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The Post-Exit Performance of Buy-and-Build Strategies

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Abstract

In this paper, I analyse the post-exit performance of buy and build (B&B) strategies using a hand collected data sample of 51 B&B companies located in Denmark, Finland, Norway, Great Britain and France. The analysed deals happened between 2008 and 2013. The control group consists of companies that were not involved in a B&B strategy, exited in the same period and that are based in the same countries. Further I use propensity score matching to identify control companies that are similar in size and age to the B&B sample. Panel regression models are used to estimate the effect B&B has on assets, turnover, return on assets (ROA) and the ratio of turnover to assets, which is used as a measure for capacity utilization. I find no empirical evidence for a performance decrease after the exit. B&B does not appear to be linked with a significant increase in ROA but a significant effect is found for capacity utilization, asset growth and turnover growth.

1. Introduction

The public opinion about private equity (PE) is often unfavourable. The Economist (2007) writes that critics of PE claim “It strips companies of assets and flips them for a fast buck.” and that “It pays scant attention to employees and suppliers.” This illustrates the common criticism of PE firms that they focus on boosting short-term performance to be able to quickly and profitably sell the acquired company. Thus, some claim that PE firms profit greatly from selling overleveraged firms, while the sold companies themselves tend to decrease drastically in performance after the exit (Cao & Lerner, 2009). Critics argue that PE firms are not able to add much value to a company and instead benefit from using debt as tax shields and acting against the interests of shareholders and workers (Lerner, Sorensen and Strömberg, 2011). However researchers that empirically investigate the claim that PE firms cut back important investments and employment find no evidence that supports this criticism (Bacon, Wright & Demina, 2004; Lerner, Sorensen and Strömberg, 2011). Also research that directly looks at the long-term performance of companies that were sold by a PE firm finds no evidence for a decline in performance post-exit (Cao & Lerner, 2009).

A strategy that is becoming increasingly popular with European PE firms is buy-and-build (B&B). In 2016 the number of European B&B deals were on their highest levels since 2008, while other PE backed buyouts did not increase much in volume (Buy-and-build Monitor H1 2016). This suggests that B&B strategies become increasingly important and hence, more researchers turned their attention towards this strategy in recent years. Bansraj and Smit (2017) for example investigate which market conditions are optimal for B&B. Borell and Heger (2013) show that B&B can lead to an increase in profitability and capacity utilization in the target company after it was bought by the PE firm. However none of the research so far investigates the post-exit performance of B&B in order to find out if B&B leads to long-term improvements in the target companies. This was done for PE in general in order to investigate if the criticism that PE sacrifices long-term growth for short-term gains is true. Since B&B is becoming

increasingly popular it is interesting to investigate this claim specifically for B&B. Therefore this paper analyses the performance of companies acquired in a B&B deal after the PE firm exited and comparing it with companies that were not part of a B&B strategy. The main research question thus becomes: How does the performance of B&B targets change post-exit?

Generally speaking, B&B describes an inorganic growth strategy used by PE firms in which first a bigger, established company is acquired, which is then used to acquire additional companies, that are typically smaller (Smit, 2001). PE firms are firms that acquire mature companies in heavily leveraged buyouts (Kaplan & Strömberg, 2009). For this reason, they have also been called leveraged buyout investment firms. However, nowadays the term PE firm is used more often and will thus be employed in the remainder of this thesis. PE firms rarely directly acquire their target. Instead one or multiple new companies (Newcos) are founded to make the bid for the target and to structure debt and equity (Gilligan & Wright, 2014). In a B&B strategy the PE firm undertakes a series of acquisitions. In the first acquisition a so-called platform is acquired. In the following acquisition a number of typically smaller companies, so called add-ons, is acquired (Borell & Heger, 2013). These add-ons add special knowledge or new technologies to the platform and thus serve as a valuable addition to the initial platform. B&B strategies are most often observed in markets that are not dominated by a few big players but instead by many small companies (Smit, 2001). The goal of this strategy is then to consolidate the companies and to create a more efficient, bigger company (Smit, 2001; Bansraj & Smit, 2017). Lasting around five years, rather than the typical two to three, such B&B strategies are usually longer than other PE strategies.

Using a hand collected data sample of 51 companies that were targets of B&B deals and later exited, I find no evidence that the performance of B&B significantly decreases after an exit. Instead, panel regression results indicate that B&B is positively associated with an increase in capacity utilization, which is measured as the ratio of turnover to assets. Moreover, the growth of assets and

turnover is positively influenced by B&B after the exit. Therefore, this paper does not find support for the critique that PE firms and strategies like B&B sacrifice long-term performance for short-term gains.

The thesis is structured as follows: First I give an overview over the existing literature and from this literature a theoretical framework is developed. The aim of this is to identify relevant dependent variables for the models used later and to develop a theoretical background. Then the models used in the thesis are explained. Furthermore the data collection process is discussed, including the creation of an appropriate control group of companies. Next I present and discuss the results of panel regressions that show how B&B affects key financial ratios and company growth. The thesis concludes with a brief summary of the main results and recommendations for further research.

2. Theoretical framework

B&B strategies can add value in multiple ways since they are associated with the benefits of mergers and acquisitions (M&A) and PE (Borell & Heger, 2013). A hypothesis how PE can positively affect the profitability of a company is developed by Jensen in his influential paper "Eclipse of the Public Corporation" (1989; see also Jensen, 1986). According to this hypothesis privately held companies benefit from superior governance structures in comparison with public corporations. In public companies there is a conflict between shareholders and management over the available resources. Since PE firms do not suffer from this problem, they can increase the profitability and productivity of a company when taking it private. Cressy, Munari and Malipiero (2007) empirically investigate these claims. Using a sample of 122 UK buyouts they report that operating profitability increases after a PE backed buyout. This is evidence that PE can improve performance and support for Jensen's hypothesis.

The second way in which B&B strategies can add value is through the mechanisms of M&A. Siegel and Simons (2010) report that plant productivity

improves after M&A activities. This is further supported by Healy, Palepu and Ruback (1992), who present empirical evidence that asset productivity improves after a merger. Evidence that PE firms can use mergers to boost their returns is, among others, provided by Nikoskelainen and Wright (2007). They study the internal rate of return PE investors achieve from their investments. One of the main drivers of positive returns in such deals are additional acquisitions before the exit. Hammer, Hinrichs and Schweizer (2016) investigate further the role of these additional acquisitions. They report that platforms benefit from the knowledge of the PE firm when acquiring add-ons and that platforms owned by PE firms are twice as likely to acquire an add-on. In line with the so-called boost hypothesis these additional acquisitions are usually similar deals. The boost hypothesis predicts that PE firms will do many but similar acquisitions due to time constraints. This hypothesis is supported for example by Smit (2001) who argues that value in B&B strategies is created through synergy effects, as well as by consolidating small firms in a fragmented market into one big company. The claim that B&B strategies rely on a fragmented market, which PE firms then try to consolidate is empirically supported by Bansraj and Smit (2017) as well as Hammer et. al. (2017), although the latter note that a B&B strategy benefits most from a moderate fragmented market. If the firms in the market are too small it can be difficult for PE firms to find a company that would be a good platform since these should be well established and in a leadership position (Smit, 2001).

The presented research suggests that B&B can add real value in multiple ways, which leads to performance increases. However critics of private equity claim that these are only short-term performance improvements, which PE firms achieve by reducing investments that lead to long-term growth. Empirical research that investigates these claims by analysing the long-term performance of companies that were sold by a PE firm is rare and as of this point, there is no research concerned with the long-term performance of B&B. Lerner, Sorensen and Strömberg (2011) investigated, if PE firms really cut back important investments by studying the innovation and patent activities of companies that were recently acquired in a leveraged buyout deal. They did not find evidence

that PE firms cut back on long-term investments to achieve better short-term performance. After the leveraged buyout, patent activity is not reduced, the patents are more often cited and innovation activity is more focused on important projects. Overall, investment in long-term growth does not seem to be negatively affected when a PE firm acquires a company. Those findings fall in line with earlier observations made by Bacon, Wright and Demina (2004). They focus on employment spending and how employment changes after a company has been bought in a leveraged buyout. For their analysis, they considered two opposing theories. On the one hand, the 'agency theory' (Jensen & Meckling, 1976; Jensen, 1986), which predicts that the new owners will try to reduce costs, and on the other hand the 'resource-based view' (Wernerfelt, 1984; Peteraf, 1993), which assumes that spending on assets such as human resources will increase. The authors find evidence for the resource-based view. Especially when the firm follows a buy and build strategy, firms increase investment in the human resources. Finally Cao and Lerner (2009) empirically analyse the long run performance of companies that were acquired by a PE firm. They investigate the three-year and five-year stock performance of reverse leveraged buy-outs (RLBOs), initial public offerings (IPOs) of PE targets, to determine if the performance of a company deteriorates after the PE firm exited. The results indicate that even after five years RLBOs perform better than the market.

The discussed literature suggests that B&B leads performance increases and that real value can be added. Since investments do not necessarily decline under PE ownership I do not expect a significant decline in performance of B&B after an exit. This is supported by the results presented by Cao and Lerner (2009) who report that, contrary to the abovementioned criticisms, the performance of a company improves long-term and does not go down rapidly after the PE firm exits. In this paper, I will expand this analysis by investigating B&B strategies. For this, not only IPOs but all types of exits will be considered. Given the above-discussed results I expect that B&B leads to performance increases and that the performance does not deteriorates post-exit. Therefore the first hypothesis is:

Hypothesis 1: The performance of companies that were targets in a B&B strategy does not significantly decline after the PE firm exits.

Borell and Heger (2013) show empirically that B&B can boost the performance of the acquired companies through improvements in capacity utilization. They find that firms use resources more efficiently and are able to increase profitability after a B&B transaction. To measure capacity utilization the authors use the ratio of turnover to total assets. Using this ratio, they provide evidence that resources are reallocated more efficiently. Turnover over total assets declines for add-ons, who typically have low growth but a high capacity utilization before the transaction, which is evidence that additional resources were allocated to these companies. The authors then provide evidence that this reallocation of resources can lead to a heightened profitability. Platforms and add-ons that experience an increase in the industry-adjusted ratio of turnover to total assets are more profitable. Therefore, my analysis also makes use of the ratio of turnover to assets to measure capacity utilization. Unfortunately, academic literature examining the relationship between B&B and capacity utilization is still rare. Based on the results presented by Borell and Heger (2013), I expect to find a positive relationship between B&B and capacity utilization. Due to the previous discussed literature on the long-term performance of PE I expect that these improvements persist after the exit.

Hypothesis 2: The capacity utilization of companies that were targets in a B&B strategy does not significantly decline after the PE firm exits.

3. Methodology

In line with the developed theoretical framework I want to estimate the effect of B&B on performance and capacity utilization after the exit. To measure performance I will use return on assets (ROA) expecting to find a performance increase due to B&B. It is also likely, that performance improvements are related with an increase in growth. A performance decrease would then be linked to a

decrease in growth or maybe even negative growth. Therefore, I also include asset and turnover growth in the analysis. Following the literature capacity utilization is measured by the ratio of turnover to assets (Andrade & Stafford, 2004; Borell & Heger, 2013). I use the logarithm of assets and turnover in the thesis but refer to them simply as assets and turnover.

The main models used for this analysis are panel regression models. To check the robustness of the results, six slightly different models are used for each of the dependent variables. In all of these models standard errors are clustered by firm. Fixed effects and dummy variables are used in all models to account for unobserved effects that depend on the year, industry and the country of origin. The models used for ROA and the ratio of turnover to assets are the same. Model 1 includes a dummy for B&B and an interaction term Post B&B, which estimates the effect of B&B after the exit. The second model splits this post exit interaction variable into three separate interaction variables, for each post exit year one variable. This shows how B&B affects the dependent variable in each post exit year. To test the joint significance of the three post exit dummies a Wald test is used in all models that include these. In Model 3 firm control characteristics are added to the specifications of Model 2. These are assets and ROA of the target company in the year before the exit. This is done to account for the effects of size and performance. Model 4, 5 and 6 have the same specifications as the first three models but include also the first lag of the dependent variable. The models used for the two dependent growth variables are slightly different. In the first model the interaction between post and B&B drops out so that only the B&B dummy is left. In the second and third model the B&B dummy variable is excluded and the three post exit B&B interactions are included. Model 4, 5 and 6 are like the first three growth models but with the lagged dependent variable included. The exact specifications of each model are also shown in Table 2.

4. Data

The B&B sample used in this paper consists of 51 companies located in Denmark, Norway, Great Britain, France and Finland that were part of a B&B strategy and exited between 2008 and 2013. I focus on this time period due to data limitation reasons. Most of the data used in this paper is retrieved from Orbis, a database created by Bureau van Dijk. Orbis stores financial data only for ten years. To analyse the post-exit performance of the companies' financial data for three years after the exit and one year before the exit is needed. Due to these data limitations, all exit deals that were analysed took place between 2008 and 2013. The control group consists of similar companies matched using propensity score matching on assets and age of the company. To ensure maximal comparability, the comparison companies are from the same countries, industries and were exited during the same time period as the B&B sample.

Starting from a hand collected sample of 1318 B&B deals that took place in Denmark, Norway, Great Britain, France and Finland obtained from Zephyr, another Bureau van Dijk database, I tried to identify a matching exit for each of these deals. For the purpose of this thesis an exit is defined as the state in which the PE firm is not a majority owner anymore and thus loses control over the acquired company. Furthermore an exit obviously needs to take place after the deals in which the PE firm acquired the platform and add-ons.

To identify these exits, two methods are used. The first method uses Orbis to identify historic shareholder information for each company. The database thus supplies the date at which ownership changed and often even features a link to the deal in which this change of ownership took place. For each of the companies involved in a deal, targets, newcos, and acquirers, the ownership history in Orbis is checked for an exit by the PE firm. Since it is not always clear from the historic ownership information in Orbis whether an actual exit occurred or not, a second method is used to identify additional exit deals. The first step of the second method is to search in Zephyr for all deals that are identified as an exit and in which the targets of the B&B deals or the newcos involved in the B&B strategy

are targets. All deals, in which the firm majority owner of the target did not change, as well as the ones that had already been identified with Orbis, were removed from the sample. The potential exits found using these two methods are then checked and matched with the B&B deals by hand. In case there are multiple possible exits the first deal that satisfies the above-mentioned criteria for an exit is used. From this list of exits the date of exit is obtained and the identification number of the target companies that were part of a B&B strategy before being sold. This way B&B companies are identified. Financial data and other characteristics about these companies are also obtained from Orbis. For each company information about the financial characteristics are collected and additionally the first two digits of the NACE code to identify which industry the company belongs to and the date of incorporation to compute the age of the company. Since the majority of the companies are still held private after the exit by the PE firm complete data can be difficult to obtain. Therefore my final sample consists of 51 B&B companies with sufficient data.

The next data collection step is to create a control sample consisting of companies that were not involved in a B&B strategy but are similar to the B&B companies. It is important to find a similar sample since PE firms are unlikely to randomly select companies for B&B or the type of deal. Therefore, results obtained using a randomly selected control group would most likely be biased. As a first step to create a control sample all types of deals that are a majority exit with a target in Denmark, Norway, Great Britain, France or Finland are obtained from Zephyr excluding deals that I already identified as a B&B exit. This deal list is further limited to exits that happened between 2008 and 2013 and in which the deal targets are in the same industries as the B&B companies identified by the first two digits of the NACE code. Then the deals are split into a PE group and a non-PE "other" group. In the PE group are deals in which the vendor is a PE firm, indicating that the company sold in the deal was owned by a PE firm that is not doing B&B. Companies sold in these deals are also excluded from the main comparison sample. I use propensity score matching to identify from the non-PE groups target companies that are similar in age and assets to the B&B companies.

For each B&B company four other companies are identified this way. Doing these steps to find a control sample that is similar to the B&B companies is necessary to avoid biased results.

Table 1 summarizes mean, median and standard deviation for assets, turnover, ROA and the ratio of turnover to assets. Section A shows the statistics for the year before the exit deal, B for the three years after the exit and C for all four years of interest. The results are separated into three groups. The first group is the unmatched control sample, the second the matched control sample and the last group shows the results of the B&B companies. Comparing these results highlights the importance of matching. The unmatched companies differ from the B&B sample in terms of size more than the matched sample. This indicates that PE firms do not randomly choose firms for B&B, which served as the main motivation for the matching and filtering performed in the sampling process.

Table 1

Summary statistics for Assets, ROA, turnover and the ratio of turnover to assets. The table is split into three sections A, B and C. Section A summarizes the pre-exit data, B post-exit data and C the combined data. These sections summarize mean, median and standard deviation by deal type. First group of deals is the unmatched comparison sample; second the matched sample and third the B&B sample. The variables summarized are log assets, return on assets, the ratio of turnover to assets and log turnover. The ratio of turnover to assets is used to estimate capacity utilization. All data is obtained from Orbis.

| Section A Pre exit data | | | | |
|-----------------------------|-----------------|--------|--------|--------|
| Deal type | Variable | Mean | Sd | Median |
| Non-B&B Unmatched sample | Assets | 9.998 | 2.806 | 9.840 |
| | ROA | 1.108 | 21.833 | 3.541 |
| | Turnover/Assets | 0.972 | 0.193 | 1.007 |
| | Turnover | 10.081 | 2.765 | 10.013 |
| Non-B&B Matched sample | Assets | 10.413 | 2.391 | 10.181 |
| | ROA | 1.996 | 20.643 | 3.494 |
| | Turnover/Assets | 0.969 | 0.161 | 1.009 |
| | Turnover | 10.151 | 2.675 | 10.130 |
| B&B sample | Assets | 10.531 | 2.053 | 11.176 |
| | ROA | 1.965 | 18.603 | 3.691 |
| | Turnover/Assets | 0.950 | 0.161 | 0.833 |
| | Turnover | 9.945 | 2.047 | 9.807 |

| Section B Post exit data | | | | |
|-----------------------------|-----------------|--------|--------|--------|
| Deal type | Variable | Mean | Sd | Median |
| Non-B&B Unmatched sample | Assets | 10.353 | 2.949 | 10.349 |
| | ROA | 1.525 | 21.738 | 2.895 |
| | Turnover/Assets | 0.954 | 0.222 | 0.995 |
| | Turnover | 10.271 | 2.819 | 10.247 |
| Non-B&B Matched sample | Assets | 10.706 | 2.506 | 10.580 |
| | ROA | 1.650 | 20.063 | 3.442 |
| | Turnover/Assets | 0.964 | 0.247 | 1.004 |
| | Turnover | 10.402 | 2.799 | 10.384 |
| B&B sample | Assets | 10.760 | 1.920 | 11.045 |
| | ROA | 3.764 | 19.890 | 2.062 |
| | Turnover/Assets | 0.889 | 0.237 | 0.945 |
| | Turnover | 9.816 | 2.964 | 9.773 |

| Section C: Pre and Post exit data | | | | |
|-----------------------------------|-----------------|--------|--------|--------|
| Deal type | Variable | Mean | Sd | Median |
| Non-B&B Unmatched sample | Assets | 10.265 | 2.918 | 10.250 |
| | ROA | 1.425 | 21.758 | 3.017 |
| | Turnover/Assets | 0.958 | 0.215 | 0.998 |
| | Turnover | 10.224 | 2.807 | 10.192 |
| Non-B&B Matched sample | Assets | 10.622 | 2.476 | 10.492 |
| | ROA | 1.754 | 20.233 | 3.453 |
| | Turnover/Assets | 1.281 | 3.021 | 1.005 |
| | Turnover | 10.329 | 2.765 | 10.297 |
| B&B sample | Assets | 10.699 | 1.951 | 11.079 |
| | ROA | 3.254 | 19.478 | 2.210 |
| | Turnover/Assets | 0.907 | 0.218 | 0.954 |
| | Turnover | 9.855 | 2.713 | 9.790 |

5. Results and Discussion

Table 1 provides an overview over the dependent variables. Comparing the matched control group with the B&B companies, it seems like the former have a higher capacity utilization both before and after the exit deal. This is unexpected considering the literature review. However the differences are not significant and these results are only based on summary statistics. The unexpected results can be due to other factors that are not represented in such a simple analysis. In terms of ROA none of the two groups seem to clearly perform better than the other. Which of the two groups has a higher ROA depends on the years used and whether the mean or median is used for the comparison. If pre-exit years are used for instance, non-B&B companies have a higher mean ROA but a lower median ROA. If post-exit years are used instead, the results are the other way around. Due to the propensity score matching both groups are of course very similar in terms of assets. Non-B&B companies have a higher turnover using both mean and median in the pre-exit and post-exit years. However, as mentioned before these are only summary statistics and the results should therefore be treated carefully.

Panel regressions allow for a more detailed analysis that is more robust than the results presented in Table 1. In the following, I present and discuss the regression results shown in Table 2. The results of the regressions with ROA as a dependent variable do not indicate that B&B has a positive impact on profitability, since for all model specifications the variable effects are insignificant. The lack of significant negative effects indicates that B&B is not associated with a decrease in profitability after the PE firm sells the company. These findings are in line with the discussed descriptive statistics. On the one hand these findings confirm the expectation that the performance of B&B does not decrease significantly after the exit. On the other hand there also seems to be no performance increase associated with B&B. A possible explanation for this is provided by Borell and Heger (2013). In their paper they report a performance increase only for companies that also experience a capacity utilization increase. Due to the nature of the data used for this paper such an analysis is unfortunately not possible.

The second dependent variable in the table is the ratio of turnover to assets. This ratio is used to approximate capacity utilization. The effect of the dummy variable B&B is significant and positive in all of the six models. Therefore, B&B seems to be related with an increase in capacity utilization compared with similar firms that were not involved with B&B. These results are not what one would expect from the summary statistics discussed before. However the effect of B&B is robust given that it is positive and significant in all specifications. This is in line with the theory that B&B leads to a more efficient use of resources. Firms that were part of a B&B strategy benefit from the knowledge and skills of the PE firm which leads to an improvement in the use of resources. The effect of the post B&B interaction is insignificant, which suggests that the positive effect of B&B on capacity utilization does not vanish after the PE firm exited. This is also the case when a separate interaction is used for each exit year and when the joint significance of these is tested. Adding the first lag of the turnover to assets ratio does not change these results. Therefore the claim that PE firms sacrifice long-term performance for short-term gains appears to be at least partly

unjustified. B&B is overall associated with an increase in capacity utilization and there is no significant decrease after the exit.

Turnover growth and asset growth are both positively associated with B&B and there is no evidence that growth declines significantly after the exit. The effect of B&B on asset growth is only significant in the regressions, if the first lag of asset growth is included. The significant effect of the dummy in Model 4 indicates that after the exit there is a positive relationship between B&B and asset growth. This is supported by the three interaction effects in Model 5 and 6 of which the first and second is significant. The three post interaction effects are also jointly significant in Model 5 and 6, which is additional evidence that asset growth is positively associated with B&B post-exit. The results of the panel regressions with turnover growth as a dependent variable point to a similar direction. In Model 1 and 4 the B&B dummy shows a significant positive effect on turnover growth. In Model 5 and 6 the interaction of the first and third year is significant. The results of the Wald test are also significant in Model 5 and 6. Overall these findings support the hypothesis that B&B is positively related with performance and growth and there is no evidence for a significant decline post-exit. The fact that different model specifications support these results indicates that these results are robust. Thus, the results fall in line with the ones mentioned earlier and further solidify the observation that critics' claims regarding PE are largely ungrounded.

Table 2

Panel regression models for ROA, Turnover/Assets, assets growth and turnover growth. This table shows the results of the panel regressions and their specifications. Every model includes fixed effects and dummy variables for industry, year and country. BB is a dummy variable that indicates a B&B company. Post is a dummy that indicates years after the exit and Post1, Post2 and Post3 are equal to one in year 1, 2 or 3 after the exit respectively. Lag t-1 is the lag of the dependent variable. Standard errors below coefficients in

parentheses. Joint significance shows the F value of the Wald test performed for the three post dummies. Significance at the 1%, 5% and 10% level is indicated by ***, ** and * respectively.

| ROA | | | | | | |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Post*BB | 2.650 (2.820) | - | - | -1.455 (2.478) | - | - |
| BB | -1.102 (1.744) | -1.297 (1.734) | -1.086 (2.009) | -0.945 (1.763) | -1.268 (1.835) | -1.549 (2.201) |
| Post1*BB | - | 1.512 (3.431) | 0.768 (3.362) | - | -0.894 (2.865) | -0.864 (2.899) |
| Post2*BB | - | 4.647 (2.843) | 3.987 (2.474) | - | -1.143 (2.622) | -1.117 (2.648) |
| Post3*BB | - | 1.650 (4.564) | 0.822 (4.077) | - | -3.247 (4.203) | -3.231 (2.201) |
| Lag t-1 | - | - | - | -0.054 (0.056) | -0.054 (0.056) | -0.054 (0.056) |
| Industry, Year and country | Yes | Yes | Yes | Yes | Yes | Yes |
| Target control characteristics | - | - | Yes | - | - | Yes |
| Joint sig. (F) Post 1, 2 and 3 | - | 1.02 | 0.98 | - | 0.2 | 0.2 |
| R ² | 0.000 | 0.000 | 0.225 | 0.122 | 0.115 | 0.112 |

| Turnover/Assets | | | | | | |
|----------------------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Post*BB | -0.025 (0.022) | - | - | -0.028 (0.024) | - | - |
| BB | 0.028* (0.014) | 0.030* (0.016) | 0.032* (0.018) | 0.036** (0.017) | 0.037** (0.017) | 0.047** (0.021) |
| Post1*BB | - | -0.011 (0.012) | -0.012 (0.012) | - | -0.011 (0.012) | -0.009 (0.012) |
| Post2*BB | - | -0.048 (0.047) | -0.054 (0.046) | - | -0.053 (0.048) | -0.052 (0.048) |
| Post3*BB | - | -0.016 (0.020) | -0.022 (0.018) | - | -0.022 (0.023) | -0.019 (0.023) |
| Lag t-1 | - | - | - | 0.039 (0.067) | 0.039 (0.067) | 0.033 (0.057) |
| Industry, Year and country | Yes | Yes | Yes | Yes | Yes | Yes |
| Target control characteristics | - | - | Yes | - | - | Yes |
| Joint sig. (F) Pos 1, 2 and 3 | - | 0.56 | 0.67 | - | 0.6 | 0.56 |
| R ² | 0.000 | 0.000 | 0.000 | 0.193 | 0.174 | 0.108 |

| Assets growth | | | | | | |
|-----------------------------------|------------------|------------------|------------------|--------------------|---------------------|---------------------|
| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| BB | 0.010 (0.008) | - | - | 0.017** (0.007) | - | - |
| Post1*BB | - | 0.006 (0.014) | 0.010 (0.013) | - | 0.026*** (0.008) | 0.027*** (0.006) |
| Post2*BB | - | 0.011 (0.016) | 0.014 (0.015) | - | 0.027*** (0.009) | 0.022*** (0.008) |
| Post3*BB | - | 0.001 (0.021) | 0.011 (0.020) | - | 0.013 (0.012) | 0.013 (0.009) |
| Lag t-1 | - | - | - | -0.017 (0.035) | -0.017 (0.035) | 0.000 (0.020) |
| Industry, Year and country | Yes | Yes | - | Yes | Yes | Yes |
| Target control characteristics | - | - | Yes | - | - | Yes |
| Joint sig. (F) Post 1, 2 and 3 | - | 0.87 | 0.56 | - | 8.66*** | 9.51*** |
| R ² | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 |

| Variable | Turnover growth | | | | | |
|-----------------------------------|---------------------|-------------------|-------------------|----------------------|---------------------|---------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| BB | 0.040*** (0.013) | - | - | 0.038*** (0.038) | - | - |
| Post1*BB | - | -0.011 (0.022) | -0.010 (0.021) | - | 0.110*** (0.039) | 0.107*** (0.040) |
| Post2*BB | - | -0.078 (0.067) | -0.079 (0.067) | - | 0.025 (0.040) | 0.021 (0.038) |
| Post3*BB | - | -0.044 (0.033) | -0.045 (0.033) | - | 0.053** (0.024) | 0.049** (0.023) |
| Lag t-1 | - | - | - | -0.256*** (0.130) | -0.256** (0.130) | -0.244* (0.132) |
| Industry, Year and country | Yes | Yes | Yes | Yes | Yes | Yes |
| Target control characteristics | - | - | Yes | - | - | Yes |
| Joint sig. (F) Post 1, 2 and 3 | - | 0.64 | 0.72 | - | 10.24*** | 9.09*** |
| R ² | 0.000 | 0.006 | 0.007 | 0.000 | 0.000 | 0.000 |

The results so far indicate that B&B is not associated with a performance decrease post-exit. This is true for both performance and capacity utilization. Further I present evidence that B&B is related with improved capacity utilization and that even post-exit B&B targets experience improved asset and turnover growth. Different model specifications lead to similar results indicating that these are robust. However there are limitations to this study. The data I use in this study covers only five European countries and a very brief time period. Therefore the obtained results may not hold true in other countries or in an earlier time period. For example the countries analysed in this thesis are all northern European countries and it could be possible that B&B in southern Europe has different effects. Also the sample size used in this thesis is small, which makes it more difficult to obtain significant results and a small sample size makes it more likely that the used sample is not representative. Due to these limitations one should be careful when interpreting the regression results and it is unclear if the results hold outside of the analysed countries and time period.

However it is unlikely that all the results presented in this paper are only due to these limitations. In none of the model specifications is B&B associated with a significant decline post-exit indicating that this result is robust. The results are also in line with other research that found no decline in performance post-exit for PE and that associates B&B with an increase in performance and capacity utilization (Borell & Heger, 2013; Cao & Lerner, 2009). Given the related literature and the robustness of the results I reject the criticism that B&B leads to a significant decline in performance post-exit. Both hypotheses cannot be rejected.

6. Conclusion

This thesis aimed at answering the research question “how do B&B companies perform after they have been sold by the PE firm”. To investigate the relationship between B&B and ROA, capacity utilization, asset growth and turnover growth this paper used panel regressions. I did not find any evidence that the performance of B&B decreases significantly after the exit. B&B is associated with an increase in capacity utilization, asset growth and turnover growth that persist after the exit. Therefore this paper finds no evidence to support the critique that PE firms sacrifice long-term performance for short-term profit. Instead B&B leads to real improvements in capacity utilization.

For future research two questions could be interesting. The literature reports that only B&B companies with increasing capacity utilization after the B&B deal improve in performance (Borell & Heger, 2013). It would be interesting to identify these companies and investigate their long-term performance. A second possibility for future research is to use different performance measures. Cao and Lerner (2009) use stock performance to investigate how RLBOs perform. A similar approach could be used for B&B and the results could be compared with the ones found in this paper.

Bibliography

Acharya, V. V., Gottschalg, O. F., Hahn, M., & Kehoe, C. (2013). Corporate governance and value creation: Evidence from private equity. *Review of Financial Studies*, 26(2), 368-402.

Andrade, G., & Stafford, E. (2004). Investigating the economic role of mergers. *Journal of Corporate Finance*, 10(1), 1-36.

Bacon, N., Wright, M., & Demina, N. (2004). Management buyouts and human resource management. *British Journal of Industrial Relations*, 42(2), 325-347.

Borell, M., & Heger, D. (2013). Sources of value creation through private equity-backed mergers and acquisitions: The case of buy-and-build strategies.

Barnes, P. (2000). The identification of UK takeover targets using published historical cost accounting data Some empirical evidence comparing logit with linear discriminant analysis and raw financial ratios with industry-relative ratios. *International Review of Financial Analysis*, 9(2), 147-162

Boucly, Q., Sraer, D., & Thesmar, D. (2011). Growth Ibos. *Journal of Financial Economics*, 102(2), 432-453.

Cao, J., & Lerner, J. (2009). The performance of reverse leveraged buyouts. *Journal of Financial Economics*, 91(2), 139-157.

Cressy, R., Munari, F., & Malipiero, A. (2007). Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage. *Journal of Corporate Finance*, 13(4), 647-669.

Gilligan, J., & Wright, M. (2014). Private equity demystified: An explanatory guide.

Guo, S., Hotchkiss, E. S., & Song, W. (2011). Do buyouts (still) create value?. *The Journal of Finance*, 66(2), 479-517.

Hammer, B., Knauer, A., Pflücke, M., & Schwetzler, B. (2017). Inorganic growth strategies and the evolution of the private equity business model. *Journal of Corporate Finance*, 45, 31-63.

Hammer, B., Hinrichs, H., & Schweizer, D. (2016). Buy and Build Strategies in Private Equity: Boost or Transformation?.

Healy, P. M., Palepu, K. G., & Ruback, R. S. (1992). Does corporate performance improve after mergers?. *Journal of financial economics*, 31(2), 135-175.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review*, 76(2), 323-329.

Jensen, M. C. (1989). Eclipse of the Public Corporation. *Harvard Business Review*. 67(5):61-74.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

Kaplan, S. (1989). The effects of management buyouts on operating performance and value. *Journal of financial economics*, 24(2), 217-254.

Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *The Journal of economic perspectives*, 23(1), 121-146.

The trouble with private equity. (2007). *The Economist*. Retrieved from: <http://www.economist.com/node/9441256>

Lerner, J., Sorensen, M., & Strömberg, P. (2011). Private equity and long-run investment: The case of innovation. *The Journal of Finance*, 66(2), 445-477.

Nikoskelainen, E., & Wright, M. (2007). The impact of corporate governance mechanisms on value increase in leveraged buyouts. *Journal of Corporate Finance*, 13(4), 511-537.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic management journal*, 14(3), 179-191.

Siegel, D. S., & Simons, K. L. (2010). Assessing the effects of mergers and acquisitions on firm performance, plant productivity, and workers: new evidence from matched employer-employee data. *Strategic Management Journal*, 31(8), 903-916.

Silverfleet Capital Partners LLP (2016). European Buy & Build in H1 2016. Retrieved from: <http://www.silverfleetcapital.com/strategy/buy-and-build-monitor/>

Smit, H. T. (2001). ACQUISITION STRATEGIES AS OPTION GAMES. *Journal of Applied Corporate Finance*, 14(2), 79-89.

Smit, H. T., & Bansraj, D. S. (2017). A Management Theory for Buy-and-Build Acquisitions.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.