

ACQUIRING LABOR

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Abstract

We present evidence that some firms pursue M&A activity with the objective of obtaining a larger workforce. Firms most likely to be acquired for their large labor force, firms with the largest ex ante employment, are associated with more positive post-merger employment outcomes. Moreover, we find this relation is strongest when acquiring labor outside of an M&A is likely to be most difficult, due to tight labor conditions, or most valuable, in high human capital industries. We further find that high employment target firms are associated with relatively greater post-merger wage increases and lower post-merger employee turnover. We find no evidence that the positive relation between target ex ante employment and ex post employment change is driven by target asset size, market capitalization, industry, profitability or acquirer characteristics. Our findings do not exclude the possibility that a different subset of M&A activity may be motivated to penalize managers who have tolerated over-employment. Indeed, we find evidence consistent with this disciplinary motivation when considering acquisitions of targets in declining industries.

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A number of studies have shown that productivity per worker may increase with the size of the employee workforce. Idson and Oi (1999) argue that a larger workforce results in lower idle time per employee and, hence, greater productivity due to the economies of massed reserves. Greater job diversity within larger firms allows for greater internal mobility, which can lead to better screening of employees and employee-job matching, as in Idson (1989) and Tate and Yang (2011). In addition, on the job training may be cheaper to administer on a per-employee basis at firms with more employees, as in Barron, Black and Loewenstein (1987) and Black, Noel and Wang (1999). In addition, firms may seek to expand their labor force to increase production to meet rising consumer demand.

Given these benefits to a larger workforce, we ask whether firms use mergers and acquisitions (M&A) as a means to increase employment. Neoclassical models argue M&A activity can increase productivity by allocating resources more efficiently. However, it is not obvious whether such arguments apply specifically to labor. Following a transfer of ownership, the target's pre-existing employees can choose to stay or leave and are not acquired in the same way the new owner gains control over the target's pre-existing physical assets and patented technology. A firm also has the option to alternatively expand employment via hiring.

A firm's labor force may be one of its most valuable assets, as in Zingales (2000). As compared to increasing employment via hiring, acquiring labor via an acquisition can result in a larger jump to the acquirer's labor force. This mode of labor acquisition may be particularly advantageous in certain situations – such as when hiring or training is particularly costly or slow, or when bringing in teams is advantageous relative to hiring employees individually on the labor market.

The acquiring labor hypothesis contrasts with acquisition motivations suggested in earlier papers. Shleifer and Summers (1988) argue a new owner can break implicit contracts with employees associated with wage and employment expectations and thereby transfer worker surplus to shareholders. Shleifer and Vishny (1988) argue that acquirers may be motivated to target firms with over-employment, subsequently raising shareholder value with post-merger layoffs. Their argument is supported by evidence in Morck, Shleifer and Vishny (1989) that targets of hostile takeovers are associated with lower industry employment growth and the assumption that over-employment is most likely to occur following declining industry demand as

managers are often reluctant to fire redundant employees due to non-pecuniary costs. Furthermore, reports in the popular press tend to emphasize post-merger layoffs, but may reflect a biased sample of M&As with extreme employment impacts.²

In this paper, we investigate post-merger outcomes for a sample of 2,003 M&As of public target firms in the US. Using data from the U.S. Census Bureau, we compare employment, turnover, and wages at establishments owned by the target before the acquisition to employment, turnover, and wages at the same target establishments measured three years after the deal is completed.

We show that that some firms appear to be pursuing M&A activity with the objective of obtaining a larger workforce. Target firms most likely to be acquired for their large labor force (firms with the largest ex ante employment) are associated with more positive post-merger employment outcomes. This finding is stronger when acquiring labor outside of an M&A is expected to be more difficult, due to tight labor market conditions, or more valuable, in high human capital industries. Furthermore, target firms most likely to be acquired for their large labor force are also associated with greater post-merger declines in employee turnover and increases in mean wages per employee.

We identify targets which appear most likely to have been acquired for their large employee workforce by measuring raw ex ante employment and the ratio of ex ante employment to total assets, market capitalization or property plant and equipment (PP&E). To control for different labor intensities across industries, we also calculate industry-adjusted employment ratios. With each measure, we report a positive correlation between target ex ante employment and post-merger employment change, consistent with the argument that acquirers are targeting these high employment firms specifically for their labor force.

To ensure that our results are not being driven by other acquirer, target, or deal characteristics correlated with ex ante employment, we document that our results are robust to a number of controls. Our first concern is that ex ante employment may be proxying for firm size. This concern is mitigated by the fact that we find similar results when we use either raw employment or employment normalized by firm size. Furthermore, in our regressions using raw ex ante employment, we also include controls for target firm assets, market capitalization, and

² A media bias towards reporting examples of large post-merger layoffs is suggested by Brown and Medoff (1988).

non-linear transformations of these variables and find no evidence indicating that our results reflect a correlation between target assets or valuation and ex ante employment changes. We also find no evidence that our results are driven by differences across industries. For one, we include industry fixed effects in our regressions. Furthermore, we measure employment change using both a raw percent change and a measure of excess change which controls for the average employment change at non-M&A establishments matched by industry, year and size. In addition, we control for additional target characteristics, including profitability, market to book ratio and industry unionization rates, as well as acquirer characteristics, including asset size, relative size and acquirer fixed effects. We also observe the same positive correlation between target ex ante employment and post-merger employment change in a subset of our sample where we exclude post-M&A asset sales as in Maksimovic, Phillips, and Prabhala (2011).

To further examine our acquiring labor hypothesis, we test whether the positive relation between target ex ante employment and post-merger employment change is stronger during periods when attracting new employees in a given industry is predicted to be more difficult. We use recent industry employment growth as a proxy for labor market conditions and interact this variable with ex ante target employment and find a positive and significant correlation with post-merger employment change. This result is consistent with our prediction that acquiring labor acquisitions should be more common during tight labor markets. In robustness tests, we show that this result does not simply reflect time varying benefits to economies of scale as in Lambert (2004) nor does it simply reflect greater employment cuts following M&As at high employment firms in declining industries.

We also test whether acquisitions motivated to acquire labor are more common in industries where employees are associated with greater human capital. Such employees may be relatively more difficult to recruit and more valuable once employed. We measure human capital intensity, at the industry level, as either the fraction of the industry's workforce with a college degree as in Wang (2009), or as the mean or median wage in that industry, where college education and higher wages are associated with more productive employees. Using all three measures, we find the positive relation between ex ante target employment and post-merger employment change is stronger in industries where employees are associated with higher human capital.

We also find that targets with larger ex ante employment are associated with greater post-merger declines in turnover. Acquirers who target high employment firms for their employees are likely to implement measures to retain these valuable employees. These results also address a possible concern that post-merger employment may not capture whether the target's original employees remained with the merged firm. Post-merger employment will proxy for retention of the target's original employees as long as greater employment increases are not positively correlated with greater turnover of pre-existing employees (i.e. a firm which hires a new worker for a new job is not also more likely to have to hire an additional new worker to replace an existing worker who quits or is fired, as compared to a firm which is not growing.)

While we find evidence that some M&A deals are motivated as a means to acquire labor, such evidence does not preclude the existence of M&As with alternative motivations. We specifically discuss one alternative motivation which has received significant attention in the literature: that M&A activity can discipline managers who have tolerated excess employment. We do not find evidence indicating that this motivation is common in the full sample. M&A activity motivated to profit from reversing over-employment should target firms with excess employment and result in ex post employment declines. We proxy for excess employment with industry adjusted employment ratios and find the opposite relation in the data. This result is more consistent with the acquiring labor motivation. However, we do find evidence consistent with the disciplinary motivation when considering acquisitions of targets in declining industries.

We also document sample-wide average changes in employment and wages following M&A activity. Sample-wide averages cannot be used to confirm or reject the acquiring labor hypothesis as sample means will reflect both M&As motivated to increase employment, M&As motivated to reduce employment and other M&A motivations. However, we nonetheless find them informative given the lack of pre-existing studies which document changes to employment and wages following a broad group of M&As. We find a mean employment decline at target firms, in excess of the change at control firms, of 12 percent. Given target firms are unique, we compare these changes to a sample of target firms whose deals were cancelled for reasons which appear unrelated to future expected employment and payroll. Targets of these cancelled deals have a mean excess employment increase of 7 percent, significantly different from the mean excess employment change for the set of completed deals. We find the opposite effect when

considering wages at surviving establishments. Wages, on average, increase by 2.4 percent for targets of completed deals and decrease by 6.4 percent for targets of cancelled deals.

While these results suggest that, on average, there exists a negative causal effect of M&As on target employment, these means also obscure significant cross sectional variation. We find that 48 percent of target establishments in the sample are associated with positive excess employment changes following the merger. Moreover, our regression estimates indicate that target firms with initial employment of 13,000 or more are associated with positive post-merger employment changes.³

These mean findings can be compared to studies which have looked at average employment changes following subgroups of M&A activity. Using a sample of M&As in the manufacturing sector, McGuckin and Nguyen (2001) documents a modest mean post-merger employment decline. Kaplan (1989) finds a median industry-adjusted employment decline of 12 percent following a set management buyouts in the 1980s. Davis, Haltiwanger, Jarmin, Lerner, and Miranda (2009) documents an employment decline of 10 percent following private equity buyouts. We extend these earlier findings by using a broad group of M&As and by controlling for endogeneity by comparing changes at targets whose M&A deals were completed against changes at targets whose M&A deals were cancelled for reasons unrelated to future expected wage and employment changes.

This paper also contributes to the literature on asset redeployment. As in Lambert (2004) and Maksimovic and Phillips (2001), we document a pro-cyclical justification for M&A activity. We add to these earlier studies by showing that economies of scale in acquisitions can also apply to labor and are not limited to firm constituents such as fixed assets, resources which are legally controlled by the acquirer following the M&A.

Furthermore, this paper responds to the argument in Shleifer and Summers (1988) that to judge the efficiency of a merger or acquisition, the wealth change of all relevant parties must be considered. Earlier studies have found M&As are associated with modest wealth effects on other stakeholders, such as bondholders (Kim and McConnell (1977) and Asquith and Kim (1982)),

³ As a reference, in 2005, Men's Wearhouse had 13.2 thousand employees, Steelcase had 14.5 thousand employees, CA (formerly Computer Associates) had 15.3 thousand employees. Walmart had 1.7 million employees in 2005. (All employment numbers are from Compustat).

unions via wage reductions at the target firm (Rosett (1990)) and current and retired employees via pension reversions (Pontiff, Shleifer and Weisbach (1990)). Our results add to the discussion by arguing that employee layoffs, on average, are modest and, thus, unlikely to subsidize a large fraction of target shareholder gains, on average.

Finally, we also contribute to the growing literature acknowledging the importance of rank-and-file employees in finance decisions. For example, Agrawal and Matsa (2011), Berk, Stanton, and Zechner (2010) Bronars and Deere (1991) and Simintzi, Vig, and Volpin (2011) show that capital structure is influenced by rank and file employees. Atanassov and Kim (2009) shows how rank and file employees affect corporate restructuring. Fulghieri and Sevilir (2011) shows how rank and file employees affect merger decisions via incentives. We add to this literature by showing that acquisitions can be motivated as a means to acquire a larger labor force.

The rest of the paper is organized as follows. Section 1 describes the data. Section 2 presents our empirical results concerning changes in employment, wages and turnover at target firms around M&A events. Section 3 concludes.

1. Data and Variable Construction

In the following section, we review the multiple databases used to create our sample. We provide summary statistics of the M&As included in our sample and discuss the calculations of key variables.

1.1. Databases

We combine databases from three sources to form our estimation sample: Thompson's SDC; the US Census Bureau; and CRSP/Compustat.

1.1.1. M&A Data

We use Thompson's SDC to identify mergers and acquisitions. SDC provides information on the date the deal was announced and the date it became effective. The data also include the industry affiliation of the target and the acquirer, whether the acquirer is privately

held, and the form of consideration. We use the CUSIP identifier in the SDC data to match to the Census data via the Compustat-SSEL bridge, a crosswalk file provided by the US Census.

We start with 3,260 completed M&As, announced between 1985 and 2001, of a public US target and by a public or private US acquirer, for which we can confirm the acquirer purchased a majority stake and can be matched to Compustat.⁴ We exclude observations which cannot be matched to any establishments in the Census data with non-missing employment data.⁵ In addition, to maintain a constant sample between our summary statistics and primary regressions, we drop observations with missing data for market capitalization, total assets, or PP&E from the year before the deal was effective. We are left with a sample of 2,003 unique M&As.

In Table 1, we report the summary statistics for our sample of M&As. Targets in our sample are significantly smaller, as compared to acquirers, when measured by assets or market capitalization. Targets are profitable, on average, and the typical target establishment has 126 employees and has been operating for 9 years. Nearly 80 percent of our sample are public acquirers and 58 percent of the deals represent diversifying acquisitions. We identify a diversifying acquisition when the target and acquirer's SIC code differs at the 3-digit level. We find that acquirers realize a small stock price decline upon announcement of the deal, targets report large gains, and joint returns are 1.8 percent, on average. Announcement returns are CARs measured over a symmetric 3-day window around the event. CARs are calculated using a market model estimated over 250 days starting 280 days prior to the event.

⁴ We limit the sample to public targets to take advantage of a Census database that matches CUSIPs to the firm-level identifier in the Census databases as well as to control for key firm-level variables, such as assets and profitability. To be included in the sample we require that 1) the observation have non-missing data for date effective; 2) the target CUSIP and acquirer CUSIP, as identified in SDC, be unique; that SDC not identify this observation as a repurchase; 3) the observation have non-missing data for percent of target firm acquired and percent of target firm owned after; 4) the acquirer own 50 percent or more of the target following the acquisition and less than 50 percent before the acquisition; 5) target and acquirer data be present in the SDC data; and 6) after matching to Compustat total assets is non-missing.

⁵ We are unable to match all observations to the Census data. The primary cause for unmatched observations relates to the Census provided Compustat-SSEL bridge. This bridge was constructed using a name and address match between firm names in the Census and Compustat. Several limitations of this bridge have been noted in earlier papers. For example, Maksimovic, Phillips, and Prabhala (2011) point out that the bridge often uses division names in lieu of firm names, leading to non-matched firms.

1.1.2. Census Data

The Longitudinal Business Database (LBD) is the primary Census database used in the study. The LBD is a panel dataset that tracks all U.S. business establishments with at least one employee and positive payroll.⁶ An establishment is any separate physical location operated by a firm with at least one employee. The LBD contains information on the number of employees working for an establishment and total annual establishment payroll. The LBD provides a unique establishment-level identifier, LBDNUM, which allows an establishment to be tracked over time, even in the event of a change in control. In addition, the LBD also contains a unique firm-level identifier, firmid, which links establishments that are part of the same firm. The LBD also contains information on the physical location and industry for each business establishment.

We use the fiscal year which strictly precedes the date the deal was effective as our “before” period. We follow the approach in Maksimovic, Phillips and Prabhala (2011) and look at three years after the deal was effective as our “after” period. We track establishments between the before and after periods using the LBDNUM identifier.

Census data is an improvement over the wage and employment data reported in public sources, such as Compustat. The Census data is available at the establishment level which allows us to track changes at each individual target facility before and after the acquisition. In Compustat, the only information typically available post-merger is combined acquirer and target firm-level data. Furthermore, we are able to observe the industry for each separate establishment. This allows us to better control for industry patterns in wages and employment.

1.1.3. Compustat and CRSP

We include Compustat and CRSP databases to identify accounting variables and stock market performance for both the target and acquirer. We match Compustat data using the most recent fiscal year end which strictly predates the acquisition effective date.

⁶ See Jarmin and Miranda (2002) for more information.

1.2. Variable Construction

To test our main hypothesis, we examine post-merger employment and wage changes at targets. We follow the standard approach in Davis, Haltiwanger, Jarmin, Lerner and Miranda (2009)⁷ and measure employment change for target establishment i at time t as:

$$\text{Employment change}_{it} = \text{employment}_{i,t+3} - \text{employment}_{i,t-1} / (1/2 * (\text{employment}_{i,t+3} + \text{employment}_{i,t-1})) \quad (1)$$

where i is the year in which the M&A became effective. Under this measure, employment changes can range from -200 percent to +200 percent. If an establishment is unobserved in the after period, we assume all jobs at this facility were lost and employment change is equal to -200 percent. We calculate firm level employment change as an employee-weighted average of the employment changes at the firm's establishments.

Raw wages in 2005 dollars are estimated at the establishment level as log annual payroll divided by total number of employees. Payroll includes all compensation that is taxed as ordinary income. Our primary measure of excess wages for establishment i at time t is measured as:⁸

$$\text{Excess wages}_{it} = \log \text{wage}_{it} - \text{state-year median wage}_t - \text{industry-year median wage}_t + \text{median year wage}_t \quad (2)$$

State-year median wage is the median log wage per employee in the state of location of the establishment, in a given year. Industry-year median wage is the median log wage per

⁷ See also Tornqvist, Vartia, and Vartia (1985).

⁸ We control for changes in state wages over time which have been shown to be important in a sample of manufacturing establishments in Bertrand and Mullainathan (2003) and in a cross-industry sample in Kim and Ouimet (2011) and industry wages over time which have been shown to be important in Kim and Ouimet (2011). In unreported findings, we obtained similar results when using alternative definitions of excess wages including 1) replacing median wages with means 2) replacing median year wages with a constant and 3) estimating excess wages as the residual from a regression regressing log wages on mean state-year and mean industry-year log wages.

employee matched to the establishment's industry, in a given year. Median year wage is the median log wage per employee for all establishments, in a given year. Median year, state-year and industry-year wages are all calculated using only the set of establishments owned by public firms. We use public firm establishments as wage data for public firms is better screened and less likely to contain errors and also matches our sample of target firms. We use medians, as opposed to means, to minimize the impact of outliers on our estimates given the large standard deviation in wage changes. Excess wage changes for establishment i at time t are calculated as:⁹

$$\text{Excess wage change}_{it} = \text{excess wage}_{i+3} - \text{excess wage}_{i-1} \quad (3)$$

If the establishment is unobserved in the post period, then excess wage change is undefined. We calculate firm level wage change as an employee-weighted average of the wage changes at the firm's establishments.

We limit our sample to include only those establishments which were owned by the target prior to the M&A effective date. We do not include any new greenfield establishments since such establishments are difficult to observe in a change in control setting. Following an M&A, any new establishments, related to the target's business, will typically be identified as owned by the acquirer in the Census database. Thus, we cannot distinguish between new establishments related to the business units of the original acquirer versus new establishments related to the business units of the target firm. While it is possible to observe total employment change at the combined target and acquirer, given the typical size differences between the acquirer and the target, any changes in the merged firm will typically reflect changes at the acquirer's business units.

Given the limitations of unobserved greenfield establishments, our estimates of change in employment will be negatively biased. Over time, firms will replace older establishments with newer ones. If all employees at a closed establishment are moved to a new location, true employment will be unchanged, but our measure will report a 200 percent employment decrease at the closed location. We address this bias by comparing employment changes at target

⁹ In the summary statistics in Table 2 we also report a change in excess wages using all establishments operating at that point in time. This measure is calculated as the difference in an employee-weighted average wage between the post and pre periods.

establishments to employment changes at a control set of establishments.¹⁰ Assuming the matched establishments have an equally likely probability of replacement, then the difference in employment change at the target establishments as compared to the control establishments will control for this bias. The difference will also control for industry patterns in employment across time.

1.2.1. Control Group

To be included in the control group, an establishment must be owned by a public firm and not involved in M&A activity over three years. Given our target firms are all public, we require the control establishments to also be owned by public firms due to possible differences between public and private firms. We match our sample establishments to a control establishment which is operating in the same year, in the same industry (4-digit SIC), and has the same number of employees. If more than one establishment matches our sample establishment, we use the mean employment change for all matching establishments. If no establishment matches, then we try to match by year, industry, and within 10 employees of our sample establishment. If we still do not get a match, then we try to match by year, industry and within 100 employees of our sample establishment. If we still do not get a match, then we try to match by year and industry. Target firms with establishments which we couldn't match to the control group are dropped from the sample.

For the control group, we measure employment changes over the same 4 year window as the sample establishments. We calculate excess employment change for establishment i at time t as:

$$\text{Excess employment change}_{it} = \text{employment change}_{it} - \text{control employment change}_{it} \quad (4)$$

¹⁰ One alternative approach would be to measure total employment at the acquirer and target combined. While such an approach provides a more complete picture of total employment change, it is unsatisfactory from the viewpoint of this paper. We are interested in the drivers of employment change post M&A at the target as a means to understanding the motivation for acquiring the target. Using joint target and acquirer employment will be an especially noisy measure of ex post target employment due to the large average size difference between targets and acquirers in our sample.

2. Results

In the following section, we first report mean post-merger changes in employment and wages at target firms in our sample of M&A deals. In a regression setting, we then explore cross-sectional and time series variation in post-merger changes in employment, turnover and wages at target firms to test our main hypothesis that some firms are acquired for their labor forces. Finally, we consider several robustness tests to our main regression results.

2.1. Average Target Post-merger Employment and Wage Changes

In Table 2, we report average changes in target wages and employment around completed M&A events. Employment and wage changes are measured at the establishment level, then summed to the firm level using an employee-weighted mean. Using the firm level data, we report a deal-weighted average (column 1), a median-weighted average (column 2), and an employee-weighted average (column 3). The median-weighted average uses the same sample as the deal-weighted average but gives ten times more weight to observations with values between the 40th and 60th percentile, relative to observations with values outside of this central region. We report this estimate, as opposed to a standard median, due to disclosure requirements associated with using Census data.

2.1.1. Average Employment Changes

We find an average deal-weighted employment decline at target establishments, following an M&A event, of 81 percent. This change in employment is measured using only those target establishments which were operating in the year before the effective date of the M&A. As such, some of this decline will reflect the natural replacement of older establishments with new establishments as well as trends in industry employment. Thus, we also measure excess employment change, calculated as the change in employment at existing target establishments minus the average change in employment at matched control establishments. Control establishments are matched by industry, year, and ex ante employment size and are not M&A targets. As expected, we find a more modest change in excess employment of -12.0 percent, using a deal-weighted average, -5.2 percent, using a median-weighted average, and +12.8 percent, using an employee-weighted average.

Our estimates of mean employment declines differ from earlier reported estimates following M&As of manufacturing establishments between 1977-1987 in McGuckin and Nguyen (2001). McGuckin and Nguyen (2001) report that 80 percent of plants continue to operate post-acquisition and these continuing establishments experience a mean employment decline of 8 percent. Our more negative employment declines could be related to our later sample time period, broader industry inclusion or use of a specific four year event window. McGuckin and Nguyen (2001) examine employment in 1987, as compared to employment in 1977, independent of the specific M&A date for each observation. Our estimates are more similar to the change in employment at private equity targets as reported in Davis, Haltiwanger, Jarmin, Lerner and Miranda (2009). Davis, Haltiwanger, Jarmin, Lerner and Miranda (2009) find a 10.3 percent reduction in employment at private equity targets, five years after the deal, as compared to a set of control establishments. Likewise, Kaplan (1989) reports a median industry-adjusted employment decline of 12 percent following a set management buyouts in the 1980s.

If the control firms correctly capture the expected employment change at the target establishments in the absence of an M&A, then we could interpret the change in excess employment as the causal effect of the M&A. However, while the control establishments are matched by observable characteristics, there may still be unobservable differences between target establishments and control establishments. To control for unobservable differences in which firms become targets, we compare the outcomes for the target establishments in our sample to a sample of establishments owned by firms which were involved in cancelled M&A deals.

By reading news announcements, we create a set of cancelled M&A deals where the cancellation appears unrelated to expected future employment and wage changes at the target. We also confirm that targets in the cancelled deals group are not later acquired during the following three years. The most common justifications for the cancelled deals included in our study are: target's refusal of the offer (65 observations); inability to agree on merger terms (31 observations); jointly agree to terminate (22 observations); change in acquirer's financial conditions (14 observations); government intervention and or regulatory concerns (11

observations); and, disagreement over price (11 observations.) A summary of all justifications is included in Table 3.¹¹

Comparing the employment change at the targets of completed M&A deals to changes at targets of cancelled deals, we find evidence that target firms are indeed unique and are associated with higher subsequent employment growth, as reported in Table 4. We find an average excess employment increase of 7.3 percent for our sample of cancelled deals. These results suggest that there is a negative causal effect of M&A activity on employment at the target's existing establishments on the order of 19 percent. These results cannot exclude the possibility that employment growth is faster at targets post-M&A once we include new greenfield development as we do not uniformly observe new establishments.¹² However, for the existing employees, there is greater employment decline following a completed M&A, as compared to a cancelled M&A, on average.

2.1.2. Average Wage Changes

We find an increase in excess wages per employee for the average worker at the target's existing establishments following a completed acquisition of 1.2 percent, as reported in Table 4. Interpreting this wage result is difficult given that wages are undefined in the post period at establishments which close over the event window, leading to different samples in the pre- and post- periods. To allow for a more direct comparison, we include only the subset of surviving establishments when calculating the change in employment in row 5. Limiting the sample to surviving establishments, we find an average post-merger increase in excess wages of 2.4 percent, indicating that wages increase for the average employee at establishments which remain open following acquisition completed M&A.¹³ This increase in wages at targets of completed

¹¹ As with the sample of completed M&As, not all observations identified in this table are included in the final analysis as not all observations can be successfully matched to the Census data. Census regulations prevent us from disclosing the exact observations used in the analysis. A full list of all the cancelled deals is available from the authors.

¹² New establishments could involve hiring new workers as well as transferring workers from other pre-existing target establishments.

¹³ Since wages are limited to forms of compensation which are taxed as ordinary income such as salary, bonuses and commissions, we cannot exclude the possibility that the observed wage increase simply reflects a relatively greater reliance pre-M&A on other forms of compensation, such as stock options.

deals is not observed at targets of cancelled deals. We observe an average wage decrease of 6.4 percent following cancelled M&As.

2.1.3. Average Employment and Wage Changes Synopsis

The sample averages show wage increases, consistent with the acquiring labor hypothesis. Wages may increase to reflect higher ex post productivity. However, we cannot exclude alternative interpretations of the wage changes, for example, average wages may increase if low wage employees leave the firm and are not replaced. We further explore the wage results in section 2.5.

The sample averages also show employment declines at target establishments, especially compared to the employment growth observed at targets of cancelled deals. One interpretation of these results is that acquiring the target's labor force does not motivate the majority of M&As. However, we cannot completely exclude this possibility. Even if a firm is acquired for its employees, the acquirer may be specifically seeking employees in some groups, such as sales or research and development, while there may be redundancies in other business functions, such as accounting, resulting in a net employment decline. Moreover, sample means hide large cross sectional variation. For example, we find that 48 percent of the target firms experience positive post-merger employment changes. Mean results are informative to understand expected outcomes from an employee-level, but are insufficient to infer whether or not a subset of M&A observations are motivated to acquire labor. Mean results reflect a multitude of acquisition motivations. In the following section, we directly investigate the acquiring labor hypothesis by specifically identifying acquisitions where acquiring labor is a likely motivation.

2.2. Cross-Sectional Variation in Target Post-merger Employment Changes

In this section, we investigate whether a subset of M&A activity is motivated as a means to acquire a larger employee base. We proxy for deals which are most likely to be motivated by acquiring labor with the size of the target's pre-existing workforce. Acquirers seeking to increase their total employment will be able to best achieve this goal by selecting targets with

larger workforces.¹⁴ If acquisitions of high employment targets are motivated as a means to acquire labor, we should observe relatively more positive employment changes at these firms, as compared to targets with smaller pre-existing employee bases. We test this prediction in the following section.

2.2.1. Target Ex Ante Employment and Post-merger Excess Employment Change

We measure target ex ante employment as total domestic employment at the target at the most recent measurable point in time which strictly predates the acquisition. In our regressions, we use a log transformation of ex ante employment to compensate for skewness in the raw data. Target employment change is the employee-weighted average employment change at all establishments owned by the target between the year before the M&A effective date and the third year after the effective date. Excess employment change is the difference between target employment change and the average employment change for the matched control sample. All regressions include robust standard errors which are corrected for clustering at the acquirer level.

In Table 5, column 1, we find a positive correlation between target ex ante employment and excess post-merger employment change, as predicted. For the mean firm, a one percent increase in ex ante employment is associated with an 8.9 percent increase in excess post-merger employment change.¹⁵ In column 2, we add additional controls. We include year and industry (1-digit target SIC) fixed effects. We also control for whether or not the acquisition is diversifying. We identify a diversifying acquisition when the target and acquirer do not share a 3-digit SIC code. Horizontal acquisitions may result in lower ex post employment change if the merged firm is able to consolidate operations. Indeed, as predicted, we find diversifying acquisitions are associated with higher excess post-merger employment changes.

In addition, we control for whether or not the acquirer is private. Barger, Schlingemann, Stulz, and Zutter (2008) find that private acquiring firms are different and

¹⁴ Alternatively, an acquirer could purchase several target firms with smaller employee bases. This will be less efficient given fixed costs associated with each M&A transaction. However, to the extent that this is an alternative acquisition strategy, it will bias our results towards 0.

¹⁵ The average target firm has 4,218 employees, 8.35 when log transformed. A coefficient on log target employment of 10.7 percent implies a predicted employment change of 89.3 before subtracting the constant. A ten percent increase in size for the average target firm would entail 4,640 employees, 8.44 when log transformed. A coefficient on log target employment of 10.7 percent implies a predicted employment change of 90.33 before subtracting the constant. The difference between the two indicates a 1.02 percent employment change increase.

typically pay lower premiums, as compared to public acquirers. Private firms may also have a less visible reputation. Turban and Cable (2003) argue a firm's reputation affects the ease with which it can hire employees. As such, we may find that private firms are more likely to retain acquired employees. We find a positive but insignificant coefficient on private acquirer.¹⁶

We also control for the degree of unionization in the target firm's industry at the 3-digit SIC code level.¹⁷ Unionized firms may be associated with more negative post-merger employment changes if a change in control at a unionized firm leads to a stronger ex post bargaining position when renegotiating collective bargaining agreements. Rosett (1990) finds that real wage growth falls after a takeover, using a sample of large M&A events in the 1970s and 1980s, although the result is not statistically significant. Alternatively, unionization may be associated with a more modest post-merger employment decline if collective bargaining contracts are not substantially affected by the change in control and bind the hands of the acquirer from making significant post-merger employment cuts. We find a positive but insignificant effect.¹⁸

Finally, we control for target historic profitability. We measure target profitability as the ratio of the firm's operating income before depreciation (OIBD) divided by total assets. More profitable firms are more likely to be growing and to have increasing future employment needs. As predicted, we find a positive and significant coefficient on target profitability.

2.2.2. Post-merger Employment Changes controlling for Target Size

Given that employment size is positively correlated with firm assets and market capitalization, it is possible that employment size could be proxying for other metrics of firm size. In columns 3 to 5, we control for various linear and non-linear measures of firm total assets and market capitalization. We find a negative relation between asset size and excess post-merger employment change. We find no relation between target firm market capitalization and excess post-merger employment change. Furthermore, we continue to find a positive coefficient

¹⁶ In alternative estimations reported in later tables, this relation between private acquirers and post-merger employment change is always positive and occasionally significant.

¹⁷ Data limitations prevent us from directly controlling for the union status at the target firm. Industry unionization data is provided by www.unionstats.com. See Hirsch and Macpherson (2003) for more information.

¹⁸ In alternative regressions reported in later tables this relation is occasionally significant. However, the economic magnitude is modest.

associated with target ex ante employment even after including additional size controls. These results indicate that historic employment is not simply proxying for total assets or market capitalization.

As further evidence that the positive relation between ex ante target employment and post-merger employment changes are not being driven by the size of the firm's assets or market capitalization, we explore the relation between employment ratios and excess post-merger employment change. We create three ratios, normalizing employment by total assets, total PP&E and market capitalization. All ratios are log transformed to adjust for skewness. A firm is more likely to be pursuing an acquiring labor motivation when pursuing a target with a higher ex ante employment ratio.

We report the results in Table 6. As in the prior table, the dependent variable is excess post-merger employment change and standard errors are robust and corrected for clustering at the acquirer level. As reported in columns 1 to 3, we find a positive coefficient with each ratio indicating that as the ratio of the target firm's employment to assets, market capitalization, or PP&E increases, excess post-merger employment change increases.

To ensure that we are not picking up industry effects, where some industries may have higher employment ratios, in columns 4 to 6, we use industry adjusted ratios. Industry adjusted target employment/total assets is calculated as the log of ex ante target employment divided by assets minus the industry (3-digit SIC) mean log of ex ante employment divided by assets. The industry adjusted market capitalization and PP&E ratios are calculated in a similar manner. We find a positive and significant correlation between each of the industry adjusted ratios and excess post-merger employment change.

Furthermore, in unreported regressions, we repeat all the above tests using raw employment change as the dependent variable in lieu of excess employment change. All coefficients on target employment and ratios of target employment are positive and significant at the 0.001 level.

2.2.3. Acquisitions Motivated to Discipline Target Managers who Tolerated Over-Employment

The results presented in the previous two tables are not consistent with the predictions of a hypothesis that M&A activity is commonly motivated as a means to reverse over-employment at some target firms. A large literature argues that M&A activity can discipline managers who are not acting in shareholder's best interests.¹⁹ A manager may realize private benefits from hiring employees and avoiding layoffs, but such actions may not always be in the best interest of shareholders. The ratio of industry adjusted employment should proxy for over-employment. If a significant fraction of M&A activity is seeking to reverse over-employment, we should observe the greatest post-merger employment declines at those firms with high employment ratios. Instead, we find the opposite, indicating acquisitions with such disciplinary motivations are not common in the full sample. In section 2.3.2, we further investigate whether such motivations are more common when the target is in a declining industry.

2.2.4. Target Ex Ante Employment and Post-merger Excess Employment Change by Human Capital Intensity

The results presented in the previous two tables show a robust positive correlation between the size of employment at the target prior to the M&A and excess post-merger employment change. This result is consistent with our hypothesis that some mergers are motivated as a means to acquire labor. However, the same results are open to alternative interpretations. To better isolate evidence uniquely consistent with our hypothesis, we next explore whether this positive correlation between the employment at the target prior to the M&A and excess post-merger employment change is stronger in industries where employees are associated with greater human capital.

Acquiring labor as an acquisition motivation should matter more in industries where employees are associated with greater human capital. We consider four proxies for the human capital intensity at the target firm: 1) industry college share; 2) industry mean wages; 3) industry

¹⁹ See Shleifer and Vishny (1988), Morck, Shleifer and Vishny (1989), and Shleifer and Summers (1988) as examples where the authors specifically suggest M&As as a means to discipline managers who have been tolerating over-employment.

median wages; and 4) industry R&D. We interact each proxy with target ex ante employment and observe whether the relation between ex ante employment and post-merger excess employment change is stronger as human capital at the target increases.

Schooling has been shown to increase an individual's human capital. We estimate the share of college-educated workers using Wang (2009).²⁰ We use industry mean and median wages, where higher wages are assumed to reflect more skilled or productive employees. We define industry as 3-digit SIC and exclude all firms involved in M&A activity from the mean and median calculations. High levels of industry R&D imply that employees must be trained in using specialized technology and, thereby, are likely to be more difficult to replace. Industry R&D is calculated as the mean industry R&D expenditures normalized by sales. If R&D expenditures are not reported for a firm, we assume them to be zero.

We report the results in Table 7. The table is similar to the previous regression tables with excess post-merger employment change as the dependent variable. However, we drop industry fixed effects as all of our proxies are measured at the industry level and have limited within-industry across-time variation.

As seen in columns 1 to 4, the interaction of three out of four proxies for human capital and ex ante target employment size are positive, indicating that the acquiring labor hypothesis is more common at targets whose employees are associated with higher human capital. The coefficient on the interaction of R&D and target ex ante employment is positive but insignificant with a p-value of 0.18. The lack of a significant finding may reflect the fact that only a fraction of employees at a firm may be involved with R&D. This will lead to significant noise in our tests since our dependent variable measures employment change across the entire workforce.

2.3. Time Series Variation in Target Post-merger Employment Change

In the previous section, we showed cross-sectional patterns consistent with the acquiring labor hypothesis. Targets with larger ex ante employment are associated with more positive excess post-merger employment changes. We also noted that this relationship is stronger in industries associated with greater human capital. In the subsequent section, we consider whether the relation between ex ante target employment and excess post-merger employment change

²⁰ Wang (2009) estimates this fraction using the Bureau of Census Current Population Survey (CPS).

matters more during periods of time when it is relatively more difficult to expand employment outside of the M&A setting.

2.3.1. Variation in Industry Expansions

We proxy for the ease of hiring outside of M&A activity with lagged industry employment growth. Lagged industry employment growth is estimated as the change in employment within the target's industry over the past two years. We use broad 1-digit SIC industry categories to capture alternative employment prospects.²¹ All else equal, an industry which has recently experienced strong historic growth will have a tighter labor market as compared to a contracting industry.²² In a tight labor market, attracting new employees will be relatively more difficult, thus increasing the attractiveness of acquiring labor via an M&A. We predict acquiring labor motivations will be more common during tight labor markets, leading to a stronger correlation between ex ante target employment and excess post-merger employment change.

In Table 8, we report the results. As in the previous table, the dependent variable is excess post-merger employment change. We include controls for whether or not the acquirer was private, average industry unionization, target profitability and whether or not the acquisition was diversifying in all the regressions but do not report the coefficients to conserve space. As predicted, in column 1, we report a positive coefficient on the interaction of lagged industry employment growth and target ex ante employment. These results also hold after we control for target asset size, as reported in column 2.

These findings are complimentary to results in Maksimovic and Phillips (2001, 2002) and arguments in Lambert (2004) which find that during periods of rising product prices, productive firms benefit relatively more from a larger asset base. If greater employment is needed to maximize the efficiencies to be gained from the larger asset base, then we should expect to find higher ex post employment changes following such mergers.

²¹ Our broad industry definition compares to the industry definitions used in research on job switchers in Neal (1995) and more recent work on the transferability of human capital in Gathmann and Schönberg (2010).

²² We also acknowledge that an industry which has experienced strong historic growth had both high labor demand but was also able to meet high demands. As such, the variable will also reflect industries where it is easy to attract new labor. To the extent that this is true, it should bias our results towards 0.

In columns 3 and 4, we directly test this prediction. We use target asset size to proxy for acquisitions most likely motivated to increase the acquirer's asset base. We use change in GDP and a dummy variable, *MP_expansion*, which picks up industry expansions to proxy for economic conditions. *MP_expansion* replicates the expansion dummy variable in Maksimovic and Phillips (2001), although at the 1-digit SIC code level to correspond to our measure of industry growth. *MP_expansion* takes the value of 1 if the industry's real production increased that year and exceeded its long term trend, 0 otherwise. We find a strong and positive relation between the interaction of target asset size and change in GDP and post-merger excess employment change. However, we find an insignificant relation between the interaction of target asset size and *MP_expansion* and post-merger excess employment change. This result is consistent with Maksimovic and Phillips (2001) which finds strong predictive power in macroeconomic variation and weaker evidence with industry-specific expansions. These results support the argument that a large workforce is necessary to realize benefits from expanding asset sizes during periods of economic expansion.

Given that rising industry employment is positively correlated with GDP change and that target ex ante employment is correlated with asset size, the results we reported in column 1 may be driven by these correlations. We define the acquiring labor hypothesis broadly to include any benefit from expanding employment through M&A. As such, increasing labor to maximize utilization of a larger asset base is included. However, to see if this one benefit drives our results, we include both interactions in one regression. In column 5, we report a significant coefficient on the interaction of GDP change and target asset size. We also continue to observe a positive and significant coefficient on the interaction of ex ante target employment and lagged industry growth. In unreported results, we find a positive and significant coefficient on the interaction of ex ante target employment and post-merger employment change when including the interaction of *MP_expansion* and targets assets in the same regression. These results are suggestive that the acquiring labor hypothesis includes benefits to a larger labor force associated with achieving efficiencies from operating a larger asset base as well as other benefits to a larger employee base, such as better employee-job matching.

As robustness tests, in unreported results, we use two alternative definitions of industry employment growth: industry employment growth over the past year; and, industry employment

growth over the past three years. In both cases, we find results consistent with earlier findings, however, the interaction between past industry employment growth using either alternative measures and ex ante target employment is only significant at the 0.05 level.

2.3.2. Industry Declines and Target Post-merger Employment Change

If acquisitions motivated to discipline target managers who have tolerated over-employment dominate our sample, then we would have expected to observe a negative correlation between ex ante target employment (a proxy for over-employment) and post-merger excess employment change (as earlier over-employment is reversed). Instead, as reported in Tables 5 and 6, we report a positive relation. However, it is possible that such motivations are common under certain circumstances. Costly over-employment may be more prevalent in declining industries if managers avoid the non-pecuniary costs associated with firing workers who are no longer needed. If true, then acquisitions motivated to discipline target managers who have tolerated over-employment will be most common when the target's industry is in decline and when the target has high employment. This argument generates the same prediction as our acquiring labor hypothesis: a positive coefficient on the interaction of ex ante target employment and target industry growth. However, the disciplinary motivation argues the result will be driven by more negative employment changes in industries with declining growth. The acquiring labor motivation argues the result will be driven by more positive employment changes in industries with high growth.

We separately test the two different motivations by creating two new variables, industry employment change if negative, which captures declining industries, and industry employment change if positive, which captures growing industries. Specifically, industry employment change if negative is identical to industry employment change when industry employment change is negative. Otherwise, this variable is coded as zero. We interact this with target ex ante employment and find a positive coefficient, as reported in column 6. Thus, target firms with higher ex ante employment in industries which have experienced recent large declines in employment are associated with more negative ex ante employment changes, suggesting that disciplinary takeovers occur in declining industries.

In column 7, we confirm that the positive coefficient on the interaction of industry employment growth and ex ante target size is not solely driven by employment declines. Industry employment change if positive is the same as industry employment change when industry employment change is positive. Otherwise, this variable is coded as 0. We interact this variable with ex ante target size and find a positive and statistically significant coefficient, consistent with the prediction of the acquiring labor hypothesis that acquiring employees via M&As will be relatively more attractive in tight labor markets.

2.4. Post-merger Changes in Target Employee Turnover

The labor acquisition hypothesis argues that acquirers will retain a large fraction of the target's workforce post acquisition. One prediction, explored in earlier tables, is that post-merger employment at the target will be higher following a labor motivated acquisition, all else equal. A related hypothesis is that employee turnover will be lower following a labor motivated acquisition, all else equal. Acquirers seeking to expand their labor force should implement compensation, benefit and work policies that encourage more employees to stay.

Turnover data comes from the Longitudinal Employer-Household Dynamics (LEHD) database, maintained by the US Census. The LEHD is primarily derived from state unemployment records and contain information on employee hires and departures at the quarterly frequency for all establishments within a state, once the state is covered by the LEHD program.²³ The panel begins in 1992 for several states and the coverage of states increases over time.

Employee turnover includes all voluntary and involuntary departures from a firm, and is estimated as:

$$T_{i,j,t} = (H_{i,j,t} - \max\{(E_{i,j,t} - E_{i,j,t-1}), 0\})/E_{i,j,ave} \quad (5)$$

where T is turnover, H is the number of new hires and E is the level of employment, at firm i , establishment j , at the beginning of quarter t , at the beginning of quarter $t-1$ or average employment over the period $t-1$ to t . We limit our sample to full quarter employees, defined as

²³ See Abowd et al (2009) for more detail.

workers employed over the previous quarter, as these are presumably the more valuable employees. We annualize quarterly turnover by summing all four quarters. Establishments with less than 4 quarters of data are not included in this analysis to minimize the likelihood of picking up turnover effects associated with closing facilities. Firm level turnover is calculated as an employee-weighted mean.

Change in employment will not directly affect turnover. For example, consider the case where one employee's job is terminated and all other employees remain. In this case, $H_{i,j,t} = 0$, $\max\{(E_{i,j,t} - E_{i,j,t-1}), 0\} = 0$ and, thus, $T_{i,j,t} = 0$. Alternatively, if the establishment has 10 employees, 2 employees leave and both are replaced with new hires, then $H_{i,j,t} = 2$, $\max\{(E_{i,j,t} - E_{i,j,t-1}), 0\} = 0$ and, thus, $T_{i,j,t} = 20$ percent.

In the following regression tests, we use the change in turnover around the M&A event as the dependent variable. Turnover change is calculated as $\text{turnover}_{t+1} - \text{turnover}_{t-1}$. We use a shorter event window (one year before the date effective to one year after the date effective) as compared to the 4-year event window used in the employment change tests as a longer window may miss important changes which occur during merger integration. We use the change in turnover to control for pre-existing firm-specific patterns in employee turnover. The observations included in these tests differs from the earlier regressions as 1) the LEHD is only available starting in 1992, 2) the LEHD data is not available for all US states and 3) not all establishments in the LBD can be matched to the LEHD.²⁴

The results are reported in Table 9. As predicted we find that turnover decreases as ex ante target employment increases, as reported in column 1. Furthermore, this relationship is not driven by the positive correlations between employment size and assets, market capitalization and PP&E. In columns 2 to 4, we report a negative relation between each employment ratio and change in turnover. In columns 5 to 8, we repeat the earlier regressions with a control for the average establishment age. Turnover tends to be higher at new establishments, as shown by Lane, Isaac, and Stevens (1996) and Porter and Steers (1976) and employment size may be correlated with age. The additional control does not affect our key finding that turnover change is negatively correlated with ex ante target employment.

²⁴ Note, if a state is included in the sample, then all establishments physically located in that state are included in the sample. See Ouimet and Zarutskie (2011) for a description of the matching between the LEHD and the LBD and for further detail as to why the match rate is less than 100 percent.

2.5. Post-merger Changes in Target Employee Wages

One additional prediction of the labor acquisition hypothesis is that post-merger wages will increase, or at a minimum, not decrease. Wages may increase as a means by the acquirer to retain employees and thereby minimize turnover. Additionally, wages may increase to reflect higher post-merger productivity associated with a larger work force. The summary statistics reported in Table 3 showed that wages increase, on average, post-merger for the full sample. Furthermore, this wage gain is not observed at target firms whose announced M&A is subsequently cancelled, as reported in Table 4, Panel B. These full sample results are consistent with the acquiring labor hypothesis.

To document additional evidence more uniquely consistent with the hypothesis, we test whether post-merger wages increase relatively more at targets with larger ex ante employment. We measure the change in wages as the employee-weighted mean excess wage per employee in the post period minus the employee-weighted mean excess wage per employee in the pre period. We limit the sample to only those establishments that are observed in both the pre- and post-period to control for differences in mean employee wage across establishments. We also include controls for acquirer size due to the positive correlation between firm size and employee wages documented in Brown and Medoff (1989).

In Table 10, we report the results. We find that excess wages increase more at those target firms where ex ante employment is higher. We report similar findings whether we measure employment as log total employment or as a ratio normalized by assets, market capitalization or PP&E. Moreover, in undisclosed results, we find a similar positive relation between ex ante employment and raw wage changes.

One difficulty in interpreting the wage results is the possibility that changes in employment may cause the change in wages. The typical assumption is that low seniority, low wage workers are typically fired first, leading to an increase in mean wages if employment declines. Thus, the fact that we observe greater wage increases at targets with high ex ante employment is even more striking. Furthermore, we also directly control for change in employment. The results are reported in columns 4 to 8. Here we use a measure of change in excess employment that is only calculated using the establishments that are included in the wage

change measure and over the same 3 year window. As predicted, we find a negative relation between change in excess employment and wage change. Furthermore, with this additional control we continue to find a positive relation between wage change and ex ante target employment, as predicted by the acquiring labor hypothesis.

2.6. Robustness Tests

In the following section we consider a number of robustness checks on our main results. We also explore the correlation between target ex ante employment size and M&A announcement returns.

2.6.1. Change in Raw Employment

In unreported tests, we repeat all regressions which used excess employment change as the dependent variable with raw employment change as the dependent variable instead. By doing so, we ensure that our definition of excess employment change is not driving our results. We find consistent results in all cases with one exception. The positive and significant coefficient on the interaction of ex ante target employment and college share as a predictor of excess post-merger employment change is still positive but not a significant predictor of post-merger raw employment change.²⁵ All other key coefficients retain the sign and significance as reported in the excess employment change regressions.

2.6.2. Post-merger Asset Sales

Maksimovic, Phillips, and Prabhala (2011) show that after purchasing a multi-establishment target, acquirers often sell some of the target's establishments. To ensure that post-merger asset sales are not driving our results, we repeat our tests after limiting the sample to observations where we can most reliably confirm that the acquirer retained the establishment ex post.

We are only able to control for post-merger asset sales on a subset of our deals. To be included in this sample, we require that the acquirer be public so that we can match the acquirer cusip to the census firm-level identifier using the Compustat-SSEL bridge. We also require that

²⁵ The p-value on the interaction of college share and log ex ante employment is 0.20.

the acquiring firm still be active in the post-period, which we define as having at least one establishment operating. For deals which meet these criteria, we then track establishment ownership in the post period. If the establishment is owned by either the acquirer or the target according to the Census firm-level identifier “firmid”, we retain the establishment as part of this acquirer ownership confirmed subsample.²⁶ We also include any establishments not operating in the post period (and thus experienced -200 percent employment change) as part of the acquirer ownership confirmed subsample. We then calculate a firm-level employee-weighted change in ownership using only this set of confirmed acquirer owned establishments. In column 1 of Table 11, we report a similar relation between target ex ante employment and excess post-merger employment change, using this subsample of observations where we can most reliably confirm ex post acquirer ownership, as found using the full sample.

2.6.3. Acquirer Characteristics

In earlier tests, we controlled for target characteristics. However, we have only included one acquirer characteristic control in all our tests, whether or not the acquirer is public, due to limited data availability for private acquirers. In the following test, we limit the sample to public acquirers which allows us to expand our controls for acquirer characteristics. In particular we are interested in controlling for acquirer size. Large acquirers may be more reluctant to shed employees given findings in Barron, Black and Loewenstein (1987) and Barron, Bishop and Dunkelberg (1985) that larger employers spend more resources searching for an employee, as compared to smaller employers. In column 2, we control for acquirer size and find no relation between acquirer size and post-merger employment change. In column 3, we add a non-linear acquirer size term and continue to observe no relation between acquirer size and post-merger employment change at the target. Furthermore, we continue to observe a positive and significant relationship between target ex ante employment and post-merger excess employment change.

Furthermore, as a means to control for all time invariant acquirer characteristics, we include acquirer firm fixed effects. We report the results in column 4. We continue to observe a

²⁶ We include establishments identified as target owned as the Census is sometimes slow to update ownership of establishments, especially in non Census years.

positive and significant relationship between target ex ante employment and post-merger excess employment change

2.6.4. Relative Size

Idson and Feaster (1990) argue that different types of employees match to small versus large firms. Given that acquirers are larger than targets, a target firm with large ex ante employment may have a large proportion of employees who match to large firms and, thus, relatively higher post-merger employment. To test whether this alternative story is driving our result, we create a new variable, relative size, which is the ratio of the target firm's assets to the acquiring firm's assets. According to this story, the lower the relative size, the more likely employees will stay leading to a relatively higher post-merger excess employment change. We find no significant relationship between relative size and post-merger excess employment change, as reported in column 4.

2.6.5. Target Age

Ex ante target employment may be correlated with other firm characteristics, such as the average age of its establishments. In unreported results, we control for the average age of establishments at the target firm. Age is calculated as the difference between the current year and the first year the establishment is observed in the LBD. As the LBD begins in 1975, the oldest establishments in our sample are top-coded as the current year minus 1975. Target firms with larger ex ante employments may have older establishments and establishment age may be correlated with post-merger employment change. Given that an older establishment has survived until today, it may be less likely it will close in the next few years as compared to a newer establishment. We find no statistical relation between average establishment age and post-merger excess employment change.

2.6.6. Announcement Return Results

In this section we test how the market responds to acquisitions more likely to be motivated as a means to acquire labor. In unreported results, we find no significant correlation between target ex ante employment and either target or joint announcement returns. The lack of

a significant finding may reflect the fact that benefits associated with acquiring labor will both increase the probability that a merger occurs and affect the announcement return given the merger occurs.

2.6.7. Robustness Tests Synopsis

In sum, we find no evidence indicating that the positive correlation between ex ante target employment and post-merger excess employment change is driven by 1) our definition of excess employment change; 2) post-merger asset sales; 3) acquirer size or time invariant characteristics; 4) employees matching to either small or large firms; or 5) average target establishment age. Excluding these alternative interpretations lends additional support to our acquiring labor hypothesis. Furthermore, we find no relation between M&A announcement returns and ex ante target employment.

3. Conclusion

We show that that some firms appear to be pursuing M&A activity with the specific objective of obtaining a larger workforce. A target firm with a large ex ante employment will add more to the acquirer's ex post employment. If acquirers select targets with large employment specifically for their employee base, we should then observe more positive employment changes following an M&A at these targets. We find a positive relation between ex ante target employment and post-merger employment change at the target. This relation holds whether we measure ex ante employment as raw employment or as a ratio of employment to assets, market capitalization or PP&E and does not appear to be driven by other target, acquirer, or deal characteristics.

Furthermore, we predict and find that acquiring labor acquisitions are more common during tight labor market conditions. We use recent industry employment growth as a proxy for labor market conditions and interact this variable with ex ante target employment and find a positive and significant correlation with post-merger employment change. We also predict and find that acquiring labor acquisitions are more common in industries where employees are associated with relatively higher human capital. We measure industry human capital intensity as either the fraction of the industry's workforce with a college degree or as the mean or median

wage in that industry. Using all three measures, we find the positive relation between ex ante target employment and post-merger employment change is stronger in industries where employees are associated with higher human capital.

Access to the target's employees offers one more justification for the large premiums typically associated with M&A activity. These results support arguments which emphasize the importance of labor as a source of firm value, as in Zingales (2000) and the benefits to a larger employee workforce, as in Idson (1989), Idson and Oi (1999), and Tate and Yang (2011). Furthermore, to retain these valuable employees, acquirers pursuing labor-motivated M&A activity also increase post-M&A employee retention. We find lower turnover ex post at targets which appear most likely to have been acquired for their employees as well as higher average wages.

The existence of these labor-motivated M&As does not exclude the possibility that a different subset of M&A activity is motivated to penalize managers who have tolerated over-employment as in Shleifer and Vishny (1988). Disciplinary takeovers should target firms with excess employment and result in the greatest post-merger employment declines. We proxy for excess employment with industry adjusted employment ratios and find the opposite relation in the data, a result more consistent with the acquiring labor motivation. However, we do find evidence consistent with this disciplinary motivation when considering acquisitions of targets in declining industries.

While we find evidence consistent with a subset of acquisitions which are motivated as a means to acquire labor, we also document sample-wide negative employment and positive wage effects associated with M&As. We compare targets of completed deals to targets of deals which were subsequently cancelled for reasons which appear unrelated to future employment and wage changes. We find a mean employment decline at target firms whose deals were completed, in excess of the change at control firms, of 12 percent. Alternatively targets of cancelled deals are associated with a seven percent excess employment increase, significantly different from the mean excess employment change for the set of completed deals. Wages increase by 2.4 percent for targets of completed deals and decrease by 6.4 percent for targets of cancelled deals, on average. Mean results are informative as to the expected experience for employees of target firms, however, there is significant cross sectional variation in our sample. We find that 48

percent of target establishments in the sample are associated with positive excess employment changes following the merger.

Our results point to future research questions. While we find evidence that some M&As are motivated by acquiring a larger workforce, we are unable to comment on M&As which may be motivated to acquire a few specific employees with unique skills within a firm. How common are such acquisitions? Finally, how might any surplus created in mergers motivated by acquiring labor be split between employees and shareholders?

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Table 1. Summary Statistics for M&A Deals. All target and acquirer variables are measured as of the year prior to the date effective. Assets, market capitalization, and PP&E are all normalized to year 2005 dollars. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Announcement returns are measured over a symmetric three-day window and winsorized at one percent. CARs are estimated by a market model using the value-weighted CRSP index as the market and estimated over 250 days starting 280 days prior to the event.

Variable	Mean	N
<i>Target characteristics</i>		
Target assets	2,171.4	2,003
Target market capitalization	1,074.3	2,003
Target PP&E	326.1	2,003
Target OBID/assets (percent)	2.5	2,003
Target firm-level employment	4,218.2	2,003
Target average number of employees per establishment	125.7	2,003
Target average establishment age (years)	9.0	2,003
<i>Acquirer characteristics</i>		
Acquirer assets	16,532.9	715
Acquirer mkt cap	17,355.6	715
Private acquirer (percent)	21.2	2,003
<i>Deal characteristics</i>		
Diversifying acquisition (percent)	58.0	2,003
Acquirer announcement CAR (percent)	-1.3	715
Target announcement CAR (percent)	23.6%	715
Joint announcement CAR (percent)	1.8%	715

Table 2. Post-merger Employment and Wage Changes at Target Firms. Sample includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. Raw employment change is the difference between employment at the target firm three years after the deal was effective as compared to the year before the deal was effective. Excess employment change is the difference between employment change at the target firm and matched control establishments. Excess wage change is the difference in average excess wage per employee at the target firm three years after the deal was effective as compared to the year before the deal was effective. Excess wage is estimated as target wages - state-year median wage_t - industry-year median wage_t + median year wage_t. Industry is defined at the 3-digit SIC code level. Excess wage changes for all observed employees uses wage data for all employees observed in the pre and post periods. Excess wage change limited to surviving establishments uses only wage data for employees at establishments which are observed in both the pre and post periods. Deal-weighted average weights all M&A observations equally. Median-weighted average gives ten times more weight to observations between the 40th and 60th percentiles as compared to observations outside of that range. Employee-weighted average gives more weight to observations with greater ex ante target employment.

	Deal-weighted average	Median-weighted average	Employee-weighted average	N
Raw employment change	-0.810	-0.677	-0.430	2,003
Excess employment change	-0.120	-0.052	0.128	2,003
Excess wage changes for all observed employees	0.012	0.002	0.032	1,523
Excess wage change limited to surviving establishments	0.024	0.016	0.045	1,523

Table 3. Justifications for M&A Cancellations. Sample includes all M&A observations which appear to be cancelled for reasons unrelated to future employment change and where the target firm was not subsequently acquired within the following three years.

Primary Reason for merger cancellation	Count of observations
Acquirer's inability to obtain financing	10
Acquirer's shareholder dissent	3
Change in acquirer's financial conditions	14
Disagreement over price	11
Government intervention/Regulatory Concerns	11
Inability to agree on merger terms	31
Jointly agree to terminate	22
Target's refusal of the offer	65
Target's shareholder dissent	2
Total	169

Table 4. Employment and Wage Changes at Target Firms of Completed and Cancelled Deals. The sample in column 2 is identical to the sample in Table 3 and includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. The sample in column 3 includes all targets of cancelled deals in Table 4, Panel A, for which we were able to match to the Census data. In column 4 we report the difference (column 2- column 3). Column 5 reports t-statistics associated with the difference between columns 1 and 2. Raw employment change is the difference between employment at the target firm three years after the deal was effective as compared to the year before the deal was effective. Excess employment change is the difference between employment change at the target firm and matched control establishments. Wage change is the difference in average wage per employee at the target firm three years after the deal was effective as compared to the year before the deal was effective. Excess wage is estimated as target wages - state-year median wage_t - industry-year median wage_t + median year wage_t. Industry is defined at the 3-digit SIC code level. Excess wage changes for all observed employees uses wage data for all employees observed in the pre and post periods. Excess wage change limited to surviving establishments uses only wage data for employees at establishments which are observed in both the pre and post periods. Deal-weighted averages are reported.

	Completed Deals	Cancelled Deals	Difference	T-test of differences
Raw employment change	-0.810	-0.561	-0.249	-3.22 ***
Excess employment change	-0.120	0.073	-0.193	-2.29 **
Excess wage changes for all observed employees	0.012	-0.028	0.040	0.86
Excess wage change limited to surviving establishments	0.024	-0.064	0.088	2.21 **

Table 5. Target Ex Ante Employment and Post-merger Excess Employment Changes. Sample includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. The dependent variable, excess employment change, is the difference between employment change at the target firm and matched control establishments and summed to the firm level. Change is measured as employment three years after the deal was effective minus employment the year before the deal was effective. Target ex ante employment, assets, and market capitalizations are log transformed. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Industry unionization is labor union coverage by 3-digit SIC code from www.unionstats.com. Target profitability is measured as OIBD/total assets. Industry fixed effects are at the target industry 1-digit SIC code level. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4	5
Target ex ante employment	0.107 (0.011) ***	0.091 (0.013) ***	0.117 (0.021) ***	0.117 (0.021) ***	0.092 (0.018) ***
Diversifying acquisition		0.187 (0.046) ***	0.180 (0.046) ***	0.180 (0.046) ***	0.187 (0.046) ***
Private acquirer		0.070 (0.055)	0.062 (0.055)	0.062 (0.055)	0.071 (0.055)
Industry unionization		0.003 (0.002)	0.003 (0.002)	0.003 (0.002)	0.003 (0.002)
Target profitability		0.207 (0.078) ***	0.234 (0.077) ***	0.231 (0.083) ***	0.204 (0.075) ***
Target assets			-0.040 (0.020) **	-0.033 (0.049)	
Target assets squared				-0.001 (0.004)	
Target market capitalization					0.015 (0.027)
Target market capitalization squared					-0.002 (0.002)
Year FE	No	yes	yes	yes	yes
Industry FE	No	yes	yes	yes	yes
N	2,003	2,003	2,003	2,003	2,003
N clusters	1,431	1,431	1,431	1,431	1,431
R-squared	0.053	0.097	0.100	0.100	0.097

Table 6. Target Ex Ante Employment Ratios and Post-merger Excess Employment Changes. Sample includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. The dependent variable, excess employment change, is the difference between employment change at the target firm and matched control establishments and summed to the firm level. Change is measured as employment three years after the deal was effective minus employment the year before the deal was effective. All employment ratios are log transformed. Industry adjusted target employment/total assets is calculated as the log of ex ante target employment divided by assets minus the industry (3-digit SIC) mean log of ex ante employment divided by assets. The industry adjusted market capitalization and PP&E ratios are calculated in a similar manner. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Industry unionization is labor union coverage by 3-digit SIC code from www.unionstats.com. Target profitability is measured as OIBD/total assets. Industry fixed effects are at the target industry 1-digit SIC code level. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4	5	6
Target employment / assets	0.093 (0.020) ***					
Target employment / market capitalization		0.046 (0.015) ***				
Target employment / PPE			0.048 (0.016) ***			
Industry adjusted target employment / assets				0.076 (0.017) ***		
Industry adjusted target employment / market capitalization					0.033 (0.014) **	
Industry adjusted target employment / PPE						0.053 (0.015) ***
Diversifying acquisition	0.166 (0.046) ***	0.171 (0.047) ***	0.176 (0.046) ***	0.185 (0.046) ***	0.177 (0.047) ***	0.178 (0.046) ***
Private acquirer	0.030 (0.056)	0.016 (0.057)	0.039 (0.056)	0.039 (0.055)	0.030 (0.056)	0.039 (0.056)
Industry unionization	0.005 (0.002) ***	0.005 (0.002) ***	0.007 (0.002) ***	0.005 (0.002) **	0.006 (0.002) ***	0.005 (0.002) ***
Target profitability	0.340 (0.078) ***	0.317 (0.081) ***	0.337 (0.082) ***	0.337 (0.078) ***	0.321 (0.079) ***	0.332 (0.081) ***
Year FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes
N	2,003	2,003	2,003	2,003	2,003	2,003
R-squared	0.083	0.073	0.074	0.080	0.070	0.073

Table 7. Target Ex Ante Employment and Post-merger Excess Employment Changes by Target Industry Human Capital. Sample includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. The dependent variable, excess employment change, is the difference between employment change at the target firm and matched control establishments and summed to the firm level. Change is measured as employment three years after the deal was effective minus employment the year before the deal was effective. Industry college share is the fraction of college-educated workers in that industry as in Wang (2009). Industry mean and median wages are calculated after excluding all firms involved in M&A deals. Target ex ante employment is log transformed. Diversifying acquisition, private acquirer, industry unionization and target profitability are included in all regressions but not reported to conserve space. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4
Target ex ante employment	0.035 (0.034)	-0.160 (0.109)	-0.147 (0.100)	0.087 (0.013) ***
Industry college share	-1.797 (1.041) *			
Industry college share * Target ex ante employment	0.250 (0.140) *			
Industry mean wages		-0.524 (0.260) **		
Industry mean wages * Target ex ante employment		0.072 (0.031) **		
Industry median wages			-0.483 (0.230) **	
Industry median wages * Target ex ante employment			0.067 (0.028) **	
Industry R&D / Sales				-0.047 (0.036)
Industry R&D / Sales * Target ex ante employment				0.007 (0.005)
Year FE	yes	yes	yes	Yes
N	2,003	2,003	2,003	2,003
R-squared	0.095	0.095	0.095	0.093

Table 8. Target Ex Ante Employment and Post-merger Excess Employment Changes by Historic Industry Growth. Sample includes all M&As of public US targets which meet the criteria detailed in in Section 1.1.1. The dependent variable, excess employment change, is the difference between employment change at the target firm and matched control establishments and summed to the firm level. Change is measured as employment three years after the deal was effective minus employment the year before the deal was effective. Industry employment growth (2 yr) is estimated as the change in employment within an industry (1-digit SIC) over the past two years. Industry employment growth (2 yr) IF NEGATIVE is identical to Industry employment growth (2 yr) if industry growth is negative, otherwise 0. Industry employment growth (2 yr) IF POSITIVE is identical to Industry employment growth (2 yr) if industry growth is positive, otherwise 0. GDP change is the change in GDP over the past year using real dollars. MP_expansion takes the value of 1 if the industry's real production increased that year and exceeded its long term trend. Target ex ante employment and assets are log transformed. Diversifying acquisition, private acquirer, industry unionization, target profitability, and industry fixed effects are included in all regressions but not reported to conserve space. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4	5	6	7
Target ex ante employment	0.073 (0.015) ***	0.099 (0.023) ***			0.105 (0.023) ***	0.069 (0.019) ***	0.101 (0.014) ***
Industry employment growth (2 yr)	-3.181 (1.388) **	-3.138 (1.396) **			-2.688 (1.360) **		
Industry employment growth (2 yr)* Target ex ante employment	0.508 (0.186) ***	0.493 (0.188) ***			0.356 (0.184) **		
GDP change			-0.183 (0.060) ***		-0.175 (0.050) ***		
Target assets		-0.040 (0.049)	-0.066 (0.032) **	0.065 (0.015) ***	-0.148 (0.036) ***		
Target assets squared		0.000 (0.004)					
Target assets * GDP change			0.031 (0.007) ***		0.028 (0.008) ***		
MP industry expansion				0.109 (0.136)			
Target assets * MP industry expansion				-0.023 (0.021)			
Industry employment growth (2 yr) IF NEGATIVE						-2.936 (1.986)	
Industry employment growth (2 yr) IF NEGATIVE * Target ex ante employment						0.505 (0.256) **	
Industry employment growth (2 yr) IF POSITIVE							-7.686 (3.074) ***
Industry employment growth (2 yr) IF POSITIVE * Target ex ante employment							1.217 (0.443) ***
Year FE	yes	yes	no	yes	no	yes	yes
N	2,003	2,003	2,003	2,003	2,003	2,003	2,003
R-squared	0.100	0.103	0.086	0.076	0.100	0.099	0.100

Table 9 Target Ex Ante Employment and Post-merger Turnover Changes. Sample includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1 and can be matched to the LEHD data. The dependent variable, turnover change, is the difference in turnover, measured as $\text{turnover}_{t+1} - \text{turnover}_{t-1}$, where t is the year of the date effective. Turnover, is defined as $T_{i,j,t} = (H_{i,j,t} - \max\{(E_{i,j,t} - E_{i,j,t-1}), 0\})/E_{i,j,\text{ave}}$ where T is turnover, H is the number of new hires and E is the level of employment, at firm i , establishment j , at the beginning of quarter t , at the beginning of quarter $t-1$ or average employment over the period $t-1$ to t . Target ex ante employment and all employment ratios are log transformed. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Industry unionization is labor union coverage by 3-digit SIC code from www.unionstats.com. Target profitability is measured as OIBD/total assets. Industry fixed effects are at the target industry 1-digit SIC code level. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4	5	6	7	8
Target ex ante employment	-1.268 (0.323) ***				-1.361 (0.327) ***			
Target employment / assets		-1.711 (0.455) ***				-1.749 (0.453) ***		
Target employment / market capitalization			-1.179 (0.328) ***				-1.269 (0.331) ***	
Target employment / PPE				-1.634 (0.388) ***				-1.666 (0.386) ***
Diversifying acquisition	-1.369 (1.190)	-0.432 (1.186)	-0.361 (1.181)	-0.351 (1.177)	-1.595 (1.212)	-0.592 (1.197)	-0.515 (1.190)	-0.511 (1.186)
Private acquirer	-0.930 (1.744)	-0.716 (1.657)	-0.088 (1.625)	-1.137 (1.603)	-0.692 (1.712)	-0.483 (1.622)	0.202 (1.586)	-0.914 (1.559)
Industry unionization	0.058 (0.057)	0.027 (0.054)	0.051 (0.058)	0.002 (0.054)	0.036 (0.057)	0.004 (0.055)	0.029 (0.058)	-0.022 (0.055)
Target profitability	-1.707 (2.291)	-4.211 (2.512) *	-3.965 (2.746)	-4.325 (2.989)	-1.808 (2.398)	-4.449 (2.631) *	-4.229 (2.894)	-4.568 (3.134)
Average establishment age					0.368 (0.130) ***	0.336 (0.129) ***	0.359 (0.131) ***	0.336 (0.128) ***
Industry FE	yes							
Year FE	yes							
N	309	309	309	309	309	309	309	309
R-squared	0.097	0.100	0.093	0.111	0.117	0.118	0.113	0.128

Table 10. Target Ex Ante Employment and Post-merger Wages Changes. Sample includes all M&As of public US targets by public acquirers which meet the criteria detailed in Section 1.1.1 and have at least one establishment operating in the post period. The dependent variable, excess wage change, is defined as excess wages three years after the deal was effective minus excess wages the year before the deal was effective. Excess wages is defined as log wage at the target establishment plus the median full sample wage for that year minus the median wage for all establishments operating in the same state and same year minus the median wage for all establishments operating in the same industry and same year. To be included in the sample, an establishment must be observed in both the pre and post periods. Target ex ante employment, all employment ratios, and acquirer size are log transformed. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Industry unionization is labor union coverage by 3-digit SIC code from www.unionstats.com. Target profitability is measured as OIBD/total assets. Industry fixed effects are at the target industry 1-digit SIC code level. All standard errors are robust and corrected for clustering at the acquirer level.

	1	2	3	4	5	6	7	8
Target ex ante employment	0.032 (0.017) **				0.033 (0.016) **			
Target employment / assets		0.062 (0.024) ***				0.063 (0.023) ***		
Target employment / market capitalization			0.062 (0.022) ***				0.059 (0.021) ***	
Target employment / PPE				0.040 (0.021) *				0.042 (0.021) **
Diversifying acquisition	-0.015 (0.038)	-0.033 (0.040)	-0.034 (0.039)	-0.029 (0.040)	-0.001 (0.036)	-0.019 (0.038)	-0.022 (0.037)	-0.015 (0.038)
Industry unionization	0.004 (0.002) **	0.004 (0.002) ***	0.004 (0.002) **	0.005 (0.002) ***	0.004 (0.002) **	0.004 (0.002) ***	0.003 (0.001) **	0.005 (0.002) ***
Target profitability	-0.112 (0.097)	-0.048 (0.087)	-0.049 (0.086)	-0.056 (0.087)	-0.084 (0.088)	-0.019 (0.079)	-0.025 (0.080)	-0.027 (0.079)
Acquirer size	-0.149 (0.048) ***	-0.132 (0.047) ***	-0.125 (0.046) ***	-0.128 (0.049) ***	-0.125 (0.044) ***	-0.107 (0.044) **	-0.104 (0.044) **	-0.103 (0.046) **
Acquirer size squared	0.009 (0.003) ***	0.008 (0.003) ***	0.008 (0.003) ***	0.008 (0.003) ***	0.007 (0.003) ***	0.007 (0.003) ***	0.007 (0.003) ***	0.006 (0.003) **
Average employment change for surviving establishments					-0.124 (0.049) ***	-0.124 (0.048) ***	-0.112 (0.046) **	-0.125 (0.049) ***
Industry FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes
N	774	774	774	774	774	774	774	774
R-squared	0.135	0.141	0.154	0.133	0.156	0.163	0.173	0.156

Table 11. Robustness Tests. The sample in column 1 includes all M&As of public US targets by public US acquirers with at least one establishment still operating in the post-period. The sample in columns 2 to 5 includes all M&As of public US targets which meet the criteria detailed in Section 1.1.1. The dependent variable, excess employment change, is the difference between employment change at the target firm and matched control establishments and summed to the firm level. Change is measured as employment three years after the deal was effective minus employment the year before the deal was effective. Excess Employment change on retained establishments, used in column 1, is limited to establishments which can be confirmed to be owned by the acquirer in the post-period. The dependent variable used in columns 2 to 5 uses the full sample. Target ex ante employment, assets, and market capitalizations are log transformed. Diversifying acquisitions are identified when the target and acquirer do not share the same 3-digit SIC code. Industry unionization is labor union coverage by 3-digit SIC code from www.unionstats.com. Target profitability is measured as OIBD/total assets. Relative size is the ratio of target assets to acquirer assets. Industry fixed effects are at the target industry 1-digit SIC code level. All standard errors are robust and corrected for clustering at the acquirer level.

Dependent variable	Excess Employment change on retained establishments	Excess employment change (full sample)			
Target ex ante employment	0.084 (0.019) ***	0.127 (0.022) ***	0.126 (0.022) ***	0.103 (0.052) **	0.122 (0.022) ***
Diversifying acquisition	0.136 (0.069) **	0.171 (0.071) **	0.172 (0.071) **	0.118 (0.207)	0.168 (0.071) **
Industry unionization	-0.002 (0.003)	-0.005 (0.003)	-0.005 (0.003)	-0.002 (0.007)	-0.004 (0.003)
Target profitability	0.225 (0.153)	0.363 (0.173) **	0.362 (0.174) **	0.078 (0.502)	0.363 (0.175) **
Acquirer assets		-0.015 (0.024)	0.132 (0.117)		
Acquirer assets squared			-0.009 (0.007)		
Relative size					0.015 (0.200)
Industry FE	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes
Acquirer FE	no	no	no	yes	no
N	715	715	715	1431	715
R-squared	0.069	0.097	0.100	0.778	0.095