

# Takeovers and Endogenous Labor Reallocation

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## Abstract

Existing work studies the effects of corporate events—such as mergers and acquisitions (M&A)—on workers by examining changes in labor activity before and after the event. Using new data on individual job search behavior, we examine the timing of labor market activity around M&A events. We provide evidence for a significant amount of endogenous worker selection: job search activity for employees of M&A targets begins to increase ten months prior to a takeover announcement. In contrast, stock prices of target companies begin to rise only one month before an announcement. M&A announcements, therefore, appear to mark an intermediate point in the labor reallocation process, rather than the beginning. We show that shifting the window of analysis significantly changes estimates of labor supply parameters during takeovers. The findings illustrate that accounting for endogenous worker selection prior to corporate events such as M&A is critical for correctly estimating their effects on labor.

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## Introduction

Corporate events such as mergers and acquisitions (M&A) have dramatic effects on labor, and a major issue of concern for academics and practitioners alike is understanding how workers fare during these events.<sup>1</sup> In many empirical studies of takeovers and labor, researchers compare worker outcomes before and after takeover events in order to estimate the causal effects of these transactions on workers, as the takeover date marks a clear point in time when workers become informed about their futures, and we are otherwise unable to observe the timing of workers' reactions to corporate events.

In this paper, we present new data from a major digital labor market intermediary to shed light on this timing, and show that for M&A, the process of labor reallocation appears to begin well before a takeover announcement occurs. The data we analyze describe the job search activity of approximately 23 million U.S. workers who post their resumes to an online job search platform. We study the timing of individual search activity and the target wages sought by job seekers, and we parse workers' resumes in order to characterize employees who look for new jobs when their employers are involved in mergers and acquisitions (M&A).

The data provide a unique perspective into the reallocation of workers that takes place during takeovers, as job search is a critical, but often overlooked, stage of the labor reallocation process. The data illustrate that a takeover announcement represents an intermediate point, rather than the beginning, of a labor reallocation process already

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<sup>1</sup> See Gallup, 2019; Lee et al. 2018; Ma et al. 2018; Dessaint et al. 2017; Guo and Kong 2017; Lagaras 2017; Li 2013; Li 2012; Conyon et al. 2004; McGuckin and Nguyen 2001; Cartwright and Cooper 1993; Brown and Medoff 1988.

under way: we observe a significant increase in employee job search activity starting ten months before a takeover announcement. We further describe empirically the endogenous selection process by which different types of workers engage in job search around an M&A event. We then show that the observed selection has important implications for empirical analyses of the effects of takeovers on workers. In our sample, we illustrate that accounting for the timing of employee job search by shifting the window of analysis from merger announcement dates to pre-merger announcement dates significantly impacts estimates of workers' labor supply parameters during takeovers.

Granular data on individual job search behavior is typically unobservable; our analysis is made possible by the emergence of digital labor market intermediaries. The information that we observe cannot be found in datasets traditionally used to study workers. For example, employer-employee matched administrative records primarily describe firm-worker matches that materialize after workers engage in job search. In these data, because of labor market frictions, many job seeking employees who are unable to find alternative employment opportunities immediately are observationally equivalent to those employees who refrain from exerting search effort. As a result, these data are insufficient for fully characterizing worker job search behavior, and therefore the labor reallocation process, during takeovers.

Our first set of findings illustrates the timing of employee job search effort around takeover announcements. We document a significant increase in the number of employees who post their resumes to the jobs board beginning approximately ten months before an M&A announcement (see Figure 1). In our data, the average number of employees of acquired firms who upload their resumes increases by approximately 5-

11% each month relative to baseline rates of job search for those workers from firms unaffected by takeovers. This pattern persists across different types of M&A: horizontal mergers, vertical acquisitions, and hostile takeovers. Our estimates grow larger in magnitude when we control for firm-level characteristics such as operating performance, company size, and time-series patterns in job search.

For comparison, we examine the timing of abnormal stock returns around M&A announcements. In our sample of publicly traded target firms, we observe abnormal stock returns that mirror findings from the existing literature (Eckbo 2009): cumulative abnormal stock returns materialize approximately one month before an M&A announcement (see Figure 2). These findings suggest that employees begin to exert increased job search effort well before the share price run-up that frequently occurs immediately before a takeover announcement.

Our second set of empirical findings sheds light on the wages that employees target in the external labor market when they search for jobs around M&A. At the time of resume posting, job seekers self-report their most recent wages as well as the “target” wages that they are willing to accept from a new employer. These data enable us to measure the wages at which employees are seeking to supply their labor to the external labor market around M&A events. We find that employees who search for new jobs starting up to ten months before a takeover announcement set target wages that are 2-4% lower than those set by other comparable job seekers in the population.

Our third set of empirical findings characterizes heterogeneity across employees who engage in job search around a takeover announcement. In order to classify employees, we extract workers’ job titles from their resumes and then standardize them in accordance with official 6-digit standard occupational codes (SOC). We then merge

these codes with survey data collected by the U.S. Department of Labor's O\*NET program to measure task-level heterogeneity in the types of workers who engage in job search around M&A.

Using these data, we find that the rise in job search rates observed prior to the takeover announcement is driven by employees who serve in managerial roles (see Figure 3). We also present a task-level analysis that shows that workers who perform tasks central to the organization of production in the firm, such as "Organizing Work Activities" and "Coordinating Staff" (Garicano 2000), are especially likely to increase job search effort around takeover announcements. These workers comprise a higher fraction of job seekers during the months leading up to a takeover announcement than they do during other times.

To interpret the new facts that we document, we develop a conceptual framework that incorporates takeovers into the canonical model of job search (Mortensen 1986). In this framework, changes in workers' job search effort and the wages they seek from the outside labor market reflect changes in their future wage expectations. We use our data on observed worker job search behavior to infer when, and how, workers change their wage expectations around M&A events.

We do not take a stand on the specific reasons why workers may change their wage expectations before an M&A announcement; workers may react to insider information about an impending takeover, or they may simply react to financial or business events at the firm that are predictive of a future takeover. Irrespective of the various reasons at play, ours is the first study to empirically characterize the labor reallocation process that is already well under way by the time that a corporate takeover is formally announced. The findings are inconsistent with the view that labor

reallocation during takeovers is initiated by the takeover announcement, as is implicitly assumed by many empirical studies of the effects of takeovers on labor.

We consider alternative explanations for our findings. One alternative explanation for the observed increase in employee job search prior to takeover announcements is that it reflects how workers at a takeover target respond to an increase in external labor demand. Higher external labor demand would cause these workers to exert job search effort, which in turn, could cause their employer to become a more vulnerable takeover target. This explanation is at odds, however, with the observation that employees who engage in job search prior to a takeover announcement do not post higher target wages, as an increase in labor demand would suggest. Therefore, the increase in job search prior to takeover announcements does not solely reflect a reverse causal relationship between employee job search and takeover activity.

We also present suggestive evidence that employees are not simply responding to direct knowledge of impending takeovers per se, as anecdotally, most deals are initiated approximately six months before a takeover announcement (Boone and Mulherin 2007). Moreover, we observe increased employee job search effort prior to announcements even in hostile takeovers. These transactions involve relatively less communication between acquirers and targets, as acquirers often attempt to purchase targets without the direct consent of the targets' boards. Workers involved in these transactions are therefore less likely to have direct knowledge of a takeover until it is publicly announced.

In our final analysis, we demonstrate that accounting for the endogenous process by which employees self-select into the labor supply pool prior to a takeover

announcement is critical for correctly estimating the effects of takeovers on labor. First, we empirically describe significant heterogeneity in the composition of employees who engage in job search before versus after a takeover announcement. Specifically, we find that employees who engage in job search in the immediate ten months preceding a takeover announcement seek 1-2% higher target wages than employees who search for new jobs after a takeover announcement. Second, we show that failing to account for this endogenous selection process leads to biased estimates of the effects of takeovers on workers' labor supply decisions. In our data, we show that exploiting the takeover announcement date, rather than a pre-merger announcement date, biases the average wage discount that employees are willing to accept in the external labor market by up to 43%.

The lessons that we draw in the context of M&A have broader implications for better understanding the effects of other corporate events on workers. Existing empirical work examines the effects of various events such as plant closings, bankruptcies, and ownership changes, often by exploiting event dates as a key point in time when employees become more informed about their futures at their employers, as it is difficult to otherwise identify specific times when workers react to information related to these events. Our data on job search reveals an endogenous selection process by which workers initiate labor reallocation well before the announcement of a takeover. To the extent that the start of this process precedes event dates in other settings, our findings suggest that future empirical work should account for endogenous sample selection in order to correctly estimate and interpret the effects of these events on workers.

The remainder of the paper is as follows. Section 2 proposes a conceptual framework that incorporates takeovers into the canonical model of job search. Section 3 describes the data construction, provides descriptive statistics, and discusses sampling considerations. Section 4 presents the empirical findings. Section 5 concludes.

## **2. Conceptual Framework**

To guide our empirical analysis, we propose a job search theoretic framework that incorporates corporate takeovers. We first describe the general comparative statics of the canonical on-the-job search model. We then introduce takeovers into this model. Finally, we describe how this framework enables us to interpret data on resume posting and target wage setting.

### *2.1 Canonical Job Search Model*

In the canonical model of costly on-the-job search (Mortensen 1986, Cahuc et al. 2014), an employee forms an expectation over the discounted stream of wages that she expects to earn from her employer. While doing so, she faces an exogenously specified distribution of outside wage offers, and may receive income during unemployment spells (such as unemployment insurance). The benefit of searching for a new job is that the employee may receive a wage offer that represents a significant improvement to her wage expectations at her current employer. The cost of searching for a new job is that the worker must exert effort to look for outside wage offers; the costs associated with this effort may include the opportunity costs of spending time looking for vacancies, interviewing for new positions, and potentially bargaining over terms of employment.



In equilibrium, a worker optimally exerts job search effort until the marginal benefit of search effort equals the marginal cost of search effort. Additionally, the worker obeys the following rule: accept any wage offer that exceeds her reservation wage, where the reservation wage is an endogenously determined threshold that reflects various model parameters. These parameters may include income during unemployment spells, characteristics of the outside offer distribution, personal discount rates, and other factors that influence the worker's preferences or the constraints that she faces. There are two standard comparative statics that emerge from the canonical model: search effort increases, while the reservation wage decreases, in response to a negative shock to the income that an individual expects to earn at her current employer (*ceteris paribus*).

## *2.2 Incorporating Corporate Takeovers into the Canonical Job Search Model*

Events that take place at takeover targets may provide new information to employees about the wages that they can expect to earn from their employers. Examples of such events could be unexpected reductions in firm profitability, technological shocks that impact product market competition, and/or the development of new goods and services. Events of these types can inform workers' earnings expectations through two channels.

First, these events may have a direct impact on the expected earnings of workers through subsequent changes that the firm may make on its own. For example, if the firm realizes an unexpected reduction in earnings, managers may choose to lay off employees or freeze wage growth as a means of stemming additional losses. Second, these events may have an indirect impact on workers' expected earnings by affecting

the probability of a takeover and the subsequent organizational changes that a takeover precipitates. For example, an acquiring firm might lay off employees of an acquired firm after a takeover as a means of reducing organizational redundancies (Dessaint et al. 2017; Ma et al. 2018; Ouimet and Zarutskie 2016; Tate and Yang 2015; Li 2013; Conyon 2002; Brown and Medoff 1988).

The implications of these types of events for different employees within the firm are likely to be heterogeneous: these events may represent positive, negative, or neutral shocks to the earnings expectations of different types of workers. As per the comparative statics of the canonical search model, those employees who view such events as negative (positive) earnings shocks will increase (decrease) their job search efforts and decrease (increase) their reservation wages. Those employees who do not change their earnings expectations in response to these shocks will not display any changes in job search behavior.

### *2.3 Connecting the Data to the Theory*

We use this conceptual framework to interpret the new empirical facts that we document in this paper. We treat online resume posting as an empirical proxy for job search effort: we assume that an increase (decrease) in the number of employees from a firm that post their resumes to the online job search platform constitutes an increase (decrease) in job search effort by the firm's employees. Similarly, we use the self-reported wage that an employee requires in order to accept a job offer from an external employer, as an empirical proxy for the employee's reservation wage.

Under these assumptions, our data enable us to answer many new questions that have not been studied in the existing literature. By examining changes in employee

resume posting, we are able to infer if and when employees of acquired firms change their earnings expectations. We can also estimate the quantities and types of employees who are most likely to engage in job search prior to a takeover announcement. Our data on target wages allows us to quantify the extent to which workers adjust their reservation wages prior to takeover announcements. The observed timing of individual resume posting allows us to examine how workers' external wage expectations vary across employees who search for jobs at different times.

The job search activities of employees represent a critical stage in the labor reallocation process. In order for workers to change jobs from one employer to another, they must first engage in a process of job search. Our data enable us to infer when workers change their earnings expectations in response to information that they observe at takeover targets, and as a consequence, allow us to shed light on how labor reallocation is initiated around takeover events. By improving our understanding of the labor reallocation process around takeovers, we can improve empirical strategies designed to measure the effects of takeovers on workers.

### **3. Data**

The data that we analyze in this study come from several sources. In this section, we describe how these data are assembled, present sample descriptive statistics, and discuss important sampling considerations.

#### *3.1. Sample Construction*

The first data source is a major online jobs board focused on the U.S. labor market. The website serves as a platform for two-sided matching between job seekers

and companies: job seekers post their resumes on the website to look for jobs, while employers search these resumes to identify desirable job candidates. Job seekers voluntarily provide information about their backgrounds and employment histories to the website by entering information in various standardized fields.

Through a proprietary agreement with the company, we obtain the most recent information posted by individual job seekers as of 2010 (dating back to 2000). For each job seeker, we observe a resume posting date and the name of their current employer. From the website, we also obtain information on their employment status as of the time they last updated their resume, the wage they earned in their most recent job, and the target wage that they are willing to accept in order to take a new job. We also collect user demographic information such as race and gender for each of these workers. There are approximately 23 million workers in our sample, or 13% of the U.S. labor force.

We classify each occupation held by a job seeker in accordance with the U.S. Department of Labor's Standard Occupational Classification (SOC) system. Using information on job title, job description, and worker education, we identify the 6-digit SOC code that most accurately characterizes an individual's job title at their current employer.<sup>2</sup> We then merge this data with the Department of Labor (DOL) and Employment and Training Administration's (ETA) 2012 survey data on occupational requirements. The U.S. DOL/ETA's Occupational Information Network (O\*NET) database contains information on the work activities, skills, and tasks required in a given occupation (at the 6-digit SOC level). This information is collected from national surveys of each occupation's worker population (randomly selected from the entire

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<sup>2</sup> See [www.bls.gov/soc/major\\_groups.htm](http://www.bls.gov/soc/major_groups.htm) for more detailed information on official SOC group descriptions.

population of establishments in the U.S.), or otherwise, through occupation experts for those occupations where worker sampling is difficult. For example, the O\*NET program quantifies the extent to which work activities such as “Analyzing Data or Information” and “Making Decisions and Problem Solving” are important for every SOC code defined by the DOL.

The O\*NET database has become a major data source for empirical work in labor economics (Autor et al. 2003; Jensen and Kletzer 2010; Blinder 2009; Hallock 2013). For every 6-digit SOC code in our job seeker data set, we merge the corresponding data from the O\*NET database on work activities so that we have standardized occupational characteristics for each individual employment spell in the resume sample.

We then merge our linked data to a third source of information: Capital IQ’s database on public and private firm characteristics. For each of the current employers listed by job seekers, we collect data on the employer’s balance sheet and income statements for the years when an individual is employed by the firm.<sup>3</sup> Specifically, for each company, we collect information on the size of its assets, physical capital stock (plant, property, and equipment (PPE)), operating earnings, and 4-digit standard industrial classification (SIC) code. These data are mostly available for publicly traded firms, but we do observe some of these fields for private companies as well.

Finally, we collect data on whether a given company was ever acquired in an M&A event during the sample period. Details on an M&A transaction, such as the date of the announcement and whether the deal involved a tender offer, are provided by Capital IQ. We use these data to describe the types of takeovers that we observe in our sample.

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<sup>3</sup> Capital IQ maintains name history files that are used to ensure that a given company with multiple name changes in the resume database is correctly linked to the same firm identifier in Capital IQ.

We define horizontal takeovers as deals in which the acquirer and target firm share the same 2-digit SIC code. Using industry input-output tables provided by the U.S. Bureau of Economic Analysis, we define vertical takeovers as deals in which the target or acquirer belongs to an industry that produces output which comprises at least 5% of the input used by the opposing party in the transaction (following Kedia et al. 2011). We define hostile takeovers as deals that involve a tender offer, as these transactions often involve the acquiring firm attempting to purchase a target firm without the consent of the target firm's board.

The final, merged dataset consists of detailed occupation and employer data for each employment spell reported by a job seeker who uses the website. As part of our data agreement with the company, we report findings using a 10% random sample for this paper. However, our results are robust to the choice of sample size, as we observe similar findings for random 5%, 10%, and 15% subsamples of the full data.

### *3.2. Sample Descriptive Statistics*

Table 1 presents summary statistics describing the individual job seekers in our sample. For comparison, we also present the corresponding characteristics for workers in the U.S. labor force using data from the 2012 CPS March supplement, BLS statistics, and OES employment surveys. The figures in the table indicate that our data cover a wide spectrum of the U.S. workforce, as online job sites such as our data provider are a major job search channel (Kuhn and Skuterud 2000, 2004). Not surprisingly, however, there are some important sampling differences between our dataset and the overall population. Panel A shows that our sample is approximately 52% female, while the U.S. labor force is approximately 47% female, illustrating that we over-sample female

workers in our data. Panel B illustrates that our sample has a similar distribution of education levels across workers, except for those with a college degree, who are overrepresented in our sample. The difference in college degree attainment likely reflects the fact that college-educated workers are more likely to use Internet job resources than are individuals without a high school education (i.e., the remaining workers in the CPS sample).<sup>4</sup>

The distribution of employment across industries for our sample is compared to that of the U.S. labor force in Panel C. Industry classifications for the employers in our sample are by SIC 2-digit major group. The span of industries for workers in our sample closely resembles that of the total labor force, as the employers in our sample consist of nearly all public firms as well as many of the larger private firms in the U.S. There is over-sampling of the finance and business sectors in our data relative to the U.S. labor force, and there is under-sampling of agriculture, construction, and retail trade. Both patterns are to be expected, as the propensity to find employment through online resources is likely to be higher in knowledge-intensive industries such as finance relative to industries such as agriculture. Moreover, industries that are under-sampled in our data tend to consist of smaller, private firms with relatively fewer employees.

The distribution of occupational employment for our sample is compared to that of the U.S. labor force in Panel D. Occupational statistics for the U.S. labor force are obtained from the DOL's 2012 Occupational Employment Statistics (OES) program. To compare the job-seeker sample with the OES sample, we map the occupational subcategories in the data to the major occupational headings as per the DOL's SOC

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<sup>4</sup>. Panel C excludes workers who have either less than high school educational attainment or unspecified educational attainments; we exclude this group from the current analysis because many of these workers may have incorrectly specified their education levels on the website.

system (2-digit level). Panel D shows that the distribution of occupations in the sample is similar to that of the U.S. labor force. Moreover, the large number of observations across occupations illustrates that we observe job histories for workers across many categories, ranging from lower ranked employees to higher ranked managers. There is some oversampling of management and administrative and clerical positions in our data, and there is under-sampling of occupations related to food, construction, installation, and production services. Panel E reports the mean and median annual wages earned by users in our sample, which are \$38,000 and \$33,000, respectively. These figures are very close to the U.S. labor force mean and median incomes in 2010 of \$38,337 and \$26,197 (as per the 2011 CPS), respectively.

Overall, Table 1 illustrates that our dataset contains detailed information about the types of job seekers who tend to use online resources to find employment. While the number of such workers in this population is significant and covers a large cross-section of the skill distribution, as evidenced by the broad similarities in worker attributes between the sample and the labor force, there are many workers who are not represented in our data. Therefore, we are able to use our data to assess how takeovers impact many, but not all, workers within a firm.

In Table 2, we present the sample characteristics for the firms (employers) in our sample. There are a total of 1,277, 980 unique company names in our sample, as per the names listed by job seekers on their resumes. We are able to match these company names to 159, 136 unique Capital IQ identifiers. Panel A describes firm characteristics for the publicly traded firms in our sample as of 2010. The median public firm size in terms of the book value of assets is \$745.21 million, while the median public



firm return on assets (defined as the ratio of earnings before interest, taxes, depreciation and amortization divided by the book value of assets) is 9.5%.

Panel B depicts the industry distribution of mergers and acquisitions in our sample relative to the population. The similarities across both distributions illustrate that our sample is representative of takeover activity involving both public and private firms; at least 32% of the mergers that we observe are in the manufacturing sector.

Panel C illustrates that approximately 31% of our sample's takeovers are horizontal mergers, while 10% of our sample is comprised of vertical acquisitions.

### *3.3 Sampling Considerations*

Our dataset has various advantages and limitations. The main advantage of our data is that we are able to analyze detailed information on individual job search behavior for a large sample of the U.S. labor force. This information is unavailable in datasets commonly used to study labor, and it allows us to present new facts that describe how workers react to changes in earnings-related information around takeover announcements. As such, we are able to analyze a key phase of the labor reallocation process that is frequently overlooked in studies of corporate events and labor.

One of the limitations of our data is that our sample is not a random sampling of the U.S. population. We have higher sampling rates of workers who are more likely to use online resources for job search than workers who use alternative means for finding jobs, and we are more likely to observe large employers in our sample given that we observe a proper subset of the total labor force. Additionally, corporate takeovers are not random events that take place across firms. The sample statistics presented in

Tables 1 and 2 attest to these sampling considerations. Nevertheless, we believe that the within-sample dynamics that we observe are informative for understanding the broader process of labor reallocation that takes place during corporate takeovers. In particular, our results are useful for highlighting the importance of endogenous labor activity around mergers and acquisitions.

## **4. Empirical Analysis**

### *4.1. Empirical Findings*

In this section, we describe our empirical findings. First, we describe the facts that we observe in the data. Second, we interpret these facts given the conceptual framework presented in Section 2. Third, we consider alternative explanations for the evidence. Finally, we present additional analyses to illustrate the implications of our findings.

#### *4.1.1. Job Search Effort*

In order to examine how the employees of acquired firms engage in job search effort, we present two sets of analyses. First, we present raw data that illustrates how the employees of acquired firms post their resumes in the months leading up to a takeover announcement. Figure 1 depicts the number of employees from acquired firms in our sample who post their resumes each month during the 12 months that precede a takeover announcement. For comparison, we present the cumulative abnormal stock returns of publicly-traded target firms around M&A announcements in Figure 2.

Figure 1 suggests that there appears to be a significant increase in the number of workers who post their resumes online, at least nine months prior to the announcement

of an M&A deal. In contrast, cumulative abnormal stock returns for publicly traded targets materialize approximately one month before an M&A announcement. Moreover, in results not reported here, when we extend the event window to include 12 months prior to an M&A announcement, we do not observe significant cumulative abnormal returns outside of the immediate month preceding a takeover announcement.<sup>5</sup>

Second, we present OLS regression estimates of the change in the number of employees who post their resumes each month prior to an M&A announcement. Specifically, we estimate the following regression:

$$\text{Log Number of Job Seekers}_{jt} = \beta * \text{Takeover}_{jt+T} + v_j + y_t + \text{Controls}_{jt} + e \quad (1)$$

where the dependent variable, *Log Number of Job Seekers<sub>jt</sub>*, is the natural logarithm of the number of employees from firm *j* who post their resume in month *t*. The key independent variable of interest, *Takeover<sub>jt+T</sub>*, is a binary indicator for whether firm *j* has been announced to be acquired in a merger or acquisition as of month *t+T*. We also include controls for firm and year fixed effects, along with other measures of firm characteristics such as firm size (measured as the natural log of the firm's book assets) and profitability (measured as the ratio of operating earnings to book assets).

The regression coefficient of *Takeover* measures the average difference between the log number of employees who engage in job search in the immediate *T* months preceding a takeover announcement, and the log number of employees who search for jobs at firms that do not get acquired within the same window of time. The regression enables us to detect whether there is a statistically significant increase in the number of

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<sup>5</sup> It is worth noting that Figure 1 potentially suggests that there is a decrease in the number of employees from acquired firms who engage in job search immediately after a takeover announcement. These data are subject to significant measurement error, as employees who search for jobs after a takeover announcement frequently change the name of their employer from the target firm to the acquired firm. Therefore, in this study, we do not attempt to analyze the numbers of employee job seekers that follow a takeover announcement.

employees who exert job search effort in the months leading up to a takeover announcement.

The coefficient estimates are reported in Table 3. Column (1) of Table 3 illustrates that when we look at monthly changes in log employee job search counts starting 12 months before a takeover announcement (i.e.  $T = 12$  months), we see statistically significant changes in the number of employees who engage in job search ten months prior to a takeover announcement. Informed by the results in Column (1), we measure the average change in employee job search counts across the ten months that precede a takeover announcement in Columns (2) through (6). Across the different specifications in these columns, we observe positive and statistically significant coefficients that range in magnitude from 5.1 to 10.1. Intuitively, these estimates imply that the number of employees who engage in job search in the ten months prior to a takeover announcement increases by 5.2% to 10.6%.

The results are robust across specifications that vary in the choice of controls, such as firm-specific baseline averages in monthly job search behavior. When we control for observable firm characteristics such as operating profitability and size, we see that the number of employees who engage in job search increases with firm size and decreases with poor profitability. These results are intuitive, as firms of greater size in terms of assets will typically have larger workforces, while poor firm performance is likely a harbinger of layoffs and wage cuts that will cause workers to look for new jobs (as explained in Section 2). When we add these controls, the sample size decreases because the only firms for which these controls are observable are public firms. In spite of the sample size reduction, however, the magnitude of our main coefficient estimate

almost doubles, ostensibly illustrating the increased accuracy of our coefficient estimates once confounding factors are accounted for in the regression.<sup>6</sup>

In Table 4, we repeat our estimation of Specification (1) for three different types of M&A transactions: horizontal, vertical, and hostile takeovers. The results in Table 4 illustrate that across various types of M&A transactions, we observe a significant increase in the number of employees who engage in job search during the ten months prior to an M&A announcement. The coefficient on *Takeover* is quantitatively similar across all specifications in Panels A through C.

#### 4.1.2. Reservation Wages

In order to empirically evaluate the wages that job seeking employees are willing to accept from the external labor market around M&A announcements, we analyze workers' self-reported "target" wages. Specifically, we estimate the following OLS regression:

$$\text{Target Wage Premia}_{ijt} = \beta * \text{Takeover}_{jt+T} + v_j + y_t + \text{Controls}_{ijt} + e \quad (2)$$

where the dependent variable, *Target Wage Premia*<sub>ijt</sub>, is the ratio of the target wage divided by the current wage of job seeker *i* employed by firm *j* at time *t*. We include individual-level controls such as years of labor market experience, highest level of educational attainment, race, gender, and occupation as of time *t*.

The regression coefficient on *Takeover* in this specification is a measure of the average change in the target wage premia that job seekers are willing to accept around M&A announcements. The regression estimates tell us whether job seeking employees

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<sup>6</sup> For brevity, we report results with firm-level controls such as ROA and size. When we add additional firm-level controls such as leverage, capital intensity, R&D intensity, and firm age, the coefficient estimates for *Takeover* are even larger than the estimates presented in Table 3.

are willing to take a wage discount in the months preceding a takeover announcement. We consider the target wage premia of employees impacted by different types of takeovers: the full sample of observed takeovers, horizontal mergers, and vertical acquisitions. The coefficient estimates across these samples are presented in Table 5.

Across all columns in Panel A, the findings indicate that employees who search for new jobs starting in the immediate ten months prior to an M&A announcement appear to take a target wage “discount” relative to other job seekers in the population. The estimates imply that job seeking employees from acquired firms are willing to accept 1.9-3.3% lower target wages given their current wages, relative to other, comparable job seekers in the population. The estimates across all columns in Panels B and C are similar to the estimates presented in Panel A, suggesting that the nature of target wage discounting is similar across workers employed by firms acquired in different types of takeovers.

#### *4.1.3 Occupational Composition of Job Seeking Employees*

We examine how the occupational composition of job seekers varies around M&A announcements in two sets of analyses. In our first set of analysis, we graphically plot the occupational distribution of employees who engage in job search starting in the immediate ten months prior to an M&A announcement. We compare this distribution with the occupational distribution of workers who engage in job search in the absence of impending M&A activity.

These distributions are presented in Figure 3, across employees classified by their 2-digit SOC codes. Figure 3 illustrates that the fractions of job seekers across most 2-digit SOC codes remains similar or decreases during the months immediately before

an M&A announcement and during the absence of an M&A announcement. The most obvious exception, however, is SOC code 11: managers. This set of workers shows the largest increase in the fraction of employees who engage in job search prior to a takeover announcement.

In a second set of analysis, we present regression estimates that characterize the types of tasks performed by employees who engage in job search around M&A announcements. Specifically, we estimate the following OLS regression specification:

$$Task\ Score_{ijt} = \beta * Takeover_{jt+T} + v_j + y_t + Controls_{ijt} + e \quad (3)$$

where the dependent variable,  $Task\ Score_{ijt}$ , is the logarithm of the score of a given task performed by job seeker  $i$  employed by firm  $j$  at time  $t$ . As discussed in Section 3, tasks scores are collected by the U.S. DOL's O\*NET program across 6-digit SOC codes. All other variables are the same as in Specification (1), and we set  $T = 10$  months following the results in Table 3.

The regression coefficient for  $Takeover$  provides a numerical estimate of how the score for a given task differs between the average worker who searches for a job starting in the ten months prior to a takeover announcement versus the average worker who searches for a new job in the absence of a takeover announcement. The regression supplements the graphical analysis in Figure 3 by enabling us to control for various determinants of job search by workers of specific occupations and, therefore, more rigorously detect changes in the occupational distribution of employees who search for new jobs prior to M&A announcements. We consider various types of tasks that are associated with managerial responsibilities versus production line roles. Managerial tasks include: "Making Decisions that Affect the Whole Firm", "Organizing Work Activities for Employees", "Communicating to Staff", and "Establishing and Maintaining

Relationships Among Co-workers.” Production line tasks include: “Performing Physical Tasks”, “Repairing Equipment and Machinery”, “Drafting Technical Specifications”, and “Selling Goods to Customers.”

Table 6 presents our regression estimates. Panel A illustrates that the average score for managerial tasks increases among job seekers who search for jobs starting in the ten months prior to a takeover announcement. Across Columns (1) through (8), the log score for each task increases irrespective of the choice of controls used in the regression. The results imply that the average employee who looks for a job in the months preceding a takeover announcement performs managerial tasks with greater intensity than other, comparable job seekers. Conversely, the results in Panel B illustrate that the average score for production-level tasks decreases among job seekers prior to takeover announcements. These results indicate that we do not observe a significant increase in the fraction of production line employees who search for jobs in the months leading up to a takeover announcement.

#### *4.2 Theoretical Interpretation of the Main Findings*

We use the conceptual framework developed in Section 2 to interpret our empirical findings on job search effort, target wages, and the occupational distribution of job seekers around takeover announcements. The findings are consistent with the view that employees of acquired firms react to information prior to takeover announcements that causes many of them to lower their future wage expectations at their current employer. We are unable to take a stand on the types of information that employees observe, as this information is unobservable and is likely to vary across different type workers and transactions. The main focus of our analysis is to instead



identify whether workers engage in job search before a takeover is publicly announced, and infer whether the net sum of the information that workers receive prior to an announcement leads to empirically demonstrable changes in search behavior.

Our findings illustrate an endogenous labor reallocation process that begins well *before* takeovers are announced to the public. The findings are inconsistent with the view that the process of labor reallocation during M&A begins at the announcement of a takeover or begins at the outset of share price run-ups that are frequently observed before M&A announcements. These models might otherwise serve as reasonable priors, given well-established evidence of stock price run-ups one month prior to takeover announcements, and given the absence of previous research documenting employee job search patterns.

By rejecting this view, our findings help advance our understanding of how workers cope with the changes that take place around M&A events. Job search is a critical, but frequently overlooked, stage of the labor reallocation process. By correctly accounting for the timing of endogenous employee job search, we can better estimate the effects of takeovers on labor, a concern for academics and practitioners alike. We discuss these issues in more depth in Sections 4.4 and 4.5.

#### *4.3 Alternative Explanations for Main Findings*

We consider various alternative explanations for our main findings, and present additional evidence to evaluate these explanations in more depth. One alternative explanation for our findings on increased job search prior to a takeover announcement is that these patterns reflect a reverse causal relationship between employee job search and takeovers. It is possible that employees of specific firms experience increases in

external labor demand, which induces them to increase their job search effort. Increased attention towards job search and higher rates of subsequent employment separations may cause their employers to become more vulnerable takeover targets.

The strongest evidence that contradicts this explanation is the set of findings on the target wages chosen by job seekers prior to takeover announcements (Table 5). If increased job search prior to a takeover announcement reflects an increase in the labor demand for employers of eventual takeover targets, then we should expect an increase in employee reservation wages, as per the predictions of the canonical search model presented in Section 2. The results in Table 5, however, reject this hypothesis. The observed reduction in wages that job seekers are willing to accept from the external labor market indicate that the increases in job search effort observed prior to takeover announcements are not driven by increases in external labor demand.

A second alternative explanation for our findings is that employees may be reacting to specific knowledge of an impending takeover of their employer. For example, negotiations between an acquiring firm and a target firm may be initiated as early as ten months before a takeover announcement. If employees quickly learn about these negotiations, they then may engage in job search and give rise to the observed patterns in resume posting and target wage setting that we document.

We believe that this explanation cannot fully account for our findings. First, most deals are initiated approximately six months—not ten months—before a takeover announcement (Boone and Mulherin 2007). Second, we note that employees exert increased job search effort even in the months preceding hostile takeover announcements (Table 4, Panel C). Hostile takeovers involve relatively less communication between acquirers and targets, as acquirers often attempt to purchase

targets without the direct consent of the targets' boards. Workers involved in these transactions are therefore less likely to observe information about takeovers until they are publicly announced. Because we observe increased job search effort in the months leading up to hostile takeover announcements, we believe that our findings for the full sample do not solely reflect employees learning about impending takeovers per se.

#### *4.4 Takeovers and Endogenous Worker Selection*

Our findings have implications for better understanding the effects of takeovers on workers. Given that our data suggest a change in priors regarding the timing of employee job search around takeover announcements, a natural question to consider next is whether workers who search for jobs in advance of a takeover announcement face different labor market prospects than workers who search for jobs close to a takeover announcement. If so, then accounting for the endogenous selection process by which workers enter the job seeker pool is critical for correctly estimate the impact of takeovers on labor.

To explore this issue, we examine how employees who search for new jobs in the immediate ten months preceding a takeover announcement set their target wages relative to workers employed by non-acquired firms. More specifically, we re-estimate Specification (2), restricting our sample of treated workers to those workers employed by acquired firms who search for new jobs in the ten months immediately preceding a takeover announcement. That is, we exclude all employees of acquired firms who search for jobs after a takeover announcement from the treatment sample. The control sample remains the same as before.

We then compare employees' target wages in the ten months preceding a takeover announcement, with the target wages chosen by employees who job search after a takeover announcement. We estimate the following OLS regression specification:

$$\text{Target Wage Premia}_{ijt} = \beta * \text{Post-Takeover}_{jt} + v_j + y_t + \text{Controls}_{ijt} + e \quad (4)$$

where *Post-Takeover* is a binary indicator for whether job seeker *i* searches in the immediate ten months preceding a takeover (*Post-Takeover* = 0) or after a takeover (*Post-Takeover* = 1). All other variables are defined in the same way as in Specification (2). This regression allows us to compare the target wages chosen by workers who engage in job search in the immediate months before, versus after, a takeover announcement.

The results are presented in Table 7. Panel A indicates mixed results regarding the differences between the target wages set by workers who search in the immediate ten months preceding takeover announcements and the target wages set by comparable workers who search for jobs in the absence of an impending takeover announcement. Depending on the specification, employees who search for new jobs prior to takeover announcements set target wages that are similar to, if not significantly lower than, the target wages chosen by other comparable workers.

Panel B of Table 7, however, shows robust evidence that workers who search for jobs after a takeover announcement are willing to accept significantly lower wages in the external labor market than employees who search for new jobs in the ten months preceding a takeover announcement. The results indicate that the timing of job search is a statistically significant predictor of employees' reservations wages, even after controlling for a variety of different employee and firm characteristics in Columns (1) through (5).

While the results in Table 7 do not necessarily depict a causal relationship between the timing of job search and workers' external wage expectations, the results do illustrate differences in the composition of employees who search for new jobs at different points of time around takeover announcements. This evidence illustrates the endogenous selection process by which workers enter the job search pool around takeover events: workers who begin job search before a takeover announcement have higher wage expectations than workers who search for jobs after a takeover is publicly announced.

#### *4.4 Selection Bias in Estimates of Takeover Effects on Workers*

The figures in Table 7 imply that studies which aim to estimate the effects of takeovers on labor should account for the endogenous behavior of workers that takes place *prior* to a takeover announcement. Failure to do so can distort estimates of the effects of takeovers on various quantities of interest. For example, an empirical design that considers job seekers in the ten months prior to a takeover announcement as “unaffected” by the takeover may mischaracterize the full effects of takeovers on labor.

To illustrate this point in our setting, we show that failure to account for the search behavior of workers prior to a takeover announcement biases estimates of takeovers' effects on worker's target wages. We measure this distortion by estimating specification (4), and defining *Post-Takeover* as a binary indicator of whether a given employee engages in job search before, versus after, a takeover announcement. In this specification, we deliberately treat *all* workers who engage in job search prior to a takeover announcement as part of the control sample. We compare the coefficient estimates for this specification, with the coefficient estimates presented in Table 5, in

which all workers who engage in job search in the immediate ten months prior to a takeover are considered part of the treatment sample.

The results of this comparison are presented in Table 8. Across all columns in Panel A, the estimated coefficients for *Post-Takeover* using the truncated treatment sample are significantly more negative than the estimated coefficients presented in Table 5. By using the takeover announcement date as the event date, we estimate target wage discounts that are significantly larger than the wage discounts that workers are willing to accept under specifications that use a ten month pre-announcement date as the event date. In other words, the truncated sample leads to estimates that overstate the wage cuts that employees of acquired firms are willing to accept in the outside labor market.

The observed differences in target wage premia across the different specifications stem from the fact that many workers who search for new jobs prior to a takeover announcement have higher target wages than workers who search for new jobs after a takeover announcement. In Panel B of Table 8, we show that including workers who engage in job search in the immediate ten months preceding a takeover announcement as part of the “treatment” sample can reduce the estimated wage discount by up to 43%. These results illustrate that if we ignore the endogenous differences in the types of workers who look for new jobs around a takeover announcement, we incorrectly estimate workers’ reservation wages, and hence mischaracterize workers’ labor supply behavior, around M&A events.

While these findings pertain directly to takeovers and labor, our analysis has implications for empirical work that examines the effects of various corporate events on labor. To the extent that workers react to information related to corporate transactions

before they are formally announced to occur, such as plant closings and legal changes in corporate control, our study suggests that empirical designs that aim to estimate the effects of these transactions on workers take these reactions into account. Accounting for richer models of labor reallocation—in this case, endogenous worker behavior prior to an event date—likely leads to more precise estimates of the effects of these events on labor, and can help better guide academic and practitioner understanding of worker welfare and efficiency during these times.

## **5. Conclusion**

This paper presents new evidence that describes employee job search behavior around corporate takeovers. Job search is a critical, but frequently overlooked, stage of the labor reallocation process that takes place during mergers and acquisitions. We document a large increase in the number of employees who exert job search effort and a significant reduction in the wages that these workers are willing to accept starting up to ten months before a takeover announcement. The results illustrate that labor reallocation is an endogenous process that begins well before a takeover is publicly announced.

Our findings have implications for understanding how corporate events such as mergers and acquisitions impact labor. Existing work on takeovers and labor typically exploits the takeover event date as a clear point in time when workers become informed about their future labor market prospects, as it is otherwise difficult to observe when workers first react to information that relates to M&A. Using new data on job search, we demonstrate that a significant number of employees self-select into the labor supply pool prior to a takeover announcement. We show that failure to account

for this endogenous selection process distorts estimates of the effects of takeovers on labor.

The lessons we draw in the context of takeovers are likely to pertain to other corporate events that impact workers. In these settings, it is likely that the endogenous selection of workers into the job seeker pool has important implications for correctly estimating the effects of these events on workers. Furthermore, the findings in this paper motivate further inquiry into the broader process of labor and capital reallocation during corporate events. While our data shed light on the phase of job search, there is still too little known about other stages of the reallocation process, such as the matching process between firms and workers. These stages of the labor and capital reallocation process are critical to study, as they likely have important implications for better understanding the efficiency and welfare consequences of corporate financial events of interest.



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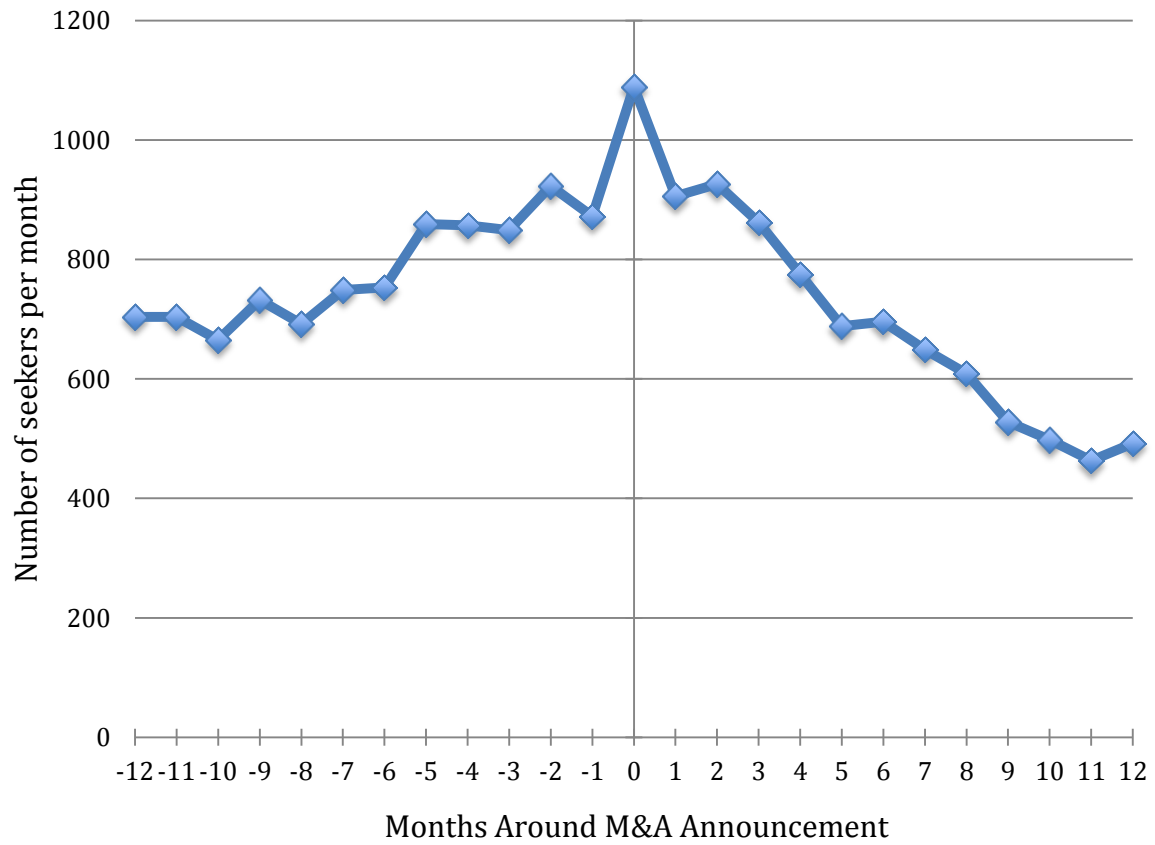
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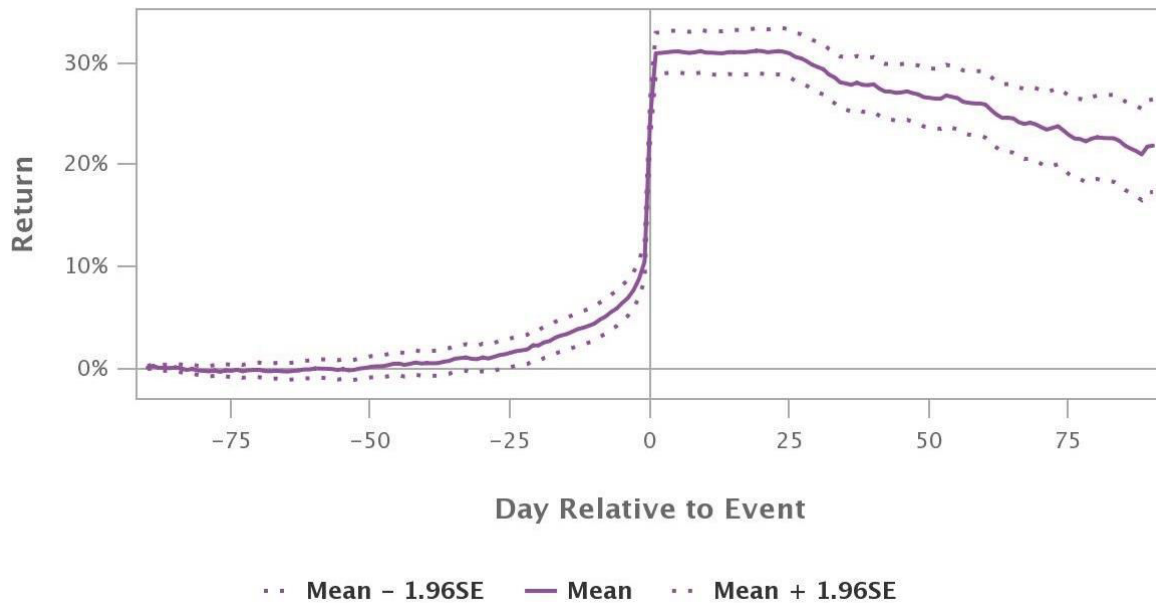
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## FIGURES



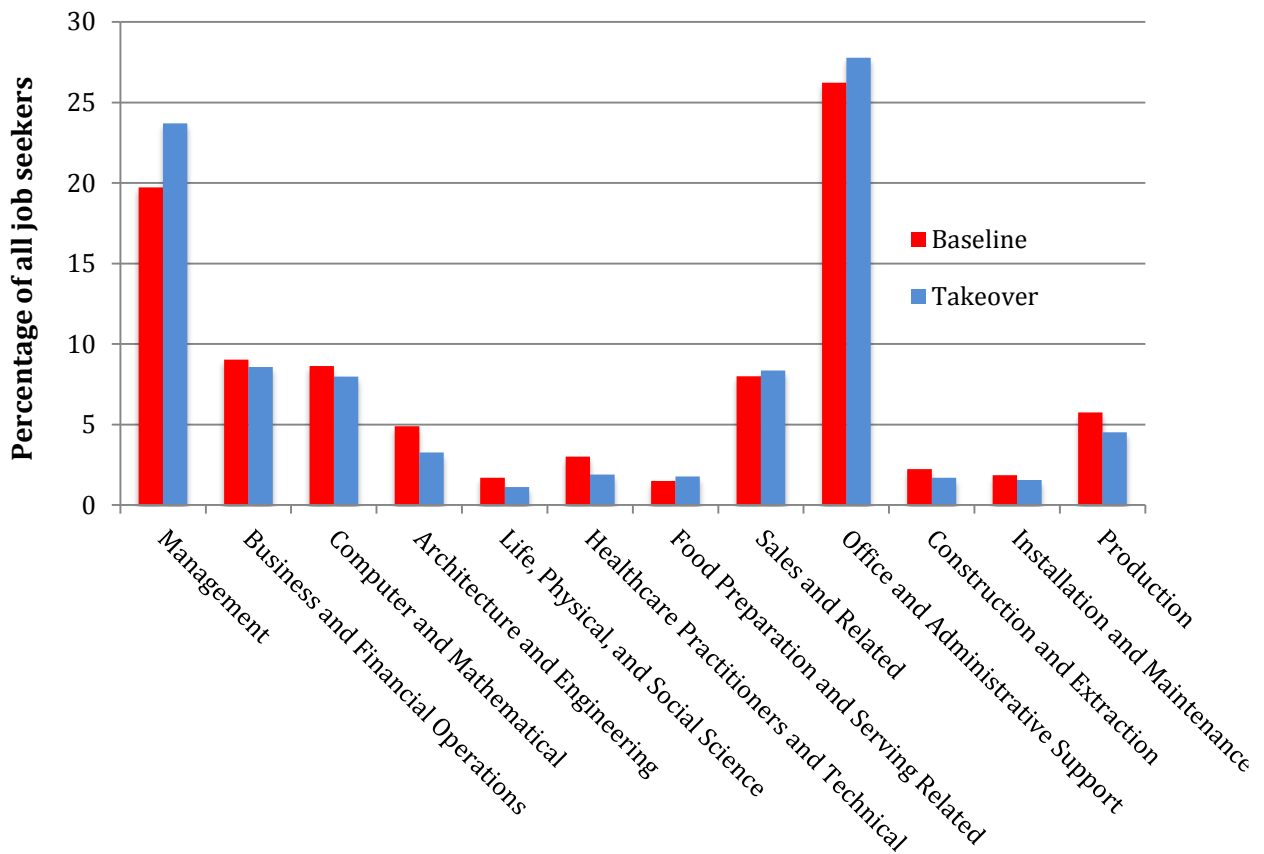
**Figure 1. Job Search around M&A Announcements**

This figure plots the number of employees from target firms in the sample who post their resumes to the job website during the months surrounding an M&A announcement (month 0).



**Figure 2. Cumulative Abnormal Stock Returns of Target Firms Around Takeover Announcements**

This figure depicts event study abnormal stock returns for publicly traded target firms in our sample. The benchmark model used to calculate abnormal returns is the 4-factor (Fama-French Plus Momentum) factor model. The estimation window length is 100 days, with a 50 day gap between the estimation window and the event window. The sample consists of 3,821 target firms that are acquired during the sample period.



**Figure 3. Occupational Distribution of Job Seekers**

This figure depicts the occupational distribution of employees of acquired firms who engage in job search during normal times (“Baseline”) vs. during takeover events (the “Takeover” period begins ten months prior to a takeover announcement). The x-axis depicts official 2-digit standard occupational classifications (SOC) of employees at the time of resume posting, for the twelve most common SOC codes observed in the sample.

**Table 1. Worker-Level Descriptive Statistics**

This table presents summary statistics describing the sample of job seekers, and for comparison, the characteristics of the U.S. labor force (from the BLS CPS and OES). % Sample and % Labor Force refer to the percentage of individuals in the sample and U.S. labor force, respectively. Industry classifications are based on 2-digit SIC major groups, while Occupation classifications are based on 2-digit SOC major groups. Industry and occupation designations for a sample worker refer to the most recent job title held by the worker for which data is available. Total refers to the number of individuals in the sample for whom data is available.

Category	% Sample	% Labor Force	Category	% Sample	% Labor Force
<i>Panel A: Gender</i>			<i>Panel D: Occupation</i>		
Female	52	47	Management	15.8	4.9
Male	48	53	Business	6.1	4.9
<i>Panel B: Education</i>			Computer	5.2	2.7
4-year college	33	21	Engineering	1.6	1.8
High School	27	27	Life Sciences	1.3	0.8
2-year	20	19	Social Services	1.4	1.4
Graduate degree	10	8	Legal	1.0	0.8
Vocational	9	10	Education	3.8	6.4
Doctorate	1	2	Arts	1.7	1.3
<i>Panel C: Industry</i>			Healthcare	2.3	5.9
Agriculture	0.3	1.6	Health Support	2.1	3.0
Mining	0.8	0.5	Protective Service	1.3	2.5
Construction	2.7	5.7	Food	3.2	8.9
Manufacturing	18.1	15.8	Maintenance	0.7	3.3
Transportation	7.6	5.8	Personal Care	1.3	2.9
Wholesale Trade	5.4	6.0	Sales	12.6	10.6
Retail Trade	17.9	20.0	Administrative	28.4	16.4
Finance	15.2	6.4	Construction	1.9	3.8
Services	31.4	32.3	Installation	1.2	3.9
Public Administration	0.7	6.0	Production	3.0	6.6
			<i>Panel E: Wages</i>		
			Mean	\$38,000	\$38,337
			Median	\$33,000	\$26,197
			Total	589,631	

## Table 2. Firm-Level Descriptive Statistics

This table presents summary statistics describing the firms in the sample. Panel A presents firm characteristics for public companies in our sample using Compustat data. Panel B describes the distribution of mergers and acquisitions across SIC major groups in our sample and the population. Panel C describes the types of mergers and acquisitions in our sample: *Horizontal* deals represent transactions where the buyer and seller share the same 2-digit SIC code, *Vertical* deals represent transactions where either the buyer or seller produces output that constitutes 5% or more of the inputs used by the other party in the transaction, and *Hostile* deals are transactions where a tender offer was issued (as per Capital IQ).

Panel A: Compustat statistics for sample public firms			
Firm Characteristics	Median	Mean	Std. Dev.
<i>Assets (MM)</i>	745.21	19,437.5	14,3542.3
<i>Earnings (MM)</i>	66.75	1,010.55	4,553.382
<i>Return on Assets</i>	0.095	0.062	2.978
<i>PPE (MM)</i>	84.5	2,192.29	9,326.943
<i>Capital Intensity</i>	0.146	0.247	0.26
<i>Employees (K)</i>	1.66	13.555	52.578
Panel B: Distribution of Mergers & Acquisitions across Major SIC Industry Groups			
Industry Group	Sample	Population	
<i>Agriculture, Food, Forestry</i>	0.4	0.41	
<i>Mining</i>	6.04	5.36	
<i>Construction</i>	0.81	3.04	
<i>Manufacturing</i>	36.76	32.24	
<i>Transportation and Utilities</i>	9.47	7.78	
<i>Wholesale Trade</i>	3.02	8.81	
<i>Retail Trade</i>	7.55	5.44	
<i>Financial Services</i>	11.58	12.03	
<i>Non-financial Services</i>	23.67	24.33	
Panel C: Distribution of Merger & Acquisition Types			
<i>Horizontal</i>	9,186	31%	
<i>Vertical</i>	3,052	10%	
<i>Hostile</i>	998	3%	
<i>Total number of M&amp;A events</i>	29,648		



**Table 3. Job Search Effort in Acquired Firms Prior to Takeover Announcements**

This table presents OLS regression estimates of the number of employees who engage in job search prior to a takeover announcement. The dependent variable *Job Seekers* is the log number of employees of a given firm who upload their resumes in a given month. The independent variables, *Month N (Takeover)* are binary indicator variables for whether a given firm receives a takeover bid within the next *N* (ten) months of the observed resume postings. *ROA* (return on assets) is the firm's ratio of pre-tax earnings to book assets, while *Size* is the log of the firm's book assets. *Year* and *Firm FE* refer to year and firm fixed effects, respectively. Heteroskedasticity-robust standard errors are reported in parentheses.

Job Seekers	(1)	(2)	(3)	(4)	(5)	(6)
<i>Takeover</i>		0.075 (0.004)***	0.074 (0.004)***	0.068 (0.010)***	0.051 (0.009)***	0.101 (0.033)***
<i>ROA</i>						-0.040 (0.011)***
<i>Size</i>						0.251 (0.032)***
<i>Month 1</i>	0.077 (0.015)***					
<i>Month 2</i>	0.057 (0.014)***					
<i>Month 3</i>	0.061 (0.014)***					
<i>Month 4</i>	0.044 (0.014)***					
<i>Month 5</i>	0.062 (0.014)***					
<i>Month 6</i>	0.038 (0.014)***					
<i>Month 7</i>	0.038 (0.014)***					
<i>Month 8</i>	0.062 (0.014)***					
<i>Month 9</i>	0.052 (0.015)***					
<i>Month 10</i>	0.038 (0.014)***					
<i>Month 11</i>	0.021 (0.014)					
<i>Year FE</i>	x		x		x	x
<i>Firm FE</i>	x			x	x	x
R <sup>2</sup>	0.020	0.010	0.000	0.020	0.020	0.070
No. of obs.	589,631	589,631	589,631	589,631	589,631	72,249

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 4. Job Search Effort in Acquired Firms Prior to Takeover Announcements Across Deal Types**

This table presents OLS regression estimates of the number of employees who engage in job search prior to a takeover announcement, across various types of takeovers depicted in each panel (described in Section 3). The dependent variable is the log number of employees of a given firm who upload their resumes in a given month. The independent variable, *Takeover*, is a binary indicator variable for whether a given firm (target) receives a takeover bid within ten months of the observed resume posting. *Profitability* is the firm's ratio of pre-tax earnings to book assets, while *Size* is the log of the firm's book assets. *Year* and *Firm FE* refer to year and firm fixed effects. Heteroskedasticity-robust standard errors are in parentheses.

Panel A: Horizontal Targets					
Job Seekers	(1)	(2)	(3)	(4)	(5)
<i>Takeover</i>	0.074 (0.007)***	0.073 (0.007)***	0.055 (0.013)***	0.039 (0.013)***	0.091 (0.029)***
<i>Profitability</i>					-0.038 (0.012)***
<i>Size</i>					0.252 (0.034)***
<i>Year FE</i>		x		x	x
<i>Firm FE</i>			x	x	x
R <sup>2</sup>	0.00	0.01	0.00	0.02	0.07
No. of obs.	563,035	563,035	563,035	563,035	67,253
Panel B: Vertical Targets					
<i>Takeover</i>	0.126 (0.012)***	0.127 (0.012)***	0.102 (0.027)***	0.086 (0.026)***	0.100 (0.045)***
<i>Profitability</i>					-0.043 (0.013)***
<i>Size</i>					0.258 (0.034)***
<i>Year FE</i>		x		x	x
<i>Firm FE</i>			x	x	x
R <sup>2</sup>	0.00	0.01	0.00	0.02	0.07
No. of obs.	553,002	553,002	553,002	553,002	65,913
Panel C: Hostile Targets					
<i>Takeover</i>	0.144 (0.023)***	0.144 (0.023)***	0.101 (0.047)**	0.086 (0.046)*	0.085 (0.038)***
<i>Profitability</i>					-0.048 (0.015)***
<i>Size</i>					0.257 (0.035)***
<i>Year FE</i>		x		x	x
<i>Firm FE</i>			x	x	x
R <sup>2</sup>	0.00	0.01	0.00	0.02	0.07
No. of obs.	548,942	548,942	548,942	548,942	65,969

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 5. Reservation Wages of Job Seekers from Acquired Firms**

This table presents OLS regression estimates of the differences in target wages sought by job seekers employed by various types of takeover targets and job seekers employed elsewhere. The dependent variable, *Target Wage Premium*, is the ratio of the target wage of an individual job seeker, divided by the current wage earned by the job seeker, at the time of resume posting. The independent variable, *Takeover*, is a binary indicator variable for whether the individual's employer has been targeted for M&A within the next ten months of the observed resume posting. *Experience* is the years of observed labor market experience at the time of resume posting. Indicator variables for gender, race, highest level of educational attainment, and two-digit SOC classification are included, as are fixed effects for year and employer. Target types in described in Section 3. Heteroskedasticity-robust standard errors are included in parentheses.

Panel A: All Acquired Firms					
Target Wage Premium	(1)	(2)	(3)	(4)	(5)
<i>Takeover</i>	-0.032 (0.002)***	-0.033 (0.002)***	-0.027 (0.002)***	-0.019 (0.003)***	-0.021 (0.007)***
<i>Experience</i>		-0.004 (0.000)***	-0.003 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Educ/Occ</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.00	0.01	0.02	0.04	0.04
No. of obs.	165,808	165,808	148,324	86,854	86,854
Panel B: Horizontal Targets					
<i>Takeover</i>	-0.017 (0.004)***	-0.018 (0.004)***	-0.014 (0.004)***	-0.005 (0.005)	-0.037 (0.012)***
<i>Experience</i>		-0.004 (0.000)***	-0.004 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Education</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.00	0.01	0.02	0.04	0.04
No. of obs.	147,579	147,579	131,734	76,912	76,912
Panel C: Vertical Targets					
<i>Takeover</i>	-0.039 (0.005)***	-0.039 (0.005)***	-0.041 (0.006)***	-0.035 (0.007)***	-0.025 (0.015)*
<i>Experience</i>		-0.004 (0.000)***	-0.003 (0.000)***	-0.003 (0.000)***	-0.001 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Education</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.00	0.01	0.02	0.04	0.04
No. of obs.	143,043	143,043	127,679	74,413	74,413

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 6. Occupational Composition of Job Seekers from Acquired Firms**

This table presents OLS regression estimates of the changes in the composition of employees who search for new jobs prior to takeover announcements. The dependent variable is the logarithm of the numerical score for a given task performed by an individual employee who engages in job search (on a scale of 1-5, where 1 is unimportant and 5 is important, as per U.S. DOL O\*NET survey data). The independent variable, *Takeover*, is a binary indicator variable for whether a given job seeker's employer has received a takeover bid within the next ten months of the observed resume posting. *Year* and *Firm FE* refer to year and firm fixed effects, respectively. No. of obs. refers to the number of individual job seeker observations that comprise the sample. Heteroskedasticity-robust standard errors are in parentheses.

Panel A: Managerial Tasks								
Task Score	Making Decisions		Organizing Activities		Communicating to Staff		Establishing Relationships	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Takeover</i>	0.018 (0.001)***	0.008 (0.004)***	0.015 (0.002)***	0.010 (0.003)***	0.022 (0.001)***	0.013 (0.002)***	0.013 (0.001)***	0.010 (0.002)***
<i>Year FE</i>		x		x		x		x
<i>Firm FE</i>		x		x		x		x
R <sup>2</sup>	0.002	0.010	0.003	0.011	0.002	0.010	0.002	0.012
No. of obs.	129,409	129,409	129,409	129,409	129,409	129,409	129,409	129,409
Panel B: Production Tasks								
Task Score	Performing Physical Tasks		Repairing Equipment		Drafting Technical Specs		Selling Goods	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Takeover</i>	-0.015 (0.005)***	-0.018 (0.009)***	-0.013 (0.002)***	-0.009 (0.005)**	0.069 (0.017)***	-0.053 (0.012)***	0.027 (0.005)***	-0.029 (0.005)***
<i>Year FE</i>		x		x		x		x
<i>Firm FE</i>		x		x		x		x
R <sup>2</sup>	0.002	0.010	0.001	0.013	0.001	0.010	0.000	0.000
No. of obs.	129,409	129,409	129,409	129,409	129,409	129,409	129,409	129,409

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 7. Reservation Wages of Job Seekers Around M&A Announcements**

This table presents OLS regression estimates of the differences in target wages sought by job seekers employed by takeover targets and other job seekers in the sample, during different time windows around a takeover announcement. The dependent variable, *Target Wage Premium*, is the ratio of the target wage of an individual job seeker, divided by the current wage earned by the job seeker, at the time of resume posting. The independent variable in Panel A, *Takeover*, is a binary indicator variable for whether the individual's employer is targeted for M&A within the next ten months of the observed resume posting (*Takeover* = 1). In Panel B, *Takeover* is a binary indicator variable for whether the individual's employer has been targeted for M&A before the observed resume posting (*Takeover* = 1). The control sample in both panels consists of job seekers employed by non-target firms and firms that are not targeted for M&A within the next ten months (*Takeover* = 0). *Experience* is the years of observed labor market experience at the time of resume posting. Indicator variables for gender, race, highest level of educational attainment, and two-digit SOC classification are included, as are fixed effects for year and employer. Heteroskedasticity-robust standard errors are included in parentheses.

Panel A: Before Takeover Announcement					
Target Wage Premium	(1)	(2)	(3)	(4)	(5)
<i>Takeover</i>	-0.020 (0.004)***	-0.020 (0.004)***	-0.019 (0.004)***	-0.007 (0.005)	-0.012 (0.009)
<i>Experience</i>		-0.004 (0.000)***	-0.003 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Educ/Occ</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.00	0.01	0.02	0.04	0.04
No. of obs.	153,746	153,746	137,651	80,499	80,499
Panel B: After Takeover Announcement					
<i>Takeover</i>	-0.038 (0.003)***	-0.039 (0.003)***	-0.033 (0.003)***	-0.025 (0.004)***	-0.021 (0.009)**
<i>Experience</i>		-0.004 (0.000)***	-0.003 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Educ/Occ</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.00	0.01	0.02	0.04	0.04
No. of obs.	155,625	155,625	138,808	81,007	81,007

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 8. Sample Selection Bias in Target Wage Estimates**

This table presents estimates of the differences in target wages sought by acquired firm employees across two alternative sampling windows. Panel A shows OLS regression estimates of *Target Wage Premium* (the ratio of the target wage of an individual job seeker, divided by the current wage earned by the job seeker, at the time of resume posting) on *Takeover* (a binary indicator of whether the job seeker posts a resume after her employer has been announced to be acquired in a takeover; job seekers employed by target firms during the ten months preceding a takeover announcement are excluded from the sample). Other controls include *Experience* as the years of observed labor market experience at the time of resume posting, indicator variables for gender, race, highest level of educational attainment, and two-digit SOC classification, and fixed effects for year and employer. Panel B presents the absolute (\$) and percentage (%) differences in the estimates of *Takeover* presented in Panel A of Table 5 (which are based on a treatment sample that consists of acquired firm employees who search for new jobs starting ten months before a takeover announcement) with the estimates of *Takeover* in Panel A of this table. Heteroskedasticity-robust standard errors are included in parentheses.

Panel A: Target Wage Effects of M&A using the Announcement Date as the Event Date					
<i>Takeover</i>	-0.038 (0.003)***	-0.039 (0.003)***	-0.034 (0.003)***	-0.027 (0.004)***	-0.037 (0.005)***
<i>Experience</i>		-0.004 (0.000)***	-0.003 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***
<i>Race/Gender</i>			x	x	x
<i>Educ/Occ.</i>			x	x	x
<i>Year FE</i>				x	x
<i>Firm FE</i>					x
R <sup>2</sup>	0.000	0.010	0.020	0.040	0.040
No. of obs.	194,611	194,611	173,965	103,048	103,048
Panel B: Target Wage Differences between Alternative Sampling windows					
	(1)	(2)	(3)	(4)	(5)
<i>Difference (\$)</i>	0.006 (0.003)***	0.006 (0.003)***	0.007 (0.003)***	0.008 (0.004)***	0.016 (0.006)***
<i>Difference (%)</i>	15.8	15.4	20.6	29.6	43.2