

Private Equity and the Organization of Firms*

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Abstract

We study how private equity (PE) buyouts reshape the internal organization of firms. Using data on over 10,000 U.S. PE buyouts combined with worker-level resume information, we track changes in hierarchies, managerial control spans, and functional structure. Contrary to the conventional view that PE streamlines and flattens organizations, we find that hierarchies become deeper after buyouts, particularly at the top of the firm. Managerial control spans shrink and firms become more top-heavy. At the same time, PE-owned firms reallocate employment away from product-related functions toward administrative and coordination roles, while top executives oversee increasingly specialized organizational units. These organizational changes hold across deal types and outcomes and persist after PE exits. Overall, our evidence suggests that PE buyouts strengthen firms' organizational capabilities rather than concentrating decision-making in flatter hierarchies.

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1 Introduction

Private equity (PE) has become one of the most consequential forms of corporate ownership worldwide. Over the past four decades, PE-backed firms have consistently outperformed their public market peers ([Kaplan and Schoar, 2005](#); [Harris et al., 2014](#)). Improvements in operating performance play a central role in this outperformance, explaining a substantial share of investor returns beyond financial engineering and sector exposure ([Acharya et al., 2013](#)). These findings imply that value creation under PE ownership is closely tied to real changes in how firms are managed and operated. Yet, despite extensive research on incentives, governance, and deal design, we know little about how PE firms organize the companies they control.

The established view of organizational change following PE buyouts holds that PE ownership creates value through organizational streamlining: small top management teams with high-powered incentives operate in flat hierarchies and lean administrative structures, reducing bureaucracy while strengthening governance ([Jensen, 1989](#); [Lichtenberg and Siegel, 1990](#); [Kaplan and Strömberg, 2009](#); [Gompers et al., 2016](#)). However, the modern PE landscape may differ meaningfully from this characterization. A large share of transactions now involve private-to-private sales and private-to-public exits, which require greater formalization and standardization to meet reporting, compliance, and scalability demands ([Rajan, 2012](#)). Consistent with this shift, survey evidence indicates that PE-owned firms adopt structured management practices similar to those of publicly listed firms ([Bloom et al., 2015](#)). To reconcile the existing literature with modern PE practice, this paper provides the first systematic evidence on how PE ownership reshapes the internal organization of firms.

To guide our analysis, we formulate two stylized views of organizational design under PE ownership. The baseline view is consistent with the notion of organizational streamlining and emphasizes changes in human capital at the top of the organization. Under this view, PE investors create value by installing highly skilled managers whose expertise raises firm productivity. Superior managerial talent allows firms to eliminate less productive middle managers while simultaneously increasing the productivity of subordinates—an outcome referred to as the “shadow of the superstars” (cf. [Garicano and Rossi-Hansberg, 2015](#)). An alternative view emphasizes organizational change aimed at improving operating efficiency and scalability. PE investors may reor-

ganize firms by introducing standardized processes, stronger monitoring, and greater functional specialization. While these changes allow production to operate more efficiently, they also increase the complexity of decision-making, as employees must coordinate across specialized functions and formalized procedures. Managing increasingly complex workflows therefore requires stronger organizational capabilities—that is, the ability to coordinate resources, knowledge, and activities to solve production problems.

We rely on models of knowledge-based hierarchies (cf. [Garicano, 2000](#); [Garicano and Rossi-Hansberg, 2006, 2012](#)) to understand how these views should affect firms’ internal organization. Knowledge-based hierarchies characterize firms as systems that allocate expertise under communication constraints. In this framework, organizational structure reflects both the distribution of knowledge and the complexity of the problems that must be solved. Improvements in top-level knowledge relax supervisory bottlenecks and allow managers to oversee larger teams, widening managerial control spans and flattening hierarchies. In contrast, greater workflow complexity increases managerial problem-solving demands and requires additional filtering layers that route problems through the organization. Consequently, control spans shrink and hierarchies deepen as firms adapt their structure to support stronger organizational capabilities. The framework therefore provides a unified lens for interpreting how PE ownership reshapes firm hierarchies.

To examine these predictions, we assemble a novel dataset that combines 10,461 U.S. leveraged buyouts completed between 2008 and 2020 with granular worker-level employment histories reconstructed from online resume data. The resulting panel allows us to observe monthly employment at each firm, together with each employee’s hierarchical position, job function, and career background. We construct matched control firms that never receive PE financing but are otherwise comparable in industry, organizational structure, and location prior to the buyout. Using a difference-in-differences event-study design, we track how firms’ internal organization evolves in the years surrounding the buyout.

Our results provide strong support for the organizational-capability view. Following buyouts, LBO firms develop deeper hierarchies even after accounting for firm growth. The increase in hierarchical depth is concentrated at the top of the organization: upper managerial layers expand while layers at the bottom are more likely to be removed. At the same time, managerial control spans shrink across all supervisory layers and contract most strongly at the top, rendering firms

significantly more top-heavy. Taken together, these patterns point to increased managerial oversight and coordination rather than organizational flattening.

The deepening of hierarchies is remarkably pervasive. It occurs in standalone and buy-and-build transactions, across industries, and among both expanding and contracting firms. Importantly, hierarchies do not decline even in public-to-private transactions associated with substantial employment reductions. Moreover, the organizational changes we document are highly persistent. When PE investors exit and portfolio firms continue as independent entities, deeper hierarchies and more top-heavy structures remain largely intact, suggesting that the organizational architecture introduced under PE ownership is durable

We complement this vertical perspective on organizational design with a horizontal view of employment allocation across corporate functions (following [Guadalupe et al., 2014](#)). Following buyouts, the share of employees in administrative functions—particularly finance and general management—rises significantly, while the share of employees in product-facing functions such as engineering declines. These changes indicate that PE-owned firms expand their administrative and coordination capacity, consistent with the development of stronger organizational capabilities.

This reorganization is accompanied by a substantial expansion of executive leadership. Buyout targets become significantly more likely to employ CEOs, CFOs, and other C-suite executives, and the number of employees with the title “chief” increases sharply. Most of these executives are hired externally rather than promoted internally. In aggregate, buyout targets hire approximately 22,000 more executives than matched control firms over our sample period. These patterns highlight an additional role of private equity: PE investors actively recruit leadership teams that fit their blueprint of an effective organizational structure.

The executives hired following buyouts differ systematically from both incumbent managers and executives hired in control firms. Newly hired leaders are older, more likely to hold MBAs, more likely to have prior senior leadership experience, and more likely to have previous private equity experience—often with the same investor. This pattern points to targeted recruitment from a specialized executive labor pool and suggests that PE-led reorganizations prioritize general managerial capabilities over product-specific expertise.

These leadership changes are accompanied by substantial employee turnover. Over the four

years following acquisition, abnormal turnover across the workforce amounts to roughly 25% above baseline levels. Turnover dynamics vary sharply across the vertical hierarchy of the firm. In the year of the buyout, turnover among top managers increases by about 70%, while turnover among rank-and-file employees remains largely unchanged. Turnover in middle management also rises, though more modestly. Even four years after the buyout, turnover remains elevated across all layers of the organization, albeit at lower levels. Among top managers, the remaining excess turnover in later years is primarily driven by replacements, suggesting that some managers are particularly hired to facilitate organizational change.

Alongside these organizational changes and leadership replacements, wages increase throughout the firm. Wage growth begins at the top of the hierarchy and subsequently spreads to lower layers. Consistent with the economics of knowledge-based hierarchies, wage increases are largest in higher layers, reflecting both the leverage of top managerial knowledge and the demand for more skilled managers. Approximately one third of the wage growth following buyouts can be explained by the expansion of hierarchical layers, while the remaining increase reflects the recruitment of higher-skilled managers relative to comparable positions in control firms.

Taken together, our findings do not align well with the view that PE buyouts streamline organizations by hiring and leveraging a small number of top executives. Instead, our results suggest that PE investors reshape the internal organization of firms by expanding managerial hierarchies and coordination capacity. These changes appear to reflect investments in organizational capabilities that support monitoring, specialization, and scalable growth. Our findings also highlight to what extent the boundaries of the firm are redrawn under PE ownership. In effect, LBO firms add an executive layer with specialized functions. PE managers play a central role in recruiting and installing leadership teams into PE's blueprint of an effective organizational structure. However, our results do not support the notion that PE managers are largely involved in LBO firms' day-to-day business.

A potential concern when using resume data is representativeness. Online profiles may not fully capture employment dynamics across the entire workforce. Reassuringly, our employment estimates closely mirror established findings in the literature. On average, leveraged buyouts are associated with employment growth of approximately 31% over four years relative to matched controls, while public-to-private transactions exhibit employment declines of around 15–17%.

These magnitudes closely align with population-level evidence in [Davis et al., 2025](#), suggesting that resume-based data accurately reflect aggregate employment dynamics following buyouts. Importantly, the deepening of hierarchies occurs in both expanding and contracting firms, indicating that the structural changes we document reflect organizational redesign rather than mechanical effects of workforce growth or decline.

Our paper contributes to several strands of literature. First, we contribute to the large literature on how private equity creates value. Prior work emphasizes financial engineering and operational improvements (see [Kaplan and Strömberg, 2009](#) for a survey). Within this literature, our paper is most closely related to research examining the impact of PE ownership on firms' human capital and organizational practices. Early work highlights the role of incentives and monitoring in PE-backed firms ([Jensen, 1989](#); [Kaplan, 1989](#); [Lichtenberg and Siegel, 1990](#)), while more recent studies document differences in management practices ([Bloom et al., 2015](#)) and workforce dynamics ([Davis et al., 2014](#); [Agrawal and Tambe, 2016](#); [Olsson and Tåg, 2017](#); [Antoni et al., 2019](#); [Davis et al., 2025](#); [Garcia-Gomez et al., 2025](#)). One important insight of our paper for this literature is that PE can strengthen management structures even when incumbent management, the focus of many papers, is actually cut. More generally, we complement this literature by providing the first systematic evidence on how PE buyouts reshape firms' internal organization along hierarchical and functional dimensions.

Second, we contribute to the literature on internal firm organization. A growing body of work studies how firms structure hierarchies and allocate managerial authority. (e.g., [Tåg, 2013](#); [Caliendo et al., 2015](#); [Bastos et al., 2018](#); [Spanos, 2019](#); [Mariscal, 2018](#); [Gumpert et al., 2021](#); [Friedrich, 2022](#); [Bias et al., 2025](#)). Much of this work infers hierarchies from census-based occupational codes (e.g., [Tåg, 2013](#); [Caliendo et al., 2015](#); [Bastos et al., 2018](#); [Spanos, 2019](#); [Mariscal, 2018](#); [Gumpert et al., 2021](#); [Friedrich, 2022](#); [Bias et al., 2025](#)). U.S. evidence largely relies on survey data (e.g., [Rajan and Wulf, 2006](#); [Guadalupe and Wulf, 2010](#); [Guadalupe et al., 2014](#)) with the exception of [Ewens and Giroud \(2025\)](#) who use resume data to estimate public firms' hierarchies from employee flows, a strategy that only works for large firms with a sufficient amount of internal employee flows. We complement this literature by using resume data to map out the internal organizational of private firms. More specifically, we contribute to the literature that studies the link between finance and firm organization (cf. [Rajan, 2012](#); [Bias et al., 2025](#)) in the context of the lifecycle of the firm.

2 Theoretical Framework

To guide our analysis, we draw on models of knowledge-based hierarchies that characterize firms as systems for allocating expertise under communication constraints (Garicano, 2000; Garicano and Rossi-Hansberg, 2006, 2012). In these models, workers solve problems up to their knowledge threshold, while more complex problems are escalated to higher layers of the hierarchy. Organizational structure emerges from the trade-off between knowledge acquisition and communication costs: control spans depend on how frequently problems are escalated and how much time managers must devote to resolving them.

Within this framework, we analyze two mechanisms through which PE ownership may reshape the internal organization of firms. The first mechanism operates through changes in human capital at the top of the hierarchy. By installing highly capable executives, PE investors increase the organization’s problem-solving capacity and relax supervisory bottlenecks. The second mechanism operates through changes in organizational capabilities. By introducing standardized processes, stronger monitoring, and greater functional specialization, PE investors make production more efficient but also increase coordination demands and workflow complexity. These two mechanisms generate opposing predictions for key parameters of firm organization, including hierarchical depth, managerial control spans, and the share of managers in the workforce.

2.1 Human capital and the shadow of the superstars

An alternative mechanism emphasizes the leverage of top managerial talent. Rather than increasing organizational complexity, PE investors may create value by installing exceptionally capable executives whose expertise can be scaled across the organization. In this view, performance improvements arise from exploiting what organizational economics describes as the “shadow of the superstars”: highly skilled leaders increase the productivity of a large number of subordinates.

In knowledge-based hierarchies, control spans depend on both the frequency with which subordinates escalate problems and the time required to resolve them. When highly knowledgeable executives occupy the top of the hierarchy, escalated problems can be resolved more quickly and efficiently. Moreover, superior managerial expertise improves the quality of guidance and decision-making throughout the organization, allowing subordinates to solve more problems in-

dependently and perform tasks more effectively. The supervisory time constraint therefore relaxes.

This mechanism allows top managers to supervise larger teams, leading to wider managerial control spans. As spans widen, fewer intermediate filtering layers are required to route problems through the organization. Organizational hierarchies therefore flatten and the share of managers in the workforce declines.

Taken together, the superstar-leverage mechanism yields three contrasting predictions following a PE buyout: (i) wider managerial control spans, (ii) flatter hierarchies with fewer managerial layers, and (iii) a lower share of managers reflecting reduced need for intermediate coordination.

2.2 Organizational capabilities and operational complexity

Consider a private equity buyout aimed at improving operational performance and enabling scalable growth. Following the buyout, firms introduce standardized processes, digital systems, and formal performance monitoring. Decision rights become more structured, accountability requirements intensify, and production activities become more tightly coordinated across organizational units. These changes allow firms to operate more efficiently but also make production workflows more complex.

Within the knowledge-hierarchy framework, greater workflow complexity raises the likelihood that operational problems exceed the knowledge threshold of lower-level employees and must be escalated to higher layers of the organization. Managers therefore face higher problem-solving demands, which tighten supervisory time constraints and reduce the number of subordinates they can effectively oversee. As a result, managerial control spans shrink.

At the same time, firms reorganize to manage the growing complexity of production and coordination. Rather than concentrating all difficult cases at the top of the hierarchy, organizations introduce additional filtering layers that route problems according to their difficulty. Middle management becomes responsible for resolving intermediate-complexity problems before they reach senior leadership. Organizational hierarchies therefore deepen and the share of managers in the workforce increases.

Greater process sophistication also encourages functional specialization. As production tasks

become more differentiated, firms build specialized organizational units—for example in compliance, finance, data governance, or process engineering—to manage increasingly complex workflows. In this view, stronger organizational capabilities emerge as the outcome of firms adapting their internal structures to coordinate specialized activities and solve more complex production problems.

Taken together, the organizational-capabilities mechanism yields three predictions following a PE buyout: (i) narrower managerial control spans, (ii) deeper hierarchies with additional managerial layers, and (iii) a higher share of managers reflecting increased specialization and coordination needs.

3 Data

We combine private equity buyout deal data from Pitchbook with firm-level workforce histories constructed from LinkedIn online resume data provided by Revelio Labs. The resume data allows us to reconstruct who is employed at which level in the firm, in which job function, and with which background on a monthly basis. For each PE buyout target, we select a matched control firm from the universe of companies that never experienced a PE buyout. Our final sample comprises 10,461 PE buyout deals completed in the United States between 2008 and 2020, each paired with a control firm.

3.1 PE Buyout Deals

We obtain all PE buyout deals from Pitchbook.¹ We restrict the sample to deals completed in the United States between 2008 and 2020. We start in 2008 because Revelio begins to provide comprehensive coverage of online resumes in the US from around that year. We end in 2020 to allow at least five years of post-buyout observation for all deals in the sample. We focus on transactions in which a PE fund acquired majority control of a company for the first time. To this end, we exclude add-on acquisitions (bolt-on transactions adding a company to an existing PE platform), secondary transactions (sales between PE sponsors), and growth or expansion capital

¹Pitchbook is currently one of the most comprehensive sources of PE deal activity, with coverage comparable to or exceeding other major databases. It has therefore become a leading source for PE buyout studies in the U.S. (see, e.g., [Gupta et al., 2024](#); [Gornall et al., 2025](#)).

deals (minority investments).

Figure 1 breaks down our final sample of 10,461 PE buyout deals by deal year and industry sector. We can see that 67% of the deals in our sample period are in the Services sector, 27% in Manufacturing, and 6% in Natural Resources—much higher share of service-related businesses compared to older studies of PE buyouts.

3.2 Firm Organization Data

We use online resume data from LinkedIn, supplied by Revelio Labs. Revelio compiles approximately 780 million profiles, representing the near-complete universe of LinkedIn users worldwide. For the United States, the data covers approximately 150 million individuals who have listed at least one position at a U.S.-based company, including current and former employees who retain their profiles. This is in a similar dimension as the total size of the US labor force totaling 172 million persons as of Jan 2026.²³

We match companies across Pitchbook and Revelio using a multi-criteria algorithm based on LinkedIn-URL, website-URL, company name (including former and also-known-as names), geographic location, and founding year. Full details of the matching algorithm and its scoring methodology are provided in Appendix A.2. In cases where a target company has multiple LinkedIn company pages (e.g., a subsidiary with a separate profile), we allow a single deal to map to multiple LinkedIn company identifiers and sum employment across them.⁴ After requiring a confirmed match and complete employment history (non-missing employment, employment growth, and industry classification), we retain 10,639 PE buyout deals.⁵

3.2.1 Employment

We use the position start and end dates listed on individual resumes to reconstruct monthly employment at each firm. A potential concern with resume-based data is that not all workers maintain a LinkedIn profile, so employment counts may understate the true workforce. In a sample

²³See <https://www.bls.gov/>, accessed on Mar 4, 2026.

³Revelio Labs data has been increasingly used in economics and finance research (e.g., Babina et al., 2024).

⁴All results are similar when we restrict the sample to companies that are uniquely identified across both datasets.

⁵Pitchbook contains 14,795 PE buyout deals with our filters, so we are able to match 72% of these to LinkedIn (= 10,639/14,795).

of US public firms, [Ewens and Giroud \(2025\)](#) report that 47% of employees reported in Compustat are covered by LinkedIn profiles. To assess coverage in our sample, we identify the subset of LBOs where a public company was taken private ('public-to-private' deals) and search for the last SEC 10-K filing prior to the deal. In the 214 deals where we find US-employment reported in SEC filings, LinkedIn covers 45% of the workforce of the median firm (364 of 812 employees). Therefore, while LinkedIn does not observe every employee, it captures a substantial and representative share of the workforce.

Even though employment is not the focus of our analysis, note that even partial coverage through LinkedIn provides an unbiased estimate of changes in employment over time if the propensity to have a LinkedIn profile is stable across target and control firms over time. We validate this by replicating the analysis of [Davis et al. \(2025\)](#), who analyze employment in private equity deals using *complete* workforce data. Their main finding is that private-to-private deals increase employment by 15% two years after the buyout, and public-to-private deals decrease it by -12%.

[Table 3](#) presents our replication using LinkedIn profiles. The key result is that our data closely reproduces the estimates of [Davis et al. \(2025\)](#). First, none of the pre-treatment indicators is significant, indicating that treated and control firms develop similarly before PE buyout. In Column (1), using all deals, we find PE-targets grow by 28% more than control firms by year two after the buyout ($= \exp(0.25) - 1$). When we split by deal type in Columns (3) and (5), we find a -15% employment decrease in public-to-private deals and a 31% increase in private-to-private deals. To analyze the data in an even more similar fashion to [Davis et al. \(2025\)](#), we also weight every deal by employment in $t - 12$ months pre-deal and filter for deals prior to 2014, as they analyze PE buyouts from 1980–2013. Columns (4) and (6) report these results: employment decreases by -14% in public-to-private deals and increases by 17% in private-to-private deals. This is remarkably similar to the -12% and +15% reported by [Davis et al. \(2025\)](#).

Overall, our tests show that using the LinkedIn resume data to proxy for employment in a sample of deals as early as 2008–2013 produces remarkably similar results as when using complete workforce data. However, the main focus of our analysis is the organization at the top of the firm, where LinkedIn coverage is likely more complete. Therefore, we think it is fair to assume our analysis of the structure of the workforce is not severely biased by using the LinkedIn-represented

subset of the workforce.

3.2.2 Corporate Hierarchy - Vertical Firm Organization

To measure the hierarchical organization of a firm, we use the concept of *layers*, in which individuals in organizations are classified into managerial layers from top to bottom. One main approach in the literature is to develop a fixed mapping of job titles to layers ([Caliendo et al. \(2015\)](#); [Friedrich \(2022\)](#); [Tåg \(2013\)](#); [Gumpert et al. \(2021\)](#) have developed mappings for French, Danish, Swedish, and German administrative data, respectively).

To classify individuals into layers, we use the *seniority* measure by Revelio Labs, which classifies every job position into one of seven seniority levels. In contrast to a fixed mapping, Revelio’s algorithm not only considers the job title, but also individual and firm characteristics to increase the accuracy of the sorting within the firm. The seniority levels, or layers—we use both synonymously—are as follows:

Layer	Designation	Three most frequent job titles
7	Senior executive level	CEO, Chief Executive Officer, Chief Financial Officer
6	Executive level	Partner, Principal, Managing Director
5	Director level	Director, General Manager, Realtor
4	Manager level	Consultant, Manager, Vice President
3	Associate level	Account Manager, Project Manager, Senior Software Engineer
2	Junior level	Software Engineer, Registered Nurse, Associate
1	Entry level	Customer Service Representative, Sales Associate, Student

A measure of hierarchy should group workers into skill groups. [Table 2](#) shows that Revelio’s seniority levels separate the workforce in economically meaningful ways. For this analysis, we use the whole cross-section of US-firms as of December 2020, which is based on 85 million LinkedIn job positions. We find that higher layers command higher skill, as measured by experience, education, and compensation. All three increase monotonically from layer 1 to layer 7. The finer granularity of the 7-layers (as compared to 4 layers in most fixed mappings) amplifies the differences across layers: compensation at layer 7 is 17-20 times that at layer 1, compared to a ratio of 2-4 as found in most 4-layer based analyses (See, e.g., [Caliendo et al., 2015](#); [Gumpert et al., 2021](#))

Another prediction of hierarchy theories is that employment (or hours worked) should be hierarchical in the sense that lower layers work more. [Table 2](#) shows that the employment hierarchy

holds at the top and bottom of the hierarchy but not uniformly across the middle layers, e.g., with layer 5 having slightly more employees than layer 4. This reflects the composition of our sample: in service-related businesses, many director-level roles (layer 5) are individual contributors or oversee only small teams, while the manager layer (layer 4) can be thinner because not every function requires a full management tier beneath the director. However, if we aggregate our 7 layers into 4 layers – top-management, middle management, supervisors, and workers, similar to those of [Caliendo et al. \(2015\)](#) – we find very similar employment hierarchies based on the Revelio classification, as shown in Online Appendix [A.4](#).

Important for our analysis, the mapping of job titles to seniority levels should be sufficiently stable across firms. We test this directly by examining where specific job titles are classified across seniority levels, using our snapshot of 85 million US-jobs as of December 2020. [Table A2](#) shows the result. In 99.8% of cases, a ‘CEO’ is classified into seniority 6–7. Other roles in the engineering career ladder are also where we would expect them: with the ‘Director of Engineering’ concentrating in layer 5 (89.4%), ‘Engineering Manager’ evenly spread across layers 4 and 5, and almost all ‘Software Engineers’ (90.2%) being in layer 2. The implication is that if a firm does not have layers 6–7, it does not feature a CEO (except in the rare 0.2% of cases where the CEO is classified into a lower layer). We also verify this by plotting the most frequent job titles of a 6-layer firm, without layer 7, in [Table A4](#) – these firms lack a ‘CEO’ role.

Last, we add that the Revelio layer measure is particularly well suited to our setting because of its seven-layer granularity. It allows us to separately identify how PE affects different tiers of the managerial hierarchy – distinguishing, for example, changes at the director tier (layer 5) from changes at the C-suite (layer 7). Finally, our difference-in-differences design with firm fixed effects is robust to time-invariant cross-firm inconsistencies in layer assignment, as identification relies on within-firm variation over time.

3.2.3 Job functions - Horizontal Firm Organization

Revelio also classifies each position into one of seven job function categories: Administration, Finance, Operations, Sales, Marketing, Research & Development, and Engineering. The classification first maps the millions of distinct raw job titles in the data to 1,500 standardized occupational

roles, which are then aggregated into the seven function categories. The mapping algorithm uses not only the raw job title but also job descriptions, listed skills, position descriptions of colleagues with the same title, profiles of similar users, and prior positions held by the worker.

As with the layer classification, we test the cross-firm consistency of the function assignment using our snapshot of 85 million US-jobs as of December 2020. [Table A3](#) reports where seven recognizable benchmark titles are classified across the seven function categories. The classification concentrates overwhelmingly in the expected category: ‘Software Engineer’ maps to Engineering in 99.0% of cases, ‘Financial Analyst’ to Finance in 99.3%, ‘Logistics Coordinator’ to Operations in 99.6%, and ‘Sales Manager’ to Sales in 94.4%. For certain analyses, we further group these into three broad functions: Corporate (Finance and Administration), Product (Engineering and R&D), and Business Operations (Operations, Sales, and Marketing).

3.3 Matched Control Firms

For each PE buyout target, we identify a control firm six months before the deal date. Only firms that *never* appear as a PE buyout target in Pitchbook are eligible as controls.⁶ The pool of potential controls comprises the approximately 6.8 million U.S. companies observed in Revelio.

We first require exact matching on three dimensions: (i) industry, using the Revelio industry classification RICS with 50 categories; (ii) hierarchical structure, requiring that the control firm fills exactly the same subset of the seven seniority levels as the target (a vector of seven binary indicators of whether a layer is filled); and (iii) U.S. headquarters. Within the set of exact matches, we impose a size caliper: the control firm’s employment must be within $\pm 20\%$ of the target’s employment at the matching date. Among the remaining candidates, we select the single nearest neighbor by employment and employment growth in the 12 months up to the matching month using Mahalanobis distance. Of the 10,639 deals with complete data, we find a suitable control firm for 10,461 (or 98%); the remaining deals lack a candidate satisfying the exact-match constraints.

[Table 1](#) reports balance statistics at the matching date, six months before the deal. Mean employment is 230 for PE targets and 226 for controls; the difference is statistically insignificant ($t = 0.18$). Median employment is balanced across both groups at 40. By construction, treated

⁶By restricting to never-treated units, we avoid the biases that can arise in staggered difference-in-differences designs when previously treated firms serve as controls ([Baker et al., 2022](#)).

and control firms have the same average number of filled hierarchy levels (5.5 out of 7). Monthly hirings (5.0 vs. 4.9), separations (3.8 vs. 3.6), and twelve-month employment growth (0.13 vs. 0.13) are all closely balanced.

The only notable pre-treatment difference is that PE targets are somewhat more likely to have a CEO, CFO, and COO, and hence larger employment in layer 7 at the matching date. We attribute this primarily to anticipation effects: some newly appointed CXOs report only the calendar year rather than the exact month of their start date on their resumes. Since, as we show later, PE sponsors frequently appoint all kinds of new CXOs shortly after the deal, matching six months before the transaction mechanically captures a subset of these early appointments. Importantly, applying the normalized-difference balance test proposed by [Imbens and Wooldridge \(2009\)](#), none of the variables used in our analysis exceeds the 0.25 imbalance threshold, as reported in the final column of Table 1.

4 Empirical Strategy

We use a difference-in-differences (DiD) approach to compare outcomes at PE buyout targets relative to their matched control firms in the months around the transaction. Specifically, we estimate the following event-study specification:

$$Y_{it} = \delta_i + \gamma_t + \sum_{\substack{t=-48 \\ t \neq -12}}^{48} \beta_t \mathbb{1}(t) \times PE_i + f(L_{it}) + \varepsilon_{it}, \quad (1)$$

where i indexes firms and t indexes event time in months relative to the buyout ($t = 0$ is the month of the deal). Y_{it} denotes the outcome of firm i at event time t . We study a range of firm-level outcomes, including the number of filled hierarchy layers, the employment share at each seniority level, and the employment share in each job function category. PE_i is an indicator equal to one if firm i is a buyout target and zero if it is the matched control. δ_i denotes firm fixed effects, which absorb all time-invariant firm characteristics. γ_t denotes event-time fixed effects, which control for shocks common to all firms at the same horizon relative to the deal. The term $f(L_{it})$ is a flexible control for firm size, specified as a third-degree polynomial in the firm's lagged employment (measured one month prior to t) together with its twelve-month employment growth

rate up to one month before t . These controls ensure that our estimates of organizational changes – such as shifts in layer structure or job-function composition – are not mechanically driven by contemporaneous changes in firm size. We cluster standard errors at the firm level.

The main coefficients of interest are β_t , which estimate the difference in outcomes between buyout targets and control firms at event time t , relative to the omitted period $t = -12$. We take twelve months before the buyout as the benchmark and omit the associated indicator from the regression. This choice allows for anticipation effects in the months immediately preceding the deal, which may already reflect early restructuring activity. In our baseline specification, we let t range from -48 to $+48$, yielding a symmetric four-year window around the buyout.

We also examine the dynamics of the outcomes, paying particular attention to potential pre-trends. Although conditional parallel trends cannot be tested directly, we follow the standard procedure and analyze the interaction terms β_t for $t < -12$ for any signs of a violation. As we show in the results, we find little evidence of differential trends in the four years prior to the buyout. Moreover, as reported in Table 1, treated and control firms are closely balanced on employment, employment growth, hirings, separations, and hierarchical structure at the matching date. Since our control group is matched on characteristics associated with buyouts and restricted to firms that *never* appear as PE targets, our design does not suffer from the biases that can arise in staggered setups when previously treated units serve as controls (Baker et al., 2022).

5 Organizational Design After Private Equity Buyouts

This section examines how private equity (PE) buyouts reshape firms’ internal organization. The theoretical framework developed above highlights how organizational structures adjust to changes in managerial knowledge and coordination requirements. In this perspective, organizational design reflects the way firms allocate decision-making authority and expertise in order to solve production problems efficiently. We use this framework as a lens to interpret how PE ownership affects hierarchical structures, functional specialization, leadership teams, workforce dynamics, and compensation.

We proceed in several steps. We begin by examining how hierarchical structures and managerial control spans evolve following buyouts, as these dimensions capture how decision authority

and problem-solving responsibilities are distributed within firms. We then study the functional composition of employment and the organization of executive leadership, which shed light on how firms build coordination capacity and managerial specialization. Finally, we analyze workforce turnover, wage structures, and the persistence of organizational changes in order to understand how these structural adjustments are implemented and whether they endure beyond the buyout period.

5.1 Hierarchical Structure and Managerial Control

We begin by examining how hierarchical structures change following PE buyouts. Hierarchies determine how decision-making authority and problem-solving responsibilities are distributed within firms. Changes in hierarchy depth and managerial control spans therefore provide a direct window into how firms organize expertise and coordinate production.

Figure 2 offers the first descriptive look, plotting monthly averages of employment, the number of hierarchical layers, hirings, and separations for treated and control firms around the buyout event. Employment at PE-backed firms rises gradually after the buyout. The number of hierarchical layers, however, jumps almost immediately—about half the total increase occurs within three months, as if the organizational restructuring had been planned before the deal closed. By month 24, the hierarchy increase levels off and shows no sign of reverting over the four post-buyout years we observe.

Figure 5 and Table 4 report formal event-study estimates of the number of hierarchical layers at target firms relative to matched controls, estimated via equation (1). Treated and control firms track each other closely before the deal, with no evidence of pre-trends. After the buyout, PE-backed firms add roughly 0.5 layers relative to controls within two years after the deal—roughly 10 percent of the pre-deal mean of 5.5 layers (see Column 1 of Table 4).

A well-established fact in the literature is that larger firms have more hierarchical layers, and PE-backed firms grow after buyouts in our sample. One might therefore worry that the hierarchy deepening is simply a mechanical size effect. We examine this directly. A simple cross-sectional regression of layers on log employment explains 62% of the variation in hierarchies (see Appendix Table A10). Adding a quadratic and cubic term raises R^2 to 82%; a fourth-degree polynomial has no

additional explanatory power. The relationship between firm size and hierarchy depth is smooth, monotone, and well-captured by three polynomial degrees.

We therefore include the full cubic polynomial of log employment—along with 12-month employment growth to capture size dynamics—in all regressions. The intuition is that these controls absorb the portion of hierarchization that is mechanically driven by firm size, leaving us to identify what PE ownership adds to hierarchy after accounting for the size-hierarchy relationship. Formally, we are testing whether PE buyouts predict residual variation in hierarchy depth beyond what size alone would predict—the roughly 18% of variation the size polynomial does not explain. Even within this residual, the PE effect is large and precisely estimated, with a t-statistic of about 20 (Column 2 of Table 4). Strikingly, the pattern holds even for public-to-private deals, where employment *falls* by roughly 15% post-deal: once the size polynomial is included, even shrinking firms add layers (Column 4). The hierarchy deepening is not a mechanical consequence of growth.

Where in the hierarchy do the new layers appear? Table 5 shows they are added at the top. We estimate the same event-study regression with the full set of size controls, with the only difference that the dependent variables are now indicators of whether each hierarchical layer (1–7) is occupied. The probability of having a layer-7 position rises by 0.12 (21% relative to the pre-deal mean of 0.58), layer 6 by 0.06 (11%), and layer 5 by 0.02 (2%). New layers are being added above the existing structure, not filling gaps below.

To analyze how the shape of the hierarchy changes, we now use the employment share of each layer (as % of all employment) as a dependent variable. Figure 6 Panel A (Table A11 for full regression details) shows the results: We find that employment shifts upward: the top layer’s employment share rises by 1.2 percentage points by year two after buyout (38% relative to a mean of 3.2%), while the shares of the two lowest layers fall and the middle layers (3 and 4) are roughly unchanged. More generally, this reallocation occurs even at firms that already had a full 7-layer hierarchy before the deal (Table A13), ruling out a simple composition effect. Figure 8 aggregates layers into three conventional management categories: top management (layers 6 and 7), middle management (layers 3 to 5), and rank-and-file employees (layers 1 and 2). We find that top management grows by almost 2 percentage points of total employment, middle management grows by about 1.5 points, both at the expense of rank-and-file workers.

Another way to analyze hierarchical shape is via the ratio of subordinates per manager, or

"control span". We define the control span of layer l as the sum of all employees below that layer divided by all managers in layer l . Figure 6 Panel B (Table A12) reports the results, where the dependent variable is the natural log of the control span of each layer. We find that managerial control spans fall at every layer, most sharply at the top. Layer-7 spans decline by 0.15 log points—about 16% fewer subordinates per manager ($= \exp(0.15) - 1$); layer-6 spans shrink by 0.11 (11%). The compression is monotone in layers: the higher the layer, the larger the reduction in span.

Taken together, the evidence indicates that hierarchical structures become deeper and managerial control spans shrink following PE buyouts. These patterns suggest that firms increase managerial oversight and coordination capacity after buyouts. Viewed through the lens of the framework, the findings are consistent with firms adapting their internal structure to manage more complex workflows and coordination demands.

5.2 Functional Specialization and Organizational Capabilities

We next examine how employment is reallocated across functions following buyouts. The functional composition of employment reflects how firms organize and coordinate different activities within the organization. In particular, administrative and coordination functions often play an important role in monitoring performance, integrating business units, and implementing standardized processes.

The framework discussed above suggests that as organizations introduce more structured processes and coordination mechanisms, the demand for administrative and managerial functions may increase. To explore this dimension of organizational change, we examine how employment shares evolve across product-facing, operational, and administrative functions after buyouts. Following [Guadalupe et al. \(2014\)](#), we classify firm functions from close to the product—"product-functions" such as sales, marketing, R&D, engineering—to more distant from the product, or "administrative", such as general management, finance, and other administration. We keep operations in an intermediate position, not being as easily classified into one or the other.

Table 6 reports event-study regressions where the dependent variable is the employment share of the different functional categories. General management is the largest gainer, rising by 1.2 percentage points by year 2 after buyout (38% relative to a pre-deal mean of 3.3%), followed by

finance. Notably, the expansion is not uniform across all administrative roles—other administrative functions actually contract—suggesting a targeted build-up of coordination capacity rather than general back-office growth. Product-related employment shares fall across the board. In Table A14, when combining the 7 single functions into product-related, operations, and administrative, we find that administrative functions increase by about 2 percentage points after the buyout, at the expense of product-related functions that decrease by about 2.2 percentage points.

This pattern connects to a set of findings scattered through the PE literature. [Ewens et al. \(2022\)](#) document that PE-backed newspapers cut reporters and editors; [Spaenjers and Steiner \(2024\)](#) find reduced room-related expenditure in PE-owned hotels. In each case, PE ownership shifts resources away from directly product-related activities. Note however, that a shift away from the product does not necessarily mean worse product-quality in our framework: the increased administrative infrastructure can raise productivity in product-facing roles. The fact that PE makes restaurants cleaner, as shown by [Bernstein and Sheen \(2016\)](#), suggests that this is not just a theoretical possibility.

The results show a systematic shift in employment toward administrative and coordination functions following buyouts. These changes suggest that PE-owned firms expand their internal capacity for monitoring, coordination, and organizational management. In the context of the framework, such adjustments are consistent with firms strengthening the organizational capabilities required to operate more complex production processes.

5.3 Executive Leadership and Organizational Architecture

Who populates the new managerial layers? And where do they come from? Executive managers play a central role in coordinating organizational activities, allocating decision rights, and implementing strategic initiatives. If firms reorganize to support more specialized and coordinated activities, leadership teams should expand and become more functionally differentiated. These questions also matter because the two views generate starkly different predictions about the profile of new executives. Superstars are exceptional generalists by definition; operational complexity calls for specialists who can manage structured, differentiated organizations.

Table 7 shows that PE-owned firms add all kinds of new and specialized "Chief officer" roles,

that did not exist in the firm pre-buyout. The dependent variable in this regression is an indicator of whether a "Chief X Officer" exists in the firm, where X stands for one of 11 roles: "Executive" (CEO), "Operating" (COO), "Financial" (CFO), "Human Resources" (CHRO), "Information" (CIO), "Legal" (CLO), "Administrative" (CAO), "Technology" (CTO), "Product" (CPO), "Marketing" (CMO), "Sales/Revenue" (CSRO), and "any other Chief", for any "Chief" role not covered by the other 11. We again categorize CFO/CHRO/CIO/CLO/CAO into "administrative", CEO and COO into "General management", and the remaining 4 into "product-related". The coefficients measure the change in the likelihood that a firm employs a given functional executive. We find that PE buyouts increase the likelihood that firms employ these specialized "Chief" roles in almost all functions. Summing across all C-suite roles (Column 13), we find that private equity increases the number of CXO roles by about 0.5 by year 2 after the buyout, a 38% increase over the unconditional mean of 1.2 C-suite roles.

Panels B and C decompose this expansion into external hires and internal promotions. We find that the overwhelming majority of new C-suite roles are filled with external hires. External hires account for about 85% of the increase in C-Suite roles (Column 13: $= 0.42/0.47$), while PE-driven internal promotions explain the remaining 15%. This is similar to the evidence reported by [Gompers et al. \(2022\)](#): they find that in PE-backed CEO-replacements, 75% are external hires. Our findings complement this perspective by adding a new dimension: PE firms not only replace executives in existing roles but also create entirely new C-suite roles that did not exist before the deal. Figure 3 illustrates the pervasive role of PE firms in executive search. We plot all monthly C-suite hires (level 7) around PE buyouts: C-suite hiring explodes in the month of the deal at PE-backed firms and persistently stays elevated at about twice the level of control firms, while pre-deal levels were similar. In total, PE firms hired approximately 23,500 CXOs during the post-deal period, compared to 9,100 at control firms — a difference of 14,400, or 158% more CXO hiring.

We next examine the characteristics of executives who join firms around buyouts. Table 8 shows that newly hired top managers differ systematically from those hired by control firms. For this analysis, we combine all layer-7 hires in the pre-buyout period ($t - 48$ to $t - 7$) and to allow for some anticipation, we count all hires from $t - 6$ onwards as post-buyout hires. We break these down by treatment and control, so that we combine all hires into 4 groups, pre-and post-buyout and treated and control for each group. We combine the changes in pre- vs. post across

PE-backed and control to a "Diff-in-diff" setting. We find that managers hired after buyouts tend to be older and more highly educated, and they are significantly more likely to hold an MBA degree. They are also more likely to have a military background and to have held positions at higher hierarchical layers in their previous jobs. We test for military backgrounds, because this is a relatively independent test of experience with some of the most hierarchical organizations: the army. Finally, newly hired managers are also more likely to have prior PE-backing experience and are frequently recruited from other portfolio firms managed by the same PE firm.

The evidence indicates that buyout targets expand their executive leadership and recruit specialized managers to oversee distinct organizational functions. These patterns suggest that PE investors actively shape the managerial architecture of portfolio firms.

5.4 Workforce Turnover and Organizational Transformation

Organizational restructuring often involves changes in the composition of the workforce. When firms adopt new organizational structures or coordination mechanisms, the skills and experience required from managers and employees may change. Turnover patterns therefore provide insight into how firms adjust their human capital to support organizational transformation.

We examine how employee turnover evolves across different hierarchical layers following buyouts. Turnover is defined as the average of hirings and firings in the preceding 12 month period, divided by midpoint average employment in that period. Table 10 presents the results: At the buyout date itself, top management turnover rises by 9.5 percentage points—from a pre-deal mean of 13.7%, meaning top management turnover almost doubles. Middle management turnover rises by 4 percentage points (23% relative to its mean of 17.4%). Rank-and-file turnover, by contrast, stays small and statistically insignificant at the time of the buyout. At first, the managerial workforce is restructured, not the broader employee base. These dynamics change over time. By year 1, top management turnover peaks at 10.5 percentage points above baseline. Rank-and-file turnover now too increases in a statistically significant way to 2.9 percentage points, reflecting the downstream effects of the new organizational structure rippling through the firm. The ordering matters: managers change first, workers adjust second. This sequence is consistent with the executive-hiring evidence above—PE investors recruit new leadership, who then reshape the

layers below them.

Turnover rises substantially among managerial positions following buyouts, while turnover among rank-and-file employees changes comparatively little. These patterns suggest that organizational change is accompanied by adjustments in managerial personnel. The results are consistent with the view that firms adapt their managerial human capital to operate within newly established organizational structures.

5.5 Wage Structure and Knowledge Hierarchies

Knowledge hierarchy models generate a specific prediction about wages: deepening the hierarchy increases the returns to being at the top. As the firm adds layers, the manager at the top leverages her knowledge over a larger structure, raising her marginal product and her pay. We test this directly by analyzing how log total annual compensation changes by management layer and function.

Column 1 of Table 9 shows that average compensation across all employees rises by roughly 13% in PE-backed firms relative to control firms by year 2. To test the extent to which this change is driven by the new hierarchical structure of the firm after PE, we add indicators for the number of layers a firm has in Column 2. We find that the coefficient drops to 10%, meaning that approximately 25% of the wage increase can be explained by the new hierarchical organization. The remaining increase can be broken down by management levels in Columns 3-5: The Top management earns 9% more; middle management earns 5% more; rank-and-file employees earn just 1% more by year 2 after buyout. The wage structure steepens, and within-firm wage dispersion increases.

Work experience data in Table A17, where the dependent variable is log years of work experience by layer and function, add an interesting perspective. Firm-wide experience rises by 3–4% in year 1, driven by top and middle management, consistent with PE investors adding experienced executives first. Over time, however, by year 4 after buyout, Top and middle managers at PE-backed firms become significantly less experienced overall. This suggests that the initial re-build of the organization requires experienced managers at first, which dissipates over time. Together with the compensation findings, this also suggests the PE-backed firms pay a premium for specific

organizational skills and track record, not accumulated seniority.

We find that wage growth is concentrated in higher layers of the organization, leading to increased wage dispersion within firms. These patterns suggest that managerial expertise becomes more valuable following buyouts. Viewed through the lens of the framework, the results are consistent with the expansion of hierarchical structures that leverage specialized managerial knowledge.

5.6 Heterogeneity and Robustness

While the organizational changes documented above appear systematic, the magnitude of these effects may vary across firms and transactions. Differences in industry characteristics, growth trajectories, or value creation strategies may influence the extent to which firms reorganize their internal structures.

To explore these possibilities, we examine whether the organizational patterns documented above vary across different deal types, industries, and firm growth environments. Table 11 re-estimates the hierarchy-depth regression—with the number of hierarchical layers as the dependent variable—across subsamples defined by growth strategy (buy & build vs. standalone LBO)⁷, industry (manufacturing vs. services), pre-buyout growth (above vs. below median), post-buyout growth (above vs. below median), and exit route (IPO, secondary, M&A, or bankruptcy). The hierarchy-deepening effect is strikingly consistent, both economically and statistically, across all these deal types. By year 2 after the deal, PE adds about 0.2 layers in almost all situations. The only exception is PE deals ending up in IPO exits. This may be a special case, as IPO firms deepen their hierarchical structure well before the actual IPO (Bias et al., 2025)—which we can confirm as a pre-trend in our sample. Appendix Table A15 confirms the same stability for functional and hierarchical employment reallocation across all these situations.

The results show that the organizational changes associated with PE buyouts appear broadly and across a wide range of firms and transaction environments. The consistency of the findings suggests that the restructuring of managerial hierarchies and organizational functions is a general feature of PE ownership.

⁷We identify buy-and-build deals by searching Pitchbook for whether an Add-on acquisition took place with the LBO deal in our sample as the mentioned "platform". All deals without an add-on are categorized as standalone LBO.

5.7 Persistence of Organizational Change

Do the organizational changes roll back once PE ownership ends? This question offers a sharp test of our two views. Under the superstar view, organizational structure is built around particular individuals—once the PE-installed executives and their sponsors exit, the firm should revert to its earlier state. Under the operational-complexity view, PE buyouts change *how the firm is organized*, not just who runs it. New layers, new functional roles, new reporting structures—these are embedded in the organization and should persist regardless of who owns it.

To test the rolling-back, we track the firms in our sample through their PE exit events. To find exit information about the deals in our sample, we start by Pitchbook’s exit information, and complement these by searching firms in SDC’s IPO and M&A databases, as well as Orbis’ M&A database (formerly Zephyr). We are able to find exits for about 6600 firms, or 2/3 of our sample. To be able to observe them for the same $\pm 48\text{months}$ event window, we limit the sample to the exits observed by 2020, which leaves us with 4,787 deals with exit information. We distinguish four exit routes: secondary buyout (sold to another PE fund, 2,893 deals), IPO (105 deals), M&A (sold to strategic acquirer, 1,535 deals), and bankruptcy (254 deals). The exit types generate different predictions about persistence. Secondary buyouts and IPOs leave the firm as an independent entity—if organizational complexity is now a feature of how the firm operates, we would expect the hierarchy to stay or even deepen under new ownership. M&A is the opposite case: when a firm is absorbed by an acquirer, its organizational structure is typically replaced by the acquirer’s—we would expect the PE-built hierarchy to unwind. Bankruptcy is a failure event and a separate kind of exit.

Table 12 reports the results of the number of hierarchies regression, with the exception that we now analyze the event window around the *Exit from PE*, not the PE entry. For this analysis, we also search for new control firms in $t - 6$ before the exit, with the same procedure for the main sample (see Section 3.3). Column 1 shows that for all exits combined, hierarchy depth shows no significant decline after exit. In secondary buyouts, hierarchies actually deepen further, adding 0.07 layers by year 2 post-exit, consistent with the incoming PE fund continuing to build organizational capacity. In M&A exits, hierarchy depth falls by 0.09 layers—precisely the pattern expected when the firm is being integrated into a larger organization. This M&A reversal is an important falsification:

it shows that hierarchies *can* unwind when there is a structural reason for them to, making the absence of reversal elsewhere more informative.

Table A16 extends the analysis, reporting post-exit coefficients across all main dependent variables—hierarchy depth, employment shares by layer and function, and control spans—at two years post-exit. Across all exit types, we find no signs of reversal of the organizational changes, with the exception of M&A noted above.

The results show that deeper hierarchies and stronger managerial structures remain in place even after PE investors exit. This is clear evidence against the superstar view, in which changes would dissipate when the superstars leave the firm. The persistence suggests that buyouts introduce lasting changes to firms’ internal organization rather than temporary adjustments during the investment period.

6 Conclusion

Private equity is often viewed as a governance mechanism that improves incentives and disciplines management. Our findings suggest that its influence reaches further into the internal structure of firms. Rather than simply streamlining organizations, buyouts are associated with substantial changes in how firms are organized and managed. PE-owned firms expand their executive leadership, shift employment toward administrative and coordination functions, and replace a large share of incumbent managers. These changes coincide with the emergence of deeper managerial hierarchies and more specialized leadership roles that remain in place well beyond the buyout period.

Taken together, the evidence points to a broader role for private equity in shaping the development of firms. PE investors appear to act not only as providers of capital and governance, but also as architects of organizational change who assemble leadership teams and install managerial structures designed to support growth and coordination. More broadly, our findings highlight how financial ownership can influence the internal organization of firms. Understanding these organizational channels may be important for interpreting both the performance of PE-backed companies and the broader impact of private equity on the economy.

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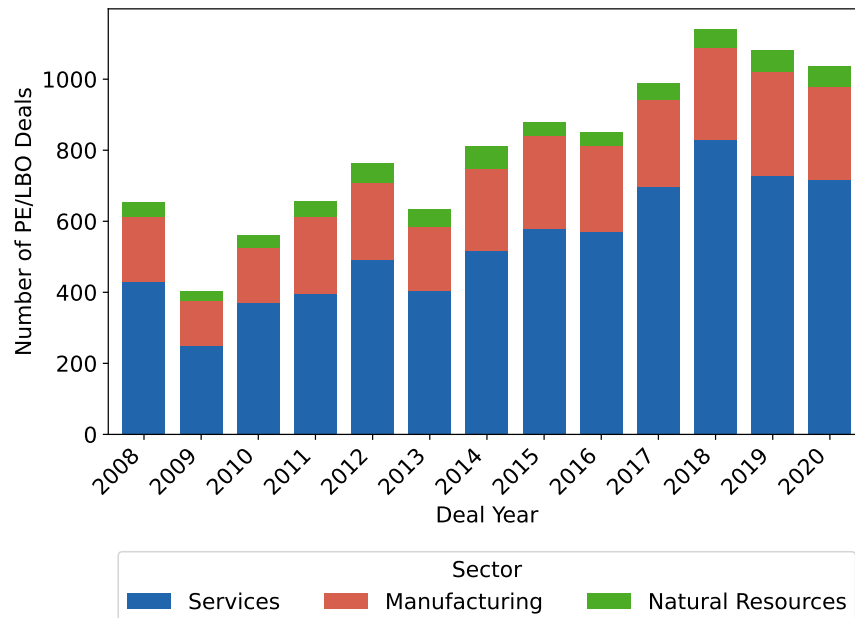
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Tables and Figures

Figure 1: Sample

This figure shows the distribution of 10,461 PE/PE Buyout deals in our main sample across years and industry sector.

Panel A: Deals over Time



Panel B: Industry Sector share over Time

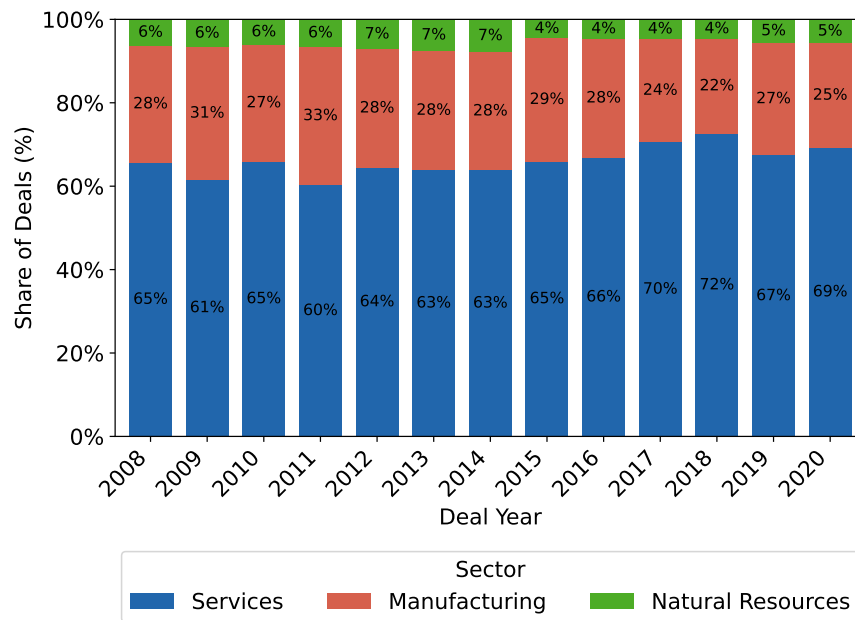


Figure 2: Employment Dynamics around PE Buyouts

This figure shows the average employment, number of hierarchy layers, number of hirings and separations, of all 10,461 treated and control firms in our sample.

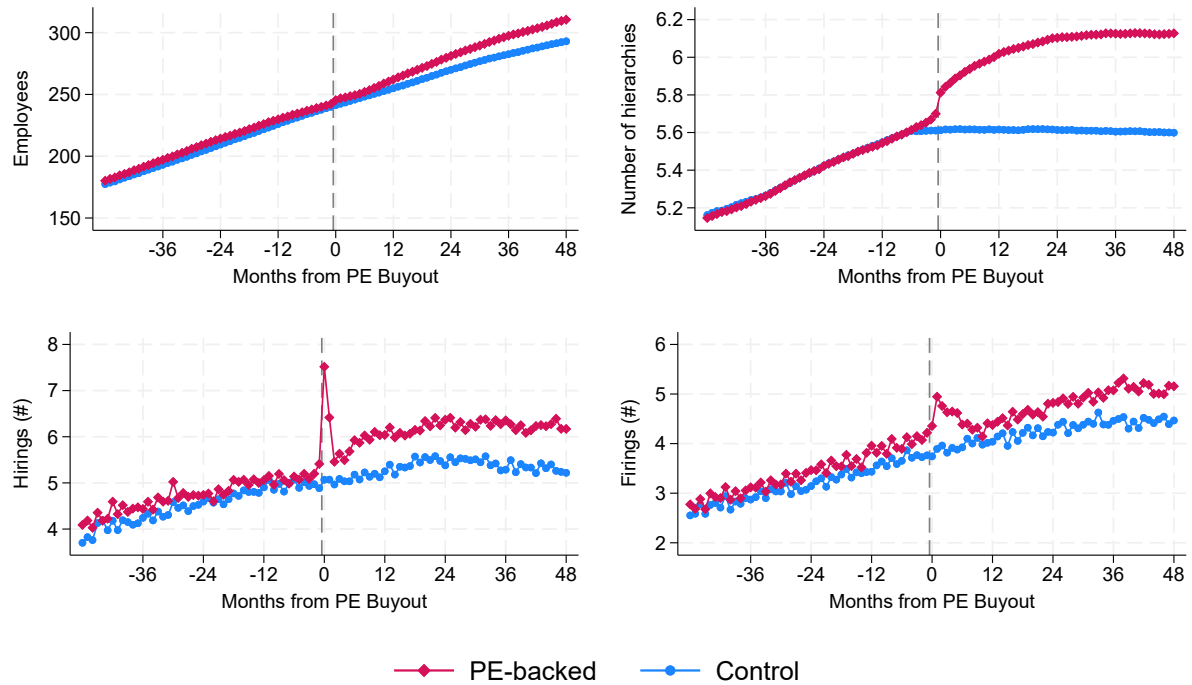


Figure 3: C-Suite Hires around PE Buyouts

This figure shows the total monthly hires of C-suite executives (layer 7) of the 10,461 treated and control firms in our sample.

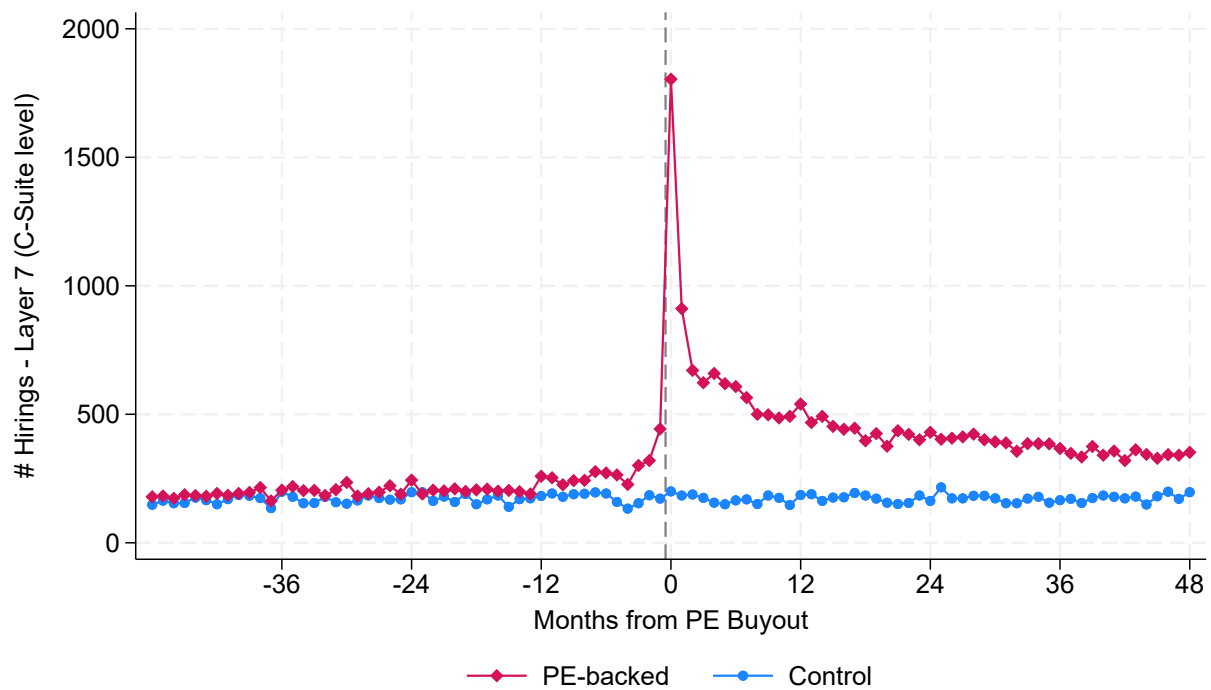


Figure 4: PE buyout Effects on Employment

This figure shows event study plots for the natural logarithm of employment at target firms relative to the matched control group. We plot the coefficients on the event-time fixed effects interacted with the PE Buyout indicator estimating equation (1). The x-axis displays the months relative to the PE Buyout closing date. The vertical lines indicate the 95% confidence intervals, based on standard errors clustered at the firm level. Each panel shows the results of three regressions: all deals, the subset of public-to-private deals, and the subset of private-to-private deals.

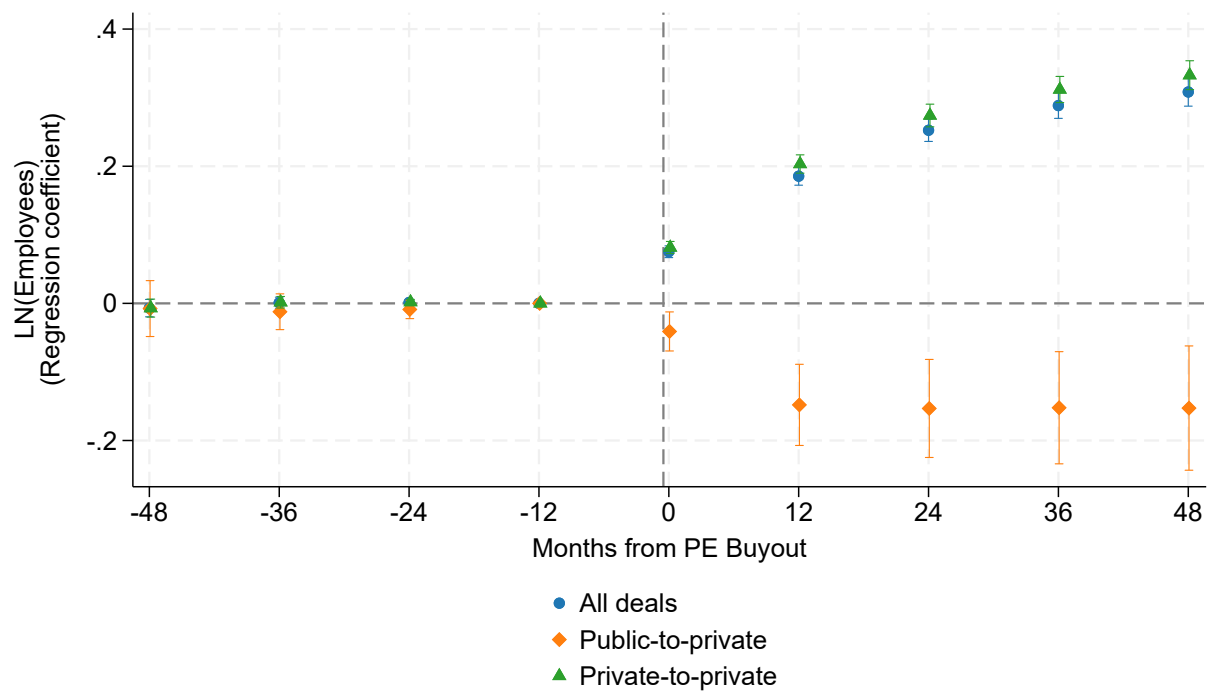
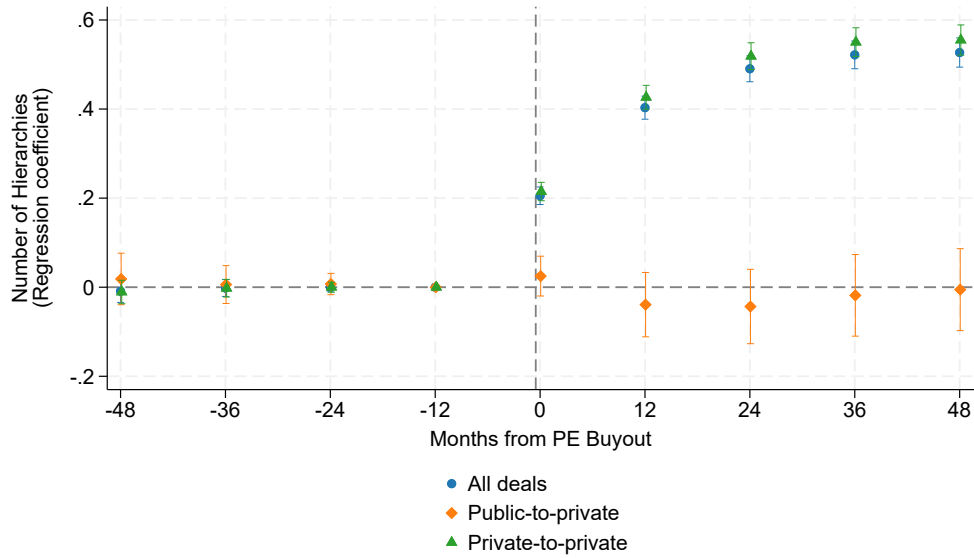


Figure 5: PE Buyout Effects on Hierarchies

This figure shows event study plots for the number of hierarchy layers at target firms relative to the matched control group. We plot the coefficients on the event-time fixed effects interacted with the PE Buyout indicator estimating equation (1). The x-axis displays the months relative to the PE Buyout closing date. The vertical lines indicate the 95% confidence intervals, based on standard errors clustered at the firm level. Panel A and B show regressions without and with firm size controls, respectively. Each panel shows the results of three regressions: all deals, the subset of public-to-private deals, and the subset of private-to-private deals.

Panel A: No Controls



Panel B: Controlling for Firm Size

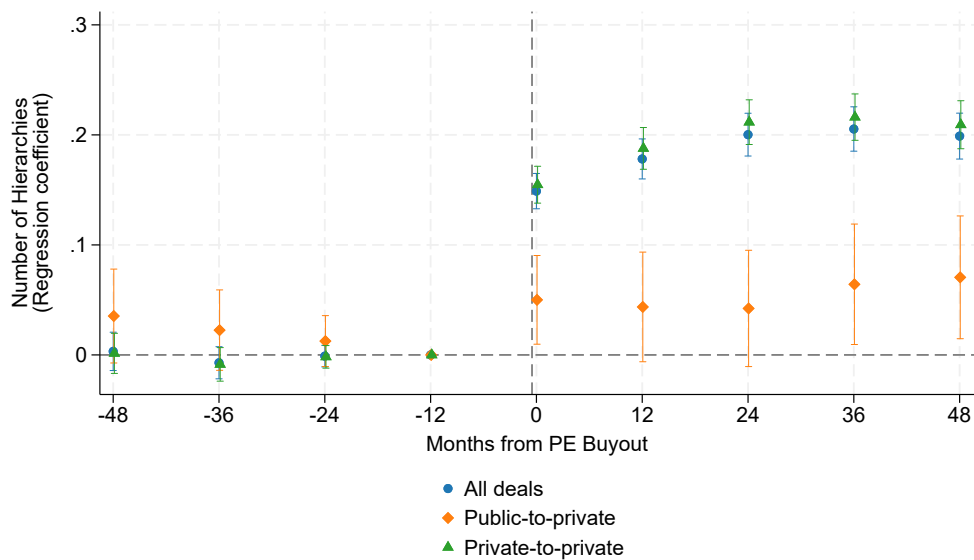
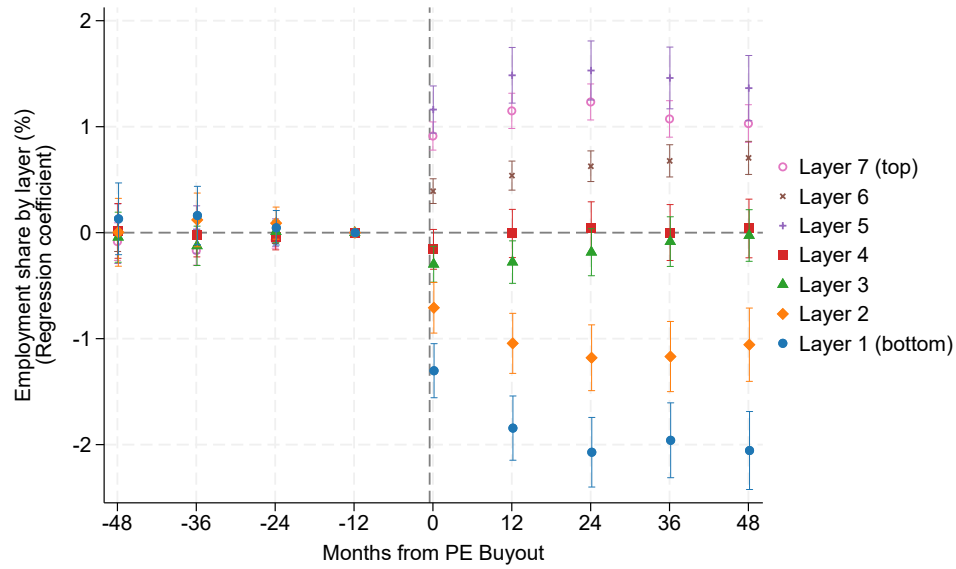


Figure 6: PE Buyout Effects on Employment Share and Control Spans of Layers

This figure shows event study plots for employment shares and control spans by layer at target firms relative to the matched control group. We plot the coefficients on the event-time fixed effects interacted with the PE indicator estimating equation (1). The x-axis displays the months relative to the PE Buyout closing date. The vertical lines indicate the 95% confidence intervals, based on standard errors clustered at the firm level. Panel A shows regressions with the employment share of layer l as dependent variables. Panel B shows regression results with the natural logarithm of the control span of layer l as dependent variables.

Panel A: Employment Share by Layer



Panel B: Control Span by Layer

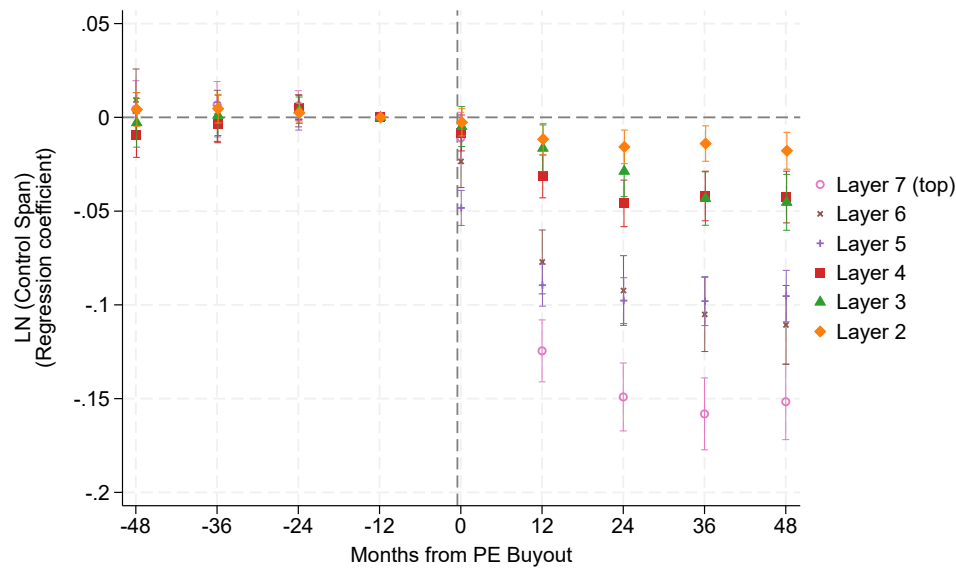


Figure 7: PE Buyout Effects on Firm Functions

This figure shows event study plots for employment shares of different firm functions at target firms relative to the matched control group. The dependent variable is the employment share (in %) of each functional category. Product functions are sales&marketing, engineers, and R&D; administrative functions include finance, general management, and other admin. Operations functions are a separate category. We plot the coefficients on the event-time fixed effects interacted with the PE Buyout indicator estimating equation (1). The x-axis displays the months relative to the PE Buyout closing date. The vertical lines indicate the 95% confidence intervals, based on standard errors clustered at the firm level. Each panel shows the results of three regressions: all deals, the subset of public-to-private deals, and the subset of private-to-private deals.

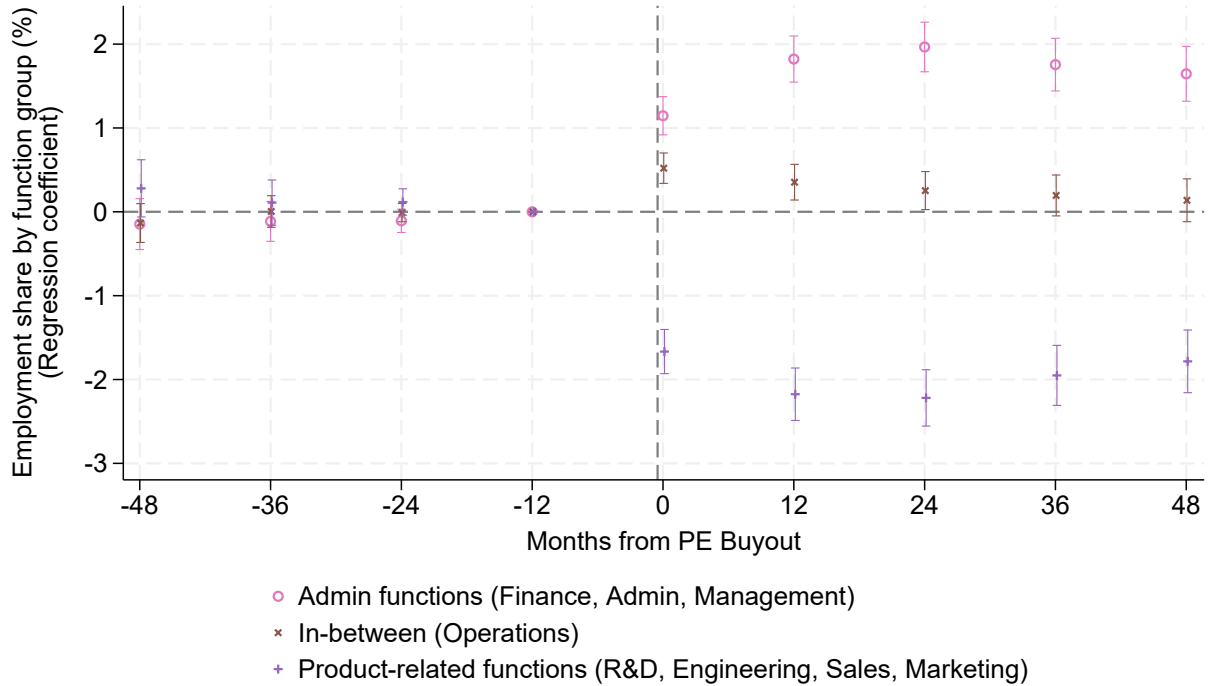


Figure 8: PE Buyout Effects on Management Employment Shares

This figure shows event study plots for employment shares of different firm functions at target firms relative to the matched control group. The dependent variable is the employment share (in %) each management level group. Top management is layers 6&7, middle management is layers 3-5, rank-and-file includes layers 1&3. We plot the coefficients on the event-time fixed effects interacted with the PE Buyout indicator estimating equation (1). The x-axis displays the months relative to the PE Buyout closing date. The vertical lines indicate the 95% confidence intervals, based on standard errors clustered at the firm level. Each panel shows the results of three regressions: all deals, the subset of public-to-private deals, and the subset of private-to-private deals.

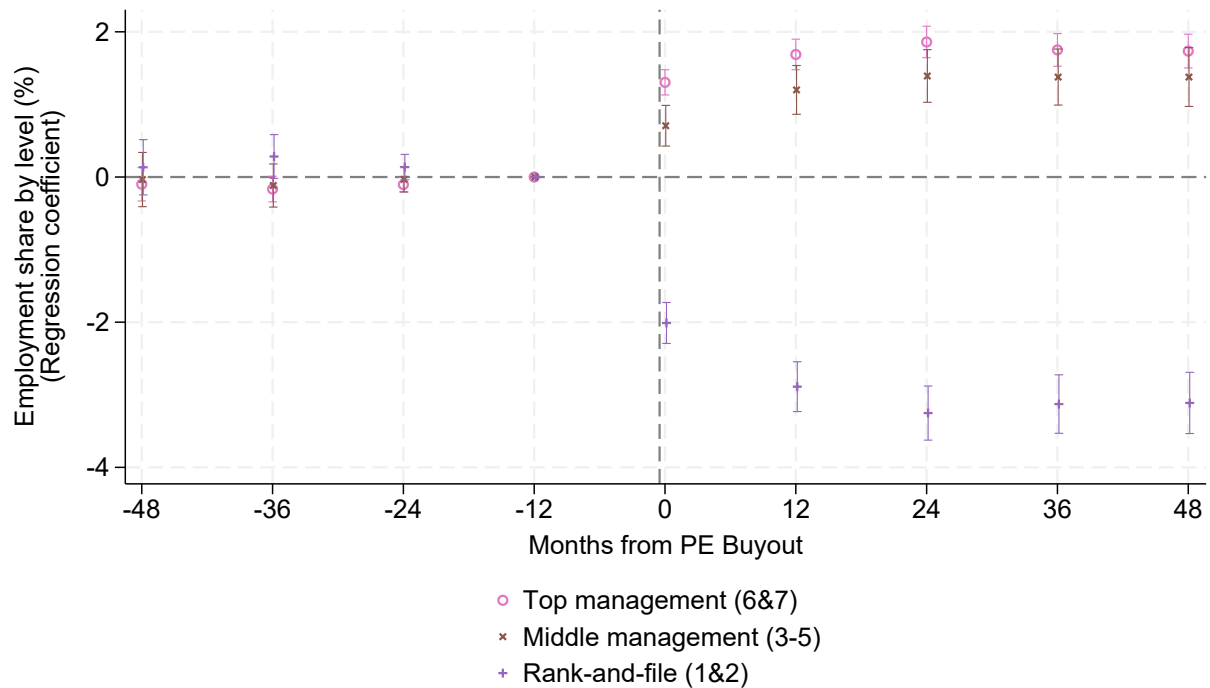


Table 1: Matching Statistics: PE Buyout targets and Control Firms

This table reports summary statistics for the 10,461 PE Buyout targets and 10,461 matched control firms in the matching month, 6 months before PE Buyout ($t - 6$). The matched control firms consist of firms that never experienced a PE Buyout according to Pitchbook data (*'never treated'*), and show no observable differences in firm organization in $t - 6$. For variable definitions see Appendix A.1. To test whether PE Buyout targets and control firms differ on observable characteristics, we use a t-test of equal means and the normalized difference test developed by Imbens and Wooldridge (2009).

	PE Buyout targets		Control firms		Difference	
	Mean	Median	Mean	Median	<i>t</i> -stat for equal mean	Imbens- Wooldridge test
<i>Panel A: Hierarchy</i>						
Number of hierarchies	5.55	6.00	5.55	6.00	0.00	0.00
Hierarchy 1 filled? (0/1)	0.91	1.00	0.91	1.00	0.00	0.00
Hierarchy 2 filled? (0/1)	0.91	1.00	0.91	1.00	0.00	0.00
Hierarchy 3 filled? (0/1)	0.82	1.00	0.82	1.00	0.00	0.00
Hierarchy 4 filled? (0/1)	0.85	1.00	0.85	1.00	0.00	0.00
Hierarchy 5 filled? (0/1)	0.88	1.00	0.88	1.00	0.00	0.00
Hierarchy 6 filled? (0/1)	0.58	1.00	0.58	1.00	0.00	0.00
Hierarchy 7 filled? (0/1)	0.60	1.00	0.60	1.00	0.00	0.00
<i>Panel B: Employment</i>						
Employees	229.82	40.00	226.06	40.00	0.18	0.00
Employees in layer 1	74.00	10.00	70.88	10.00	0.56	0.01
Employees in layer 2	62.02	10.00	64.33	10.00	-0.41	0.00
Employees in layer 3	25.59	4.00	24.99	4.00	0.18	0.00
Employees in layer 4	29.99	5.00	28.66	5.00	0.34	0.00
Employees in layer 5	30.03	6.00	29.42	5.00	0.16	0.00
Employees in layer 6	6.48	1.00	6.19	1.00	0.29	0.00
Employees in layer 7	1.70	1.00	1.59	1.00	2.01	0.02
<i>Panel C: Other Firm Characteristics</i>						
Hirings (per month)	5.06	1.00	4.90	1.00	0.42	0.00
Firings (per month)	3.82	0.00	3.56	0.00	0.82	0.01
Promotions (per month)	0.47	0.00	0.46	0.00	0.28	0.00
Demotions (per month)	0.22	0.00	0.21	0.00	0.45	0.00
Has CEO position? (0/1)	0.44	0.00	0.43	0.00	1.77	0.02
Has CFO position? (0/1)	0.30	0.00	0.26	0.00	5.71	0.06
Has COO position? (0/1)	0.16	0.00	0.15	0.00	1.78	0.02
AI skill	0.00	0.00	0.00	0.00	-3.65	-0.04
IT skill	0.13	0.10	0.13	0.10	0.49	0.00
Army skill	0.01	0.00	0.01	0.00	-0.47	0.00
Salary (USD k)	130.42	112.23	132.39	111.77	-1.58	-0.02
Employment growth	0.13	0.10	0.13	0.10	0.49	0.00

Table 2: Distribution of the U.S. Workforce by Hierarchy

This table reports summary statistics for the cross-section of US-based firms as of 2020—broken down by hierarchical layers. It reports the number of persons, share of persons, mean and median of experience (in years), education, and total compensation (in US\$). Education levels: 1 - primary/secondary/high school, no university level education; 2 - college degree / bachelors degree; 3 - master's degree / MBA; 4 - doctoral degree, PhD. For variable definitions see Appendix A.1. Panel A contains all 7-layered firms, Panel B all 6-layered firms, without a layer 7.

Layer	Persons		Experience		Education		Compensation	
	Number	Share (%)	Mean	Median	Mean	Median	Mean	Median
Panel A: All 7-layer firms								
7	455,332	0.74	24.91	25.00	1.77	2.00	824,850	745,510
6	1,638,293	2.67	23.64	23.00	1.80	2.00	286,164	278,395
5	7,404,138	12.06	21.97	21.00	1.74	1.00	216,575	212,709
4	7,186,667	11.71	19.16	17.00	1.68	1.00	113,091	110,984
3	6,711,682	10.94	17.12	15.00	1.67	1.00	87,272	84,661
2	18,195,718	29.65	15.58	13.00	1.59	1.00	77,183	73,387
1	19,785,450	32.24	13.29	10.00	1.35	1.00	46,496	44,056
All	61,377,280	100.00	16.49	14.00	1.56	1.00	100,537	69,791
Panel B: All 6-layer firms								
6	187,983	3.19	24.92	24.00	1.73	2.00	328,063	316,324
5	718,738	12.21	22.74	21.00	1.69	1.00	235,100	232,436
4	626,392	10.64	20.00	18.00	1.62	1.00	118,375	115,374
3	563,333	9.57	18.36	16.00	1.61	1.00	89,898	88,042
2	1,559,509	26.49	16.56	14.00	1.57	1.00	78,305	75,375
1	2,230,110	37.89	14.43	11.00	1.41	1.00	50,521	48,005
All	5,886,065	100.00	17.31	15.00	1.54	1.00	100,274	71,223

Table 3: PE Buyout Effects on Employment

This table shows the results of firm-level difference-in-differences regressions comparing employment at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the natural logarithm of number of employees. The coefficients are estimating from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable Sample:	LN Employees					
	All PE Buyouts		Public-to-private deals		Private-to-private deals	
	un-weighted	empl-weighted & Deal-year<2014	un-weighted	empl-weighted & Deal-year<2014	un-weighted	empl-weighted & Deal-year<2014
	(1)	(2)	(3)	(4)	(5)	(6)
PE x t-48	-0.01 (-1.08)	-0.01 (-1.04)	-0.01 (-0.37)	0.01 (0.33)	-0.01 (-1.03)	-0.01 (-1.17)
PE x t-36	0.00 (0.22)	-0.00 (-0.24)	-0.01 (-0.92)	-0.00 (-0.32)	0.00 (0.38)	-0.00 (-0.18)
PE x t-24	0.00 (0.68)	0.00 (1.00)	-0.01 (-1.29)	-0.00 (-0.28)	0.00 (0.93)	0.00 (1.09)
PE x t+0	0.08*** (17.25)	0.04*** (6.41)	-0.04*** (-2.82)	-0.03 (-1.57)	0.08*** (18.09)	0.05*** (7.20)
PE x t+12	0.19*** (27.51)	0.10*** (9.11)	-0.15*** (-4.91)	-0.13*** (-3.10)	0.20*** (29.73)	0.12*** (11.29)
PE x t+24	0.25*** (30.38)	0.14*** (10.20)	-0.15*** (-4.20)	-0.15*** (-2.94)	0.27*** (32.49)	0.17*** (12.40)
PE x t+36	0.29*** (30.17)	0.15*** (9.82)	-0.15*** (-3.65)	-0.16** (-2.57)	0.31*** (32.09)	0.19*** (11.78)
PE x t+48	0.31*** (29.20)	0.17*** (9.39)	-0.15*** (-3.30)	-0.16** (-2.38)	0.33*** (30.98)	0.20*** (11.21)
Observations	188298	80685	9486	4986	178812	75699
# deals	10461	4485	527	277	9934	4208
R-squared	0.95	0.95	0.96	0.95	0.94	0.94
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean dependent var	3.73	3.64	5.92	5.67	3.61	3.50

Table 4: PE Buyout Effects on Hierarchies

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the number of hierarchy layers. The coefficients are estimating from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable Sample:	Number of hierarchies					
	All PE Buyouts		Public-to-private deals		Private-to-private deals	
	(1)	(2)	(3)	(4)	(5)	(6)
PE x t-48	-0.01 (-0.70)	0.00 (0.36)	0.02 (0.63)	0.04 (1.62)	-0.01 (-0.80)	0.00 (0.15)
PE x t-36	-0.00 (-0.18)	-0.01 (-0.96)	0.01 (0.28)	0.02 (1.21)	-0.00 (-0.22)	-0.01 (-1.11)
PE x t-24	0.00 (0.08)	-0.00 (-0.21)	0.01 (0.59)	0.01 (1.07)	0.00 (0.01)	-0.00 (-0.34)
PE x t+0	0.21*** (20.41)	0.15*** (18.19)	0.02 (1.10)	0.05** (2.43)	0.21*** (20.46)	0.15*** (18.09)
PE x t+12	0.40*** (30.48)	0.18*** (19.21)	-0.04 (-1.06)	0.04* (1.72)	0.43*** (31.09)	0.19*** (19.39)
PE x t+24	0.49*** (33.05)	0.20*** (20.18)	-0.04 (-1.02)	0.04 (1.57)	0.52*** (33.74)	0.21*** (20.42)
PE x t+36	0.52*** (32.81)	0.21*** (19.96)	-0.02 (-0.39)	0.06** (2.30)	0.55*** (33.41)	0.22*** (20.10)
PE x t+48	0.53*** (31.55)	0.20*** (18.68)	-0.01 (-0.12)	0.07** (2.48)	0.55*** (32.03)	0.21*** (18.78)
<i>Controls</i>						
ln Employees (t-1)		3.63*** (126.42)		3.80*** (21.13)		3.62*** (122.22)
ln Employees (t-1) ²		-0.51*** (-72.36)		-0.53*** (-15.40)		-0.51*** (-68.54)
ln Employees (t-1) ³		0.02*** (44.86)		0.03*** (12.09)		0.02*** (41.36)
Employment growth		0.06*** (7.98)		0.08*** (2.62)		0.05*** (7.70)
Observations	187367	187300	9463	9462	177904	177838
R-squared	0.85	0.93	0.82	0.92	0.85	0.93
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	5.49	5.49	6.69	6.69	5.42	5.42

Table 5: PE Buyout Effect on Existence of Hierarchical Layers

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variables are dummy variables indicating whether the respective layer is filled. The coefficients are estimating from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	Filled layer? (0/1)						
	Layer 7 (top)	Layer 6	Layer 5	Layer 4	Layer 3	Layer 2	Layer 1 (bottom)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	0.00 (0.29)	0.00 (0.38)	0.00 (0.97)	-0.00 (-1.25)	-0.00 (-1.19)	0.00 (0.75)	0.00 (1.09)
PE x t-36	-0.00 (-1.28)	0.00 (0.20)	0.00 (1.13)	-0.00 (-1.48)	-0.00 (-1.39)	0.00 (0.92)	0.00 (0.35)
PE x t-24	-0.00 (-0.72)	0.00 (0.04)	0.00 (0.83)	-0.00 (-0.27)	-0.00 (-0.06)	-0.00 (-0.09)	0.00 (0.11)
PE x t+0	0.09*** (22.05)	0.03*** (8.46)	0.02*** (8.53)	0.01** (2.55)	-0.00 (-0.31)	0.00 (1.25)	-0.01** (-2.26)
PE x t+12	0.12*** (24.04)	0.05*** (10.72)	0.02*** (6.78)	0.01*** (2.94)	0.00 (0.09)	-0.00 (-1.22)	-0.01*** (-2.80)
PE x t+24	0.13*** (24.69)	0.06*** (11.82)	0.02*** (6.20)	0.01** (2.26)	0.00 (0.48)	-0.00 (-0.74)	-0.01*** (-3.94)
PE x t+36	0.12*** (22.24)	0.06*** (11.98)	0.03*** (7.24)	0.01** (2.44)	0.00 (0.15)	-0.00 (-0.26)	-0.01*** (-3.83)
PE x t+48	0.12*** (20.29)	0.06*** (11.28)	0.02*** (6.67)	0.01** (2.18)	0.00 (0.52)	-0.00 (-0.63)	-0.01*** (-3.20)
<i>Controls</i>							
ln Employees (t-1)	0.17*** (12.47)	0.10*** (7.71)	0.60*** (48.01)	0.62*** (49.96)	0.53*** (42.67)	0.72*** (57.45)	0.69*** (55.09)
ln Employees (t-1) ²	0.02*** (6.48)	0.04*** (11.53)	-0.10*** (-35.85)	-0.10*** (-33.48)	-0.07*** (-22.27)	-0.14*** (-46.93)	-0.13*** (-42.68)
ln Employees (t-1) ³	-0.00*** (-11.09)	-0.00*** (-17.33)	0.01*** (27.61)	0.00*** (22.81)	0.00*** (10.44)	0.01*** (37.91)	0.01*** (33.94)
Employment growth	0.05*** (13.73)	0.02*** (5.31)	-0.01** (-2.19)	-0.02*** (-6.69)	-0.01*** (-4.53)	-0.01*** (-4.15)	-0.01* (-1.89)
Observations	187573	187573	187573	187573	187573	187573	187573
R-squared	0.78	0.79	0.77	0.76	0.77	0.75	0.72
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	0.58	0.57	0.87	0.85	0.80	0.90	0.91

Table 6: PE Buyout Effects on Firm Functions

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the employment share (in %) of each functional category. Product functions are sales&marketing, engineers, and R&D; administrative functions include finance, general management, and other admin. Operations functions are a separate category. The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Employment share (%) in functions:						
	Admin. functions			In-between	Product functions		
	General management	Finance	Admin.	Operations	Sales & Marketing	R&D	Engineer
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	-0.08 (-0.93)	-0.20** (-1.97)	0.14 (1.31)	-0.13 (-1.13)	-0.05 (-0.32)	0.11 (1.47)	0.22 (1.48)
PE x t-36	-0.17** (-2.41)	-0.07 (-0.89)	0.13 (1.60)	0.00 (0.04)	0.07 (0.50)	0.00 (0.01)	0.04 (0.36)
PE x t-24	-0.07* (-1.86)	-0.10** (-2.04)	0.06 (1.36)	-0.01 (-0.17)	0.06 (0.74)	0.04 (0.99)	0.03 (0.38)
PE x t+0	0.91*** (13.44)	0.44*** (5.51)	-0.20*** (-2.72)	0.52*** (5.63)	-0.44*** (-3.49)	-0.12** (-2.20)	-1.10*** (-9.94)
PE x t+12	1.15*** (13.55)	0.76*** (8.05)	-0.08 (-0.93)	0.35*** (3.26)	-0.45*** (-2.97)	-0.19*** (-2.84)	-1.54*** (-11.28)
PE x t+24	1.23*** (14.23)	0.77*** (7.55)	-0.03 (-0.34)	0.25** (2.19)	-0.47*** (-2.84)	-0.19*** (-2.65)	-1.56*** (-10.48)
PE x t+36	1.07*** (12.24)	0.73*** (6.79)	-0.05 (-0.50)	0.20 (1.57)	-0.37** (-2.16)	-0.21*** (-2.76)	-1.37*** (-8.53)
PE x t+48	1.03*** (11.37)	0.67*** (5.93)	-0.05 (-0.49)	0.14 (1.05)	-0.29 (-1.60)	-0.15* (-1.89)	-1.34*** (-7.99)
<i>Controls</i>							
ln Employees (t-1)	-1.18** (-1.96)	2.11*** (3.12)	-0.09 (-0.38)	-2.43*** (-3.03)	-0.26 (-0.26)	0.31 (0.66)	1.68* (1.79)
ln Employees (t-1) ²	-0.08 (-0.59)	-0.20 (-1.30)	0.08 (0.59)	0.32* (1.76)	0.04 (0.17)	-0.10 (-0.94)	-0.07 (-0.32)
ln Employees (t-1) ³	0.01 (1.57)	-0.00 (-0.04)	-0.01 (-0.87)	-0.02 (-1.31)	0.00 (0.08)	0.01 (1.36)	-0.00 (-0.01)
Employment growth	0.94*** (7.09)	-0.22** (-1.96)	-0.19* (-1.81)	-0.42*** (-3.14)	0.21 (1.17)	-0.07 (-0.81)	-0.25 (-1.46)
Observations	187300	187300	187300	187300	187300	187300	187300
R-squared	0.75	0.89	0.85	0.81	0.91	0.95	0.92
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	3.33	9.54	8.79	10.13	34.67	5.92	27.62

Table 7: PE Buyout Effects on Executive Specialization

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. Each column reports the coefficient on PE Buyout $\times$ t+24 from a separate regression of equation (1) where the dependent variable is an indicator for whether the firm has a filled position of the respective chief officer role (0/1). Columns are grouped into administrative functions, general management, and product functions. Panels split the sample by whether the position was filled through an internal promotion or an external hire. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Admin functions					General			Product functions					Has any other CXO? (0/1)	# Chief Officers
	Has CFO? (0/1)	Has CHRO? (0/1)	Has CIO? (0/1)	Has CLO? (0/1)	Has CAO? (0/1)	Has CEO? (0/1)	Has COO? (0/1)	Has CTO? (0/1)	Has CPO? (0/1)	Has CMO? (0/1)	Has CSRO? (0/1)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)		
Panel A: All															
PE x t+24	0.15*** (26.04)	0.02*** (8.89)	0.02*** (5.90)	0.00 (0.88)	0.00 (0.33)	0.13*** (22.93)	0.03*** (6.07)	0.02*** (4.43)	0.01*** (2.94)	0.02*** (6.05)	0.03*** (9.58)	0.04*** (8.18)	0.47*** (30.69)		
Panel B: Internal promotions															
PE x t+24	0.01* (1.82)	0.00*** (2.65)	-0.00 (-0.79)	0.00 (0.10)	-0.00 (-0.92)	0.02*** (5.76)	-0.00 (-1.23)	0.00** (2.01)	0.00 (1.58)	0.00 (1.05)	0.01*** (4.86)	0.01*** (3.73)	0.06*** (6.04)		
Panel C: External hires															
PE x t+24	0.15*** (25.12)	0.02*** (7.61)	0.02*** (6.51)	0.00 (1.13)	0.00 (1.00)	0.11*** (20.08)	0.04*** (7.40)	0.01*** (3.57)	0.00*** (2.71)	0.02*** (6.00)	0.02*** (8.12)	0.03*** (7.14)	0.42*** (29.37)		
Observations	187573	187573	187573	187573	187573	187573	187573	187573	187573	187573	187573	187573	187573	187573	
Employment controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 8: Characteristics of Newly Hired Top Managers Around PE Buyouts

This table reports pre- and post-buyout characteristics of newly hired top managers (seniority level 7) at PE-backed firms and matched control firms. Pre and post periods are all 47 months before and 49 months post deal, respectively. The difference-in-differences (DiD) estimate compares the change in characteristics at PE-backed firms to the change at control firms. For variable definitions see Appendix A.1. T-statistics are based on standard errors clustered at the firm level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Control firms			PE-backed			Difference-in-differences	
	Pre	Post	Diff.	Pre	Post	Diff.	DiD	t-stat
Age	41.504	38.420	−3.084	42.407	40.779	−1.628	1.457***	12.47
Education	2.140	2.177	0.037	2.133	2.187	0.055	0.018***	2.66
Top 20 university (0/1)	0.200	0.194	−0.006	0.184	0.194	0.009	0.015***	4.61
MBA (0/1)	0.216	0.220	0.005	0.227	0.248	0.021	0.016***	4.58
Military background (0/1)	0.013	0.013	−0.000	0.013	0.017	0.004	0.004***	3.76
Layer in prior position	4.614	4.641	0.027	4.728	4.895	0.167	0.140***	10.93
PE-backing experience	0.166	0.240	0.074	0.241	0.391	0.150	0.076***	20.34
PE-backing experience same GP	0.004	0.011	0.007	0.033	0.100	0.068	0.060***	33.79
Observations	7473	8798		9161	23527			

Table 9: PE Buyout Effects on Employee Compensation

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the natural log of total annual compensation. Columns 1–2 report results for all employees without and with controls for the number of layers of the firm (dummies). Columns 3–5 split by vertical layer (top management, middle management, rank-and-file). Columns 6–8 split by horizontal function (admin, operations, product-related). The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. Employment controls include $\ln$ Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	LN (Total compensation)							
	Vertical layers					Horizontal functions		
	All	All	Top mgmt.	Middle mgmt.	Rank-and-file	Admin	Operations	Product-related
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PE x t-48	−0.01** (−2.23)	−0.01** (−2.40)	−0.00 (−0.39)	0.00 (0.03)	0.00 (0.41)	0.01 (1.07)	0.01** (2.24)	−0.00 (−0.57)
PE x t-36	−0.01** (−2.27)	−0.01** (−2.14)	−0.01 (−1.16)	0.00 (0.81)	0.00 (0.24)	0.01 (1.42)	0.01*** (2.74)	−0.00 (−0.61)
PE x t-24	−0.00* (−1.86)	−0.00 (−1.58)	0.00 (0.08)	0.00 (1.59)	0.00 (0.09)	0.00 (0.84)	0.00 (1.49)	−0.00 (−0.91)
PE x t+0	0.09*** (25.38)	0.07*** (21.84)	0.06*** (10.32)	0.04*** (14.83)	0.00 (0.94)	0.02*** (3.83)	0.09*** (15.17)	0.02*** (7.81)
PE x t+12	0.12*** (28.53)	0.10*** (24.99)	0.08*** (11.32)	0.05*** (16.47)	0.01*** (3.01)	0.03*** (4.34)	0.11*** (16.73)	0.04*** (11.10)
PE x t+24	0.13*** (29.06)	0.10*** (25.29)	0.09*** (10.98)	0.05*** (15.18)	0.01*** (4.21)	0.04*** (5.48)	0.11*** (15.97)	0.05*** (12.56)
PE x t+36	0.12*** (26.82)	0.10*** (23.04)	0.08*** (9.68)	0.06*** (15.38)	0.01*** (4.14)	0.04*** (6.14)	0.11*** (15.30)	0.05*** (12.16)
PE x t+48	0.12*** (25.08)	0.10*** (21.64)	0.08*** (8.51)	0.06*** (14.34)	0.01*** (3.77)	0.04*** (5.37)	0.11*** (14.51)	0.05*** (11.34)
<i>Employment controls</i>	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	187300	187300	140760	180349	180032	142234	149990	183183
R-squared	0.85	0.86	0.79	0.84	0.87	0.81	0.83	0.85
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# Hierarchies FE	No	Yes	No	No	No	No	No	No
Mean dep. var. in t=−12	11.65	11.65	12.99	11.87	10.98	11.26	11.65	11.47

Table 10: PE Buyout Effects on Employee Turnover

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the 12-month rolling employee turnover rate. Column 1 reports results for all employees. Columns 2–4 split by vertical layer (top management, middle management, rank-and-file). Columns 5–7 split by horizontal function (admin, operations, product-related). The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. Employment controls include $\ln$ Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	Turnover rate 12m rolling						
	All	Vertical layers			Horizontal functions		
		Top mgmt.	Middle mgmt.	Rank-and-file	Admin	Operations	Product-related
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	0.13 (0.55)	−0.80* (−1.67)	0.34 (1.14)	−0.36 (−0.91)	0.41 (0.65)	−0.93* (−1.71)	0.17 (0.54)
PE x t-36	0.12 (0.54)	−1.23*** (−2.65)	0.09 (0.31)	0.36 (0.94)	−0.49 (−0.82)	−0.67 (−1.27)	0.21 (0.70)
PE x t-24	−0.17 (−1.17)	−0.45 (−1.42)	−0.11 (−0.58)	−0.27 (−0.96)	0.48 (1.05)	−0.63 (−1.60)	−0.11 (−0.49)
PE x t+0	2.66*** (12.17)	9.46*** (19.97)	4.02*** (14.55)	0.50 (1.41)	1.39** (2.43)	5.30*** (10.29)	1.30*** (4.45)
PE x t+12	4.26*** (17.33)	10.52*** (21.78)	5.76*** (19.74)	2.89*** (7.52)	4.18*** (6.97)	3.32*** (6.26)	3.56*** (11.40)
PE x t+24	3.68*** (15.23)	3.49*** (7.37)	4.76*** (16.79)	3.78*** (10.06)	3.43*** (5.70)	2.39*** (4.58)	3.80*** (11.92)
PE x t+36	4.36*** (17.42)	3.36*** (7.09)	4.78*** (16.41)	4.67*** (12.19)	3.33*** (5.55)	3.80*** (7.31)	4.20*** (13.08)
PE x t+48	4.17*** (16.28)	2.73*** (5.74)	4.70*** (15.95)	4.41*** (11.39)	3.10*** (5.15)	3.35*** (6.39)	4.21*** (13.12)
<i>Employment controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	187561	142948	181121	181086	145552	152854	183858
R-squared	0.50	0.33	0.42	0.48	0.38	0.35	0.49
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=−12	21.78	13.66	17.35	28.81	26.29	20.64	23.83

Table 11: Heterogeneity

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group, estimated separately for subsamples defined by deal characteristics. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the number of hierarchy layers. The coefficients are estimated from equation (1). We split the sample by: growth strategy type, i.e. buy & build platforms and standalone companies (Columns 1-2), industry (Manufacturing and Services, Column 23-4), employment growth pre-deal (above and below median growth between $t - 24$ and $t - 12$, Column 5-6), employment growth g post-deal ($g \geq 0$ or $g < 0$ between $t + 12$ and $t + 48$ (Column 7-8), and by eventual exit type (Columns 9-12). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. Employment controls include ln Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable: Sample breakdown by:		Number of hierarchies														
		Growth type		Industry		Pre-LBO growth			Post-LBO growth			Exit type				
		Buy & build platform (inorganic)	Standalone PE Buyout (organic)	Manufac- turing	Services	High	Low	Growth (g>=0)	Decline (g<0)	IPO	M&A (strat. acquirer)	Secondary (fin. acquirer)	Bankruptcy			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)			
PE x t-48		0.01 (0.61)	-0.00 (-0.05)	0.01 (0.63)	0.00 (0.25)	0.01 (0.38)	0.00 (0.20)	0.01 (1.27)	-0.02 (-1.39)	-0.10* (-1.67)	-0.02 (-0.90)	0.03* (1.86)	0.02 (0.51)			
PE x t-36		-0.01 (-0.71)	-0.01 (-0.66)	-0.02 (-1.20)	-0.00 (-0.14)	-0.01 (-0.71)	-0.01 (-0.60)	0.00 (0.07)	-0.03* (-1.87)	-0.07 (-1.24)	-0.01 (-0.74)	0.01 (1.09)	0.02 (0.55)			
PE x t-24		-0.00 (-0.24)	-0.00 (-0.08)	-0.00 (-0.30)	0.00 (0.34)	-0.00 (-0.09)	-0.00 (-0.30)	0.00 (0.17)	-0.01 (-0.65)	-0.01 (-0.24)	-0.00 (-0.41)	0.01 (0.85)	0.02 (0.70)			
PE x t+0		0.16*** (14.29)	0.14*** (11.76)	0.19*** (11.99)	0.13*** (13.52)	0.17*** (13.88)	0.13*** (12.07)	0.17*** (18.00)	0.09*** (5.89)	0.10* (1.90)	0.11*** (6.24)	0.14*** (11.42)	0.23*** (4.56)			
PE x t+12		0.20*** (15.61)	0.16*** (12.09)	0.23*** (12.42)	0.16*** (14.44)	0.20*** (14.80)	0.15*** (12.45)	0.23*** (21.28)	0.07*** (3.88)	0.07 (1.32)	0.15*** (7.47)	0.18*** (13.06)	0.25*** (4.58)			
PE x t+24		0.23*** (17.06)	0.18*** (12.37)	0.25*** (12.70)	0.18*** (15.46)	0.23*** (15.65)	0.17*** (12.62)	0.27*** (23.12)	0.07*** (3.35)	0.06 (0.89)	0.16*** (7.18)	0.21*** (13.92)	0.30*** (4.92)			
PE x t+36		0.23*** (16.66)	0.18*** (12.48)	0.26*** (12.64)	0.19*** (15.39)	0.23*** (14.94)	0.18*** (12.89)	0.28*** (23.30)	0.06*** (2.94)	0.11* (1.72)	0.16*** (6.94)	0.22*** (14.12)	0.25*** (3.96)			
PE x t+48		0.23*** (15.92)	0.17*** (11.48)	0.27*** (12.51)	0.18*** (14.22)	0.21*** (13.75)	0.18*** (12.23)	0.28*** (22.19)	0.05*** (2.43)	0.14* (1.96)	0.14*** (5.75)	0.21*** (13.17)	0.22*** (3.32)			
Employment controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Observations		84565	102735	51534	125026	94869	92431	138742	48558	2581	41681	72554	4961			
R-squared		0.93	0.93	0.93	0.93	0.92	0.95	0.93	0.94	0.92	0.93	0.92	0.95			
Firm FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Event time FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Mean dep. var. in t=-12		5.83	5.21	5.23	5.67	5.54	5.43	5.49	5.49	6.38	5.40	5.77	5.37			
Mean firm age		26.92	28.06	35.43	24.60	21.55	33.82	27.22	28.43	28.69	26.41	28.65	33.11			
Mean holding period										4.04	4.93	3.75	3.97			

Table 12: Effects on Hierarchies Around PE Exit

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group, estimated around the *exit* from PE Buyout ownership rather than the PE Buyout entry event. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth 6 months before the exit. The dependent variable is the number of hierarchy layers. The coefficients are estimated from equation (1) with time indexed relative to the exit event. The sample is split by exit type: all exits (Column 1), secondary buyout (Column 2), IPO (Column 3), M&A (Column 4), and bankruptcy (Column 5). The period 12 months before the exit, $t - 12$, is the omitted reference period. Employment controls include $\ln$ Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable Sample:	No. hierarchies				
	All exits	Secondary exit	IPO exit	M&A exit	Bankruptcy
	(1)	(2)	(3)	(4)	(5)
Exit from PE x t-48	0.00 (0.07)	-0.00 (-0.15)	0.01 (0.14)	0.02 (0.79)	-0.08 (-1.38)
Exit from PE x t-36	0.01 (1.11)	0.00 (0.18)	0.03 (0.54)	0.04* (1.92)	-0.05 (-1.03)
Exit from PE x t-24	0.01 (1.10)	0.01 (1.37)	0.02 (0.48)	-0.00 (-0.29)	0.02 (0.60)
Exit from PE x t+0	0.03*** (2.60)	0.05*** (4.33)	0.02 (0.56)	-0.02 (-1.00)	-0.04 (-0.89)
Exit from PE x t+12	-0.00 (-0.36)	0.05*** (3.38)	0.01 (0.23)	-0.11*** (-4.77)	-0.08 (-1.20)
Exit from PE x t+24	0.01 (0.84)	0.07*** (4.30)	-0.01 (-0.18)	-0.09*** (-3.86)	-0.09 (-1.38)
Exit from PE x t+36	0.00 (0.19)	0.06*** (3.21)	-0.04 (-0.60)	-0.10*** (-3.83)	-0.04 (-0.63)
Exit from PE x t+48	-0.01 (-0.52)	0.04** (2.08)	-0.04 (-0.47)	-0.09*** (-3.47)	-0.04 (-0.64)
<i>Employment controls</i>					
$\ln$ Employees (t-1)	3.52*** (68.39)	3.73*** (52.41)	3.26*** (6.88)	3.37*** (38.14)	2.89*** (17.55)
$\ln$ Employees (t-1) ²	-0.48*** (-40.48)	-0.53*** (-32.92)	-0.45*** (-4.92)	-0.45*** (-20.16)	-0.34*** (-8.61)
$\ln$ Employees (t-1) ³	0.02*** (26.37)	0.02*** (22.48)	0.02*** (3.80)	0.02*** (11.77)	0.01*** (4.78)
Employment growth 12m	0.06*** (5.59)	0.07*** (4.94)	-0.03 (-0.39)	0.04** (2.46)	0.07* (1.89)
Observations	85620	51883	1889	27336	4512
No. deals	4787	2893	105	1535	254
R-squared	0.93	0.92	0.94	0.94	0.95
Firm FE	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes
Mean dependent var	5.91	6.08	6.61	5.62	5.45

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A.1 Variable Definitions

The table reports variable definitions. All variables are measured at the firm-month level unless otherwise noted. Data from Revelio Labs are matched to private equity deal-level information from PitchBook. Employees are assigned to hierarchical layers based on the Revelio Labs seniority layer, which ranges from $\ell = 1$ (lowest) to $\ell = 7$ (highest). We further group layers into three levels: workers ($\ell \in \{1, 2\}$), middle management ($\ell \in \{3, 4, 5\}$), and executives ($\ell \in \{6, 7\}$). We also classify employees into horizontal functions f (e.g., Product-related (R&D, Sales, Marketing, Engineering), Administrative (Admin, Finance, General Management), and In-between (Operations)) based on Revelio Labs job category taxonomy. Unless otherwise noted, all variables that are reported at the aggregate firm level are also computed separately by layer ℓ , by level, and by function f .

Variable	Definition
<i>Employment</i>	
Employees	Total number of employees in the firm.
Employment growth (12m)	Twelve-month employment growth rate using the Davis-Haltiwanger-Schuh (DHS) midpoint employment growth formula: $g_t = \frac{E_t - E_{t-12}}{\frac{1}{2}(E_t + E_{t-12})}$.
Hirings	Number of employees newly hired at the firm in a given month.
Firings	Number of employees separated from the firm in a given month.
Turnover (12m)	Twelve-month rolling turnover rate: $\text{Turnover}_t = \frac{\sum_{s=t-11}^t (H_s + F_s) / 2}{\frac{1}{2}(E_t + E_{t-12})}$ where H_s and F_s denote hirings and firings in month s , and E_t denotes employment in month t . The denominator is the DHS midpoint employment. Also computed by level and function, using the respective employment stocks and flows.
Replacement (12m)	Twelve-month rolling replacement rate: $\text{Replacement}_t = \frac{\min(\sum_{s=t-11}^t H_s, \sum_{s=t-11}^t F_s)}{\frac{1}{2}(E_t + E_{t-12})}$ The numerator captures worker flows that constitute direct replacements—positions that are both vacated and refilled. Also computed by level and function.
<i>Hierarchy</i>	
Number of layers	Number of filled hierarchical layers in the firm, ranging from 1 to 7. A layer is counted as filled if the firm has at least one employee in that layer.
Filled layer ℓ ? (0/1)	Indicator equal to one if the firm has at least one employee in layer ℓ , and zero otherwise. Defined for $\ell = 1, \dots, 7$.
Employment share of layer ℓ	Employees in layer ℓ divided by total employees. Defined for $\ell = 1, \dots, 7$. Also computed by management level: top management ($\ell \in \{6, 7\}$), middle management ($\ell \in \{3, 4, 5\}$), rank-and-file ($\ell \in \{1, 2\}$).
Control span of layer ℓ	Total employees in all layers below ℓ divided by employees in layer ℓ . Defined for $\ell = 2, \dots, 7$.
<i>Firm functions</i>	

Continued on next page

Appendix A.1 (continued)

Variable	Definition
Employment share of function f	Employees in function f divided by total employees. Functions: General management, Finance, Admin. (administrative); Operations (in-between); Sales & Marketing, R&D, Engineering (product-related).
Has CXO? (0/1)	Indicator equal to one if the firm has at least one employee whose title matches the respective C-suite role, and zero otherwise. Defined for CEO (<i>Executive</i>), CFO (<i>Financial</i>), COO (<i>Operating</i>), CTO (<i>Technology</i>), CHRO (<i>Human Resources/People/Talent</i>), CIO (<i>Information</i>), CLO (<i>Legal</i>), CAO (<i>Administrative</i>), CPO (<i>Product</i>), CMO (<i>Marketing</i>), and CSRO (<i>Sales/Revenue/Growth</i>). Each role is identified via regex pattern matching on job titles, grouping functionally equivalent variants under a single indicator, e.g. Sales/Revenue/Growth.
Has any other CXO? (0/1)	Indicator for any chief officer title not in the list above.
# Chief Officers	Count of distinct C-suite positions filled at the firm.
<i>Individual characteristics</i>	
Age	Age of the employee (in years).
Experience	Career experience (in years). Experience is measured as years since an employee's earliest observed position or earliest graduation date, whichever comes first.
Education	Education level (categorical) of employees. Scale: 1 = high school, 2 = bachelor's, 3 = master's/MBA, 4 = doctoral.
Top 20 university (0/1)	Indicator for whether the employee graduated from a top-20 ranked U.S. university (list according to the 2025 U.S. News National University ranking).
MBA (0/1)	Indicator for whether the employee holds an MBA degree.
Military background (0/1)	Indicator for whether the employee has been observed in a position at a military organization.
Total compensation	Total annual compensation (USD) as given by Revelio's proprietary expected total compensation algorithm. The algorithm's prediction is based on job position, firm, and individual career background information.
Layer in prior position	Seniority layer of the employee's most recent position before joining the firm.
PE-backing experience (0/1)	Indicator for whether the person worked at a PE-backed firm, in any of the prior job positions.
PE-backing experience same GP (0/1)	Indicator for whether the person worked at a firm backed by the same GP, in any of the prior job positions.

A.2 Firm Matching and Dataset Linkage Procedures

This appendix describes the procedures used to link firms across the five datasets used in the analysis: Revelio Labs, PitchBook, Refinitiv IPO, Refinitiv M&A, and Orbis M&A. Because these databases do not share a universal firm identifier, we implement a structured entity-matching procedure based on standardized identifiers, hierarchical matching rules, and score-based validation.

The matching procedure consists of three steps. First, firm identifiers are standardized across datasets to ensure comparability. Second, candidate matches are generated using a hierarchical matching procedure that prioritizes LinkedIn identifiers, corporate websites, and company names, which are the most reliable firm-level identifiers available across databases. Third, candidate pairs are evaluated using a scoring algorithm and the highest-quality match is selected. The aggregate similarity score captures the primary evidence linking firms across datasets and therefore serves as the first-order criterion for match selection, as it reflects agreement in the most informative identifiers. The secondary validation score provides additional confirmation based on geographic, temporal, and industry information, which are useful for distinguishing firms with similar names but are less reliable as primary identifiers. Accordingly, the validation score is used only to rank candidate matches with similar aggregate scores rather than to impose an independent threshold.

I. Standardization of Firm Identifiers

Before matching firms across datasets, we standardize key identifiers to ensure comparability across sources. Corporate website URLs are normalized by converting all text to lowercase, removing prefixes such as “www”, enforcing a consistent protocol format (e.g., converting HTTPS to HTTP), removing default ports, and eliminating trailing slashes. Company names are standardized by converting text to lowercase, removing punctuation and non-ASCII characters, and replacing common abbreviations (for example, “ltd” is replaced by “limited”). Because firms may appear under multiple names across datasets, we retain and standardize all available name variants, including legal names, historical names, aliases, and short names. Geographic identifiers such as country, state, and city are harmonized using consistent naming conventions.

II. Hierarchical Firm Matching

Firms are matched across datasets using a hierarchical procedure that sequentially applies identifiers with decreasing specificity. The algorithm first attempts to match firms using LinkedIn company URLs and corporate websites, which typically correspond to unique firm entities. When these identifiers are unavailable, the procedure relies on company names. Because firms often appear under multiple name variants across datasets, the algorithm compares all available versions of corporate names across candidate pairs. Let N_i denote the set of standardized names associated with firm i and N_j denote the set associated with firm j . The name similarity score is defined as $\text{NameScore}_{ij} = \max_{n \in N_i, m \in N_j} \text{sim}(n, m)$, where $\text{sim}(\cdot)$ denotes the fuzzy string similarity metric.

III. Aggregate Matching Score

For each candidate firm pair (i, j) we compute an aggregate similarity score summarizing the primary evidence linking the two firms:

$$\text{AggScore}_{ij} = S_{ij}^{\text{LinkedIn}} + S_{ij}^{\text{Website}} + S_{ij}^{\text{Name}}.$$

The components are defined as follows. The LinkedIn component equals $S_{ij}^{\text{LinkedIn}} = 1$ if LinkedIn URLs match and -1 otherwise. The website component equals $S_{ij}^{\text{Website}} = 1$ if corporate websites match, -1 if websites conflict, and 0 if one or both websites are missing. The name component equals $S_{ij}^{\text{Name}} = 1$ if $\text{NameScore}_{ij} \geq \tau$ and 0 otherwise. Candidate matches are retained only if $\text{AggScore}_{ij} > 0.85$.

IV. Secondary Validation Score

To further distinguish firms with similar names, we compute a validation score based on geographic location, founding year, and industry classification:

$$\text{SubScore}_{ij} = S_{ij}^{\text{Location}} + S_{ij}^{\text{Year}} + S_{ij}^{\text{Industry}}.$$

The location component is defined as $S_{ij}^{\text{Location}} = 0.75 I(\text{country match}) + 0.50 I(\text{state match}) + 0.25 I(\text{city match})$, where $I(\cdot)$ denotes an indicator function. The founding-year component equals $S_{ij}^{\text{Year}} = 0.5$ if founding years match and -0.5 otherwise. The industry component equals $S_{ij}^{\text{Industry}} = 1$ if NAICS codes match and -1 otherwise.

V. Final Match Selection

After applying the aggregate score threshold, a firm may still have multiple candidate matches. The final match is selected by ranking candidate pairs according to $\max_j \text{AggScore}_{ij}$. If multiple candidates share the same aggregate score, ties are broken using $\max_j \text{SubScore}_{ij}$. The candidate with the highest aggregate score and, conditional on that, the highest validation score is selected as the final match.

VI. Linking IPO and M&A Transactions

We link PitchBook firms to the Refinitiv IPO database using the matching procedure described above. Candidate pairs are first restricted to observations with identical headquarters country. Corporate websites and company names are then compared across datasets, and matches are retained only if the aggregate similarity score exceeds the threshold.

To identify acquisition events, we combine transaction data from the Refinitiv M&A and Orbis M&A databases. Two additional filters are applied to ensure that transactions correspond to strategic acquisitions rather than financial sponsor deals. First, we exclude transactions in which the acquiring firm is a financial investor or the deal is classified as a financial sponsor transaction. Second, we restrict the sample to transactions representing a transfer of corporate control; a deal is included only when the ownership stake acquired is at least 50% or when the transaction description explicitly indicates that the acquirer obtained majority shares. For acquisition events, we combine Refinitiv and Orbis M&A databases because each source captures transactions that may be missing in the other, allowing us to improve coverage of exit outcomes while maintaining consistent identification of control-changing acquisitions.

VII. Final Linked Dataset

Applying the procedures described above produces a unified dataset linking firm-level organizational information from Revelio with private equity transactions from PitchBook and exit outcomes from Refinitiv IPO and the M&A databases. The hierarchical matching procedure combined with score-based validation ensures consistent firm identifiers across databases while minimizing false matches arising from naming inconsistencies or changes in corporate structure.

A.3 Plausibility of the assignment of job titles

Table A2: Distribution of Example Job Titles Across Seniority Levels

The table reports the distribution of six benchmark job titles across the seven Revelio seniority levels, based on all 85 million active LinkedIn positions in the United States as of December 2020. Each column sums to 100%. The titles are identified by string search in the raw job title field.

Layer	Share of occurrences at each seniority level (%)					
	'CEO'	'CTO'	'Director of Engineering'	'Engineering Manager'	'Senior Software Engineer'	'Software Engineer'
7	94.5	91.0	0.0	0.0	0.0	0.0
6	5.3	0.5	10.2	0.0	0.0	0.0
5	0.0	8.3	89.4	50.4	3.7	0.0
4	0.0	0.0	0.2	48.9	11.9	0.3
3	0.2	0.2	0.1	0.5	30.4	8.8
2	0.0	0.1	0.0	0.2	54.0	90.2
1	0.0	0.0	0.0	0.0	0.0	0.7

Table A3: Distribution of Example Job Titles Across Job Functions

The table reports the distribution of seven benchmark job titles across Revelio job functions, based on all 85 million active LinkedIn positions in the United States as of December 2020. Each row sums to 100%. The titles are identified by string search in the raw job title field.

Job Category	Share of occurrences within job category (%)						
	'Administrative Assistant'	'Software Engineer'	'Financial Analyst'	'Marketing Manager'	'Logistics Coordinator'	'Sales Manager'	'Researcher'
Admin	90.3	0.9	0.0	1.0	0.0	0.8	6.4
Engineer	0.0	99.0	0.0	0.2	0.0	0.5	0.1
Finance	0.5	0.0	99.3	0.7	0.0	3.0	0.1
Marketing	0.6	0.0	0.0	90.1	0.0	0.6	0.2
Operations	0.7	0.0	0.6	0.1	99.6	0.5	0.0
Sales	6.6	0.0	0.0	7.7	0.3	94.4	0.0
Scientist	1.2	0.0	0.0	0.1	0.0	0.1	93.2

Table A4: Job Titles by Orgainizational Layer - Six-layer firms only

This table lists the five most frequent job titles for each organizational layer for all persons employed in US-based firms with six layers, as of December 2020. A six-layered firm is defined as having at least one employee in all six bottom seniority levels, that is, except the top level 7, as classified by Revelio Labs.

Layer	Frequency rank	Title	Count	Total persons in layer	Percentage share
7	#N/A	#N/A	#N/A	#N/A	#N/A
7	#N/A	#N/A	#N/A	#N/A	#N/A
7	#N/A	#N/A	#N/A	#N/A	#N/A
7	#N/A	#N/A	#N/A	#N/A	#N/A
7	#N/A	#N/A	#N/A	#N/A	#N/A
6	1	Partner	21,312	187,983	11.34
6	2	Principal	9,169		4.88
6	3	Managing Partner	4,781		2.54
6	4	Managing Director	4,621		2.46
6	5	Executive Director	4,199		2.23
5	1	President	19,012	710,929	2.67
5	2	Realtor	18,638		2.62
5	3	Adjunct Professor	15,965		2.25
5	4	General Manager	14,664		2.06
5	5	Director	12,267		1.73
4	1	Member	14,108	625,588	2.26
4	2	Consultant	10,540		1.68
4	3	Manager	10,455		1.67
4	4	Sales Manager	9,639		1.54
4	5	Vice President	9,044		1.45
3	1	Account Manager	13,880	562,961	2.47
3	2	Project Manager	11,578		2.06
3	3	Account Executive	8,250		1.47
3	4	Owner	7,291		1.30
3	5	Operations Manager	6,604		1.17
2	1	Project Manager	24,620	1,559,193	1.58
2	2	Registered Nurse	19,314		1.24
2	3	Software Engineer	15,174		0.97
2	4	Associate	13,794		0.88
2	5	Supervisor	10,613		0.68
1	1	Teacher	43,885	2,230,075	1.97
1	2	Administrative Assistant	25,341		1.14
1	3	Student	24,498		1.10
1	4	Sales Associate	17,639		0.79
1	5	Substitute Teacher	17,076		0.77
Total				5,876,729	

A.4 Formal check of layer properties - replicating [Caliendo et al. \(2015\)](#)

Tables [Table A5](#) to [Table A9](#) presents summary statistics of the compensation, education, and experience distributions by layer in the 2020 cross-section of US firms using Revelio data. This analysis replicates the layer property analysis of [Caliendo et al. \(2015\)](#). To make the analysis comparable, we remap the the 7 Revelio seniority levels into 4 Caliendo-comparable layers:

- Layer 4 (Top management) = seniority 6–7
- Layer 3 (Mid-management) = seniority 5
- Layer 2 (Supervisors) = seniority 3–4
- Layer 1 (Workers) = seniority 1–2

We find that education, experience, and compensation are all higher for higher layers.

Table A5: Distribution of compensation, education, and experience by layer (remapped)

This table is based on Table 1 in Caliendo et al. (2015). It reports mean and percentiles of career experience (in years), education, and total annual compensation (USD) for each of the 4 re-mapped layers in the 2020 cross-section of US firms. Education levels: 1 – High school or below; 2 – Bachelor’s degree; 3 – Master’s degree; 4 – PhD. Experience is counted from the first job entry date or earliest graduation date, whichever comes first.

(a) Experience (years), 2020 cross-section				
	Layer 1	Layer 2	Layer 3	Layer 4
mean	14.44	18.39	22.08	23.52
p5	2	4	6	7
p10	3	6	8	10
p25	6	10	14	15
p50	12	16	21	23
p75	20	25	29	31
p90	31	34	38	38
p95	37	40	43	43
N	52,989,320	18,618,648	10,653,154	3,513,015
(b) Education, 2020 cross-section				
	Layer 1	Layer 2	Layer 3	Layer 4
mean	1.45	1.64	1.70	1.76
p5	1	1	1	1
p10	1	1	1	1
p25	1	1	1	1
p50	1	1	1	2
p75	2	2	2	2
p90	2	3	3	3
p95	3	3	3	3
N	52,989,320	18,618,648	10,653,154	3,513,015
(c) Compensation, 2020 cross-section				
	Layer 1	Layer 2	Layer 3	Layer 4
mean	61,043	102,802	228,861	484,904
p5	11,638	16,780	44,937	66,271
p10	21,623	30,777	68,835	99,110
p25	35,960	64,562	129,563	239,285
p50	54,182	99,333	224,951	355,277
p75	78,633	133,065	305,984	602,222
p90	107,105	169,724	386,401	1,050,890
p95	127,608	199,562	446,910	1,311,336
N	52,989,320	18,618,648	10,653,154	3,513,015

Table A6: Data description by number of managerial layers (remapped)

This table is based on Table 3 in Caliendo et al. (2015). It reports descriptive statistics for firms by the number of filled seniority layers in the 2020 cross-section. *# of emp.* refers to the number of employees. *Comp.* refers to mean total annual compensation (USD) across employees. *Exp.* refers to mean experience years across employees. Firm-level means are first computed within each firm, then averaged across firms.

# layers	firms	# of emp.		Compensation		Experience	
		median	mean	mean	median	mean	median
4	409,915	25	175.21	174,011	152,021	17.84	17.64
3	540,978	7	13.75	167,758	130,718	17.77	17.20
2	836,436	3	4.40	171,133	110,120	17.41	16.09
1	1,922,360	1	1.47	177,461	82,255	16.81	14.33

Table A7: Percentage of firms that have consecutively ordered layers (remapped)

This table is based on Table 4 in Caliendo et al. (2015). It reports the fraction of firms with consecutively ordered layers (i.e., a firm with k filled layers fills exactly layers 1 through k) for different numbers of seniority layers in the 2020 cross-section. The first row presents the unweighted share. The second row presents the shares weighted by the total number of employees.

	Among firms with				
	4 layers	3 layers	2 layers	1 layer	All Firms
Unweighted	100.00	64.09	43.59	52.20	57.27
Weighted by # emp.	100.00	80.56	52.54	62.41	94.94

Table A8: Firms that satisfy a hierarchy in the number of employees (remapped)

This table is based on Table 5 in Caliendo et al. (2015). It reports the share of firms that satisfy a hierarchy in the number of employees separately for firms with 1 to 4 layers in the 2020 cross-section. Column (1) reports the fraction of firms that satisfy a hierarchy at all layers. Columns (2)–(4) display the fraction of firms that satisfy a hierarchy at each adjacent pair. A firm satisfies a hierarchy in the number of employees if $n_\ell \geq n_{\ell+1}$ for all relevant layers ℓ .

# layers	n firms	(1)	(2)	(3)	(4)
		$n_L^\ell \geq n_L^{\ell+1} \forall \ell$	$n_1 \geq n_2$	$n_2 \geq n_3$	$n_3 \geq n_4$
1	1,922,360	100.0	80.2	85.3	86.7
2	836,436	81.9	81.9	66.8	82.1
3	540,978	57.2	84.8	70.3	78.3
4	409,915	49.4	85.8	72.2	84.9

Table A9: Firms that satisfy a hierarchy in wages (remapped)

This table is based on Table 6 in Caliendo et al. (2015). It reports the share of firms that satisfy a hierarchy in wages separately for firms with 1 to 4 layers in the 2020 cross-section. Column (1) reports the fraction of firms that satisfy a hierarchy at all layers. Columns (2)–(4) display the fraction of firms that satisfy a hierarchy at each adjacent pair. A firm satisfies a hierarchy in wages if $w_{\ell+1} \geq w_{\ell}$ for all relevant layers ℓ .

# layers	n firms	(1)	(2)	(3)	(4)
		$w_L^{\ell+1} \geq w_L^{\ell}$ $\forall \ell$	$w_2 \geq w_1$	$w_3 \geq w_2$	$w_4 \geq w_3$
1	1,922,360	100.0	0.0	0.0	0.0
2	836,436	38.5	38.5	7.0	4.9
3	540,978	53.3	73.6	63.6	14.5
4	409,915	76.2	92.9	95.2	86.3

A.5 Firm Size and Hierarchies

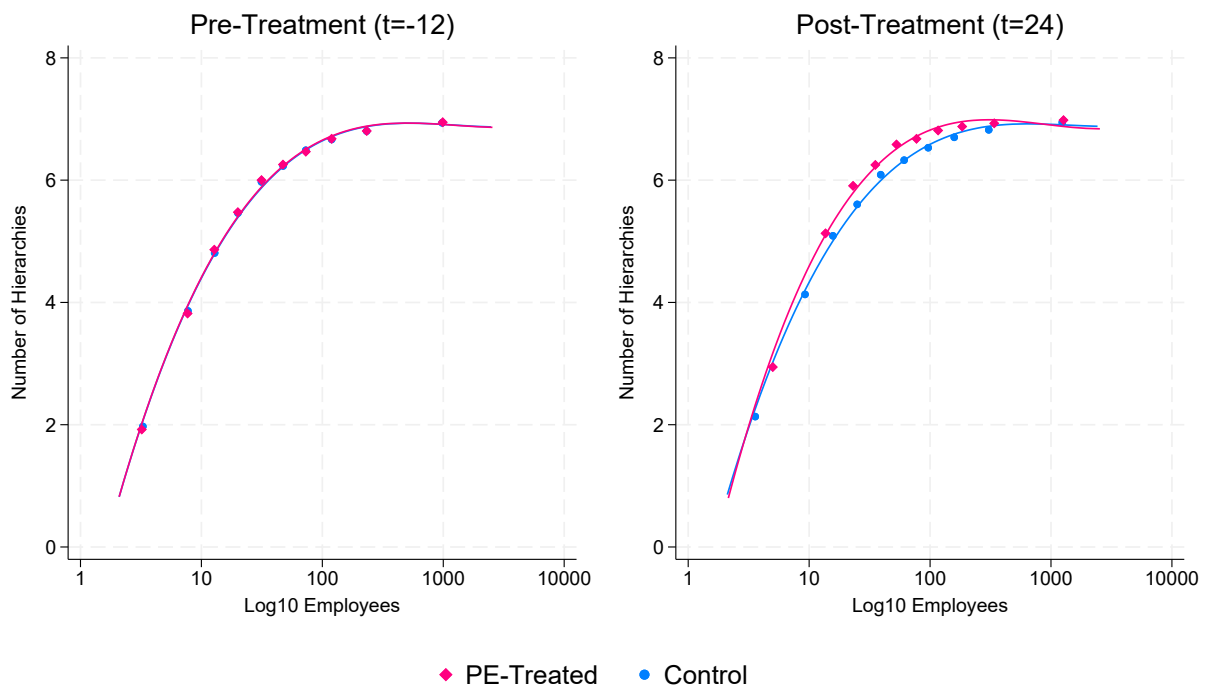
Table A10: Firm Size and Hierarchies

This table reports OLS regressions of the number of hierarchy layers on firm size, estimated in the cross-section of PE-backed and control firms at $t = -12$ (12 months before the buyout). The dependent variable is the number of hierarchy layers. The independent variables are polynomial terms of the natural log of employment. Each column adds a higher-order polynomial term. T-statistics based on robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Number of hierarchies			
	(1)	(2)	(3)	(4)
ln Employees (t-1)	0.82*** (133.73)	2.44*** (140.17)	3.69*** (118.71)	3.61*** (39.18)
ln Employees (t-1) ²		-0.20*** (-86.47)	-0.53*** (-64.59)	-0.49*** (-12.40)
ln Employees (t-1) ³			0.02*** (39.65)	0.02*** (2.96)
ln Employees (t-1) ⁴				0.00 (0.69)
Constant	2.42*** (97.78)	-0.31*** (-10.68)	-1.58*** (-48.28)	-1.53*** (-23.60)
Observations	20902	20902	20902	20902
R-squared	0.62	0.80	0.82	0.82
Mean dep. var. in t=-12	5.49	5.49	5.49	5.49

Figure A1: Size and Hierarchies–Pre and post PE buyout

This figure shows binned scatterplots of the number of hierarchies as a function of firm size. The figure plots four binscatters: 12 months pre- and 24 months post buyout ($t - 12$ and $t + 24$), each for PE-treated and control. The dots are averages for binned observations split into 10 deciles of the firm size variable. The lines are regressions of number of hierarchies on a third polynomial of firm size based on the raw data (not the binned averages).



A.6 Additional Analyses

Table A11: PE Buyout Effects on Employment Share by Layer

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the employment share (in %) of each hierarchy layer. The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	Employment share (%)						
	Layer 7 (top)	Layer 6	Layer 5	Layer 4	Layer 3	Layer 2	Layer 1 (bottom)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	-0.08 (-0.93)	-0.02 (-0.18)	-0.01 (-0.06)	0.02 (0.13)	-0.04 (-0.35)	0.00 (0.02)	0.13 (0.76)
PE x t-36	-0.17** (-2.41)	0.00 (0.06)	0.03 (0.27)	-0.02 (-0.22)	-0.12 (-1.31)	0.12 (0.93)	0.16 (1.15)
PE x t-24	-0.07* (-1.86)	-0.03 (-0.95)	0.00 (0.02)	-0.04 (-0.72)	0.01 (0.19)	0.09 (1.17)	0.05 (0.56)
PE x t+0	0.91*** (13.44)	0.39*** (6.59)	1.16*** (10.23)	-0.16 (-1.64)	-0.30*** (-3.45)	-0.71*** (-5.81)	-1.30*** (-10.01)
PE x t+12	1.15*** (13.55)	0.54*** (7.70)	1.49*** (11.09)	-0.01 (-0.06)	-0.28*** (-2.71)	-1.04*** (-7.22)	-1.84*** (-11.92)
PE x t+24	1.23*** (14.23)	0.63*** (8.50)	1.53*** (10.76)	0.05 (0.37)	-0.18 (-1.63)	-1.18*** (-7.45)	-2.07*** (-12.36)
PE x t+36	1.07*** (12.24)	0.68*** (8.74)	1.46*** (9.82)	0.00 (0.01)	-0.08 (-0.70)	-1.17*** (-6.92)	-1.96*** (-10.87)
PE x t+48	1.03*** (11.37)	0.71*** (8.86)	1.36*** (8.68)	0.04 (0.28)	-0.03 (-0.21)	-1.06*** (-5.99)	-2.06*** (-10.95)
<i>Controls</i>							
ln Employees (t-1)	-1.18** (-1.96)	-1.08* (-1.94)	-1.81* (-1.89)	-1.65* (-1.94)	-1.34* (-1.83)	1.13 (1.19)	5.94*** (6.16)
ln Employees (t-1) ²	-0.08 (-0.59)	0.09 (0.72)	0.23 (1.05)	0.39** (2.02)	0.38** (2.32)	0.12 (0.56)	-1.12*** (-5.14)
ln Employees (t-1) ³	0.01 (1.57)	-0.00 (-0.36)	-0.02 (-1.04)	-0.03** (-2.11)	-0.03** (-2.40)	-0.02 (-1.07)	0.07*** (4.88)
Employment growth	0.94*** (7.09)	0.36*** (3.58)	-0.14 (-0.80)	-0.65*** (-4.73)	-0.06 (-0.44)	-0.65*** (-3.76)	0.20 (1.12)
Observations	187300	187300	187300	187300	187300	187300	187300
R-squared	0.75	0.72	0.76	0.72	0.73	0.76	0.84
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	3.19	3.34	15.68	13.31	10.69	25.36	28.43

Table A12: PE Buyout Effects on Control Spans

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the natural logarithm of the control span in layer l , defined as the number of employees in all layers below layer l , divided by the employees in layer l . The coefficients are estimating from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference period. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	LN (Control Span)					
	Layer 7 (top)	Layer 6	Layer 5	Layer 4	Layer 3	Layer 2
	(1)	(2)	(3)	(4)	(5)	(6)
PE x t-48	0.00 (0.30)	0.01 (1.05)	0.00 (0.29)	-0.01 (-1.59)	-0.00 (-0.45)	0.00 (0.91)
PE x t-36	0.01 (1.10)	0.00 (0.15)	-0.00 (-0.22)	-0.00 (-0.71)	0.00 (0.22)	0.00 (1.19)
PE x t-24	0.01 (1.32)	0.00 (1.02)	-0.00 (-0.33)	0.00 (1.38)	0.00 (1.01)	0.00 (0.97)
PE x t+0	-0.03*** (-4.01)	-0.03*** (-4.32)	-0.05*** (-11.66)	-0.01*** (-3.09)	-0.01 (-1.52)	-0.00 (-0.72)
PE x t+12	-0.13*** (-15.29)	-0.08*** (-9.10)	-0.09*** (-16.49)	-0.04*** (-6.17)	-0.02*** (-3.05)	-0.01*** (-2.72)
PE x t+24	-0.15*** (-16.61)	-0.09*** (-10.04)	-0.10*** (-16.34)	-0.05*** (-7.93)	-0.03*** (-4.51)	-0.02*** (-3.45)
PE x t+36	-0.16*** (-16.61)	-0.11*** (-10.65)	-0.10*** (-15.31)	-0.05*** (-6.82)	-0.05*** (-6.33)	-0.01*** (-2.90)
PE x t+48	-0.15*** (-15.05)	-0.11*** (-10.52)	-0.10*** (-14.09)	-0.05*** (-6.53)	-0.05*** (-6.21)	-0.02*** (-3.55)
<i>Controls</i>						
ln Employees (t-1)	1.29*** (35.78)	1.78*** (44.04)	1.16*** (43.69)	1.39*** (48.29)	1.53*** (49.50)	0.69*** (35.67)
ln Employees (t-1) ²	-0.10*** (-11.43)	-0.24*** (-27.00)	-0.22*** (-34.02)	-0.26*** (-39.42)	-0.29*** (-41.44)	-0.15*** (-32.92)
ln Employees (t-1) ³	0.00*** (5.08)	0.01*** (17.51)	0.01*** (28.26)	0.02*** (32.75)	0.02*** (34.84)	0.01*** (29.49)
Employment growth	-0.04*** (-6.50)	-0.03*** (-3.57)	-0.03*** (-4.76)	0.00 (0.90)	-0.01 (-1.24)	0.01*** (3.38)
Observations	116211	111889	165791	160958	152872	169670
R-squared	0.95	0.90	0.87	0.84	0.86	0.84
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	3.73	3.30	1.87	1.80	1.80	0.74

Table A13: PE Buyout Effects on Employment Share by Layer — Seven-Layer Firms

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. The sample is restricted to firms with all seven hierarchy layers filled at $t = -12$. The dependent variable is the employment share (in %) of each hierarchy layer. The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable Sample	Employment share (%)						
	Only 7-layer firms (in $t=-12$)						
	Layer 7 (top)	Layer 6	Layer 5	Layer 4	Layer 3	Layer 2	Layer 1 (bottom)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x $t-48$	0.05 (0.51)	-0.07 (-0.83)	0.14 (1.12)	0.13 (1.15)	-0.07 (-0.67)	-0.21 (-1.44)	0.04 (0.27)
PE x $t-36$	-0.01 (-0.17)	-0.03 (-0.52)	0.09 (1.00)	0.13 (1.47)	-0.11 (-1.34)	-0.12 (-1.04)	0.05 (0.42)
PE x $t-24$	0.03 (1.21)	-0.01 (-0.16)	0.06 (1.08)	-0.02 (-0.42)	-0.02 (-0.33)	-0.12* (-1.72)	0.08 (1.05)
PE x $t+0$	0.12*** (3.45)	0.07* (1.83)	0.33*** (4.83)	-0.18*** (-2.77)	-0.11* (-1.87)	-0.06 (-0.73)	-0.17** (-2.00)
PE x $t+12$	0.14*** (2.91)	0.11** (2.32)	0.49*** (5.48)	-0.18** (-2.08)	-0.25*** (-3.26)	-0.12 (-1.09)	-0.21* (-1.87)
PE x $t+24$	0.14*** (2.70)	0.20*** (3.53)	0.50*** (4.89)	-0.05 (-0.58)	-0.21** (-2.38)	-0.27** (-2.19)	-0.30** (-2.39)
PE x $t+36$	0.07 (1.43)	0.22*** (3.68)	0.59*** (5.19)	-0.09 (-0.92)	-0.12 (-1.30)	-0.31** (-2.28)	-0.35** (-2.48)
PE x $t+48$	0.04 (0.74)	0.23*** (3.60)	0.54*** (4.50)	-0.07 (-0.66)	-0.14 (-1.40)	-0.18 (-1.22)	-0.42*** (-2.76)
<i>Controls</i>							
ln Employees ($t-1$)	-6.91*** (-3.92)	-1.27 (-1.11)	3.11* (1.88)	1.29 (0.82)	1.84 (1.38)	2.67 (1.37)	-0.74 (-0.31)
ln Employees ($t-1$) ²	0.90*** (2.67)	-0.02 (-0.10)	-0.76** (-2.42)	-0.14 (-0.45)	-0.21 (-0.81)	-0.02 (-0.05)	0.24 (0.53)
ln Employees ($t-1$) ³	-0.04* (-1.86)	0.01 (0.89)	0.05** (2.45)	0.00 (0.14)	0.01 (0.52)	-0.02 (-0.73)	-0.01 (-0.54)
Employment growth 12m	1.25*** (5.91)	0.54*** (3.76)	0.56*** (2.82)	-0.34* (-1.93)	-0.19 (-1.37)	-0.76*** (-3.39)	-1.07*** (-4.78)
Observations	77453	77453	77453	77453	77453	77453	77453
R-squared	0.66	0.76	0.83	0.78	0.78	0.85	0.93
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in $t=-12$	2.47	4.19	15.17	13.29	11.47	27.35	26.06

Table A14: PE Buyout Effects on Vertical Layers and Horizontal Functions

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the employment share (in %) in each vertical layer and each horizontal function category. The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Employment share (%)					
	Vertical layers			Horizontal functions		
	Top mgmt.	Middle mgmt.	Rank-and- file	Admin.	Operations	Product- related
	(1)	(2)	(3)	(4)	(5)	(6)
PE x t-48	-0.10 (-0.84)	-0.04 (-0.18)	0.13 (0.69)	-0.15 (-0.95)	-0.13 (-1.13)	0.28 (1.61)
PE x t-36	-0.17* (-1.84)	-0.12 (-0.77)	0.28* (1.84)	-0.11 (-0.94)	0.00 (0.04)	0.11 (0.80)
PE x t-24	-0.10** (-2.06)	-0.03 (-0.36)	0.14 (1.53)	-0.11 (-1.50)	-0.01 (-0.17)	0.12 (1.45)
PE x t+0	1.30*** (14.71)	0.71*** (4.94)	-2.01*** (-13.96)	1.15*** (9.85)	0.52*** (5.63)	-1.67*** (-12.40)
PE x t+12	1.69*** (15.67)	1.20*** (7.00)	-2.89*** (-16.49)	1.82*** (12.97)	0.35*** (3.26)	-2.18*** (-13.65)
PE x t+24	1.86*** (16.82)	1.39*** (7.52)	-3.25*** (-17.11)	1.97*** (13.04)	0.25** (2.19)	-2.22*** (-12.95)
PE x t+36	1.75*** (15.25)	1.38*** (6.99)	-3.13*** (-15.21)	1.76*** (10.96)	0.20 (1.57)	-1.95*** (-10.69)
PE x t+48	1.74*** (14.63)	1.38*** (6.66)	-3.11*** (-14.47)	1.65*** (9.85)	0.14 (1.05)	-1.78*** (-9.35)
<i>Controls</i>						
ln Employees (t-1)	-2.27*** (-2.85)	-4.80*** (-4.05)	7.06*** (6.04)	0.69 (0.69)	-2.43*** (-3.03)	1.74 (1.54)
ln Employees (t-1) ²	0.01 (0.06)	0.99*** (3.72)	-1.00*** (-3.80)	-0.19 (-0.86)	0.32* (1.76)	-0.12 (-0.50)
ln Employees (t-1) ³	0.01 (0.95)	-0.07*** (-3.80)	0.06*** (3.19)	0.01 (0.38)	-0.02 (-1.31)	0.01 (0.61)
Employment growth	1.30*** (8.15)	-0.85*** (-4.08)	-0.45** (-2.14)	0.53*** (2.92)	-0.42*** (-3.14)	-0.11 (-0.56)
Observations	187300	187300	187300	187300	187300	187300
R-squared	0.76	0.78	0.82	0.87	0.81	0.86
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	6.53	39.68	53.79	21.28	10.06	68.67

Table A15: PE Buyout Effects on Vertical Employment Shares – Heterogeneity by Exit Type

This table displays the results of firm-level difference-in-differences regressions comparing employment shares across vertical layers at target firms relative to the matched control group, estimated separately for subsamples defined by exit type. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variables are the employment shares (in %) of top management, middle management, and rank-and-file employees. The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. Employment controls include In Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	Employment share (%) of:											
	IPO			M&A (strat. acquirer)			Secondary (fin. acquirer)			Bankruptcy		
	Top mgmt.	Middle mgmt.	Rank-and-file	Top mgmt.	Middle mgmt.	Rank-and-file	Top mgmt.	Middle mgmt.	Rank-and-file	Top mgmt.	Middle mgmt.	Rank-and-file
Sample breakdown by exit type:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
PE x t-48	-0.46 (-0.56)	0.56 (0.43)	-0.10 (-0.08)	0.10 (0.40)	-0.39 (-0.91)	0.29 (0.66)	0.14 (0.85)	-0.10 (-0.37)	-0.04 (-0.14)	0.56 (0.70)	-0.16 (-0.14)	-0.40 (-0.33)
PE x t-36	-0.63 (-0.72)	0.76 (0.78)	-0.13 (-0.11)	-0.10 (-0.51)	-0.15 (-0.46)	0.25 (0.75)	0.04 (0.34)	-0.10 (-0.46)	0.05 (0.25)	0.45 (0.74)	-0.26 (-0.27)	-0.19 (-0.17)
PE x t-24	-0.47 (-0.98)	-0.02 (-0.03)	0.48 (0.84)	-0.14 (-1.34)	-0.04 (-0.19)	0.17 (0.95)	-0.07 (-0.90)	-0.13 (-1.00)	0.19 (1.48)	0.68** (2.08)	-0.46 (-0.77)	-0.22 (-0.35)
PE x t+0	0.56 (1.14)	0.49 (0.72)	-1.06* (-1.69)	1.12*** (5.69)	0.45 (1.42)	-1.57*** (-5.05)	0.97*** (8.36)	0.70*** (3.45)	-1.67*** (-8.12)	0.18 (0.38)	1.07 (1.23)	-1.26 (-1.38)
PE x t+12	0.22 (0.33)	0.19 (0.22)	-0.42 (-0.43)	1.28*** (5.29)	0.79** (2.10)	-2.08*** (-5.36)	1.47*** (10.55)	1.29*** (5.28)	-2.76*** (-11.28)	0.58 (0.88)	2.20** (2.13)	-2.77** (-2.45)
PE x t+24	0.58 (0.87)	0.09 (0.09)	-0.67 (-0.66)	1.44*** (5.65)	1.34*** (3.27)	-2.79*** (-6.70)	1.77*** (12.25)	1.38*** (5.26)	-3.15*** (-11.64)	0.81 (1.26)	1.99* (1.85)	-2.80** (-2.31)
PE x t+36	0.86 (1.23)	0.45 (0.38)	-1.32 (-1.09)	1.06*** (4.21)	1.09*** (2.48)	-2.15*** (-4.76)	1.75*** (11.62)	1.28*** (4.58)	-3.03*** (-10.35)	-0.02 (-0.03)	2.17* (1.91)	-2.15* (-1.71)
PE x t+48	0.79 (1.02)	0.31 (0.27)	-1.10 (-1.05)	0.95*** (3.69)	1.13** (2.47)	-2.08*** (-4.42)	1.65*** (10.30)	1.30*** (4.39)	-2.95*** (-9.49)	0.19 (0.26)	1.82 (1.38)	-2.00 (-1.42)
<i>Employment controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2581	2581	2581	41681	41681	41681	72554	72554	72554	4961	4961	4961
R-squared	0.74	0.84	0.87	0.77	0.77	0.81	0.74	0.80	0.83	0.76	0.81	0.82
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=-12	6.62	39.47	53.91	7.10	40.43	52.47	6.02	40.01	53.98	4.74	35.33	59.93

Table A16: PE Buyout Exit Effects – Event Study Around Exit

This table summarizes the effects of exiting PE Buyout ownership across all main outcome variables. Each cell reports the coefficient on Exit from PE Buyout $\times$ t+24 from a separate regression based on equation (1), with time indexed relative to the *exit* from PE Buyout ownership rather than the PE Buyout entry event. The sample is split by exit type: all exits (Column 1), secondary buyout (Column 2), IPO (Column 3), M&A (Column 4), and bankruptcy (Column 5). Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the exit. The period 12 months before the exit, $t - 12$, is the omitted reference year. All regressions include firm and event time fixed effects as well as employment controls (ln Employees (t-1), its square, its cube, and employment growth over 12 months). T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Sample:	Exit from PE $\times$ t+24 coefficient (t-stat)				
	All exits	Secondary exits	IPO exits	M&A exits	Bankruptcy
	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Employment</i>					
LN(1+employees)	-0.09*** (-7.58)	0.04** (2.56)	0.18*** (3.02)	-0.27*** (-11.97)	-0.61*** (-10.46)
<i>Panel B: Hierarchy Depth</i>					
No. hierarchies	0.01 (0.84)	0.07*** (4.30)	-0.01 (-0.18)	-0.09*** (-3.86)	-0.09 (-1.38)
<i>Panel C: Filled layer? (0/1)</i>					
Layer 7 (top)	-0.03*** (-3.40)	0.01 (0.94)	0.02 (0.66)	-0.09*** (-6.92)	-0.04 (-1.12)
Layer 6	0.01* (1.74)	0.03*** (3.31)	0.00 (0.13)	-0.02* (-1.78)	0.01 (0.17)
Layer 5	0.01 (1.51)	0.00 (0.64)	0.00 (0.46)	0.01* (1.65)	-0.01 (-0.52)
Layer 4	0.01 (1.48)	0.01** (2.40)	-0.01 (-0.71)	0.00 (0.07)	-0.03 (-1.28)
Layer 3	0.01** (2.30)	0.02*** (2.71)	-0.03 (-1.63)	0.02 (1.52)	-0.03 (-1.06)
Layer 2	-0.00 (-0.38)	-0.00 (-0.36)	0.02 (1.62)	-0.00 (-0.61)	-0.00 (-0.05)
Layer 1 (bottom)	0.00 (1.10)	0.01 (1.56)	-0.02 (-1.02)	-0.00 (-0.24)	0.02 (0.81)
<i>Panel D: Employment share (%) of:</i>					
Top management	-0.21 (-1.57)	0.36** (2.47)	0.86* (1.91)	-1.22*** (-4.18)	-0.98 (-1.08)
Middle management	0.29 (1.27)	0.51** (1.97)	-0.92 (-0.99)	0.40 (0.86)	-2.09 (-1.61)
Rank-and-file	-0.08 (-0.32)	-0.87*** (-3.24)	0.05 (0.05)	0.82* (1.74)	3.07** (2.14)
<i>Panel E: LN(Control Span) of:</i>					
Layer 7 (top)	0.01 (1.13)	-0.03* (-1.82)	-0.10 (-1.47)	0.11*** (4.53)	0.21*** (3.22)
Layer 6	-0.02* (-1.88)	-0.05*** (-3.24)	-0.10** (-2.03)	0.06** (2.20)	-0.10 (-1.60)
Layer 5	0.01* (1.65)	-0.01 (-1.00)	-0.05 (-1.35)	0.06*** (3.55)	0.05 (1.33)
Layer 4	0.01 (1.35)	-0.01 (-1.06)	-0.01 (-0.23)	0.05*** (3.22)	0.05 (1.22)
Layer 3	0.01 (0.92)	0.01 (0.85)	-0.01 (-0.16)	0.00 (0.04)	0.04 (0.96)
Layer 2	0.01 (1.08)	-0.00 (-0.64)	-0.01 (-0.36)	0.02** (2.19)	0.04 (1.16)
No. obs.	86166	52074	1890	27630	4572
No. deals	4787	2893	105	1535	254

Table A17: PE Buyout Effects on Employee Experience

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the natural log of years of work experience. Column 1 reports results for all employees. Columns 2–4 split by vertical layer (top management, middle management, rank-and-file). Columns 5–7 split by horizontal function (admin, operations, product-related). The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. Employment controls include $\ln$ Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	LN (Experience years)						
	Vertical layers				Horizontal functions		
	All	Top mgmt.	Middle mgmt.	Rank-and-file	Admin	Operations	Product-related
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	−0.01*** (−3.05)	−0.01** (−2.03)	−0.01 (−1.19)	−0.00 (−0.75)	−0.01 (−1.32)	0.00 (0.00)	−0.01* (−1.80)
PE x t-36	−0.01* (−1.95)	−0.01* (−1.65)	0.00 (0.20)	−0.00 (−0.75)	−0.00 (−0.26)	0.01 (0.87)	−0.01* (−1.84)
PE x t-24	−0.00** (−2.51)	−0.00 (−0.30)	−0.00 (−0.04)	−0.00 (−0.73)	−0.01 (−1.38)	0.00 (0.59)	−0.00** (−2.26)
PE x t+0	0.03*** (11.55)	0.02*** (4.08)	0.02*** (6.00)	0.01** (2.40)	0.01 (1.54)	0.04*** (6.50)	0.02*** (4.98)
PE x t+12	0.04*** (12.32)	0.01 (1.50)	0.02*** (6.42)	0.01** (2.60)	0.01 (1.16)	0.05*** (7.40)	0.02*** (6.94)
PE x t+24	0.03*** (8.85)	−0.00 (−0.80)	0.01*** (3.31)	−0.00 (−0.18)	0.01 (0.71)	0.03*** (4.23)	0.02*** (4.03)
PE x t+36	0.02*** (4.87)	−0.02*** (−2.78)	0.01 (1.61)	−0.01** (−2.14)	−0.00 (−0.05)	0.02*** (2.73)	0.01 (1.29)
PE x t+48	0.01*** (2.83)	−0.02*** (−3.10)	−0.00 (−0.31)	−0.01*** (−2.76)	−0.01 (−1.13)	0.01 (1.16)	−0.00 (−0.21)
<i>Employment controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	187300	140761	180349	180032	142234	149990	183183
R-squared	0.84	0.80	0.81	0.79	0.74	0.75	0.81
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=−12	2.47	2.87	2.61	2.24	2.35	2.50	2.42

Table A18: PE Buyout Effects on Employee Replacement Rates

This table displays the results of firm-level difference-in-differences regressions comparing firm outcomes at target firms relative to the matched control group. Firms are matched on industry (50 categories), hierarchical structure (7 dummies of whether layers 1-7 are filled), employment, and employment growth before the buyout. The dependent variable is the 12-month rolling replacement rate (share of departing employees replaced by a new hire within 12 months). Column 1 reports results for all employees. Columns 2–4 split by vertical layer (top management, middle management, rank-and-file). Columns 5–7 split by horizontal function (admin, operations, product-related). The coefficients are estimated from equation (1). The period 12 months before the PE Buyout, $t - 12$, is the omitted reference year. Employment controls include $\ln$ Employees ($t-1$), its square, its cube, and employment growth over 12 months. T-statistics based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable	Replacement rate 12m rolling						
	Vertical layers				Horizontal functions		
	All	Top mgmt.	Middle mgmt.	Rank-and-file	Admin	Operations	Product-related
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PE x t-48	0.60*** (3.24)	−0.16 (−0.76)	0.21 (1.12)	0.56* (1.77)	0.23 (0.56)	0.13 (0.40)	0.66*** (2.82)
PE x t-36	0.27 (1.50)	−0.11 (−0.54)	−0.04 (−0.24)	0.49 (1.59)	−0.34 (−0.84)	−0.13 (−0.40)	0.35 (1.49)
PE x t-24	−0.07 (−0.49)	0.06 (0.39)	−0.09 (−0.68)	−0.34 (−1.42)	0.08 (0.24)	0.01 (0.05)	−0.13 (−0.68)
PE x t+0	−0.39** (−2.24)	0.79*** (3.52)	0.10 (0.55)	−1.01*** (−3.48)	−1.31*** (−3.32)	0.33 (1.01)	−0.64*** (−2.78)
PE x t+12	1.16*** (6.30)	3.76*** (15.38)	1.85*** (9.96)	0.57* (1.92)	0.68* (1.67)	1.16*** (3.47)	0.93*** (3.99)
PE x t+24	1.47*** (7.69)	3.10*** (12.67)	2.07*** (11.34)	1.53*** (5.12)	1.01** (2.40)	1.06*** (3.19)	1.40*** (5.61)
PE x t+36	1.66*** (8.67)	2.72*** (11.44)	1.79*** (9.73)	1.94*** (6.46)	1.47*** (3.59)	1.71*** (5.34)	1.59*** (6.48)
PE x t+48	1.55*** (8.09)	2.26*** (9.88)	1.78*** (9.63)	1.75*** (5.87)	1.01** (2.49)	1.32*** (4.07)	1.37*** (5.77)
<i>Employment controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	187561	142948	181121	181086	145552	152854	183858
R-squared	0.52	0.27	0.40	0.44	0.32	0.28	0.49
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var. in t=−12	12.50	3.61	7.99	15.98	10.53	7.00	13.06