Mergers & Acquisitions and Employee Job Search

Ashwini K. Agrawal
London School of Economics and Political Science

Prasanna Tambe
Wharton School of Business
University of Pennsylvania

March 15, 2018

Working Paper[1]

Abstract

We use proprietary data from a job search website to reveal how employees look for new jobs around mergers and acquisition (M&A) announcements. This paper documents several new empirical findings. First, we observe a significant increase in employees' job search activity approximately five months before an M&A announcement. In contrast, abnormal stock returns for target companies only materialize approximately one month before the announcement. Second, these employees target significantly lower wages in the outside labor market relative to other job seekers in the population. Third, employees who perform tasks that are sensitive to changes in organizational hierarchies show the greatest changes in search effort. We develop a model that incorporates M&A into a job search theoretic framework in order to interpret these findings.

[1] Preliminary and Incomplete. Address for correspondence: a.agrawal14@lse.ac.uk

Introduction

Mergers and acquisitions (M&A) have major repercussions for employees, as they trigger the reallocation of many workers across the labor market. In spite of the importance of these events, however, we have a poor understanding of the process by which workers look for new jobs during M&A. For example, we know little about the timing of employee job search, the types of workers whose search effort is most sensitive to M&A, and the wages that employees target in the outside labor market. Understanding job search activity is critical for assessing the impact of mergers and acquisitions on workers' labor market outcomes, as job search is a critical stage in the labor reallocation process.

The biggest challenge in studying this topic is identifying employees' job search behavior. Standard datasets that are commonly used to estimate the impact of M&A on workers, such as administrative employer-employee matched data, are inadequate for this task. Because of labor market frictions, many employees who look for new jobs will be unable to find alternative employment opportunities quickly. In these datasets, many job-seeking employees will be observationally equivalent to employees who choose to refrain from exerting search effort and remain with their employers. These data, therefore, are insufficient for characterizing employees' job search activity.

To overcome this challenge, we collect proprietary data from a large job search website that enables us to identify employees who look for new jobs. The data describe the search activity of approximately 20 million U.S. workers who post their resumes to a jobs board from 2001 to 2010. We study the timing of individual search activity and

parse data from workers' resumes to characterize employees who actively look for new jobs during takeovers.

We use these data to present a number of new empirical facts that describe the job search activity of workers who are impacted by mergers and acquisitions. To interpret these facts, we propose a model that incorporates key features of M&A into a standard job search theoretic framework. We argue that the findings shed light on the labor reallocation process that takes place during corporate control events, and are therefore informative towards understanding the effects of takeovers on employees—an important group of non-financial stakeholders.

Our first set of empirical findings reveals the timing of employee job search effort around M&A announcements. We document a significant increase in the number of employees who engage in active search approximately five months *before* an M&A announcement (see Figure 1). In our data, the average number of employees of target firms who post their resumes online each month increases by approximately 3% relative to pre-merger baseline rates of job search.

For comparison, we examine the timing of abnormal stock returns around M&A announcements. In our sample, we observe abnormal stock returns that mirror the findings in the existing literature: cumulative abnormal stock returns materialize approximately one month before an M&A announcement (see Figure 2). This finding suggests that employees exert job search effort in response to information related to M&A well before shareholders trade upon this information. In other words, job search reflects information about impending M&A announcements that cannot be inferred from stock price data.

Our second set of empirical findings sheds light on the wages that employees target in the outside labor market when they look for jobs around M&A announcements. At the time of resume posting, job seekers report their most recent wages, as well as the wages that they target from a new job in the outside labor market. We document that employees who search for new jobs during M&A appear to take a target wage "discount" relative to other job seekers in the population. Employees who post their resumes to the job search website starting six months prior to an M&A announcement exhibit a 1.5% lower ratio of target wages to current wages than other job seekers in the population. The change in the ratio of target wages to current wages stems primarily from reductions in target wages; the impact of M&A on the composition of workers based on their current wages is mixed.

Our third set of empirical findings illustrates a shift in the occupational distribution of employees who search for new jobs around M&A announcements. We parse workers' job descriptions from their resumes and classify job titles 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 heterogeneity in the tasks performed by different employees within the firms in our sample.

We document a significant increase in job search effort by workers who exercise authority and control rights within organizations. Specifically, we find that workers who specialize in performing tasks such as "Staffing Organizational Units", "Coordinating Work Activities", and "Guiding and Directing Subordinates" comprise an increased fraction of job seekers around M&A announcements. In contrast, workers who perform production-level tasks such as "Controlling Equipment and Machinery", "Performing

Physical Activities", and "Moving and Handling Objects", exert relatively less search effort during M&A events.

To interpret these findings, we propose a model that bridges theories of M&A with theories of job search and matching. Specifically, we incorporate M&A into a standard job search theoretic framework (Mortensen 1986) to consider the impact of corporate takeovers on individual employees' job search behavior. In our model, information that is related to a potential M&A announcement signals a change in the stream of income that many employees expect to earn from their current employer. This information may reflect firm performance, changes in investment opportunities, and other firm characteristics that impact firm-worker match surplus. These employees will optimally respond to this signal by changing their outside job search effort and adjusting their reservation wages. The nature of this signal and its subsequent impact on workers' search effort and reservation wages will vary across merger type and employee characteristics, a feature that we explore using our data.

The empirical facts that we document can be understood within the context of our model. Because M&A events are commonly associated with layoffs and wage cuts, many employees will rationally expect lower wages from their employer upon the materialization of information that is associated with a merger or acquisition. These workers will increase their job search effort and lower their reservation wages; these facts are consistent with the observed increase in resume posting, as well as the reduction in outside target wages, by employees who search for jobs during M&A events. Moreover, these effects are most salient for workers who perform tasks that are significantly impacted by organizational changes to the allocation of authority and control rights commonly associated with mergers and acquisitions.

Other factors that impact job search timing and heterogeneity, such as information about impending merger, liquidity constraints facing workers and shareholders, as well as variation in the shocks to labor demand facing workers across different mergers, likely also play a role in explaining our findings. We consider these mechanisms in our discussion of the empirical findings, and illustrate that the empirical implications of these mechanisms can be understood through the lens of our model.

The main contribution of this paper is a set of new empirical findings that describe employee job search behavior during mergers and acquisitions. To date, there has been little work studying workers' job search behavior in the context of corporate control events. The evidence that we document can be interpreted through a model in which labor market frictions impact employee job search effort and target wage setting during takeovers. The findings implicitly reject models of frictionless labor market reallocation during M&A, and illustrate the need to incorporate various frictions when evaluating the impact of corporate takeovers on worker welfare.

The remainder of the paper is as follows. Section 2 proposes a model that incorporates M&A in a job search theoretic framework. Section 3 describes the data construction, provides descriptive statistics, and discusses sampling considerations. Section 4 explains our empirical framework. Section 5 presents the empirical findings and discusses alternative explanations for the evidence.

2. Theoretical Framework

We use a job search theoretic framework to consider how employees look for new jobs around M&A announcements. We first describe the general comparative

statics of standard on-the-job search theory. We then introduce M&A into the search framework. Finally, we consider various theoretical mechanisms by which M&A could impact outcomes such as the timing of employee job search, the target wages that workers seek from the outside labor market, and the composition of employees who engage in active job search during corporate takeovers.

2.1 Job Search Theory

In the canonical model of costly on-the-job search (Mortensen 1986, Cahuc and Zilberberg 2004), employees form expectations over the discounted stream of wages they expect to earn over time at their current employer. While doing so, they face 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 an employee may receive a wage offer that represents a significant improvement to the worker's wage expectations at her current employer. The cost of searching is that the worker must exert effort to look for outside wage offers, incur the opportunity cost of spending time looking for vacancies, interview for new positions, and potentially bargain 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 constraints that she faces.

There are two standard comparative statics that emerge from the canonical model. The two implications of the model are that 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). These comparative statics form the foundation for the implications of the search model that we consider in the context of M&A.

2.2 Incorporating M&A into the Job Search Framework

We incorporate M&A into the job search theoretic framework by treating information related to an M&A announcement as an exogenous shock to a target firm employee's expectations over the wages she expects to receive from her current employer. The shock may be positive, negative, or neither, across different types of employees within the firm.

For many workers, information related to M&A announcements serve as a negative shock to their expected earnings at their current firm: corporate consolidation often leads to involuntary layoffs and wage cuts, while many other workers voluntarily choose to leave acquired firms for non-pecuniary reasons. For other workers, M&A announcements may serve as a non-negative shock to earning expectations; these employees remain unaffected or might benefit from an acquisition. Some workers wish to remain employed in an acquired firm because the merger is in fact driven by the desire of acquiring firms to gain access to the human capital possessed by specific

employees within target firms; these workers view the merger as a harbinger of higher future wages (Ouimet and Zaruskie 2016).

2.2.1 Job Search Effort During M&A

One of the key implications of M&A announcements for employee job search effort is that we should observe an increase in job search effort for the employees that view an M&A announcement as a negative shock to their expected earnings from their current employer. Even if these employees had anticipated some probability of a takeover prior to the start of a given employment spell, the realization of a takeover bid signals a relative reduction in the earnings they expect to realize from their employer.

Empirically, this mechanism suggests that we should observe an increase in the number of employees who post their resumes to the online jobs board in response to information related to an impending takeover. We use our data to estimate baseline rates of job search for firms not involved in takeovers, as well as for firms that receive a takeover bid. We use the M&A announcement to measure any abnormal changes in job search in the periods of time around a takeover bid relative to job search during normal times.

2.2.2 Reservation Wages

A second issue that we consider is the impact of M&A announcements on employees' reservation wages. One of the standard predictions of job search models is that a negative shock to a worker's expected earnings at his current employer will lead to a reduction in the worker's reservation wage. In our framework, the announcement of a merger signals a reduction in expected future wages for many workers. Therefore,

the announcement will cause many employees to lower their reservation wage and become more willing to accept outside job offers that they might have otherwise rejected in the absence of a merger announcement.

In our dataset, employees provide self-reported wages that they seek from outside employment opportunities. We use these data to proxy for job seekers' reservation wages. To test our theoretical predictions about reservation wages around M&A announcements, we compare changes in these self-reported "target" wages across workers who are affected by mergers with the self-reported "target" wages of workers who are unaffected by mergers. We control for a number of factors that influence these target wages, such as worker demographics and occupation, to isolate the empirical effects of the M&A announcement on the job seeker's target wages in the outside labor market.

2.2.3 Occupational Composition of Employee Job Seekers

A third issue that we evaluate is heterogeneity in the types of workers that are more vs. less sensitive to an M&A announcement. We consider various theories of mergers and acquisitions, and consider the empirical implications of these theories for the job search patterns that we observe in the data.

The simplest theory that we evaluate is the impact of mergers and acquisitions on the labor demand for workers who perform different tasks within the firm. An M&A event signals a shift in the target firm's organizational structure. While the specific nature of these changes varies across different types of mergers (such as horizontal vs. vertical mergers), one common thread across different merger types is that M&A announcements signal changes in the control over key assets within the target firm.

We identify the different tasks that workers perform within the firms in our sample, and we classify tasks based on their association with the allocation of control and authority within organizations. Tasks that ostensibly correspond to the allocation of control and authority that we identify with our data are tasks such as the staffing of organizational units, the development of objectives and strategies for employees, and the guiding and directing of subordinates. In contrast, tasks that appear less related to changes in organizational structures are tasks such as handling physical equipment, operating vehicles and machinery, and inspecting and maintaining technical devices. These tasks are likely to reflect production line work, as opposed to tasks related to the organization of employees who perform these functions.

2.2.4 The timing of job search around to M&A announcements

One implicit issue that we consider is the timing of job search by employees around an M&A announcement. Different theories give rise to different empirical predictions about the timing of employee job search. Each of these theories can be incorporated into our model, and we can use our data to assess the extent to which these competing theories are empirically relevant.

The benchmark theory for the timing of job search is that information regarding the M&A event and all other assets (such as human capital, equities, etc.) is symmetric across all market participants. According to this view, workers and shareholders have equal information about the likelihood of a merger across all points in time and trade assets that face similar levels of liquidity risk. Under this hypothesis, one should only observe a significant change in employee search effort that is coincident with the timing of share price movements associated with the merger announcement. We use our data

to examine the timing of worker search effort in the immediate weeks surrounding merger announcements, and assess whether information about the merger and all other relevant assets in the economy appears to be symmetric or asymmetric across market participants.

A second theory relates to heterogeneity in the market frictions that different stakeholders face. Even if information about an M&A event is symmetric across market participants, different stakeholders may behave in observationally different ways because they face different liquidity constraints. For example, shareholders may face relatively low rates of liquidity risk for the trading of equity securities around M&A transactions, and may only exhibit abnormal trading volume once a sufficient level of uncertainty about an impending merger has been resolved. In contrast, workers may face sufficiently high search costs and choose to search for a new job well before uncertainty is resolved to the same degree that equity investors require in order to trade.

A third theory that relates to the timing of employee job search concerns the timing of information revelation regarding an impending M&A event. Employees in acquired firms may be privy to inside information about an impending merger announcement. As a matter of compliance with securities laws, corporate executives are expected to maintain discretion about merger announcements and refrain from leaking private information about a merger before it is publicly announced. If, however, non-executive workers obtain information about an impending merger ahead of time, then it is possible that these workers will act upon that information immediately. More specifically, if mergers serve as a negative shock to workers' expected earnings at their current employer, then our job search model could explain why workers who learn

about the merger will begin searching for a job as soon as they gain access to the information about the merger announcement rather than wait until the information is revealed to the public.

2.2.5 Costly vs. Costless Job Search Effort

One implicit question that we consider is whether models of costly job search effort or models of costless job search effort appear more appropriate for describing the behavior of employees during M&A announcements. Models with costless search effort assume that employed workers can look for new jobs constantly and choose to accept wage offers that are higher than their reservation wage. These models imply that we should not observe any significant changes in the job search behavior of target firm employees around M&A announcements.

In contrast, models of costly search imply that a worker's search effort will increase when she faces a negative shock to the wages she expects to earn from her current employer. Because mergers lead to wage cuts and layoffs for many (though not all) employees, it is reasonable to assume that many employees of acquired firms perceive an M&A announcement to be a forbearer of future wage reductions. These models therefore imply that we should observe a significant increase in job search effort by many employees of target firms.

2.2.6 Real Implications of Job Search Models

By formulating the empirical implications of models that describe how M&A announcements impact employee job search behavior, we shed light on the factors that shape employees' labor market outcomes around M&A events. If models with search

costs appear relevant for explaining job search behavior, then the findings would suggest that many of the outcomes that workers experience during mergers and acquisitions are influenced of supply side frictions. On the other hand, if the evidence supports frictionless models of job search, such as models in which workers have perfect information about the timing of merger announcements and models in which workers are able to search for jobs at no cost, then it is less likely that the labor market outcomes that are observed after mergers and acquisitions can be attributed to supply side impediments to employee job search.

3. Data

We combine several new data sources to construct a dataset that describes the job search behavior of workers employed by U.S. firms. 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.

We obtain the most recent information posted by individual job seekers as of 2010. For each job seeker, we observe a posting date and the name of their current

employer. From the website, we also obtain information on the dates when users first posted and last updated their resumes, their employment status as of the time they last updated their resume, the wages they earned in their most recent job, and the target wage that they are searching for in their next 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 the occupation held by each 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. [2]

We 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 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

[2] See www.bls.gov/soc/major_groups.htm for more detailed information on official SOC group descriptions.

labor economics (Jensen and Kletzer (2010), Blinder (2009), and 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 as of the years when an individual is employed by the firm.[3] We also collect data on whether the company was ever acquired in an M&A event during the sample period. 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.

The final, merged dataset consists of detailed occupation data and detailed employer data for each job seeker who uses the website. For computational feasibility, we analyze 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 individuals 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

[3]. 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.

employment surveys. The figures in the table indicate that our data cover a wide spectrum of the U.S. work force, 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 differences between our sample and the overall population. Panel A shows that our sample is approximately 52% female; the U.S. labor force is approximately 47% female. 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).[4]

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 oversampling 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.

4. 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.

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 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 private equity impacts many, but not all, workers within a firm.

In Table 2, we present the sample characteristics for the firms (employers) in our sample. We have access to data for about 36,305 firm-years between 2001 to 2010.

These are firms which are public and for which we have access to financial data from Compustat as well as data on the firm's yearly IT investment levels, which we derive using methods described in Tambe and Hitt (2012). The average firm-year in our sample is large, with a mean value for output of slightly over $3 billion dollars, and about 14,000 employees. The distribution of firm-years across industries in shown in Panel B. There is significant representation for firms in most sectors, and especially in manufacturing and service industries.

4. Empirical Framework

4.1 Identification Strategy

We use our dataset to identify new empirical facts that describe how workers look for new jobs around M&A announcements. The ideal test for evaluating the various theoretical predictions outlined in Section 2 would be to identify the characteristics of employees who search for new jobs upon the announcement of an M&A event, and compare them with the characteristics of the counterfactual pool of employees who would have engaged in job search in the absence of an M&A announcement. Because the counterfactual pool is unobservable to the econometrician, however, we instead exploit observable data on the composition of jobs seekers employed across all firms in our sample. For each of our empirical tests, we approximate the relevant counterfactual group with an observable control group that is implicitly defined by our identification assumptions.

Our central identification assumption is that an M&A announcement is an exogenous shock to the parameters that impact workers' job search decisions. We

approximate the characteristics of workers who would have looked for new jobs in the absence of an M&A announcement (the counterfactual pool), with the characteristics of job seekers employed by similar firms that are not acquired during the sample period (the control group). The treatment group in our main empirical tests consists of job seekers employed by firms that are subject to an M&A announcement during the sample period.

The treatment effects in our tests are OLS difference-in-difference estimates of the effects of M&A announcements on the characteristics of employees who look for new jobs. The first "difference" reflects the changes in the composition of employees who look for jobs before vs. after an M&A announcement, while the second "difference" reflects the differences in the composition of employees who look for jobs from acquired vs. non-acquired firms. Using regression terminology, our main tests reflect the following specification:

$$Worker\ Characteristic_{ijk} = \beta * M\&A\ Announcement_{jk} + v_j + y_k + Controls_{ijk} + e \quad (1)$$

where the dependent variable, $Worker\ Characteristic_{ijk}$, refers to one of several characteristics of individual job seeker i employed by firm j who posts his resume in time period (month or year) k . These characteristics include measures of worker job search effort, target wages, and maximum commuting distance. The main independent variable, $M\&A\ Announcement_{jk}$, is a binary indicator for whether firm j is targeted in an M&A announcement at time k.

We include controls for firm fixed effects, year fixed effects, and in some specifications, we include time varying worker-level and firm-level controls. The firm fixed effects serve as controls for the average characteristics of job seekers observed for any given firm. The year fixed effects serve as controls for the average characteristics of

job seekers observed in any given sample year. The time varying worker-level and firm-level controls are potentially endogenous with M&A announcements; however, we include these controls in various specifications in order to present a more complete picture of how M&A influences the composition of employees who look for new jobs. Under the identification assumption, the regression coefficient provides an estimate of the causal effect of an M&A announcement on the characteristics of employees who look for new jobs.

4.2 Advantages and Limitations of the Empirical Design

Our empirical design has several advantages and limitations. The first advantage of our empirical design is that we are able to analyze detailed data that on job search behavior that is typically unobservable to econometricians. The behavior that we analyze cannot be readily inferred from commonly-used administrative data such as matched employee-employer datasets, since these data reflect labor outcomes that are shaped by both labor supply and labor demand factors. Because data on realized labor market outcomes alone cannot be used to test models that describe the frictions underlying actual job search decisions, we rely on data that illustrate individual job search behavior that takes place prior to any realization of labor reallocation. We are able to construct empirical proxies for a variety of theoretical measures of interest by examining the specific timing and parameters of individuals' online job search decisions.

A second advantage of our analysis is the plausibility of the identification assumption: M&A announcements are shocks to worker expectations about wages that are likely exogenous to economy wide shifts in labor demand—particularly in the short-

run. An important concern when analyzing job search behavior is differentiating between supply and demand side forces that influence workers' job search decisions. We focus on shocks that influence employee behavior within short time horizons; our data on the specific timing of job search decisions show little change in the job search behavior of workers employed by similar, non-acquired firms in the same local markets immediately after an M&A announcement (such a change might otherwise signify changes in outside labor demand). Moreover, M&A announcements typically precede actual transfers of corporate control by several months, so the immediate changes in job search behavior that we observe likely reflect changes in workers' wage and employment expectations rather than actual employer decisions facilitated by realized changes in ownership. The evidence therefore provides strong empirical support for our identification assumption.

One of the limitations of our analysis is that we do not observe job seekers who refrain from using our online platform. Although we observe the job search decisions of approximately 13% of the U.S. workforce, there are many workers who engage in job search using personal networks, newspaper advertisements, and other non-electronic means of job search. The absence of these types of workers in our sample influences the interpretation of some of our empirical estimates, however, we argue that the within-sample estimates of job seeker characteristics that we document are informative for testing general models that describe job search behavior. Furthermore, at a minimum, the empirical findings are relevant for describing the job search behavior for the population of workers who use online resources for job search, which is an economically sizeable fraction of the total labor force. We discuss the relevance of these concerns within the context of the specific analyses that we describe in Section 5.

A second limitation of our analysis is that we do not observe workers who refrain from active job search during the sample period, either before or after the announcement of a merger. It is likely that takeovers increase the probability of search for some workers, but not enough to induce them to actively engage in looking for a new job and thus be observed in our sample. The absence of these workers therefore creates potential sample selection bias that precludes us from estimating the full effect of M&A announcement on the labor supply curve of target employees (Heckman 1979).

5. Empirical Findings

5.1 Employee Job Search Effort following M&A Announcements

We begin our empirical analysis by measuring the impact of M&A announcements on the numbers of employees from target firms that engage in job search activity in the months surrounding the M&A announcement. Figure 1 depicts the raw number of job seekers in our sample for companies that get acquired. The figure illustrates a significant increase in job search activity at least five months prior to the announcement of an M&A acquisition.

For comparison, we examine the timing of abnormal stock returns around M&A announcements. In our sample, we observe abnormal stock returns that mirror the findings in the existing literature (Eckbo 2007): cumulative abnormal stock returns materialize about one month before an M&A announcement (see Figure 2). This finding suggests that employees exert job search effort in response to information related to M&A well before shareholders trade upon this information.

We then estimate the change in job search for employees of M&A targets relative to the changes in job search for employees of other firms in our sample. Specifically, we estimate the following regression:

$$Log\ Number\ of\ Job\ Seekers_{jk} = \beta * M\&A\ Announcement_{jk+5} + v_j + y_k + Controls_{ijk} + e \quad (2)$$

where the dependent variable, $Log\ Number\ of\ Job\ Seekers_{jk}$, is the natural logarithm of the number of employees from firm j who post their resume in month k. The independent variable, $M\&A\ Announcement_{jk+5}$, is a binary indicator for whether firm j has been targeted in an M&A announcement as of month $k+5$. We choose this month simply based on the visual evidence presented in figure 1; the results are similar if we vary the threshold to include months 6, 7, 8 or even months 3, 4, 5 before an M&A announcement. We also include controls for industry, sector, firm, and year fixed effects.

The coefficient estimates from this regression are reported in Table 3. Columns (1) through (5) show positive and significant coefficients that range in magnitude from 1.5 to 4.3. The results are robust across specifications that vary in the choice of controls, which means that the impact of M&A announcements on employee job search is significant even after controlling for industry or firm-specific baseline averages in monthly job search behavior. The estimates imply that an M&A announcement is associated with a significant increase in the number of employees who engage in job search each month, starting five months before the actual announcement.

The findings are consistent with a key empirical implication of our model, i.e. that we should observe an increase in job search effort for the employees that view an M&A announcement as a negative shock to their expected earnings from their current employer. Even if these employees had anticipated some probability of a takeover prior to the start of a given employment spell, the realization of a takeover bid signals a

relative reduction in the earnings they expect to realize from their employer. The observed increase in the number of employees who post their resumes to the online jobs board around the M&A announcement is consistent with the view that many employees respond to information related to an impending takeover by exerting search effort.

Another implication of this finding is that the premises of job search models that feature costless job search effort are less relevant for our empirical setting. As discussed in Section 2, these models assume that employees can constantly engage in job search at no cost; these models therefore imply that we should observe no significant change in the numbers of employees who engage in job search following the announcement of an M&A transaction. Instead, the data support the premises of models with costly on-the-job search effort. In these models, job search effort varies across employees and is determined by the tradeoff between the marginal benefits and the marginal costs of search effort facing each individual. In our context, an M&A announcement serves as a negative shock to the wage expectations of many employees of target firms. According to models of costly search, these shocks should therefore lead to the increases in job search activity that we observe in Table 3.

5.2 M&A Announcements and Reservation Wages

We examine the impact of M&A announcements on the desired wages sought by employees who search for new jobs around M&A announcements. Specifically, we estimate the following regression:

$$Target\ Wage\ Premia_{ijk} = \beta * M\&A\ Announcement_{jk} + v_j + y_k + Controls_{ijk} + e \quad (3)$$

where the dependent variable, *Target Wage Premia*$_{ijk}$, is the ratio of the desired wages divided by the current wages of job seeker *i* employed by firm *j* at time *k*. All other variables are defined the same way as in Equation (2).

The results are depicted in Table 4. The findings indicate that employees who search for new jobs during M&A appear to take a target wage "discount" relative to other job seekers in the population. Employees who post their resumes to the job search website starting five months prior to an M&A announcement exhibit an approximately 1.5% lower ratio of target wages to current wages than other job seekers in the population (Column 6).

These findings are consistent with the main empirical predictions of our model. One of the standard predictions of job search models is that a negative shock to a worker's expected earnings at his current employer will lead to a reduction in the worker's reservation wage. In our framework, the announcement of a merger signals a reduction in expected future wages for many workers. Therefore, the announcement will cause many employees to lower their reservation wage and become more willing to accept outside job offers that they might have otherwise rejected in the absence of a merger announcement. This fact jointly reflects the causal impact of M&A announcements on worker target wages, as well as the selection effect of M&A announcements on the composition of employees who look for new jobs during a takeover.

To decompose this effect into changes in the current wages vs. changes in the target wages, we separately estimate Equation 3 using the logarithm of current wages and the logarithm of target wages for earned by job seeker *i* employed by firm *j* at time *k* as dependent variables. The results are depicted in Tables 5 and 6. The change in the

ratio of target wages to current wages observed in Table 4 stems primarily from reductions in target wages, as indicated by the coefficient estimates for *Merger* in Table 5. As Table 6 illustrates, the impact of M&A on the current wages earned by job seekers from M&A targets is mixed in our sample, and highly dependent on sample specification.

5.3 M&A and the Occupational Composition of Job Seekers

Tables 7 and 8 evaluate the changes in the task composition of job seekers around M&A announcements for tasks that relate to the organizational hierarchies of target firms. We estimate Equation 1 using the task scores for different tasks collected by the U.S. DOL's O*NET program for individual job seeker *i* from firm *j* at time *k*. The reported coefficients are estimates of how the task composition of job seekers at acquired firms compares with the task composition of job seekers at firms that are otherwise comparable but have not been the target of an acquisition. The regressions in Panel A are univariate, while the regressions in Panel B include both firm and year fixed-effects. Each column in the tables corresponds to a different O-NET task measure.

The magnitudes of the coefficient estimates for *Merger* in Table 7 are significantly positive for O-NET task measures that reflect tasks that relate to the exercise of authority and control within organizations. Specifically, we find that workers who specialize in performing tasks such as "Staffing Organizational Units", "Coordinating Work Activities", and "Guiding and Directing Subordinates" comprise an increased fraction of job seekers around M&A announcements. In contrast, as illustrated in Table 8, workers who perform production-level tasks such as "Controlling Equipment and Machinery", "Performing Physical Activities", and "Moving and Handling Objects", exert relatively less search effort during M&A events.

These estimates suggest that mergers have a causal effect on the task composition of the labor pool, and that the pattern of estimates that we observe is consistent with theories of M&A triggering organizational changes in acquired firms.

An M&A event signals a shift in the target firm's organizational structure that will disproportionately impact workers who previously exercised authority and control in the standalone entity. While the specific nature of these changes varies across different types of mergers (such as horizontal vs. vertical mergers), one common thread across different merger types is that M&A announcements signal changes in the control over key assets within the target firm.

Employees whose occupations place greater importance on tasks that ostensibly correspond to the allocation of control and authority that we identify with our data, such as the staffing of organizational units, the development of objectives and strategies for employees, and the guiding and directing of subordinates, exhibit the greatest changes in search effort around M&A announcements. In contrast, tasks that are ostensibly less related to changes in organizational structures, such as handling physical equipment, operating vehicles and machinery, and inspecting and maintaining technical devices, are less associated with abnormal changes in search effort during M&A. These tasks are likely to reflect production line work, as opposed to tasks related to the organization of employees who perform these functions.

6. Conclusion

This paper presents a number of new empirical facts that describe employee job search behavior during mergers and acquisitions. We interpret these facts through the

lens of a model that incorporates M&A into a standard on-the-job search theoretic framework. We observe a large increase in the number of employees who exert job search effort at least 5 months before the public announcement of a merger. Middle managers and other employees who perform tasks that are central to the allocation of control and authority within organizations appear to be especially sensitive to takeovers announcements. M&A announcements also have a negative effect on the target wages that workers are willing to earn from outside employers. These facts are consistent with the empirical predictions of costly on-the job search models, and are inconsistent with frictionless models of labor supply.

Overall, the findings suggest that frictionless models of labor supply and demand are inadequate for describing employee job search activity, and therefore more broadly, are insufficient for describing the process of labor reallocation that takes place around corporate control events. Instead, the data indicate that labor market frictions are important factors that influence employee job search behavior, and likely have effects on workers' labor market outcomes during takeovers.

The findings in this paper give rise to questions that are important to address. While our data shed light on the process of job search around mergers and acquisitions, less is known about the manner by which firms and workers form new matches during takeovers. Additionally, even less is known about how takeovers influence worker separations are non-acquired firms. This process of matching between firms and workers is important for understanding the efficiency and welfare of financial market and labor market outcomes realized during corporate control transactions.

References

Abadie, Alberto, David Drukker, Jane Herr, and Guido W. Imbens, 2004, "Implementing Matching Estimators for Average Treatment Effects in Stata." *Stata Journal*, 4, 290–311.

Acemoglu, Daron, 2002, "Technical Change, Inequality and the Labor Market," Journal of Economic Literature 40, 7-72.

Agrawal, Ashwini and David Matsa, 2013, "Labor Unemployment Risk and Corporate Financing Decisions," *Journal of Financial Economics*, 108, 449–470.

Agrawal, A., & Tambe, P. (2016). Private equity and workers' career paths: the role of technological change. *Review of Financial Studies*, hhw025.

Autor, David, and Daron Acemoglu, 2010, "Skills, Tasks, and Technologies: Implications for Employment and Earnings," Handbook of Labor Economics, Volume 4, Elsevier, forthcoming.

Autor, David, and Frank Levy, and Richard Murnane, 2003, "The Skill Content of Recent Technological Change: An Empirical Exploration," *The Quarterly Journal of Economics*,118, 1279-1333.

Bartel, Ann, Casey Ichniowski, and Kathryn Shaw, 2007, "How Does Information Technology Affect Productivity? Plant-Level Comparisons of Product Innovation, Process Improvement, and Worker Skills," *Quarterly Journal of Economics*, 122, 1721–1758.

Becker, Gary S., 1962, "Investment in Human Capital: A Theoretical Analysis." *Journal of Political Economy*, 70, 9–49.

Black, Sandra and Lisa Lynch, 2001, "How to Compete: The Impact of Workplace Practices and Information Technology on Productivity," *Review of Economics and Statistics,* 83, 434–445.

Bloom, N., & Van Reenen, J. (2007). Measuring and Explaining Management Practices Across Firms and Countries. *The Quarterly Journal of Economics*, *122*(4), 1351-1408.

Bloom, N., Garicano, L., Sadun, R., & Van Reenen, J. (2014). The distinct effects of information technology and communication technology on firm organization. *Management Science*, *60*(12), 2859-2885.

Bresnahan, Timothy F., Erik Brynjolfsson, and Lorin M. Hitt, 2002, "Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence," *Quarterly Journal of Economics*, 117, 339–376.

Brynjolfsson, Erik and Lorin Hitt ,1996, “Paradox lost? Firm-level evidence on the returns to information systems spending,” *Management Science*, 42(4), 541–558.

Cannella, A. A., & Hambrick, D. C. (1993). Effects of executive departures on the performance of acquired firms. *Strategic Management Journal*, *14*(S1), 137-152.

Cartwright, S., & Cooper, C. L. (1993). The psychological impact of merger and acquisition on the individual: A study of building society managers. *Human relations*, *46*(3), 327-347.

Card, David, 2011, “The Return of the Firm to Labor Economics.” Available at http://www.sole-jole.org/2011cardpresaddress.pdf. Accessed on June 28, 2013.

Card, David, Jörg Heinin, and Patrick Kline, 2013, "Workplace Heterogeneity and the Rise of West German Wage Inequality," *The Quarterly Journal of Economics*, 128(3), 967–1015.

Chatterjee, S., Lubatkin, M. H., Schweiger, D. M., & Weber, Y. (1992). Cultural differences and shareholder value in related mergers: Linking equity and human capital. *Strategic management journal*, *13*(5), 319-334.

Fried, Y., Tiegs, R. B., Naughton, T. J., & Ashforth, B. E. (1996). Managers' reactions to a corporate acquisition: A test of an integrative model. *Journal of Organizational Behavior*, 401-427.

Gibbons, Robert, and Lawrence Katz, 1991, “Layoffs and Lemons,” *NBER Working Paper No. w2968*.

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. (2009). Taking stock of what we know about mergers and acquisitions: A review and research agenda. *Journal of Management*.

Harford, J. (2005). What drives merger waves?. *Journal of financial economics*, *77*(3), 529-560.

Haveman, H. A. (1995). The demographic metabolism of organizations: Industry dynamics, turnover, and tenure distributions. *Administrative Science Quarterly*, 586-618.

Healy, P. M., Palepu, K. G., & Ruback, R. S. (1992). Does corporate performance improve after mergers?. *Journal of financial economics*, *31*(2), 135-175.

Heckman, James J. “Sample Selection Bias as a Specification Error”. Econometrica, Vol. 47 (No. 1), January 1979, pp. 153-161.

Houston, J. F., James, C. M., & Ryngaert, M. D. (2001). Where do merger gains come from? Bank mergers from the perspective of insiders and outsiders. *Journal of financial economics*, *60*(2), 285-331.

Iverson, R. D., & Pullman, J. A. (2000). Determinants of voluntary turnover and layoffs in an environment of repeated downsizing following a merger: An event history analysis. *Journal of management*, *26*(5), 977-1003.

Jovanovic, B., & Rousseau, P. L. (2008). Mergers as reallocation. *The Review of Economics and Statistics*, *90*(4), 765-776.

Jovanovic, B., & Rousseau, P. L. (2001). Mergers and technological change: 1885-1998. *Unpublished working paper, Vanderbilt University*.

Kleinert, J., & Klodt, H. (2002). *Causes and consequences of merger waves*(No. 1092). Kiel Institute for the World Economy (IfW).

Krug, Jeffrey A., and W. Harvey Hegarty. "Postacquisition turnover among US top management teams: An analysis of the effects of foreign vs. domestic acquisitions of US targets." *Strategic Management Journal* 18, no. 8 (1997): 667-675.

Krug, J. A., & Hegarty, W. H. (2001). Predicting who stays and leaves after an acquisition: A study of top managers in multinational firms. *Strategic Management Journal*, 185-196.

Kuhn, Peter, and Mikal Skuterud, 2000, "Job search methods: Internet versus traditional", *Monthly Labor Review*, *23*, 3.

Kuhn, Peter and Mikal Skuterud, 2004, "Internet Job Search and Unemployment Durations," *The American Economic Review*, *94*(1), 218.

Maksimovic, V., Phillips, G., & Prabhala, N. R. (2011). Post-merger restructuring and the boundaries of the firm. *Journal of Financial Economics*, *102*(2), 317-343.

Napier, N. K. (1989). Mergers and acquisitions, human resource issues and outcomes: A review and suggested typology. *Journal of management studies*, *26*(3), 271-290.

Neal, Derek. "Industry-Specific Human Capital: Evidence from Displaced Workers." Journal of Labor Economics, Vol. 13 (No. 4), October 1995, pp. 653-677.

Ouimet, Paige and Rebecca Zarutskie, 2016, "Acquiring Labor." Working Paper.

Osterman, Paul, 1995, "Skill, Training, and Work Organization in American Establishments," *Industrial Relations*: *A Journal of Economy and Society*, 34, 125–146.

Shleifer, Andrei and Larry H. Summers, 1988, "Breach of Trust in Hostile Takeovers," *Corporate Takeovers: Causes and Consequences*, Chapter 2, pp. 33–68, Chicago: University of Chicago Press.

FIGURES

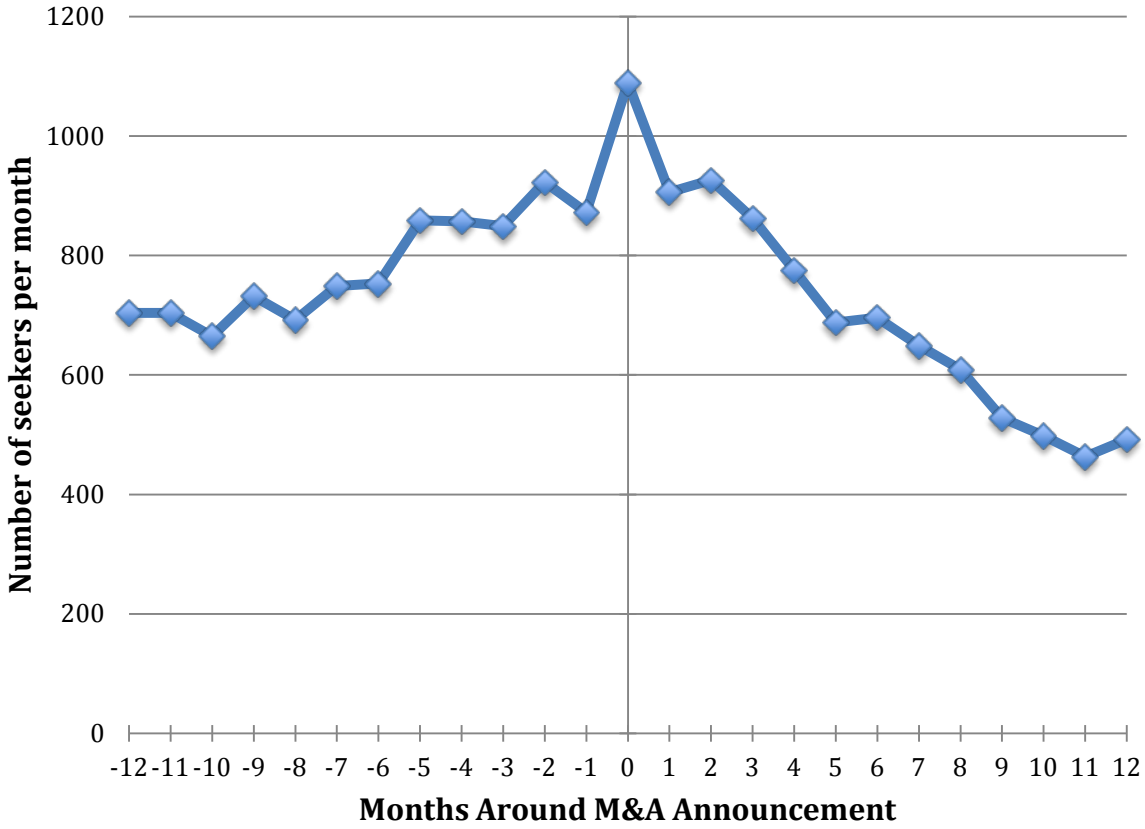

Figure 1. Job Search around M&A Announcements

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).

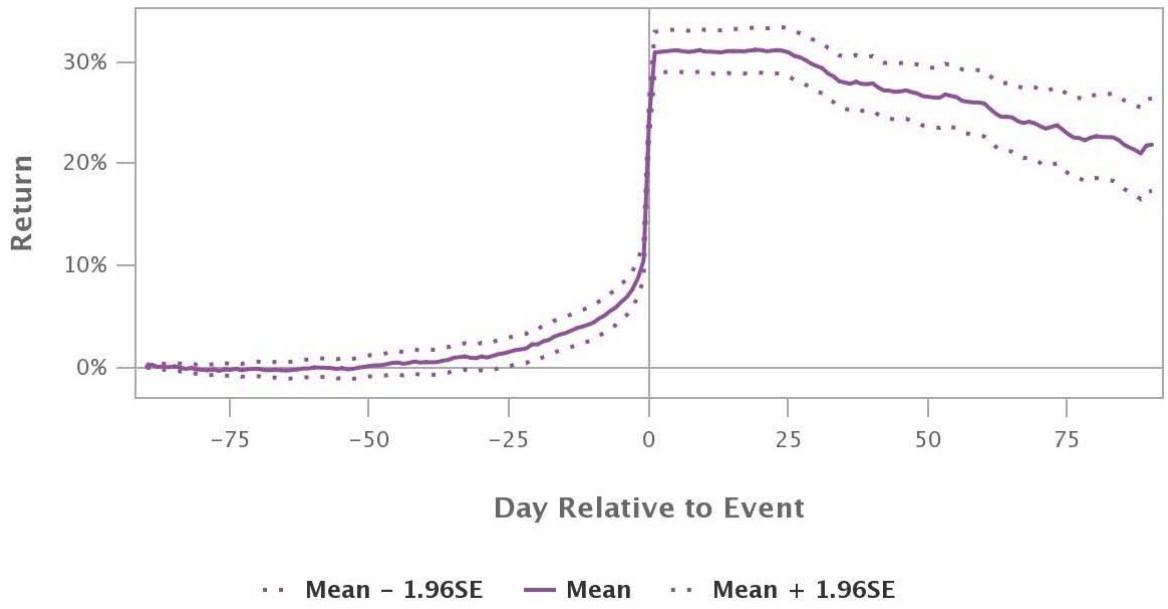

Figure 2. Cumulative Abnormal Stock Returns of Target Firms Around Takeover Announcements

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.

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
Panel A: Gender			*Panel D: Occupation*		
Female	52	47	Management	15.8	4.9
Male	48	53	Business	6.1	4.9
			Computer	5.2	2.7
Panel B: Education			Engineering	1.6	1.8
4-year college	33	21	Life Sciences	1.3	0.8
High School	27	27	Social Services	1.4	1.4
2-year	20	19	Legal	1.0	0.8
Graduate degree	10	8	Education	3.8	6.4
Vocational	9	10	Arts	1.7	1.3
Doctorate	1	2	Healthcare	2.3	5.9
			Health Support	2.1	3.0
Panel C: Industry			Protective Service	1.3	2.5
Agriculture	0.3	1.6	Food	3.2	8.9
Mining	0.8	0.5	Maintenance	0.7	3.3
Construction	2.7	5.7	Personal Care	1.3	2.9
Manufacturing	18.1	15.8	Sales	12.6	10.6
Transportation	7.6	5.8	Administrative	28.4	16.4
Wholesale Trade	5.4	6.0	Construction	1.9	3.8
Retail Trade	17.8	20.0	Installation	1.2	3.9
Finance	15.3	6.4	Production	3.0	6.6
Services	31.4	32.3			
Public Administration	0.7	6.0	*Panel E: Wages*		
			Mean	$38,000	$38,337
			Median	$33,000	$26,197
			Total	202,114	

Table 2. Firm-Level Descriptive Statistics

This table presents summary statistics describing the employers of job seekers in the sample. Panel A contains Compustat statistics across firm-years in the sample; Value-added, output, capital, and materials are taken directly from Compustat fields. Non-IT Employment is computed as total employment reported in Compustat minus IT employment. IT employment is computed using data from Tambe and Hitt (2014). Panel B reports the SIC major industry distribution across all firm-years in the sample. Panel C reports the SIC major industry distribution for mergers and acquisitions involving sample employers.

Panel A: Compustat statistics for firm-years in sample

Variable	Mean	Std. Dev.	N
Value-Added ($ million)	1073.7	3402.6	36305
Output (($ million)	3135.4	10957.5	36305
Capital (($ million)	2106.4	8191.6	36305
Materials (($ million)	2061.7	8187.8	36305
Non-IT Employees (x 1,000)	13.8	43.5	36305
IT Employees	277.4	1035.6	36305

Panel B: Distribution of firm-years over SIC major industry groups

Major Industry	N	Percent of Sample
Construction	37	0.1
Durable Mfr.	11,142	30.7
Non-Durable Mfr.	6,383	17.6
Trans. & Utilities	3,458	9.5
Wholesale Trade	1,506	4.2
Retail Trade	3,670	10.1
Financial Services	2,345	6.5
Non-financial Services	7,764	21.4
Total	**36,305**	**100**

Panel C: Distribution of Mergers and Acquisitions over SIC major industry groups

Major Industry	N	Percent of Sample
Construction	310	2.5
Durable Mfr.	2,421	19.5
Non-Durable Mfr.	1,614	12.9
Trans. & Utilities	929	7.5
Wholesale Trade	1,008	8.1
Retail Trade	919	7.5
Financial Services	1,275	10.3
Non-financial Services	3,716	29.9
Total	**12,192**	**100**

Table 3. Impact of M&A Announcements on the number of employees who engage in active job search

This table presents OLS regression estimates of the number of employees who engage in active job search in the 5 months leading up to the takeover announcement. The dependent variable in each column is the log number of employees who post their resumes to the jobs board in a given month. The independent variable, Merger, is a binary indicator variable for whether a given firm has received a takeover bid within five months of the observed search activity. The treatment sample therefore consists of all firm-month observations that take place within 5 months before a takeover bid for the firm takes place; the control sample consists of all other firm-month observations in the sample. N refers to the number of firm-month observations that comprise the sample. *Sample* denotes whether the regression sample consists of target firms only, or all firms in the dataset. Standard errors are in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Merger	0.042	0.043	0.041	0.025	0.037	0.037	0.037	0.015
	(0.006)***	(0.007)***	(0.006)***	(0.007)***	(0.008)***	(0.008)***	(0.008)***	(0.006)***
Fixed Effects:								
Year		x	x	x		x	x	x
Industry			x	x			x	x
Firm				x				x
Sample:								
Target firms	x	x	x	x				
All firms					x	x	x	x
R^2	0.010	0.011	0.012	0.020	0.010	0.012	0.013	0.021
N	46,881	46,881	46,881	46,881	592,888	592,888	592,888	592,888

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

Table 4. Impact of M&A on the ratio of target wages to current wages for employees who engage in job search

This table presents OLS regression estimates of the impact of M&A on the ratios of target wages sought by job seekers to the current wages earned by job seekers at the time of resume posting. The dependent variable is the ratio of target wages to current wages of an individual job seeker at the time of resume posting. Merger is a binary indicator of whether an individual job seeker posts his resume while employed at a target firm at most five months before the announcement of a takeover (1 if so; 0 if not). Experience is the total number of observed labor market experience (in years) prior to the most recent employment spell. Firm tenure is the length of the most recent employment spell until the time of resume posting. Fixed effects include indicator variables for gender, race, education, year of resume posting, and firm (employer). N refers to the number of individual job seekers that comprise the sample.

Ind Vars	(1)	(2)	(3)	(4)	(5)	(6)
Merger	-0.029	-0.009	-0.016	-0.025	-0.008	-0.015
	(0.004)**	(0.004)**	(0.008)**	(0.003)**	(0.003)**	(0.005)**
Experience		-0.004	-0.002		-0.004	-0.002
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Firm Tenure		-0.010	-0.008		-0.009	-0.008
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Fixed Effects:						
Gender		x	x		x	x
Race		x	x		x	x
Education		x	x		x	x
Year		x	x		x	x
Firm			x			x
Sample:						
Target Firms	x	x	x			
All Firms				x	x	X
R^2	0.003	0.107	0.450	0.003	0.120	0.461
N	82,169	82,169	74,155	194,603	194,603	103,046

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

Table 5. Impact of M&A on the target wages of employees who engage in job search

This table presents OLS regression estimates of the impact of M&A on the target wages sought by job seekers at the time of resume posting. The dependent variable is the logarithm of target wages of an individual job seeker at the time of resume posting. Merger is a binary indicator of whether an individual job seeker posts his resume while employed at a target firm at most five months before the announcement of a takeover (1 if so; 0 if not). Experience is the total number of observed labor market experience (in years) prior to the most recent employment spell. Firm tenure is the length of the most recent employment spell until the time of resume posting. Fixed effects include indicator variables for gender, race, education, year of resume posting, and firm (employer). N refers to the number of individual job seekers that comprise the sample.

Ind Vars	(1)	(2)	(3)	(4)	(5)	(6)
Merger	-0.029	-0.009	-0.016	-0.025	-0.008	-0.015
	(0.004)***	(0.004)***	(0.008)**	(0.003)***	(0.003)***	(0.005)***
Experience		-0.004	-0.002		-0.004	-0.002
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Firm Tenure		-0.010	-0.008		-0.009	-0.008
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Fixed Effects:						
Gender		x	x		x	x
Race		x	x		x	x
Education		x	x		x	x
Year		x	x		x	x
Firm			x			x
Sample:						
Target Firms	x	x	x			
All Firms				x	x	X
R^2	0.00	0.02	0.05	0.003	0.120	0.461
N	82,169	82,169	74,155	194,603	194,603	103,046

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

Table 6. Impact of M&A on the current wages of employees who engage in job search

This table presents OLS regression estimates of the impact of M&A on the current wages earned by job seekers at the time of resume posting. The dependent variable is the logarithm of current wages of an individual job seeker at the time of resume posting. Merger is a binary indicator of whether an individual job seeker posts his resume while employed at a target firm at most five months before the announcement of a takeover (1 if so; 0 if not). Experience is the total number of observed labor market experience (in years) prior to the most recent employment spell. Firm tenure is the length of the most recent employment spell until the time of resume posting. Fixed effects include indicator variables for gender, race, education, year of resume posting, and firm (employer). N refers to the number of individual job seekers that comprise the sample.

Ind Vars	(1)	(2)	(3)	(4)	(5)	(6)
Merger	0.072	0.009	0.010	0.004	-0.050	0.018
	(0.006)***	(0.006)	(0.009)	(0.006)	(0.006)***	(0.006)***
Experience		0.022	0.013		0.022	0.012
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Firm Tenure		0.034	0.023		0.032	0.022
		(0.000)**	(0.000)**		(0.000)**	(0.000)**
Fixed Effects:						
Gender		x	x		x	x
Race		x	x		x	x
Education		x	x		x	x
Year		x	x		x	x
Firm			x			x
Sample:						
Target Firms	x	x	x			
All Firms				x	x	X
R^2	0.003	0.120	0.354	0.003	0.120	0.461
N	82,169	82,169	74,155	194,603	194,603	103,046

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

Table 7. Impact of M&A on the composition of job seekers across tasks highly affected by changes to organizational hierarchies

This table presents OLS regression estimates of the impact of M&A events on the composition of job seekers employed by target firms. The dependent variable in each column is the logarithm of the numerical score for a given task performed by an employee who engages in job search in a given year (on a scale of 1-5, where 1 is unimportant and 5 is important); the score is a measure of the importance of the task within the total set of tasks that a worker performs (based on U.S. DOL O*NET survey data). Merger is a binary indicator of whether an individual job seeker posts his resume while employed at a target firm within at most 5 months of the announcement of a takeover (1 if so; 0 if not). Each column corresponds to a task associated with the allocation of control and authority within the organization. Column 1 corresponds to 'Staffing Organizational Units', Column 2 corresponds to 'Coordinating the Work and Activities of Others', Column 3 corresponds to 'Scheduling Work and Activities', Column 4 corresponds to 'Guiding, Directing, and Motivating Subordinates', Column 5 corresponds to 'Developing Objectives and Strategies'. Panel A contains regressions with no controls; Panel B contains firm and year fixed effects. N refers to the number of individual job seekers that comprise the sample. Standard errors are in parentheses.

Panel A: Univariate Regressions					
Ind vars	(1)	(2)	(3)	(4)	(5)
Merger	0.054	0.034	0.026	0.034	0.024
	(0.002)***	(0.002)***	(0.003)***	(0.002)***	(0.002)***
R^2	0.000	0.000	0.000	0.002	0.001
N	194,603	194,603	194,603	194,603	194,603
Panel B: Fixed Effects Regressions					
Ind vars	(1)	(2)	(3)	(4)	(5)
Merger	0.039	0.022	0.020	0.015	0.015
	(0.004)***	(0.003)***	(0.003)***	(0.003)***	(0.002)***
R^2	0.000	0.000	0.000	0.002	0.001
N	153,893	153,893	153,893	153,893	153,893

* p<0.1; ** p<0.05; *** p<0.01

Table 8. Impact of M&A on the composition of job seekers across tasks less affected by changes to organizational hierarchies

This table presents OLS regression estimates of the impact of M&A events on the composition of job seekers employed by target firms. The dependent variable in each column is the logarithm of the numerical score for a given task performed by an employee who engages in job search in a given year (on a scale of 1-5, where 1 is unimportant and 5 is important); the score is a measure of the importance of the task within the total set of tasks that a worker performs (based on U.S. DOL O*NET survey data). Merger is a binary indicator of whether an individual job seeker posts his resume while employed at a target firm within at most 5 months of the announcement of a takeover (1 if so; 0 if not). Each column corresponds to a task that is *not* directly associated with the allocation of control and authority within the organization. Column 1 corresponds to 'Performing General Physical Tasks', Column 2 corresponds to 'Controlling Machinery and Equipment', Column 3 corresponds to 'Handling and Moving Objects', Column 4 corresponds to 'Repairing and Maintaining Equipment', Column 5 corresponds to 'Operating Vehicles and Mechanized Devices'. Panel A contains regressions with no controls; Panel B contains firm and year fixed effects. N refers to the number of individual job seekers that comprise the sample. Standard errors are in parentheses.

Panel A: Univariate Regressions					
Ind vars	(1)	(2)	(3)	(4)	(5)
Merger	-0.012	-0.019	0.004	-0.001	-0.003
	(0.002)***	(0.002)***	(0.003)	(0.002)	(0.002)
R^2	0.000	0.000	0.000	0.002	0.001
N	194,603	194,603	194,603	194,603	194,603
Panel B: Fixed Effects Regressions					
Ind vars	(1)	(2)	(3)	(4)	(5)
Merger	-0.009	-0.008	-0.005	-0.005	0.004
	(0.004)***	(0.003)***	(0.003)	(0.004)	(0.004)
R^2	0.000	0.000	0.000	0.002	0.001
N	153,893	153,893	153,893	153,893	153,893

* p<0.1; ** p<0.05; *** p<0.01