Do Employees Cheer for Private Equity? The Heterogeneous Effects of Buyouts on Job Quality

Will Gornall, Oleg Gredil, Sabrina T. Howell, Xing Liu *

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Abstract

We examine how private equity investments affect employee perceptions of job quality. Leveraged buyouts (LBOs) lead to job satisfaction declines for long-tenured, low-skill, and less-educated workers. High-skill workers and managers are less impacted overall but report larger declines in work-life balance. This is consistent with private equity managers capturing rents from replaceable employees. We find similar effects for ESG fund deals but no effects for growth equity deals. Using novel deal-level cash-flow data, we show that high-debt and low-IRR deals drive the job quality declines, consistent with free cash-flow and rent-sharing models.

Keywords: private equity, leveraged buyouts, job quality, employees, corporate culture, non-pecuniary amenities, implicit contracts
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*UBC, Tulane, NYU Stern & NBER, UBC. Emails: will.gornall@sauder.ubc.ca, ogredil@tulane.edu, sabrina.howell@nyu.edu, xing.liu@sauder.ubc.ca. Howell is the corresponding author and is located at NYU Stern, 44 West 4th St KMC 9-93, NY NY 10012. We thank Ammon Lam and Tej Chilukuri for their excellent research assistance. We also thank Jinfei Sheng for access to an initial version of Glassdoor data. Gornall thanks the SSHRC for their support and gratefully acknowledges that this research was undertaken, in part, thanks to funding from the Canada Excellence Research Chairs program awarded to Dr. Erik Snowberg in Data-Intensive Methods in Economics. Gredil thanks StepStone Group for providing data access. Sabrina Howell's work was funded by the NYU Stern Center for Sustainable Business and the Kauffman Foundation.

A worker's relationship with her employer involves far more than money. Company culture, commitment to work-life balance, and management are central to job quality but do not show up on a paycheck (Guiso, Sapienza, and Zingales, 2015; Graham et al., 2017; Gorton and Zentefis, 2020). The nature of firm ownership no doubt affects both compensation and non-pecuniary aspects of job quality. One type of ownership that has dramatically expanded its footprint in the U.S. economy – as in many other countries – over the past two decades is private equity. Private equity has delivered strong financial returns, benefiting investors and fund managers (Guo, Hotchkiss, and Song, 2011; Harris, Jenkinson, and Kaplan, 2014; Robinson and Sensoy, 2016; Korteweg and Sorensen, 2017).[1] These returns have come from a combination of operational and capital structure improvements, including efficiency gains, corporatization, and growth opportunities (Lerner, Sorensen, and Strömberg, 2011; Bloom, Sadun, and Van Reenen, 2015; Fracassi, Previtero, and Sheen, 2021).[2]

The operational and financial changes raise the question of how private equity ownership impacts employees, perhaps a firm's most important stakeholders. One hypothesis is that private equity extracts rents from employees, imposing cost-cutting measures that reduce amenities, job security, and time-off. Consistent with this, media reports highlight layoffs and oppressive working conditions after private equity buyouts.[3] In this model, returns to investors come at the expense of employee well-being. An alternative is that by increasing efficiency and profitability, private equity improves employee satisfaction, including via rent-sharing of value creation. Private equity owners might even invest in employee satisfaction and firm culture as a means toward higher profits.[4]

We test these competing predictions and help to reconcile them. We ask how buyouts affect employee perceptions of job quality, including not just compensation but also non-pecuniary amenities, and examine how any effects differ across both deal and employee types. We use employee reviews from the website Glassdoor, focusing on four dimensions that speak to the crucial intangibles of the employer-employee relationship: Compensation & Benefits, Work-Life Balance, Culture & Values, and Senior Management. We merge the Glassdoor firms to private equity deals from Pitchbook and to deal-level returns data from

[1] The literature finds that private equity outperforms public markets in net-of-fee returns to investors, while also yielding large profits for private equity fund managers. Also see Kaplan and Stromberg (2009), Karabarbounis and Pinto (2018), Ang et al. (2018). There is, however, some controversy about the impacts of risk, leverage, and liquidity on performance (Lerner and Schoar, 2004; Franzoni, Nowak, and Phalippou, 2012; Axelson et al., 2013).

[2] Also see Cornelli and Karakaş (2012), Acharya et al. (2013), Bernstein and Sheen (2016), Agrawal and Tambe (2016), Bernstein et al. (2017), Eaton, Howell, and Yannelis (2020), and Gupta et al. (2021), among many others.

[3] See, for example, this Guardian article or this Atlantic article, accessed August 3, 2021.

[4] Some studies have found that a strong culture and satisfied employees are associated with higher profits (Edmans, 2011; Welch and Yoon, 2020).

Stepstone, a large fund of funds that invests in private equity funds. Our analysis dataset includes over three million reviews of jobs by employees currently working at 270,000 unique companies posted between 2008 and 2019. Of these, 1,376 companies are LBO targets that meet our data requirements (we separately consider growth equity and management buyout deals).

Our research design is a differences-in-differences model, using firm and industry-time fixed effects with never-private equity-owned firms serving as controls (we use matching to generate controls for an alternative specification). The identification challenge is that private equity managers do not target firms at random. We use dynamic differences-in-differences event studies to assess whether target firms appear to be on track towards the changes we observe. When we observe no pre-trends and a discontinuous change after the buyout, we assume that the result is causal, following convention in the literature.

We find that current employees' satisfaction with their Compensation & Benefits declines after a buyout by 7.2% of a standard deviation (ratings are on a one-to-five scale, making this the most relevant benchmark). We see similar declines in Culture & Values, and smaller declines in Work-Life Balance and Senior Management. Our main contribution is to highlight the types of employees and deals driving these declines.

First, we consider employee tenure. Workers who were at the firm before the buyout experience strong negative effects, with little or no effect among those hired after the buyout. This indicates an important role for sorting, where new hires are a better match for the new operational structure or employment contract (Lazear, 1998; Eriksson and Kristensen, 2014; Liu et al., 2019). The negative effects also increase with job tenure at the firm along all dimensions, but most strikingly for Culture & Values. These results are broadly consistent with private equity firms generating value by extracting rents from entrenched current employees and refusing to honor implicit contracts (Shleifer and Summers, 1988). In the private equity literature, this possibility has been previously addressed only with measures of earnings and separations (Davis et al., 2014; Olsson and Tåg, 2017; Antoni, Maug, and Obernberger, 2019).

We examine layoffs using a novel panel of LinkedIn profile information collected specifically for our target firms. Consistent with existing literature, we find evidence of significant one-time layoffs at the time of the buyout, followed by a return to the pre-buyout layoff rate but with lower employment growth than previously. However, these patterns appear independent of the satisfaction results, because they are not different for high-layoff firms. The persistence of our results for about three years after the buyout could be consistent with reduced job security as a permanent operational change but does not seem to reflect the

effects of a one-time mass layoff.

Second, we look at employee and job characteristics. The negative effects of LBOs on Compensation & Benefits, Culture & Values, and Senior Management are driven by the lowest skilled workers in entry-level jobs with low work experience and education requirements. In contrast, LBOs have little impact or even increase the reported satisfaction of workers in jobs requiring a Master's or professional degree. These results suggest that private equity owners capture rents from long-tenured but replaceable employees. They are also consistent with private equity owners shifting firms toward higher-skill business models. The opposite pattern occurs for the Work-Life Balance dimension, where we see managers, higher-skilled workers, and people employed at corporate headquarters experiencing negative effects, while there is no effect for other types of workers. Thus, although employees with more human capital appear insulated from – or even benefit from – the financial consequences of LBOs, they suffer from increased work pressure.

Third, we consider deal characteristics, beginning with the nature of the transaction. We divide the LBOs that compose our main sample into public-to-private, corporate divestiture, and vanilla deals. No particular deal type is responsible for the average negative effects, but we find much larger negative effects on Work-Life Balance after corporate divestitures. In these types of deals, employees at the targeted subsidiary may have benefited from managers enjoying the "quiet life," reflecting the agency issues inherent in multiunit corporations (Scharfstein and Stein, 2000; Schoar, 2002; Bertrand and Mullainathan, 2003). In a placebo test, we find no effects of growth equity deals, where there is private equity investment but generally no change in controlling ownership.

Leverage is an important part of the private equity playbook due to its tax benefits and power to discipline managers (Kaplan and Stromberg, 2009). In seminal papers, Myers (1977) and Jensen (1986) argue that higher leverage will reduce resource allocation to employees because of the agency costs of debt and the discipline of lower free cash flows, respectively. Taking a different perspective, Maksimovic and Titman (1991) and Berk, Stanton, and Zechner (2010) argue that since financial distress makes it harder to honor contracts with employees, firms can commit to treating employees well by maintaining lower leverage. Regardless of the direction of causality, these theories predict that deals with higher leverage should lead to lower perceived job quality (holding all else constant). We find that both high and low leverage deals are associated with significant employee satisfaction declines, suggesting that leverage is not the entire story. However, consistent with these theories, we find that deals with high leverage are associated with almost

twice the decrease in employee satisfaction.

We also examine returns to investors. To our knowledge, this is the first paper to link private equity returns to any type of employee outcome. Using deal-level cash flows from StepStone's SPI database, we examine the relationship between changes in employee satisfaction around the deal and several measures of investor returns. If private equity returns come in part from extracting employee surplus, we might expect a negative relationship. It is also possible that there might be no relationship if private equity always extracts employee surplus in the same way regardless of the ex-post deal success. Alternatively, if firms share some rents with employees, along the lines of classic bargaining models of wage-setting (Stole and Zwiebel, 1996; Card et al., 2018), then employee satisfaction might increase with deal returns.

The evidence is most consistent with the latter view, particularly when it comes to Compensation & Benefits. We find a positive elasticity; that is, employee satisfaction changes are increasing in returns. (The average change is negative in our returns-matched sample, as in the full sample.) This is consistent with previous literature finding that firm performance is positively associated with employee satisfaction (Verwijmeren and Derwall, 2010; Edmans, 2011; Bae, Kang, and Wang, 2011; Edmans, Li, and Zhang, 2014; Guiso, Sapienza, and Zingales, 2015; Green et al., 2019). We then ask whether this association is stronger for private equity targets than for public firms. We compare private equity deal returns to public company returns using the method from Korteweg and Nagel (2016) and show that while both types of firms appear to share rents with employees, the pass-through is stronger for private equity-owned firms when total returns are concerned (i.e., IRR). However, the pass-through is not different (and is, in fact, lower for some rating dimensions) from that of the public firms when we measure investor returns using public market equivalent returns (PMEs). This is consistent with private equity-owned firms using performance-based compensation to realize greater pass-through of systematic shocks to workers (i.e., shocks that are not firm-specific and idiosyncratic), but otherwise exhibiting similar rent-sharing as public firms.

Finally, we examine whether funds that incorporate Environment, Society, and Governance (ESG) concerns in their investing exhibit different results. Employing a merge to Preqin's ESG module, we find that buyouts led by ESG fund – where investors self-report considering ESG factors in decisions – have the same negative effects as other buyouts. This suggests that a standard ESG screen does not ensure better expected outcomes for workers. However, we find no evidence of negative effects for the more narrowly defined category of Impact funds, which have an explicit policy to acquire firms with positive social impact.

Together, our results paint a picture of private equity owners revising the firm's implicit contract with its workers. Replaceable, lower-skill workers with longer tenure at the firm are adversely affected, while those with higher marginal products and whose firm-specific human capital is more important for value creation experience benefits. The tenure results point to particularly negative effects for employees who are entrenched in the sense of facing costs to switching jobs, and are thus overcompensated relative to their marginal product (Cronqvist et al., 2009). This is related to the idea of worker entrenchment leading to human costs of bankruptcy in Berk, Stanton, and Zechner (2010). They theorize that when a firm takes on more debt it will need to compensate employees for the additional risk of bankruptcy or attract less risk-averse employees, predicting pay premia that weakly increase with worker tenure. Our results are consistent with their model; pre-existing workers – especially those with longer tenure – experience strong negative effects, while new hire preferences and labor contracts are more aligned with the new owners.

The employee reviews that we employ have been shown to be informative about a number of firm outcomes (Edmans, 2011; Green et al., 2019; Liu et al., 2019). These data have several other benefits. First, they cover all compensation, including equity, which is a major part of the private equity playbook. For example, Gompers, Kaplan, and Mukharlyamov (2016) find that private equity investors allocate 17% of company equity to management and employees; this is far higher than at public companies. Also, the ratings reflect the utility of compensation levels, which is arguably more relevant for welfare than the standard wage or salary measures. Second, the data directly measure non-pecuniary amenities such as the ability to manage one's personal life. Third, the popularity of the Glassdoor website yields a large and diverse sample. Our primary concern with the data is selection because employees choose to write reviews. For this to affect our results, employees of private equity-owned firms would have to have different review tendencies than those of control firms, a possibility that we test for and do not find evidence to support. Glassdoor mitigates this bias by requiring anyone viewing reviews on the platform to also contribute a review. Furthermore, most of our results address heterogeneity across employee and deal types, which are to some degree insulated from this concern as well as issues of private equity target firm selection.

This paper contributes to the literature studying how private equity ownership affects workers, which includes Boucly, Sraer, and Thesmar (2011) and Davis et al. (2014) on the number of employees, Cohn, Nestoriak, and Wardlaw (2021) on workplace safety, Olsson and Tåg (2017) on unemployment incidence at LBO targets in Sweden, Fang, Goldman, and Roulet (2021) on wage gaps at LBO targets in France, and Antoni, Maug, and Obernberger (2019) on employment and wages at LBO targets in Germany. Our

paper extends this work in at least four ways. First, we shed new light on the importance of non-pecuniary amenities such as employees' perceptions of firm culture. Non-pecuniary job amenities are an important but largely unstudied and not fully priced dimension of the economy (Mas and Pallais, 2017; Lins, Servaes, and Tamayo, 2017; Lamadon, Mogstad, and Setzler, 2019).

Second, the Compensation & Benefits measure incorporates stock option grants, which as mentioned above are central to the private equity playbook but are difficult to observe. Our finding that higher-skill workers and managers become if anything more satisfied with their Compensation & Benefits after buyouts suggests that studies finding declines in manager wages after buyouts but no effects on non-manager wages may be missing important equity compensation (Antoni, Maug, and Obernberger, 2019; Fang, Goldman, and Roulet, 2021). Third, we study the real effects of U.S. buyouts on a large and representative sample. As Morris and Phalippou (2020) note, the literature on private equity ownership has generally used small and selected samples restricted to a single industry or European country with markedly different labor laws from the U.S. Finally, we shed light on the connection between employee outcomes and value creation as measured by deal-level returns.

We also contribute to work on the relationship between employee satisfaction and returns, which is increasingly important amid the growing emphasis that investors place on ESG (Barber, Morse, and Yasuda, 2021; Lins, Servaes, and Tamayo, 2017). One implication of the returns analysis is that if limited partners were able to screen private equity deals on ex-post employee satisfaction, the result would be better financial returns. Our analysis does not shed light on the direction of causality, though the literature cited above suggests that more satisfied employees can lead to better firm outcomes.

Finally, this paper shows for the first time how ownership changes affect workers' non-pecuniary amenities and perception of firm culture differently according to their level of human capital and replaceability. While the literature has separately studied how corporate ownership structures affect firm outcomes (e.g. Maksimovic and Phillips (2008), Cremers, Nair, and John (2009), and Bena and Li (2014)) and the importance of culture, management, and other non-wage amenities (e.g. Guiso, Sapienza, and Zingales (2015) and Levit and Malenko (2016)), rarely have they been examined together. Related work that touches more broadly on employee welfare around acquisitions or takeovers includes Pontiff, Shleifer, and Weisbach (1990), Pagano and Volpin (2005), John, Knyazeva, and Knyazeva (2015), and Dessaint, Golubov, and Volpin (2017).

1 Data Sources and Summary Statistics

Our analysis is based on four datasets. Employee satisfaction information comes from Glassdoor reviews (Section 1.1). We match those to private equity deals in Pitchbook and supplement them with LinkedIn data on employment (Section 1.2). Finally, we gather investor returns data from Stepstone (Section 1.3) and fund ESG data from Preqin (Section 1.4).

1.1 Employee Review Data

We begin with comprehensive employee review data from Glassdoor.com between the platform's inception in January 2008 and the end of 2019. These data cover almost all major companies and contain measures of employee satisfaction as well as the reviewer's job title, tenure, employment status, and location. Figure 1 offers two examples of the reviews that compose the underlying data. In the Dell review (Panel A), we hover the mouse over the overall rating (a two out of a maximum of five) to view the dimension ratings. This reviewer gave Dell a one on Career Opportunities but a four on Compensation & Benefits. The PetSmart review (Panel B), written shortly after the firm went through a public-to-private buyout, highlights an employee's reaction to the deal. The reviewer expresses new distrust of upper management and concerns that "Cost reductions have sacrificed customer service."

We restrict our consideration to U.S.-based current employees of U.S. companies, yielding a final sample of 3,300,000 reviews from 271,000 companies.[5] For these reviews, we focus on four numeric ratings which range from one (worst) to five (best): Compensation & Benefits, Culture & Values, Senior Management, and Work-Life Balance.[6] Table 1 Panel A summarizes these ratings. Although the four dimensions are correlated with one another, they each contain independent information, as shown in Appendix Table A.1. Glassdoor offers five additional rating dimensions which we relegate to robustness tests because they are either highly correlated with our main variables or are not well populated.[7]

[5] Although reviews by former employees are included in our data, we drop them from our analysis sample due to inconsistent termination date reporting.

[6] Although the scores are numerical, they are more accurately thought of as categorical responses. There are two concerns here. First, the one-to-five system censors extremely negative and extremely positive reviews. This problem is reduced by the relatively low number of one- and five-star reviews. Second, the reviewers interpret categories in a non-cardinal way: a company with ten two-star reviews and ten four-star reviews is not the same as a company with twenty three-star reviews. We use linear regressions to allow for easy interpretation of the coefficients and because the changing nature of categories invalidates the underlying assumptions of ordinal regression techniques. This non-cardinality should not bias our coefficients but should be kept in mind for interpretation.

[7] Glassdoor's reviewing policies changed over time. In May 2012 the platform added Culture & Values as a dimension and eliminated half-point scores as well as partial reviews. In September 2020 it added a score for Diversity & Inclusion. Glassdoor has also varied over time the number of reviews one can view before being required to post a review. Our time fixed effects control for these dynamics.

Glassdoor employs a give-to-get model, where a review must be entered in order to view the reviews on the website. This reduces the selection bias and polarization that are inherent in online reviews (Marinescu et al., 2018). Evidence of this is the fact that the distributions of the four ratings approximate a bell curve, shown in Appendix Figure A.2. For example, the mean Senior Management rating is 3.4 with a standard deviation of 1.4 (recall that the range is one to five).

These ratings convey meaningful information about firms. Karabarbounis and Pinto (2018) show that the wages of Glassdoor reviewers are consistent with external data from the U.S. Census Bureau. Glassdoor reviews have been shown to predict stock returns (Green et al., 2019; Sheng, 2019), operating performance (Huang, Li, and Markov, 2020), and firm financing (Chemmanur, Rajaiya, and Sheng, 2019). Lee et al. (2020) show that the reviews react to corporate events such as scandals. In sum, we are confident that the ratings offer reasonably truthful information about the state of the company.

The Glassdoor data include reviewers' location, tenure, and job title, which we use to infer reviewer characteristics as summarized in Table 1 Panel B. (Unfortunately, we cannot track individual reviewers over time.) The data contain new hires and veteran employees, with 25% of employees working no more than one year at the firm, 29% one to three years, 19% three to five years, and 26% five or more. Among reviewers who report location, 54% work in the MSA of the corporate headquarters.

We infer workers' roles using their reported job titles. Text matching reveals that one out of seven has a job title identifying them as a manager. We merge job titles to OCC codes using the mapping in Atalay et al. (2020).[8] O*NET data from the U.S. Department of Labor, Employment and Training Administration provides rich information on the nature of each of these.[9] About 14% of the matched raters are in jobs that typically require no more than a year of work experience, while at the other end of the spectrum 23% are in jobs requiring more than five years of experience. The majority (76%) are in jobs that typically require a college degree, while 18% are in jobs that do not and the remaining 6% are in jobs that require a Masters' or Professional degree. Overall, Glassdoor reviews skew toward skilled employees (Karabarbounis and Pinto, 2018).

[8]Retrieved from https://occupationdata.github.io/ on Nov 1, 2020.

[9]Only 39% of reviews are matched because job titles are missing for some reviews and are ambiguous (e.g., Associate) for others.

1.2 Private Equity Deal Data

We manually match Glassdoor firms to private equity deal targets in the Pitchbook database. We focus on targets based in the U.S. with a transaction date between 2010 and 2016, so as to be within the range of the Glassdoor review data with sufficient observations on either side of the deal. PitchBook is widely regarded as one of the most comprehensive private equity databases, and is especially strong for the U.S. data and the most recent decade. We drop non-U.S. deals, secondary transactions (where company ownership is transferred between two private equity investors), PIPEs and other investments in companies that were not taken private, and debt-only deals. This gives us a total of 7,706 deals.

We divide those deals into five mutually exclusive categories based on Pitchbook's deal classification scheme: public-to-private deals, corporate divestitures, 'vanilla' LBOs, management buyouts (MBO), and growth equity deals. We focus our main analysis on the first three, which we refer to as LBOs and which represent different flavors of the conventional private equity model. In a public-to-private deal, private equity investors purchase and take private a public company, such as the 3G Capital-led buyout of Kraft. Although small in number, these deals account for many of our reviews as the target companies tend to be large. These deals are theoretically interesting because of the change in incentives, information provision, and capital structure. Corporate divestitures occur when a private equity firm acquires a subsidiary of a corporation, and either holds it as a standalone firm or rolls it into another existing company. Examples of this type of deal include Cerberus' purchase of grocery store chain Albertson's from Supervalu in 2013, and the spin-off of McGraw Hill Education to Apollo. Corporate divestiture deals have significant cultural and management implications because they typically cause the corporate form to change from a diversified conglomerate to a more focused firm. We define a vanilla LBO as any other private equity purchase of a standalone, privately held company. One example of a vanilla LBO in our data is Blackstone's 2015 buyout of Stearns Lending, which provides mortgage lending services.

We consider the final two types of deals – MBOs and growth equity deals – separately, as these represent different business models that likely have different implications for employee satisfaction. In an MBO, the existing managers of a company purchase a controlling interest with the help of a private equity firm. Growth equity deals, which are closer to venture capital but for later-stage companies, occur when a private equity firm takes a non-controlling stake in a company, and the cash from the investment goes to the company rather than to selling shareholders. We combine these two types of deals and use them as a placebo sample.

We retain only a company's first deal in each of the LBO and placebo samples. For example, RestorixHealth was taken private in 2010 by Cressey & Company and Leonard Green & Partners, raised growth equity twice in 2014, and then was sold to a different private equity consortium in 2015. It enters our sample twice: the initial LBO enters our main sample and the first growth round enters our placebo sample. This example is illustrative but far from typical as less than 1% of our companies have multiple LBOs. Some deal types fit into multiple classifications. In these cases, we classify deals in the following order of priority (as mentioned above, a deal in our data is assigned to only one type): growth equity, MBO, public-to-private, corporate divestiture, vanilla LBO. We will compare our LBO and placebo samples against a control group of never-treated firms that do not have an LBO, MBO, growth equity deal, or secondary buyout in our Pitchbook sample.

Table 1 Panel C provides summary statistics about the final sample of matched LBO deals that are used in our analysis. Appendix Table A.2 presents further deal characteristics of all Pitchbook deals, Glassdoor matched deals, and Glassdoor matched deals in our analysis sample. The full set of LBO deals from Pitchbook meeting the requirements stipulated above is presented in the left columns. The middle columns describe the deals we were able to match to companies in Glassdoor. The right-hand columns describe the matched deals used in our final analysis (the same as Table 1 Panel C). We matched 2,767 (77%) out of 3,577 qualifying Pitchbook LBO deals to Glassdoor companies. In our main analysis, we restrict to the 1,376 LBO deals within this matched sample that have at least one review by current employees in both pre- and post-deal periods.

The matched deals are reasonably representative of the full dataset (Appendix Table A.2). They have a similar industry breakdown; for example, 16% (15%) of deals in our matched (full) sample are in healthcare. Matched deals are slightly more likely to be public-to-private and less likely to be corporate divestitures, reflecting the difficulty of obtaining high-quality matches to subsidiaries before and after the LBO. Since we focus on companies with employee reviews, our matched deals tend to be larger and have more employees than the typical private equity deal. To the extent we care about the impact on employees, the focus on deals with meaningful numbers of employees does not create a problem. Figure 2 shows that the matched deals are distributed relatively uniformly across our sample period. Appendix Table A.3 contains summary statistics about the growth equity and MBO sample. Overall, we believe our data are among the most representative of private equity's overall role in the U.S. economy that researchers have been able to study to date.

To better understand the role of employee departures around LBOs, we obtain LinkedIn data from the

analytics firm LIX on all employees who ever worked for a subset of the LBO target companies. We restrict this research to the 622 targets in our main analysis sample that have both (a) at least five reviews; and (b) current employee reviews before and after the deal. We were able to successfully match 385 firms, and observe LinkedIn profile data for 460,619 employee reviewers at those firms. For each employee, we observe their reported employment years and title. We use this to create a firm-year panel of departure and hiring rates. Specifically, we calculate the employment change of firm j in year t as the number of LinkedIn users who report working for that firm in year t divided by the number of users who report working for that company in year $t-1$, minus one. The hiring rate is the number of users whose first year of employment at that company is year t, divided by the number of users reporting employment at the company in year $t-1$. The departure rate is the number of users reporting a final year of employment in year t, divided by the number of users reporting employment at the company in year t.

1.3 Investor Return Data

We gather data on investor returns from Stepstone Group, which has provided fund-of-fund and advisory services in private markets since 2006. Stepstone created its SPI dataset while performing due diligence on prospective managers and monitoring existing private fund investments. This is similar to other sources of deal-level private equity return data that have been used in the literature (Robinson and Sensoy, 2013; Degeorge, Martin, and Phalippou, 2016; Braun, Jenkinson, and Stoff, 2017). The SPI data include each deal's internal rate of return (IRR) and total value multiple (TVM). Furthermore, the data contain deal-level cash flow information (i.e., initial investments, follow-ons, interim distributions), observed at no less than quarterly frequency. Finally, they include a granular description of the company's industry and the fund's mandate. Together, this information enables us to compute deal-level PMEs, following Kaplan and Schoar (2005). We calculate PMEs against the industry-specific return indices from the Russell 2000, which we obtain from Bloomberg.

The SPI data have several attractive features. First, Stepstone requires fund managers to report returns from all deals and reconcile them with fund-level performance. This mitigates the bias towards more successful deals that appears in other datasets. Second, the vast majority of targets have Capital IQ identifiers, which allow us to effectively match them the Pitchbook/Glassdoor data.[10] Third, most of the

[10]We first match Glassdoor to Capital IQ and then to SPI. Finally, we verify investor information against Pitchbook records by manager name and deal dates.

funds have Preqin fund identifiers. This enables us both to benchmark the fund-level net-of-fee performance data against a widely available dataset and to utilize the information about the funds' ESG-declarations and policies that was recently compiled by Preqin. Finally, SPI is a large dataset, with about three times the number of deals as in the Braun, Jenkinson, and Stoff (2017) dataset on a deals-per-year basis.[11]

We match 24% or 334 of our 1,376 deal LBO sample to SPI. Summary statistics for the matched sample are reported in Panel D of Table 1. The first three rows contain fund-level characteristics, averaged at the deal level. The deal-weighted average fund size of $3.47 billion is higher than in post-2005 vintage averages in the Braun, Jenkinson, and Stoff (2017) sample, but they are well within the inter-quartile range of $0.64-to-4.06 billion. The average fund IRR quartile measured against the vintage-by-size peer group determined by Preqin is 2.73. Under a uniform distribution across quartiles, the average quartile would be 2.5. Therefore, our four-way matched sample (Pitchbook-Glassdoor-SPI-Preqin) involves private equity funds with slightly higher IRRs than if they were randomly drawn from the Preqin universe.

Our deals range from total losses to eight-fold returns. To better understand the performance of the matched deals relative to a broad deal universe, we compute two types of ranks. 'Within Fund' indicates each deal's percentile return (scaled to be between 0 and 1) among all deals in its fund. Similarly, 'Within Quarter' indicates the rank among all deals in SPI transacted in the same quarter by funds with the same target size focus (Large, Medium, or Small). These rank metrics confirm that our matched sample embeds a representative distribution in return outcomes, with a slight bias towards higher-return deals with mean ranks of 0.53-to-0.58. In unreported analysis, we find that the exclusion of secondary buyouts drives this bias.[12]

Appendix Table A.4 shows that the SPI-matched deals have higher leverage and are more likely to be public-to-private transactions or corporate divestitures than a typical deal in our sample. As we show below, these characteristics are associated with more negative effects on employee satisfaction. We therefore employ a matching estimator, in which we compare the post-LBO ratings changes and investor returns with those of similar public companies that also have Glassdoor reviews (details are in Section 2). The last

[11] As of our access date in March 2021, the SPI database contained 145,749 distinct investments in 57,132 entities made by 5,939 funds operated by 1,742 managers across several private fund strategies. Restricting to LBOs and Growth Equity between 2010 and 2016 leaves us with 12,153 new investments by 1,445 funds in which we observe unique return information. Thus, Similar to Braun, Jenkinson, and Stoff (2017), approximately half of these 12,153 investments were made in companies headquartered in North America.

[12] Consistent with prior studies, secondary buyouts have lower average IRRs and multiples for SPI sample funds. Including secondary funds in our sample reduces the average within-fund IRR rank to exactly 0.50 and the within-quarter IRR rank to 0.53.

three rows of Table 1 Panel D report IRRs, TVMs, and PMEs against the industry-sector index for these LBO-mimicking investments in public firms that are similar to LBO targets.

1.4 ESG Data

An increasing number of funds report a focus on ESG. To assess whether these funds have a different relationship with the employees of target firms, we acquired Preqin's complete ESG module, which includes measures of ESG status for nearly 37,000 private equity funds. We are able to match 48% of the Glassdoor-Pitchbook deals' funds to Preqin's funds, resulting in 59% of the Glassdoor-Pitchbook deals having at least one fund matched to Preqin's funds.

We focus on two categories: ESG and the subset of ESG called "Impact." We classify deals according to the fund classification of the lead investor. The ESG category applies to any fund that reports considering environmental, social, or governance factors in its decision-making. The narrower "Impact" category includes funds with explicit investment policies to fund firms with positive social impact.[13] The Impact label has the stricter requirement that funds provide a formal impact strategy and evidence of compliance. Table 1 Panel C shows that while 13% of the deals in our data are associated with funds that describe themselves as ESG, only 3% are associated with Impact funds.

2 Empirical Approach

We estimate the effect of LBOs on employee satisfaction using a differences-in-differences design. The first difference compares targets before and after their buyouts. The second difference compares targets to firms that were never private equity-owned. In all cases, we use only reviews from employees who report working for the firm at the time of their review.[14] We use two main models to estimate the effect of LBOs and how they vary with company-, deal-, or reviewer-level characteristics.

The first specification, at the company-quarter level, is the following:

$$\bar{Y}_{j,q} = \beta \, \mathbb{1}(\text{Post LBO}_{j,q}) + \alpha_j + \gamma_{n,q} + \varepsilon_{j,q}. \tag{1}$$

Here, $\bar{Y}_{j,q}$ is the average of a job satisfaction dimension for company j in quarter q, such as the average

[13] According to Preqin, "Preqin defines impact funds as funds in which the firm invests with positive impact as its primary goal. This is defined as having an impact investing policy, or being a member of GIIN and/or IFC OPIM." See Preqin ESG Blog and Preqin ESG Report.

[14] The exception is in Table 3, where we consider former employees.

Compensation & Benefits rating given to Dell in 2014Q1. The indicator variable $\mathbb{1}(\text{Post LBO}_{j,q})$ is one if firm j is private equity-owned in the quarter, and zero if not. The coefficient β captures the relationship between private equity ownership and $\bar{Y}_{j,q}$. In some specifications, we split the post-LBO term along deal characteristic lines to separately estimate their effects relative to control firms. The goal here is to see if, for example, there are significant effects for both public-to-private and corporate divestiture deals. We include company fixed effects (α_j) and industry-quarter fixed effects using Glassdoor's 25 sectors ($\gamma_{n,q}$) to control for the company, industry, and time period. This model weights all company-quarters equally, regardless of their number of reviews, which allows us to assess the effects of private equity ownership at the deal level.

To understand how specific groups of employees are impacted, we use a review-level specification. This allows us to study the heterogeneous impact on workers and may better reflect a potential social planner's interest in worker outcomes. Letting Y_i denote a review of company j in industry n in quarter q, the regression equation becomes:

$$Y_i = \beta \, \mathbb{1}(\text{Post LBO}_{j,q}) + \delta \, \mathbb{1}(\text{Post LBO}_{j,q}) \times \text{X}_i + \text{X}_i + \alpha_j + \gamma_{n,q} + \varepsilon_i, \tag{2}$$

where X_i represents an employee-level characteristic. Here we employ an interaction model, which allows us to test for statistically different effects across employee groups (we also benefit from greater power at the review level). This review-level approach weights large companies more heavily.

In addition to these main specifications, we use several other models in supplementary analysis. First, we use event studies to test the identifying assumption that target and control companies would continue on parallel trends in the absence of the buyout. We assess whether there are differential pre-trends using figures that plot the coefficients β_s from the following equation:

$$Y_i = \sum_{s \neq -1} \beta_s \, \mathbb{1}(\text{Deal in Quarter } q - s_{j,q,s}) + \alpha_j + \gamma_{n,q} + \varepsilon_i. \tag{3}$$

Here, $\mathbb{1}(\text{Deal in Quarter } q - s_{j,q,s})$ is an indicator variable equal to one if a private equity deal occurred s quarters in the past and zero otherwise. We use the quarter before the deal as the omitted coefficient. These models allow us to assess the immediacy of any effects and also test for pre-trends.

Second, we use a matching estimator to construct an alternative control sample that is as similar as possible to the target sample. This helps to ensure that the full sample does not lead to spurious biases due to firms that are extremely different from buyout targets. We match each LBO target company to two never-

private equity-owned companies with at least one review in the three years prior to the deal. The matching is based on the founded year, industry, average percent of reviewers with more than three years of tenure, average percent of reviewers in jobs that do not typically require college, and log number of reviews. The last three variables are measured over the most recent three years. We use the Abadie and Imbens (2006) distance metric that weights each dimension by its standard deviation. In Appendix Table A.5 Panel A, we show that our matched sample is broadly similar to the LBO targets, except that the matched sample has broadly higher ex-ante satisfaction ratings. If anything, this should bias the estimation against finding a negative effect of LBOs.

Third, we use a simple linear specification to test the association between ratings and deal returns. All firms are private equity targets in the SPI-matched sample, so we do not use the differences-in-differences model as there is no second difference. However, we wish to control for persistent company quality differences, which the differences-in-differences model accomplishes with company fixed effects. Therefore, we estimate the following equation:

$$\Delta \bar{Y}_j = \beta \, \mathrm{Return}_j + \mathrm{X}_j + \eta_t + \varepsilon_{j,q}. \tag{4}$$

Importantly, Equation (4) does not have a causal interpretation. As above, each company is indexed by j. $\Delta \bar{Y}_j$ is the change in the post-deal average of the residualized rating minus the pre-deal average, where the residualized rating for a firm-quarter is the firm-quarter average rating adjusted for industry-quarter fixed effects. Return_j represents an investor return measure such as IRR. The coefficient of interest is β, which simply gives the association between returns and average rating changes. The vector X_j controls for the pre-deal average rating (to demean each firm's outcome) and the investment amount. Finally, we include deal year fixed effects, η_t.

We use this framework to assess whether private equity-owned and publicly traded companies exhibit different relationships between satisfaction changes and investor returns. To do this, we create a set of "mimicking" public companies for each private equity deal. Our approach has two steps. First, we use the matching procedure described above to match each LBO target to its two closest publicly traded peers at the time of the deal.[15] Second, we construct hypothetical investments in public equities that mimic the cash

[15]For LBO targets and for each public company at the time of the LBO, we match on year founded, industry, log number of reviews, share of jobs requiring only a high school diploma, and share of reviews by employees with at least three years of tenure. We calculate the final three variables using reviews in the three years prior to the LBO. Appendix Table A.5 Panel B compares the characteristics of these mimicking portfolios with our LBO sample. The matched companies are similar to the targets, importantly on the Compensation & Benefits where we expect to find most evidence of pass-through. They have worse ex-ante ratings on the

flow pattern of the respective LBOs. We follow Korteweg and Nagel (2016) and assume that amounts of investments in the mimicking deals exactly match those of the actual deals. The interim distributions are determined as a function of the time that has elapsed since the deal or previous distribution. The mimicking portfolio pays out its residual value on the date of the terminal distribution of the actual deal.[16]

The purpose of constructing these mimicking cash flows is to "package" public stock returns in private equity-like cash flows and investment durations. Deviating from Korteweg and Nagel (2016), we use the individual stock return in place of market-wide returns. Therefore, these hypothetical cash flows reflect the idiosyncratic return on the asset alongside the systematic risk exposures, just as with a given private equity deal. This allows us to compare the pass-through rates for the idiosyncratic risk realizations separately from those of total returns. Using these hypothetical cash flows that reflect the multi-period returns of the respective public equity, we compute the IRRs, TVMs, and PMEs against style and industry sectors, just as we do for the actual LBO sponsor fund cash flows. We can then estimate the following model:

$$\Delta \bar{Y}_j = \beta \, \text{Return}_j + \delta \, \mathbb{1}(\text{LBO}_j) \times \text{Return}_j + \gamma \, \mathbb{1}(\text{LBO}_j) + \text{X}_j + \alpha_d + \eta_t + \varepsilon_{j,q}. \tag{5}$$

The sample in Equation (5) is restricted to LBO targets for which we observe returns and the matched mimicking portfolios. The coefficient of interest is δ on the interaction between the return measure and being an LBO rather than a public investment. We include fixed effects (α_d) for each group of an LBO target and its two mimicking public equity portfolios. Other variables are as described above.

3 Results

We begin by presenting the average effect of LBOs (Section 3.1) and how they differ across joining and separating employees (Section 3.2). Then we move to our main results on employee heterogeneity (Section 3.3), deal heterogeneity (Section 3.4), investor returns (Section 3.5), and fund ESG/Impact status (Section 3.6). Finally, we discuss robustness tests (Section 3.7).

other dimensions, however. We control for the pre-deal average rating in estimation, which helps to address this.

[16] We do not observe the round-by-round valuations and therefore use the whole-fund approach. See Equation (15) in Korteweg and Nagel (2016).

3.1 Average Effect

In Table 2, we present the average effects of LBOs. Across all four dimensions, LBOs are associated with decreases in employee satisfaction. In Panel A, we present results at the company-quarter level, estimated using Equation (1). If we are most interested in the firm as a unit, this is the most appropriate level of observation. However, this model weights each firm equally, so very small firms with few reviews count as much as very large firms with many reviews. We include industry-quarter and company fixed effects, so neither industry-level time trends, nor time trends in general, nor something affecting target companies on average can explain the coefficient on $\mathbb{1}(\text{Post Buyout}_{j,q})$. We find that employees' satisfaction with Compensation & Benefits declines by 0.082 rating points after a buyout (column (1)). Since ratings are on a one-to-five scale, the magnitude of these coefficients is most easily interpreted in terms of standard deviation. This decline represents 7.2% of a standard deviation. Similarly, relative to the standard deviation, the average Work-Life Balance rating declines by 0.063 points, or 5.4% (column (2)), the Culture & Values rating by 0.093 points, or 7.3%, (column (3)), and the Senior Management rating by 0.061 points, or 4.6% (column (4)).

In Panel B, we similarly present estimates of Equation (2) at the review level. The skewed firm-size distribution means this review-level model puts most of its weight on the largest firms. We again see significant declines in Compensation & Benefits and Culture & Values, with similar magnitudes relative to the means and standard deviations as we saw in Panel A. However, the effects on satisfaction with Work-Life Balance and Senior Management are smaller and insignificant, suggesting that these results are driven by smaller firms with fewer reviews, perhaps where the average reviewer has more contact with top executives at the firm.

It is possible that these patterns reflect private equity firms targeting companies that are already on track to experience declines in employee satisfaction. In this case, we expect to see the declines start before the private equity deal. To test for such pre-trends, we use Equation (3) and report the results in Figure 3. There are no pre-trends for any of the four measures. We observe clear, persistent decreases in satisfaction in the quarters immediately after the buyout quarter. Consistent with the regressions, the most marked changes are for Compensation & Benefits and Culture & Values.

Our results indicate that operational changes that adversely affect employees occur soon after the deal. However, we cannot rule out the possibility that LBOs simply accelerate inevitable declines in employee

satisfaction. For example, having an inefficiently high number of employees might make a firm both more likely to be targeted by a private equity investor and more likely to fire people, even in the absence of an LBO. If this is the case, the significant decrease in post-LBO employee satisfaction ratings is brought about by private equity firms simply making inevitable employee-unfriendly but profit-maximizing operational changes happen sooner than they otherwise would have occurred.

3.2 New Hires, Former Employees, and the Role of Layoffs

Several channels could explain the declines in employee satisfaction after buyouts. First, LBOs might make a firm a worse place to work through employee-unfriendly operational changes. In this case, we would expect negative effects among both pre-existing employees and new hires, relative to both groups at control firms. Second, new private equity owners might breach the firm's established implicit contracts with employees (Shleifer and Summers, 1988). This channel predicts stronger effects for employees at the firm before the buyout. Finally, a third channel that could co-exist with either of the first two is that operational changes after the buyout might lead different employees to sort into the firm. In this case, satisfaction may remain similar to control firms or even improve among new hires who are a better match with private equity ownership.

We run several tests of these hypotheses. First, we compare current employees who started after the private equity deal (new hires) with current employees who started before the deal (pre-deal employees). We interact the effect of an LBO with whether the employee is hired after the deal in Panel A of Table 3, using Equation (2).[17] There are large and significant negative effects among current employees who were hired before the deal. These effects are represented by the first row of coefficients. For example, the effect of LBOs on Work-Life Balance among pre-buyout employees is -0.056 and significant at the 0.05 level (column (2)); in contrast, the full-sample effect is an insignificant -0.024 (Table 2 Panel B column (2)). The result for satisfaction with Senior Management follows a similar pattern (column (4)). In contrast, we find no negative effects among new hires, as shown in the second row of coefficients. They report a small and insignificant decline in Compensation & Benefits (column (1)), no change in Culture & Values (column (3)), and insignificant increases in Work-Life Balance and Senior Management (columns (2) and (4)).

These results are consistent with private equity owners creating value in part by breaching implicit

[17] We use review date, deal date, and job tenure to determine if an employee is hired after the deal. An employee is a new hire if the distance between the deal date and review date is longer than the job tenure (upper bond in days). We use tenure controls to address any association between tenure and satisfaction.

contracts that previous managers held with employees. The new owners can then extract rents from pre-existing employees. In this model, employees hired after the buyout need not lose surplus. The results also point to the importance of matching, where the nature of the firm changes in a way that is a better fit for the new hires. Our findings are less consistent with employee-unfriendly operational changes. If these changes are occurring, they have no measurable impact on new hires.

Second, we look at layoffs around private equity deals. Past literature has shown strong evidence of churn after buyouts and mixed results on aggregate employment growth (Boucly, Sraer, and Thesmar, 2011; Davis et al., 2014; Fang, Goldman, and Roulet, 2021). If our results are driven by layoffs and churn, employees departing after private equity deals may have a particularly negative view of their company. Panel B of Table 3 repeats the main analysis but uses the sample of former employees instead of current employees.[18] We find strong negative effects that are similar to those among current, pre-buyout employees from Panel A. This is again consistent with the post-LBO firm eliminating pre-existing employee surplus and achieving better matches with new employees.

Although our main tests in Table 2 include only current employees and so are not driven by laid-off employees, layoffs or the threat of layoffs may affect the composition of reviewers and the propensity to complete a review. We test for this in two ways. First, we assess whether the composition of reviews shifts towards recently laid-off former employees after a private equity deal, with reviews among current employees reflecting individuals who are very concerned about being laid off. Appendix Figure A.3 Panel A shows that the number of reviews by current employees falls immediately after the buyout, consistent with some layoffs. The number returns to baseline during the second year after the buyout. Panel B shows that the number of reviews by former employees does not change at all. Panel C confirms that there are no meaningful changes in the share of reviews by current employees. These are also not statistically significant when estimated using a single post-buyout coefficient (as in Equation (1)). This suggests that to the degree LBOs are accompanied by layoffs, it does not dramatically affect an employee's propensity to review.

We also examine layoff patterns using external data from LinkedIn (see Section 1.2). In Appendix Figure A.4 Panel A, we show that around the deal there is a large, one-time increase in the departure rate. Although many departures are voluntary, the observed spike in departures at the time of a private equity deal is indicative of layoffs. The departure rate returns to its baseline by the third year after the buyout, consistent

[18]To identify former employees, we make use of the employee's job ending year in Glassdoor. When job ending year is missing, we use the year of review.

with layoffs being part of the private equity's initial operational changes. When we turn to the hiring rate in Panel B, we see some evidence of a fall after the buyout. We also see a significant drop in the overall employment growth rate in Panel C. Given these patterns, we ask whether the overall negative effects are driven by firms with particularly high net losses in employees. We calculate the extent to which each LBO target's employee departure rate increases from the four years prior to the deal to the subsequent four years. We classify deals with an above-median increase in departure rate (above 1%) as high layoff. We then test whether these high layoff deals show a different effect. The results of this test, reported in Appendix Table A.6, indicate that these deals are not statistically different from other deals.

In sum, it does not seem that our results can be entirely explained by a one-time labor reallocation after the buyout. Also consistent with this, the negative effects on average satisfaction are quite persistent, lasting for at least three years as shown in Figure 3. It remains possible that lower satisfaction stems from a permanent increase in job insecurity. Particularly in light of the persistence, greater fear of being laid off would represent a mechanism by which worker job quality declines; clearly, job security is an amenity and contributes to employee surplus.

3.3 Employee and Job Characteristics

In this section, we look at whether the impact of private equity on an employee is moderated by that employee's position. Specifically, we explore the importance of employees' entrenchment, skills, and bargaining power. First, in Table 4, we show that the results for all four rating dimensions are driven by workers with longer tenure. The first row shows the effect among workers at the firm for less than a year, and reveals positive but insignificant effects. The next three rows show a substantial incremental impact on longer-tenured workers, with workers who have been at the firm for at least three years showing the strongest negative effects. This relationship is most striking for Culture & Values, where the effect is positive but insignificant (0.032) for workers with 0-1 year of tenure, -0.054 for 1-3 years, -0.094 for 3-5 years, and -0.111 for 5+ years (note the coefficients need to be added as the 0-1 year group is the base), with the difference between the 0-1 and 5+ years groups being 13% of a standard deviation (column (3)). Workers with longer tenure also report larger decreases in satisfaction with Compensation & Benefits, Work-Life Balance, and Senior Management (columns (1) and (4)). Overall, this is consistent with an implicit contracts story where private equity owners extract surplus from entrenched workers.

We consider measures of skill in Table 5. The results here are strikingly different from those for tenure,

consistent with skill and entrenchment playing different roles in employer-employee bargaining. In Panel A, we consider the years of required work experience associated with the employee's job title. Here, we see that the negative effect of LBOs on Compensation & Benefits is driven by the lowest skilled workers who have jobs that typically require less than one year of work experience; for them, the effect is -0.113 or 9% of a standard deviation (column (1)). For all other groups, the decrease is smaller and insignificant. Similar patterns occur for Culture & Values and Senior Management, albeit more noisily (columns (3)-(4)). However, the pattern reverses for Work-Life Balance, where the effect on entry-level workers is insignificant but is significant and negative for workers in roles that require more experience (column (2)).[19]

In Panel B of Table 5, we consider education and again find that employees in lower-skill roles drive our results. The negative effect on Compensation & Benefits is driven by jobs that do not require a Bachelor's degree (column (1)). Employees in high-skilled roles requiring a Master's or professional degree are impacted significantly more positively, with the overall effect on them being positive and insignificant. The same pattern holds for all the other rating dimensions, though the negative effect among the bottom group loses significance. There is a large and robust effect on satisfaction with Senior Management among the highly educated group (column (4)). Specifically, the coefficients imply that among workers in jobs requiring a Master's or professional degree relative to those in jobs that do not require a Bachelor's degree, private equity buyouts improve satisfaction with Compensation & Benefits by 0.119 rating points, or 9% of a standard deviation. The same statistic for Senior Management is 0.168 rating points, or 12% of a standard deviation.

In Table 6 Panel A, we look at whether managers are differentially impacted. This table reveals interesting heterogeneity. Managers report essentially no decrease in Compensation & Benefits following the deal. However, they report much larger decreases in Work-Life Balance. This is broadly consistent with our work experience results and suggests differential margins of adjustment, with lower-level employees facing pay cuts and higher-level employees facing increased workload. Panel B looks at employees who work in the same city (measured with MSA) as the firm's headquarters. Consistent with new management pushing more skilled workers to be more productive, column (2) of Table 6 shows that the negative effect on Work-Life Balance is driven by workers at headquarters. The other rating dimensions are not significantly different between headquarters and other locations.

[19]The independent effects of work experience, in the bottom rows of the panel, control for the fact that workers in jobs requiring more experience are generally more satisfied than entry-level workers.

In sum, we find that private equity reduces satisfaction with pay only among less-skilled, entry-level workers, while pushing more highly educated and skilled employees to work harder. LBOs most adversely affect relatively low-skill workers, which is consistent with private equity firms extracting rents from the most replaceable workers. It could also be consistent with a change in the nature of the firm. For example, if private equity firms invest in technology, that could generate value while hurting relatively low-skill workers. Overall, while they do lead to a reduction in Work-Life Balance, private equity buyouts appear to be good news for the most highly skilled workers.

3.4 Deal Attributes

In this section, we test whether the declines in employee satisfaction exist for different types of deals. We modify Equation (1) by separating the independent variable $\mathbb{1}(\text{Post LBO}_{j,q})$ into multiple variables representing different levels of a deal characteristic. This allows us to interpret the coefficients relative to the base group of non-target control firms. While we can compare magnitudes across deal types, a disadvantage of this model is that we cannot assess whether coefficients are statistically different from one another.

We first consider the three transaction types that compose our main sample. In Table 7 Panel A, we divide the private equity deals into public-to-private deals, corporate divestitures, and vanilla LBOs. Across deal types, all the measures besides Work-Life Balance show decreases of similar magnitude. They are all significantly different from control firms except for the effects of public-to-private deals on Culture & Values and Senior Management. Among the dimensions, the outlier is Work-Life Balance, where the average negative effect appears driven by corporate divestitures. This type of deal has a negative effect that is more than three times as large as vanilla LBOs. The coefficient of -0.153 represents 13% of a standard deviation (Panel A column (2)).

The results in Panel A indicate that no particular deal type drives our results, though they suggest that corporate divestitures are primarily responsible for a large share of the efficiencies in which employees are asked to work harder – reducing Work-Life Balance. Corporate divestitures are also the largest source of negative effects on Compensation & Benefits. In these types of deals, employees at the targeted subsidiary may have previously benefited from managers who enjoyed the "quiet life" and suffered from the agency issues inherent in multiunit corporations (Scharfstein and Stein, 2000; Bertrand and Mullainathan, 2003). For example, Schoar (2002) argues that "conglomerates dissipate rents in the form of higher wages."

We next consider deal size. We define small as the bottom two terciles and large as the top tercile,

though the results are similar using alternative deal size breakdowns. The results, shown in Table 7 Panel B, indicate that the main effect is robust across both smaller and larger deals. However, there are substantially more adverse effects on Culture & Values in smaller deals (column (3)). For satisfaction with Work-Life Balance and Senior Management, the effects are larger among bigger deals (columns (2) and (4)). When combined with the corporate divestiture results from Panel A, these results support the idea that as firms become larger and more diversified, employees are not required to work as hard, creating opportunities for an external acquirer (Seru, 2014).

An important part of the private equity playbook is leverage, which offers tax advantages and aligns incentives. These benefits are crucial to value creation in private equity (Kaplan and Stromberg, 2009); for example, Guo, Hotchkiss, and Song (2011) find that outsize returns in post-1980s buyouts have come more from leverage rather than cash flow gains. In seminal papers, Myers (1977) and Jensen (1986) argue that because debt imposes agency costs and the discipline of lower free cash flows, respectively, higher leverage will reduce resource allocation to employees. Taking a different perspective, Maksimovic and Titman (1991) argue that because financial distress reduces a firm's ability to honor implicit contracts with employees, firms commit to treating employees well by maintaining lower leverage. Regardless of the direction of causality, all of these theories predict that deals with higher leverage should be associated with more employee dissatisfaction.

In Table 7 Panel C, we split deals around the median of leverage, which we measure as the value of the debt taken on relative to the deal size. Both high and low leverage deals are associated with satisfaction declines for employees. However, high-leverage deals lead to much greater dissatisfaction across all four dimensions. For example, in high-debt deals, the effect on Compensation & Benefits is -0.184, or 16% of a standard deviation (column (2)), almost twice the coefficient on low-debt deals. The differences between these coefficients are borderline statistically significant, but they are economically meaningful.

In sum, the average negative results are not driven by a particular transaction type or deal size. Importantly, as mentioned above, all of the relationships documented in this section do not imply causality. For example, the different effects by leverage could reflect another deal characteristic associated with high debt. However, the results shed light on which types of deals are better and worse from employees' perspectives.

3.5 Investor Returns

A particularly interesting deal-level attribute is the financial return to investors. It differs from the other characteristics that we consider because it is determined well after the deal date. Deal performance could be related to employee satisfaction through several channels. First, if investor returns in private equity come largely from extracting employee surplus, we might see a negative relationship between returns and job quality changes – the more effective private equity is at extracting surplus, the worse workers do. Second, there might be no correlation if private equity firms always extract employee surplus in the same way regardless of the deal success. Finally, we might see a positive relationship if there is a risk-sharing mechanism in which investor successes and failures are passed through to employees, similar to the way that currency exchange rate variation passes through to wages and prices (Gopinath, Itskhoki, and Rigobon, 2010; Bussiere, 2013). It is important to emphasize that we do not seek to establish causality here, since the return formation and satisfaction changes occur simultaneously and could both reflect a third variable.[20]

We begin by showing the raw relationship between returns and employee satisfaction changes for the subset of deals that match to returns (see Section 1.3). Panel A of Figure 4 plots bin-scatters with rating changes on the y-axis and the deal's log returns on the x-axis for twenty return quantiles.[21] Each column contains a different rating dimension. We present the results for three measures of returns: IRRs in the first row, TVMs in the second row, and PMEs against the Russell 2000 industry sector index in the third row. The plots suggest a positive association between investor returns (regardless of the metric) and changes in employee satisfaction. We also include the quadratic spline to show that the relationship is largely linear.

We confirm this positive association in Table 8, where we estimate Equation (4). For each rating dimension, we show the result using the log return in the first column and the percentile rank in the second column. The percentile ranks, which we calculate within the sample of LBO deals, help to correct for the positive effect of leverage on cash flow volatility. For example, if a private equity firm doubles a firm's leverage, both the firm's equity returns and its employees' fortunes may become more exposed to firm-level shocks. Therefore, using the absolute return is most relevant to thinking about the fraction of equity returns that are passed through to employees. The percentile specification sheds more light on the degree to which employees are exposed to firm-level shocks in general.

[20] We also do not seek to establish the role of private equity manager skill as our small sample and the high degree of randomness in deal-level returns makes that impossible. Korteweg and Sorensen (2017) show that the luck-related variance in buyout fund returns is six times that of the skill-related variance.

[21] Before calculating the log, we add either one plus the return value for IRR or 0.1 plus the value for TVM and PME.

In Panel A we report our results using IRR, which weights early cash flows more heavily and is widely used in the industry to gauge private equity deal performance. We see a large and robust positive relationship for both log and percentile returns across all four satisfaction dimensions. For example, column (2) indicates that moving from the 25th percentile to the 75th percentile in IRR is associated with a 0.15 rating point increase in Compensation & Benefits. In Panel B, we turn to PMEs, which capture idiosyncratic returns after accounting for what the comparable public market investments would deliver. The relationship is similarly large and robust for PME when considering Compensation & Benefits and Senior Management, although it is positive but not significantly different from zero for Work-Life Balance and Culture & Values. The pattern for TVM – which captures the total return to investors without any time or risk adjustment – is similar to PME, reported in Appendix Table A.7 Panel A.

Figure 4 and Table 8 show that higher investor returns are not associated with greater deterioration in employee ratings. However, this positive relationship is not altogether surprising, because public firms have been shown to exhibit a similar association (Edmans, 2011). This leads us to ask whether the relationship between financial performance and employee satisfaction for private equity-backed firms is different from public firms. It could be weaker for private equity-backed firms if private equity investors are less capital constrained on the downside and more effective at keeping rents to themselves in the upside. It could also be stronger if private equity firms give more performance pay on the upside and pass more downside to employees through leverage and costly default.

We compare the strength of the association between returns and employee satisfaction for LBO targets and public companies using the mimicking public equity investments introduced in Section 2. To briefly summarize, we match each LBO target to the two closest publicly traded peers by industry, size, age, and labor force characteristics. We then construct hypothetical investments in these public equities that mimic the cash flow pattern of the LBOs. This allows us to compute the IRR, TVM, and PME just as we do for the LBO cash flows. Appendix Figure A.5 shows that the same positive association between returns and employee satisfaction exists for our mimicking public equity investments, consistent with the previous literature.

Estimates of Equation (5) are reported in Table 9. There is an association between returns and employee satisfaction for both types of firm. We find some evidence for private equity targets having a stronger pass-through of total returns as measured by IRR to employees directly via compensation. Panel A column (1) shows that every 0.25 increase in log IRR is associated with a 0.033 point increase in satisfaction with

Compensation & Benefits for the public equity sample and a significantly higher 0.092 point increase for the LBO sample. This relationship is stronger for percentile ranks, which we compute separately within the private equity and hypothetical public equity returns. These correct for the standard deviation of LBO returns (Panel D of Table 1) being about double the level observed for mimicking investments in public equities, consistent with the leverage explanation. Moving up one IRR quartile is associated with more than twice as much of an increase in employee satisfaction with Compensation & Benefits for LBO targets (0.100 versus 0.040 for the matched public companies). The relationships for the other dimensions are generally positive (except for Culture & Values) but not statistically significant, consistent with pecuniary compensation being the most relevant mechanism of pass-through.

This pattern no longer holds if returns are measured with PMEs, as shown in Panel B. The interaction between returns and being a private equity deal turns negative; insignificantly so for Compensation & Benefits and Work-Life Balance, but significantly so for Culture & Values and Senior Management. This indicates that, relative to public companies, the pass-through rate of idiosyncratic equity returns to employee satisfaction is the same or lower in private equity as in public firms.[22] Results using TVM are presented in Appendix Table A.7 Panel B.

In sum, the results on returns show that the employees in private equity-backed firms report higher satisfaction when investors do well. This relationship is similar to public firms, with there being more pass-through of investor IRR to employee Compensation & Benefits and less pass-through of the idiosyncratic shocks picked up by PME to employee satisfaction with Culture & Values and Senior Management. While these correlations are suggestive, it is important to emphasize that these results have no causal interpretation because returns and employee satisfaction are codetermined after the deal.

3.6 ESG and Impact Funds

The returns analysis raises the provocative possibility that there may be no clear tradeoff between investor returns and treating employees well in private equity. Since treating employees well is one way for firms to create positive social impact, this leads us to the question of whether there are differential effects of ESG or Impact investment mandates, which have become increasingly popular among institutional investors. According to one estimate, the share of managed assets in the U.S. that are under ESG mandates has doubled

[22] In unreported results, we also verify that embedding hyperbolic discounting in the PME computation does not change the sign of the relations.

since 2015 to represent a third of the total, or $17 trillion.[23] Labor relations are central to the "social" component of ESG (Henisz, Koller, and Nuttall, 2019).

We first consider the full set of all ESG funds. As shown in Table 10 Panel A, deals led by ESG funds are associated with the same negative effect on employees as other deals. Our specification, where coefficients are relative to the base group of non-targeted firms, highlights that both types of funds lead to statistically significant negative effects. One explanation is that ESG is notoriously poorly measured and self-reported, which can enable funds to label themselves as ESG-oriented even if they are not.[24] Regardless, our results from the links to both returns and ESG ratings suggest, perhaps surprisingly, that if limited partners wished to screen firms on treating employees well (as measured by the employees' own perceptions), they need not sacrifice returns and cannot achieve this by screening only on a broad ESG category. As labor relations become an increasing priority among limited partners, this potentially points to the need for new measures and sources of data.[25]

We next focus on the Impact indicator, which represents those investment funds that, according to Preqin, require portfolio companies to have a positive impact. In Table 10 Panel B, we document that our negative results are driven by non-Impact funds. There is no measurable effect of buyouts on employee satisfaction when the investment fund has an Impact orientation. Although this sample is small and our coefficients imprecise, it points to potential benefits from more stringent screens.

3.7 Robustness Tests

In this section, we present robustness tests of the results in Table 2. Perhaps most importantly, we conduct a placebo test using growth equity and MBOs. As discussed in Section 1.2, these deals do not typically involve new management. The data are dominated by growth equity deals, where the private equity firm takes a non-majority stake in a company to fund new investment. This contrasts with the total control and focus on operational efficiency improvement that are characteristic of LBOs. If our main results stem from the event of a new investment or any change in ownership rather than a change in controlling ownership, we might expect to see similar results for these other two types of deals. If they stem from the operational changes that occur after LBOs specifically, we do not expect to find similar results.

[23] See, for example, this USSIF article.

[24] See, for example, Howard-Grenville (2021) or this PitchBook article.

[25] For example, one private equity investor told Pitchbook, as reported in this PitchBook article, that "Sophisticated LPs are now asking tougher questions about a firm's ESG efforts. For GPs, it's no longer enough to just say, 'Oh, we have an ESG policy.'"

In Appendix Table A.8, we add these two types of deals to the sample (Appendix Table A.3 describes their characteristics). We compare their effects in the second two rows with the effect of our main sample LBOs, reported in the first row. As above, the three coefficients should be interpreted relative to control non-targeted firms. For growth equity deals we see small and insignificant coefficients for all dimensions at both the company-quarter (Panel A) and review level (Panel B). For MBOs, we do see negative effects on Compensation & Benefits, but no effects on the other three dimensions. Recall that in an MBO, the existing managers of a company purchase a controlling interest in a company with the help of a private equity firm. This suggests that lower satisfaction with pay after LBOs is not strictly related to new management. Overall, however, we can conclude that our main results do not simply reflect the presence of any private equity deal, but LBOs in particular.

We also conduct a series of tests to ensure our findings are not spurious artifacts of some aspect of sample or model construction. First, we report results from the matching estimation in Appendix Table A.9 and find similar results to the main model at both the review (Panel A) and the company level (Panel B). Our matching is based on company founding date, industry, size, and worker education and tenure (as described in Section 2) and these tests help further alleviate concerns about selection bias.

Second, recall that each review does not necessarily include ratings on all four dimensions. In Appendix Table A.10, we show that the results are very similar to those in our main table when we restrict the sample to reviewers who rate the company on all dimensions. Third, in Appendix Table A.11 we show that the results are robust to requiring a company to have at least 30 reviews in total during our sample period. This ensures that the results do not reflect firms with small numbers of reviews. Fourth, in Appendix Table A.12 Panel A we cluster standard errors by quarter rather than by company, which leads to more precise estimates than in our main table. Fifth, in Appendix Table A.12 Panel B, the dependent variables are the median rather than average rating for each dimension. The estimates are very similar to those in the main table.

Sixth, we address whether employee composition may be an omitted variable explaining the deal heterogeneity results. In unreported tests, we control for five aspects of employee composition in our deal- and company-level analysis and find that while the sample size is reduced, the results are robust to including all of the measures or any subset.[26] Therefore, it does not seem that the employee heterogeneity

[26]Specifically, we add five continuous controls for the percent of reviews in each company-quarter by employees who report the following characteristics: a tenure of less than three years, a job title that indicates the employee is a manager, a job title that typically requires Masters or Professional degrees, a job title that typically requires above-median work experience, and a location in the company headquarter's MSA.

factors we study in Section 3.3 explain the deal results, though of course other features may explain the correlations that we observe with deal type, size, and leverage.

Seventh, we might be concerned that the returns analysis, which uses only a subsample of deals that can be matched to the Stepstone data, might be based on a set of deals with non-representative effects. Therefore, in Appendix Table A.13, we restrict the analysis to the sample matched to returns data, and continue to find strong effects. At the company-quarter level, the magnitudes are somewhat larger than our main effects (Panel A). Eighth, in Appendix Table A.14, we show that the results are similar when using only deals that took place after 2013. This helps address both concerns about lower completeness for the early part of the sample and the possibility that private equity deals in the wake of the financial crisis were systematically different.

Finally, we examine the rating dimensions that we do not use in our main analysis, because they are either sparsely populated or highly correlated with our main variables. These are Career Opportunities, Recommend this Company, Business Outlook, and Approves of CEO. The second and fourth are binary measures (the reviewer answers Yes or No). The third has answers including negative, neutral, and positive, where we convert them into -1, 0, and 1, respectively. We also exclude Overall Rating because it is not a specific dimension of job quality and it correlates closely with the sum of the four dimensions we study. Panel A of Appendix Table A.15 contains summary statistics on these additional dimensions. Panel B shows the effect of private equity buyouts on employee satisfaction on these additional rating dimensions. Consistent with the other results, we find robust negative effects on all outcomes.

4 Conclusion

This paper offers the first analysis, to our knowledge, of the effect of private equity buyouts on job quality as perceived by employees. On one hand, we might expect private equity ownership to increase satisfaction, either as a consequence of increased productivity (Guo, Hotchkiss, and Song, 2011; Harris, Jenkinson, and Kaplan, 2014; Korteweg and Sorensen, 2017) or because employee morale itself generates value (Edmans, 2011; Guiso, Sapienza, and Zingales, 2015; Welch and Yoon, 2020). On the other hand, if operational changes include cutting costs and amenities, investor returns could come at the expense of employee satisfaction (Appelbaum and Batt, 2014; Bhattarai, 2019). Policymakers have sought to address such negative effects; for example, several U.S. Senators proposed a bill in 2019 that would prioritize

worker pay after private equity-owned companies shut down operations.[27]

This paper makes progress towards reconciling the two views. By merging employee reviews with comprehensive private equity deal data, we document that, consistent with the second view, employee satisfaction declines on average following LBOs, with the strongest negative effects showing up in reported satisfaction with Compensation & Benefits and Culture & Values. One-time layoffs do not explain the effects. Long-tenure, lower-skill, and less-educated workers are most adversely affected, particularly when it comes to Compensation & Benefits. In fact, higher-skill and more educated workers are unaffected or even benefit along three of our four dimensions, with the exception being Work-Life Balance where their satisfaction declines.

Our results become more nuanced when we assess returns. We match our deals to high-quality deal-level returns data, which offers to our knowledge the first linkage between operational effects of private equity buyouts and investor returns. We find evidence to support the first view – that changes in employee satisfaction are positively associated with higher returns, particularly when it comes to Compensation & Benefits. In fact, employees of private equity targets are relatively more impacted by total investor returns than employees at comparable publicly traded firms. While multiple forces are likely at play, these results are most consistent with bargaining theories of rent-sharing in labor contracts. That is, although overall private equity buyouts may reduce average satisfaction, employees share in the success when the deal goes well.

Overall, this paper sheds new light on how private equity affects the nature of the firm, pushing beyond the existing literature on employment, separations, and wages. The results are strongly consistent with private equity ownership leading to a revision of implicit contracts, with the most adverse effects for entrenched but replaceable workers. Our results point to a need for further research on how ownership type affects employees, potentially using alternative measures of culture and measures of compensation that, like our measure, include stock option grants.

[27] See this Senate Press Release

References

Abadie, Alberto and Guido W Imbens. 2006. "Large Sample Properties of Matching Estimators for Average Treatment Effects." Econometrica, 74 (1):235–267.

Acharya, Viral V, Oliver F Gottschalg, Moritz Hahn, and Conor Kehoe. 2013. "Corporate Governance and Value Creation: Evidence From Private Equity." The Review of Financial Studies, 26 (2):368–402.

Agrawal, Ashwini and Prasanna Tambe. 2016. "Private Equity and Workers' Career Paths: The Role of Technological Change." The Review of Financial Studies, 29 (9):2455–2489.

Ang, Andrew, Bingxu Chen, William N Goetzmann, and Ludovic Phalippou. 2018. "Estimating Private Equity Returns From Limited Partner Cash Flows." The Journal of Finance, 73 (4):1751–1783.

Antoni, Manfred, Ernst Maug, and Stefan Obernberger. 2019. "Private Equity and Human Capital Risk." Journal of Financial Economics, 133 (3):634–657.

Appelbaum, Eileen and Rosemary Batt. 2014. Private Equity at Work: When Wall Street Manages Main Street. Russell Sage Foundation.

Atalay, Enghin, Phai Phongthiengtham, Sebastian Sotelo, and Daniel Tannenbaum. 2020. "The Evolution of Work in the United States." American Economic Journal: Applied Economics, 12 (2):1–34.

Axelson, Ulf, Tim Jenkinson, Per Strömberg, and Michael S Weisbach. 2013. "Borrow Cheap, Buy High? The Determinants of Leverage and Pricing in Buyouts." The Journal of Finance, 68 (6):2223–2267.

Bae, Kee-Hong, Jun-Koo Kang, and Jin Wang. 2011. "Employee Treatment and Firm Leverage: A Test of the Stakeholder Theory of Capital Structure." Journal of Financial Economics, 100 (1):130–153.

Barber, Brad M, Adair Morse, and Ayako Yasuda. 2021. "Impact Investing." Journal of Financial Economics, 139 (1):162–185.

Bena, Jan and Kai Li. 2014. "Corporate Innovations and Mergers and Acquisitions." The Journal of Finance, 69 (5):1923–1960.

Berk, Jonathan B, Richard Stanton, and Josef Zechner. 2010. "Human Capital, Bankruptcy, and Capital Structure." The Journal of Finance, 65 (3):891–926.

Bernstein, Shai, Josh Lerner, Morten Sorensen, and Per Strömberg. 2017. "Private Equity and Industry Performance." Management Science, 63 (4):1198–1213.

Bernstein, Shai and Albert Sheen. 2016. "The Operational Consequences of Private Equity Buyouts: Evidence From the Restaurant Industry." The Review of Financial Studies, 29 (9):2387–2418.

Bertrand, Marianne and Sendhil Mullainathan. 2003. "Enjoying the Quiet Life? Corporate Governance and Managerial Preferences." Journal of Political Economy, 111 (5):1043–1075.

Bhattarai, Abha. 2019. "Private Equity's Role in Retail Has Killed 1.3 Million Jobs, Study Says." The Washington Post.

Bloom, Nicholas, Raffaella Sadun, and John Van Reenen. 2015. "Do Private Equity Owned Firms Have Better Management Practices?" American Economic Review, 105 (5):442–46.

Boucly, Quentin, David Sraer, and David Thesmar. 2011. "Growth LBOs." Journal of Financial Economics, 102 (2):432–453.

Braun, Reiner, Tim Jenkinson, and Ingo Stoff. 2017. "How Persistent Is Private Equity Performance? Evidence From Deal-Level Data." Journal of Financial Economics, 123 (2):273–291.

Bussiere, Matthieu. 2013. "Exchange Rate Pass-Through to Trade Prices: The Role of Nonlinearities and Asymmetries." Oxford Bulletin of Economics and Statistics, 75 (5):731–758.

Card, David, Ana Rute Cardoso, Jörg Heining, and Patrick Kline. 2018. "Firms and Labor Market Inequality: Evidence and Some Theory." Journal of Labor Economics, 36 (S1):S13–S70.

Chemmanur, Thomas J, Harshit Rajaiya, and Jinfei Sheng. 2019. "How Does Online Employee Ratings Affect External Firm Financing? Evidence From Glassdoor." Available at SSRN 3507695.

Cohn, Jonathan, Nicole Nestoriak, and Malcolm Wardlaw. 2021. "Private Equity Buyouts and Workplace Safety." The Review of Financial Studies.

Cornelli, Francesca and Oğuzhan Karakaş. 2012. "Corporate Governance of LBOs: The Role of Boards." Available at SSRN 1875649.

Cremers, KJ Martijn, Vinay B Nair, and Kose John. 2009. "Takeovers and the Cross-Section of Returns." The Review of Financial Studies, 22 (4):1409–1445.

Cronqvist, Henrik, Fredrik Heyman, Mattias Nilsson, Helena Svaleryd, and Jonas Vlachos. 2009. "Do Entrenched Managers Pay Their Workers More?" The Journal of Finance, 64 (1):309–339.

Davis, Steven J, John Haltiwanger, Kyle Handley, Ron Jarmin, Josh Lerner, and Javier Miranda. 2014. "Private Equity, Jobs, and Productivity." American Economic Review, 104 (12):3956–90.

Degeorge, Francois, Jens Martin, and Ludovic Phalippou. 2016. "On Secondary Buyouts." Journal of Financial Economics, 120 (1):124–145.

Dessaint, Olivier, Andrey Golubov, and Paolo Volpin. 2017. "Employment Protection and Takeovers." Journal of Financial Economics, 125 (2):369–388.

Eaton, Charlie, Sabrina T Howell, and Constantine Yannelis. 2020. "When Investor Incentives and Consumer Interests Diverge: Private Equity in Higher Education." The Review of Financial Studies, 33 (9):4024–4060.

Edmans, Alex. 2011. "Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices." Journal of Financial Economics, 101 (3):621–640.

Edmans, Alex, Lucius Li, and Chendi Zhang. 2014. "Employee Satisfaction, Labor Market Flexibility, and Stock Returns Around the World." National Bureau of Economic Research.

Eriksson, Tor and Nicolai Kristensen. 2014. "Wages or Fringes? Some Evidence on Trade-Offs and Sorting." Journal of Labor Economics, 32 (4):899–928.

Fang, Lily, Jim Goldman, and Alexandra Roulet. 2021. "Private Equity and Pay Gaps Inside the Firm." Available at NBER Conference f149062.

Fracassi, Cesare, Alessandro Previtero, and Albert W Sheen. 2021. "Barbarians at the Store? Private Equity, Products, and Consumers." The Journal of Finance.

Franzoni, Francesco, Eric Nowak, and Ludovic Phalippou. 2012. "Private Equity Performance and Liquidity Risk." The Journal of Finance, 67 (6):2341–2373.

Gompers, Paul, Steven N Kaplan, and Vladimir Mukharlyamov. 2016. "What Do Private Equity Firms Say They Do?" Journal of Financial Economics, 121 (3):449–476.

Gopinath, Gita, Oleg Itskhoki, and Roberto Rigobon. 2010. "Currency Choice and Exchange Rate Pass-Through." American Economic Review, 100 (1):304–36.

Gorton, Gary B and Alexander K Zentefis. 2020. "Corporate Culture as a Theory of the Firm." National Bureau of Economic Research.

Graham, John R, Campbell R Harvey, Jillian Popadak, and Shivaram Rajgopal. 2017. "Corporate Culture: Evidence From the Field." National Bureau of Economic Research.

Green, T Clifton, Ruoyan Huang, Quan Wen, and Dexin Zhou. 2019. "Cowdsourced Employer Reviews and Stock Returns." Journal of Financial Economics, 134 (1):236–251.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales. 2015. "The Value of Corporate Culture." Journal of Financial Economics, 117 (1):60–76.

Guo, Shourun, Edith S Hotchkiss, and Weihong Song. 2011. "Do Buyouts (Still) Create Value?" The Journal of Finance, 66 (2):479–517.

Gupta, Atul, Sabrina T Howell, Constantine Yannelis, and Abhinav Gupta. 2021. "Does Private Equity Investment in Healthcare Benefit Patients? Evidence From Nursing Homes." National Bureau of Economic Research.

Harris, Robert S, Tim Jenkinson, and Steven N Kaplan. 2014. "Private Equity Performance: What Do We Know?" The Journal of Finance, 69 (5):1851–1882.

Henisz, Witold, Tim Koller, and Robin Nuttall. 2019. "Five Ways That ESG Creates Value." McKinsey Quarterly.

Howard-Grenville, Jennifer. 2021. "ESG Impact Is Hard to Measure- But It's Not Impossible." Harvard Business Review.

Huang, Kelly, Meng Li, and Stanimir Markov. 2020. "What Do Employees Know? Evidence From a Social Media Platform." The Accounting Review, 95 (2):199–226.

Jensen, Michael C. 1986. "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." The American Economic Review, 76 (2):323–329.

John, Kose, Anzhela Knyazeva, and Diana Knyazeva. 2015. "Employee Rights and Acquisitions." Journal of Financial Economics, 118 (1):49–69.

Kaplan, Steven N and Antoinette Schoar. 2005. "Private Equity Performance: Returns, Persistence, and Capital Flows." The Journal of Finance, 60 (4):1791–1823.

Kaplan, Steven N and Per Stromberg. 2009. "Leveraged Buyouts and Private Equity." Journal of Economic Perspectives, 23 (1):121–46.

Karabarbounis, Marios and Santiago Pinto. 2018. "What Can We Learn From Online Wage Postings? Evidence From Glassdoor." Economic Quarterly, (4Q):173–189.

Korteweg, Arthur and Stefan Nagel. 2016. "Risk-Adjusting the Returns to Venture Capital." The Journal of Finance, 71 (3):1437–1470.

Korteweg, Arthur and Morten Sorensen. 2017. "Skill and Luck in Private Equity Performance." Journal of Financial Economics, 124 (3):535–562.

Lamadon, Thibaut, Magne Mogstad, and Bradley Setzler. 2019. "Imperfect Competition, Compensating Differentials and Rent Sharing in the US Labor Market." National Bureau of Economic Research.

Lazear, Edward P. 1998. Personnel Economics for Managers. Wiley New York.

Lee, Yoojin, Shaphan Ng, Terry J Shevlin, and Aruhn Venkat. 2020. "The Effects of Tax Avoidance News on Employee Perceptions of Managers and Firms: Evidence From Glassdoor.com Ratings." The Accounting Review, Forthcoming.

Lerner, Josh and Antoinette Schoar. 2004. "The Illiquidity Puzzle: Theory and Evidence From Private Equity." Journal of Financial Economics, 72 (1):3–40.

Lerner, Josh, Morten Sorensen, and Per Strömberg. 2011. "Private Equity and Long-Run Investment: The Case of Innovation." The Journal of Finance, 66 (2):445–477.

Levit, Doron and Nadya Malenko. 2016. "The Labor Market for Directors and Externalities in Corporate Governance." The Journal of Finance, 71 (2):775–808.

Lins, Karl V, Henri Servaes, and Ane Tamayo. 2017. "Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility During the Financial Crisis." The Journal of Finance, 72 (4):1785–1824.

Liu, Tim, Christos Makridis, Paige Ouimet, and Elena Simintzi. 2019. "The Distribution of Non-Wage Benefits: Maternity Benefits and Gender Diversity." Available at SSRN 3088067.

Maksimovic, Vojislav and Gordon Phillips. 2008. "The Industry Life Cycle, Acquisitions and Investment: Does Firm Organization Matter?" The Journal of Finance, 63 (2):673–708.

Maksimovic, Vojislav and Sheridan Titman. 1991. "Financial Policy and Reputation for Product Quality." The Review of Financial Studies, 4 (1):175–200.

Marinescu, Ioana, Nadav Klein, Andrew Chamberlain, and Morgan Smart. 2018. "Incentives Can Reduce Bias in Online Employer Reviews." Academy of Management Proceedings, 2018 (1):11189.

Mas, Alexandre and Amanda Pallais. 2017. "Valuing Alternative Work Arrangements." American Economic Review, 107 (12):3722–59.

Morris, Peter and Ludovic Phalippou. 2020. "Thirty Years after Jensen's Prediction: Is Private Equity a Superior Form of Ownership?" Oxford Review of Economic Policy, 36 (2):291–313.

Myers, Stewart C. 1977. "Determinants of Corporate Borrowing." Journal of Financial Economics, 5 (2):147–175.

Olsson, Martin and Joacim Tåg. 2017. "Private Equity, Layoffs, and Job Polarization." Journal of Labor

Economics, 35 (3):697–754.

Pagano, Marco and Paolo F Volpin. 2005. "Managers, Workers, and Corporate Control." The Journal of Finance, 60 (2):841–868.

Pontiff, Jeffrey, Andrei Shleifer, and Michael S Weisbach. 1990. "Reversions of Excess Pension Assets After Takeovers." The RAND Journal of Economics, 21 (4):600–613.

Robinson, David T and Berk A Sensoy. 2013. "Do Private Equity Fund Managers Earn Their Fees? Compensation, Ownership, and Cash Flow Performance." The Review of Financial Studies, 26 (11):2760–2797.

———. 2016. "Cyclicality, Performance Measurement, and Cash Flow Liquidity in Private Equity." Journal of Financial Economics, 122 (3):521–543.

Scharfstein, David S and Jeremy C Stein. 2000. "The Dark Side of Internal Capital Markets: Divisional Rent-Seeking and Inefficient Investment." The Journal of Finance, 55 (6):2537–2564.

Schoar, Antoinette. 2002. "Effects of Corporate Diversification on Productivity." The Journal of Finance, 57 (6):2379–2403.

Seru, Amit. 2014. "Firm Boundaries Matter: Evidence from Conglomerates and R&D Activity." Journal of Financial Economics, 111 (2):381–405.

Sheng, Jinfei. 2019. "Asset Pricing in the Information Age: Employee Expectations and Stock Returns." Available at SSRN 3321275.

Shleifer, Andrei and Lawrence H Summers. 1988. "Breach of Trust in Hostile Takeovers." In Corporate Takeovers: Causes and Consequences. University of Chicago Press, 33–68.

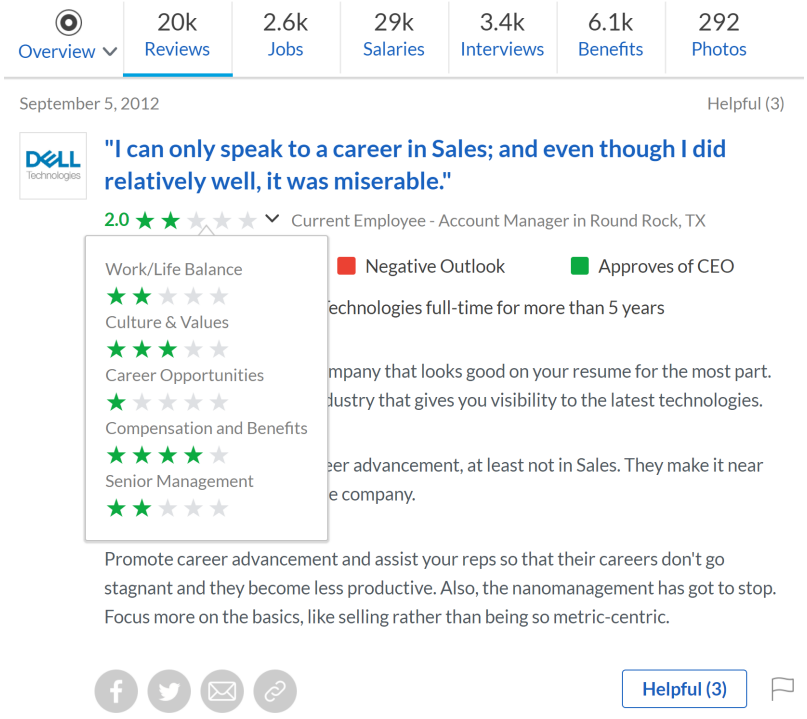
Stole, Lars A and Jeffrey Zwiebel. 1996. "Organizational Design and Technology Choice Under Intrafirm Bargaining." The American Economic Review, 86 (1):195–222.

Verwijmeren, Patrick and Jeroen Derwall. 2010. "Employee Well-Being, Firm Leverage, and Bankruptcy Risk." Journal of Banking & Finance, 34 (5):956–964.

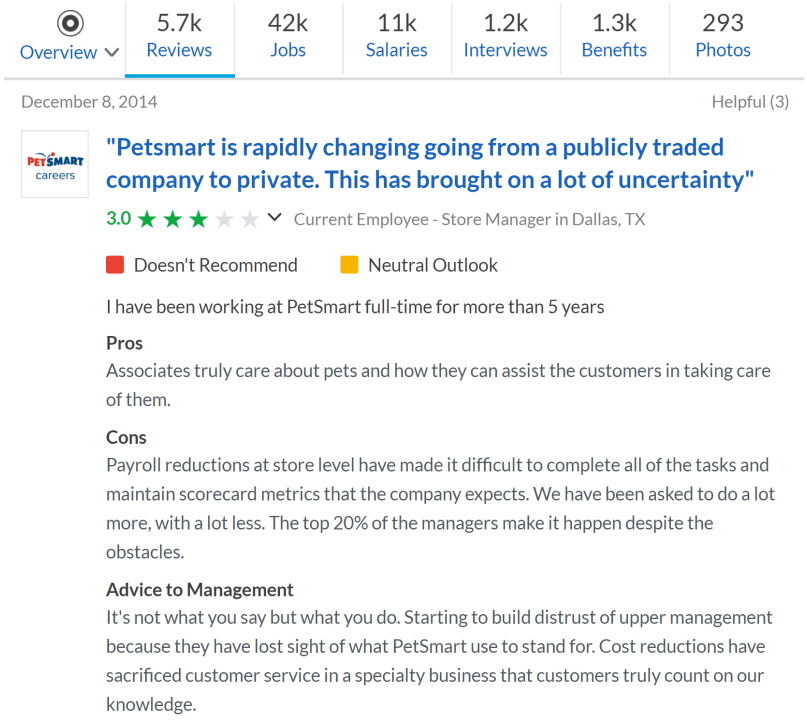
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Figure 1: **Example Glassdoor Review**

Panel A: Dell Technologies

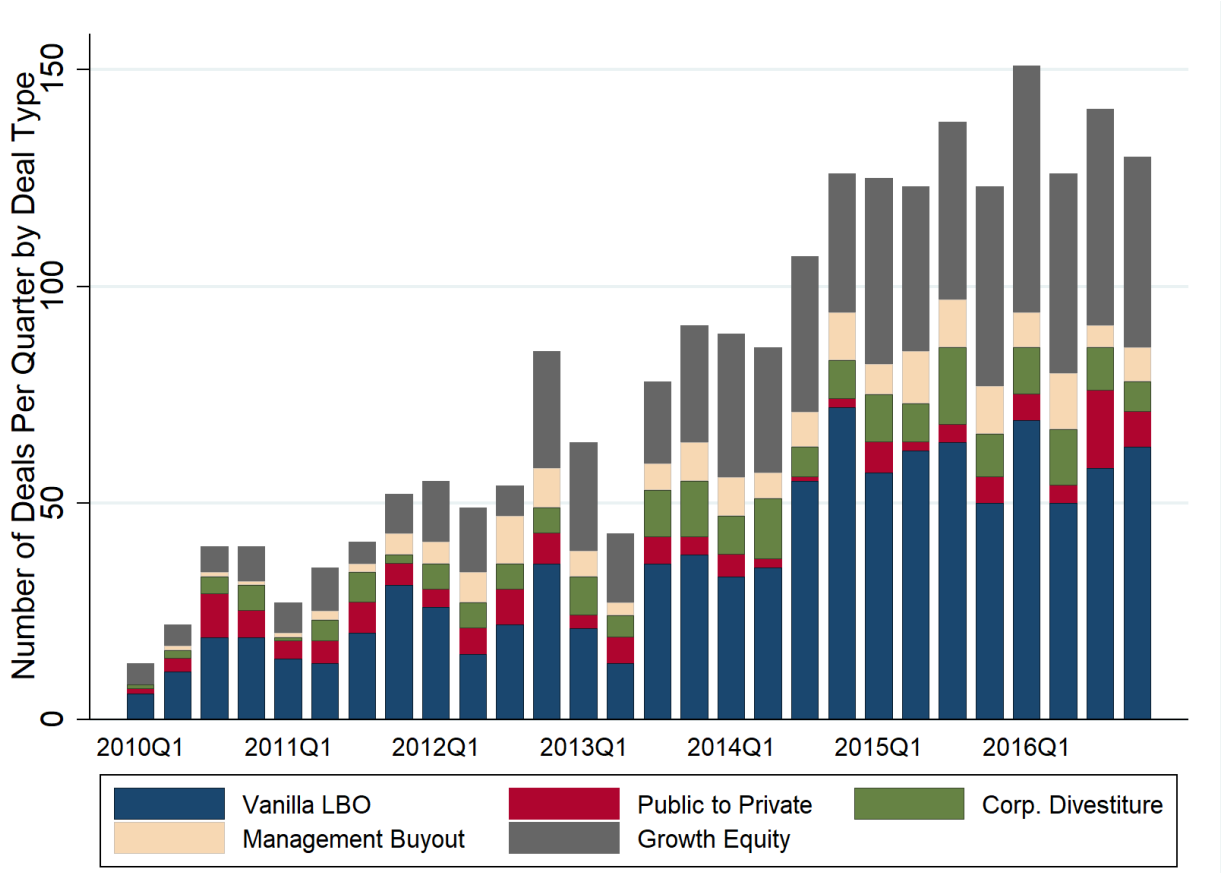


Panel B: PetSmart



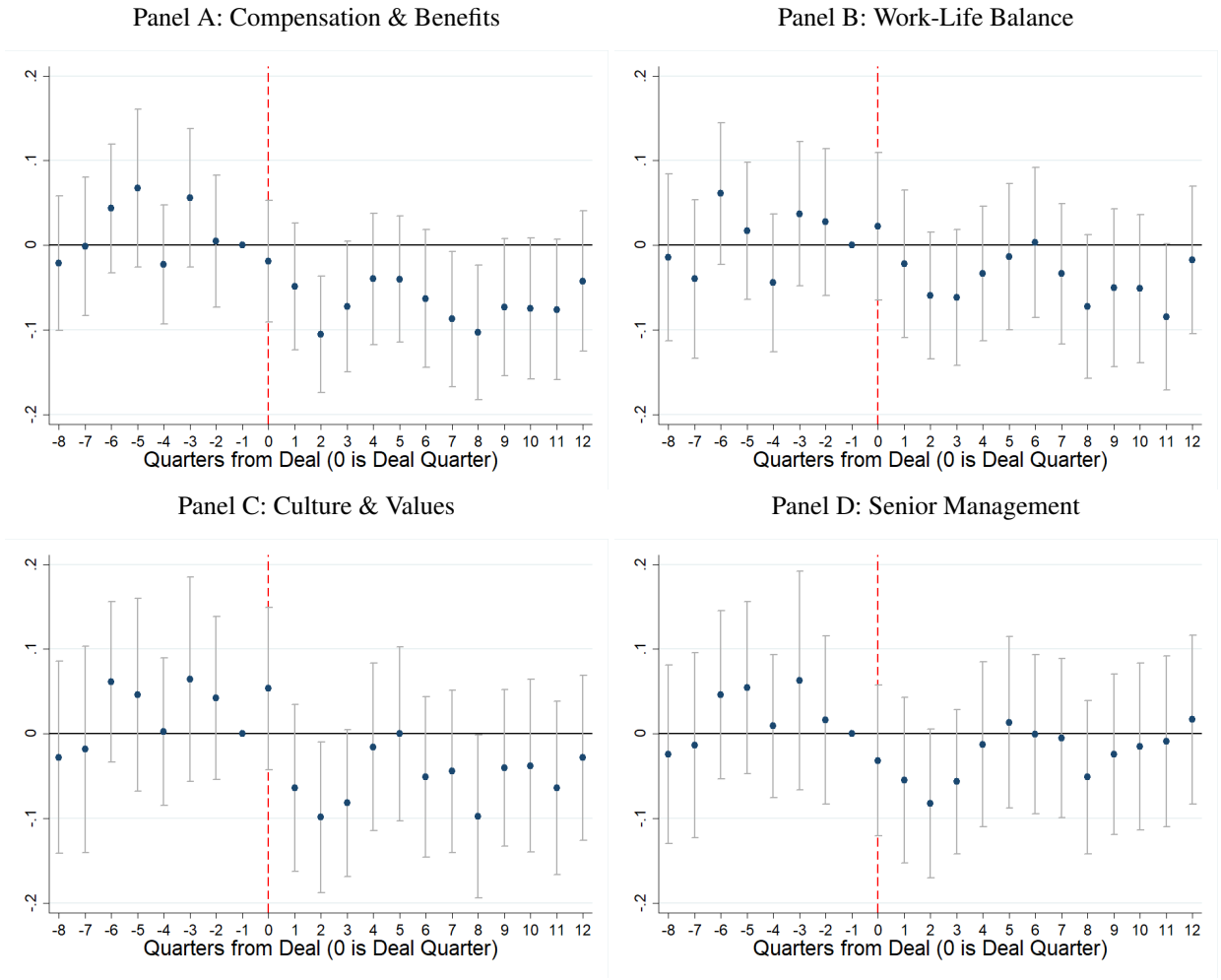
Note: This figure provides two examples of Glassdoor reviews retrieved on March 12, 2021 from Dell Review and PetSmart Review.

Figure 2: **Deal Sample Overview**



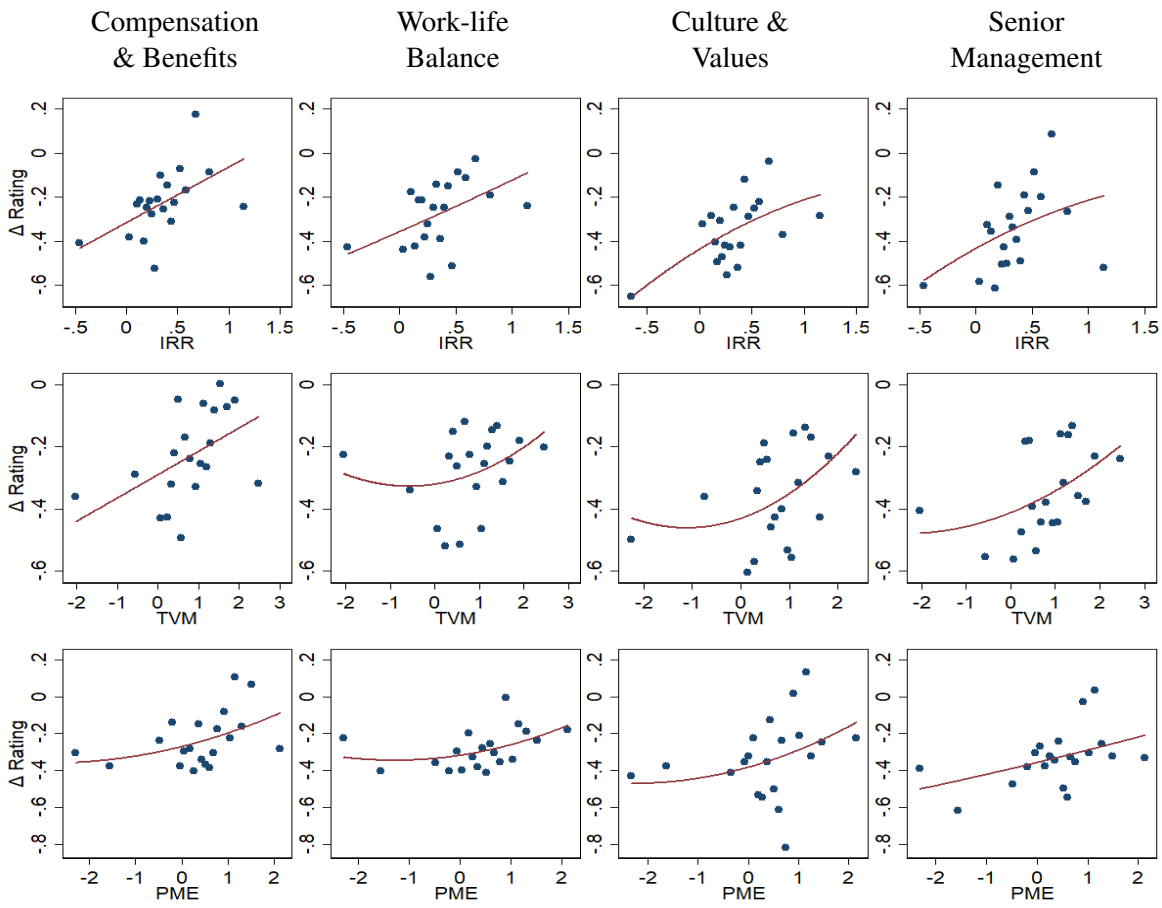
Note: This figure presents the number of deals per quarter in the main LBO sample that we include in analysis, which are Pitchbook deals matched to Glassdoor that occur between 2010 and 2016, and comprise "vanilla", public-to-private, and corporate divestiture LBOs. The figure also shows the two deal types that comprise the placebo sample: management buyouts and growth equity deals.

Figure 3: **Event Study of Effects of LBOs on Dimensions of Employee Satisfaction**



Note: This figure presents differences-in-differences event studies of the effect of LBOs on four dimensions of employee satisfaction, using Equation (3). The unit of observation is the review, and we present separate coefficients for 8 quarters before and 12 quarters after the buyout. The regression is fully saturated, including dummies for all quarters around the buyout. We omit quarter -1 (the quarter before the buyout). Standard errors are clustered at the company level.

Figure 4: **Investor Return and Changes in Employee Satisfaction**



Note: The figure presents bin-scatter plots of the changes in residualized average quarterly ratings of employees on the deal-level gross-of-fee returns in the LBO-SPI matched sample. The rating category is indicated at the top of each column. Returns are measured as either the deal's IRR (top row), TVM (middle), or PME (bottom), as indicated by the x-axis title. PMEs are computed against the style and target firm's industry sector of the Russell 2000 index. The returns are transformed by taking the natural log of 1 plus the return value for IRR, and 0.1 plus value for multiples, before taking the average within the respective return quantile.

Table 1: **Summary Statistics**

Panel A: Glassdoor Employee Review Scores

	All			Ever-LBO Sample			Control Sample		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Review Level									
Compensation & Benefits	3,317,661	3.49	1.26	131,194	3.28	1.30	3,186,467	3.49	1.25
Work-Life Balance	3,324,728	3.59	1.32	131,318	3.47	1.35	3,193,410	3.60	1.31
Culture & Value	3,052,262	3.71	1.39	119,716	3.50	1.44	2,932,546	3.72	1.39
Senior Management	3,237,193	3.36	1.44	127,759	3.17	1.47	3,109,434	3.36	1.43
Company-Quarter Level									
Number of Reviews	865,916	4.21	18.83	23,454	6.22	16.25	842,462	4.15	18.89
Avg. Compensation & Benefits	859,694	3.42	1.15	23,377	3.19	1.03	836,317	3.43	1.15
Avg. Work-Life Balance	861,444	3.64	1.17	23,405	3.45	1.07	838,039	3.64	1.17
Avg. Culture & Value	769,681	3.68	1.28	19,752	3.42	1.18	749,929	3.69	1.28
Avg. Senior Management	852,779	3.37	1.32	23,286	3.10	1.19	829,493	3.38	1.33
Company Level									
Number of Reviews	270,694	26.69	317.02	1,376	197.74	613.23	269,318	25.82	314.55
Avg. Compensation & Benefits	254,924	3.46	1.09	1,376	3.28	0.63	253,548	3.46	1.09
Avg. Work-Life Balance	255,719	3.78	1.06	1,376	3.52	0.62	254,343	3.78	1.06
Avg. Culture & Value	243,870	3.82	1.15	1,369	3.49	0.74	242,501	3.82	1.15
Avg. Senior Management	251,847	3.61	1.20	1,376	3.21	0.71	250,471	3.61	1.21

Panel B: Employee Characteristics

	All			Ever-LBO Sample			Control Sample		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Reported Location									
Works at Headquarters	1,735,970	0.54	0.50	65,870	0.35	0.48	1,670,100	0.55	0.50
Reported Tenure									
Tenure $<$ 1 Years	2,402,297	0.25	0.43	89,635	0.28	0.45	2,312,662	0.25	0.43
Tenure 1-3 Years	2,402,297	0.29	0.46	89,635	0.30	0.46	2,312,662	0.29	0.46
Tenure 3-5 Years	2,402,297	0.19	0.39	89,635	0.19	0.39	2,312,662	0.19	0.39
Tenure 5+ Years	2,402,297	0.26	0.44	89,635	0.24	0.43	2,312,662	0.26	0.44
Reported Job Title									
Is Managerial	2,327,268	0.14	0.35	87,543	0.15	0.36	2,239,725	0.14	0.35
Typically Requires $<$ 1 Years Exp.	1,533,455	0.14	0.35	56,706	0.14	0.34	1,476,749	0.14	0.35
Typically Requires 1-3 Years Exp.	1,533,455	0.27	0.44	56,706	0.26	0.44	1,476,749	0.27	0.44
Typically Requires 3-5 Years Exp.	1,533,455	0.37	0.48	56,706	0.34	0.47	1,476,749	0.37	0.48
Typically Requires 5+ Years Exp.	1,533,455	0.23	0.42	56,706	0.26	0.44	1,476,749	0.23	0.42
Typically Requires Only High School	1,533,455	0.18	0.39	56,706	0.22	0.42	1,476,749	0.18	0.39
Typically Requires College	1,533,455	0.76	0.43	56,706	0.74	0.44	1,476,749	0.76	0.43
Typically Requires Masters/Professional	1,533,455	0.06	0.24	56,706	0.04	0.19	1,476,749	0.06	0.24

Table 1: **Summary Statistics**—Continued

Panel C: Deal Statistics

	N	Mean	SD
Deal Type			
Vanilla LBO	1,376	0.73	0.44
Public to Private	1,376	0.11	0.31
Corporate Divestiture	1,376	0.16	0.37
PitchBook Industry Sector			
Business Products/Services	1,376	0.32	0.47
Consumer Products/Services	1,376	0.23	0.42
Energy	1,376	0.02	0.13
Financial Services	1,376	0.04	0.20
Healthcare	1,376	0.15	0.35
Information Technology	1,376	0.23	0.42
Materials and Resources	1,376	0.01	0.10
Deal Characteristics			
Deal Size (USD m)	552	724.53	1748.99
Leverage	223	0.80	3.69
Number of Employees	789	2024.30	7430.95
Impact Fund	1,376	0.03	0.18
ESG/Impact Fund	1,376	0.13	0.34

Panel D: Deal-level Investor Returns

	N	Mean	SD	p5	p50	p95
Fund Size (USD b)	334	3.47	4.59	0.21	1.21	14.68
Fund IRR quartile	321	2.73	0.75	2.00	3.00	4.00
Fund IRR	321	0.21	0.13	0.06	0.19	0.40
Deal Amount Invested (USD b)	334	0.14	0.18	0.01	0.08	0.53
Deal IRR	331	0.39	0.52	-0.15	0.27	1.36
Deal IRR rank within Fund	331	0.52	0.28	0.01	0.55	0.91
Deal IRR rank within Quarter	331	0.59	0.28	0.05	0.65	0.95
Deal TVM	334	2.99	2.75	0.14	2.19	8.21
Deal TVM rank within Fund	334	0.54	0.29	0.01	0.59	0.92
Deal TVM rank within Quarter	334	0.62	0.29	0.00	0.70	0.95
Deal PME vs Russel 2000 Style	321	2.19	2.08	0.11	1.65	5.63
Deal PME vs Russel 2000 Sector	321	1.97	1.94	0.00	1.49	5.34
Mimicking public co IRR	720	0.09	0.31	-0.32	0.08	0.54
Mimicking public co TVM	726	1.62	1.30	0.33	1.29	4.02
Mimicking public co PME vs Sector	726	1.05	0.82	0.14	0.89	2.51

Note: This table presents summary statistics. Panel A presents statistics on each Glassdoor rating dimension and the number of reviews at the review, company-quarter, and aggregated company level. The Ever-LBO sample is all the companies with LBO deals in our main analysis, including vanilla LBOs, public-to-private deals, and corporate divestitures (together, these comprise 1,376 deals). The control sample is non-targeted companies. Panel B presents statistics on employee characteristics. Works at Headquarters is defined for workers who report a location and is a dummy variable equal to one if the reported location is in the same MSA as the company's headquarters. Reported Tenure is the length of employment as reported on Glassdoor. Whether a reviewer's reported job title is managerial and the work experience and education it typically requires are calculated as discussed in Section 1.1. Panel C presents deal characteristics of the PitchBook-Glassdoor matched deals in our main analysis. Panel D describes the investor return data from the Stepstone SPI database that is matched to Glassdoor company and Pitchbook deal information. The last three lines describe the returns metrics for the mimicking public equity investments. We follow Korteweg and Nagel (2016) to construct cash flows out of stock returns from CRSP to mimic the patterns observed in private equity. We take the closest two matches for each LBO deals using the distance metric from Abadie and Imbens (2006).

Table 2: **Effect of LBOs on Employee Satisfaction**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.082***	-0.063***	-0.093***	-0.061***
	(0.018)	(0.018)	(0.024)	(0.021)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.347
Outcome S.D.	1.145	1.170	1.277	1.322

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.070***	-0.024	-0.066**	-0.020
	(0.018)	(0.023)	(0.026)	(0.024)
Observations	3,317,661	3,324,728	3,052,262	3,237,193
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.217	0.181	0.199	0.209
Outcome S.D.	1.257	1.316	1.388	1.437

Note: This table reports the effect of an LBO on employee satisfaction measures. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)) but with no interaction variables). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table 3: **Effect of LBOs on Employee Satisfaction of New Hires and Former Employees**

Panel A: Interaction with Whether Employee is Hired After Deal

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.081***	-0.056**	-0.087***	-0.060*
	(0.024)	(0.023)	(0.030)	(0.031)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(New Hire)	0.051***	0.073***	0.087***	0.072***
	(0.019)	(0.020)	(0.020)	(0.022)
Observations	2,103,173	2,107,721	2,095,460	2,080,813
Tenure FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.240	0.206	0.219	0.241
Outcome S.D.	1.273	1.328	1.391	1.450

Panel B: Former Employee Sample

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.078***	-0.077***	-0.083***	-0.076***
	(0.019)	(0.022)	(0.024)	(0.020)
Observations	2,628,647	2,635,245	2,476,685	2,579,864
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.222	0.179	0.202	0.169
Outcome S.D.	1.320	1.406	1.506	1.451

Note: Panel A shows the effect of an LBO interacted with whether the employee is hired after the deal, using Equation (2). We use review date, deal date, and job tenure to determine if an employee is hired after the deal. An employee is hired after the deal if the distance between the deal date and review date is longer than that employee's job tenure could be. We include tenure fixed effects to control for bias. Panel B repeats the analysis in Table 2 using former employees instead of current employees. Employee reviews are assumed to be as of the employee's departure, if that is reported. All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table 4: **Effect of LBOs on Employee Satisfaction by Employee Tenure at Firm**

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	0.008	0.029	0.032	0.038
	(0.030)	(0.025)	(0.032)	(0.035)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(1-3 Years Tenure)	-0.074***	-0.032**	-0.086***	-0.075***
	(0.022)	(0.016)	(0.019)	(0.022)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(3-5 Years Tenure)	-0.118***	-0.101***	-0.126***	-0.116***
	(0.025)	(0.022)	(0.023)	(0.025)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(5+ Years Tenure)	-0.099***	-0.111***	-0.143***	-0.103***
	(0.030)	(0.030)	(0.030)	(0.035)
$\mathbb{1}$(1-3 Years Tenure)	-0.136***	-0.149***	-0.179***	-0.261***
	(0.004)	(0.004)	(0.004)	(0.005)
$\mathbb{1}$(3-5 Years Tenure)	-0.135***	-0.196***	-0.223***	-0.345***
	(0.005)	(0.005)	(0.006)	(0.006)
$\mathbb{1}$(5+ Years Tenure)	-0.019**	-0.205***	-0.183***	-0.324***
	(0.008)	(0.007)	(0.007)	(0.009)
Observations	2,103,178	2,107,726	2,095,465	2,080,813
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.239	0.206	0.219	0.241
Outcome S.D.	1.273	1.328	1.391	1.450

Note: This table reports how the effect of an LBO varies with the number of years an employee has been at the firm, using Equation (2). This tenure variable takes one of four values: 0-1 year, 2-3 years, 4-5 years, and more than 5 years. The interaction with 0-1 years of tenure is omitted so that the coefficient on $\mathbb{1}$(Post LBO) represents the effect for that group. All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table 5: **Effect of LBOs on Employee Satisfaction by Job Requirements**

Panel A: Interaction with Job's Required Work Experience

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.113***	0.055	-0.065	-0.058
	(0.041)	(0.042)	(0.042)	(0.042)
𝟙(Post LBO) × 𝟙(Req. 1-3 Years Exp.)	0.086***	-0.069**	0.042	0.057
	(0.033)	(0.033)	(0.032)	(0.035)
𝟙(Post LBO) × 𝟙(Req. 3-5 Years Exp.)	0.075	-0.086**	0.047	0.076*
	(0.046)	(0.041)	(0.036)	(0.044)
𝟙(Post LBO) × 𝟙(Req. 5+ Years Exp.)	0.072	-0.084*	0.045	0.068
	(0.054)	(0.048)	(0.047)	(0.055)
𝟙(Req. 1-3 Years Exp.)	0.083***	0.009	0.057***	0.035***
	(0.009)	(0.010)	(0.008)	(0.008)
𝟙(Req. 3-5 Years Exp.)	0.133***	0.100***	0.130***	0.111***
	(0.010)	(0.011)	(0.009)	(0.010)
𝟙(Req. 5+ Years Exp.)	0.195***	0.090***	0.166***	0.144***
	(0.012)	(0.015)	(0.010)	(0.011)
Observations	1,328,996	1,330,874	1,210,773	1,313,220
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.246	0.214	0.231	0.247
Outcome S.D.	1.254	1.322	1.387	1.439

Panel B: Interaction with Job's Required Education

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.072*	-0.021	-0.037	-0.031
	(0.042)	(0.042)	(0.040)	(0.041)
𝟙(Post LBO) × 𝟙(Req. College)	0.030	0.008	0.011	0.036
	(0.049)	(0.040)	(0.035)	(0.041)
𝟙(Post LBO) × 𝟙(Req. Masters/Prof)	0.119*	0.101*	0.090	0.168***
	(0.063)	(0.057)	(0.055)	(0.062)
𝟙(Req. College)	0.081***	0.092***	0.125***	0.114***
	(0.011)	(0.009)	(0.010)	(0.010)
𝟙(Req. Masters/Prof)	0.123***	0.113***	0.132***	0.134***
	(0.015)	(0.013)	(0.012)	(0.012)
Observations	1,328,996	1,330,874	1,210,773	1,313,220
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.244	0.213	0.230	0.247
Outcome S.D.	1.254	1.322	1.387	1.439

Note: This table reports how the effect of an LBO on an employee varies with the work experience (Panel A) and education (Panel B) that employee's job typically requires, using Equation (2). The work experience and education each reviewer's reported job title typically requires is calculated as described in Section 1.1. The coefficient on 𝟙(Post LBO) in represents the effect on the least qualified group (jobs typically not requiring $>$ 1 year work experience or college). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value $<$0.01, ** denotes $<$0.05, and * denotes $<$0.1.

Table 6: **Effect of LBOs on Employee Satisfaction by Manager Status and Location**

Panel A: Interaction with Employee Employee Manager Status

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.058***	-0.005	-0.034	-0.003
	(0.022)	(0.024)	(0.030)	(0.026)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(Manager)	0.052*	-0.062*	0.018	0.028
	(0.028)	(0.035)	(0.032)	(0.038)
$\mathbb{1}$(Manager)	0.219***	-0.019**	0.140***	0.158***
	(0.008)	(0.009)	(0.007)	(0.008)
Observations	2,028,602	2,033,069	1,865,270	1,971,897
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.240	0.198	0.216	0.232
Outcome S.D.	1.267	1.322	1.382	1.438

Panel B: Interaction with Employee Location at Firm Headquarters

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.069***	-0.005	-0.037	-0.034
	(0.026)	(0.028)	(0.032)	(0.027)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(Headquarters)	-0.020	-0.060***	-0.040	-0.018
	(0.025)	(0.023)	(0.026)	(0.025)
$\mathbb{1}$(Headquarters)	0.011	0.101***	0.054***	0.055***
	(0.007)	(0.007)	(0.007)	(0.008)
Observations	1,531,063	1,534,158	1,392,050	1,516,049
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.253	0.214	0.240	0.253
Outcome S.D.	1.271	1.327	1.409	1.463

Note: This table shows the effect of an LBO interacted with each reviewer's manager status and location, using Equation (2). We identify managers using the reviewer's job title. We classify employees as being at the company headquarters if the employee's reported location is in the same MSA as the company headquarters. All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table 7: **Effect of LBOs on Employee Satisfaction by Deal Characteristics**

	Comp & Benefits	Work-Life Balance	Culture & Values	Senior Management
Panel A: Deal Type				
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Public to Private)	-0.069*	-0.067	-0.096	-0.069
	(0.040)	(0.044)	(0.061)	(0.050)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Corp Divestiture)	-0.111***	-0.153***	-0.103*	-0.086*
	(0.042)	(0.041)	(0.057)	(0.048)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Vanilla LBO)	-0.077***	-0.037	-0.090***	-0.052*
	(0.022)	(0.023)	(0.030)	(0.027)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.347
Outcome S.D.	1.145	1.170	1.277	1.322
Panel B: Deal Size				
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Small Deal Size)	-0.125***	-0.062*	-0.152***	-0.055
	(0.032)	(0.034)	(0.047)	(0.040)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Large Deal Size)	-0.083**	-0.106***	-0.054	-0.104**
	(0.033)	(0.036)	(0.053)	(0.041)
Observations	848,008	849,743	759,344	841,143
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.353	0.348
Outcome S.D.	1.145	1.170	1.277	1.323
Panel C: Deal Leverage				
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(Low Leverage)	-0.097**	-0.097*	-0.025	-0.082
	(0.045)	(0.054)	(0.074)	(0.055)
$\mathbb{1}$(Post LBO) × $\mathbb{1}$(High Leverage)	-0.184***	-0.180***	-0.155**	-0.145***
	(0.047)	(0.048)	(0.072)	(0.056)
Observations	842,171	843,901	754,609	835,335
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.327	0.353	0.349
Outcome S.D.	1.146	1.171	1.278	1.324

Note: This table shows whether deal characteristics lead to different effects relative to a base of non-targeted companies, using Equation (1). We use company-quarter level data. Panel A divides the sample of LBOs into three deal types: corporate divestitures, public-to-private deals, and "vanilla" deals in which a private, independent company is acquired. Panel B divides the sample of LBOs by deal size (top vs. bottom two terciles). Deals with missing size are excluded. Panel C divides the sample of LBOs by below vs. above-median leverage, measured as the ratio of debt to deal size. Deals with missing leverage are excluded. All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table 8: **Post-deal Employee Satisfaction Changes and Investor Returns**

Panel A: Internal Rate of Return

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log(Return)	0.251***		0.228***		0.303***		0.271***	
	(0.080)		(0.076)		(0.093)		(0.086)	
Return Pctle		0.293**		0.242**		0.286*		0.323***
		(0.113)		(0.104)		(0.158)		(0.117)
Observations	329	329	330	330	211	211	329	329
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.572	0.571	0.591	0.589	0.556	0.548	0.603	0.602

Panel B: Public Market Equivalent Against Industry Sector Within Russell 2000 Value Index

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log(Return)	0.057*		0.038		0.068		0.062*	
	(0.032)		(0.037)		(0.049)		(0.036)	
Return Pctle		0.246**		0.180		0.249		0.238**
		(0.108)		(0.114)		(0.157)		(0.110)
Observations	311	311	311	311	199	199	311	311
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.553	0.555	0.577	0.579	0.539	0.539	0.586	0.587

Note: This table reports tests of the association between deals' gross-of-fee returns and the changes in employee satisfaction ratings around the deal, using Equation (4). The dependent variable is the change in the residualized quarterly average rating between all pre-deal quarters and all post-deal quarters. The independent variables are investor returns measured as either the deal's IRR (Panel A) or PME (Panel B). PMEs are computed against the style and industry sector of the Russell 2000 index. We show two transformations of returns. One is the natural log of 1 plus the return value for IRR, and 0.1 plus value for PME. The second is the percentile rank, calculated within the sample. The sample includes the LBOs in our main analysis, for which we observe deal-level returns or cash flows in the SPI database. Controls in all specifications include deal-year fixed effects, log of amount invested, and the pre-deal rating levels. Standard errors are clustered by SPI industry sub-sector. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table 9: **Employee Satisfaction and Investor Returns in LBOs and Public Equities**

Panel A: Internal Rate of Return

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\mathbb{1}$(PE Deal) × log(Return)	0.235*		0.209		-0.035		0.152	
	(0.122)		(0.146)		(0.165)		(0.177)	
$\mathbb{1}$(PE Deal) × Return Pctle		0.238**		0.141		-0.070		0.044
		(0.107)		(0.133)		(0.158)		(0.102)
log(Return)	0.133		0.008		0.386***		0.160	
	(0.111)		(0.110)		(0.125)		(0.160)	
Return Pctle		0.160**		0.068		0.419***		0.288***
		(0.080)		(0.089)		(0.103)		(0.091)
$\mathbb{1}$(PE Deal)	-0.207***	-0.218***	-0.084*	-0.080	-0.063	0.039	-0.084*	-0.019
	(0.043)	(0.064)	(0.045)	(0.072)	(0.061)	(0.093)	(0.051)	(0.063)
Observations	1,012	1,012	1,012	1,012	661	661	1,012	1,012
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.691	0.690	0.754	0.753	0.738	0.739	0.768	0.770

Panel B: Public Market Equivalent Against Industry Sector Within Russell 2000 Value Index

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\mathbb{1}$(PE Deal) × log(Return)	-0.061		-0.038		-0.110*		-0.090**	
	(0.037)		(0.043)		(0.058)		(0.043)	
$\mathbb{1}$(PE Deal) × Return Pctle		-0.073		-0.070		-0.283*		-0.221**
		(0.102)		(0.128)		(0.164)		(0.104)
log(Return)	0.123***		0.037		0.191***		0.140***	
	(0.038)		(0.033)		(0.044)		(0.043)	
Return Pctle		0.292***		0.103		0.499***		0.383***
		(0.086)		(0.086)		(0.112)		(0.098)
$\mathbb{1}$(PE Deal)	-0.126***	-0.056	-0.003	0.035	-0.029	0.159	-0.022	0.121*
	(0.034)	(0.060)	(0.035)	(0.066)	(0.051)	(0.100)	(0.043)	(0.063)
Observations	1,007	1,007	1,007	1,007	648	648	1,007	1,007
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.682	0.682	0.749	0.749	0.730	0.731	0.767	0.768

Note: The table compares the correlations between the investor returns and employee satisfaction ratings in LBOs with that in public equities, using Equation (5). The dependent variable is the change in the residualized quarterly average rating between all pre-deal quarters and all post-deal quarters. The independent variables are investor returns measured as either the deal's IRR (Panel A) or PME (Panel B). PMEs are computed against the style and industry sector of the Russell 2000 index. We show two transformations of returns. One is the natural log of 1 plus the return value for IRR, and 0.1 plus value for PME. The second is the percentile rank, calculated separately within the sample LBO deals and within the mimicking public company investments. The sample includes the LBOs in our main analysis for which we observe deal-level returns or cash flows in SPI database, as well as the associated mimicking portfolios. We follow Korteweg and Nagel (2016) to construct cash flows out of stock returns from CRSP to mimic the pattern observed in private equity. Controls in all specifications include deal fixed effects (i.e. the LBO itself and two public equity matches) and the pre-deal rating levels for the LBOs and their public equity matches. Standard errors are two-way clustered by SPI industry sub-sector and company identifier. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table 10: **Effect of LBOs on Employee Satisfaction by Fund ESG and Impact Status**

Panel A: All ESG

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(ESG/Impact Fund)	-0.074*	-0.088**	-0.155**	-0.086
	(0.043)	(0.043)	(0.065)	(0.053)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(Non-ESG/Impact Fund)	-0.083***	-0.058***	-0.081***	-0.056**
	(0.020)	(0.020)	(0.026)	(0.023)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.347
Outcome S.D.	1.145	1.170	1.277	1.322

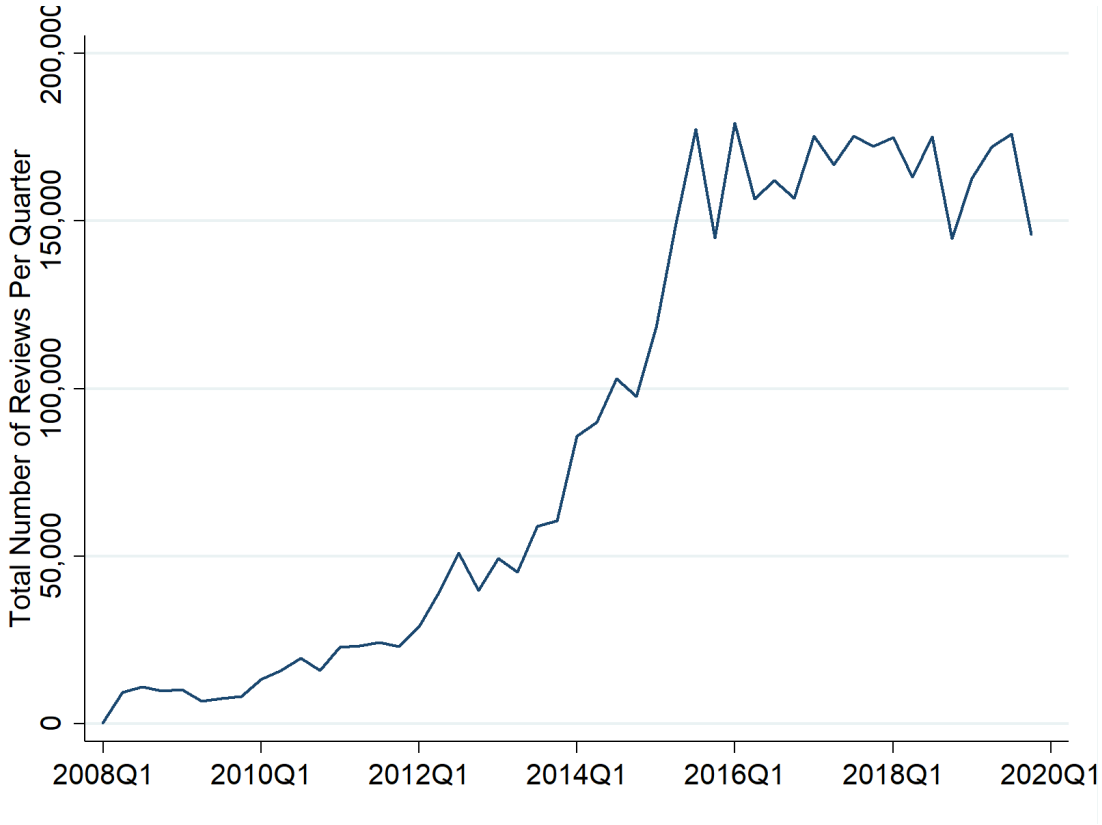
Panel B: Impact Funds Only

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(Impact Fund)	-0.065	-0.001	-0.040	-0.056
	(0.091)	(0.102)	(0.132)	(0.128)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(Non-Impact Fund)	-0.082***	-0.066***	-0.095***	-0.061***
	(0.018)	(0.019)	(0.025)	(0.021)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.347
Outcome S.D.	1.145	1.170	1.277	1.322

Note: This table shows the effect of LBOs on employee satisfaction for funds with different ESG statuses, using Equation (1). Panel A uses the broad ESG definition, which includes Impact funds. Panel B considers only deals led by Impact funds. The data are at the company-quarter level. ESG and Impact classification are from Preqin. All models include company and industry-quarter fixed effects. Standard errors are clustered by company. *** denotes p-value <0.01, ** denotes p-value <0.05, and * denotes p-value <0.1.

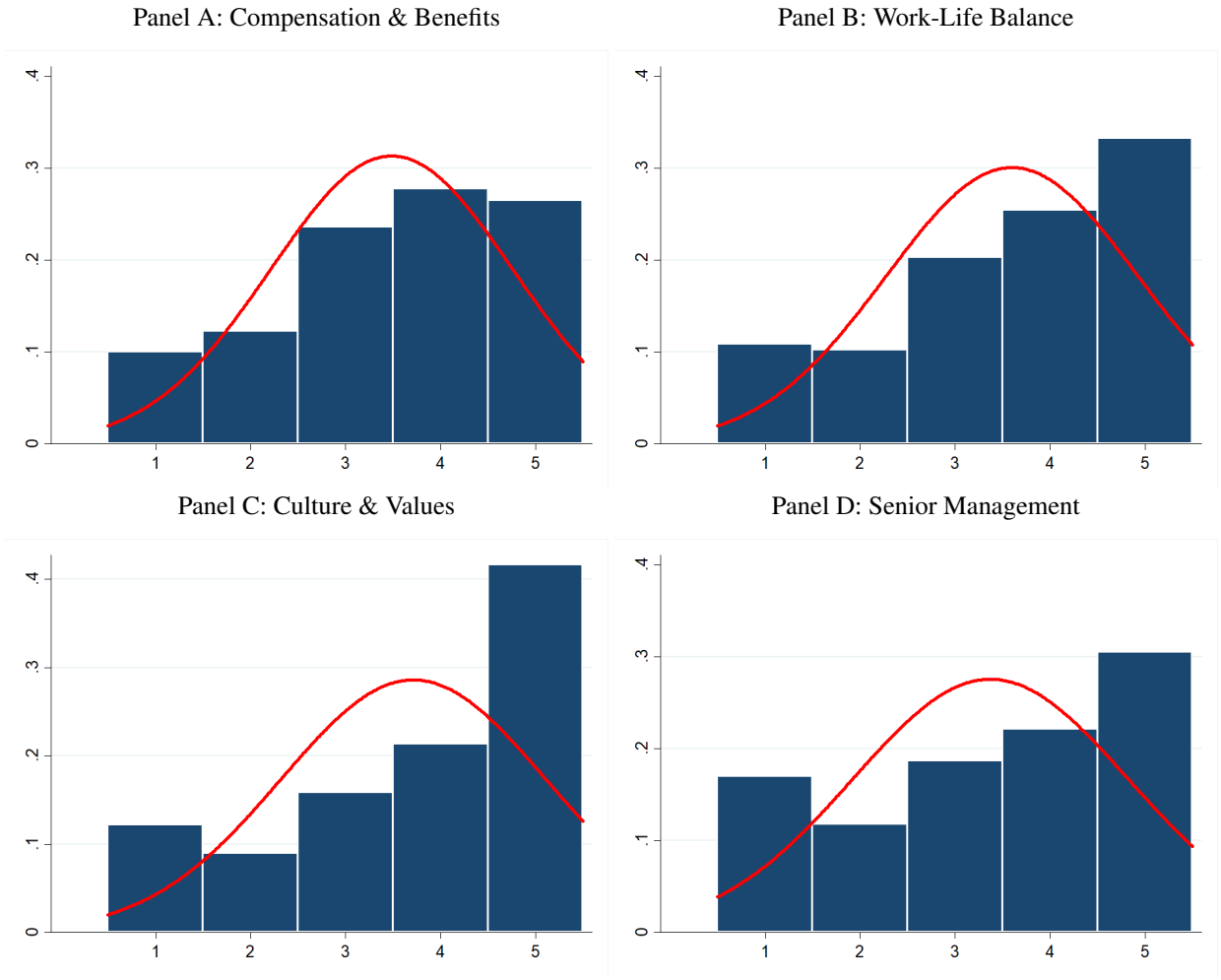
Appendix: For Online Publication

Figure A.1: **Number of Glassdoor Reviews by Quarter**



Note: This figure presents the total number of reviews in Glassdoor each quarter from 2008 to 2019.

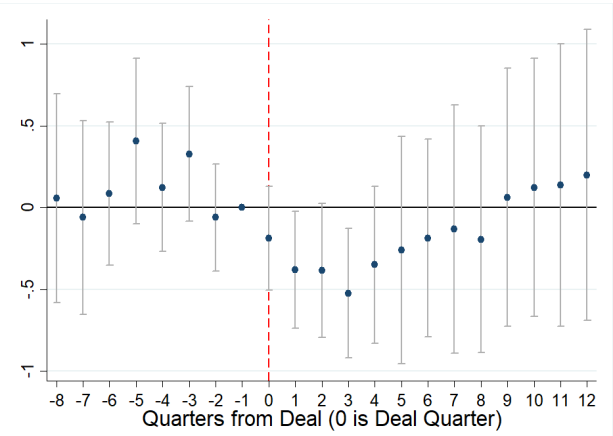
Figure A.2: **Distribution of Glassdoor Ratings**



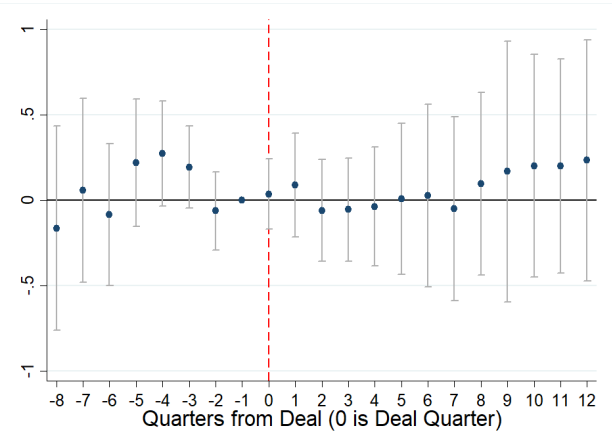
Note: This figure presents histograms of the four rating dimensions in the universe of Glassdoor over the period 2008 to 2019. The y-axis is the fraction for each score (the sum of bar heights equals one). The red line is fitted (normally-distributed) curve with the same mean and standard deviation as those from the data. Glassdoor added Culture & Values as a rating item in May 2012, when it also disallowed half-point scores for other rating items. Half-point scores (2% of the sample) are dropped from the figure.

Figure A.3: **Event Study of Effects of LBOs on Number/Share of Reviews by Employment Status**

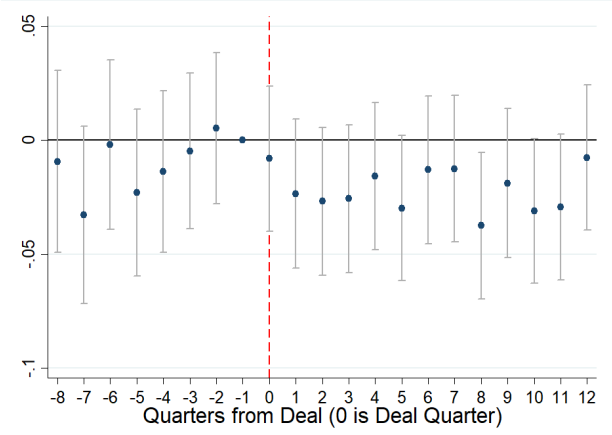
Panel A: Number of Reviews by Current Employees



Panel B: Number of Reviews by Former Employees



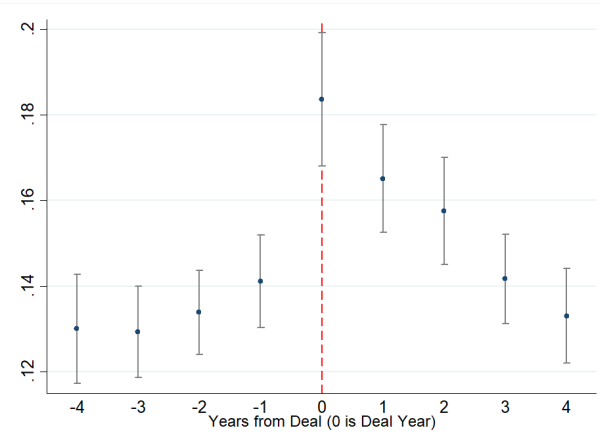
Panel C: Share of Reviews by Current Employees



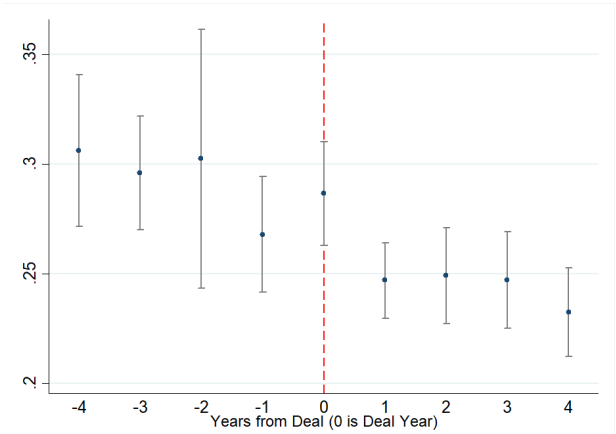
Note: This figure presents differences-in-differences event studies of the effect of LBOs on number/share of reviews by employment status. The unit of observation is a company-quarter, and we present separate coefficients for 8 quarters before and 12 quarters after the buyout. The regression is fully saturated, including dummies for all quarters around the buyout. We omit quarter -1 (the quarter before the buyout). Standard errors are clustered at the company level.

Figure A.4: **Employment Dynamics Around LBOs**

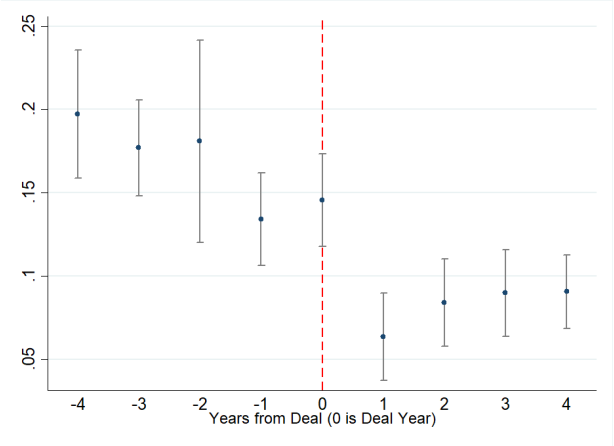
Panel A: Departure Rate



Panel B: Hiring Rate



Panel C: Employment Growth Rate



Note: This figure presents employment dynamics around LBOs. Employment data is from LinkedIn. The y-axis is the mean value shown by point symbols and capped by 95% confidence intervals. We present means for 4 years before and 4 years after the buyout.

Figure A.5: **Investor Return and Changes in Employee Satisfaction for Mimicking Public Equity Investments**



Note: The figure presents bin-scatter plots of the changes in average quarterly ratings of employees on the returns attained by investments in public companies in portfolios structured to match private equity cashflows. The rating category is indicated at the top of each column. The returns are measured as either the deal's IRR (top row), or TVM (middle), or PME (bottom), as indicated by the x-axis title. PMEs are computed against the style and the investee firm's industry sector of the Russel 2000 index. The returns are transformed by taking the natural log of 1 plus the return value for IRR, and 0.1 plus value for multiples before taking the average within the respective return quantile. We consider hypothetical investments in public equities that mimic the cash flow pattern of each of the LBOs in our sample. For each LBO target, we match 2 closest peers by industry, size, age, and labor force characteristics. The distance is computed following Abadie and Imbens (2006). The mimicking cash flows are computed following Korteweg and Nagel (2016).

Table A.1: **Correlation Matrix of Glassdoor Ratings**

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
Compensation & Benefits	1.000			
Work-Life Balance	0.533***	1.000		
Culture & Values	0.608***	0.653***	1.000	
Senior Management	0.626***	0.660***	0.803***	1.000

Note: This table presents the correlation matrix of the four rating dimensions in the universe of Glassdoor over our 2008 to 2019 sample period. *** denotes p-value <0.01, ** denotes p-value <0.05, and * denotes p-value <0.1.

Table A.2: **Comparison of Pitchbook, Glassdoor, and Matched Samples**

	All PB Deals			GD Matched Deals			Deals in Analysis Sample		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Deal Type									
Vanilla LBO	3,577	0.75	0.44	2,767	0.75	0.43	1,376	0.73	0.44
Public to Private	3,577	0.07	0.25	2,767	0.08	0.26	1,376	0.11	0.31
Corporate Divestiture	3,577	0.19	0.39	2,767	0.17	0.38	1,376	0.16	0.37
PitchBook Industry Sector									
Business Products/Services	3,577	0.35	0.48	2,767	0.34	0.47	1,376	0.32	0.47
Consumer Products/Services	3,577	0.20	0.40	2,767	0.21	0.41	1,376	0.23	0.42
Energy	3,577	0.04	0.18	2,767	0.03	0.16	1,376	0.02	0.13
Financial Services	3,577	0.05	0.23	2,767	0.05	0.22	1,376	0.04	0.20
Healthcare	3,577	0.15	0.35	2,767	0.16	0.36	1,376	0.15	0.35
Information Technology	3,577	0.17	0.38	2,767	0.19	0.39	1,376	0.23	0.42
Materials and Resources	3,577	0.04	0.19	2,767	0.03	0.16	1,376	0.01	0.10
Deal Characteristics									
Deal Size (USD m)	1,372	530.48	2323.08	1,014	526.95	1437.82	552	724.53	1748.99
Leverage	390	0.71	2.83	333	0.73	3.06	223	0.80	3.69
Number of Employees	1,971	1230.23	5008.03	1,473	1348.17	5565.36	789	2024.30	7430.95
Impact Fund	3,577	0.03	0.16	2,767	0.03	0.17	1,376	0.03	0.18
ESG/Impact Fund	3,577	0.11	0.31	2,767	0.11	0.31	1,376	0.13	0.34

Note: This table presents characteristics of Pitchbook LBOs between 2010 and 2016, the deals we matched to Glassdoor, and the deals in our analysis sample.

Table A.3: **Deal Characteristics of Management Buyouts and Growth Equity Deals**

	Management Buyouts			Growth Equity Deals		
	N	Mean	SD	N	Mean	SD
PitchBook Industry Sector						
Business Products/Services	178	0.34	0.48	700	0.26	0.44
Consumer Products/Services	178	0.21	0.41	700	0.22	0.41
Energy	178	0.03	0.17	700	0.02	0.15
Financial Services	178	0.06	0.24	700	0.06	0.23
Healthcare	178	0.08	0.28	700	0.15	0.35
Information Technology	178	0.25	0.44	700	0.28	0.45
Materials and Resources	178	0.02	0.13	700	0.02	0.14
Deal Characteristics						
Deal Size (USD m)	70	793.05	3123.85	292	93.66	262.19
Leverage	28	0.66	0.84	48	0.68	0.33
Number of Employees	89	2754.43	12314.14	332	936.48	2830.62
Impact Fund	178	0.03	0.17	700	0.02	0.12
ESG/Impact Fund	178	0.11	0.32	700	0.07	0.25

Note: This table presents characteristics of the 2010 to 2016 Pitchbook MBOs and growth equity deals used in our placebo tests.

Table A.4: **Main Analysis Sample and Return-Matched Sample Comparison**

	Deals in Analysis Sample			Return-matched Deals			Return-unmatched Deals		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Deal Type									
Vanilla LBO	1,376	0.73	0.44	334	0.58	0.49	1,042	0.78	0.41
Public to Private	1,376	0.11	0.31	334	0.22	0.41	1,042	0.07	0.26
Corporate Divestiture	1,376	0.16	0.37	334	0.20	0.40	1,042	0.14	0.35
PitchBook Industry Sector									
Business Products/Services	1,376	0.32	0.47	334	0.24	0.43	1,042	0.35	0.48
Consumer Products/Services	1,376	0.23	0.42	334	0.21	0.41	1,042	0.23	0.42
Energy	1,376	0.02	0.13	334	0.02	0.14	1,042	0.02	0.13
Financial Services	1,376	0.04	0.20	334	0.04	0.19	1,042	0.05	0.21
Healthcare	1,376	0.15	0.35	334	0.15	0.35	1,042	0.15	0.35
Information Technology	1,376	0.23	0.42	334	0.32	0.47	1,042	0.21	0.40
Materials and Resources	1,376	0.01	0.10	334	0.02	0.14	1,042	0.01	0.08
Deal Characteristics									
Deal Size (USD m)	552	724.53	1748.99	186	842.51	1197.74	366	666.93	1964.67
Leverage	223	0.80	3.69	103	1.03	5.39	120	0.60	0.67
Number of Employees	789	2024.30	7430.95	187	2235.11	4070.86	602	1958.81	8200.82
Impact Fund	1,376	0.03	0.18	334	0.05	0.21	1,042	0.03	0.17
ESG/Impact Fund	1,376	0.13	0.34	334	0.18	0.38	1,042	0.12	0.32
Number of Investors	1,376	1.99	1.27	334	1.72	1.18	1,042	2.08	1.29
Firm Characteristics at Deal Date									
Firm Age	1,026	28.44	26.16	288	28.19	25.98	738	28.54	26.25
Number of Reviews	1,376	16.80	56.46	334	17.02	39.72	1,042	16.73	60.87
% Long Tenure	879	0.44	0.34	198	0.48	0.33	681	0.43	0.35
% High School	975	0.19	0.31	239	0.16	0.27	736	0.20	0.33
Pre-deal Average Ratings									
Compensation & Benefits	1,286	3.20	0.86	317	3.31	0.86	969	3.16	0.85
Work-Life Balance	1,289	3.52	0.88	318	3.63	0.85	971	3.49	0.88
Culture & Values	955	3.45	1.03	215	3.65	0.93	740	3.39	1.05
Senior Management	1,288	3.10	1.00	317	3.20	0.96	971	3.06	1.01

Note: This table presents characteristics of Pitchbook-Glassdoor matched LBOs between 2010 and 2016 in our main analysis sample, the deals we matched to return, and the deals we did not match to return. The firm characteristics at the deal date and pre-deal average ratings are measured for the twelve quarters prior to the LBO deal.

Table A.5: **Comparison of LBO and Matched Samples**

Panel A: LBO Targets and Matched Non-target Peers

	LBO targets	Non-target Peers	Difference
	Mean	Mean	T-test
Firm Characteristics at Deal Date			
Firm Age	28.441	28.380	0.061
Number of Reviews	16.799	17.434	-0.635
% Long Tenure	0.443	0.440	0.003
% High School	0.193	0.190	0.003
Pre-deal Average Ratings			
Compensation & Benefits	3.199	3.277	-0.078***
Work-Life Balance	3.522	3.512	0.010
Culture & Values	3.450	3.508	-0.058
Senior Management	3.096	3.168	-0.072**

Panel B: LBO Targets and Matched Public Equity Peers

	Return-matched LBO targets	Public Peers	Difference
	Mean	Mean	T-test
Firm Characteristics at Deal Date			
Firm Age	28.188	28.607	-0.419
Number of Reviews	17.125	20.487	-3.362
% Long Tenure	0.479	0.474	0.005
% High School	0.158	0.142	0.016
Pre-deal Average Ratings			
Compensation & Benefits	3.308	3.234	0.074
Work-Life Balance	3.627	3.449	0.178***
Culture & Values	3.645	3.396	0.249***
Senior Management	3.197	3.057	0.140**

Note: Panel A shows pre-deal firm characteristics for the LBO targets and the matched control sample of Glassdoor non-targets. Panel B shows pre-deal firm characteristics for the LBO targets where we have return data and the matched public equity peers. The variable values are measured for the twelve quarters prior to the LBO deal. The unit of observation is a deal. P-values are from a two-sided t-test for means. *** denotes p-value <0.01, ** denotes p-value <0.05, and * denotes p-value <0.1.

Table A.6: **Role of Layoffs in the Effect of LBOs on Employee Satisfaction**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.096**	-0.065	-0.088	-0.028
	(0.039)	(0.041)	(0.057)	(0.049)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(High Layoff)	-0.047	-0.038	-0.015	-0.096
	(0.054)	(0.057)	(0.090)	(0.067)
Observations	844,952	846,684	756,827	838,097
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.327	0.353	0.349
Outcome S.D.	1.146	1.170	1.278	1.323

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.052	-0.013	-0.067	0.042
	(0.040)	(0.045)	(0.059)	(0.054)
$\mathbb{1}$(Post LBO) $\times$ $\mathbb{1}$(High Layoff)	-0.072	-0.070	-0.016	-0.108
	(0.056)	(0.079)	(0.082)	(0.073)
Observations	3,255,345	3,262,429	2,995,032	3,176,897
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.217	0.181	0.199	0.209
Outcome S.D.	1.256	1.315	1.387	1.436

Note: This table shows the role of layoffs in the effect of LBOs on employee satisfaction. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). We compute layoff intensity as the difference between the average departure rate in the 4 years prior to the deal and the average departure rate in the 4 years after the deal. $\mathbb{1}$(High Layoff) indicates deals with above-median layoff intensity (1%). Employment data is from LinkedIn. Panel A uses company-quarter average reviews as the dependent variable and Panel B uses reviews. All models include company and industry-quarter fixed effects. Standard errors are clustered by company. *** denotes p-value <0.01, ** denotes p-value <0.05, and * denotes p-value <0.1.

Table A.7: **Post-deal Employee Satisfaction Changes and Investor Total Value Multiple**

Panel A: Association within LBO Sample

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log(Return)	0.074*		0.039		0.057		0.067*	
	(0.038)		(0.037)		(0.052)		(0.039)	
Return Pctle		0.291***		0.189*		0.241		0.267**
		(0.109)		(0.099)		(0.152)		(0.106)
Observations	331	331	332	332	212	212	331	331
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.564	0.567	0.584	0.586	0.543	0.544	0.597	0.599

Panel B: Comparison to Mimicking Public Equity Investments

	Compensation & Benefits		Work-life Balance		Culture & Values		Senior Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\mathbb{1}$(PE Deal) × log(Return)	0.023		-0.021		-0.124*		-0.052	
	(0.049)		(0.048)		(0.063)		(0.052)	
$\mathbb{1}$(PE Deal) × Return Pctle		0.182		0.021		-0.250		-0.040
		(0.123)		(0.126)		(0.152)		(0.107)
log(Return)	0.076*		0.026		0.186***		0.120***	
	(0.039)		(0.034)		(0.045)		(0.043)	
Return Pctle		0.180**		0.069		0.476***		0.322***
		(0.087)		(0.082)		(0.102)		(0.089)
$\mathbb{1}$(PE Deal)	-0.145***	-0.184**	0.002	-0.012	0.018	0.136	-0.006	0.030
	(0.042)	(0.074)	(0.041)	(0.069)	(0.058)	(0.090)	(0.050)	(0.073)
Observations	1,029	1,029	1,029	1,029	670	670	1,029	1,029
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.685	0.685	0.750	0.750	0.732	0.733	0.768	0.769

Note: This table reports tests of the association between deals' gross-of-fee TVM returns and the changes in employee satisfaction ratings around the deal. Panel A uses Equation (4) and Panel B uses Equation (5). The dependent variable is the change in the residualized quarterly average rating indicated in the column's header from all quarters before the deal onset to all quarters after the deal. The returns are the deal's TVM, transformed by taking the natural log of 0.1 plus the value. Percentile ranks are calculated separately within the sample LBO deals and within the mimicking public company investments, which act as a control group in Panel B. The sample is the LBOs in our analysis sample for which we observe deal-level returns or cash flows in SPI database. In both panels, we also control for pre-deal rating levels. In Panel A, controls also include deal-year fixed effects, and log investment amount. In Panel B, we also control for deal cohort fixed effects, whereby a cohort is defined as the LBO itself and two matched public peers. We follow Korteweg and Sorensen (2017) to construct cash flows out of stock returns from CRSP to mimic the pattern observed in private equity. Standard errors are clustered at the industry subsector level as reported in SPI. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table A.8: **Effect of Management Buyouts and Growth Equity Deals on Employee Satisfaction**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.082***	-0.063***	-0.093***	-0.061***
	(0.018)	(0.018)	(0.024)	(0.021)
𝟙(Post Management Buyout)	-0.092*	0.022	0.010	0.001
	(0.048)	(0.052)	(0.070)	(0.057)
𝟙(Post Growth Equity)	-0.015	-0.015	-0.022	-0.021
	(0.025)	(0.027)	(0.035)	(0.030)
Observations	874,694	876,467	783,223	867,724
Company-Deal FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.354	0.325	0.351	0.346
Outcome S.D.	1.144	1.169	1.276	1.321

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.069***	-0.025	-0.066**	-0.021
	(0.018)	(0.023)	(0.026)	(0.024)
𝟙(Post Management Buyout)	-0.054*	0.076*	0.077	0.108
	(0.029)	(0.045)	(0.093)	(0.094)
𝟙(Post Growth Equity)	-0.023	0.011	0.006	0.018
	(0.030)	(0.035)	(0.043)	(0.040)
Observations	3,396,895	3,403,914	3,127,071	3,314,396
Company-Deal FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.217	0.180	0.198	0.208
Outcome S.D.	1.258	1.316	1.389	1.438

Note: This table shows the effect of MBOs and growth equity deals on employee satisfaction. The base group is non-targeted companies. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). All models include company-deal and industry-quarter fixed effects. Standard errors are clustered by company. *** denotes p-value <0.01, ** denotes p-value <0.05, and * denotes p-value <0.1.

Table A.9: **Effect of LBOs on Employee Satisfaction: Matching Estimation**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post) $\times$ $\mathbb{1}$(LBO)	-0.065***	-0.078***	-0.087***	-0.051**
	(0.021)	(0.022)	(0.030)	(0.025)
$\mathbb{1}$(Post)	-0.024	0.001	-0.037*	-0.020
	(0.015)	(0.016)	(0.019)	(0.018)
Observations	69,473	69,525	58,146	69,149
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.321	0.278	0.314	0.279
Outcome S.D.	1.019	1.060	1.158	1.178

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post) $\times$ $\mathbb{1}$(LBO)	-0.075***	-0.037	-0.078**	-0.043
	(0.021)	(0.026)	(0.031)	(0.027)
$\mathbb{1}$(Post)	-0.003	0.005	-0.012	-0.013
	(0.014)	(0.016)	(0.020)	(0.018)
Observations	406,962	407,596	372,114	396,995
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.191	0.154	0.167	0.157
Outcome S.D.	1.288	1.348	1.430	1.453

Note: This table reports the effect of an LBO on employee satisfaction measures using a matching estimator. We construct the control sample using matched non-treated firms. We match each LBO target to two never-targeted companies with at least 1 review in the 3 years prior to the deal using founded year, industry, average % of reviewers with >3-year tenure (over last 3 years), average % of reviewers in jobs that typically require only high school (over last 3 years), and log number of reviews (over last 3 years). We use the Abadie and Imbens (2006) distance metric that weights each dimension by its standard deviation. Panel A and Panel B show the regression results at the company-quarter level and the review level, respectively. All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value <0.01, ** denotes <0.05, and * denotes <0.1.

Table A.10: **Effect of LBOs on Satisfaction of Reviewers Who Rate Company on All Dimensions**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.081***	-0.054**	-0.088***	-0.064**
	(0.022)	(0.023)	(0.025)	(0.026)
Observations	757,721	757,721	757,721	757,721
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.368	0.342	0.353	0.359
Outcome S.D.	1.157	1.177	1.275	1.327

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
𝟙(Post LBO)	-0.069***	-0.023	-0.062**	-0.032
	(0.020)	(0.020)	(0.026)	(0.026)
Observations	2,955,253	2,955,253	2,955,253	2,955,253
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.222	0.188	0.201	0.212
Outcome S.D.	1.271	1.327	1.391	1.443

Note: This table reports the effect of an LBO on employee satisfaction measures, restricting the sample to reviewers who rate the company on all dimensions. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table A.11: **Effect of LBOs on Employee Satisfaction For Firms With 30 or More Reviews**

Panel A: Company-Quarter Level, Require Firm to Have at Least 30 Reviews

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.071***	-0.057***	-0.067**	-0.038
	(0.021)	(0.021)	(0.028)	(0.024)
Observations	370,425	370,577	318,301	368,637
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.301	0.261	0.296	0.274
Outcome S.D.	0.977	1.014	1.103	1.137

Panel B: Review Level, Require Firm to Have at Least 30 Reviews

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.064***	-0.017	-0.052*	-0.006
	(0.020)	(0.025)	(0.028)	(0.026)
Observations	2,604,263	2,608,197	2,380,804	2,531,796
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.176	0.136	0.152	0.152
Outcome S.D.	1.242	1.311	1.377	1.412

Note: This table reports the effect of an LBO on employee satisfaction measures, restricting the sample to firms with at least 30 reviews. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table A.12: **Effect of LBOs on Employee Satisfaction: Standard Errors and Median Ratings**

Panel A: Standard Errors Clustered by Quarter

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.082***	-0.063***	-0.093***	-0.061***
	(0.014)	(0.020)	(0.023)	(0.020)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.347
Outcome S.D.	1.145	1.170	1.277	1.322

Panel B: Median Ratings

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.085***	-0.051**	-0.091***	-0.060**
	(0.019)	(0.020)	(0.027)	(0.023)
Observations	859,694	861,444	769,681	852,779
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.353	0.321	0.347	0.343
Outcome S.D.	1.183	1.210	1.328	1.376

Note: This table reports the effect of an LBO on employee satisfaction measures, using Equation (1). Panel A uses company-quarter average reviews as the dependent variable and calculates standard errors at the quarter level. Panel B uses company-quarter median reviews in place of mean reviews and clusters standard errors at the company level. All models include company and industry-quarter fixed effects. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table A.13: **Effect of LBOs on Employee Satisfaction Within Return-matched Sample**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.137***	-0.127***	-0.166***	-0.126***
	(0.029)	(0.031)	(0.043)	(0.037)
Observations	844,419	846,153	756,816	837,562
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.348
Outcome S.D.	1.146	1.171	1.278	1.323

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.080**	-0.042	-0.079*	-0.020
	(0.032)	(0.036)	(0.047)	(0.051)
Observations	3,237,559	3,244,430	2,979,969	3,159,089
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.218	0.181	0.199	0.210
Outcome S.D.	1.255	1.314	1.386	1.435

Note: This table reports the effect of an LBO on employee satisfaction measures using only deals that were matched to returns. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table A.14: **Effect of LBOs on Employee Satisfaction Within Deals after 2013**

Panel A: Company-Quarter Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.081***	-0.044**	-0.090***	-0.068***
	(0.023)	(0.022)	(0.026)	(0.026)
Observations	849,613	851,347	761,647	842,730
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.355	0.326	0.352	0.348
Outcome S.D.	1.147	1.171	1.278	1.324

Panel B: Review Level

	Compensation & Benefits	Work-Life Balance	Culture & Values	Senior Management
	(1)	(2)	(3)	(4)
$\mathbb{1}$(Post LBO)	-0.069***	-0.015	-0.072**	-0.033
	(0.021)	(0.022)	(0.028)	(0.026)
Observations	3,247,147	3,254,252	2,988,071	3,168,586
Company FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes
R-squared	0.218	0.182	0.199	0.209
Outcome S.D.	1.256	1.315	1.387	1.436

Note: This table reports the effort of an LBO on employee satisfaction measures using only deals that occurred after 2013. Panel A uses company-quarter average reviews as the dependent variable (Equation (1)) and Panel B uses review-level data (Equation (2)). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.

Table A.15: **Additional Rating Dimensions**

Panel A: Summary Statistics of Additional Rating Dimensions

	All			Ever-LBO Sample			Control Sample		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Review Level									
Overall Rating	3,720,429	3.70	1.28	145,569	3.50	1.33	3,574,860	3.71	1.27
Career Opportunities	3,322,178	3.48	1.35	131,439	3.29	1.40	3,190,739	3.49	1.35
Recommend this Company	3,078,009	0.72	0.45	122,225	0.66	0.48	2,955,784	0.73	0.45
Business Outlook	2,722,946	0.45	0.76	108,588	0.33	0.81	2,614,358	0.45	0.76
Approves of CEO	2,442,040	0.46	0.72	106,473	0.34	0.76	2,335,567	0.47	0.72
Company-Quarter Level									
Avg. Overall Rating	924,688	3.67	1.19	24,206	3.39	1.10	900,482	3.67	1.19
Avg. Career Opportunities	860,353	3.38	1.24	23,404	3.14	1.13	836,949	3.39	1.25
Avg. Recommend this Company	819,239	0.71	0.40	22,394	0.62	0.39	796,845	0.71	0.40
Avg. Business Outlook	720,551	0.43	0.68	19,156	0.30	0.65	701,395	0.44	0.68
Avg. Approves of CEO	567,316	0.45	0.64	19,861	0.31	0.62	547,455	0.45	0.64

Panel B: Effect of LBOs on Employee Satisfaction on Additional Rating Dimensions

	Overall Rating	Career Opportunities	Recommend this Company	Business Outlook	Approves of CEO
	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}$(Post LBO)	-0.068***	-0.052***	-0.018**	-0.038***	-0.029**
	(0.019)	(0.019)	(0.007)	(0.015)	(0.014)
Observations	924,688	860,353	819,239	720,551	567,316
Company FE	Yes	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.335	0.341	0.288	0.315	0.310
Outcome S.D.	1.193	1.244	0.401	0.680	0.641

Note: Panel A of this table presents summary statistics on the additional rating types not used in our main analysis. Recommend this Company and Approves of CEO are binary ratings where the reviewer answers Yes or No and we convert them into 1 and 0. Business Outlook has ratings including negative, neutral, and positive, where we convert them into -1, 0, and 1, respectively. Panel B reports the effect of LBOs on employee satisfaction on these additional rating dimensions at the company-quarter level (Equation (1)). All models include company and industry-quarter fixed effects. Standard errors are clustered at the company level. *** denotes p-value < 0.01, ** denotes <0.05, and * denotes <0.1.