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Friendships and Search Behavior in Labor Markets

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This paper examines how organizations use employee networks to contend with job seekers' search behavior. According to prior research, in markets where job seekers engage in nonsequential job search, organizations respond with tactics such as exploding offers and recruiting candidates earlier. In this paper, I posit that organizations have a social structural response. I argue that in an attempt to avoid problems related to candidates' job search, organizations are more likely to provide job offers to candidates with friends in the hiring organization than to those without friends. I test and find support for this hypothesis in a study of entry-level professionals in business and law. After a period of trial employment, candidates were more likely to receive job offers from organizations if they had a friend employed there than if they did not. The implications of this study for research on labor markets, networks, and inequality are discussed.

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Introduction

It is well established that social networks have widespread effects on labor markets. Social networks lead to the acquisition of jobs as often as formal job search methods (Granovetter 1995, Marsden and Gorman 2001), and a significant share of organizations on the demand side use social networks to recruit and screen job candidates (Kalleberg et al. 1996, Fernandez and Galperin 2014). A primary explanation for why organizations utilize networks is that doing so offers assurances about the quality of candidates. According to classic literature in labor economics, incomplete information is provided in standard hiring criteria, such as the school one attended, work experience, and grades. Organizations offer jobs to candidates with social ties to organizational members because their quality can be verified by a firsthand source (Saloner 1985, Simon and Warner 1992). Sociologists, too, have argued that networks provide information about quality that may aid in selection (Granovetter 1981, Marsden and Gorman 2001, Moss and Tilly 2001, Yakubovich and Lup 2006) and that organizations may have assurance that even if lower-quality candidates are selected, these individuals become better through the aid of their social contacts post-entry (Fernandez et al. 2000, Castilla 2005).

Building on these prior studies, this paper proposes that organizations use networks to predict not only the quality of job seekers but also the job seekers' search behavior. Classic economic models of labor markets assume job seekers accept (or reject) offers sequentially or "on the spot." Yet in many labor markets (e.g., newly minted masters of business administration (MBAs)), candidates search for multiple offers over a period of time (Roth and Xing 1994, Tang et al. 2009). When candidates search nonsequentially for jobs, this increases the costs of recruiting employees on the demand side of the market. Employers that offer jobs to candidates who eventually turn them down miss the opportunity to make offers to candidates who might have joined the firm but have since found jobs elsewhere (Roth and Xing 1997, Kagel and Roth 2000).

In this paper, I propose that organizations use a specific type of relationship in an attempt to mitigate problems related to the nonsequential search behavior of job seekers: the friendship between an employee of the hiring organization and a job candidate. Friendships are close, interpersonal relationships comprised of sentimentality and obligation (Silver 1990). Unlike instrumental relationships that are pursued mainly for economic gain, friendships are affective relationships that are maintained for reasons other than economic concerns. Organizations may rely on the sentiments and obligations within friendships in anticipation that this lowers difficulties related to job seekers' search behavior. As a result, candidates with friends in the organization may be more likely to receive job offers than candidates who lack friends.

Testing this hypothesis requires isolating the use of friendships to attend to job seekers' search behavior from aforementioned explanations on why friendships affect employers' job offer decisions. To do this, I use a unique context: trial employment. Most

extant theories on networks and labor market outcomes implicitly or explicitly assume that networks would not be utilized by organizations if information about the quality of job candidates were directly available (for an exception, see Castilla 2005). When quality can be revealed ex ante, networks become largely redundant and should no longer affect the likelihood that candidates are offered jobs. Leveraging this insight, I study the effect of friendships on offer decisions after a period of trial employment. Trial employment refers to a time in which individuals work for an employer before more permanent hiring decisions are made (Houseman et al. 2003, Cappelli and Keller 2013). Because information about prospective employees is available through direct observation, any network effects that arise are unlikely to be attributable to concerns about job seeker quality.

The trial employment context in this study is internships that new business and law professionals complete prior to graduation. After graduate students in business and law finish one or two years of professional education, internships serve as a several-week "extended job interview" (Baron and Kreps 1999, Beenen and Rousseau 2010). I conducted a multistage survey among business and law students attending a private university who completed internships. Participants were surveyed about the relationships they had with employees in their internship organization and their job offer outcomes after their internship was complete. My analysis indicates that candidates with a friend in the hiring organization are more likely to receive offers than those without friends. Follow-on analyses suggest the positive effect of friendships is attributable to employers' attempts to mitigate difficulties related to job seekers' search and that friendships may make effectual changes to job seekers' behavior.

Nonsequential Job Search

The economics literature on labor markets has long recognized the effect of job seeker search behavior on employer–employee matching (e.g., Stigler 1961). In traditional search models, the job seeker seeks out offers with the intent of maximizing her future income stream. She does so by accepting or rejecting offers serially or on the spot. This behavioral model of search is based on sequential statistical decision theory (Wald 1947). The job seeker learns about the distribution of offers available as part of a search process, rejecting an offer before moving on to the next (Lippman and McCall 1976, Mortensen 1986).

In many labor markets, including those for new MBAs and law associates, job seekers consider multiple offers at the same time. In these markets, the cost of a job search is low because it is coordinated by institutions such as universities. This allows individuals to receive and entertain multiple offers from employers simultaneously (Roth and Xing 1994, Coles et al. 2010). Nonsequential job search has a number of benefits for the job seeker. By considering multiple offers at once, job seekers gain access to information about a distribution of job opportunities before turning any down. In this way, the job seeker treats each offer as an option that may be exercised (or not) at the end of the job search period (Mortensen and Pissarides 1994, Mortensen 2011).

Although beneficial to job seekers, this type of search behavior increases recruiting costs on the demand side. In markets where job seekers conduct nonsequential search, it is less likely that a job offer will be accepted by a given candidate (Roth and Xing 1997, Kagel and Roth 2000, Ployhart 2006). Firms attempt to deal with this recruiting problem in a number of ways. One approach is for the firm to make exploding job offers that reduce the time candidates are given to decide on a job. Another tactic is for firms to recruit candidates earlier in the process; this way, firms have more time to learn of candidates' decisions and may be able to seek out additional candidates if needed. However, previous studies suggest that there are limits to these approaches. Exploding offers run counter to the norm in many professions (Niederle and Roth 2009), and offers with a short fuse may lead to adverse selection (Ely and Siegel 2013). Moreover, the problem with recruiting early is that other firms follow suit, leading the market to unravel to the point where uncertainty about candidate quality is too high to produce efficient matching (Li and Rosen 1998). For example, in the legal profession in the early part of the last century, the entry-level market for lawyers unraveled to the point where job offers were made several months before law students completed their education—i.e., before grades could be used to determine the quality of candidates (Roth and Xing 1994).

There is substantial prior research suggesting that organizations rely on relationships between current employees and job seekers to manage difficulties that result from labor market frictions, especially with respect to uncertainty about job seeker quality (e.g., Rees 1966, 1970; Granovetter 1981; Fernandez and Weinberg 1997; Castilla 2005; Yakubovich and Lup 2006; Beaman and Magruder 2012). Even though studies identify some downsides to using employee networks for this purpose (Bailey and Waldinger 1991, Bewley 1999), research also indicates that the associated costs of doing so may be outweighed by the benefits to the firm (Fernandez et al. 2000).

Given evidence that firms use networks to address uncertainty about candidate quality, it is reasonable to expect that they also use employee–candidate relationships to attend to hiring difficulties of another type: those arising from job seeker search. In markets where multiple offers arrive at once, it is

economically rational for candidates to extend their contemplation of offers regardless of whether doing so increases firms' recruiting difficulties. Hence, as described next, employers may examine the relationships between current and prospective employees to indicate whether the latter may deviate from such rational job search in ways that benefit the hiring organization.

Friendships and Employer Offer Decisions

Although the definition varies, friendships are generally recognized as affective relationships that are voluntary in nature (Rubin 1985). They are bonds that exist beyond the province of material or financial needs (Silver 1990). That is, whereas some relationships are formed and maintained for the purpose of instrumentality, friendships are formed and maintained for their own sake (Lincoln and Miller 1979, Lawler and Yoon 1996). Friendships trigger mechanisms such as trust, empathy, and social control that are not present in ties purely based on instrumental exchange.

From an early age, people hold a normative view of friendships that partly consists of the notion that individuals should not seek to maximize their own personal benefit in relationships with friends (Asher and Gottman 1981). There is considerable evidence to support the existence of this norm. In game theory experiments, economists find that participants share significantly more financial compensation with a person who is deemed a friend than with one who is an acquaintance (Montgomery 1998). In a study of industry peer networks, Sgourev and Zuckerman (2011) find that individuals continue with membership in networks because of their loyalty to friends, even when this counters economic gain.

Given the normative beliefs surrounding friendships, organizations may view friendships between employees and job candidates as one way to circumvent problems that arise in employment markets characterized by nonsequential search. First, organizations may believe that candidates with friends in the hiring organization are more likely to accept a job offer. Because job candidates may consider friendships to be valuable in their own right (Lawler 1992), a job that permits the chance to be employed where friends work could be viewed more favorably (Heimer 1992, Baron and Pfeffer 1994). Furthermore, friends are perceived to be similar on "deep-level" dimensions, such as beliefs and values (Lazarsfeld and Merton 1954). Because the candidate's friends chose to join the organization from a set of employment options, organizations may believe their friends would choose "in kind" (Rees and Shultz 1970, Montgomery 1991, Fernandez and Galperin 2014). Finally, employers may believe that job seekers with friends in the organization are better informed about the firm and jobs than are candidates without friends (Granovetter 1995, Fernandez and Weinberg 1997). If candidates with friends have more information than others, their persistence during the recruiting process may indicate to the firm that they would likely accept a job if offered.

Second, organizations may anticipate that the presence of friends in the organization encourages the job seeker to make a more timely decision. As intimated previously, organizations prefer learning about job offer rejections as soon as possible so that they can recruit other candidates. A firm may believe that it is apt to receive earlier notification of such rejections from candidates with close personal ties to organizational members. Although it may be in the candidate's own interest to hold onto an offer for as long as possible, the presence of affective relationships may result in an earlier decision owing to reputational concerns for those friends (Rees and Shultz 1970, Burt and Knez 1995).

These arguments are consistent with the sentiments expressed by managers in qualitative interviews (see the appendix for the interview protocol). During these interviews, managers frequently discussed frustrations stemming from the search behavior of candidates related to nonsequential job search. When asked about the strategies used to deal with these issues, managers mentioned assessing—prior to offering a job—the likelihood that a given candidate would accept it. When asked how they effected this strategy, some managers stated that they did, at times, use friendships between employees and candidates to proxy for the latter's search behavior. For instance, one human resources (HR) manager at a financial services firm stated,

> It's one of the strategic things, that when we talk about activities to plan or the relationships that people have, it's part of our strategic recruiting plan to make sure the person we make an offer to is connected, and has those relationships, so that they are less likely to feel, well, less likely to renege on a commitment [an offer they have accepted].

Another manager mentioned the difficulty of offering jobs to candidates because of the uncertainty surrounding their likelihood of accepting them. He stated that, after candidates had worked for the firm temporarily (i.e., during an internship), the presence of friendships in the firm provided a source of assurance to the firm that it would be worthwhile to put forth the effort to extend an offer. He said,

> The inevitable question is how much do we need a new analyst for next year? So, there's certainly, in terms of friends, or the relationship issue, one thing that can come up is, okay, this person is very qualified;

> do they like it here? We don't know—we think they'll take this position, but do we really need the person? Are they a complete rock star? If that's the case, then absolutely [they get an offer]. Or, if it's [that] they were very good, they were B+ but they have relationships and we're very confident that they'll take the position if offered, then we'll sort of find something for them.

Another manager stated that candidates with friends in his hiring organization are more likely to receive job offers than those without friends are. When asked why this was the case, he stated,

> Our company values very high predictability and planning, so that's why we'd like to have some assurance that a person is coming back [after an internship] so that we can move on without having to worry or have this hanging over our heads.

Managers also stated that they believe candidates with friends in the hiring organization would behave differently from those without friends in other ways. For example, managers stated that they knew it was common practice for job seekers to hold on to offers for negotiating purposes during their job search, even if they had no intention of accepting them. Managers believe that this behavior is less likely to occur when the candidate has friends in the hiring organization. In the words of one manager,

> The person without any relationships would be more likely to shop around the offer. The person with relationships with contacts here or friends here would most likely not do that.

These arguments and quotations suggest that organizations view the presence of friends as a way to improve hiring outcomes in markets where job seekers search for jobs nonsequentially. Organizations may anticipate that candidates with friends in the hiring organization are more apt to accept job offers than are candidates without friends. In addition, organizations may believe candidates with friends are less likely to delay responding to offers that they do not intend to accept. In light of such expectations about search behavior, I hypothesize as follows.

Hypothesis. *Job candidates with friends in the hiring organization are more likely to receive job offers than are candidates without friends.*

Research Setting and Data

This hypothesis is examined in the context of business and law internships. Internships are short-term work assignments that are used to match employers to employees (Wertheim 1988, Baron and Kreps 1999). During internships, employers typically assess the intern's skills and abilities over several weeks. Internships are a form of trial employment that organizations use to screen prospective employees before more permanent employment decisions are made (Kalleberg 2000, Houseman et al. 2003). This hiring approach is useful because labor is an experience good for which quality is difficult for employers to ascertain ex ante (Jovanovic 1979). Although employers likely vary in the extent to which they use internships as a screening tool, the idea behind this choice in setting is that employers have the opportunity to assess quality directly, making networks that are typically relied on during traditional hiring scenarios unnecessary.

The main sample consists of MBA students at a private university who completed internships during the summer of 2009. The MBA students were recruited for the study during a professional development course in the spring. The sample is limited to nonsponsored MBA students, or those pursuing a MBA degree without the sponsorship (i.e., financial backing) of an employer. The list of eligible participants was obtained from the university's MBA Career Management Center (CMC). The center carefully monitors which nonsponsored students become interns so that it can provide internship placement data to a national agency. The CMC provided a list of 126 MBA students that were eligible to complete internships that year.

In the late spring and prior to the start of the internship, all the interns were mailed a link to a survey about their internship employer and the relationships (if any) they had with employees in that organization. Of the 126 eligible MBA students, 114 (about 90%) participated in this pre-internship survey. Three months later, students who had completed the first survey were sent a link to a post-internship survey. Among these students, 103 completed the post-internship survey, making the total response rate 83% over both rounds of research.

In the fall of 2009, the study was extended to include a second sample of interns from the university's law school who had just completed internships during the past summer. These students took a single survey. Overall, 93 of 267 third-year law interns participated in the study (a 34% response rate). Because these law interns did not complete the survey until after they returned to campus, I took steps to aid in their network recall. The majority of the third-year students interned as associates in law firms. I gathered information about the names of these firms' employees from the *Martindale Hubble Directory*. This information was used to create rosters of the employees in each internship organization, and the relevant roster was supplied to each respondent before he or she completed the survey.

Across the two samples, observations were removed if respondents had an internship that extended beyond the summer into the fall, if the

respondent had not received notification concerning his or her offer status by the spring of the following year, or if for whom other data were either missing or incomplete. This culling resulted in 90 observations in the business sample and 68 in the law sample, for a total of 158 observations.

Dependent Variable

The dependent variable *offer* is dichotomous, equal to 1 if the intern received a full-time postgraduate job offer from the internship employer and 0 otherwise. The offer data were collected from the post-internship survey. Interns who had not yet received notification regarding job offer status made a note of this on the survey. I contacted those interns the following spring and recorded the offer status of each one at that time. The job offer information gathered from the survey and via the follow-up as just described was compared with data collected by the career management centers at the business and law schools. In each case, the offer outcome reported on the survey (or ascertained during the follow-up) was the same as that recorded by the CMCs.

Independent Variable

The *friend* variable is dichotomous, equal to 1 if the respondent had at least one friend prior to starting and 0 otherwise. The survey asked respondents to list all the individuals they knew in the organization prior to their internship. Knowing someone was defined as someone they could "recognize by sight and by name" that worked in the organization. Next, respondents indicated the frequency of interaction, duration, and closeness between themselves and each person listed. Finally, respondents categorized each listed person as a friend, relative, acquaintance, mentor, recruiter, internship supervisor, internship colleague, or alumnus. This categorization was used to determine which interns had friends in the firm.

In this setting, business and law students are told to "network" ad nauseam to secure internships, raising the possibility that interns' unobserved characteristics might lead them to have friends in the organization. In this study, many structural characteristics of friendships marshal against this concern. For one, the friendships listed predated the internship search; more than 80% of the time, the respondent reported knowing the friend for more than a year. Furthermore, interviews with the interns brought to the fore the nonstrategic nature of these relationships. For instance, one intern mentioned that the friend listed was a "friend of the family," whereas another person mentioned that the person was a "sports buddy from college" and another a "sorority sister." Nevertheless, to further mitigate concerns about endogeneity, I removed any contacts respondents listed as having known for less than a year when constructing the friend variable and then ran the analyses. Removing these contacts did not have a substantive effect on the results, so I include all those categorized as friends in the analyses presented below.

Individual-Level Controls

A number of variables are included as controls that might make the effect of friendships on job offers spurious if they were omitted from the models. One variable is the level of interest interns had in working for the employer after graduation. It could be that interns with friends in the organization differ in their motivation because those with friends are "presold" on the virtues of working for an organization (Wanous 1980). If this is the case, those with friends may exert more effort during the internship. This possibility was addressed by including a variable that captures the interest individuals had in working for the organization. Prior to the start of the internship, respondents were asked, "If you were offered a full-time job from your internship organization right now that would begin after graduation, how likely is it that you would accept it?"[1] Responses were based on a five-point Likert scale ranging from 1 (very unlikely) to 5 (very likely) to accept such an offer. A dichotomous *no intent* variable was created, equal to 1 if the respondents indicated they would be extremely or very unlikely to accept a postgraduate job offer if it were to be provided and 0 otherwise.[2]

In addition, a variable is included in the models to control for the ability of the interns. I collected information on the grade point average (GPA) of the students based on which students made the dean's list in the law and business schools (i.e., those in the top 20%). Because the individuals in the study attended the same university, this provided a measure of relative ability for participants (Chatman 1991, O'Reilly and Chatman 1994). A *top 20%* dummy variable was created, equal to 1 if the individual had a GPA in the top 20% of the MBA or law school class and 0 otherwise.

The demographic background of the respondents is also controlled for in the models. Gender is included using a *female* dummy variable, and dummy variables for U.S. racial minorities (i.e., *African American*, *Hispanic American*, and *Asian American*) are also included. Finally, there are a number of non-U.S. citizens in the business school sample, and thus *foreign* is included as a dummy variable, equal to 1 if the individuals originated outside of the United States and 0 otherwise.

[1] This question was asked of the business interns only.

[2] A dichotomous variable rather than a continuous variable was used because it correlates most strongly to receiving an offer.

Table 1 Descriptive Statistics

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. *Offer*	0.45	0.50	1.00												
2. *Friend*	0.14	0.35	0.26*	1.00											
3. *Top 20%*	0.19	0.39	0.24*	−0.12	1.00										
4. *Pay*	0.88	0.33	0.27*	−0.04	0.01	1.00									
5. *Organizational size*	6.37	2.45	0.39*	0.04	0.08	0.33*	1.00								
6. ln(*Number of alumni*)	1.69	1.44	0.23*	0.01	0.03	0.32*	0.31	1.00							
7. *Foreign*	0.44	0.50	−0.19	−0.18	−0.20	−0.08	−0.12	−0.07	1.00						
8. *African American*	0.07	0.25	−0.07	−0.11	−0.02	0.10	0.18	0.13	−0.24*	1.00					
9. *Hispanic American*	0.02	0.15	0.01	−0.06	0.12	−0.17	−0.12	−0.06	−0.13	−0.04	1.00				
10. *Asian American*	0.08	0.27	−0.02	0.12	−0.03	−0.02	0.01	−0.11	−0.26*	−0.08	−0.04	1.00			
11. *Female*	0.44	0.50	0.08	0.01	−0.03	0.13	0.07	0.11	0.01	−0.06	0.02	0.07	1.00		
12. *No intent*	0.16	0.36	−0.21	−0.09	0.11	0.07	−0.05	0.03	−0.01	0.01	−0.06	−0.12	0.05	1.00	
13. *Financial industry*	0.17	0.37	−0.11	0.07	0.01	0.08	−0.07	0.14	0.14	−0.12	−0.07	−0.13	−0.16	0.05	1.00

Note. $N = 90$ (business interns).
*$p < 0.05$.

Organizational and Industry-Level Controls

A number of organizational-level control variables are also included. Because a nonpaying internship may reflect that there are limited financial resources in the employing organization, the variable *pay* is included as a dichotomous variable, equal to 1 if the intern was paid during the summer for employment and 0 otherwise. An *organizational size* variable is included to control for differences in financial resources across the organizations at which the interns worked and the slack they have to make offers (Barber et al. 1999).[3] Given the financial industry's turbulence during 2009, a *financial industry* dummy was included to indicate whether the respondents worked for organizations in the banking, investment, or insurance industry.

The logged *number of alumni* in the organization is also included as a control. The number of alumni may indicate the tendency the organization has to recruit individuals from targeted schools (Parkin 2006, Oyer and Schaefer 2012). The count of alumni was gathered from looking up the organization's name in the business and law schools' alumni databases and counting the number of employees listed. The counts are skewed, so a log transform of the number of alumni is included in the models.

Analyses and Results

Table 1 describes the means and correlations for the variables for the main business intern sample. Less than half of the business interns (45%) received full-time offers from their employers. In this sample, 19% of the interns are ranked in the top 20% of their MBA class, indicating that this sample is representative of the MBA population at the university. Most interns (88%) were paid during their internships, and 17% of the interns in the sample worked in the finance industry. The majority of interns (55%) worked in offices with more than 150 employees, whereas less than 20% worked in offices with fewer than 40 employees. Forty-four percent of the sample is female. The percentage of African Americans, Asian Americans, and Hispanic Americans in the sample is 7%, 8%, and 2%, respectively, and 44% of those in the sample originated from outside of the United States.

Table 2 presents multivariate analysis using logistic regression. I obtain similar results using linear probability models. Because the hypothesis is directional, all hypothesis testing is shown using one-tailed tests. In Model 1, the job offer variable is regressed on the friend variable. This model indicates that having a friend in the organization has a positive and statistically significant effect on the likelihood of receiving an offer ($p < 0.05$). Model 1 does not include the individual-, organizational-, and industry-level control variables. In Model 2, I regress the job offer variable on the friendship variable with the individual-level controls included. Notably, each control variable is statistically significant and in the expected direction. Interns in the top 20% of the MBA class are significantly more likely to receive job offers than those who are ranked lower. Interns with a lack of interest in working for the internship organization after graduation are significantly less likely to receive offers. After inclusion of these variables, the positive and statistically significant effect of friendships on offers remains ($p < 0.05$).

Next, the firm- and industry-level variables are included in Model 3. Again, the effects of all the control variables are sensible. The size of the firm has a positive and statistically significant effect on an individual receiving a full-time postgraduate offer from

[3] Pretesting indicated that respondents had a rough idea of the size of their employing organization. Hence, survey respondents were asked to indicate the size of that organization by category (0–10 employees, 11–20 employees, etc.).

Table 2 Logistic Regression Models of Job Offers

Variable	Model 1 (business)	Model 2 (business)	Model 3 (business)	Model 4a (business)	Model 4b (law)	Model 4c (combined)
Friend	1.60*	1.84*	2.42**	2.47**	1.71*	1.56**
	(0.70)	(0.80)	(0.86)	(0.98)	(0.97)	(0.53)
Top 20%		1.83**		1.98*	0.79	0.87*
		(0.62)		(0.83)	(0.80)	(0.47)
No intent		−1.62*		−1.85*	—	—
		(0.79)		(0.85)		
Organizational size			0.36**	0.37**	0.53**	0.31**
			(0.13)	(0.15)	(0.19)	(0.09)
Pay			2.37†	2.64		2.95*
			(1.84)	(2.16)		(1.27)
ln(*Number of alumni*)			0.19	0.21	−1.03*	−0.21
			(0.18)	(0.21)	(0.44)	(0.16)
Financial industry			−1.08†	−1.01†	—	—
			(0.68)	(0.74)		
Law						−0.10
						(0.47)
Demographic variables	No	No	No	Yes	Yes	Yes
Constant	−0.39*	−0.55*	−5.26**	−5.26**	−2.23**	−4.51**
	(0.23)	(0.28)	(1.84)	(2.05)	(0.74)	(1.25)
N	90	90	90	90	68	158

Note. Robust standard errors are in parentheses.
†$p < 0.10$; *$p < 0.05$; **$p < 0.01$ (one-tailed tests).

the internship employer. Although the other firm- and industry-level controls are not statistically significant at the 5% level, they are in the expected direction. As in the previous models, the impact of having a friend is positive and statistically significant ($p < 0.01$).

Model 4a shows the full model with all controls, including the demographic variables. The individual demographic variables are not shown, but none had an impact on receiving a job offer with the exception of the Asian American dummy variable, which has a negative coefficient and is statistically significant ($p < 0.05$). In this full model, friendships have a positive and statistically significant effect on receiving a job offer ($p < 0.01$, odds ratio of 11.82).

The friend effect is assessed further among a second sample—law interns that completed internships during the same time period. Among the sample of law interns, the effect of friendships on offers is positive and statistically significant ($p < 0.05$, odds ratio of 5.52).[4] In Model 4c, the effect of friends is tested in the combined sample of law and business interns. A *law* dummy variable was included in the analysis to control for differences across the samples. Consistent with every other model, the friend effect is positive and statistically significant ($p < 0.01$).

[4] In my analysis of the law student sample, the *financial industry* variable was excluded (because law interns do not work in this industry) as was the *no intent* variable (because the data for this subsample were collected after internships were completed).

Robustness Checks

The results above provide evidence that after controlling for individual-, firm-, and industry-level factors, friendships improve the likelihood that individuals receive job offers. The results hold even after including factors that could make the relationship between friendships and job offers spurious, such as the intent to work for an employer. It is important to note that this effect is seen in the context of internships, a setting in which organizations are able to observe candidates prior to making job offers, which helps rule out an alternative explanation that employers are leaning on the friends of job seekers to provide information about quality. These findings are consistent with sentiments expressed by employers on why friendships are given weight in selection decisions in markets with nonsequential job search.

I perform additional checks to rule out other alternative explanations for these findings. First, I examined whether these results could be driven by a treatment effect. Prior studies suggest that those with social contacts in the organization pre-hire may be more "socially enriched" than others (Fernandez et al. 2000, Castilla 2005). I use a normative proficiency scale by Morrison (1995) to assess whether individuals with friends were more socialized than others. The normative proficiency scale measures the knowledge an individual has about an organization's norms, goals, and values (Feldman 1981). There was no statistically significant difference in the level of

proficiency between those with friends and those without ($p > 0.1$). Furthermore, in mediation tests there was no evidence that socialization affected the relationship between friendships and offers.

I also compared the effect of friendships on offers with the effect of other relationships that individuals had in the organization. Evidence that not only friendships but also instrumental relationships affected job offers would lead to questions about the expected benefits of affective ties. On the internship survey, respondents listed all their social contacts in the internship organization and placed these individuals into categories. These various categories of relationships—between employees and interns—are included in the regression models in Models 5a and 5b in Table 3. I omitted the "relatives" category because there were almost no relatives listed as contacts by survey respondents. In Model 5a, the friend variable is dichotomous (for comparability to the earlier models), and in Model 5b, the friend variable is the count of the number of friends the intern had in the organization.

Table 3 The Effect of Social Contacts on Job Offers

Variable	Model 5a	Model 5b	Model 6
Friend (0/1)	1.71**		
	(0.62)		
Total friends (count)		1.08*	1.99**
		(0.48)	(0.68)
Total acquaintances	−0.35*	−0.34*	−0.44*
	(0.20)	(0.19)	(0.26)
Total mentors	0.09	0.14	0.17
	(0.27)	(0.27)	(0.28)
Total supervisors/colleagues	0.04	−0.01	0.04
	(0.34)	(0.36)	(0.34)
Total recruiters	−0.02	−0.01	0.01
	(0.16)	(0.15)	(0.17)
Total alumni	0.58†	0.60†	0.66†
	(0.42)	(0.44)	(0.47)
Other control variables			
Top 20%	0.93*	0.91*	0.93*
	(0.50)	(0.49)	(0.50)
Organizational size	0.31**	0.31**	0.32**
	(0.09)	(0.09)	(0.09)
Pay	3.17*	2.97*	3.16*
	(1.44)	(1.27)	(1.54)
ln(*Number of alumni*)	−0.26†	−0.27*	−0.28†
	(0.16)	(0.17)	(0.17)
Law	0.04	−0.04	0.10
	(0.47)	(0.47)	(0.48)
Same state			0.26
			(0.49)
Total friends × *Same state*			−1.60*
			(0.83)
Demographic variables	Yes	Yes	Yes
Constant	−4.88**	−4.57**	−5.06**
	(1.43)	(1.26)	(1.60)
N	158	158	158

Note. Robust standard errors are in parentheses.
†$p < 0.10$; *$p < 0.05$; **$p < 0.01$ (one-tailed tests).

The results indicate that none of the instrumental relationships has a positive and statistically significant effect on an intern getting an offer. This would be surprising in a traditional hire study, where quality is difficult to verify ex ante and any social contact might be relied on to do so. Here, the lack of a positive effect for the other types of relationships suggests that this is not how organizations are utilizing social contacts.[5] Rather, the only other type of relationship that has even a marginally significant effect on job offers ($p < 0.1$, odds ratio is 1.84) is alumni relationships, which could be operating to influence the perception of the behavior of candidates in a similar way as friendships because of the identity-related aspects of alumni connections (Ashforth and Mael 1989, Rivera 2011, Rider 2012).

Finally, I investigated the impact of propinquity on the importance of friendships between current and prospective employees. In qualitative interviews, managers expressed greater concern about the job interest of candidates who would be forced to relocate if a job offer were accepted. Given this, I reasoned that when prospective employees must move from a greater distance, a friend in the organization may be more important to helping the organization believe that an offer would be given serious consideration. To explore this further, in Model 6, I include two additional variables. I add a variable that indicates whether the intern completed an internship in the same state as the university he or she was attending, and I include an interaction term between the same state variable and the number of friends the intern has in the organization. I expect the effect of friendships on offers to weaken when an individual works in the same state as the university. Consistent with this expectation, the coefficient on the interaction term is negative and statistically significant ($p < 0.05$). As suspected, the influence of friends on the offer decisions of employers is dampened with geographic proximity. What this implies is that the availability of nearby social capital replaces the need for social capital within the organization as an indicator of whether a candidate would give a job offer serious consideration.

[5] The arguments presented here might suggest that mentors would have an additional positive effect on the likelihood of a job being offered. However, in this setting mentors are normally assigned before an internship begins, and interviews suggest that they were often mentors "in name only." That is, the mentoring relation did not constitute a close interpersonal bond.

Extension: Do Friendships Alter Job Seekers' Search Behavior?

This study has sought to examine how organizations use friendships to attend to job seekers' search behavior. The goal of this research has not been to directly assess the behavior of the job seekers themselves, but the question remains: Do friendships actually influence search behavior? Answering this question may shed more light on the offer decisions of firms.

I begin to explore this question with a set of follow-on interviews with 16 professionals and a vignette study. This follow-on work provides some evidence that a job candidate's search behavior changes in the context of close, interpersonal ties. During semistructured interviews, individuals suggested that they would feel more obligated to accept a job offer from a firm where one or more of their friends worked (see the appendix for the interview protocol). Although some interviewees stated they would not accept an unwanted offer despite a friend working at the firm, others indicated that it would factor into their decision, at least at the margin. For example, one person who had accepted a job offer where a friend worked stated that

> I did feel a little more obligated to take the offer when I got it, but that's easy to say because I was interested, and that was my top choice anyway, but even if it wasn't, even if it was, you know, runner up, I would still probably put it higher on the list because of that connection [a friend].

Interviewees also suggested that, beyond influencing their decisions about offers, friends strongly affected the promptness with which they would inform employers of their offer decisions. A common sentiment was that they would normally hold on to offers for as long as possible and not reject them earlier than the firm's deadline. For example, two individuals expressed the following:

> Person 1: You try to wait because you can use it as leverage while you're interviewing with other firms, and it makes that choice, the more places that you have offers, it kind of makes it easier to compare. Usually the more choices you have it's harder, but in this case it's easier to stack companies up against each other because there are so many factors.
>
> Person 2: The norm is waiting until the very end, even if you're not interested. That's not my style, but I know a lot of people who play that game, which, it's really just the value of the option. You wait until the bitter end because there could be other things that come up.

However, many of the interns indicated that they would behave differently with respect to a job offer from an organization where a friend was employed. For instance, one person stated that when it came to providing decisions about offers to firms, he would wait until the last minute at firms where he did not have personal ties but would behave differently at places where he had friends. Specifically, he stated,

> You know, if it's a company you're not going to work for, and you don't have friends there, it's like, whatever, I don't care. I'm not going to work for them anyways. I don't know anyone that would be offended by me, or if they were I could care less, because I don't have a long-standing relationship with a person. But if it's somebody you know and have a long-standing relationship [with], you certainly want to show that, look, I'm not waiting until the last minute because I know you guys have spots to fill. I want you guys to have time to fill your spots.

Another person talked about experiencing a higher level of discomfort if she were to hold onto unwanted offers from firms where she had close personal ties. She stated,

> I can only imagine from what I've seen, and just from my own personal experience, when there is a friend or family involved I can't sleep well, it just weighs on you. You'd want to shorten up that time period as quickly as possible.

Vignette Experiment

In sum, sentiments expressed by new professionals indicate that close interpersonal relationships may change search behavior. To further explore the findings from the qualitative interviews, I conducted a vignette experiment in a one-year MBA program at the same institution as the main study. A total of 39 individuals participated out of approximately 45 students enrolled in the course. The experiment took place during a class break, and the survey was administered by the class instructor (who had no other involvement in the study). The instructor also provided a link to the survey so that students without the necessary equipment (i.e., a laptop) could take the study after class.[6] To encourage participation, individuals enrolled in the course were placed in a raffle for an iPad Mini. Three participants opted not to provide information on their demographic background and prior work experience. Of the 36 remaining participants, 56% were Caucasian, 19% were Asian, and the rest are U.S. minorities. Women accounted for 25% of the sample. The participants have, on average, seven years of work experience and are 30 years of age. Before conducting the study, the vignette was pretested with prior and current MBA students not

[6] In logistic models of search behavior, a control variable was included for whether or not the students took the survey in class. Inclusion of this variable did not affect the positive and statistically significant effect of friendships on the decision to let unwanted offers go early.

currently enrolled in the course and a power analysis was conducted to determine the appropriate class size for the study to take place.

The experiment involved participants reading a hypothetical scenario about a job offer that they did not intend to accept, after which they had to decide when the employer should be informed of their decision. The hypothetical scenario read as follows:

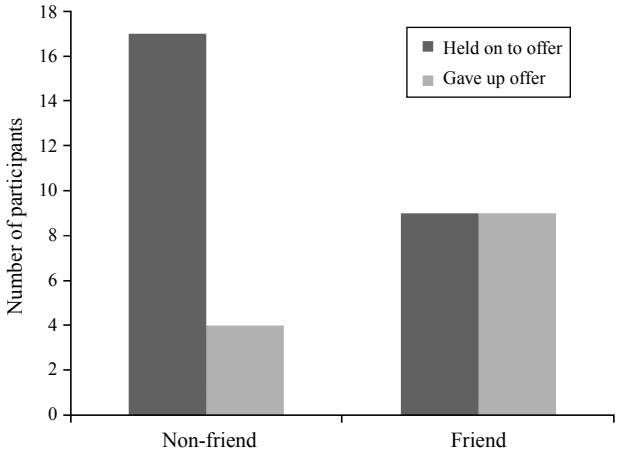
> You are enrolled in a two-year full-time MBA program at a prominent university. You decided to get your MBA to obtain a great new job after graduation. During the summer between your first and second year in the MBA program, you completed an internship. The organization you interned with made you a full-time postgraduate job offer. However, this organization was not right for you. Under *NO* circumstance are you going to accept the organization's offer. The organization has given you 30 days to let them know whether or not you will accept their job offer. It is the fall of your second year, and you have no other job offers.
>
> From your standpoint, even though you will not take the job offer from your internship employer, *it would be useful for you to hold on to the offer as long as possible* because it puts you in a better negotiating position with employers as you look for a job.
>
> From the internship organization's standpoint, *it would be useful to know that you are rejecting their offer right away* (*on day one*) so that they can recruit other individuals who are looking for jobs that might take jobs elsewhere during the 30 day period.
>
> Your close, personal friend works for your internship employer.

I used Qualtrics© software to randomly assign the participants to a friend and non-friend. In the friend condition, the respondents were told that "a close, personal friend works for the employer," as indicated above. This statement did not appear in the non-friend condition. After reading the hypothetical scenario, respondents were asked if they were going to let the organization know as soon as possible (on day 1) that they are kindly rejecting its offer. A manipulation check followed that assessed the respondents' understanding of the scenario; this assessment indicated participants in the friend condition were significantly more likely to indicate they had a friend in the internship organization than those in the non-friend condition ($z = 4.11$, $p = 0.00$).

The dependent variable, *held offer*, is dichotomous, equal to 1 if a participant held on to the unwanted offer for any period of time and 0 otherwise. Given the categorical nature of the dependent variable and the small sample size, I use the nonparametric Fisher's exact test to evaluate the relationship between friends and search behavior.

Figure 1 illustrates the results. The respondents assigned to the friend condition were more likely to let their offers go as soon as possible and forgo search versus those in the non-friend condition. In the non-friend condition, a minority of participants (4 of 21) indicated that they would inform the employer they were rejecting an unwanted offer early rather than hold on to it during their job search. In contrast, half of the respondents (9 of 18) in the friend condition indicated that they would do so. The Fisher's exact test is statistically significant, with a p-value of 0.044 (one-sided test). By way of comparison, the $\chi^2(1)$ test yields a p-value of 0.041, which is also significant; however, caution should be taken when evaluating results using a χ^2 test in samples of this size. Overall, the findings from the vignette study coalesce with findings from interviews with job seekers: both provide some evidence that the presence of friends in a target organization changes the behavior of an individual who seeks a job there.

Figure 1 Decision to Inform Employer About Unwanted Offer



Concluding Remarks

Among those who study labor markets, there is a long-standing interest in how and why social networks affect labor market outcomes. Whereas early work in this field (e.g., Granovetter 1973) focused on the effect of social networks on the supply side (employee job search), the past 15 years have seen increased attention paid to the effect of social networks on the labor market's demand side—that is, employer selection (Fernandez and Galperin 2014). Common themes emerging from the literature are that (i) uncertainty about job seeker quality induces employers to rely on employee networks during the selection process and (ii) employee networks assure firms of the quality of applicants through mechanisms that operate pre- and post-entry. According to Fernandez et al. (2000), organizations appear to be "social capitalists" that utilize employee networks to gain strategic human resource advantages.

I augment these insights by demonstrating the existence of a significant, robust, and well-behaved relationship between friendships and employers' job

offer decisions that is rooted in the use of friendships to counteract search behavior. I find that when candidates undergo a job search nonsequentially, organizations are more likely to offer jobs to candidates with friends in the organization than to those without friends. This relationship appears to be stronger when the job candidate works in a state outside of his or her home educational institution. Additionally, I find some evidence suggesting that this demand-side response may be reasonable because friendships may alter candidates' search behavior in ways that benefit the firm.

These findings echo labor market theories that indicate how a criterion unrelated to quality can become part of the decision-making frameworks within which organizational hiring choices are made. For example, the literature on statistical discrimination has documented that, for the sake of efficiency, nonmerit-based factors such as race and gender may figure in the firm's selection decisions (Arrow 1972; for a recent discussion, see Rubineau and Kang 2012). The argument goes that as long as the probability of an undesired behavior is distributed unequally among a population, employers may reasonably offer jobs to individuals whose probability of displaying the undesired behavior is diminished—e.g., firms may offer jobs to men rather than women based on the idea that the former are less likely to exit the workforce. Here, I invoke a similar mechanism: an organization factors friendships into its job offer decisions because job seekers with friends in that organization are viewed as less likely to search for jobs in ways that are detrimental to the firm.

By testing the effects of networks on selection in a setting where prior theory would suggest their effects should be limited—and then providing evidence that these effects persist owing to job seekers' search behavior—this study makes an important contribution to research on social networks and labor markets. However, I am careful not to generalize the structural effect uncovered here to labor markets of all types. The search behavior displayed by these job seekers is concomitant with a "thick" set of employment options—in other words, when an individual can court (or be courted by) multiple employers simultaneously. In light of prior research cited heretofore, I carefully chose a context to reflect the realities of many but not all labor markets. Future research would do well to investigate how search behavior varies across labor markets and industries as well as to explore the ensuing effects of social networks. Such studies could help establish which relationship types have the greatest effect across a variety of employment contexts.

Furthermore, although follow-up analysis offers evidence of increased employer attentiveness to friendships when a candidate would need to relocate from another state, this topic certainly merits additional investigation. There is a robust and growing literature addressing the effects of geographic distance on employment outcomes, and studies that juxtapose variation in social capital with proximity effects may yield useful insights. (For a recent example of work along these lines, see Sorenson and Dahl 2012.) Future research should aim to document whether employers view applicants as being amenable to making trade-offs between the social capital inherent to organizations and the social capital located in communities, neighborhoods, and volunteer groups. In addition, studies should be designed to investigate supply-side search behavior more effusively. In this paper, I have used qualitative interviews and a vignette experiment to provide evidence of the effect of friendships on search behavior, but this evidence needs to be complemented with additional studies in the field to more fully elucidate these relationships.

Finally, this study makes an important contribution to research on inequality in labor markets. Because organizations are the primary distributors of income, the hiring choices of employers have a substantive effect on income inequality. (For a recent review addressing inequality and organizations, see Bidwell et al. 2013.) Previous research that suggests inequality may be amplified in labor markets reliant on strong rather than weak connections (e.g., Montgomery 1994) seems especially relevant to the findings presented here. Namely, it offers another reason why some professions are difficult to enter: the structural (e.g., timing) aspects of labor markets and the demand-side response to these aspects may make them so. Although the firm's use of employee networks may be a reasonable response to labor market frictions, it may disadvantage groups whose members tend to lack close relationships to employees of hiring organizations.

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Appendix

Semistructured Interviews with HR Managers and Supervisors

Interviews were conducted with HR managers and intern supervisors. The career services center of an elite, private

university provided the names of 16 HR managers that were responsible for internship programs. Each individual was contacted, and 7 of the 16 agreed to be interviewed. The purpose of these interviews was to verify the setup of the quantitative study. A number of follow-up interviews were conducted with supervisors of MBA interns to learn more about offer decisions. These supervisors are 10 alumni of the same university whom were selected to be interviewed after being sent an email by the MBA program office. The interviews lasted 22 minutes on average, with the shortest interview lasting 11 minutes and the longest 36 minutes. During these semistructured interviews, the following questions were posed. Follow-on questions were asked to gain additional information as needed.

HR Managers

Why does your organization have an internship program?

How does your organization decide who to hire as interns?

What sort of work assignments do interns complete during the program?

How confident are you that managers understand the quality or ability of individuals by the end of the internship program?

Have there ever been instances when managers did not know how to assess performance?

Intern Supervisors

What were the biggest challenges you faced when managing interns?

How were decisions made about whom would receive offers?

Did you think about who would be likely to accept an offer in thinking through whom to make offers?

What sort of signals or cues would you or the organization try to pick up on in terms of who would accept?

Did interns' personal ties provide any information?

Semistructured Interviews with Job Seekers

Interviews were also conducted with MBA students from the same university that provided access to HR managers and supervisors. The MBA program office at the university provided the names and email address of 30 randomly chosen individuals in their second year of the MBA program. These individuals were contacted and invited to participate in an in-person interview about their job-finding experiences. Individuals opted out of being interviewed for a number of reasons (e.g., they were joining a family business, they were currently studying abroad). A total of 16 individuals agreed to be interviewed. Interviews lasted 19 minutes on average, with the shortest interview lasting 13 minutes and the longest interview lasting 41 minutes.

Interview Protocol

At the start of the interview, participants filled out a table about their job-finding experiences (an excerpt is shown in Table A.1). The participants were asked about each of their job offers, whether or not they had received exploding offers, how long they took to decide on offers, and about relationships they had with individuals in the organization.

Table A.1. Excerpt of Table from Job Seeker Interview

Companies where you had interviews for a full-time job	Did this company make you a full-time offer?	If yes, how many days did you consider this offer?	Was this an exploding offer?	If yes, how long did you have to decide on your offer?	Did you accept this offer?	Did you know anyone at this company? (Knowing someone is defined as being able to recognize this person by face and by name.)	If yes, how close were you to the person you knew the best? Circle one answer.
	Yes/no		Yes/no		Yes/no	Yes/no	Especially close Close Less than close Distant

Using this table, questions were asked to probe for additional information about the job search. For offers listed, the following questions were asked:

1. Why did you decide to hold on to an offer or not hold on to an offer until the date of expiration?

2. Whom did you know in the organization (if applicable)? Did this relationship(s) affect your decision to accept an offer/hold on to an offer/let an offer go prior to the date of expiration? Why or why not?

3. Would you expect your peers to respond the same way you did?

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