Capital working for economic growth: Economic impact on the Norwegian economy

A swarm of locusts or economic growth engines

Last year, the private equity industry in Europe faced strong criticism, relating to its contribution to employment, conditions for financial stability and lack of transparency. The term "Swarm of locusts" was introduced to illustrate how firms are stripped for value by the mushrooming number of private equity investors. The strongest opponents, led by the socialist group in the EU Parliament (PSE), were primarily focusing on the large buyout funds, partly sheltering the venture capital funds for their attacks.

In the aftermath, several publications have shown that the critique is largely misplaced. But the publications have predominantly focused on the conditions in the UK and the US.[1] We need more evidence on the economic impact of VC and PE investments in smaller countries like Norway. In this section we present an extensive study of the economic impact of this form of investment in Norway. We look at how firms which are backed by VC and PE develop in terms of employment, turnover and value added growth. We also look at contributions to society in terms of tax payments and regional job creation.

We find no reason to claim that the economy suffers due to the presence of VC and PE ownership. On the contrary, this kind of ownership - seed, venture, expansion or buyout capital - strongly promotes employment growth, turnover and value creation in Norway. Firms that are backed by this kind of capital also contribute with higher tax payments and wage bills.

Our economic impact study is based on the MENON company database, which contains all firms that are required to submit annual financial reports to the government (approximately 200,000 firms covering 90% of all market-based activity in Norway over the period 1990–2006). This provides us with a unique opportunity to compare the performance of VC and PE- backed firms with other firms sharing similar characteristics like business

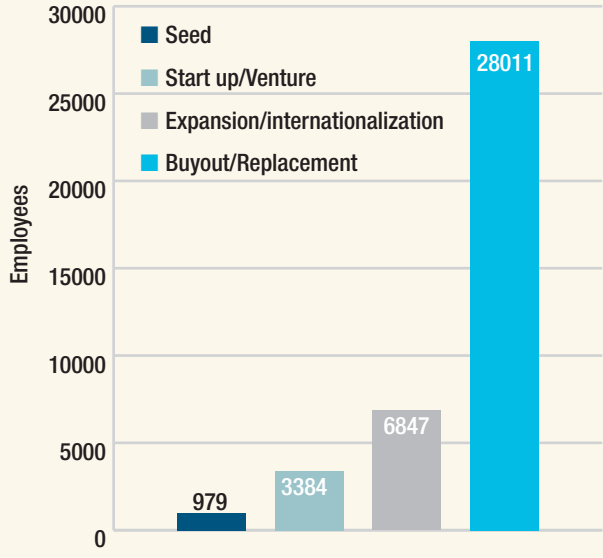
1) For instance the recent World Economic Forum 2008 publication: The Globalization of Alternative Investments Working Papers Volume 1: The Global Economic Impact of Private Equity Report 2008, edited by Anuradha Gurung and Josh Lerner.

The MENON VC and PE historical database

To study the economic role and impact of VC and PE investments, we have constructed a historical database covering the vast majority of portfolio companies in Norway from 1997 to 2006, both in existing and terminated funds. This database has been merged with the MENON company database in order to permit studies of economic performance over time. Altogether, the database contains 616 portfolio companies. 195 of them are in the seed phase, 210 in start-up/venture, 99 sort under expansion/internationali-zation, and 112 are buyout cases. In 2006, the database contained 475 companies. The rest have either been merged into other companies, they may have closed down or potentially moved abroad. Note, however, that in 2006 VC and PE funds had exited from approximately 50 of these 475 companies. The VC and PE historical database contains information on the company's location, age, industry affiliation and employment, in addition to full annual accounts and balance sheets.

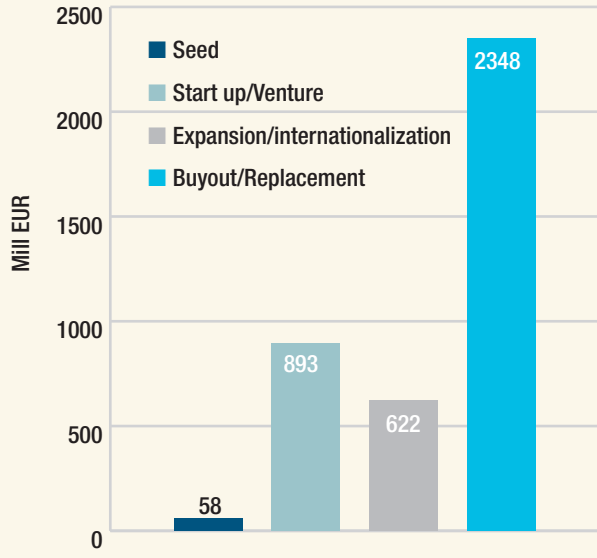
This allows us to map the development in performance measures like turnover, value added, EBITDA, ROCE, ROE, debt ratios and other relevant financial measures. Furthermore, the database is linked to the MENON NVCA activity survey. This allows us to identify the funds' ownership share and amount of investment in each portfolio company, initial entry year and divestment strategy (e.g. IPO). We also identify fund characteristics like fund size, characteristics of limited partners (LP), number of portfolio companies, fund location and the number of professional fund managers. This contributes to making the database one of the richest and most complete in the world.

Figure 19a: Number of employees in portfolio companies by segment (2006)



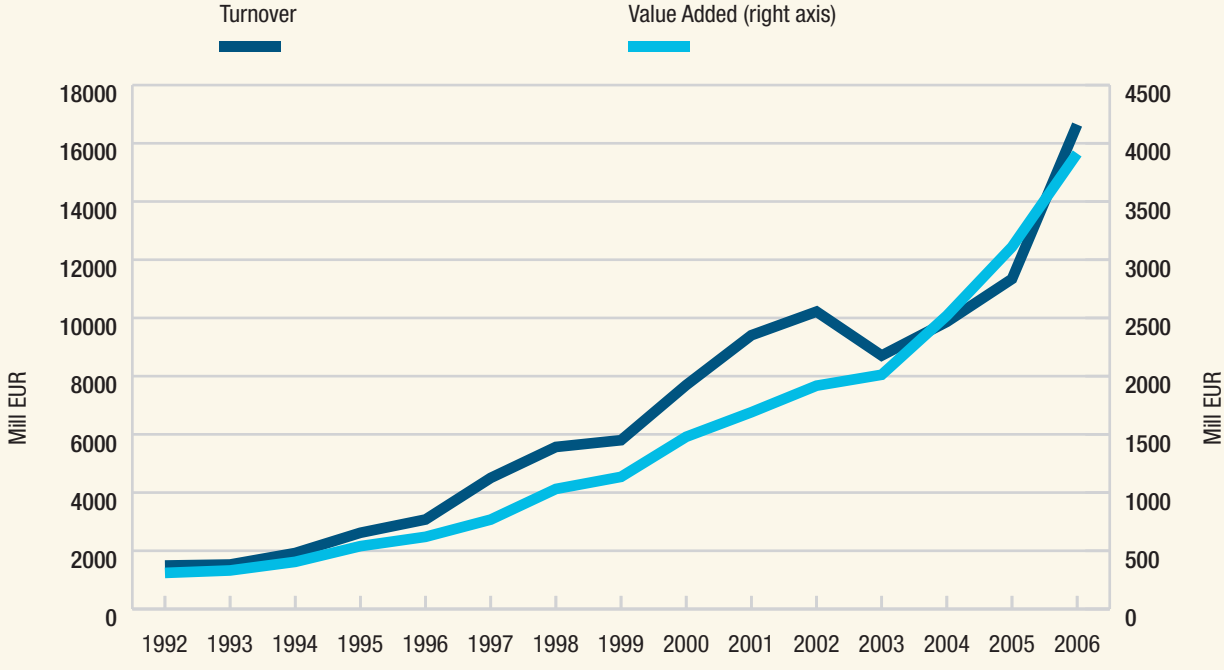
Source: MENON Business Economics/Norsk Venture (NVCA)

Figure 19b: Value added in portfolio companies by segment (2006)



Source: MENON Business Economics/Norsk Venture (NVCA)

Figure 20: Economic activities in firms with VC and PE ownership



Source: MENON Business Economics/Norsk Venture (NVCA)

sector, size and age. We return to these comparisons below.

VC and PE in Norway

At the end of 2007, Norwegian VC and PE funds had invested in 603 companies, 70% of them (422) are located in Norway. How many people do these companies employ, how high is their activity level, where are they located, and in what industries do we find them? These are important questions that need to be answered if we are to present a relevant picture of the role of the VC and PE industry in Norway. The most recent figures are based on the 2006 accounts. In total, the companies employed close to 40,000 people, which represents 1.6% of total employment in Norway and 2.4% of business sector employment. As shown in Figure 19a, companies backed by buyout capital cover 70% (28,000) of the employment, while companies in the venture phase only employ 3,400. In the previous chapter, we showed that the majority of capital is channelled to venture companies in Norway. The fact that the number of employees in this segment is relatively low indicates that the venture companies are highly capital and R&D- intensive, requiring more investment per employee.

Booming value added contribution

We focus extensively on the measure "value added" since it represents the firms' contribution to GDP. Value added in a firm is the sum of operating result and wage costs. It sums up the returns to all the firm's stakeholders (employees, owners, tax collectors and creditors). In economics, this is the core term used to measure economic growth and value creation.

Value added generated by the portfolio companies reached EUR 3.9bn in 2006, representing 1.6% of GDP. 10 years earlier, the share was as low as 0.4% of GDP. Figure 19b shows value added in the portfolio companies in 2006 by segment. It follows that the share has quadrupled during a decade (see also Figure 20), indicating that the VC and PE industry has gained importance during recent years, not only in terms of investment but also in terms of economic impact.

A surprising geographical investment pattern

As in most European countries, economic activity tends to cluster in densely populated areas. In Norway, this trend has led to considerable concern that rural areas will fall behind economically, leading to a less vital Norway outside the larger city-regions in the south. In the map of Norway in Figure 21, we look at the geographical distribution of portfolio companies and their economic activity. The largest regions with respect to value added in portfolio companies are Oslo, Eastern Norway and Southern Norway. There are four interesting geographical patterns that deserve further attention. First, the activity level in Southern Norway is disproportionately large as compared to the share in the overall economy. This indicates that the region holds a large number of attractive investment cases. Secondly, the densely populated regions, Eastern Norway and Western Norway, are not overrepresented by VC and PE portfolio companies (64% of value added in VC and PE as compared to 68% in the total economy). Third, Northern Norway is well represented among these companies as the share is in line with the region's share of GDP. Hence, VC and PE funds identify a substantial number of investment cases in this region. This may come as a surprise, since there is a widespread impression that innovation and entrepreneurial growth lags behind in this part of the country.

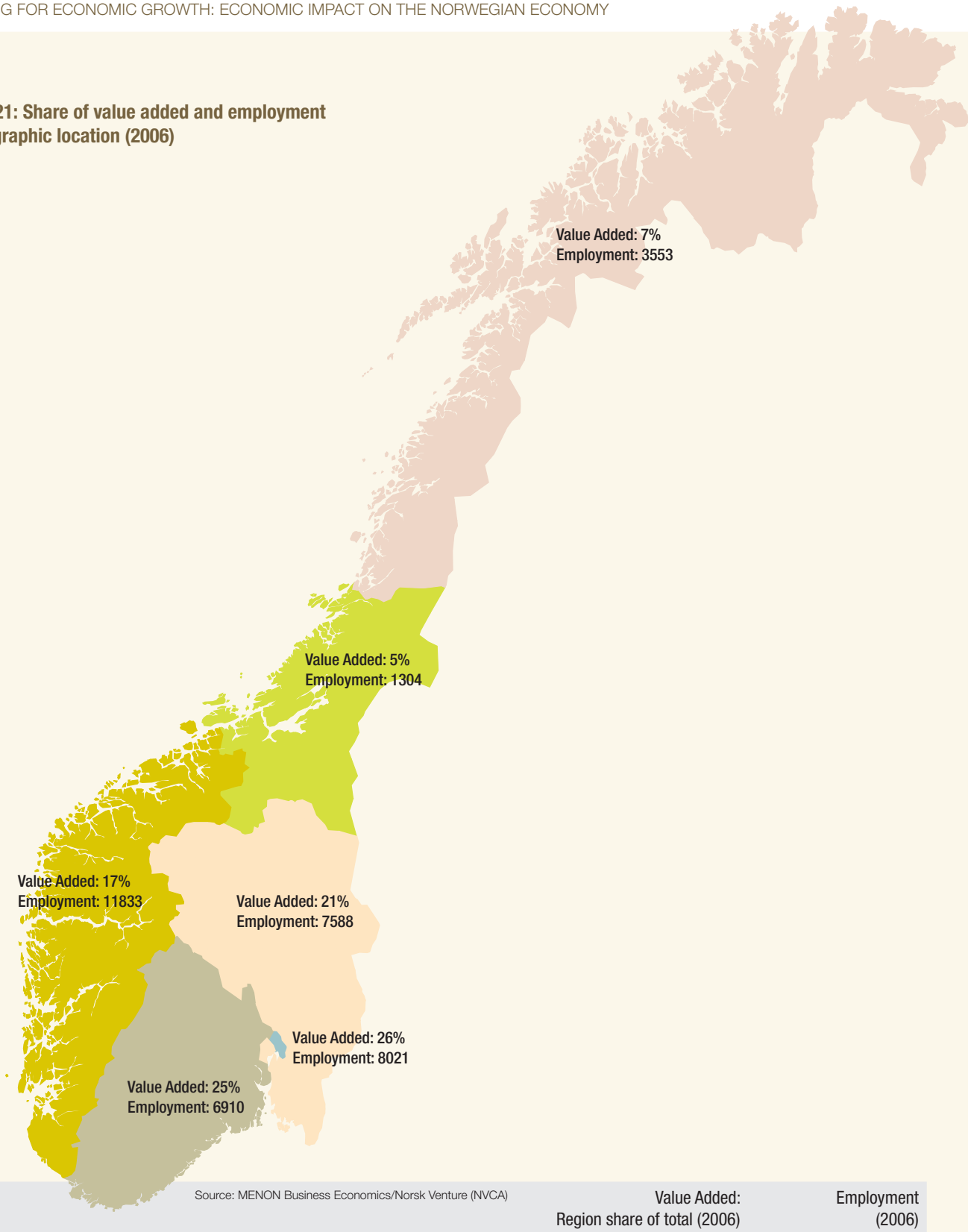
A final point to mention is that the level of employment in Western Norway is the highest of all regions, and the number of employees per firm is high. Thus, one may claim that VC and PE investors often enter large and/or labour intensive firms in this region.

Economic activities are dominated by ICT

A closer look at the industry distribution of portfolio companies shows that the Norwegian ICT industry has received a lot of attention among VC and PE investors (see Figure 22).[2] Close to 240 of the 475 firms we cover in 2006 sort under the ICT and business services industry. Most of them focus on information technology. Although a

2) The industry groups in this chapter differ from those we apply in the activity study in the previous chapter. Here, we need an industrial classification that covers the whole economy. Consequently, we have applied the NACE 1 digit industry classification codes.

Figure 21: Share of value added and employment by geographic location (2006)



Source: MENON Business Economics/Norsk Venture (NVCA)

	Value Added: Region share of total (2006)	Employment (2006)
Eastern Norway (Østfold, Akershus, Hedmark and Oppland)	21%	7588
Oslo	26%	8021
Southern Norway (Buskerud, Vesfold, Telemark and Agder)	25%	6910
Western Norway (Rogaland, Hordaland, Sogn og Fjordane and Møre og Romsdal)	17%	11833
Mid Norway (Sør-Trønderlag and Nord-Trønderlag)	5%	1304
Northern Norway (Nordland, Troms and Finmark)	7%	3553
Total	100%	39208

Figure 22: Sector distribution of portfolio companies (2006)

Source: MENON Business Economics/Norsk Venture (NVCA)

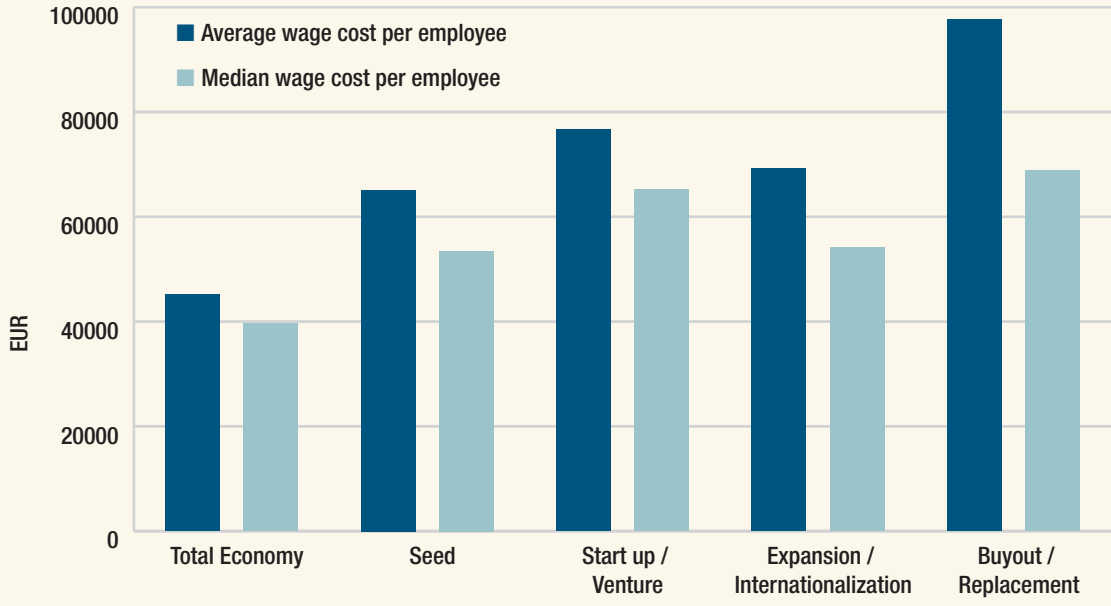
large proportion of them are early stage firms, the number of employees is still high. The second largest industry in terms of employment covers oil and gas related activities. Note that the manufacturing industry and retail trade thus far have received limited attention from VC and PE investors in Norway. As outlined earlier in this yearbook, we expect that investors will devote more attention to these industries over the coming years as the number of potential investment cases is fairly large in Norway. The number of portfolio companies within the culture, media and leisure industries is also relatively limited in Norway. The demand for these services is growing fast and should indicate a strong potential for more active investments in the years to come.

Paying high wages and taxes

A firm's ability to attract highly skilled and productive employees is often reflected in its wage structure. If firms are to grow in the long term, they should be able to pay highly competitive wages. Moreover, if PE investors are focusing on and pushing for tough cost management strategies, one would expect wages per employee to be lower than in firms with other kinds of ownership. This is especially topical for firms owned by buyout funds where restructuring and productivity enhancement stand out as some of the most important performance indicators. Yet, the figures tell another story (see Figure 23). Portfolio firms in all phases pay higher wages per employee than firms without VC and PE ownership. The average pay in the buyout segment is more than twice the pay in the rest of the business universe. Since averages may be affected by some extreme cases, we have also reported the median firm's wage costs per employee, and the picture remains virtually unchanged. Overall, the willingness to pay high wages is significantly stronger in VC and PE-owned firms than in other firms.

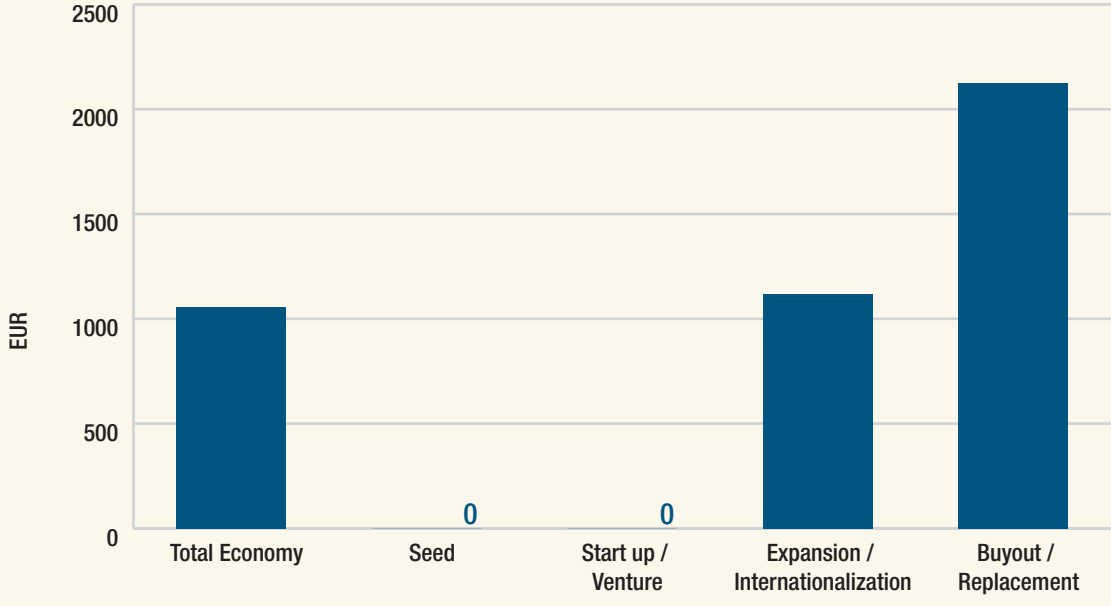
An alternative measure of contribution to the economy is based on a company's tax payments. The amount of corporate taxes paid by a company is determined by its pre-tax profits, which again is a function of firm size and profitability. We have chosen to report corporate taxes per employee since this measure adjusts for size. In Figure 24, we present the median corporate tax bill per employee for

Figure 23: Wage costs per employee (2006)



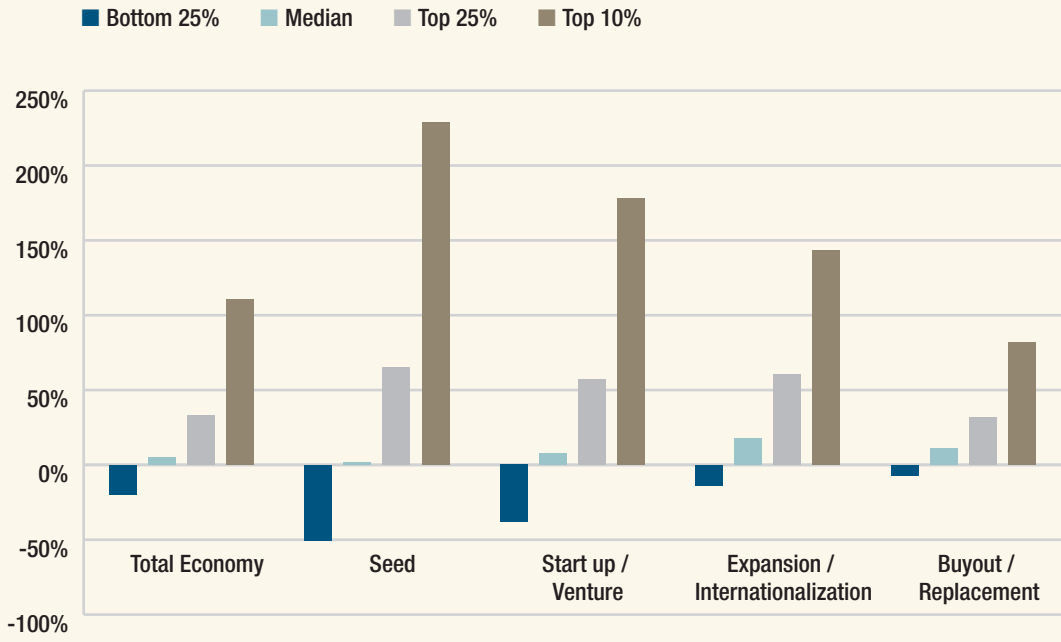
Source: MENON Business Economics/Norsk Venture (NVCA)

Figure 24: Median corporate taxes per employee (2006)



Source: MENON Business Economics/Norsk Venture (NVCA)

Figure 25: Average Y/Y growth in value added (1997-2006)



Source: MENON Business Economics/Norsk Venture (NVCA)

firms. It clearly shows that the taxes per employee are higher in the more mature segments.

The good, the bad and the mediocre

We will now turn our attention to economic performance over time. The core question is whether VC and PE-backed firms develop more favourably than others. If they do, it is possible to claim that this form of ownership tends to outperform other forms of ownership. We test this according to three measures: value added, employment and turnover. Note, however, that the distribution of growth performance is extremely wide. This is especially so among early-stage firms; hence the variation between the bad and the good is large. To illustrate this point, we look at value added growth for the bottom 25%, the median, the top 25% and the top 10% in Figure 25. There is clearly a consistent pattern driven by size. The larger firms in the buyout segment vary less with respect to Y/Y value added growth than the smaller firms in the seed and venture segments. On the other hand, the performance of the median firm should to a lesser extent be affected by the segment. Still, the median performance varies across the segments. Buyout and expansion tends to outperform the other segments in addition to firms without VC and PE owners, but also the median venture company outperforms the median firm in the rest of the economy.

Sorting out other explanations

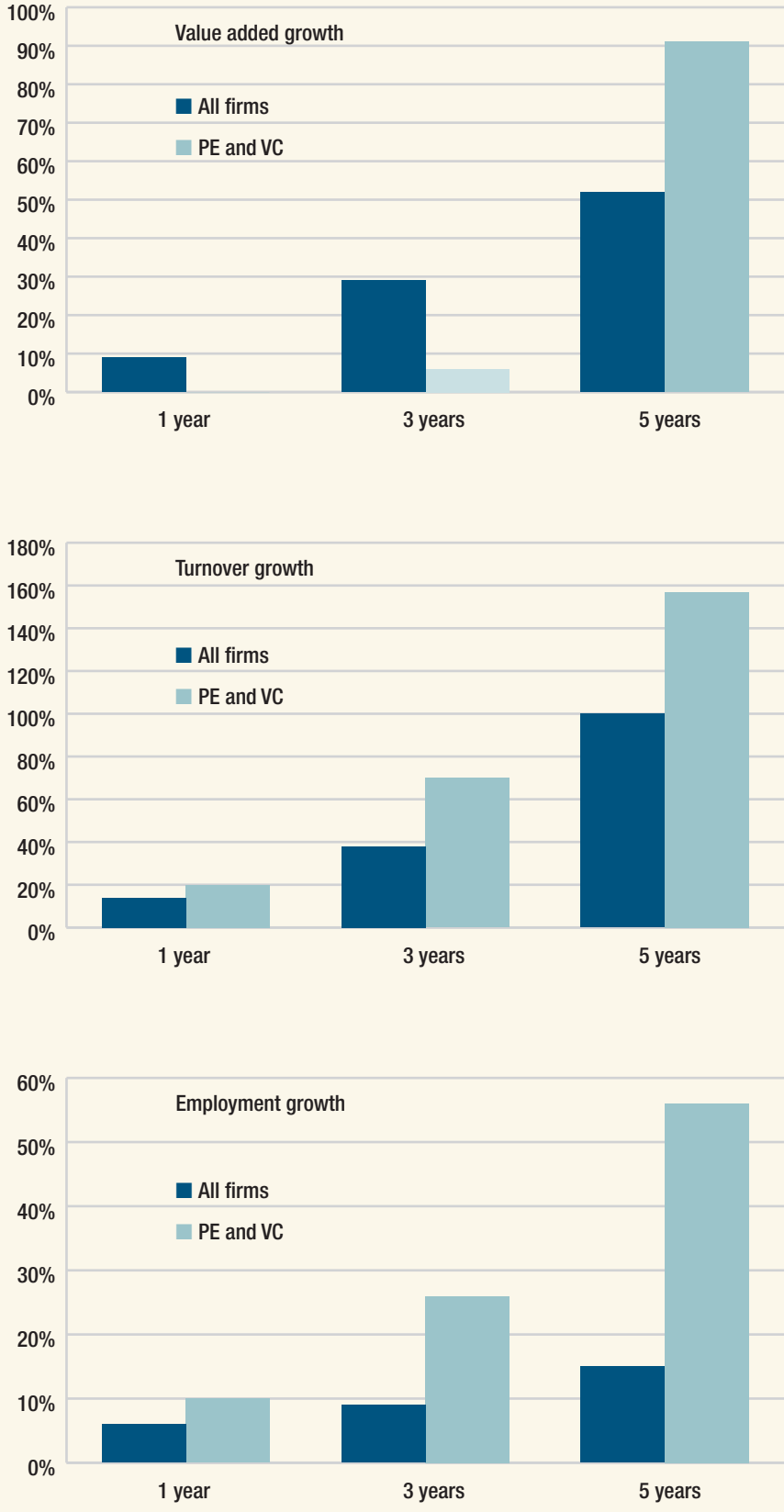
So far, we have simply described some variation in the universe of firms in Norway. To say something more solid about the relative performance of VC and PE-owned companies, we need to employ a model that controls for other factors which tend to affect the performance of firms. In addition, we know that the performance of VC and PE-owned firms tends to follow a j-curve pattern where profitability slides during the first years, and thereafter climbs fast. Consequently, we have to differentiate between short, medium and long- term growth patterns.

In Figure 26, we report performance differences between VC / PE-owned-firms and other firms. Here we control for the following factors: Industry affiliation, size, add-on investments and business cycle variations.

When it comes to value added growth, we observe a typical j-curve pattern for VC and PE- owned firms. They slightly underperform in the short term (1 year), somewhat more in the medium term (3 years), but outperform other firms in the long run (5 year).[4] This is a pattern you would expect to find if these firms boost operating costs (excluding wages) in the short term in order to achieve higher growth in the long term.

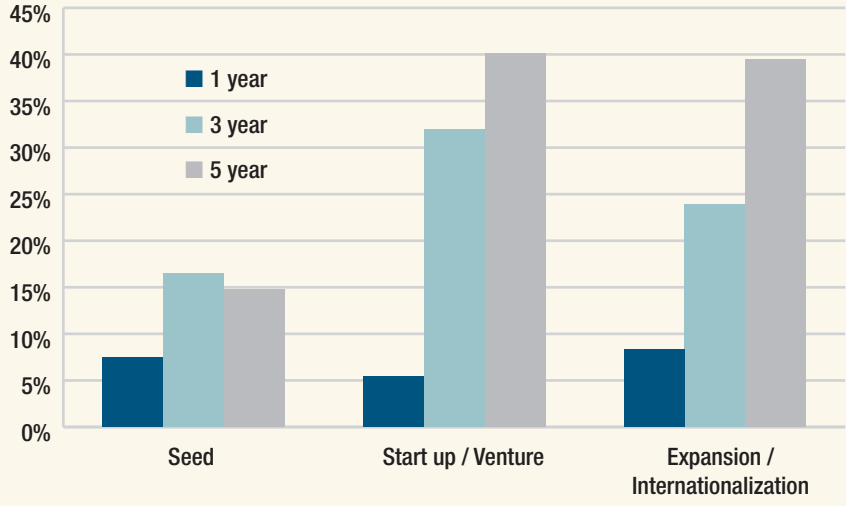
4) It is important to note that the regression results for PE-ownership in the short and medium term were not significant. This is graphically illustrated by the lighter shades in the first graph in Figure 26.

Figure 26: Effects of VC and PE ownership on growth: regression models



Source: MENON Business Economics/Norsk Venture (NVCA)

Figure 27: Growth in employment relative to buyout growth



Source: MENON Business Economics/Norsk Venture (NVCA)

This behavioural pattern is supported by our findings on turnover and employment growth. Here, we find no traces of a j-curve pattern. Figure 26 shows that both turnover and employment grow faster in the short, medium and the long term. When both turnover and employment (wage costs) climb more rapidly, a short and medium-term underperformance in value added must be driven by strong growth in operating costs.

The outperformance with respect to turnover and employment growth is considerable. After 5 years, VC and PE-owned firms have grown by 57 percentage points more than other firms, in terms of turnover. For employment, the growth is more than 3 times larger than in the rest of the economy.

In Figure 27, we take a closer look at the employment growth of firms in different segments among VC and PE-owned firms. All the results are benchmarked against the employment growth in the buyout segment. We find significantly higher employment growth in both the venture and expansion segments, while the employment growth in seed companies is not significantly higher than in buyout. Hence when it comes to employment growth, it is the middle phases in the VC/PE lifecycle that display the best results. ■

What do we control for when measuring performance?

First, we look at difference in growth between the firm and its industry affiliation. In this way, we control for the fact that different industries consistently differ with respect to performance.[3] *Second, we adjust for firm size at the start of the growth period, since larger firms may grow more slowly than smaller firms in percentage terms. Third, we control for add-on investments. This is important since a large share of PE-owned firms follow an expansion strategy based on acquisitions rather than organic growth. We have identified 126 VC and PE-owned companies that have conducted one or more add-on investments. The growth in these companies is controlled for by using an add-on dummy. Fourth, we control for the starting year of the growth period in order to adjust for general business cycle variations. Finally, we restrict our study to firms that display non-extreme growth patterns. The limit is set at +100% growth per year and –50% growth per year.*

3) For instance, if most VC and PE-owned firms are located in high-performing industries, it is not merely the ownership that explains performance variations, but industry affiliation.