


Figure 1: Financial measures over time

IV. Results

Difference in differences analysis

To examine the financial resilience of private equity backed companies in relation to non-private equity backed companies during the Covid-19 financial crisis, we created a “Post” dummy variable that is set to 1 for the years 2020 to 2022, and 0 for the years 2017, 2018 and 2019 representing whether the data entry is from before or after the crisis had begun. Another dummy variable was also created, called “PE”, which was set to 1 for the PE-backed companies and to 0 for non-PE-backed companies. This allows us to conduct a difference in difference analysis (DiD).

Following the methodology of Lavery and Wilson (2024), we performed a difference in difference analysis of key financial metrics before and during the pandemic to investigate whether or not there was a difference between private equity backed companies and non-private equity backed companies during the crisis. Furthermore, we also looked at year by year effects of being private equity backed, defined as $PE \cdot year$. This was done to see if there was any difference between the treatment and control group during any of the years. For the year by year effects, we used 2019 as the base year and we also took the log of *total assets* and *net sales* to enable a comparison between firms of different sizes.

	Total Assets (log)	Net Sales (log)	ROA	Equity Ratio
Panel A: Baseline difference-in-difference				
PE · Post	0.1061	0.0548	-0.0235	-0.0043
<i>p-values</i>	<i>0.14</i>	<i>0.82</i>	<i>0.14</i>	<i>0.83</i>
Panel B: Year-by-year effects				
PE · 2017	-0.0149	0.0182	0.0245	-0.0190
<i>p-values</i>	<i>0.82</i>	<i>0.86</i>	<i>0.30</i>	<i>0.38</i>
PE · 2018	-0.0417	0.0029	-0.0100	-0.0203
<i>p-values</i>	<i>0.32</i>	<i>0.98</i>	<i>0.59</i>	<i>0.23</i>
PE · 2020	0.0399	0.0759	-0.0224	-0.0052
<i>p-values</i>	<i>0.24</i>	<i>0.68</i>	<i>0.22</i>	<i>0.77</i>
PE · 2021	0.0825	-0.0191	-0.0112	-0.0089
<i>p-values</i>	<i>0.22</i>	<i>0.94</i>	<i>0.62</i>	<i>0.71</i>
PE · 2022	0.1393	0.1287	-0.0226	-0.0381
<i>p-values</i>	<i>0.07</i>	<i>0.65</i>	<i>0.32</i>	<i>0.14</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	1692	1692	1692	1687
R-squared	0.0052	0.0002	0.0026	8.8e-5

Table 4: DiD regression on firm performance during the pandemic

The difference in difference regression on financial measures shows no significant relationship between the interaction variable (PE * Post) in any of the baseline cases. *Net Sales and Total assets* have positive coefficients for the baseline case but the result is not statistically significant ($p > 0.05$). *Return on Assets* has negative coefficients for both the baseline case and for every year except 2017 in the year by year effects. However, this result was not statistically significant ($p > 0.05$ for all cases). Furthermore, the R-squared for all the regressions are low suggesting that the model explains very little of the variation in the dependent variable.

Panel B displays the year-by-year effects of private equity ownership, no significant effect could be observed for any of the variables ($p > 0.05$) during any of the years. This suggests that PE-ownership had no impact on firm performance in Sweden during the years of consideration.

Additionally, we conducted a second difference in difference analysis on four more variables, *Number of employees*, *Quick ratio*, *Asset turnover ratio* and *Investment*. This was done to investigate whether private equity ownership had any impact on liquidity and investment levels on their portfolio companies' vis a vis their non-private equity backed peers.

	Number of employees	Quick Ratio	Asset turnover ratio	Investment
Panel A: Baseline difference-in-difference				
PE · Post	-10.154	115.26	-0.0497	31.996
<i>p-values</i>	<i>0.63</i>	<i>0.16</i>	<i>0.60</i>	<i>0.21</i>
Panel B: Year-by-year effects				
PE · 2017	-8.4734	-151.24	0.1692	-13.720
<i>p-values</i>	<i>0.045</i>	<i>0.30</i>	<i>0.02</i>	<i>0.62</i>
PE · 2018	-5.5000	-41.697	0.0753	-14.819
<i>p-values</i>	<i>0.09</i>	<i>0.16</i>	<i>0.19</i>	<i>0.52</i>
PE · 2020	1.6968	48.402	0.96	-13.203
<i>p-values</i>	<i>0.60</i>	<i>0.47</i>	<i>0.77</i>	<i>0.28</i>
PE · 2021	-21.197	45.516	0.0255	21.136
<i>p-values</i>	<i>0.49</i>	<i>0.51</i>	<i>0.79</i>	<i>0.33</i>
PE · 2022	-24.936	58.909	0.0670	60.057
<i>p-values</i>	<i>0.43</i>	<i>0.39</i>	<i>0.48</i>	<i>0.09</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	1692	1672	1692	1408
R-squared	0.0003	0.0022	0.0006	0.0058

Table 5: DiD regression on firm performance (secondary variables)

Again, we find almost no statistically significant differences between the two groups. For the baseline case no variable differs at a significant level for any of the variables. However, for year-by-year effects in 2017 we found a positive significant effect on *asset turnover ratio*, which was statistically significant ($p = 0.02 < 0.05$). This was, however, from before the crisis had begun. Furthermore, the year-by-year effect on number of employees was negative and statistically

significant for the year 2017. It is also worth noting that the R-squared values are very low, indicating that the model has low explanatory power.

Robustness Check

To solidify the findings in this report and ensure their validity, a multitude of robustness checks were carried out. First, we relaxed our matching parameters to include companies within a 40% bandwidth of *total assets*, *equity ratio* and *return on assets*. However, the matching was still constrained to the same industry to maintain comparability between the two groups. As expected, this increases the number of firms that we were able to match and, as illustrated in Table A.1 in the appendix, the matched group still closely resembles the treatment group. Table A.2 shows the conducted regression and similarly to our results it found no significant effect on any of the dependent variables. Looking at the secondary variables in Table A.3, we can see a slightly positive statistically significant effect on *asset turnover ratio* for the years 2017 and 2018. This is in line with our previous regression with the addition of 2018 also becoming statistically significant in the robustness check.

Furthermore, we also reduced the matching bandwidth to 15%, this had a significant impact on the number of companies that were able to match with a non-pe backed company. In total only 37 private equity backed companies were able to match with 74 non-private equity backed companies. However, the groups were still similar to each other, as demonstrated in Table A.4, and further solidified our results as we found no significant effect (Table A.5). As evident by Table A.6, none of the secondary variables are significant in either of the baseline case or in the year-by-year effects.

In a third robustness check we reverted our constraints to a 30% bandwidth of the matching variables but instead let the private equity backed companies match with 4 companies. In doing so we excluded private equity backed companies that did not match with 4 or more non private equity backed companies, thus this naturally reduced the size of our treatment group. Again, we find that the matching was successful, as demonstrated in Table A.7, which can be found in the appendix. Again, for the regression on the secondary variables we find no statistically significant effects in the base case but a slightly positive significant effect on asset turnover in 2017 as illustrated in Table A.9.

V. Discussion

Contrary to the results of the previous studies on the resilience of PE-backed firms during crises, by e.g. Bernstein et al. (2019), Lavery et al. (2024) and Kacer et al. (2025), we did not find any significant difference in difference when studying PE-backed firms in Sweden during the Covid-19 crisis. To ensure that any observed differences, or in our case lack thereof, arise from organizational structure rather than balance sheet or investment characteristics, we created a control group of non-PE-backed firms which aimed to have as similar as possible pre-crisis trends as the group of PE-backed companies. As shown in Figure 1, the two groups showed very similar trends, both before and during, in equity ratio, total assets as well as revenue (net sales). Due to the similar development of these parameters both before and during the crisis, the difference in difference regression did not yield significant results, which in turn implicates that, based on these parameters, both PE-backed and non-PE-backed firms did not perform differently during the crisis.

When comparing return on assets (ROA), Figure 1 shows that the PE-backed and non-PE-backed groups exhibited slightly different trends prior to the crisis. The non-PE-backed firms maintained a relatively stable ROA, whereas the PE-backed firms experienced some volatility, with a decline between 2017 and 2018 followed by an increase between 2018 and 2019. Despite these differences, no statistically significant variation was found in either the pre-crisis growth (Table 3) or the pre-crisis ROA levels (Table 2). The same holds true for the other variables studied, no significant differences were observed in either the growth rates or the variable levels before the crisis. This provides further evidence that the two groups were broadly comparable before the onset of the crisis.

Although Lavery et al. (2025) found differences between PE-backed firms and non-PE-backed firms, their findings suggest that the differences between these two groups were less than before the crisis, as well as significantly less than the 2008 financial crisis, as found by Bernstein et al. (2019). Lavery et al. argue that these smaller differences can be explained by the PE-investors' inability to affect the abrupt drop in demand for certain goods and services during the pandemic, compared to during the financial crisis 2008 where they could use their strategic expertise, substantial financial resources, and extensive networks of consultants, financial institutions, and operational partners to offset some of the crisis's negative effects.

Building on these arguments, we can compare the difference in economic downturns in the UK with those in Sweden during the pandemic. As Andersson et al. (2023) shows, the economic downturns in Sweden were much less severe due to the lesser lockdown policies. Hence, companies operating in Sweden was generally less affected by the crisis than companies operating in countries with stricter lockdowns, as for example the UK. This lesser overall impact could thus explain why our results had trouble finding differences between the two groups. Hence, both the lesser possibility for PE-investors to offset the consequences of the Covid-19 crisis compared to

other crises, as well as the lesser overall economic impact of the Covid-19 crisis in Sweden compared to other countries may be reasons which explain our results.

Another possible explanation for our differing results is that the Swedish private equity industry may operate differently from its British counterpart, potentially making the influence of PE ownership during crises less pronounced in Sweden. To explore this further, a similar study could be conducted using data from the 2008 financial crisis to examine whether significant differences between PE-backed and non-PE-backed firms emerged in that context. If such differences were found, it would support the interpretation that the lack of divergence in our Covid-19 results is primarily due to the relatively milder economic impact of the pandemic in Sweden. However, until such comparative analyses are conducted, definitive conclusions cannot be drawn. It is also important to note that the relatively small sample size in this study may have limited the statistical power to detect subtle but potentially meaningful differences between the groups.

This paper was further limited to the company data that could be found in the Serrano database which by nature primarily focuses on financial data and metrics. Thus, there were very limited investigations into non-financial performance metrics have been conducted and thus the research may have missed potential non-financial effects such as brand recognition or well-being of employees.

Conclusion

This thesis investigated whether Swedish PE-backed firms exhibited greater financial resilience during the Covid-19 crisis compared to their non-PE-backed counterparts. Using a difference-in-differences regression approach, a sample of Swedish PE-backed firms was matched with similar non-PE-backed firms based on pre-crisis financial characteristics. The two groups were then compared across key financial indicators such as equity ratio, total assets, revenue, and return on assets throughout the pandemic.

Contrary to findings in earlier studies on British firms, this analysis found no statistically significant differences in performance between PE-backed and non-PE-backed companies during the Covid-19 crisis. Several explanations are possible: first, the relatively mild economic downturn in Sweden, due to less restrictive lockdown policies, may have reduced the overall stress on firms, thus limiting the potential impact of PE ownership. Second, structural differences in the Swedish private equity industry may mean that PE ownership plays a less pronounced role during crises than in countries like the UK. Finally, the relatively small sample size could have limited the study's ability to detect subtle effects. These findings suggest that the effects of PE ownership on crisis resilience are context-dependent and emphasize the need for regionally nuanced research.

Since this study's focus was limited to Sweden which took lenient measures during the Covid-19 pandemic, future research should look at differences between PE backed firms and non-PE backed firms across Europe and consider to what extent the strictness of a country's lockdown affected performance. Such a study could also take variables such as GDP-growth for each country and see if it had any impact on private equity backed companies. To complement this further research on the financial fragility of private equity owned firms during the 2008 financial crisis in Sweden would support a more substantial conclusion on whether it is the business environment in Sweden that differs from the UK or that private equity backed firms simply did not perform better during the Covid-19 crisis. The timeframe under consideration was also limited by the Serrano database which only contains data up until the year 2022 at the time of writing. It is possible that the timeframe is too short and close to the pandemic to see the full aftermath of the crisis and that a longer time horizon would have yielded different results.

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Appendix

Definitions

Definition of additional variables

Serrano Variable Name	Definition
<i>bransch borsbranch_konv or BRANCH SECTOR</i>	Groups each company based on SNI07 code into one of the following industries: 10 = Energy & Environment 15 = Materials 20 = Industrial goods 22 = Construction industry 25 = Shopping goods 30 = Convenience goods 35 = Health & Education 40 = Finance & Real estate 45 = IT & Electronics 50 = Telecom & Media 60 = Corporate services 98 = Other 99 = SNI07 missing
<i>Number of employees</i>	Serrano variable which is set to the number of employees according to data in the financial statements.
<i>ser_jurform</i>	Numbered value in the serrano database based on legal form of the company. 22 = Shipping partnerships (Partrederier) 23 = Mutual funds (Vardepappersfonder) 31 = Partnerships/Limited partnerships (Handelsbolag/Kommanditbolag) 41 = Joint-stock banks (Bankaktiebolag) 42 = Insurance companies (Forsakringsaktiebolag) 49 = Limited liability companies (Aktiebolag) 51 = Cooperatives (Ekonomiska foreningar) 81 = Public entities (Statliga enheter) 82 = Primary municipalities (Primarkommuner) 83 = Local federations (Kommunalforbund) 84 = County councils (Landsting) 85 = Social insurance offices (Allmänna försäkringskassor) 87 = Public bodies corporate and institutions (Offentliga korporationer och anstalter)

	88 = Mortgage associations (Hypoteksforeningar) 89 = Regional state agencies (Statliga regionala myndigheter) 92 = Mutual insurance companies (Omsesidiga forsakringsbolag) 93 = Savings banks (Sparbanker) 96 = Foreign legal entities (Utlandska juridiska personer)
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Robustness Checks

	PE Sample				Matched Sample				Mean Diff.	t-stat	p-value
	N	Mean	Median	SD	N	Mean	Median	SD			
Total Assets (kSEK)	110	629.7	261.5	1214.5	220	598.9	229.5	1151.0	30.7	0.221	0.826
ROA	110	0.148	0.115	0.146	220	0.139	0.116	0.134	0.01	0.591	0.555
Equity Ratio	110	0.448	0.424	0.216	220	0.441	0.414	0.217	0.007	0.282	0.778
Net Sales (kSEK)	110	417.4	208.2	514.9	220	423.3	160.0	743.6	-6.0	-0.086	0.932
Interest rate on Debt	109	0.022	0.011	0.046	220	0.024	0.008	0.074	-0.002	-0.284	0.777
Number of employees	110	130.6	49.5	298.2	220	96.4	39.5	210.7	34.2	1.075	0.284
Investment	91	0.004	0.0	0.018	174	0.003	0.0	0.02	0.002	0.741	0.46
Quick Ratio	109	22.49	1.113	208.385	218	11.961	1.19	102.246	10.528	0.498	0.619
Asset turnover ratio	110	1.408	1.479	1.056	220	1.548	1.305	1.575	-0.14	-0.956	0.34

Table A.1: Robustness check 1 - Firm characteristics in 2019

	Total Assets (log)	Net Sales (log)	ROA	Equity Ratio
Panel A: Baseline difference-in-difference				
PE · Post	0.1022	-0.0842	-0.0182	-0.0042
<i>p-values</i>	0.11	0.67	0.24	0.82
Panel B: Year-by-year effects				
PE · 2017	-0.0084	0.0170	0.0238	-0.0151
<i>p-values</i>	0.89	0.86	0.27	0.47
PE · 2018	-0.0457	-0.0203	-0.0125	-0.0118
<i>p-values</i>	0.21	0.80	0.45	0.43
PE · 2020	0.0291	-0.0117	-0.0170	-0.0069
<i>p-values</i>	0.38	0.94	0.37	0.68
PE · 2021	0.0848	-0.1188	-0.0052	-0.0111
<i>p-values</i>	0.16	0.59	0.80	0.63
PE · 2022	0.1387	-0.1254	-0.0211	-0.0216
<i>p-values</i>	0.04	0.59	0.34	0.36
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	1980	1980	1980	1978
R-squared	0.0049	0.0005	0.0015	8.135e-05

Table A.2: Robustness check 1 – regression output

	Number of employees	Quick Ratio	Asset turnover ratio	Investment
Panel A: Baseline difference-in-difference				
PE · Post	3.7989	112.86	-0.1104	31.996
<i>p-values</i>	<i>0.84</i>	<i>0.10</i>	<i>0.08</i>	<i>0.21</i>
Panel B: Year-by-year effects				
PE · 2017	-2.7438	-167.51	0.1408	-50.416
<i>p-values</i>	<i>0.77</i>	<i>0.17</i>	<i>0.01</i>	<i>0.26</i>
PE · 2018	-4.6529	-49.387	0.0878	-51.242
<i>p-values</i>	<i>0.30</i>	<i>0.24</i>	<i>0.03</i>	<i>0.28</i>
PE · 2020	8.8099	21.402	-0.0421	-36.593
<i>p-values</i>	<i>0.12</i>	<i>0.75</i>	<i>0.44</i>	<i>0.40</i>
PE · 2021	-3.2273	36.768	-0.0478	-17.371
<i>p-values</i>	<i>0.90</i>	<i>0.51</i>	<i>0.49</i>	<i>0.71</i>
PE · 2022	-1.5826	63.632	-0.0126	55.797
<i>p-values</i>	<i>0.95</i>	<i>0.24</i>	<i>0.85</i>	<i>0.06</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	2178	2154	2178	1743
R-squared	4.259e-05	0.0021	0.0056	0.0014

Table A.3: Robustness check 1 – regression output (Secondary variables)

Table A.4: Robustness check 2 - Firm characteristics in 2019

	N	PE Sample			N	Matched Sample			Mean Diff.	t-stat	p-value
		Mean	Median	SD		Mean	Median	SD			
Total Assets (kSEK)	37	153.721	93.307	169.476	74	148.315	95.61	159.518	5.406	0.162	0.872
ROA	37	0.192	0.159	0.131	74	0.188	0.162	0.131	0.004	0.15	0.882
Equity Ratio	37	0.48	0.489	0.19	74	0.477	0.471	0.194	0.003	0.086	0.932
Net Sales (kSEK)	37	264.012	97.237	360.901	74	426.052	115.091	892.965	-162.041	-1.355	0.178
Interest rate on Debt	36	0.027	0.009	0.071	74	0.029	0.006	0.124	-0.002	-0.122	0.903
Number of employees	37	153.721	93.307	169.476	74	148.315	95.61	159.518	5.406	0.162	0.872
Investment	34	0.009	0.0	0.028	67	0.001	0.0	0.004	0.008	1.625	0.114
Quick Ratio	36	1.996	1.372	2.572	72	9.45	1.251	51.135	-7.454	-1.234	0.221
Asset turnover ratio	37	1.737	1.702	1.054	74	1.956	1.873	1.538	-0.219	-0.881	0.381

	Total Assets (log)	Net Sales (log)	ROA	Equity Ratio
Panel A: Baseline difference-in-difference				
PE · Post	0.0219	-0.2084	-0.0114	-0.0332
<i>p-values</i>	<i>0.86</i>	<i>0.48</i>	<i>0.68</i>	<i>0.35</i>
Panel B: Year-by-year effects				
PE · 2017	0.1068	0.1280	0.0056	0.0302
<i>p-values</i>	<i>0.28</i>	<i>0.34</i>	<i>0.90</i>	<i>0.41</i>
PE · 2018	0.0288	0.1328	-0.0303	-0.0176
<i>p-values</i>	<i>0.68</i>	<i>0.30</i>	<i>0.39</i>	<i>0.60</i>
PE · 2020	-0.0004	-0.1030	-0.0219	-0.0079
<i>p-values</i>	<i>0.99</i>	<i>0.22</i>	<i>0.45</i>	<i>0.82</i>
PE · 2021	0.0776	-0.2040	-0.0196	-0.0348
<i>p-values</i>	<i>0.45</i>	<i>0.56</i>	<i>0.61</i>	<i>0.30</i>
PE · 2022	0.1242	-0.0574	-0.0174	-0.0445
<i>p-values</i>	<i>0.30</i>	<i>0.88</i>	<i>0.62</i>	<i>0.12</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	666	666	666	665
R-squared	0.0003	0.0041	0.0006	0.0049

Table A.5: Robustness check 2 – regression output

	Number of employees	Quick Ratio	Asset turnover ratio	Investment
Panel A: Baseline difference-in-difference				
PE · Post	-3.036	183.28	-0.0794	19.783
<i>p-values</i>	<i>0.52</i>	<i>0.26</i>	<i>0.42</i>	<i>0.42</i>
Panel B: Year-by-year effects				
PE · 2017	2.8378	-52.593	0.0280	-46.167
<i>p-values</i>	<i>0.38</i>	<i>0.21</i>	<i>0.77</i>	<i>0.15</i>
PE · 2018	0.6351	-5.1421	0.0284	-27.790
<i>p-values</i>	<i>0.74</i>	<i>0.46</i>	<i>0.73</i>	<i>0.29</i>
PE · 2020	-2.7297	150.62	-0.0624	-32.414
<i>p-values</i>	<i>0.41</i>	<i>0.35</i>	<i>0.51</i>	<i>0.18</i>
PE · 2021	-0.7297	160.49	-0.1235	3.2662
<i>p-values</i>	<i>0.85</i>	<i>0.33</i>	<i>0.30</i>	<i>0.91</i>
PE · 2022	-2.1757	181.00	0.0041	14.792
<i>p-values</i>	<i>0.70</i>	<i>0.27</i>	<i>0.97</i>	<i>0.66</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	666	653	666	605
R-squared	0.0022	0.0220	0.0029	0.0061

Table A.6: Robustness check 2 – regression output (Secondary variables)

	PE Sample				Matched Sample				Mean Diff.	t-stat	p-value
	N	Mean	Median	SD	N	Mean	Median	SD			
Total Assets (kSEK)	72	291.592	152.32	453.136	288	275.992	138.404	435.461	15.6	0.263	0.793
ROA	72	0.166	0.139	0.13	288	0.157	0.134	0.119	0.008	0.491	0.624
Equity Ratio	72	0.484	0.505	0.192	288	0.481	0.486	0.197	0.003	0.104	0.918
Net Sales (kSEK)	72	326.937	181.111	378.169	288	359.004	148.722	626.015	-32.067	-0.554	0.58
Interest rate on Debt	71	0.02	0.009	0.052	287	0.022	0.007	0.061	-0.002	-0.247	0.805
Number of employees	72	92.181	38.5	138.059	288	84.545	38.0	127.44	7.635	0.426	0.671
Investment	62	0.006	0.0	0.022	239	0.001	0.0	0.01	0.005	1.693	0.095
Quick Ratio	71	1.753	1.323	1.959	285	8.635	1.275	62.078	-6.882	-1.868	0.063
Asset turnover ratio	72	1.541	1.503	1.048	288	1.598	1.441	1.38	-0.057	-0.385	0.701

Table A.7: Robustness check 3 - Firm characteristics in 2019

	Total Assets (log)	Net Sales (log)	ROA	Equity Ratio
Panel A: Baseline difference-in-difference				
PE · Post	0.0679	-0.0815	-0.0315	-0.0108
<i>p-values</i>	<i>0.38</i>	<i>0.73</i>	<i>0.07</i>	<i>0.61</i>
Panel B: Year-by-year effects				
PE · 2017	0.0175	0.2287	0.0276	-0.0095
<i>p-values</i>	<i>0.78</i>	<i>0.02</i>	<i>0.28</i>	<i>0.68</i>
PE · 2018	-0.0178	0.1247	-0.0087	-0.0218
<i>p-values</i>	<i>0.67</i>	<i>0.10</i>	<i>0.67</i>	<i>0.27</i>
PE · 2020	0.0159	0.1088	-0.0217	-0.0032
<i>p-values</i>	<i>0.67</i>	<i>0.51</i>	<i>0.26</i>	<i>0.87</i>
PE · 2021	0.0723	-0.0030	-0.0286	-0.0214
<i>p-values</i>	<i>0.31</i>	<i>0.99</i>	<i>0.21</i>	<i>0.38</i>
PE · 2022	0.1152	0.0031	-0.0253	-0.0390
<i>p-values</i>	<i>0.14</i>	<i>0.99</i>	<i>0.27</i>	<i>0.12</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	2158	2159	2158	2154
R-squared	0.0016	0.0003	0.0033	0.0004

Table A.8: Robustness check 3 – regression output

	Number of employees	Quick Ratio	Asset turnover ratio	Investment
Panel A: Baseline difference-in-difference				
PE · Post	-8.3657	104.92	-0.0620	12.837
<i>p-values</i>	<i>0.56</i>	<i>0.24</i>	<i>0.47</i>	<i>0.62</i>
Panel B: Year-by-year effects				
PE · 2017	-5.0312	-90.095	0.1257	-20.980
<i>p-values</i>	<i>0.19</i>	<i>0.34</i>	<i>0.04</i>	<i>0.55</i>
PE · 2018	-2.1840	-21.229	0.0748	-25.678
<i>p-values</i>	<i>0.41</i>	<i>0.10</i>	<i>0.13</i>	<i>0.38</i>
PE · 2020	-0.3785	76.802	-0.0144	-22.604
<i>p-values</i>	<i>0.89</i>	<i>0.35</i>	<i>0.85</i>	<i>0.10</i>
PE · 2021	-13.708	60.899	-0.0160	0.5548
<i>p-values</i>	<i>0.49</i>	<i>0.47</i>	<i>0.85</i>	<i>0.98</i>
PE · 2022	-18.226	65.938	0.0449	13.817
<i>p-values</i>	<i>0.38</i>	<i>0.43</i>	<i>0.60</i>	<i>0.57</i>
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	2160	2137	2158	1805
R-squared	0.0002	0.0017	0.0009	0.0010

Table A.9: Robustness check 3 – regression output (Secondary variables)

Additional Graphs

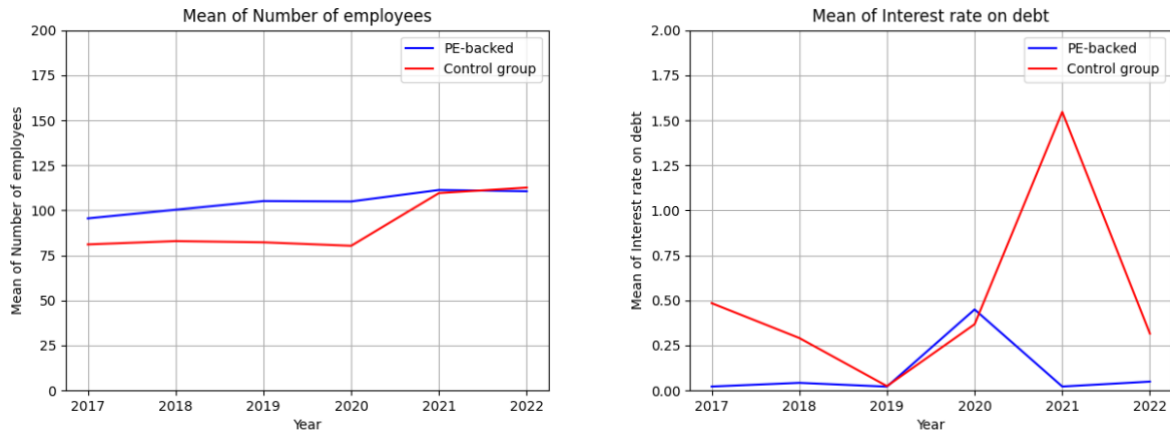


Figure A.1: Additional financial measures over time

AI disclosure

AI tools have been used to help troubleshoot and write code in python and in some cases, we used it to assist us with grammar, spell checking and formulating certain sentences in the text.