

The Economic and Social Impact of Private Equity in Europe: Summary of Research Findings

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Per Strömberg
Professor of Finance, Stockholm School of Economics
Director, Institute for Financial Research (SIFR)

Data availability and limitations

It should be noted that the relative youth of the European private equity industry restricts the compilation and availability of comprehensive industry data. This, in turn, has made systematic industry research difficult. Although numerous researchers have attempted to explore the buyout and venture capital space, a lot of the existing studies suffer from a lack of complete and long-term time-series datasets. It is for these reasons that part of the academic findings have relied mainly on US data, where the industry has been longer established. Some practical difficulties also arise from the different methodologies used, depending on the region and data provider, meaning data is not always comparable.

It should also be noted that some of the findings can be region-specific. Therefore one cannot always derive clear and universal conclusions and care needs to be taken when applying some of the evidence across the board. For example, venture capital has worked very well in the US and Israel, but has struggled to be adopted in other countries.

When analysing findings, the continuous interaction and mutual interdependence of the private equity industry and broader economic phenomena should also be taken into account. On one hand, private equity can have an impact on macroeconomic development, but on the other, it is also highly affected by this same development. That is why the findings can vary at times, depending on the period under study.

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The private equity industry has found itself caught up in the prevailing political debate concerning the need for reform of financial services regulation. However, much of the debate about private equity tends to be based on hearsay or, at best, isolated examples, with little reference to the real impact of the industry on the European economic model. The purpose of this paper is to bring some clarity to the areas of the private equity model that have been most debated.

This report presents the main features of the private equity model and summarises the empirical evidence relating to a number of economic and social impact questions:

1. What is the impact of private equity investment on the overall economy?
2. How does private equity ownership differ from other types of ownership?
3. Is there a link between private equity investment and innovation?
4. How is the operating performance of portfolio companies affected?
5. What is the effect of private equity involvement on employment and employees? How does private equity influence human resource management practices?
6. What is the role of private equity during industry and economic downturns or when access to capital is scarce?

For consistency, this document contains research evidence from academic sources only excluding studies emanating from the private equity and venture capital industry itself, or studies by various consulting firms or investment banks that may be connected in some way to the industry.

All referenced studies have been listed at the end of this document.

What is Private Equity?

Private equity is a model of ownership for investors based on specific investment strategies and contractual agreements between fund managers and investors.

Investment strategy:

- It consists of investments of equity (or equity-related) capital in companies that are usually not quoted on a regulated market. However, investment in quoted companies with the purpose of delisting is often observed. The stage of development of the portfolio companies varies from very young companies (early-stage venture capital) to more mature businesses (buyout). A private equity fund manager will create a portfolio by making a certain number of investments as defined in the fund strategy.
- These investments are usually made with one of two objectives in mind: to develop innovative portfolio companies with high growth potential; or to increase the value of portfolio companies, through growth strategies implemented by actively monitoring the decisions taken by the management and establishing clear lines of responsibility and corresponding incentives.
- The investments are long term (typically holding periods of between three and seven years); private equity funds do not seek to make money by trading or speculating in securities.

Contractual agreements between fund managers and investors:

- Funds are usually marketed to professional investors and structured as limited partnerships. Limited partners are given some oversight of the fund (by allowing them to sit on advisory boards or on investors' committees) but are still protected from general liability. A high degree of investor protection is provided within existing governance and practices.
- Investors commit to provide equity capital to a fund; the fund itself is usually not leveraged.
- The capital committed is drawn down over a period of time (called the investment period, usually three to five years) just in time to be invested in specific companies after a notification is sent to investors by the fund manager; the capital committed is not drawn down upfront (as is the case with other types of funds).
- Unlike most hedge funds, investors in private equity funds do not have the right to withdraw their capital (redemption rights) before the end of the fund's life. Therefore their investment is illiquid during the term of the fund (although liquidity events are occasionally observed when investors sell their commitments to other investors). Given that the funds are not leveraged and that investors do not have redemption rights, it is unlikely that the activity of private equity funds poses any systemic risk.
- The fund is usually characterised by a term of 10 years, with the option of a set number of one-year extensions (usually two extensions). At the end of the fund's life, all fund capital should have been returned to investors.
- Gains are recorded mainly through the realisation of investments. Although such gains can be reinvested in limited circumstances up to a certain ceiling (such as when a small proportion of proceeds is used to make follow-on investments into existing investments), they are mostly distributed to investors within a short period of time after realisation.
- Management fees depend on the size of the fund and on the resources required to implement the proposed strategy, and represent a percentage of the committed capital (usually between 1% and 2.5% during the investment period and scaling down thereafter).

- Fund managers are co-investors in funds in order to align their interest with the other investors. After the initial commitment plus an agreed rate of return has been achieved for investors (the “hurdle rate”), fund managers receive a share of realised capital gains (“carried interest”). Apart from the management fee, there are no rewards unless the fund is successful, in order to make all parties motivated to create long-term, sustainable value.
- Extensive and detailed disclosures are made to investors both initially and on an ongoing basis (quarterly or semi-annually), usually in audited reports. These enable very thorough due diligence and are generally more extensive than those available in any other asset class; this is made possible by the commercial confidentiality of the disclosure process.

Summary of Research Findings

1. What is the impact of private equity investment on the overall economy?

The beneficial effect of private equity on productivity and innovation suggests a positive impact on economic growth.

- In cross-country data, there is a clear positive relationship between private equity investment activity and economic growth.
- However, no rigorous academic study has analysed whether private equity actually has an impact on the GDP growth of a country. The problem in undertaking such studies is to control for the reverse causality explanation – that growth causes private equity investment, rather than the other way around.
- Researchers argue that management buyouts played a catalytic role and helped restore the US economy during the 1980s and early 1990s.
- The overall research evidence suggests that, on a macroeconomic level, leveraged buyouts contribute to better allocation of capital and a more efficient economy. As such, they can be a powerful tool for accelerating the restructuring of the economies. Through leveraged buyouts, scarce equity capital can be freed from declining, low-value-added industries and invested in high-risk, high-value-added emerging industries that may otherwise not be financed.
- Other studies have been able to show that (i) private equity has a positive impact on stock market development, and (ii) stock market development increases economic growth, suggesting that part of the correlation is indeed causal.

2. How does private equity ownership differ from other types of ownership?

Private equity funds have significantly longer investment horizons than other institutional investors. This suggests that they take decisions and implement practices based on companies' long-term interests.

- The median holding period for private equity funds investing in leveraged buyouts and more mature companies has been estimated to be six years (ie, more than 50% of all leveraged buyouts are held for more than six years by the investors).
- The median holding period for private equity funds investing in venture capital and high-growth companies has been estimated to be five years. This number may be underestimated because the study has been undertaken using pre-2001 data, and venture holding periods before and during the time of the dot-com boom were significantly shorter than holding periods since 2001 (often less than two years).
- The holding periods for institutional investors in public equity have been estimated to be one year or less.

Private equity and venture capital fund managers are much more than mere capital providers. Unlike most other institutional investors, they get actively involved in the operations and strategy of their portfolio companies and put considerable management efforts into supporting them.

With regards to private equity in general:

- Private equity fund managers are personally exposed to the success or failure of their investments.
- Private equity fund managers get actively involved in the operations and strategic development of their portfolio companies to a much larger extent than, for example, institutional investors in public equity.
- Private-equity-owned companies tend to follow less entrenched business practices than family-owned, privately owned or widely owned public companies, or those owned by governments.
- Private-equity-owned companies introduce innovative operational management practices (such as modern 'lean manufacturing' practices, comprehensive performance documentation processes, etc) and continuously improve them.
- The success of both the companies and the funds is positively related to the degree to which both buyout and venture capital fund managers get actively involved in the business practices and strategies of their portfolio companies.

With regards to venture capital:

- In both Europe and the US, venture capital fund managers provide extensive value-added support post-investment, including help with fundraising, information systems, mergers and divestments, business and marketing plan development, and recruiting.

Summary of Research Findings

Firms owned by private equity funds have more robust corporate governance practices than other firms.

- Companies owned by private equity funds use more long-term performance-based managerial compensation and managers have a significantly larger equity interest in the company.
- Buyout funds typically take a controlling stake in companies.
- Boards of private-equity-backed companies are smaller, meet more frequently, and have a smaller fraction of insider (management) board members than boards of other companies. These board characteristics have been shown to be associated with better company performance.
- Compared to other private companies, private-equity-backed companies are more likely to recruit professional management, replace underperforming management, and introduce performance-based pay that is more strongly tied to long-term performance.
- Private equity board members are most active in complex and challenging transactions.

3. Is there a link between private equity investment and innovation?

Academic research has shown a positive link between private equity investment and innovation. However, some studies have found diverging evidence on the causal relationship.

- One group of academic studies looking at US data found evidence that venture capital investments cause a significant increase in patent filings and thereby stimulate innovation. For example, Kortum and Lerner's research shows that a dollar of venture capital could be as much as 10 times as effective in stimulating patents as a dollar of corporate R&D.
- Some subsequent authors argue that although venture capital investments may be a driver of patent activities, they do not improve productivity growth and hence do not necessarily spur industrial innovation. These studies actually suggest that venture capital investment may follow innovation, not the other way around.
- The latest study on US data, however, which carefully controls for reverse causality, suggests that venture capital has a significant effect on both patenting counts and new firm creation.
- Studies on European data are generally less conclusive than the US ones. Although venture-capital-backed companies generally have a higher patenting activity, some studies argue that this is because venture capital firms fund companies that are already more innovative, rather than actually increasing the companies' innovativeness.
- Research concurs that buyout-backed companies pursue more economically important innovations and have more focused patent portfolios in the years after a buyout investment, as their innovation activities become focused on a few core areas.
- Researchers have also shown that the average R&D intensity of buyout-backed companies increases at a rate comparable to that of non-buyout companies.

Table 1: Review of conflicting academic evidence

Author/Year of study	Country	Findings
Mollica and Zingales, 2007	US	Venture capital investment has a positive impact on innovation and the creation of new companies (controlling for various reverse causality explanations).
Kortum and Lerner, 2000	US	Venture capital investment has a positive impact on patent counts and this impact is larger than that of industrial research and development expenditure.
Popov and Roosenboom, 2008	Europe	Private equity investment causes a significant increase in patent filings.
Hirukawa and Ueda, 2006	US	Venture capital investment causes an increase in patent filings but without a corresponding increase in total factor productivity.
Caselli, Gatti and Perrini, 2008	Italy	Venture-capital-backed companies register more patents than comparable non-venture-capital-backed companies before receiving venture capital investments, whereas this tendency disappears after the investment is made.
Engel and Keilbach, 2007	Germany	Venture-capital-backed companies register more patents than comparable non-venture-capital-backed companies before they receive venture capital investments, but this is not the case after the investment.

4. How does private equity affect the operating performance of companies?

The overall picture across different methodologies, measurement units and time periods is that private equity enhances company performance.

- The empirical evidence on the operating performance of companies after a private equity investment is largely positive.
- For buyouts, there is evidence of increased operating margins, increased productivity, and increased capital efficiency after a leveraged buyout. The most recent empirical work finds larger positive performance increases for European buyouts than US ones.
- For venture capital, venture-capital-backed companies have been shown to grow faster and be quicker to bring their products to market than non-venture-capital-backed companies.

The positive effects on financial performance have not been found to be at the expense of long-term investment and growth.

- On the contrary, as already mentioned, buyout- and venture-backed companies show an increase in the size and productivity of their investments in innovation and research and development.
- Moreover, the beneficial effect of private equity investment has been shown to continue after the private equity funds have sold their investments. In particular, private-equity-backed initial public offerings outperform other initial public offerings in the stock market.

Table 2: Review of academic findings on various performance indicators

Author/Year of study	Country and nature of transaction	Findings post-transaction
Kaplan, 1989	US, public-to-privates	Operating margin increased by between 10% and 20%.* Cashflow margin increased by roughly 40 percent.** Ratio of capex to sales declined. Large increases were recorded in company values.*
Boucly et al., 2008	France, leveraged buyouts	Operating profitability after buyouts increased by about 6%. Buyout-backed companies experienced a very strong growth in sales, assets and employment after the transaction, in particular when they were previously more likely to be credit constrained.
Smith, 1990	US, management buyouts	A sustained and significant increase in operating cash flows per employee and per dollar of operating assets from the year before to the year after the buyout was recorded. The increase is not the result of layoffs or reductions in expenditures for advertising, maintenance and repairs, research and development, or property, plant, and equipment.
Lichtenberger and Siegel, 1990	US, leveraged buyouts	Leveraged buyouts and management buyouts had a strong positive effect on total factor productivity.
Davis et al, 2009	US, leveraged buyouts	Within two years after a buyout, productivity growth was 2% higher than for comparable non-buyout-backed companies. About two-thirds of this differential was due to improved productivity among continuing establishments of the company and about one-third to the contribution of more entry and exit.
Harris et al, 2005	UK, management buyouts	Companies involved in management buyouts were less productive than comparable companies before the buyout, but experienced a substantial increase in total factor productivity after the buyout.
Bergstrom, 2007	Sweden, leveraged buyouts	Leverage buyout-backed companies recorded an improvement in operating performance in terms of EBITDA margins and sales growth.*
Cressy, Munari, Malipiero, 2007	UK, leveraged buyouts	The operating profitability of private-equity-backed buyouts was 4.5% higher than comparable non-buyout companies over the first three years.
Acharya and Kehoe, 2008	UK, public-to-privates	Buyout-backed companies recorded higher profitability per employee (11.6%) than their quoted peers (5.9%) in terms of average annual growth. In declining industries, private-equity-backed companies performed far better than their public equivalents.
Gottschalg, 2007	Europe, leveraged buyouts	Buyout-backed companies outperformed comparable publicly traded companies in terms of sales, EBITDA and profitability growth (EBITDA/assets).
Goossens, Manigart, and Meuleman, 2008	Belgium, buyouts	Non-private-equity-backed buyouts and private equity-backed buyouts recorded similar sales growth and efficiency. Private-equity-backed buyouts grew less in terms of assets but more in terms of employees.
Guo et al, 2008	US, leveraged buyouts	Gains in operating performance were either comparable to or slightly exceeded those observed for comparable non-buyout-backed companies.
Weir et al, 2007	UK, public-to-privates	Public-to-privates recorded a modest improvement in operating margins.

* Absolutely and relative to industry

** Ratio of operating income less capital expenditures to sales

5. What is the effect of private equity involvement on employment and employees? How does private equity influence human resource management practices?

The question of whether private equity firms help create or reduce employment has generated considerable debate. Up-to-date different academic studies have reached diverging conclusions. However, the empirical evidence is consistent with a view that private equity portfolio companies create economic value by operating more efficiently.

- For leveraged buyouts, the academic evidence from the US and the UK suggests that employment and wages both grow at companies that experience leveraged buyouts, but at a somewhat slower rate than at other similar companies.
- One exception is France, where companies undergoing leveraged buyouts experience both significantly higher employment growth and wage growth than other similar companies.
- However, research in the UK and the US has shown that companies that received private equity backing had significantly lower productivity and employment growth than other companies in the same sector before the buyout. This means buyout firms usually invest in underperforming companies that “need to be repaired”. This suggests employment levels before the transaction may not have been sustainable.
- Overall, the academic findings are not consistent with concerns over job destruction, but neither are they consistent with the diametrically opposite position that buyouts are associated with especially strong employment growth. Rather, the empirical evidence is consistent with a view that private equity portfolio companies create economic value by operating more efficiently.
- For venture capital investments, US studies have shown that venture-backed companies persistently tend to be larger than non-venture-backed companies at every stage of the company’s life cycle – at birth, at the time of venture financing, and beyond. In addition, the majority of new companies going public are venture-backed. This suggests that venture capital investment has a positive impact on new job creation.
- Survey evidence suggests that buyout deals have a positive effect on employee relations in terms of pay systems and employee involvement methods.
- Similarly, survey evidence suggests that employees at management buyout companies appear to have more discretion over their work practices than comparable workers at non-management buyout entities, with skilled employees in particular having low levels of supervision at buyout-backed businesses.

Table 3: Review of conflicting academic evidence

Author/Year of study	Country	Effect on employment and employees
Boucly et al, 2009	France	Leveraged buyout companies experienced greater job and wage growth than other similar companies.
Bruining, Boselie, Wright and Bacon, 2005	UK and the Netherlands	Post-management buyout, companies saw an increase in training and employee empowerment.
Amess, Brown and Thompson, 2006	UK	Employees at management buyout companies had more discretion over their work practices than comparable workers at non-management buyout entities, with skilled employees in particular having low levels of supervision at buyout-backed businesses.
Amess, Girma, and Wright, 2008	UK	Private-equity-backed leveraged buyouts had no significant impact on either wages or employment. Non-private-equity-backed leveraged buyouts and traditional acquisitions caused a decline in employment.
Wright et al, 2007	UK	The majority of buyouts of companies that underwent either a management buyout or management buy-in experienced growth in wages.
Lichtenberg and Siegel, 1990	US	Relative to the industry average, employment levels tend to decline after the buyout, but at a slower rate than they did before the buyout. Following leveraged buyouts, production workers wage rates increased.
Kaplan, 1989	US	Employment increased post-buyout, but by less than other companies in the industry.
Wright et al, 2007	UK	On average, employment levels initially fell, but then rose above the pre-buyout level in management buyouts; in management buy-ins, employment levels fell after the buyout; the majority of management buyouts and management buy-ins experienced growth in employment.
Davis et al, 2008	US	Post-buyout, employment at buyout companies increased at a lower rate than at other companies in the same industry. However, this continued a pre-buyout trend (ie, buyout-backed companies had smaller employment growth prior to the buyout transaction). The results varied depending on the sector: the relative declines in employment levels were concentrated in retail businesses, while no difference in employment levels was found in the manufacturing sector. However, for new establishments (greenfield investments), buyout companies had higher job growth than similar non-buyout companies. The authors were unable to determine the net effect of leveraged buyouts of the lower growth in existing establishments, but higher growth in new ones.
Davis et al, 2009	US	Buyout-backed companies experienced an intensification of job creation and destruction activity. The correlation between the growth in productivity and earnings per worker after buyout transactions was higher at buyout-backed companies than at comparable non-buyout-backed companies.
Cressy, Munari, Malipiero, 2007	UK	Over the first four post-buyout years, employment fell relative to comparable non-buyout companies, but increased in the fifth year. The initial period of rationalisation created opportunity for more sustainable job creation.

6. What is the role of private equity during industry and economic downturns or when access to capital is scarce?

There is no academic evidence that, due to higher leverage ratios in portfolio companies, private equity activity contributes to economic downturns.

- Leveraged buyouts usually have a higher level of debt than other companies. Under normal circumstances, leverage has been shown to have positive effects on the financial performance and efficiency of companies.
- The average financial distress rates of buyouts are comparable to that of typical investment-grade corporate bond issuers, despite their higher leverage.
- On the other hand, research has suggested that venture-backed biotech companies in the UK may be more likely to fail (while they are also significantly more likely to go public).
- During hot credit market conditions, leveraged buyout transactions involve particularly high debt levels, which can lead to unusually high rates of financial distress.
- Still, even in the cases when leverage buyouts end in financial distress, company value has been shown to increase relative to the value before the buyout.
- Hence, despite the fact that default rates of private-equity-backed companies may increase in downturns, there is no evidence that private equity activity contributes to deeper recessions.
- This evidence suggests that private equity causes no systemic risk to the financial system.
- As private-equity-backed companies are better managed, it can be assumed that companies with private equity owners should experience less problems during economic downturns.

Overall, the evidence suggests that private equity has a particularly beneficial effect on the economy during downturns when access to capital is scarce.

- Private equity funds investing during economic downturns have a significantly better performance than private equity funds investing in booms.
- Therefore private equity funds have a very strong incentive to invest during downturns.
- Consistent with this, buyout investments undertaken during economic downturns are shown to experience particularly large productivity increases. Similarly, buyout investments have been shown to have a particularly positive impact on employment and growth for companies that are financially constrained. These findings suggest that the transitional capital provided by private equity funds fills a critical gap at times when the capital markets are weak.
- For venture capital, the positive impact of venture capital investment on innovation has been shown to be particularly high during the start-up phase of a company, when capital markets are less liquid. During short downturns venture capital firms can still draw capital that was committed previously when economic conditions were more favourable.

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