

# Retail Customer Reactions to Private Equity Acquisitions\*

Vesa Pursiainen<sup>†</sup> and Tereza Tykvová<sup>‡</sup>

March 2023

## Abstract

Acquisition announcements by private equity funds are associated with significant reductions in customer visits to target firm outlets, measured using aggregated mobile phone data. These reductions occur in primary but not in secondary buyouts. Customer reviews do not become more negative. Following deal completion, the customer losses are reversed. Thus, the initial decrease is unlikely to be the consequence of operational changes. The decrease in visits is smaller in areas with higher economic connectedness, income, stock market participation, and self-employment rates, and larger in altruistic, Republican-voting and individualistic regions. The decrease is also larger for outlets facing more competition.

*JEL classification:* D12, G14, G24, G34

*Keywords:* private equity, buyout, customer reaction, reputation

---

\*We appreciate the helpful comments from Nihat Aktas, Reiner Braun, Fabio Bertoni, Douglas Cumming, Alexander Groh, Hyeik Kim, Tse-Chun Lin, Tatyana Marchuk, Felix von Meyerinck, Tamara Nefedova, Mikael Paaso, Ludovic Phalippou, Stefano Ramelli, Martin Schmalz, Christoph Schneider, Philip Valta, Ayako Yasuda, the conference participants at Paris December Finance Meeting 2021 and Private Markets Research Conference 2022, as well as the seminar participants at Swiss Finance Institute and University of St.Gallen. We thank Kristóf Margitay and Gianluca Vanacore for excellent research assistance. All errors are ours.

<sup>†</sup>University of St.Gallen and Swiss Finance Institute, E-mail: vesa.pursiainen@unisg.ch

<sup>‡</sup>University of St.Gallen and Swiss Finance Institute, E-mail: tereza.tykvova@unisg.ch

# 1 Introduction

A large number of studies suggest that private equity (PE) ownership can have positive effects on firms’ operations.<sup>1</sup> Despite this, PE investors often spark negative public commentary and press coverage, as well as frequent attacks by politicians.<sup>2</sup> PE acquisitions of retailers have attracted public scrutiny and negative media coverage amid bankruptcies of several large PE-backed retail chains.<sup>3</sup> It seems plausible that such negative attention may affect or reflect the public opinion on PE investors. Hence, an announcement that a PE fund is acquiring a retail business may be perceived negatively by the customers of the target firm – and affect their shopping decisions.<sup>4</sup> However, studying customer reactions is difficult as there is usually limited data available on private companies, and any existing data tend to be at annual frequency, making it hard to identify short-term changes.

In this study, we examine the reactions of retail customers to PE acquisitions of businesses using aggregated and anonymized mobile phone data covering approximately 10% of all mobile devices in the United States. This allows us to observe monthly customer visits to individual target outlets around the acquisition announcement and closing, and compare those with matched control outlets in the same location.<sup>5</sup> Our main finding is that there is a significant decrease in customer visits to target outlets in the months immediately following a PE acquisition announcement. However, after the completion of the deal, the customer losses tend to be reversed. Eventually, customer visits exceed the pre-announcement level for a typical buyout, possibly driven by operational changes introduced by the new owners.<sup>6</sup>

These findings suggest that some customers react negatively to the announcement of a PE

---

<sup>1</sup>See, e.g., Acharya et al. (2013), Boucly et al. (2011), Bernstein and Sheen (2016).

<sup>2</sup>For example, in January 2019, the Democratic senator Elizabeth Warren introduced a piece of draft legislation titled “Stop Wall Street Looting Act” aimed at PE funds (Financial Times (2019)), and on March 2019, the Republican senator Marco Rubio released a report titled “American Investment in the 21st Century”, attacking financial investors’ control of the economy.

<sup>3</sup>See, for example, Business Insider (2017), Bloomberg (2017), Washington Post (2019).

<sup>4</sup>As a well-publicized example, Oatly, a producer of oat milk, faced a boycott backlash from consumers and activists after selling a stake to Blackstone, one of the largest PE firms.

<sup>5</sup>We use the sector-neutral term *outlet*, even though the majority of our sample outlets are restaurants.

<sup>6</sup>Such changes might include advertising, promoting events, refurbishing of outlets, improvements in service or cleanliness, and others.

buyout, but this initial decrease in visits is unlikely to be explained by operational changes by the new PE owner, as it takes place before the deal completion, when the acquirer does not yet own the target business. This initial decrease in visits occurs only in primary buyouts. There is no decrease in secondary buyouts where the target business changes hands between two PE firms.

Our mobile phone location data come from SafeGraph, which include monthly customer visit numbers for millions of outlets across the U.S. The data set is available from 2018 onwards, so we construct a broad sample of PE acquisitions announced between March 1, 2018, and December 31, 2019. To capture as many deals as possible, we combine data on PE acquisitions from Preqin, SDC, and Capital IQ. This approach gives us a sample of 110 unique acquisitions by PE firms where we can track visits to target outlets. The 110 target firms have 20,681 unique outlets in the United States. We manually check and complement the announcement and completion dates in the data for completeness. For each target outlet, we include other outlets in the same zip code and same NAICS code as a control group. There are 261,872 control outlets in our final data set. This data allows us to observe changes in customer visits in target and control outlets at a monthly frequency around both the acquisition announcement as well as deal completion, which means we can separate the effect of announcement from the effect of change of operational control.

We perform a regression analysis both around deal announcement and deal completion. Relative to control outlets, target firms experience a significant reduction in customer visits following the announcement of a PE acquisition. Depending on the sample composition, customer visits bottom at approximately 5-8% below pre-announcement levels at three months after the announcement. The average level of visits in the four months following the announcement is 3.2% below the pre-announcement level. However, the decline in customer visits after deal announcement is temporary and reverses after deal completion. We find no evidence of customer visits declining after deal completion, when the operational control of the business is transferred. On the contrary, shortly after deal completion, the target firms

tend to experience an increase in customer visits, and ultimately surpass the levels seen before the announcement. The majority (63%) of our full announcement sample and 87% of the completion sample are attributable to restaurants, making it by far the largest sector in our data.

If the decrease in customer visits was driven by an adverse customer reaction to the announcement of prospective PE ownership, we would expect this effect to disappear in cases where the former owner of the target business is another PE firm. These deals, which are referred to as *secondary* buyouts, are quite common and represent 21 percent of deals and about one third of the outlets in our sample. We test this conjecture and find that, indeed, there is no reduction in customer visits around the announcement of secondary buyouts. This means that the entire decrease we document comes from primary buyouts, where the target business is sold to a PE fund by a non-PE seller. We also find that restaurants are the most important contributor to the negative average change in visits following the deal announcement. This is not very surprising, as these deals are common, visible to the consumer, and in a competitive sector with typically plenty of substitutes available.

To study cross-sectional differences in customer responses in different areas, we use four different sets of local measures. We start by the local social capital measures based on Facebook data, which were introduced in Chetty et al. (2022a) and Chetty et al. (2022b). In particular, these data include a measure of *Economic connectedness*, which captures the share of high-socioeconomic status (SES) friends among low-SES individuals. In more socio-economically segregated areas, people might have a more negative views on private equity. We find that friendships across class lines are associated with smaller decreases in customer visits following an announcement of a PE acquisition. In addition, we examine the effect of volunteering rate, which may proxy for the level of altruism (Carpenter and Knowles Myers (2010)), and the number of civic organizations, a common proxy for social capital. Higher levels of volunteering are associated with more negative reactions – suggesting that more altruistic regions react more negatively to PE buyouts. The number of civic organizations

is not significantly associated with the change in customer visits.

Our second set of local measures considers characteristics related to wealth, stock market participation, and self-employment. We want to examine whether customers in poorer areas are more concerned about PE buyouts of local businesses than customers in relatively richer areas. Moreover, we test if customers in areas with higher stock market participation or self-employment rates are less negative toward private equity ownership. This would suggest that the drop in outlet visits after the buyout announcement should be larger in areas with lower income or wealth, as well as in areas with lower stock market participation and self-employment rate. We find that higher income, stock market participation and self-employment rates are indeed associated with smaller decreases in customer visits following a buyout announcement.

Third, we focus on the link between customer reaction to buyout announcements and the local political and religious orientation using data from the Census. Customers in Republican-voting regions tend to decrease their visits more than customers in Democratic-oriented regions. Religiosity per se does not seem to have any effect, but there are significant differences between different religions. In Catholic-dominated areas customers reduce their visits to the target outlets after the deal announcement less strongly than in other areas. These effects also survive controlling for the effect of local personal income per capita. Gatchev et al. (2022) claim that Republican and Protestant areas tend to have more pro-business attitudes. Our results would thus suggest that such pro-business attitudes coincide with more negative views on private equity, or higher willingness to act on negative views. This might also be consistent with stronger views on individual responsibility of their consumption decisions. In line with this proposition, we find that the decrease in customer visits is significantly larger in more individualistic counties, using historical data from Bazzi et al. (2020) on infrequent names and frontier experience.<sup>7</sup>

---

<sup>7</sup>Bazzi et al. (2020) show that individualism is positively correlated with the support for Republicans. Bian et al. (2022) find that individualism is an important determinant of people's behavior during the COVID-19 pandemic.

Finally, we consider how customer behavior is linked to the local competition among relevant outlets. As suggested by the results of von Meyerinck et al. (2021), customers' ability to reduce visits to PE-acquired outlets might be constrained by the lack of alternatives. We include an analysis using various measures of local competition. Our results are consistent with competition being an important determinant of customer reactions, with outlets facing more competition experiencing significantly larger decreases in customer visits.

If the decline in customer visits reflects customers disliking private equity ownership, one would expect that it varies with PE prominence and reputation. More specifically, we should observe a stronger negative reaction for PE investors with bad reputation. To proxy for bad reputation, we count the lawsuits against the PE firm in past five and ten years, which we obtain from the Westlaw database. Our results show that both lawsuit involvement measures are negatively associated with the change in customer visits after a buyout announcement. This finding supports the view that customers dislike PE investors and translate their perceptions into their shopping behavior.

An important assumption for the decline in customer visits to be explained by customers disliking private equity ownership is that customers must know about the acquisition. While we cannot observe customer knowledge directly, we can obtain indirect evidence by looking at the media coverage of the target firms and see whether it increases around the acquisition announcement. To do this, we use data from RavenPack, measuring both the number of unique news stories about the target firm as well as their tone. We find that there is a significant increase in news articles about the target firm during the acquisition month, and the coverage reverts to pre-buyout levels in 1-2 months. The average tone of news articles about the target following the buyout announcement also appears more negative, although this difference is not statistically significant.

A potential alternative explanation for the decrease in customer visits is that service quality deteriorates after the buyout announcement. To directly test customer satisfaction around PE acquisition announcements, we use a broad sample of all PE acquisitions in the

period 2005-2019 from Prequin. To this sample, we match all publicly available Yelp review data. We find that the average review following a PE acquisition announcement is actually slightly more positive than before it, although the difference is economically small. For the small subsample of customers rating the same outlet both before and after the acquisition, reviews become more negative – but due to the small sample size this difference is not statistically significant. We thus do not find any support for deteriorating quality after the buyout announcements.

If employees fear negative consequences of the upcoming private equity ownership (Lambert et al., 2021; Gornall et al., 2022), they might reduce their effort and possibly start looking for a new job, which could also result in a worse customer experience. To test this, we obtain data on employee reviews from Glassdoor. We find no evidence of a decrease in employee satisfaction following a PE acquisition announcement. In fact, the estimated change in employee ratings is slightly positive, although economically very small.

As an additional analysis, in the Internet Appendix, we study the likelihood of outlet closure following the announcement and completion of PE acquisitions to see whether the decline in customer visits relates to future closures. Customers could decrease their visits if they believed that the outlet will be closed down. We note that the baseline likelihood of outlet closure is very low, limiting the interpretation of this analysis. We find that the likelihood of outlet closure appears somewhat lower following the announcement of PE acquisition than before it. This difference comes primarily from the post-completion period, suggesting that PE-owners are unlikely to close outlets immediately following an acquisition.

We contribute to several strands of the literature. Our study provides novel insights on customer reactions to PE acquisitions and their potential impact on firm performance. Many existing studies suggest that buyouts and venture capital investments generally lead to improvements in operational efficiency (in particular for private targets, which represent the majority of the deals) as measured by labor or total factor productivity (Davis et al., 2014; Chemmanur et al., 2011; Davis et al., 2019), profitability and revenue growth (Acharya

et al., 2013; Boucly et al., 2011), or innovative activity (Bertoni and Tykvová, 2015; Lerner et al., 2011). Agrawal and Tambe (2016) find that employees improve their IT skills after PE acquisitions, which helps them in coping with the technological change. Cohn et al. (2021) conclude that workplace safety improves after PE buyouts. Bellon (2020) finds that private equity ownership leads to a 70% reduction in the baseline rate of toxic pollution in the oil and gas industry, while Shive and Forster (2020) conclude that publicly listed firms tend to pollute more than privately held firms in general, but not if private firms are in the hands of private equity investors. All these studies focus on what happens after the PE buyer gains control of the target. None of them observes the short-term effect of the acquisition announcement as we do.

Another difference between most prior studies and our work is that these studies focus on what the buyout target does, while we focus on what its customers do. Hence, we add a unique new perspective to this literature. Several studies consider the effects of PE ownership on customers. The evidence is mixed and seems to differ across industries. In regulated and less competitive industries, PE ownership may harm customers, while the opposite may be true in more competitive industries. On the negative side, Eaton et al. (2020) find that in higher education, private equity ownership is associated with decreasing quality. Similarly, Liu (2022) and Gupta et al. (2020) point to negative developments in US hospitals and nursing homes after PE acquisitions, while Gandhi et al. (2020) find that the negative effect is concentrated in less competitive markets. On the positive side, Bernstein and Sheen (2016) consider restaurant chain buyouts and find that restaurants become cleaner and better maintained. Fracassi et al. (2022) consider buyouts of consumer product manufacturers and find that they are associated with revenue growth. The revenue growth is driven by an increase in product variety and by geographic expansion, not by an increase in prices. While these studies consider the effect of PE ownership on customers, we focus on the customer reaction. In addition, all these studies focus only on post-completion operational effects. We show that the identity of the acquirer may have an effect on the target performance immediately



after the acquisition announcement, and thus even absent any operational changes.

Moreover, we provide new findings on customer reactions to corporate events and the role of customer demographics. We build on recent work by Chetty et al. (2022a) and Chetty et al. (2022b) who develop social capital measures at the zip code level from Facebook data and link them to upward economic mobility. In addition, Hoi et al. (2019) relate social capital measures to lower agency costs. We find that social capital measures are linked to reactions to PE acquisitions. We add to the literature that links religiosity to individual and corporate decisions and financial outcomes. Hilary and Hui (2009) relate level of religiosity to risk aversion, investment rates, and growth. Many studies in this area focus on differences between Catholics and Protestants. Kumar et al. (2011) point to differences in attitudes towards gambling suggesting that Catholic religion is more tolerant of gambling behavior (see also Liu et al., 2020), which affect investments, corporate decisions, and stock returns. Some of the results are contradicting. For example, Barsky et al. (1997), Stulz and Williamson (2003), and Benjamin et al. (2016) find that Protestants are more risk averse than Catholics, while other studies (Renneboog and Spaenjers, 2012; Baxamusa and Jalal, 2016) find the opposite. We also contribute to studies that link financial decisions and outcomes to political preferences. Hutton et al. (2014) argue that Republican managers are more conservative as companies managed by them have lower leverage, they invest less, but their investments are less risky. In addition, they reach higher levels of profitability. Pástor and Veronesi (2020) find that entrepreneurs vote Republican and that Republican voters are less risk averse. Gatchev et al. (2022) suggest that Republican and Protestant areas have more pro-business attitudes. We contribute to this literature by showing how customer reactions to PE acquisitions differ across political preferences and religiosity types.

Our findings are also connected to the role of reputation for companies. Apart from studies that consider this topic in general (Knittel and Stango, 2014; Chaney and Philipich, 2002; Nelson et al., 2008), a few papers focus on PE reputation. Chemmanur et al. (2011) shows that companies backed by highly reputable venture capitalists are associated with greater

TFP increases than companies backed by less reputable venture capitalists. Demiroglu and James (2010) and Huang et al. (2016) find evidence that PE reputation matters for LBO debt financing conditions. Nahata (2008) shows that companies backed by more reputable venture capitalists achieve better exits. Tykvová (2017) shows that venture capitalists' reputation can help when seeking further financing rounds. There is also experimental evidence suggesting that seller reputation matters for online sales (Resnick et al., 2006). To our knowledge, there is no existing study of the customer reactions to PE acquisitions. The studies using measures of PE fund reputation focus on financing deals and likelihood of eventual deal success. Hence, our study makes a contribution to the existing literature on the effects of reputation in private equity. It also adds to the broader literature on the role of reputation in firm performance.

The results of this study also generate valuable information for private equity practitioners. Our findings suggest that existing customers generally react negatively to announcements of PE acquisitions, but the reaction varies with the extent of the local competition as well as with characteristics of the customer base and the acquiring PE firm. This may have important implications for PE funds considering acquisitions of retail businesses, both in terms of their financial impact, as well as deriving optimal communication strategies for such deals.

## **2 Data and descriptive statistics**

### **2.1 Data on customer visits**

To measure customer visits to retail outlets, we use aggregated mobile phone data from SafeGraph, a company producing anonymized mobile phone location statistics. The data include monthly number of visits by individual visitors at each outlet. SafeGraph observes 18.75 million devices, approximately 5.6% of the US population and about 10% of mobile devices. According to SafeGraph's analysis of user characteristics, SafeGraph posits that

its sample is representative of the US population based on its own study of income characteristics, age, and demographics of its users. The data are widely used in studies of social distancing during the COVID-19 pandemic (see, e.g., Bizjak et al., 2022), and more recently also increasingly to measure consumer responses to firm actions (see, e.g., Painter, 2021; Gurun et al., 2022). SafeGraph data are available on a monthly basis from January 2018 onwards.

## 2.2 Buyout sample and control group

We construct a sample of private equity acquisitions of majority stakes (buyouts) by combining data from Preqin, SDC, and Capital IQ. To have enough data for comparison before and after the buyout, we limit our sample to deals announced between March 1, 2018, and December 31, 2019. The starting date is constrained because of the availability of SafeGraph data. The end date is constrained because of the COVID-19 pandemic, due to which we only study monthly customer visits until February 2020.

To combine buyout targets with SafeGraph outlet data, we perform a name-based matching. We include only target firms with at least 10 outlets in the data. This leaves us with a sample of 110 private equity acquisitions where we have the matching monthly customer visit data. The target firms in these deals have a total of 20,681 US outlets in the data, with the number of outlets per firm ranging from ten to 3,527. The deals included in the buyout sample are described in Appendix A.

To obtain a control group for each target outlet, we retain all outlets available in the SafeGraph data that are located in the same zip code and same 6-digit NAICS industry code as the target. This leaves us with a total sample of 282,553 outlets. Figure 1 shows the geographic distribution of the target outlets, while Table 1 provides summary statistics for our sample.

In order to be able to study changes around deal announcement separately, we extract both announcement and completion dates for the buyouts in our sample. To complement

the data, we manually check these dates and search completion dates for the deals where the databases only include announcement dates. In our analysis, we use the full sample for studying visits around announcement dates. To examine visits around deal completion dates, we include only the deals where we have announcement and closing dates in different months, allowing us to separately observe announcement and closing effects.<sup>8</sup>

## 2.3 Local characteristics

To study how the customer reaction to PE acquisitions varies by different demographics, we compile a range of local characteristics. First, we use the economic connectedness and social capital measures introduced in Chetty et al. (2022a) and Chetty et al. (2022b). We include the county- and zip code-level measures of economic connectedness (EC), which consider links among individuals with a different socioeconomic status (SES). More specifically, the variable is defined as two times the share of high-SES friends among low-SES individuals, averaged over all low-SES individuals in the county or zip code area. To measure the strength of social norms, we include the local volunteering rate, defined as the percentage of Facebook users who are members of a group which is predicted to be about ‘volunteering’ or ‘activism’ based on group title and other group characteristics in the county or zip code area, which amounts to slightly more than 6 percent on average. Finally, we also consider the civic organizations measure, defined as the number of Facebook pages predicted to be “Public Good” pages based on page title, category, and other page characteristics. It amounts to 0.019, resp. 0.014 pages per 1,000 users in the zip code, resp. county area.

To measure local income and wealth levels, we first obtain county-level personal income per capita from the BEA. The income per capita in the mean-level county is 56,570 USD, ranging between 45,431 USD in the county at the 25th percentile and 62,976 USD at the 75th percentile. We combine this data with measures of average household income, stock market participation, and self-employment rates using the Individual Income Tax Return (Form

---

<sup>8</sup>For many buyout deals, the announcement and the completion date are the same, i.e., the deal is announced on the closing date.

1040) Statistics from the IRS. These data include zip code-level data of types of income and households. We define stock market participation as the proportion of households in a given zip code that reports dividend income during the year.

We also obtain data on religion and political leanings at the county level from the Census. In the average county, 49 percent of the population is religious with the most important religions being Protestants (28 percent) and Catholics (16.6 percent). 42.6 percent of counties are majority Republican.

## **2.4 Reputation of private equity firms**

We measure reputation by looking at the PE firm involvement in lawsuits. To obtain this data, we rely on the Westlaw database. As Atanasov et al. (2012) point out, this database provides two main advantages over other databases. Compared to Lexis, which contains only judicially resolved cases, Westlaw covers unresolved cases too (for example cases that were voluntarily dismissed or settled). Compared to PACER, which focuses on federal cases, Westlaw contains cases from various court levels. We create two alternative variables to account for the involvement in lawsuits, counting the number of all lawsuits in which the PE firm was involved as a defendant in the 5- and 10-year periods prior to the deal announcement.

## **2.5 News coverage and sentiment**

To see whether news coverage increases around the acquisition announcement, we measure news coverage of target firms and the sentiment of these news. We use data from RavenPack News Analytics, which include details of each news article mentioning the firm from a large number of sources, including Dow Jones Newswires, Barrons, the Wall Street Journal, and over 22,000 other traditional and social media sites. The data also include measures of structured sentiment, relevance, and novelty. Relevance is reflected in a score between 0 and 100 that indicates how strongly the company relates to the underlying news story, with higher values indicating greater relevance. Novelty is proxied using the ENS similarity gap,

which measures the number of days since a similar event was detected for a company. We include only highly relevant (relevance of 100) and novel (ENS similarity gap of at least 90) news articles. We exclude news of the content groups “technical-analysis”, “stock-prices”, and “order-imbalances”, because these types of news are directly reporting the stock market performance of the firm. For each target firm, we then calculate the monthly number of articles and their average composite sentiment score (CSS). We call this sentiment index *News sentiment*.

### 3 Main results

#### 3.1 Customer visits around the PE acquisition announcement

To examine customer reactions around private equity deal announcements, we perform a regression analysis of the following form:

$$\ln(Visits)_{i,t} = \beta Target_{i,j} \times Month\ from\ announcement_{i,t} + \gamma X_{i,j,t} + \epsilon_{i,t}, \quad (1)$$

where  $i$  denotes an outlet,  $j$  refers to a buyout, and  $t$  to a calendar month. *Visits* is the monthly number of visits in outlet  $i$ . *Target* is a dummy taking the value one if the outlet belongs to the buyout target firm and zero for the outlets belonging to the control group. *Month from announcement* is a set of dummies indicating the time relative to acquisition announcement.  $X$  is a vector of controls that includes outlet fixed effects, controlling for cross-sectional differences between different outlets, and zip code x NAICS x (calendar) month fixed effects, controlling for any location-specific variation over time.

Figure 2 shows the results. There is a noticeable decrease in the months immediately following the deal announcement, bottoming at approximately 5% reduction around month three from announcement.<sup>9</sup> This decrease gets reversed approximately six months after the

---

<sup>9</sup>We do not observe any pre-trends. The development of customer visits in the treated and control outlets is very similar prior to the deal announcement.

deal announcement, on average. As not all of the deals in our sample have eight months of data after the announcement date, we include a separate line showing the same regression coefficients only for the deals that have data for the full period. Finally, we also perform the same regression analysis for the sample we use in the analyses around completion dates, including only the deals where we have information about the completion and the announcement date and where the two dates differ.

The pattern is strikingly similar across all these samples, although the economic magnitude is larger for the constant composition and the completion samples. The results for the constant composition sample mitigate any potential concerns that the changes in sample composition across different months would drive our results. The sample that includes deals with information about the completion and announcement dates provides a cleaner environment for the analysis of the pure announcement effect than the full sample because deals in that restricted sample are first announced and then completed, while the majority of the remaining deals is announced upon completion. In addition, the deals with a separate announcement and completion date tend to be larger and hence possibly more salient to the customers.

Next, we replace the set of monthly dummies with a simple *Post* dummy taking the value of one for all months following the buyout announcement and zero for all months preceding the buyout announcement, effectively comparing the average month before announcement with the average month following it. This regression is specified as follows:

$$\ln(Visits)_{i,t} = \beta Target_{i,j} \times Post_{j,t} + \gamma X_{i,j,t} + \epsilon_{i,t}. \quad (2)$$

The results are shown in Panel A of Table 2. We include four specifications that differ in the fixed effects included. Our variable of interest is the double interaction term. The estimated coefficients are negative and statistically significant at 1% level across all specifications, suggesting that there is about 3% reduction in customer visits in the 4 months

following the announcement, relative to other outlets in the same NAICS industry and zip code. The magnitude of the effect is similar across all four specifications.

Panel B of Table 2 repeats the regressions from Panel A with an alternative dependent variable. Instead of counting the number of visits, we focus on the number of individual visitors. The results do not change much. All of them are statistically significant at 1% level and negative and of a similar magnitude as in Panel A.

### 3.2 Deal announcement versus deal completion

To study whether the changes in customer visits result from announcing a buyout or from potential operational changes following the change in ownership, we repeat the monthly regression analysis of Figure 2, but focusing on the months around the deal completion instead on the deal announcement. By definition, any changes by the new owner (such as refurbishment or rebranding of outlets) can only take place after deal completion, when the ownership has been transferred. Hence, any operations-driven changes should take place after the completion, not after the announcement.

The results, shown in Figure 3, suggest that there is no reduction in visits following deal completion. On the contrary, the decrease happens before the deal closing and actually gets reversed after deal completion.

To further confirm this finding, we perform a regression analysis separating the post-announcement and post-completion periods in the same regression. This regression is specified as follows:

$$\ln(Visits)_{i,t} = \beta_1 Target_{i,j} \times Post_{j,t} + \beta_2 Target_{i,j} \times Post\ close_{j,t} + \gamma X_{i,j,t} + \epsilon_{i,t}, \quad (3)$$

where *Post* is a dummy taking the value of one after the deal is announced, and *Post close* a dummy taking the value of one after deal completion. The sample only includes deals where the announcement and completion months are different.



The results, shown in Table 3, are consistent with the monthly analyses discussed above. The coefficient on the double interaction term  $Target_{i,j} \times Post_{j,t}$  is highly statistically significant (at 1% level) and negative, confirming that there is a reduction in customer visits following the announcement, but this decrease gets at least partly reversed following deal completion as the coefficient on the double interaction term  $Target_{i,j} \times Postclose_{j,t}$  is negative (and also statistically significant at the 1% level).

### 3.3 Primary versus secondary buyouts

If customers dislike PE investors and translate these perceptions into their shopping behavior, we should observe a decrease in customer visits in deals where the ownership changes from a non-PE to a PE investor. It should not exist in *secondary* buyouts, which are deals where a PE investor buys a target business from another PE firm. About one third of our sample outlets is attributable to secondary buyouts, which allows us to directly test this conjecture by comparing the customer reactions in primary versus secondary buyouts.

We repeat our regression analysis of monthly customer visits around the acquisition announcement and include a triple interaction term, which combines our double interaction term with an indicator for a secondary buyout. Alternatively, we split the sample into primary and secondary buyout subsamples. We report the results in Table 4. Consistent with our conjecture, there is no reduction in customer visits around the announcement of secondary buyouts. In fact, the estimated change for secondary buyouts is, essentially, both economically and statistically not different from zero. Contrary to this, the decrease in customer visits for primary buyouts amounts to 4.6% in the four months following the announcement, relative to other outlets in the same NAICS industry and zip code. This effect is highly statistically significant.

Besides the average announcement effect, we show the monthly coefficient estimates in Figure 4. For secondary buyouts, we do not observe changes in customer visits around the deal announcement. In contrast, primary buyouts exhibit a substantial decrease in visits in

the months immediately following the announcement.

These results support the view that the entire decrease we document comes from primary buyouts, where the target business is sold to a PE fund by a non-PE seller. This is consistent with a subset of customers actively avoiding patronizing PE-owned businesses.

### **3.4 Restaurants only**

Approximately 63% of the announcement sample and 87% of the completion sample are attributable to restaurants, making it by far the largest sector in our data. The sector composition of the sample is shown in detail in the Internet Appendix, Table IA.2. Hence, in this section, we repeat the baseline analyses around deal announcement and completion, excluding all other sectors from the sample.

The results, shown in Table 5, are qualitatively similar to our results using the full sample, but substantially larger in magnitude. This analysis shows that our findings are driven by buyouts in the restaurant sector. This is not surprising, as this sector is highly competitive, with customers usually having many alternatives to choose from.

## **4 Additional analysis**

### **4.1 Location characteristics**

#### **4.1.1 Economic connectedness and social capital**

To study cross-sectional differences across locations we start by measures of economic connectedness and social capital developed in Chetty et al. (2022a) and Chetty et al. (2022b). In particular, these data include a proxy of Economic connectedness ( $EC$ ), which measures the share of high-SES friends among low-SES individuals in Facebook. It seems plausible that in more socio-economically segregated areas, people might have a more negative view on private equity. To test this, we include an interaction term of  $Target \times Post$  with  $EC$  in

our regression analysis. We perform similar triple interaction term analysis also with *Volunteering*, the local percentage of Facebook users who are members of a group predicted to be about ‘volunteering’ or ‘activism’, and with *Civic organizations*, the number of Facebook Pages predicted to be “Public Good” pages per 1,000 users.

Table 6 presents the results. We run four regressions that include our measures at the county level and four regressions with zip-code-level measures. The first three regressions consider these measures separately, the fourth regression combines all three measures together. The results suggest that higher rates of economic connectedness are associated with smaller decreases in customer visits following a PE acquisition as expected. In addition, higher rates of volunteering and activism are associated with more negative reactions (in the zip-level regressions only if included jointly with the other two measures). Given a key reason for volunteering is altruism (Carpenter and Knowles Myers (2010)), this may also imply that more altruistic individuals react more negatively to PE acquisitions. The number of civic organizations is not significantly correlated with the change in customer visits.

#### **4.1.2 Income and wealth**

As next we consider how local income, wealth, stock market participation, and self-employment relate to customer reactions. We again run the base regressions to which we add triple interaction terms with these four variables, either one triple interaction term per regression or all interaction terms together. We present our results in Table 7. As expected higher income, wealth, stock market participation and self-employment rates are associated with smaller decreases in customer visits following a PE acquisition. If we run a horse race among those four variables, we can see that the local income dominates.

#### **4.1.3 Political orientation, religion and individualism**

We then examine the link between customer reaction to buyout announcements and the local political and religious orientation. Table 8 shows that customers in Republican voting

regions tend to decrease their visits more than customers in Democratic oriented regions.

Religiosity per se does not seem to have any effect, but differences between different religious orientations seem to exist. While in Protestant-dominated areas customers reduce their visits to the buyout-owned outlets after the deal announcement more strongly than in other areas, the opposite holds for the Catholic-dominated areas. When we consider these variables together with the political orientation in column 5, we find that the political orientation remains highly statistically significant, while the estimated coefficient for Protestant is no more statistically significant. Catholic remains statistically significant, but decreases in magnitude. These effects also survive controlling for the effect of local personal income per capita, the coefficient on Catholic further reduces its statistical and economical significance. Gatchev et al. (2022) suggest that Republican and Protestant areas have more pro-business attitudes. Our results would suggest that such pro-business attitudes coincide with more negative views on private equity, or higher willingness to act on negative views.

This might also be consistent with stronger views on individual responsibility of their consumption decisions. To more directly test this, we use two county-level proxies of individualism by Bazzi et al. (2020): the historical share of infrequent names in 1940, and frontier experience, measured as decades that the county was part of the frontier. The results show that individualism is associated with significantly larger reductions in customer visits following PE acquisition announcements.

## **4.2 Local competition**

Next, we consider how customer behavior is linked to the local competition among relevant outlets. As suggested by the results of von Meyerinck et al. (2021), customers' ability to reduce visits to PE-acquired outlets might be constrained by the lack of alternatives. Hence, we include an analysis using various measures of local competition. The first variable counts the number of competing outlets from the same industry that are located in the same zip code. Besides the absolute number of outlets in the industry and area, we include a relative

measure as our second variable, namely the number of outlets over the local population. A higher number of alternatives should be associated with a weaker reaction. Third, we consider the individual market share of the target outlet. Targets with a strong position in the market may face a lower competition. Our fourth and last variable in this group is the distance to the next outlet from the same industry, which could serve as a proxy for the travel costs that switching customers face.

The results, shown in Table 9, are consistent with competition being an important determinant of customer reactions. The result in column 1 suggests that customers reduce their visits more if more similar outlets are located in the same area, while the relative number of outlets in column 2 does not matter. Column 3 shows that outlets with a stronger position in the local market tend to lose fewer customers after a buyout announcement. Column 4 reveals that the number of switching customers increases as the distance to the next comparable outlet decreases.

### **4.3 PE firm involvement in lawsuits**

Next, we study how the decrease in visits varies with PE size and reputation. If customers dislike PE firms and, as a result, reduce their visits to outlets after a buyout announcement, we should observe stronger worries for less reputable PE firms. But the customers must also be aware that the coming owner is a PE firm, which is more likely to be the case if the PE firm is larger. Therefore, we first examine the effects of the PE firm size. To measure the PE firm size, we use the amount of funds raised in the past 10 years, which we obtain from Preqin. Second, we consider the PE firm involvement in lawsuits in the the 5-year period (alternatively 10-year period) prior to the deal announcement.

Table 10 exhibits the results. The first column suggests that customer visits may decrease more for outlets that are subject to buyouts from larger PE firms, but the effect of size is not statistically significant. The number of lawsuits in past five and ten years is negatively associated with the customer visits; these effects hold when add size.

## 4.4 News coverage and sentiment

When we explain the decline in customer visits by their aversion against private equity, we assume that customers know about the acquisition. However, we cannot observe customer knowledge. We argue that if target firm coverage in the media increases around the acquisition announcement, it is more likely that customers obtain this information. We therefore look at the number of novel and relevant news stories about the target firm around the acquisition announcement. In addition to the number of stories, we also consider their tone. We can only perform this analysis for the subsample of target firms covered by RavenPack data.

We show the results in Figure 5. From Panel A, we can observe a significant increase in news articles about the target firm during the acquisition month, and the coverage reverts to pre-buyout levels in 1-2 months. Panel B shows that the average tone of news articles about the target following the buyout announcement appears more negative, although this difference is not statistically significant.

## 4.5 Customer reviews following PE acquisition announcement

To examine whether the decrease in customer visits is due to a decrease in perceived quality, we study customer reviews on Yelp. For this analysis, we construct a new acquisitions sample, matching all reviews in the publicly available Yelp data set to all PE acquisitions in Preqin over the same period (from 2005 to 2019). For each target outlet in Yelp, we keep other outlets in the same zip code and same product category as control outlets. This methodology gives us a sample of 323 PE acquisitions with customer review data, involving 1,414 unique outlets and 9,395 individual reviews for the target businesses during the period from six months before the announcement to six months after it.

The Yelp reviews include a star rating, with five stars being the most positive one and one star the most negative one. In Figure 7, we show the distribution of reviews for the target outlets in the six months prior to PE acquisition announcement versus the six months after

it. Panel A includes all customer reviews for this period and shows that the distributions look quite similar, although the reviews are slightly more positive following the announcement. Panel B includes only those customers who provide a review on the same target outlet both in the six-month period before the acquisition and the six-month period after it. For these customers, the post-acquisition reviews appear clearly more negative than their reviews before the acquisition. However, as discussed below, this is based on a very small sample of customers, so it should be interpreted with caution.

Table 11 shows further analysis of customer reviews. Panel A shows summary statistics for the whole matched review sample, as well as specifically for the target outlets before and after the PE acquisition announcement. It also shows a t-test of the difference in target reviews post versus pre acquisition. This confirms first that the average reviews become more positive for target businesses, but the economic effect is small. Second, the reviews provided by customers that also rated the same outlet before the acquisition become more negative. The latter finding is not statistically significant, largely due to the very small sample size. There are only 34 pre-acquisition reviews and 36 post-acquisition reviews by these customers, reflecting the fact that most customers only provide one review per business in the Yelp data.

In Panel B, we present the results of a regression analysis of customer reviews. We include three alternative dependent variables. *Stars* is a continuous variable ranging from 1 (worst) to 5 (best), *5 stars* is a dummy taking the value of one if the customer gave a review of five stars, and *1 star* is a dummy taking the value of one if the customer gave a review of one star. These are consistent with the t-test in Panel A. On average, the estimated change in target reviews is positive, although not statistically significant. When including user-outlet pair fixed effects, the estimated change in reviews is in more negative direction, suggesting that those customers rating the target business both before and after the acquisition become more negative.

Taken together, these results suggest that the perceived quality of target businesses does

not materially worsen following the announcement of PE acquisitions. If anything, there appears to be a slight positive change in customer reviews. However, some existing customers do appear to become more negative on the business. This suggests that the reduction in customer visits that we document is not likely to be driven by a decrease in quality. It is, however, consistent with a subset of customers disliking the ownership change and reducing visits to the target business outlets.

## **4.6 Employee satisfaction following PE acquisition announcement**

Another possible indication of worsening service quality might be an increase in employee dissatisfaction. If employees fear negative consequences of the upcoming private equity ownership, they might reduce their effort and possibly start looking for a new job, which could result in a worse customer experience. This would be consistent with the findings of Lambert et al. (2021) and Gornall et al. (2022).

To test this, we obtain data on employee reviews from Glassdoor. These data is at firm level and we only include the target firms in our main PE acquisition sample. We then perform an analysis of employee ratings before and after the acquisition announcement. The results are shown in Table 12. We find no evidence of a decrease in employee satisfaction following a PE acquisition announcement. In fact, the estimated change in employee ratings is slightly positive, although economically very small.

While Lambert et al. (2021) also use Glassdoor ratings in their analysis, we note the time horizon they study is substantially longer than in our analysis. Nevertheless, they also find no decrease in employee satisfaction in the sector including restaurants, which account for the majority of our results. Hence, our findings are consistent with their data.



## 5 Conclusion

While academic literature suggests that private equity buyouts are often associated with operational improvements for the target firm, the popular image of private equity is often negative. This has likely been exacerbated by some prominent retail chains having gone bankrupt after a PE buyout and politicians of all sides often vilifying PE investors.

Our results suggest that announcements of PE acquisitions are followed by a short-term reduction in retail customer visits to the target firm's outlets – but not in cases where the target is already owned by a PE fund. This reduction is consistent with some customers voting with their feet amid the change in ownership. It is not driven by operational changes by the new owner, as the reduction takes place after announcement, not after deal completion. On the contrary, this decline is temporary, and the number of customer visits rebounds in the months after the acquisition announcement once the PE buyer obtains operational control of the business. Around the month six or seven, the typical target has returned to the pre-announcement level of customer visits.

However, this temporary decrease in visits can still add up to large aggregate losses of business. According to EY estimates, the U.S. private equity sector (all PE-owned businesses and the funds themselves) generates approximately \$1.4 trillion of GDP per year. A 3% reduction for six months every five years would reduce the aggregate annual GDP by \$4.2 billion.<sup>10</sup> Of course, this simplistic calculation assumes that none of the sales would be substituted somewhere else, or at a later point, which is probably not true. But even a mere shift between firms of this magnitude is consequential.

---

<sup>10</sup>According to Bain, the average holding period for PE-investments was 4.4 years in 2021.

## References

- Acharya, Viral V., Oliver F. Gottschalg, Moritz Hahn, and Conor Kehoe, 2013, Corporate governance and value creation: Evidence from private equity, *Review of Financial Studies* 26, 368–402.
- Agrawal, Ashwini, and Prasanna Tambe, 2016, Private equity and workers’ career paths: The role of technological change, *Review of Financial Studies* 29, 2455–2489.
- Atanasov, Vladimir, Vladimir Ivanov, and Kate Litvak, 2012, Does reputation limit opportunistic behavior in the VC industry? Evidence from litigation against VCs, *Journal of Finance* 67, 2215–2246.
- Barsky, Robert B., F. Thomas Juster, Miles S. Kimball, and Matthew D. Shapiro, 1997, Preference parameters and behavioral heterogeneity: An experimental approach in the health and retirement study, *Quarterly Journal of Economics* 112, 537–579.
- Baxamusa, Mufaddal, and Abu Jalal, 2016, CEO’s religious affiliation and managerial conservatism, *Financial Management* 45, 67–104.
- Bazzi, Samuel, Martin Fiszbein, and Mesay Gebresilasse, 2020, Frontier culture: The roots and persistence of “rugged individualism” in the United States, *Econometrica* 88, 2329–2368.
- Bellon, Aymeric, 2020, Does private equity ownership make firms cleaner? The role of environmental liability risks.
- Benjamin, Daniel J., James J. Choi, and Geoffrey Fisher, 2016, Religious identity and economic behavior, *Review of Economics and Statistics* 98, 617–637.
- Bernstein, Shai, and Albert Sheen, 2016, The operational consequences of private equity buyouts: Evidence from the restaurant industry, *Review of Financial Studies* 29, 2387–2418.

- Bertoni, Fabio, and Tereza Tykvová, 2015, Does governmental venture capital spur invention and innovation? Evidence from young European biotech companies, *Research Policy* 44, 925–935.
- Bian, Bo, Jingjing Li, Ting Xu, and Natasha Z. Foutz, 2022, Individualism during crises, *Review of Economics and Statistics* 104, 368–385.
- Bizjak, John M., Swaminathan L. Kalpathy, Vassil T. Mihov, and Jue Ren, 2022, CEO political leanings and store-level economic activity during the covid-19 crisis: Effects on shareholder value and public health, *The Journal of Finance* 77, 2949–2986.
- Bloomberg, 2017, America’s ‘retail apocalypse’ is really just beginning, November 8, 2017. <https://www.bloomberg.com/graphics/2017-retail-debt/>.
- Boucly, Quentin, David Sraer, and David Thesmar, 2011, Growth LBOs, *Journal of Financial Economics* 102, 432–453.
- Business Insider, 2017, The retail apocalypse is being fueled by private equity firms adding to debt loads, August 2, 2017. <https://www.businessinsider.com/brick-and-mortar-retail-private-equity-debt-financing-lbo-2017-8?international=true&r=US&IR=T>.
- Carpenter, Jeffrey, and Caitlin Knowles Myers, 2010, Why volunteer? evidence on the role of altruism, image, and incentives, *Journal of Public Economics* 94, 911–920.
- Chaney, Paul K., and Kirk L. Philipich, 2002, Shredded reputation: The cost of audit failure, *Journal of Accounting Research* 40, 1221–1245.
- Chemmanur, Thomas J., Karthik Krishnan, and Debarshi K. Nandy, 2011, How does venture capital financing improve efficiency in private firms? A look beneath the surface, *Review of Financial Studies* 24, 4037–4090.
- Chetty, Raj, Matthew O. Jackson, Theresa Kuchler, Johannes Stroebel, Nathaniel Hendren, Robert Fluegge, Sara Gong, Federico Gonzalez, Armelle Grondin, Matthew Jacob, Drew

- Johnston, Martin Koenen, Eduardo Laguna-Muggenberg, Florian Mudekereza, Tom Rutter, Nicolaj Thor, Wilbur Townsend, Ruby Zhang, Mike Bailey, Pablo Barberá, Monica Bhole, and Nils Wernerfelt, 2022a, Social capital i: measurement and associations with economic mobility, *Nature* 608, 108–121.
- Chetty, Raj, Matthew O. Jackson, Theresa Kuchler, Johannes Stroebel, Nathaniel Hendren, Robert Fluegge, Sara Gong, Federico Gonzalez, Armelle Grondin, Matthew Jacob, Drew Johnston, Martin Koenen, Eduardo Laguna-Muggenberg, Florian Mudekereza, Tom Rutter, Nicolaj Thor, Wilbur Townsend, Ruby Zhang, Mike Bailey, Pablo Barberá, Monica Bhole, and Nils Wernerfelt, 2022b, Social capital ii: Determinants of economic connectedness, *Nature* 608, 122–134.
- Cohn, Jonathan, Nicole Nestoriak, and Malcolm Wardlaw, 2021, Private equity buyouts and workplace safety, *Review of Financial Studies* 34, 4832–4875.
- Davis, Steven J., John Haltiwanger, Kyle Handley, Ron Jarmin, Josh Lerner, and Javier Miranda, 2014, Private equity, jobs, and productivity, *American Economic Review* 104, 3956–3990.
- Davis, Steven J., John Haltiwanger, Kyle Handley, Ben Lipsius, Josh Lerner, and Javier Miranda, 2019, The economic effects of private equity buyouts, *NBER Working Paper No. w26371* .
- Demiroglu, Cem, and Christopher M. James, 2010, The role of private equity group reputation in LBO financing, *Journal of Financial Economics* 96, 306–330.
- Eaton, Charlie, Sabrina T Howell, and Constantine Yannelis, 2020, When investor incentives and consumer interests diverge: Private equity in higher education, *Review of Financial Studies* 33, 4024–4060.
- Financial Times, 2019, Elizabeth warren is right to worry about private equity looting, July 28, 2019 (<https://www.ft.com/content/f2bc6d4e-afbd-11e9-8030-530adfa879c2>).

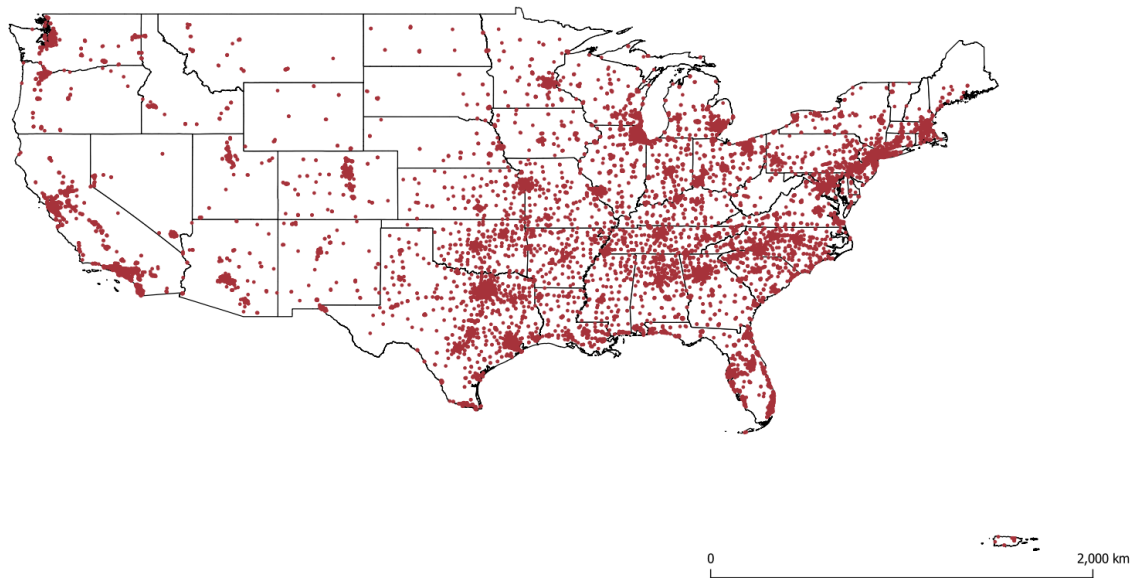
- Fracassi, Cesare, Alessandro Previtro, and Albert Sheen, 2022, Barbarians at the store? private equity, products, and consumers, *Journal of Finance* 77, 1439–1488.
- Gandhi, Ashvin, YoungJun Song, and Prabhava Upadrashta, 2020, Private equity, consumers, and competition: Evidence from the nursing home industry.
- Gatchev, Vladimir A., Christo A. Pirinsky, and Mengxin Zhao, 2022, Attitudes towards business and corporate governance, *Journal of Corporate Finance* 75.
- Gornall, Will, Oleg Gredil, Sabrina T Howell, Xing Liu, and Jason Sockin, 2022, Do employees cheer for private equity? the heterogeneous effects of buyouts on job quality, Working paper.
- Gupta, Atul, Sabrina T Howell, Constantine Yannelis, and Abhinav Gupta, 2020, Does private equity investment in healthcare benefit patients? Evidence from nursing homes.
- Gurun, Umit, Jordan Nickerson, and David H. Solomon, 2022, Measuring and improving stakeholder welfare is easier said than done, *Journal of Financial and Quantitative Analysis* Forthcoming.
- Hilary, Gilles, and Kai Wai Hui, 2009, Does religion matter in corporate decision making in America?, *Journal of Financial Economics* 93, 455–473.
- Hoi, Chun Keung(Stan), Qiang Wu, and Hao Zhang, 2019, Does social capital mitigate agency problems? Evidence from chief executive officer (CEO) compensation, *Journal of Financial Economics* 133, 498–519.
- Huang, Rongbing, Jay R. Ritter, and Donghang Zhang, 2016, Private equity firms’ reputational concerns and the costs of debt financing, *Journal of Financial and Quantitative Analysis* 51, 29–54.
- Hutton, Irena, Danling Jiang, and Alok Kumar, 2014, Corporate policies of republican managers, *Journal of Financial and Quantitative Analysis* 49, 1279–1310.

- Knittel, Christopher R., and Victor Stango, 2014, Celebrity endorsements, firm value, and reputation risk: Evidence from the Tiger Woods scandal, *Management Science* 60, iv–vi, 1–264.
- Kumar, Alok, Jeremy K. Page, and Oliver G. Spalt, 2011, Religious beliefs, gambling attitudes, and financial market outcomes, *Journal of Financial Economics* 102, 671–708.
- Lambert, Marie, Nicolas Moreno, Ludovic Phalippou, and Alexandre Scivoletto, 2021, Employee views of leveraged buy-out transactions, Working paper.
- Lerner, Josh, Morten Sorensen, and Per Strömberg, 2011, Private equity and long-run investment: The case of innovation, *Journal of Finance* 66, 445–477.
- Liu, Bibo, Huijun Wang, Jianfeng Yu, and Shen Zhao, 2020, Time-varying demand for lottery: Speculation ahead of earnings announcements, *Journal of Financial Economics* 138, 789–817.
- Liu, Tong, 2022, Bargaining with private equity: Implications for hospital prices and patient welfare, Working paper.
- Nahata, Rajarishi, 2008, Venture capital reputation and investment performance, *Journal of Financial Economics* 90, 127–151.
- Nelson, Karen K., Richard A. Price, and Brian R. Rountree, 2008, The market reaction to arthur andersen’s role in the enron scandal: Loss of reputation or confounding effects?, *Journal of Accounting and Economics* 46, 279–293.
- Painter, Marcus, 2021, Firm statements, consumer political beliefs, and the limits of stakeholder capitalism.
- Pástor, Lubos, and Pietro Veronesi, 2020, Political cycles and stock returns, *Journal of Political Economy* 128, 4011–4045.

- Renneboog, Luc, and Christophe Spaenjers, 2012, Religion economic attitude and household finance, *Oxford Economic Papers* 64, 103–127.
- Resnick, Paul, Richard Zeckhauser, John Swanson, and Kate Lockwood, 2006, The value of reputation on eBay: A controlled experiment, *Experimental Economics* 9, 79–101.
- Shive, Sophie A., and Margaret M. Forster, 2020, Corporate Governance and Pollution Externalities of Public and Private Firms, *The Review of Financial Studies* 33, 1296–1330.
- Stulz, Rene M., and Rohan Williamson, 2003, Culture, openness, and finance, *Journal of Financial Economics* 70, 313–349.
- Tykvová, Tereza, 2017, When and why do venture-capital-backed companies obtain venture lending?, *Journal of Financial and Quantitative Analysis* 52, 1049–1080.
- von Meyerinck, Felix, Vesa Pursiainen, and Markus Schmid, 2021, Competition and the reputational costs of litigation.
- Washington Post, 2019, Private equity’s role in retail has killed 1.3 million jobs, study says, July 24, 2019. <https://www.washingtonpost.com/business/2019/07/24/private-equitys-role-retail-has-decimated-million-jobs-study-says/>.

### Figure 1: Sample outlets

This map shows the target outlets included in our private equity acquisitions sample. In total, there are 20,681 target outlets in the data, attributable to 110 target firms.



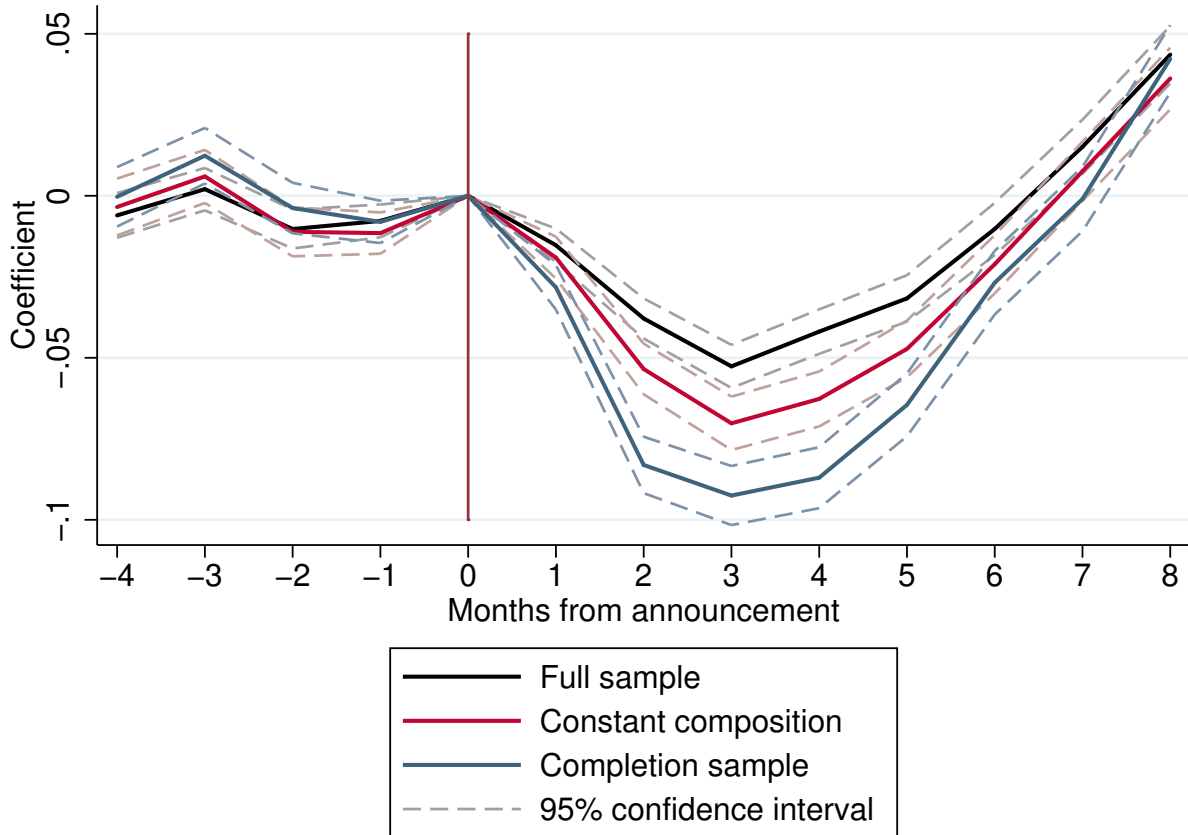


**Figure 2: Monthly visits (relative to acquisition announcement)**

This chart presents monthly coefficients for *Target* relative to the time of acquisition announcement by a PE fund, from the following regression:

$$\ln(Visits)_{i,t} = \beta Target_{i,j} \times Month\ from\ announcement_{i,t} + \gamma X_{i,j,t} + \epsilon_{i,t}$$

where  $i$  denotes an outlet,  $j$  denotes a buyout, and  $t$  a calendar month. *Visits* is the monthly number of visits in outlet  $i$ . *Target* is a dummy taking the value one if the outlet belongs to the buyout target firm. *Month from announcement* is a set of dummies indicating the time relative to acquisition announcement.  $X$  is a vector of controls that includes outlet fixed effects, controlling for cross-sectional differences between different outlets, and zip code x NAICS x month fixed effects, controlling for any location-specific variation over time. The ranges indicate 95-% confidence intervals, using heteroscedasticity-consistent standard errors clustered by zip code.

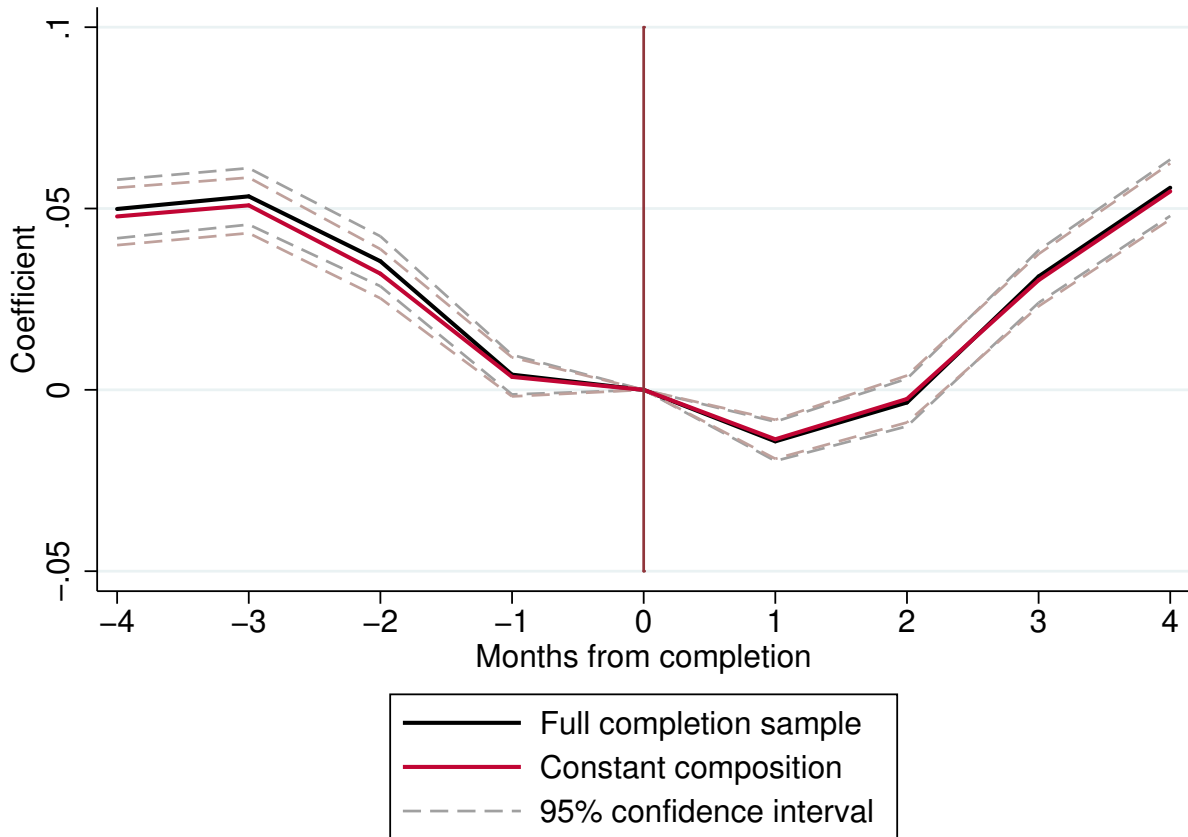


**Figure 3: Monthly visits (relative to acquisition completion)**

This chart presents monthly coefficients for *Target* relative to the time of acquisition completion by a PE fund, from the following regression:

$$\ln(Visits)_{i,t} = \beta Target_{i,j} \times Month\ from\ completion_{i,t} + \gamma X_{i,j,t} + \epsilon_{i,t}$$

where  $i$  denotes an outlet,  $j$  denotes a buyout, and  $t$  a calendar month. *Visits* is the monthly number of visits in outlet  $i$ . *Target* is a dummy taking the value one if the outlet belongs to the buyout target firm. *Month from completion* is a set of dummies indicating the time relative to acquisition completion.  $X$  is a vector of controls that includes outlet fixed effects, controlling for cross-sectional differences between different outlets, and zip code x NAICS x month fixed effects, controlling for any location-specific variation over time. The ranges indicate 95-% confidence intervals, using heteroscedasticity-consistent standard errors clustered by zip code.

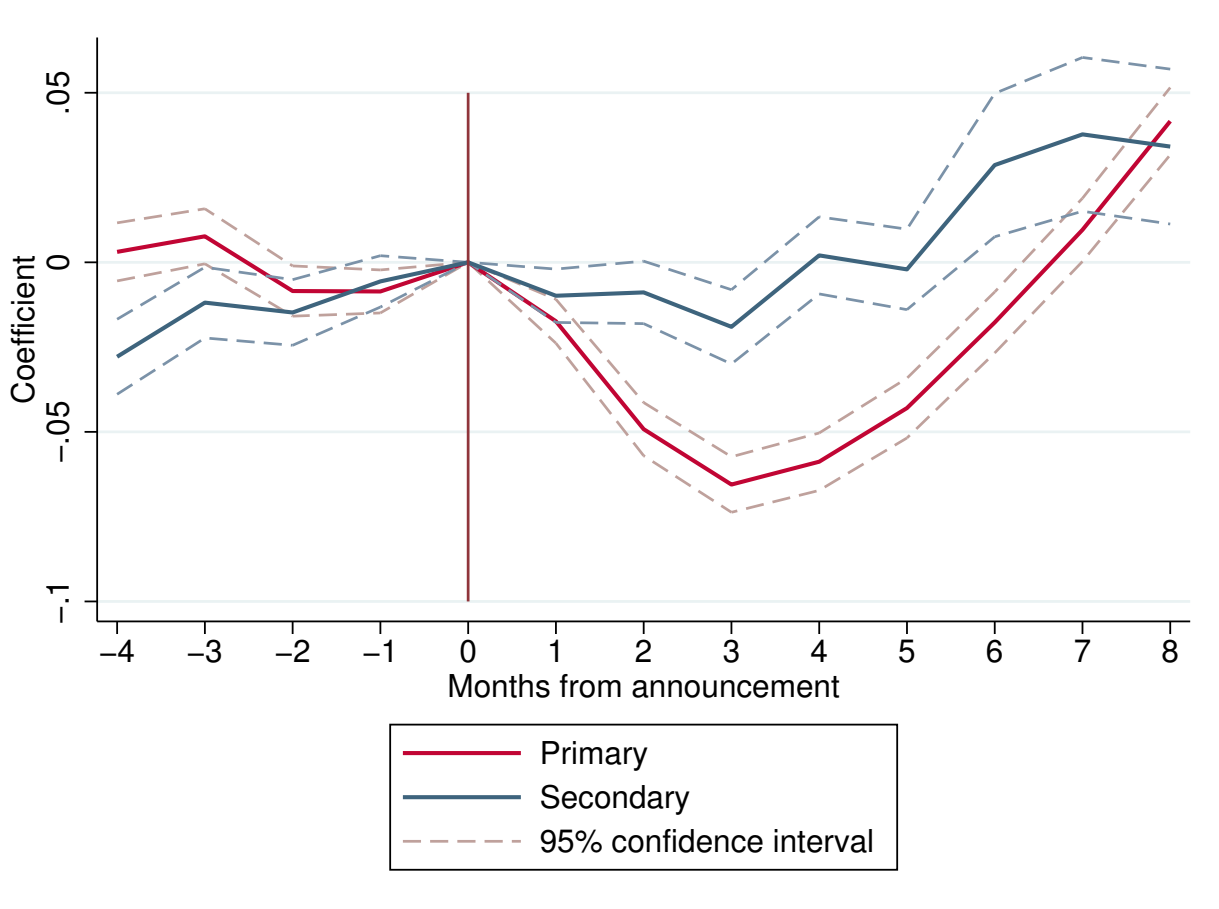


**Figure 4: Primary versus secondary buyouts**

This chart presents monthly coefficients for *Target* relative to the time of acquisition announcement by a PE fund, from the following regression:

$$\ln(Visits)_{i,t} = \beta Target_{i,j} \times Month\ from\ announcement_{i,t} + \gamma X_{i,j,t} + \epsilon_{i,t}$$

where  $i$  denotes an outlet,  $j$  denotes a buyout, and  $t$  a calendar month. *Visits* is the monthly number of visits in outlet  $i$ . *Target* is a dummy taking the value one if the outlet belongs to the buyout target firm. *Month from announcement* is a set of dummies indicating the time relative to acquisition announcement.  $X$  is a vector of controls that includes outlet fixed effects, controlling for cross-sectional differences between different outlets, and zip code x NAICS x month fixed effects, controlling for any location-specific variation over time. The ranges indicate 95%-confidence intervals, using heteroscedasticity-consistent standard errors clustered by zip code. *Primary* sample includes only primary buyouts where the seller is not another PE fund. *Secondary* sample includes only secondary buyouts where the seller is also a PE fund.



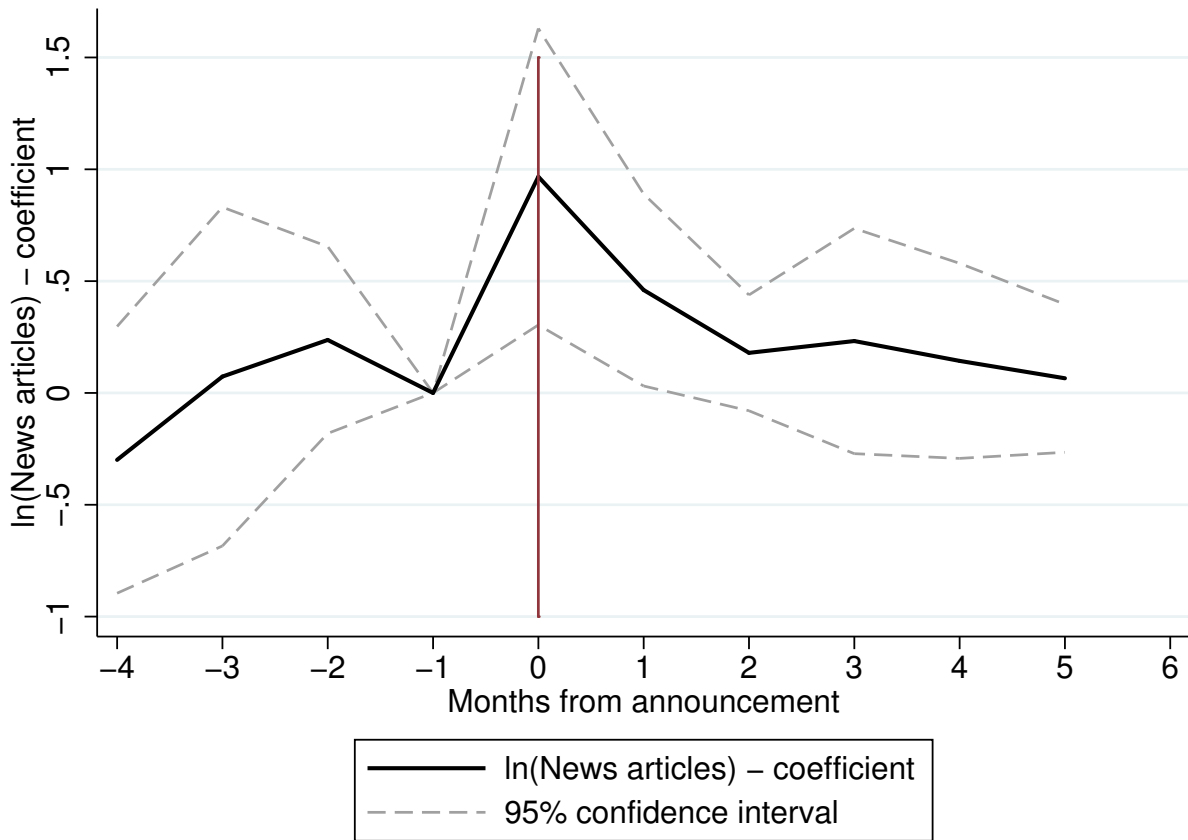
**Figure 5: News articles and sentiment (relative to acquisition announcement)**

This figure presents regression analysis of news articles and their sentiment for each target firm around the acquisition by a PE fund. The sample consists of firm-month observations of all target firms in our Safegraph sample that are also included in RavenPack data. Panel A presents monthly coefficients for *Post* relative to the time of acquisition announcement by a PE fund, from the following regression:

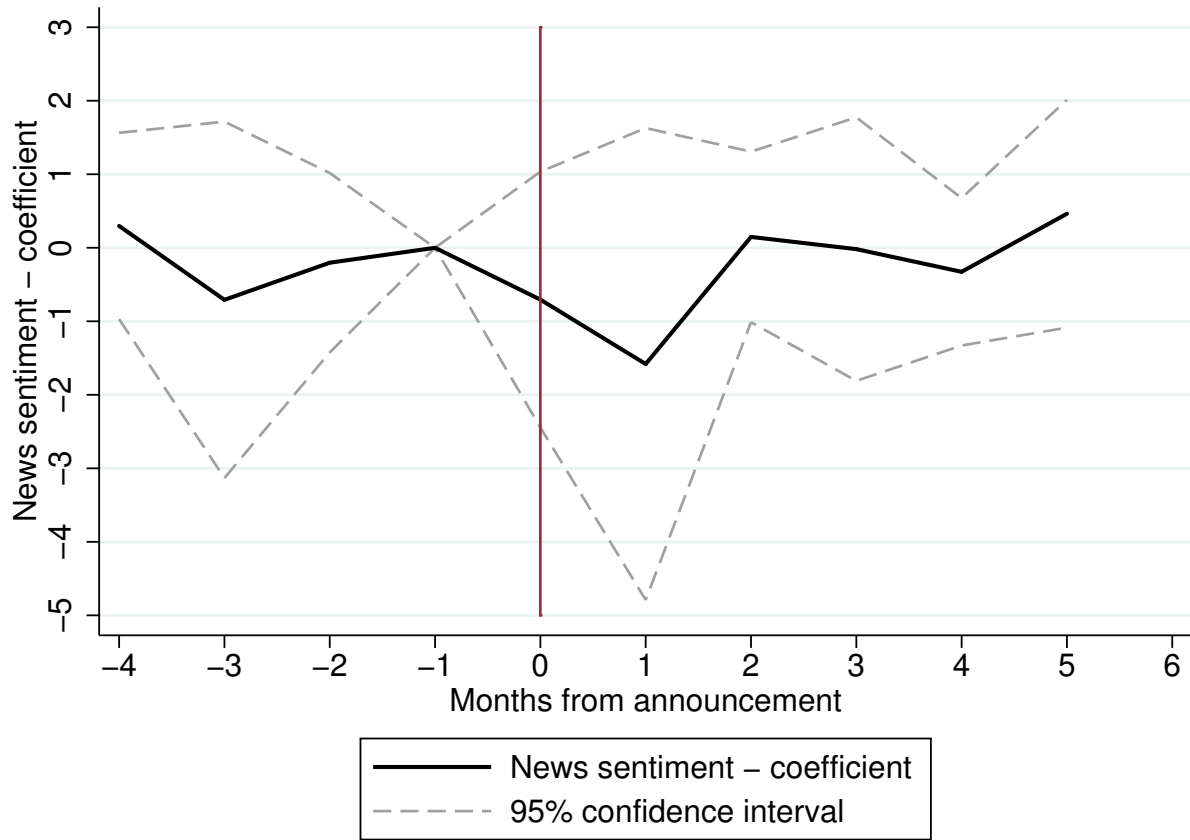
$$\ln(\text{News articles})_{i,t} = \beta \text{Month from announcement}_{i,t} + \gamma X_{i,t} + \epsilon_{i,t}$$

where  $i$  denotes a firm and  $t$  a calendar month. *News articles* is the monthly number of distinct news articles in outlet  $i$ . *Month from announcement* is a set of dummies indicating the time relative to acquisition announcement.  $X$  is a vector of controls that includes firms fixed effects, controlling for cross-sectional differences between different firms, and calendar month fixed effects. The ranges indicate 95-% confidence intervals, using heteroscedasticity-consistent standard errors clustered by firm. The excluded coefficient is for month -1, so the estimated coefficients are relative to that month. Panel B replaces the outcome variable with *News sentiment*, the monthly average sentiment score based on RavenPack composite sentiment score (CSS).

**Panel A. News articles**



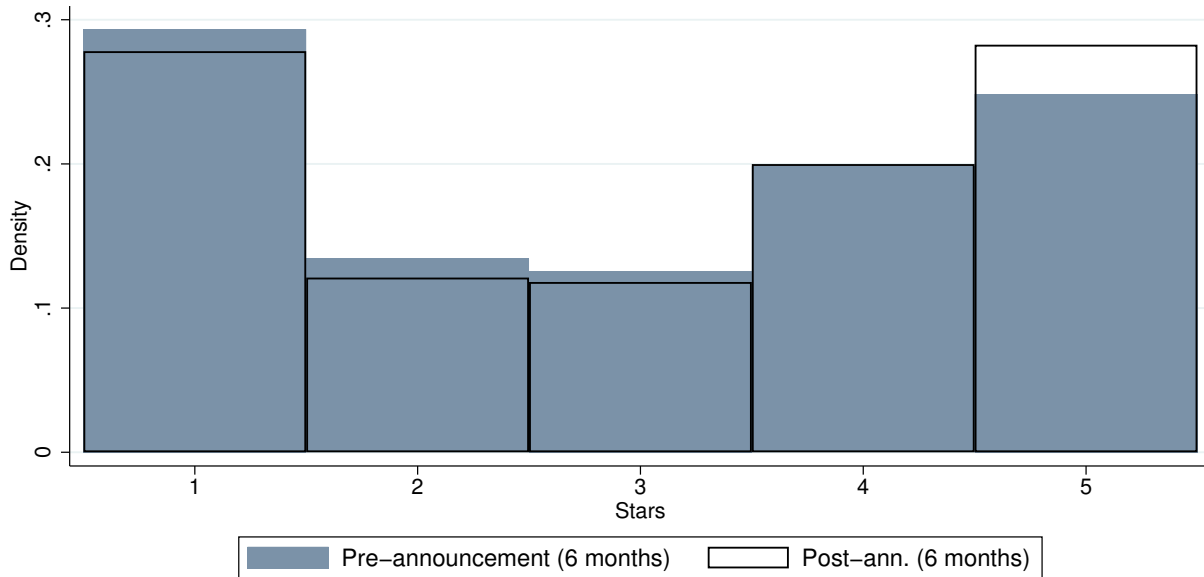
Panel B. News sentiment



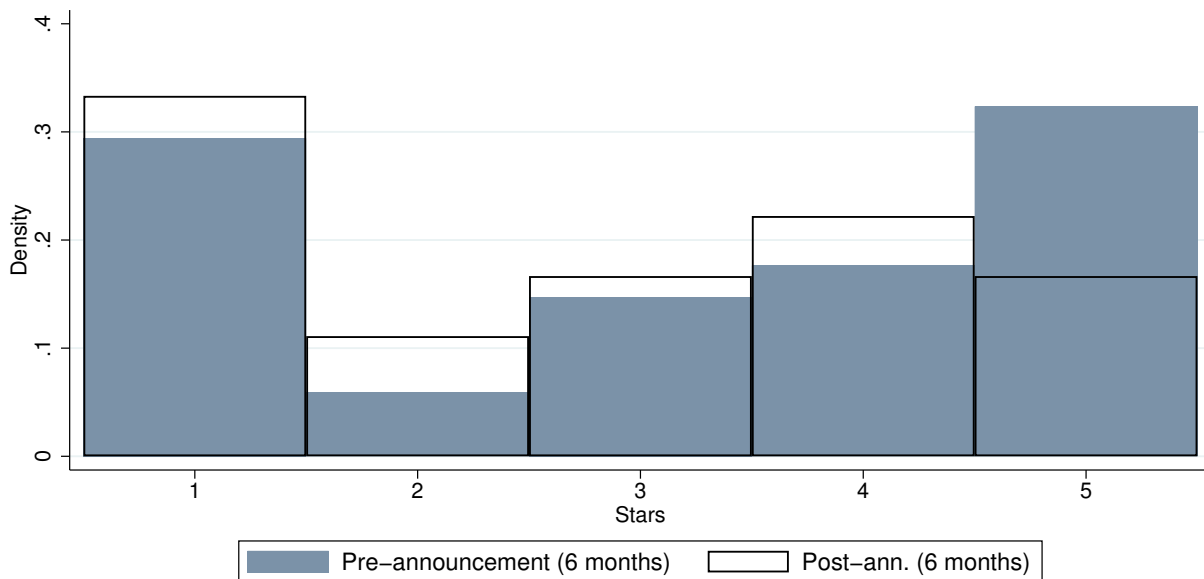
**Figure 7: Customer reviews around acquisition announcement**

This figure shows the distribution of customer reviews of the target business before and after the announcement of a PE acquisition. For this analysis, we construct a separate sample of PE acquisitions from Preqin and match them to all available Yelp reviews taking place during the period 2005 - 2019. The pre-period is the six months prior to announcement and post-period the six months following the announcement. Panel A shows all customer reviews for the target business during the event window. Panel B shows only customers who provide reviews for the same target outlet both before and after the deal announcement.

**Panel A: All customers**



**Panel B: Same customers pre and post**



**Table 1**  
**Summary statistics**

Summary statistics for the outlet-month observations in the sample. The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. *Visits* is the monthly number of visits in the outlet. *Visitors* is the monthly number of unique visitors in the outlet. *Target* is a dummy taking the value one if the outlet belongs to a target firm.

	Mean	Std	p25	p50	p75
<b>Store visit</b>					
Visits	350.670	784.021	62.000	195.000	436.000
Visitors	227.306	385.882	35.000	122.000	296.000
Closure x 100	0.103	3.201	0.000	0.000	0.000
<b>Outlet</b>					
Target	0.072	0.258	0.000	0.000	0.000
<b>Zip code</b>					
Avg. HH income	89.192	71.168	52.540	68.949	99.497
Stock participation	0.202	0.116	0.114	0.181	0.271
Self empl. rate	0.178	0.046	0.147	0.173	0.204
Target market share (outlets)	0.072	0.110	0.019	0.042	0.083
EC (zip)	0.882	0.215	0.720	0.875	1.034
Volunteering (zip)	0.064	0.024	0.048	0.061	0.076
Civic org. (zip)	0.019	0.043	0.009	0.013	0.018
<b>County</b>					
% Religious	0.493	0.118	0.400	0.483	0.565
% Protestant	0.281	0.155	0.151	0.246	0.386
% Catholic	0.166	0.116	0.079	0.144	0.231
Republican	0.427	0.495	0.000	0.000	1.000
PI per capita ('000)	56.445	19.131	45.409	52.080	62.890
EC (county)	0.801	0.152	0.704	0.765	0.880
Volunteering (county)	0.062	0.020	0.048	0.059	0.073
Civic org. (county)	0.014	0.004	0.012	0.014	0.016
N	2,381,930				

**Table 2**  
**Customer visits following PE acquisition announcement**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable in Panel A is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. The dependent variable in Panel B is  $\ln(Visitors)$ , the natural logarithm of the total number of unique visitors in the outlet during the month. The sample period is from four months before to four months after the announcement date for each deal. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

**Panel A:  $\ln(Visits)$**

	(1)	(2)	(3)	(4)
Post x Target	-0.0259*** (0.0042)	-0.0292*** (0.0026)	-0.0320*** (0.0026)	-0.0322*** (0.0026)
Post	0.0312*** (0.0022)	-0.0035** (0.0016)		
Target	0.1729*** (0.0127)			
Deal x Outlet FE	No	Yes	Yes	Yes
Month FE	No	Yes	No	No
Deal x NAICS x Month FE	No	No	Yes	No
Deal x Zip code x Month FE	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	No	Yes
N	2,381,930	2,377,758	2,349,365	2,348,912
$R^2$	0.001	0.968	0.973	0.973



**Panel B: ln(Visitors)**

	(1)	(2)	(3)	(4)
Post x Target	-0.0276*** (0.0039)	-0.0282*** (0.0023)	-0.0310*** (0.0022)	-0.0312*** (0.0022)
Post	0.0235*** (0.0022)	-0.0060*** (0.0015)		
Target	0.1924*** (0.0126)			
Deal x Outlet FE	No	Yes	Yes	Yes
Month FE	No	Yes	No	No
Deal x NAICS x Month FE	No	No	Yes	No
Deal x Zip code x Month FE	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	No	Yes
N	2,381,930	2,377,758	2,349,365	2,348,912
$R^2$	0.001	0.977	0.980	0.980

**Table 3**  
**PE acquisition announcement versus deal completion**

The dependent variable shown above each column.  $\ln(Visits)$  is the natural logarithm of the total number of visits in the outlet during the month.  $\ln(Visitors)$  is the natural logarithm of the total number of unique visitors in the outlet during the month. The sample includes only deals where the completion month is after the announcement month. The sample period is from four months before the announcement date to four months after the completion date for each deal. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	ln(Visits)			ln(Visitors)		
	(1)	(2)	(3)	(4)	(5)	(6)
Post close x Target	0.0184*** (0.0026)	0.0174*** (0.0027)	0.0174*** (0.0027)	0.0131*** (0.0022)	0.0124*** (0.0022)	0.0124*** (0.0022)
Post x Target	-0.0573*** (0.0029)	-0.0540*** (0.0031)	-0.0540*** (0.0031)	-0.0513*** (0.0026)	-0.0494*** (0.0027)	-0.0494*** (0.0027)
Post close				-0.0105*** (0.0023)		
Post				-0.0275*** (0.0019)		
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	No	No	Yes	No	No
Deal x NAICS x Month FE	No	Yes	No	No	Yes	No
Deal x Zip code x Month FE	No	Yes	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	Yes	No	No	Yes
N	1,465,394	1,458,659	1,458,659	1,465,394	1,458,659	1,458,659
$R^2$	0.963	0.968	0.968	0.972	0.976	0.976

**Table 4**  
**Primary versus secondary buyouts**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. *Secondary* is a dummy indicating buyouts where the seller is also a PE fund. *Primary* refers to buyouts where the seller is not a PE fund. Column (2) includes only primary buyouts. Column (3) includes only secondary buyouts. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1) Full sample	(2) Primary	(3) Secondary
Post x Target	-0.0460*** (0.0032)	-0.0460*** (0.0032)	0.0032 (0.0041)
Post x Target x Secondary	0.0492*** (0.0052)		
Deal x Outlet FE	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes
N	2,348,912	1,561,031	787,881
$R^2$	0.973	0.972	0.968

**Table 5**  
**Restaurants only**

The sample includes only restaurants acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Panel A shows customer visits around the announcement of the PE acquisition, with sample period from four months before to four months after the announcement date for each deal. Panel B includes only deals where the completion month is after the announcement month, with sample period from four months before the announcement date to four months after the completion date for each deal. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

**Panel A: Customer visits following PE acquisition announcement**

	(1)	(2)	(3)	(4)
Post x Target	-0.0698*** (0.0037)	-0.0661*** (0.0030)	-0.0651*** (0.0031)	-0.0651*** (0.0031)
Post	0.0255*** (0.0025)	-0.0141*** (0.0022)		
Target	0.5274*** (0.0125)			
Deal x Outlet FE	No	Yes	Yes	Yes
Month FE	No	Yes	No	No
Deal x NAICS x Month FE	No	No	Yes	No
Deal x Zip code x Month FE	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	No	Yes
N	1,508,383	1,508,070	1,506,947	1,506,938
$R^2$	0.008	0.962	0.967	0.967

**Panel B: PE acquisition announcement vs. deal completion**

	(1)	(2)	(3)	(4)
Post close x Target	-0.2311*** (0.0061)	0.0252*** (0.0027)	0.0230*** (0.0027)	0.0230*** (0.0027)
Post x Target	0.1868*** (0.0063)	-0.0827*** (0.0032)	-0.0767*** (0.0033)	-0.0767*** (0.0033)
Post close	0.0693*** (0.0036)	-0.0241*** (0.0031)		
Post	0.0092*** (0.0035)	-0.0161*** (0.0026)		
Target	0.5075*** (0.0132)			
Deal x Outlet FE	No	Yes	Yes	Yes
Month FE	No	Yes	No	No
Deal x NAICS x Month FE	No	No	Yes	No
Deal x Zip code x Month FE	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	No	Yes
N	1,277,667	1,277,502	1,276,219	1,276,219
$R^2$	0.014	0.959	0.964	0.964

**Table 6**  
**Facebook social capital metrics**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post x Target	-0.0555*** (0.0138)	-0.0116 (0.0079)	-0.0249*** (0.0085)	-0.0532*** (0.0155)	-0.0643*** (0.0109)	-0.0282*** (0.0070)	-0.0334*** (0.0029)	-0.0603*** (0.0111)
Post x Target x EC (county)	0.0289* (0.0169)			0.0648*** (0.0189)				
Post x Target x Volunteering (county)		-0.3220*** (0.1160)		-0.5726*** (0.1365)				
Post x Target x Civic org. (county)			-0.5090 (0.5545)	0.4030 (0.6343)				
Post x Target x EC (zip)					0.0370*** (0.0121)			0.0509*** (0.0133)
Post x Target x Volunteering (zip)						-0.0591 (0.0988)		-0.2700** (0.1079)
Post x Target x Civic org. (zip)							0.0813 (0.0671)	0.0870 (0.0752)
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,340,483	2,340,553	2,340,553	2,340,483	2,331,141	2,332,738	2,332,738	2,331,141
$R^2$	0.973	0.973	0.973	0.973	0.973	0.973	0.973	0.973

**Table 7**  
**Local income and wealth**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1)	(2)	(3)	(4)	(5)
Post x Target	-0.6220*** (0.1033)	-0.1246*** (0.0213)	-0.0504*** (0.0050)	-0.0605*** (0.0105)	-0.5226*** (0.1211)
Post x Target x $\ln(\text{PI pc.})$	0.0542*** (0.0095)				0.0461*** (0.0116)
Post x Target x $\ln(\text{HH income})$		0.0217*** (0.0049)			-0.0101 (0.0132)
Post x Target x Stock p.			0.0948*** (0.0215)		0.0708 (0.0549)
Post x Target x Self emp.				0.1635*** (0.0574)	0.1063* (0.0615)
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes	Yes	Yes
N	2,312,183	2,343,099	2,343,099	2,343,099	2,310,407
$R^2$	0.973	0.973	0.973	0.973	0.973

**Table 8**  
**Local political orientation, religiosity and individualism**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post x Target	-0.0180*** (0.0035)	-0.0133** (0.0054)	-0.0504*** (0.0045)	0.1587*** (0.0370)	-0.0243*** (0.0034)	0.0696 (0.0424)	-0.2069 (0.1477)
Post x Target x Republican	-0.0299*** (0.0052)					-0.0178*** (0.0061)	-0.0154** (0.0063)
Post x Target x Protestant		-0.0652*** (0.0161)				-0.0013 (0.0203)	0.0080 (0.0215)
Post x Target x Catholic			0.1086*** (0.0223)			0.0517* (0.0285)	0.0506* (0.0296)
Post x Target x Infrequent names				-0.2680*** (0.0518)		-0.1373** (0.0586)	-0.0998 (0.0623)
Post x Target x Frontier experience					-0.0077*** (0.0021)	-0.0037* (0.0022)	-0.0034 (0.0022)
Post x Target x $\ln(\text{PI pc.})$							0.0226* (0.0116)
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,348,912	2,344,875	2,344,875	2,339,881	2,339,881	2,339,881	2,307,867
$R^2$	0.973	0.973	0.973	0.973	0.973	0.973	0.973



**Table 9**  
**Local competition**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1)	(2)	(3)	(4)
Post x Target	-0.0015 (0.0075)	-0.0321*** (0.0026)	-0.0434*** (0.0037)	-0.0440*** (0.0032)
Post x Target x $\ln(1+Comp. outlets)$	-0.0120*** (0.0026)			
Post x Target x Comp. outlets/pop.		-0.0579 (0.0763)		
Post x Target x Market share			0.0803*** (0.0202)	
Post x Target x $\ln(1+Dist. to comp.)$				0.0366*** (0.0067)
Deal x Outlet FE	Yes	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes	Yes
N	2,348,912	2,344,733	2,348,801	2,348,563
$R^2$	0.973	0.973	0.973	0.973

**Table 10**  
**PE firm involvement in lawsuits**

The sample includes all outlets of retail firms acquired by PE funds in the sample period, i.e. deals announced between March 2018 and December 2019, as well as all other firms operating in the same 6-digit NAICS industry in the same zip code as any of the target outlets. We include a time period of four months before to four months after the acquisition announcement month. The dependent variable is  $\ln(Visits)$ , the natural logarithm of the total number of visits in the outlet during the month. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

	(1)	(2)	(3)	(4)	(5)
Post x Target	-0.0174 (0.0135)	-0.0042 (0.0049)	-0.0193 (0.0135)	-0.0131** (0.0059)	-0.0133 (0.0136)
Post x Target x $\ln(\text{Funds raised 10y})$	-0.0020 (0.0015)		0.0021 (0.0017)		-0.0003 (0.0017)
Post x Target x $\ln(\text{Lawsuits 5y})$		-0.0255*** (0.0033)	-0.0305*** (0.0040)		
Post x Target x $\ln(\text{Lawsuits 10y})$				-0.0114*** (0.0029)	-0.0112*** (0.0036)
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes
Deal x Zip x NAICS x Month FE	Yes	Yes	Yes	Yes	Yes
N	2,151,822	2,348,912	2,151,822	2,348,912	2,151,822
$R^2$	0.972	0.973	0.972	0.973	0.972

**Table 11**  
**Customer reviews following PE acquisition announcement**

For this analysis, we construct a separate sample of PE acquisitions from Preqin and match them to all available Yelp reviews taking place during the period 2005 - 2019. This sample includes all Yelp reviews of outlets acquired by a PE fund, as well as all other firms operating in the same product category in the same zip code as any of the target outlets. Panel A shows summary statistics for all reviews in the sample, including both target outlets and matched control outlets, for a period of six months before to six months after announcement. For target outlets, we also show the period of 12 months before to 12 months after announcement. Panel B shows the results of a regression analysis, with the dependent variable shown above each column. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

**Panel A: Summary statistics**

	All reviews		Target (pre)		Target (post)		Post-Pre
	Mean	Std	Mean	N	Mean	N	$\Delta$ Mean
<b>All reviews</b>							
Stars	3.777	1.414	2.974	4,492	3.088	4,903	0.114***
5 stars	0.443	0.497	0.248	4,492	0.283	4,903	0.034***
1 star	0.129	0.335	0.293	4,492	0.278	4,903	-0.015
Target	0.040	0.195					
<b>Same cust. only (6m)</b>							
Stars			3.176	34	2.778	36	-0.399
5 stars			0.324	34	0.167	36	-0.157
1 star			0.294	34	0.333	36	0.039
<b>Same cust. only (12m)</b>							
Stars			2.942	86	2.798	84	-0.144
5 stars			0.198	86	0.190	84	-0.007
1 star			0.314	86	0.310	84	-0.004
N	237,816		4,526		4,933		9,459

**Panel B: Regression analysis – Six months pre to six months post announcement**

	Stars		5 stars		1 star	
	(1)	(2)	(3)	(4)	(5)	(6)
Post x Target	0.0428 (0.0810)	-1.5702 (1.0754)	0.0248 (0.0243)	-0.4678* (0.2478)	0.0047 (0.0269)	0.2854 (0.2009)
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes	Yes
Deal x Zip code x Month FE	Yes	Yes	Yes	Yes	Yes	Yes
User-Outlet FE	No	Yes	No	Yes	No	Yes
N	231,560	9,614	231,560	9,614	231,560	9,614
$R^2$	0.315	0.935	0.230	0.914	0.301	0.926

**Table 12**  
**Glassdoor ratings following PE acquisition announcement**

This analysis includes Glassdoor employee ratings for the target firms in our main PE acquisition sample. We include two time windows around the announcement of the acquisition, 6 and 12 months before to 6 and 12 months after, respectively. Panel A shows summary statistics for the reviews in the sample. Panel B shows the results of a regression analysis, where the dependent variable is *Glassdoor rating*, ranging from 1 (lowest) to 5 (highest). Heteroscedasticity-consistent standard errors, clustered by firm, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

**Panel A: Summary statistics**

	Mean	Std	p25	p50	p75	N
<b>± 6 months</b>						
Glassdoor rating	3.225	1.384	2.000	3.000	4.000	3,162
<b>± 12 months</b>						
Glassdoor rating	3.276	1.388	2.000	3.000	5.000	6,624
N	6,624					

**Panel B: Regression analysis**

	± 6 months		± 12 months	
	(1)	(2)	(3)	(4)
Post	0.0855 (0.0553)	0.0853* (0.0508)	0.1181** (0.0463)	0.0972** (0.0427)
Firm FE	No	Yes	No	Yes
N	3,162	3,156	6,624	6,620
$R^2$	0.001	0.094	0.002	0.084

## Appendix A: PE acquisitions sample

This table lists the private equity acquisitions included in our sample.

Announced	Completed	Target firm	Buyer	Outlets	Sector
01-Mar-18	01-Mar-18	Techna Glass Inc	CenterOak Partners LLC	51	Wholesale Trade
01-Mar-18	01-Mar-18	LaserShip Inc	Greenbriar Equity Group LP	26	Transportation and Warehousing
02-Mar-18	02-Mar-18	Susiecakes LLC	Sterling Partners GP LLC	26	Manufacturing
09-Mar-18	09-Mar-18	Northwest Medical Inc	Corbel Structured Equity Partners	13	Health Care and Social Assistance
15-Mar-18	15-Mar-18	Family Allergy & Asthma LLC	Prairie Capital	31	Health Care and Social Assistance
31-Mar-18	31-Mar-18	Eggs Up Grill	WJ Partners, LLC	41	Restaurants
01-Apr-18	01-Apr-18	Urban Air Adventure Parks	Mantucket Capital	199	Arts, Entertainment, and Recreation
06-Apr-18	30-Mar-18	Community Medical Services Holdings, LLC	Clearview Capital, L.P.	16	Health Care and Social Assistance
13-Apr-18		Center For Autism and Related Disorders, LLC	Blackstone Group	193	Health Care and Social Assistance
18-Apr-18	02-Apr-18	Synergy Homecare	NexPhase Capital	132	Health Care and Social Assistance
27-Apr-18	04-May-18	SRS Distribution, Inc.	Leonard Green & Partners	75	Wholesale Trade
30-Apr-18		Edelman Financial Engines, LLC	Edelman Financial Services, Hellman & Friedman, Financial Engines, Inc.	39	Finance and Insurance
10-May-18	09-Jul-18	Premier Healthcare Services, LLC	Aveanna Healthcare, LLC, J.H. Whitney & Co, Bain Capital	17	Health Care and Social Assistance
22-May-18	15-Oct-18	German American Bancorp, Inc.	First Security, Inc., Castle Creek Capital Partners	15	Finance and Insurance
24-May-18	24-May-18	PECAA — Professional Eye Care Associates of America	The Cambria Group	12	Retail Trade
31-May-18	31-May-18	Jackson Hewitt Tax Service Inc	Corsair Capital	5736	Professional, Scientific, and Technical Services
01-Jun-18	01-Jun-18	Tireworks Total Car Care	Greenbriar Equity Group, GB Auto Service Inc.	17	Retail Trade
01-Jun-18	01-Jun-18	Ramona Tire & Service Centers	GB Auto Service Inc., Greenbriar Equity Group	17	Retail Trade
04-Jun-18	04-Jun-18	Water's Edge Dermatology, Inc.	Gryphon Investors	36	Health Care and Social Assistance
06-Jun-18	06-Jun-18	PT Solutions Holdings LLC	Lindsay Goldberg	165	Health Care and Social Assistance
06-Jun-18	06-Jun-18	Paladina Health LLC	New Enterprise Associates	10	Health Care and Social Assistance
20-Jun-18	20-Jun-18	Native Foods Cafe	Millstone Capital Advisors	13	Restaurants
01-Jul-18	01-Jul-18	Rusty Taco Inc.	Roark Capital Group	31	Restaurants
02-Jul-18	02-Jul-18	The Learning Experience Corp.	Golden Gate Capital	259	Health Care and Social Assistance
09-Jul-18	09-Jul-18	Taco Del Mar	High Bluff Capital Partners	63	Restaurants
20-Jul-18		Insomnia Cookies, LLC	BDT Capital Partners, Krispy Kreme Doughnut Corporation, JAB Holding Company	180	Manufacturing
23-Jul-18	22-Aug-18	Lifepoint Health, Inc	Apollo Global Management, RCCH Healthcare Partners	84	Health Care and Social Assistance
26-Jul-18	26-Jul-18	Smiles Dental	Granite Bridge Partners	17	Health Care and Social Assistance
26-Jul-18		The Bay Clubs Company, LLC	KKR	24	Arts, Entertainment, and Recreation
02-Aug-18	13-Sep-18	Jamba, Inc.	Roark Capital Group, FOCUS Brands Inc.	754	Restaurants

02-Aug-18	02-Aug-18	MD Now Medical Centers, Inc.	Brentwood Associates	49	Health Care and Social Assistance
09-Aug-18	30-Sep-18	The Shade Store, LLC	Leonard Green & Partners	26	Retail Trade
31-Aug-18	31-Aug-18	Parry'S Pizzeria	Cannon Capital	11	Restaurants
13-Sep-18	13-Sep-18	Amazing Lash Studio Franchise LLC	WellBiz Brands, Inc., KSL Capital Partners	250	Other Services (except Public Administration)
25-Sep-18	07-Dec-18	Sonic Corp.	Roark Capital Group, Inspire Brands, Inc.	3527	Restaurants
10-Oct-18		Waste Industries USA, Inc.	Ontario Teachers' Pension Plan, GFL Environmental Inc., BC Partners	12	Administrative and Support and Waste Management and Remediation Services
10-Oct-18	05-Oct-18	Eegee's, Inc.	Knott Partners, ORIX Mezzanine & Private Equity, 39 North Capital Partners	61	Restaurants
15-Oct-18	15-Oct-18	Sola Salon Studios LLC	MPK Equity Partners, AHR Growth Partners, PNC Riverarch Capital	514	Other Services (except Public Administration)
18-Oct-18	15-Oct-18	Gene Juarez Salons LLC	Transom Capital Group	10	Other Services (except Public Administration)
23-Oct-18	23-Oct-18	Dealer Tire LLC	Bain Capital	12	Retail Trade
26-Oct-18	26-Oct-18	Pure Barre, LLC.	Xponential Fitness, LLC., L Catterton, Snapdragon Capital Partners	549	Arts, Entertainment, and Recreation
31-Oct-18	31-Oct-18	Oilstop Inc	Silfra Capital LLC	25	Other Services (except Public Administration)
06-Nov-18	06-Nov-18	Splash Car Wash, Inc.	Palladin Consumer Retail Partners	57	Other Services (except Public Administration)
06-Nov-18	28-Jan-19	Bojangles', Inc.	Durational Capital Partners, The Jordan Company	749	Restaurants
07-Nov-18	30-Nov-18	Texas Digestive Disease Consultant, PLLC	Waud Capital Partners	28	Health Care and Social Assistance
07-Nov-18	21-Dec-18	Jostens, Inc.	Platinum Equity	35	Retail Trade
12-Nov-18	21-Sep-18	Numotion	LLR Partners, AEA Investors	16	Health Care and Social Assistance
03-Dec-18	11-Feb-19	Thorntons Inc	ArcLight Capital Partners, BP	199	Retail Trade
05-Dec-18	05-Feb-19	Caliber Collision Centers Inc	Hellman & Friedman LLC	1150	Other Services (except Public Administration)
11-Dec-18	01-Dec-18	Foot and Ankle Specialists of the Mid-Atlantic, LLC	New MainStream Capital	18	Health Care and Social Assistance
12-Dec-18	12-Dec-18	Health First	Capital Alignment Partners, Harbert Management Corporation, Urgent Care Group, LLC	18	Health Care and Social Assistance
13-Dec-18		La Senza Corporation	Regent LP	14	Retail Trade
13-Dec-18	13-Dec-18	Pet Supplies Plus, L.L.C.	Sentinel Capital Partners	417	Retail Trade
19-Dec-18	19-Dec-18	FleetPride, Inc.	American Securities	279	Other Services (except Public Administration)
08-Jan-19	08-Jan-19	Firebirds International, LLC	J.H. Whitney & Co	47	Restaurants
09-Jan-19	08-Jan-19	ABBA Eye Care Inc.	Riata Capital Group, Acuity Eyecare Group, J.P. Morgan Asset Management - Private Equity Group	10	Retail Trade
09-Jan-19	08-Jan-19	Eyecare Specialties	Riata Capital Group, Acuity Eyecare Group, J.P. Morgan Asset Management - Private Equity Group	11	Retail Trade
15-Jan-19	15-Jan-19	Best Friends Pet Care, Inc.	Mosaic Capital Partners	30	Other Services (except Public Administration)

04-Feb-19	04-Feb-19	Fitness Connection Ltd.	Roark Capital Group	45	Arts, Entertainment, and Recreation
05-Feb-19	05-Feb-19	Club Champion LLC	Levine Leichtman Capital Partners	53	Retail Trade
11-Feb-19		DEX Imaging, Inc.	Staples, Inc., Sycamore Partners	35	Retail Trade
01-Mar-19	01-Mar-19	DDS Dentures + Implant Solutions	Affordable Care, LLC, Berkshire Partners, Partners Group	60	Health Care and Social Assistance
01-Mar-19	01-Mar-19	Bay State Physical Therapy of Randolph PC	Calera Capital Management Inc	30	Health Care and Social Assistance
01-Mar-19	01-Mar-19	P.F. Chang's China Bistro, Inc.	Paulson & Co., TriArtisan Capital Partners	218	Restaurants
12-Mar-19	12-Mar-19	CorePower Yoga, LLC	TSG Consumer Partners	224	Other Services (except Public Administration)
13-Mar-19	13-Mar-19	FASTSIGNS International Inc.	Freeman Spogli & Co, LightBay Capital	646	Manufacturing
18-Mar-19	18-Mar-19	Gateway Dental	Smile Brands Inc., Gryphon Investors	14	Health Care and Social Assistance
18-Mar-19	04-Mar-19	Center for Diagnostic Imaging, Inc.	Wellspring Capital Management	117	Health Care and Social Assistance
19-Mar-19	29-Apr-19	Turkey Hill LLC	Peak Rock Capital	31	Retail Trade
25-Mar-19		Maurices Incorporated	OpCapita	886	Retail Trade
28-Mar-19		True Health	Kinderhook Industries, Evolent Health, GlobalHealth, Inc.	11	Health Care and Social Assistance
31-Mar-19	31-Mar-19	Savers Inc	Ares Management, Crescent Capital Group	111	Retail Trade
01-Apr-19	01-Apr-19	Exer Urgent Care	Orangewood Partners	16	Health Care and Social Assistance
02-Apr-19	02-Apr-19	Volcom, LLC	Authentic Brands Group, LLC, Lion Capital, General Atlantic	38	Retail Trade
04-Apr-19	04-Apr-19	Jenny Craig, Inc.	H.I.G. Capital	569	Other Services (except Public Administration)
04-Apr-19	04-Apr-19	Lucky Strike Entertainment, LLC	Wellspring Capital Management	18	Arts, Entertainment, and Recreation
08-Apr-19	08-Apr-19	Soft Surroundings Holdings LLC	Brentwood Associates Inc	80	Retail Trade
16-Apr-19	16-Apr-19	Golden Bear Physical Therapy Sports Injury Center Inc.	Shore Capital Partners	14	Health Care and Social Assistance
16-Apr-19	18-Jun-19	Smart & Final Stores, Inc.	Apollo Global Management	253	Retail Trade
01-May-19	01-May-19	Driver's Edge	Greenbriar Equity Group, GB Auto Service Inc.	21	Other Services (except Public Administration)
16-May-19	16-May-19	AccentCare, Inc.	Advent International	14	Health Care and Social Assistance
20-May-19	20-May-19	Futures Academy, Inc.	iEducation Group, Leeds Equity Partners	15	Educational Services
30-May-19	30-May-19	Reddy Ice Corporation	Stone Canyon Industries	104	Manufacturing
01-Jun-19	01-Jun-19	Nystrom & Associates, Ltd.	Nautic Partners	11	Health Care and Social Assistance
05-Jun-19	05-Jun-19	Pei Wei Asian Diner, LLC	West Coast Capital	144	Restaurants
07-Jun-19	06-Aug-19	Barnes & Noble, Inc.	Elliott Management Corporation	614	Retail Trade
14-Jun-19	30-Sep-19	Whataburger Restaurants LP	BDT Capital Partners, LLC	833	Restaurants
19-Jun-19	19-Jun-19	University Plaza	Vestar Capital Partners, LLC	28	Real Estate Rental and Leasing
24-Jun-19		Lendmark Financial Services, LLC	Lightyear Capital, Ontario Teachers' Pension Plan	229	Finance and Insurance
24-Jun-19	24-Jun-19	Eye Care Specialists	Vision Innovation Partners, Centre Partners	20	Health Care and Social Assistance
01-Jul-19	27-Jun-19	Crunch LLC	TPG	296	Arts, Entertainment, and Recreation
01-Jul-19	01-Jul-19	Hooters of America, LLC	TriArtisan Capital Partners, Nord Bay Capital	318	Restaurants
01-Jul-19	01-Jul-19	Center For Sight, P.L.	Pamlico Capital Management, LP	21	Health Care and Social Assistance

18-Jul-19	19-Aug-19	Jack's Family Restaurants, Inc.	AEA Investors	177	Restaurants
31-Jul-19	02-Oct-19	Wealth Enhancement Group, LLC	TA Associates	11	Finance and Insurance
08-Aug-19	16-Dec-19	Vitamin Shoppe, LLC	Franchise Group, Inc., Vintage Capital Management	739	Retail Trade
19-Aug-19	19-Aug-19	Morphe LLC	General Atlantic, Summit Partners, Sofina	19	Retail Trade
22-Aug-19		Joe Hudson's Collision Center	TSG Consumer Partners	68	Other Services (except Public Administration)
23-Aug-19	23-Aug-19	American Health Imaging, Inc.	Charlotte Radiology, P.A., Welsh, Carson, Anderson & Stowe	23	Health Care and Social Assistance
27-Aug-19	23-Oct-19	Sears Outlet Stores, LLC	Vintage Capital Management, Franchise Group, Inc.	124	Retail Trade
05-Sep-19	05-Sep-19	Associated Retinal Consultants, P.C.	FFL Partners, EyeCare Partners LLC	10	Health Care and Social Assistance
12-Sep-19		Bar Method Media, Inc.	Anytime Fitness, LLC, Roark Capital Group, Partnership Capital Growth Investors, THL Credit Advisors	121	Arts, Entertainment, and Recreation
25-Sep-19	18-Oct-19	Jimmy John's Franchisor SPV, LLC	Inspire Brands, Inc., Roark Capital Group	2768	Restaurants
04-Oct-19		National Seating & Mobility, Inc.	Cinven	14	Health Care and Social Assistance
17-Oct-19	17-Oct-19	ORS MEDCO	One Equity Partners	10	Wholesale Trade
04-Dec-19	01-Nov-19	Long's Drugs Incorporated/PharMedQuest Pharmacy Services, Inc.	Long's Drugs Incorporated, PharMedQuest Pharmacy Services, Inc., Kinderhook Industries	18	Retail Trade
09-Dec-19	20-Dec-19	Destination Maternity Corporation	Marquee Brands LLC, Neuberger Berman	46	Retail Trade
12-Dec-19	12-Dec-19	21st Century Oncology, Inc.	Genesis Care Pty Ltd, KKR	25	Health Care and Social Assistance
26-Dec-19	26-Dec-19	Cartridge World North America, LLC	Blackford Capital	207	Retail Trade
28-Dec-19		American Freight Inc.	Franchise Group, Inc., Vintage Capital Management	177	Retail Trade



# Internet appendix

## IA.1 Additional summary statistics

### IA.1.1 Observations by sector

**Table IA.1**  
**Number of observations by sector**

This table shows the number of monthly observations by sector. Panel A includes the full sample used for analyses around deal announcement, where the sample period is from four months before to four months after the announcement date for each deal. Panel B includes the sample used for analyses of announcement versus completion effects. This sample includes only deals where the completion month is after the announcement month, and the sample period is from four months before the announcement date to four months after the completion date for each deal.

**Panel A: Announcement sample**

	N	% of sample
Restaurants	1,508,383	63.3
Arts, Entertainment, and Recreation	224,990	9.4
Retail Trade	196,985	8.3
Other Services	175,352	7.4
Health Care and Social Assistance	156,991	6.6
Professional, Scientific, and Technical Services	84,520	3.5
Other	17,987	0.8
Manufacturing	16,722	0.7
Total	2,381,930	100.0

**Panel B: Completion sample**

	N	% of sample
Restaurants	1,277,667	87.2
Retail Trade	105,028	7.2
Other Services	76,476	5.2
Other	3,568	0.2
Health Care and Social Assistance	3,101	0.2
Total	1,465,840	100.0

**Table IA.2**  
**Number of observations by sector – target outlets only**

This table shows the number of monthly observations by sector. Panel A includes the full sample used for analyses around deal announcement, where the sample period is from four months before to four months after the announcement date for each deal. Panel B includes the sample used for analyses of announcement versus completion effects. This sample includes only deals where the completion month is after the announcement month, and the sample period is from four months before the announcement date to four months after the completion date for each deal.

**Panel A: Announcement sample**

	N	% of sample
Restaurants	85,283	49.8
Retail Trade	31,995	18.7
Other Services	15,423	9.0
Arts, Entertainment, and Recreation	10,816	6.3
Health Care and Social Assistance	10,197	6.0
Professional, Scientific, and Technical Services	8,804	5.1
Manufacturing	6,545	3.8
Other	2,173	1.3
Total	171,236	100.0

**Panel B: Completion sample**

	N	% of sample
Restaurants	95,629	74.2
Retail Trade	20,678	16.0
Other Services	10,736	8.3
Health Care and Social Assistance	966	0.7
Other	841	0.7
Total	128,850	100.0

## IA.2 Additional analysis

### IA.2.1 Outlet closures

In this section, we examine how the likelihood of outlet closure develops after the announcement and completion of PE acquisitions. The baseline likelihood of outlet closure is very low, which limits the interpretation of this analysis. Table IA.3 shows the results. The likelihood of outlet closure slightly decreases following the announcement of a PE acquisition. From columns (4)-(6), it seems that this difference comes primarily from the post-completion period. These results suggest that PE owners usually do not close outlets immediately after they acquire them.

**Table IA.3**  
**Likelihood of outlet closure**

The dependent variable is  $Closure \times 100$ , where  $Closure$  is a dummy taking the value of one if the outlet is closed during the month. In columns 1-3, the sample includes all deals, and the sample period is from four months before to four months after the announcement date for each deal. In columns 4-6, the sample includes only deals where the completion month is after the announcement month, and the sample period is from four months before the announcement date to four months after the completion date for each deal. Heteroscedasticity-consistent standard errors, clustered by zip code, are shown in parentheses. Significance levels: \* 0.1, \*\* 0.05, \*\*\* 0.01.

4

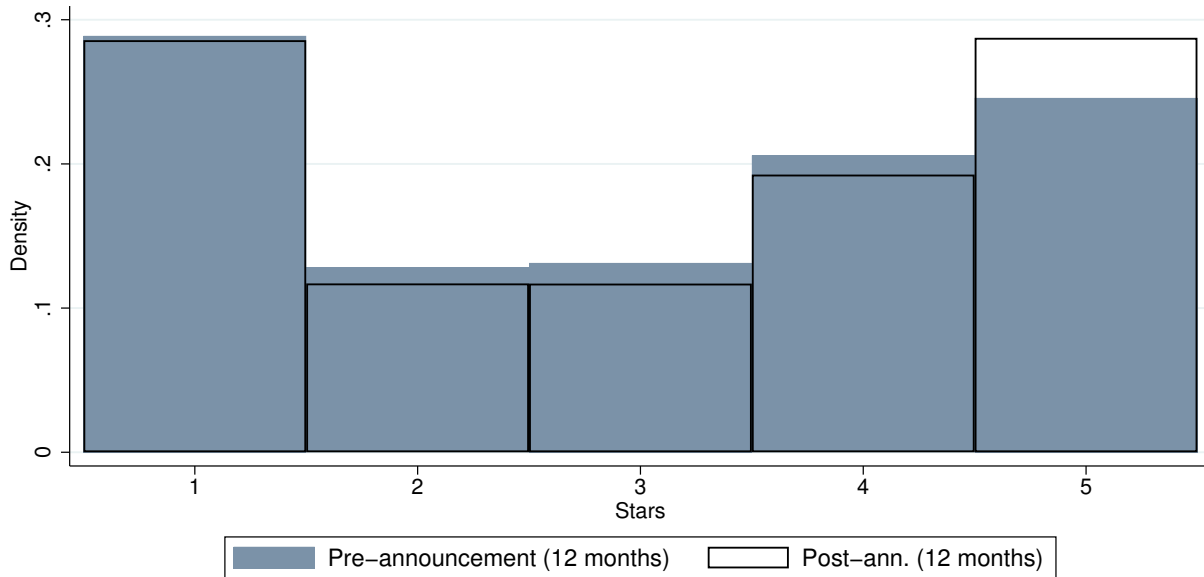
	Announcement (full) sample			Completion sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Post x Target	-0.0095 (0.0094)	-0.0157* (0.0092)	-0.0157* (0.0092)	-0.0050 (0.0088)	-0.0093 (0.0102)	-0.0093 (0.0102)
Post	0.0021 (0.0049)			-0.0073 (0.0058)		
Post close x Target				-0.0071 (0.0130)	-0.0353** (0.0153)	-0.0353** (0.0153)
Post close				0.0037 (0.0070)		
Deal x Outlet FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	No	No	Yes	No	No
Deal x NAICS x Month FE	No	Yes	No	No	Yes	No
Deal x Zip code x Month FE	No	Yes	No	No	Yes	No
Deal x Zip x NAICS x Month FE	No	No	Yes	No	No	Yes
N	2,377,758	2,349,365	2,348,912	1,465,394	1,458,659	1,458,659
$R^2$	0.383	0.445	0.445	0.300	0.373	0.373

## IA.2.2 Customer reviews – additional analysis

**Figure IA.1: Customer reviews around acquisition announcement (12 months)**

This figure shows the distribution of customer reviews of the target business before and after the announcement of a PE acquisition. For this analysis, we construct a separate sample of PE acquisitions from Preqin and match them to all available Yelp reviews taking place during the period 2005 - 2019. The pre-period is the 12 months prior to announcement and post-period the 12 months following the announcement. Panel A shows all customer reviews for the target business during the event window. Panel B shows only customers who provide reviews for the same target outlet both before and after the deal announcement.

**Panel A: All customers**



**Panel B: Same customers pre and post**

