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Student leadership experience and job accessibility: An experiment from China

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ABSTRACT

Understanding the relationships between different signals that indicate the characteristics of workers and firms is essential to improving job matching efficiency. Using a field experiment, we investigate student leadership experience premiums and explore the relationships between signals reflecting personal qualities and signals reflecting vacancy-related qualities. We find that, first, there is no universal causal effect of student leadership experience on job accessibility in China. Second, student leadership experience complements other personal qualities for individuals majoring in science and engineering. Third, student leadership experience is a complementary factor for small firms. Fourth, higher-level student leaders enjoy a larger premium in job accessibility. Finally, student leaders are not preferred by high-paying positions but favored by positions with large payment variances.

1. Introduction

Signals (e.g., education and employment status) sent by applicants play an important role in job searches (Alós-Ferrer & Prat, 2012; Frankel, 2021; McCormick, 1990; Spence, 1973). Assortative matching between workers and firms could be the complements or substitutes in production (Eeckhout & Kircher, 2011). However, few existing studies have explored the relationship between different types of signals, nor have they determined the threshold required for such signals to work. In this paper, by conducting a field experiment, we investigate the relationship between the signal of student leadership experience, and other signals that represent personal qualities on resumes, and those that reflect vacancy-related qualities on job advertisements. We also explore the threshold value of student leadership experience that affects results in the job market.

The annual election of student leaders is an important event on campus, especially for students. Moreover, student leadership experience is probably one of the most valuable college experiences (e.g., internship and volunteering experience) for students—-second only to learning activities. Therefore, an accurate understanding of the role of student leadership experience in job matching can help students better prepare for a highly competitive job market. Leadership activities may have a positive impact on academic performance, resource access, and psychological qualities, such as risk-taking, auto-excitation, and emotional-management (Anderson & Lu, 2017; Anderson & Galinsky, 2010; Deng, Li, & Zhou, 2020; Dhuey & Lipscomb, 2008; Galinsky, Gruenfeld, & Magee, 2003; Lewis, 2000; Lozano, 2008; Shamir, House, & Arthur, 1993). Furthermore, leaders can have an important influence on the

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performance of organizations, local communities, and even entire countries, such as in investment, financing, and innovation (Beaman, Chattopadhyay, Duflo, Pande and Topalova, 2009; Beaman, Duflo, Pande, and Topalova, 2012; Bertrand & Schoar, 2003; Chattopadhyay & Duflo, 2004; Etro, 2004; Grossman, Komai and Jensen, 2015; Güth, Vittoria Levati, Sutter, & van der Heijden, 2007; Jones & Olken, 2005; Malmendier & Tate, 2005). Additionally, studies have documented that individuals with leadership experience have higher incomes than those without such experience in developed countries, such as the U.S. and Sweden (Kuhn & Weinberger, 2005; Lundin, Skans, & Zetterberg, 2019).

This study contributes to the literature in the following ways. First, we extend the research on student leadership experience in four aspects: We are the first to investigate the causal effect of leadership experience on the labor market performance through field experiments. Second, by examining the different effects of various types of leadership positions (e.g., class monitor and student-union minister) on job accessibility, we explore the threshold for student leaders to obtain a premium in the labor market. Third, by comparing the impact of student leadership experiences in different majors (e.g., economics and management vs. science and engineering) on job matching, we provide guidance on leader training in different majors. Finally, compared with previous literature, which mainly considered the correlation between student leadership experience and income in Western culture and developed countries, such as the U.S., we investigate the relationship between student leadership experience and the job accessibility in Eastern culture and developing countries, such as China.

Second, our study enriches the literature on job matching, especially in the entry-level labor market. Although there is a substantial body of literature on how personal qualities influence job matching (Alós-Ferrer & Prat, 2012; Dustmann & Meghir, 2005; Gonzalez & Shi, 2010; Lindqvist & Vestman, 2011; Moscarini, 2005; Ryan, 2001), few studies have discussed how to effectively combine the different types of information on a resume to improve the efficiency of matching. Our study addresses this research gap by showing that student leadership experience is a key complement or substitute with respect to other signals reflecting personal qualities on resumes or vacancy-related qualities on job advertisements.

Using a field experiment,[1] in which we randomly distribute realistic graduate resumes of applicants with the same qualities but differentiated by student leadership experiences ("identical triplet CVs") to real vacancies through recruiting websites, we thoroughly investigate the effect of student leadership experience on job accessibility in China. We obtained the following findings. First, in terms of signals on resumes, there is no statistically significant causal effect of student leadership experience in college on job accessibility for economics and management majors; student leadership experience complements personal qualities for individuals majoring in science and engineering. Second, in terms of signals on job advertisements, student leadership experience is a complementary factor in small firms. Third, individuals with high-level student leadership experiences (e.g., student-union minister) are more likely to achieve a premium in the labor market than those with low-level student leadership experiences (e.g., class monitor), and school-level student leader positions seem to be the threshold level for achieving leadership experience premiums in the labor market. Finally, the leadership experience premium correlates with variance in pay (i.e., the ratio of upper bound to lower bound), not the pay level (i.e., the lower bound, upper bound, and median of monthly salary and non-salary benefits).

The remainder of this paper is organized as follows. Section 2 introduces the student leader setting in Chinese schools. Section 3 presents the theory and four hypotheses that serve as the basis for the design and analysis of our experiment. Section 4 describes our experimental design. Section 5 presents the empirical work, and Section 6 concludes.

2. Background: Student leader setting[2]

In China, a university generally has multiple colleges of different sizes, and a standard class has approximately 30 students. Most Chinese schools have similar student leadership structures. Usually, there are three levels of leaders in a standard class; from highest to lowest, they are monitor, commissary, and delegate. Typically, the monitor positions include one class monitor and one vice class monitor. Besides class-level student leaders, there are also college-level and school-level leaders in the college and school student unions, respectively.[3] The college and school student unions usually share a similar organizational structure. A student union generally includes presidium, secretariat, propaganda department, organization department, study department, and diplomacy department. The presidium is composed of one chairman and two vice presidents. There is one minister, two vice ministers, and three or four secretaries in a department. In some cases, high-ranking student leaders also serve as lower-ranking student leaders. For instance, the commissary in charge of studies also serves as the delegate of several courses in the college. Some class-level student leaders and even ordinary students hold leadership positions at the school level.

The different leadership positions are responsible for corresponding activities as follows. The class monitor is the highest leader in a class and bears extensive responsibilities, such as representing the class, organizing collective activities, and maintaining order. The vice class monitor assists the class monitor, especially in recording attendance and maintaining order in the class. The student leaders of the college/school student unions are responsible for coordinating the relationship between students and colleges/schools, organizing all kinds of student activities, and assisting in the management of student studies. For example, a school student-union minister usually needs to first propose a specific program of activities based on a theme and then organize members of the department to carry

[1] Field experiments, typically including audit and correspondence studies (Harrison & List, 2004; Neumark, 2018; Pager, 2007), are increasingly being applied to the analysis of the labor market (Deng, Li, & Zhou, 2020; Ruffle & Shtudiner, 2015).

[2] More information about student leadership structure in China is available in Deng, Li, Wu, and Xu (2020).

[3] In this paper,"school" refers to the larger university and "college" refers to the individual colleges within the university. Additionally, in some larger colleges, there are also grade-level leader positions such as grade chief, study minister, life minister, and organization minister.

out it through various ways, including contacting extensively enterprises to obtain financial support, communicating effectively with relevant school departments and other departments in the school student union, and organizing students to actively participate in the activities. Compared with other students, student leaders have more contact with teachers and other students and must, to varying degrees, motivate themselves and others to fulfill their responsibilities.

There are several differences between student leaders in China and those in Western countries. First, although the appointment and removal of leaders is generally based on open and fair election results, teachers in charge of student affairs also have some influence on leader management, including the selection, appointment, and promotion of leaders. Second, student leaders are usually an extension of the school administration; that is, they act in concert with school managers or officials. Therefore, student leaders are basically consistent with the school. Third, a large part of the budget of student organizations (e.g., student unions) comes from school grants. The amount of money allocated is determined by the teacher in charge of student affairs based on a series of indicators (e.g., the organization's contribution to the promotion of the school's reputation and academic achievement of its students). Fourth, student leaders can receive various awards, including bonus points for scholarship selection and recommendations to study for master's degrees without taking examinations, based on their leadership performance. These differences may lead Chinese and American student leaders to develop quite different abilities. For example, Chinese student leaders may be more able to coordinate the relationship between students' needs and school requirements, while American student leaders may have a stronger ability to lead students in autonomous management.

3. Theory and hypotheses

3.1. Theory

First, we make the following assumptions. Job accessibility is decided by assortative matching between workers and vacancies, which can be described as follows:

$$C = F\left(R_1, \cdots, R_i \cdots, R_n; V_1, \cdots, V_j, \cdots, V_m\right), \tag{1}$$

where C is the callback rate, which refers to job accessibility; R_i is the i^{th} type of signal presented on a resume, which positively reflects a personal quality; and V_j is the j^{th} type of signal displayed on a job advertisement, which positively reflects a required quality of the vacancy. Moreover, high-quality individuals are more likely to receive interview callbacks (i.e., $\partial F/\partial R_i > 0$), and individuals who apply to vacancies with high-level required qualities are less likely to receive interview callbacks (i.e., $\partial F/\partial V_j < 0$).

Based on the above assumptions, we present the following two theories[4]:

THEORY 1: *If x and y are complete complements in presenting a personal quality on a resume, then* $C = F(\min(R_x, R_y), \cdots)$*; if x and y are complete substitutes in presenting a personal quality on a resume, then* $C = F(\max(R_x, R_y), \cdots)$.

For any two types of signals (e.g., x and y), if x and y are complete complements (substitutes) in positively presenting the quality of an individual on a resume, then for the employer, the productivity of this job applicant only depends on the signal that reflects their relatively low (high) personal quality; as a result, job accessibility is only decided by the lower (higher) of these two signals.

THEORY 2: *If x and y are complete complements in production, then* $C = F(\min(R_x, V_y), \cdots)$*; if x and y are complete substitutes in production, then* $C = F(\max(R_x, V_y), \cdots)$.

For any two types of signals (e.g., x and y), if x is a type of signal positively reflecting a personal quality on a resume, y is a type of signal positively indicating a required quality on a job advertisement, and x and y are complete complements (substitutes) in production, then for the employer, the productivity of this job applicant only depends on the signal that reflects their relatively low (high) productivity; as a result, job accessibility is only decided by the lower (higher) of these two signals.

We assume that R_x, the signal of student leadership experience, has three levels. R_x^0, R_x^1, and R_x^2 respectively refer to no student leadership experience, class monitor experience, and student-union minister experience, and $R_x^2 > R_x^1 > R_x^0$. For any Z_y (where Z could be R or V), according to Theories 1 and 2, conditioned on Z_y, we can deduce the difference in job accessibility between any two levels of signal R_x; $D(R_x^s, R_x^t \mid Z_y)$, where $s \neq t$ could be 0, 1, and 2. $D = 0$ if there is no difference in job accessibility, and $D = 1$ if there is a difference in job accessibility. The relevant deduction and results are shown in Appendix 1.

3.2. Hypotheses

Four hypotheses serve as the primary guides for the experimental design and analysis described in this study.

The first hypothesis concerns the relationship between the signal of student leadership experience and other signals, such as major and school quality, on a resume.

Hypothesis 1. Student leadership experience complements other signals that positively reflect personal qualities (e.g., major and school quality) on a resume.

For Hypothesis 1 to be supported, the estimate of the interaction term between the variable positively indicating student leadership experience and the variable denoting other signals positively reflecting personal qualities on a resume must be positive and statistically

[4] In this paper, we only consider a situation in which x and y are *complete* rather than *partial* complements or substitutes.

significant in the regression of the callback rate on the interaction term and additional covariates.

The second hypothesis considers the relationship between the signal of student leadership experience on a resume and signals on a job advertisement.

Hypothesis 2. Student leadership experience complements signals that positively reflect vacancy-related qualities (e.g., firm size) on a job advertisement.

For Hypothesis 2 to be supported, the estimate of the interaction term between the variable positively indicating student leadership experience and the variable denoting signals positively reflecting vacancy-related qualities on a job advertisement must be negative and statistically significant in the regression of the callback rate on the interaction term and additional covariates.

The third hypothesis investigates the difference in job accessibility between different levels of student leadership experience.

Hypothesis 3. High-level student leadership experience (e.g., student-union minister) can more effectively enhance job accessibility than low-level student leadership experience (e.g., class monitor).

The fourth hypothesis explores whether student leadership experience can improve personal labor productivity and, thus, lead to high-paying jobs.

Hypothesis 4. Student leadership experience can help individuals achieve high-paying jobs.

4. Experimental design

4.1. Experimental instruments

In the first stage, we randomly selected more than 100 real resumes of each major from recent two-year graduates who are looking for a job.[5] We then restructured these resumes into a standardized template (see Appendix 2 for the basic layout).[6] The standardized resume consists of six basic attributes: demographic characteristics (e.g., gender and birthday), job intention (e.g., expected salary, location cities, position, and industry), internship experience (e.g., position, company, department, and job description and achievement), education (e.g., school, major, and degree), school performance (e.g., honors and student leadership experience), and occupational skills (e.g., computer skills, language skills, and professional certificates). The detailed content is shown in Appendix 3.[7] In general, our resume samples are comprised of recent graduates with bachelor's or college's degrees, which allowed us to avoid unobserved contamination from work experience.

Our experimental instrument is student leadership experience shown on the resumes. In the second stage, we selected three types of student leadership experience, i.e., no student leadership experience, class monitor, and school student-union minister, respectively.[8] We substituted personal information with different ordinary names (e.g., Hanyi Xu, Huina Yu, and Feichen He for women; Haohang Wei, Donghao Fan, Jialin Tang for men), phone numbers, and email addresses in each resume. A photo with a similar score in appearance was randomly selected to be inserted into each resume.[9] To make the triplet resumes more realistic, we also made subtle changes in, for example, the birth month, the order of scholarships/certifications, and the names of companies for specific internships (e.g., Industrial and Commercial Bank of China vs. Agricultural Bank of China). In this way, we generated triplet resumes in the sample that differed in student leadership experience but were otherwise basically identical. The first triplet resume shows no student leadership experience, the second triplet resume indicates the applicant was a class monitor, and the third triplet resume states that the applicant was a student-union minister.

4.2. Diversity management

Another concern is the limited variation in educational level because our sample only included graduates with bachelor's or college's degrees. In China, universities and colleges are stratified into groups according to their reputation and quality. High-quality schools receive more financial support from the government as well as better conditions in various other aspects. Graduating from a high-quality school signals better human capital and higher ability. On the whole, institutions are divided into four groups, from

[5] Actual resume information cannot be released because of personal privacy and confidentiality agreements.

[6] Standardized resumes do not contain any personal private information on the resumes we refer to. Our delivered resumes may have constituted a degree of competition for genuine resumes we refer to, but this competition is almost negligible based on the recruitment website having hundreds of millions of registered accounts and tens of millions of vacant positions.

[7] There are subtle differences in descriptions of these attributes in the three resumes within the same group, but the descriptions are essentially the same. For example, there will be a little difference in the name of the internship position, but the skills required and the content of the job are essentially same. This implementation is in line with the reality, because the names of the same job may be different in different companies in China.

[8] See Appendix 4: Example of student leadership experience. In what follows, we use "student-union minister" to refer to a "school-level student-union minister."

[9] First, we collected >100 personal photos of each sex from the online resumes of real recent graduates. Second, from these photos, we carefully selected 10 of the most similar photos for each sex. Third, using a portrait synthesizer and Adobe Photoshop software, we modified and adjusted the selected photos to avoid any possible privacy infringement problems. Fourth, three photos were randomly added to a set of triplet resumes for each delivery.

highest-quality to lowest-quality universities/college shown as follows, "Project 985" universities, regular "Project 211" universities, ordinary public-run universities, and ordinary private-run universities. All "Project 985" universities are selected from "Project 211" universities.[10] This stratification provides sufficient educational variation and allows us to explore the relationship between school quality and leadership experience premium.

To remove the influence of the school's city, we only choose one city in central China, i.e., Wuhan.[11] Wuhan has schools at all levels, and is located in the middle of the country, sufficiently close to the job market, avoiding North-South and East-West differences.

Different majors train in different ways, and the skills the graduates require for their careers are also different. The positions of economics and management majors are more likely to deal with people and emphasize communication skills. In contrast, the positions of science and engineering majors usually require graduates to deal with physical objects, and there is more emphasis on experimental and technological levels. Thus, different majors could have a heterogeneous effect on the relationship between student leadership experience and job accessibility. Based on these considerations, we chose finance and chemical engineering as representative majors for economics and management and science and engineering, respectively.

4.3. Experimental process

Our experiment was carried out over two periods, from October to December in 2018 and 2019, with assistance from a well-known recruitment platform.[12] We randomly selected vacancies posted on the platform from 18 different industries (e.g., finance, trade, pharmacy, petrochemical engineering, and internet) and 17 different functions (e.g., sales of financial products, administrative clerk, R & D personnel, and after-sales service).[13] These vacancies generally require that potential applicants hold college degrees or bachelor's degrees. We randomly delivered the triplet resumes with differentiated student leadership experience through an online recruitment platform to corresponding positions posted by different employers in 79 different cities across China.[14] Because different enterprises have different recruitment times, we sent resumes out in batches to avoid sending them all to the same type of enterprise. To enhance diversity, we did not send more than three resumes to the same vacancy. Overall, we delivered 2169 applications to 672 enterprises in 11 batches.

The number of jobs posted differed across cities during the experimental period, and different jobs generally required different degrees, genders, and majors, among other requirements. According to the different requirements of the posted positions (for example, gender and educational attainment), we sent out corresponding qualified resumes, delivered within a fixed period after the job was posted. Specifically, only three resumes with different levels of student leadership experience (i.e., the triplet resumes: no student leadership experience, class monitor experience, and student-union minister experience) were submitted. These were delivered in random order for the same position within one day intervals; the time interval for each resume delivery was more than one hour.[15]

4.4. Empirical strategy

Our base regression equation is

$$callback_{ij} = \beta \cdot leader_{ij} + \phi \cdot leader_{ij} \cdot X_{ij} + \varphi \cdot X_{ij} + \mu_j + e_{ij} + \eta_j + \epsilon_{ij}, \tag{2}$$

where for individual i ($i = 1, 2, 3$) in group j, $callback_{ij}$ denotes whether individual i receives an interview callback (1 if a callback is received, 0 otherwise). $leader_{ij}$ is the applicant's student leadership experience (0 if no leadership experience, 1 if class monitor experience, and 2 if student-union minister experience). X_{ij} is the vector of three types of observed control variables: personal characteristics (gender, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company attributes (industry dummies, city dummies, city level, listed status, and staff size), and vacancy features (required education, required experience, lower-bound salary, upper-bound salary, median salary, wage range, bonus, job level, and job type

[10] "Project 985" began on May 4, 1998; this group includes 38 universities. This project's aim was to establish first-class universities. "Project 211" began in November 1995; this group contains more schools, including all Project 985 schools. To face the 21st century and meet the challenges of the world's new technological revolution, the Chinese government has concentrated resources around the construction of 100 world-class universities.

[11] Our experiment was completed before the outbreak of the new coronavirus, so it would not have been affected by discrimination against Wuhan people or by the epidemic itself.

[12] This platform is one of the largest online recruitment websites. At present, the number of valid registered users exceeds 100 million, >5 million valid vacancies are posted on the website daily, and >40 million resumes a week are sent to enterprises via this recruitment platform. For more details, please refer to Deng, Li, and Zhou (2020). Due to confidentiality agreements, we cannot provide the name of this platform.

[13] All the industries and positions we selected are highly professionally inclusive and do not explicitly exclude graduates of our selected majors (i.e., finance and chemical engineering). The graduates majoring in finance are mainly sent to the positions in the finance industry (43.3% of the applications), while the graduates majoring in chemical engineering are mainly sent to the positions in the pharmacy, energy, and petrochemical engineering industries (36% of the applications).

[14] The firms from Wuhan account for only 12.31% and the firms from Hubei province account for 12.73%.

[15] We consulted human-resource experts. According to them, one vacancy posted by large (small) companies receives approximately 200 (50) resumes. We only submitted three resumes per vacancy. Thus, the signal-to-noise ratio is relatively high. We cannot completely rule out the possibility that some companies realized that we were delivering fake resumes, but the probability should be relatively small.

dummies including sale, research, clerk, and service). μ_j represents other observed relevant variables that could vary across groups but not within groups, such as city fixed effect (FE). e_{ij} and η_j respectively denote unobserved variables that vary by person and group; these primarily include resume/advertisement features and delivery characteristics, which could be observed on the resume/advertisement and during the delivery process but were not encoded. ε_{ij} represents the error term. To analyze the relationship between student leadership experience and other signals (such as gender, major, company attributes, and position features), we introduce interaction terms between *leader* and other explanatory variables of interest (e.g., $leader_{ij} \cdot X_{ij}$).

Since our encoding could not adjust for all characteristics of resumes, job advertisements, or delivery processes, estimates based on Eq. (1) could be biased. By using a within-group FE model, we can eliminate both observed and unobserved within-group effects (i.e., μ_j and η_j). Additionally, according to the experimental design, since other unobserved personal features are almost the same within groups, e_{ij} is removed. Therefore, we obtain a refined FE estimate in eq. (2):

$$\begin{aligned} callback_{ij} - callback_{kj} = \beta \cdot \left(leader_{ij} - leader_{kj}\right) + \phi \cdot \left(leader_{ij} \cdot X_{ij} - leader_{kj} \cdot X_{kj}\right) \\ + \varphi \cdot \left(X_{ij} - X_{kj}\right) + \left(\varepsilon_{ij} - \varepsilon_{kj}\right) \end{aligned} \tag{3}$$

where both i and k denote the resumes from the same group j.

Utilizing the experimental data, we estimate the leadership premium with this FE model. We also include individual, company, and vacancy FEs. Additionally, heterogeneous student leadership experience premiums across gender, major, school quality, firm size, and payment's features are explored.

5. Empirical results

5.1. Summary statistics

As shown in Table 1 (Part A), our delivery is evenly distributed among different genders, majors, and schools. On average, the staff size of the companies and the monthly salary of the positions we applied for is 1911 and RMB 7605, respectively. In addition, monthly salary fluctuates greatly; the upper bound of monthly salary is on average 40% higher than the lower bound, but most positions provide basic welfare guarantees (see bonus). We send 2169 applications with an overall callback rate of 11.9%. The average callback rate for individuals without student leadership experience, with class monitor experience, and with student-union minister experience is 12%, 11.2%, and 12.6%, respectively. The callback rate is different for men and women (13.8% vs. 9.9%). Individuals with a finance major are significantly more likely to receive interview callbacks than those with a chemical engineering major (18.3% vs. 5.7%). Additionally, graduates from high-quality schools (e.g., "Project 211" universities) seem to face more intense competition than those from low-quality schools (e.g., ordinary public-run universities, ordinary private-run universities, and ordinary colleges), which makes it more difficult for the former to receive interview callbacks (9.6% vs. 14%).

Table 1 (Part B) presents summary statistics in terms of the relative frequency of being called for an interview in different subsamples. There are no statistically significant differences in callback rates between different levels of student leadership experience, regardless of whether we use the entire sample or subsamples by gender, major, and school quality.

We next present our FE regression estimates of leadership premium.[16] We first investigate how personal characteristics influence the student leadership experience premium in the labor market and discuss the relationship between signals on resumes. We then investigate the heterogeneous effects of student leadership experience on job accessibility by company attributes or vacancy features and address the associations between signals on a resume and signals on a job advertisement. We first analyze the student leadership experience effect by using the entire sample and then address the student leadership experience premium using three separated subsamples; that is, the first subsample includes only individuals without leadership experience and with class monitor experience, the second includes only individuals without leadership experience and with student-union minister experience, and the third includes only individuals with class monitor experience and with student-union minister experience.

5.2. Signals on resumes

To test the first hypothesis, we first investigate the relationship between student leadership experience and other signals (e.g., gender, major, and school quality) on a resume in presenting personal qualities and discuss the different effects between different levels of student leadership experience.

5.2.1. Gender

We first explore whether student leadership experience has a positive effect on job accessibility. As shown in Table 2 and Table A1, although the OLS estimate (Column 1 of Panel D in Table A1) suggests that individuals with student-union minister experience could achieve a higher premium in the labor market than those with class monitor experience, both the OLS and FE estimates are otherwise

[16] We also conduct all corresponding ordinary least squares (OLS) regressions; the results are consistent with the FE estimations. The OLS results are partially presented in the appendices, and all are available upon request.

Table 1
(Part A): Summary Statistics (Observations: 2169).

	mean	max	min	SD
call	0.119	1	0	0.324
leader	1	2	0	0.817
male	0.517	1	0	0.5
finance	0.497	1	0	0.5
sch_211	0.463	1	0	0.499
scale	1911	15,000	25	4105
pay_low	6301	15,000	2000	2512
pay_high	8910	33,300	3000	3821
pay_med	7605	20,000	2500	3079
pay_variant	1.428	4.97	1.125	0.291
bonus	1.169	2	0	0.473
sch_level	2.461	4	1	1.086
inter_firm	0.686	1	0	0.464
scholarship	0.768	1	0	0.422
citylevel	1.809	4	1	0.955
listed	0.104	1	0	0.305
requ_edu	0.289	1	0	0.453
experience	0.555	1	0	0.497
job_level	1.959	3	1	0.767
sales	0.387	1	0	0.487
research	0.416	1	0	0.493
clerk	0.129	1	0	0.335
service	0.068	1	0	0.251

(Part B): Summary Statistics of Callbacks.

Sample	Leadership	None vs. Monitor	None vs. Minister	Monitor vs. Minister
Whole	0	0.120	0.120	0.112
	1	0.112	0.126	0.126
	Difference	0.008	−0.006	−0.014
Male	0	0.136	0.136	0.131
	1	0.131	0.147	0.147
	Difference	0.005	−0.011	−0.016
Female	0	0.103	0.103	0.092
	1	0.092	0.103	0.103
	Difference	0.011	0.000	−0.011
Finance	0	0.195	0.195	0.175
	1	0.175	0.178	0.178
	Difference	0.019	0.017	−0.003
Chemistry	0	0.047	0.047	0.049
	1	0.049	0.074	0.074
	Difference	−0.003	−0.027	−0.025
High-quality schools	0	0.099	0.099	0.087
	1	0.087	0.101	0.101
	Difference	0.012	−0.003	−0.015
Low-quality schools	0	0.139	0.139	0.134
	1	0.134	0.147	0.147
	Difference	0.005	−0.008	−0.013

Notes:(Part A) This table reports the mean, maximum, minimum values, and standard deviation (SD) of variables. Leader (0 if no leadership experience, 1 if class monitor, and 2 if student union minister) is a three-order variable. Male (1 if male, 0 otherwise), finance (1 if finance, 0 otherwise), sch_211 (1 if high-quality schools, 0 otherwise), inter_firm (1 famous firm such as World 500 companies, 0 otherwise), scholarship (1 high level scholarship, 0 otherwise), listed (1 if listed company, 0 otherwise), experience (1 if required experience >0, 0 otherwise), requ_edu (1 if required educational level is bachelor or above >0, 0 otherwise), sales (1 if sales, 0 otherwise), research (1 if research, 0 otherwise), clerk (1 if clerk, 0 otherwise), and service (1 if service, 0 otherwise) are dummy variables. sch_level (a larger value means higher quality school), citylevel (a small value means higher tier city), job_level (a small value means higher-tier positions) are three-order variables. Scale is the size of staff (person), but we use the log value of scale in the regressions. Pay_low, pay_high, and pay_med are in RMB Yuan, but we use the log value of these payment in the regressions. Pay_variant is the ratio of pay_high to pay_low. Bonus is a three-order variable and a larger value means better non-wages welfare.
Notes:(Part B) Leadership refers to student leadership experience, 1 and 0 respectively denotes high and low level leadership experience, and none (refers to no student leadership experience), (class) monitor, and (student-union) minister are three levels of student leadership experience.

Table 2
Leadership Experience and Callback by Gender.

	(1)	(2)	(3)	(4)
	Whole		Male	Female
Panel A. Whole Sample				
leader	0.003	0.000	0.005	0.000
	(0.005)	(0.009)	(0.006)	(0.009)
leader_male		0.005		
		(0.011)		
Observations	2169	2169	1122	1047
Panel B. None vs. *Monitor*				
leader	−0.008	−0.011	−0.005	−0.011
	(0.010)	(0.015)	(0.012)	(0.015)
leader_male		0.006		
		(0.019)		
Observations	1446	1446	748	698
Panel C. None vs. *Minister*				
leader	0.006	0.000	0.011	0.000
	(0.011)	(0.018)	(0.012)	(0.018)
leader_male		0.005		
		(0.011)		
Observations	1446	1446	748	698
Panel D. Monitor vs. *Minister*				
leader	0.014	0.011	0.016	0.011
	(0.009)	(0.015)	(0.011)	(0.015)
leader_male		0.005		
		(0.019)		
Observations	1446	1446	748	698

Notes: Leader (0 if non-leader, 1 if class monitor, and 2 if student-union minister) is an order variable, and male (1 if male, 0 otherwise) is a dummy. Leader_male is the interaction term between leader and male. In Panel C, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are fixed-effect estimations and control for personal characteristics (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, and staff size), and vacancy features (required education, required experience, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sales, research, clerk, and service). Standard errors in parentheses are robust to heteroscedasticity. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

economically and statistically insignificant. This suggests that there is no student leadership experience premium in the labor market, regardless of whether we use the entire sample or any of the three subsamples.[17]

Although Kuhn and Weinberger (2005) find student leaders can enjoy income premium after getting a job, our results suggest that individuals with student leadership experience (whether as a class monitor or student-union minister) do not achieve a premium at the pre-interview stage, which implies that student leadership experiences may have different effects at different stages of the labor market. This divergence may also be rooted in the differences between Eastern and Western cultures or the fact that China and the U.S. are in different stages of development. Western culture places more emphasis on individualism, believing that the collective has a responsibility to respect individual interests. However, Eastern culture emphasizes collectivism more and requires individuals to put collective interests first. Moreover, there are differences in the mode of production. The work of enterprises in developed countries (e.g., the U.S.) are more small-scale and mutable, and employees commonly need to organize other staff to complete tasks according to the needs of their business. In contrast, the work of enterprises in developing countries (e.g., China) is more large-scale and patterned, and employees first need to abide by collective arrangements to complete tasks assigned by their superiors. In addition, as mentioned in Section 2, there may be differences in the types of personal abilities developed through student leadership experience in China and the United States.

The interaction term "*leader_male*" is statistically insignificant, which also suggests that there is no gender difference in the effect of student leadership experience on job accessibility.

5.2.2. Major

We continue to investigate the heterogeneous effect of student leadership experience by major. As shown in Table 3, the estimate of interaction term "*leader_finance*" is negative and statistically significant (Columns 1 and 3 in Panels A and C), which infers that,

[17] R^2 is quite large (about 0.2) in the OLS estimations, but extremely small in the FE estimations, which implies that the OLS estimates are biased due to an omitted variable problem.

Table 3
Leadership Experience and Callback by Major.

	(1)	(2)	(3)
	Whole	Finance	Chemistry
Panel A. Whole Sample			
leader	0.014***	−0.008	0.014***
	(0.005)	(0.009)	(0.005)
leader_finance	−0.022**		
	(0.011)		
Observations	2169	1077	1092
Panel B. None vs. *Monitor*			
leader	0.003	−0.019	0.003
	(0.011)	(0.016)	(0.011)
leader_finance	−0.022		
	(0.019)		
Observations	1446	718	728
Panel C. None vs. *Minister*			
leader	0.027***	−0.017	0.027***
	(0.010)	(0.018)	(0.010)
leader_finance	−0.022**		
	(0.011)		
Observations	1446	718	728
Panel D. Monitor vs. *Minister*			
leader	0.025***	0.003	0.025***
	(0.009)	(0.016)	(0.009)
leader_finance	−0.022		
	(0.018)		
Observations	1446	718	728

Notes: leader (0 if non-leader, 1 if monitor, and 2 if minister of the student union) is an order variable, and finance (1 if finance, 0 otherwise) is a dummy. leader_finance is the interaction term between leader and finance. In Panel C, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are fixed-effect estimations and control for personal features (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, ownership, and staff size), and vacancy features (education requirement, experience requirement, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sale, research, clerk, and service). Standard errors in parentheses are robust to heteroscedasticity. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

compared with individuals with economics and management majors (e.g., finance), those with science and engineering majors (e.g., chemical engineering) are more likely to be affected by their student leadership experience. There is no statistically significant relationship between student leadership experience and job accessibility for individuals with a finance major (Column 2). However, recent graduates with a chemical engineering major and student-union minister experience during college period are 1.4% (2.5%) more likely to receive an interview callback than those without student leadership experience (with class monitor experience). One possible explanation is that student leadership experience is not an indispensable factor in production. Some industries and positions (e.g., science and engineering related) are more suitable for recent graduated student leaders, but some industries and positions (e.g., economics and management related) do not require their new employees to have student leadership experience.

Our results imply that student leadership experience and major are complements (substitutes) in presenting personal qualities on a resume for individuals majoring in chemical engineering (finance). Student leaders usually communicate frequently with other students and teachers; these daily activities can enhance interpersonal communication skills. Students in different majors may have different communication skills. The course content of economics and management majors is more related to interpersonal communication, so such students may generally have relatively strong communication skills, while the course content of science and engineering majors rarely involves interpersonal communication; thus, such students may generally lack communication skills. Regarding the signal of student leadership experience, it is a substitute for students majoring in economics and management. If the student leadership experience is not sufficient, it cannot increase the evaluation of the applicant (e.g., results as shown in S4 in Appendix 1). However, it is complementary for students majoring in science and technology, and the student leadership experience is more likely to give the applicant bonus points (e.g., results as shown in C1 in Appendix 1).

Furthermore, the positive estimates of "*leader*" suggests that student-union ministers are favored over class monitors. By comparing the results of Panel B with Panel C, we find that only individuals with student-union minister experience (rather than class monitor experience) are preferred by the labor market, consistent with Hypotheses 1 and 3. That is, individuals with high-level student leadership experience are more likely to enjoy a premium than those with low level student leadership experience. In contrast, if the signal of student leadership experience is a substitute but not sufficiently intense, no type of student leadership experience provides a premium.

5.2.3. By school

We further explore the relationship between student leadership experience and the quality of the school from which individuals graduated.

As shown in Column 1 of Table 4, the estimates of the interaction term "*leader_sch_211*" are economically and statistically insignificant. There are no differences in student leadership experience premium between individuals who graduated from high-quality schools and those who graduated from low-quality schools. The results from separate subsamples (Columns 2–3) further confirm that neither student leaders from high-quality nor from low-quality schools gain higher favor in the labor market.

5.3. Signals on job advertisements

To address the second hypothesis, we further investigate the relationships between three different levels of student leadership experience and signals reflecting vacancy-related qualities on job advertisements, including employer attributes and payment features.

5.3.1. Employer attributes

We next explore potential heterogeneous leadership premiums across employers at different company scales (i.e., staff size). The results are reported in Table 5.

Working in large enterprises generally involves stronger competition and tighter organizational and hierarchical structures than in small enterprises, which implies that new employees should be patient, follow the commands of their current leaders, and be willing to start with small projects. The estimates of "*leader_scale*" are negative and statistically significant (Columns 1, 3, and 4), which implies that student leadership experience could be an important complementary factor for small companies (e.g., the staff size of a firm is less than 500), and student leaders could achieve a larger leadership premium when applying to small rather than large companies. Moreover, only individuals with high-level student leadership experience (e.g., student-union minister) receive a significant premium in small firms. This indicates that Hypotheses 2 and 3 could not be rejected. One possible explanation is that large firms may want to train their staff in the leadership culture of the company and thus are likely to have an in-house leadership training program for candidates deemed worthy. However, smaller firms are less likely to have such programs and may value new employees who exhibit such talent.

Table 4
Leadership experience and callback by school quality.

	(1)	(2)	(3)
	Whole	High-Quality Schools	Low-Quality Schools
Panel A. Whole Sample			
leader	0.004	0.001	0.004
	(0.008)	(0.007)	(0.008)
leader_sch_211	−0.002		
	(0.010)		
Observations	2169	1005	1164
Panel B. None vs. Monitor			
leader	−0.005	−0.012	−0.005
	(0.015)	(0.012)	(0.015)
leader_sch_211	−0.007		
	(0.019)		
Observations	1446	670	776
leader	0.008	0.003	0.008
	(0.015)	(0.014)	(0.015)
leader_sch_211	−0.002		
	(0.010)		
Observations	1446	670	776
Panel D. Monitor vs. Minister			
leader	0.013	0.015	0.013
	(0.013)	(0.013)	(0.013)
leader_sch_211	0.002		
	(0.018)		
Observations	1446	670	776

Notes: leader (0 if non-leader, 1 if monitor, and 2 if minister of the student union) is an order variable, and sch_211 (1 if high-quality schools, 0 otherwise) is a dummy. leader_sch_211 is the interaction term between leader and sch_211. In Panel C, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are fixed-effect estimations and control for personal features (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, ownership, and staff size), and vacancy features (education requirement, experience requirement, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sale, research, clerk, and service). Standard errors in parentheses are robust to heteroscedasticity. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

Table 5
Leadership Experience and Callback by Firm Size.

	(1)	(2)	(3)	(4)
	Whole	None vs. Monitor	None vs. Minister	Monitor vs. Minister
leader	0.035*	−0.014	0.070*	0.084***
	(0.018)	(0.031)	(0.036)	(0.031)
leader_scale	−0.006*	0.001	−0.006*	−0.012**
	(0.003)	(0.005)	(0.003)	(0.006)
Observations	2169	1446	1446	1446

Notes: leader (0 if non-leader, 1 if monitor, and 2 if minister of the student union) is an order variable. Scale is the log value of company's staff size. leader_scale respecitvely is the interaction terms between leader and scale. In Column 3, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are fixed-effect estimations and control for personal features (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, ownership, and staff size), and vacancy features (education requirement, experience requirement, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sale, research, clerk, and service). Standard errors in parentheses are robust to heteroscedasticity. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

Compared with large companies, small companies are more difficult to finance (Hadlock & Pierce, 2010). Moreover, small companies face more uncertainty than do large companies with robust and standardized operations. Student leaders generally have more access to resources and are more likely to take risks than other students, which could give them a comparative advantage when applying to small companies.

5.3.2. Payment features

To examine the fourth hypothesis, we further investigate whether payment features (e.g., the level and variance of monthly salary) influence the student leadership experience premium.

As shown in Table 6, the FE estimates of "*leader_pay_low*," "*leader_pay_high*," and "*leader_pay_med*" are statistically insignificant. However, the estimates of "*leader_pay_variant*" are positive and statistically significant (Columns 1, 3, and 4 in Panel D), which suggests that student leadership experience (especially student-union minister) could help applicants achieve interview opportunities when they apply for positions with volatile salaries. Thus, the variance (i.e., the ratio of lower bound to upper bound) rather than the level (i.e., the lower bound, upper bound, and median) of monthly salary can influence the leadership premium. Additionally, we do not find a statistically significant relationship between non-wage earnings and leadership premium, as shown in Panel E. Therefore, our results do not support Hypothesis 4.

One possible explanation is that student leadership experience might not enhance personal productivity, and thus, it cannot help applicants more effectively achieve high paying jobs. However, leadership experience could have improved personal psychological qualities, such as risk-taking, making those student leaders more responsive to fluctuations in earnings. Given that the negative and significant coefficient on the leadership variable (Column 1 and 3 in Panel D), the positive coefficient on the interaction term between the leadership and pay variance variable would suggest that when applying for the jobs with no or little variance, student leadership experience could decrease the probability of getting recalls. Student leadership experience may change an individual's multifaceted preferences and abilities, such as the risk-taking ability, and our results imply that in terms of job accessibility, the effect of the change in the risk-taking ability is dominated by that of the changes in other attributes that arising from student leadership experience.

6. Conclusions

Understanding of the relationships between different signals and job matching is still quite limited. As a wide and necessary extension, we first address the relationship between signals on a resume that present personal qualities. We then investigate the association between signals reflecting personal qualities on a resume and signals reflecting vacancy-related qualities on a job advertisement. Finally, we explore the diverse effects of different signal intensity levels on job accessibility.

By using a field experiment, we effectively solve the endogeneity problem that existed in previous studies and find no universal causal relationship between student leadership experience in college and job accessibility in China, especially for economics and management majors, which is quite different from the results in Western and developed countries, such as the United States. This implies that leadership is not an essential quality for everyone, and student leadership experience premiums are influenced by the cultural background and development stage of each country. Multiple types of connections between different signals on a resume are found. Student leadership experience is a complementary factor in presenting personal qualities for individuals majoring in science and engineering (e.g., chemical engineering). However, the student leadership experience premium in the labor market may be quite weak in relation to the quality of the school from which the applicant graduated.

We find diverse associations between student leadership experience and signals on job advertisements. Student leaders could be an important complement for small companies. Our results imply that student leaders are more likely to enjoy a premium when they apply for jobs at smaller companies. However, student leaders do not have an advantage in applying for high-paying positions, but they do enjoy a premium in applying for vacancies with large variances in payment. Therefore, our results imply that student leadership experience may not increase personal productivity, but it may improve psychological qualities.

Our results suggest that high-level student leadership experience (e.g., student-union minister) is more favored by the job market

Table 6
Leadership Experience and Callback by Payment's Features.

	(1)	(2)	(3)	(4)
	Whole	None vs. Monitor	None vs. Minister	Monitor vs. Minister
Panel A. Lower Bound				
leader	0.075	0.154	0.150	−0.004
	(0.099)	(0.203)	(0.198)	(0.182)
leader_pay_low	−0.008	−0.019	−0.008	0.002
	(0.012)	(0.024)	(0.012)	(0.021)
Observations	2169	1446	1446	1446
Panel B. Upper Bound				
leader	−0.045	0.075	−0.090	−0.166
	(0.105)	(0.209)	(0.210)	(0.198)
leader_pay_high	0.005	−0.009	0.005	0.020
	(0.012)	(0.023)	(0.012)	(0.022)
Observations	2169	1446	1446	1446
Panel C. Median				
leader	0.004	0.111	0.008	−0.103
	(0.103)	(0.207)	(0.206)	(0.193)
leader_pay_med	−0.000	−0.013	−0.000	0.013
	(0.012)	(0.024)	(0.012)	(0.022)
Observations	2169	1446	1446	1446
Panel D. Wave Range				
leader	−0.050**	−0.044	−0.101**	−0.057
	(0.024)	(0.043)	(0.047)	(0.041)
leader_pay_variant	0.037**	0.025	0.037**	0.050*
	(0.016)	(0.029)	(0.016)	(0.028)
Observations	2169	1446	1446	1446
Panel E. Welfare				
leader	−0.002	−0.023	−0.004	0.019
	(0.014)	(0.027)	(0.027)	(0.022)
leader_bonus	0.004	0.012	0.004	−0.004
	(0.011)	(0.020)	(0.011)	(0.017)
Observations	2169	1446	1446	1446

Notes: leader (0 if non-leader, 1 if monitor, and 2 if minister of the student union) is an order variable. pay_low, pay_high, and pay_med respectively are the log value of lower bound, upper bound, and median value (in Yuan) of monthly salary. pay_vairant is the ratio the upper bound to the lower bound of monthly salary. Bonus is a three-order variable and a larger value means that non-wages paying are better. leader_pay_low, leader_pay_high, leader_pay_med, leader_pay_variant, and leader_bonus respectively are the interaction terms between leader and pay_low, pay_high, pay_med, pay_variant, and bonus. In Column 3, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are fixed-effect estimations and control for personal features (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, ownership, and staff size), and vacancy features (education requirement, experience requirement, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sale, research, clerk, and service). Standard errors in parentheses are robust to heteroscedasticity. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

than low-level student leadership experience (e.g., class monitor). Further, school-level leader positions seem to be a threshold level for individuals to achieve a student leadership premium in the labor market. Thus, running for a high-level leadership position, such as a school-level leader, could be of benefit.

It is frequently reported that college students recurrently run for student leader positions. However, is there any real benefit from doing so? Our research shows that seeking to be a student leader at the school level during college does indeed provide potential benefits under certain conditions. Nevertheless, our study also suggests that to improve the efficiency of job matching, everyone must complete their resumes properly according to their own characteristics. This will allow for better matching of the signals reflecting personal qualities and those of the job vacancy, helping applicants to choose the correct occupation and to apply for a company and position that is a good fit. By revealing the existence, magnitude, and patterns of student leadership experience premiums in China, our study calls for more theoretical and empirical work investigating the relationship between different signals of worker and firm characteristics to help individuals develop the abilities needed in the market and to enhance job matching efficiency.

Data availability

Data will be made available on request.

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Appendix 1. The Deduction and results of theory

We assume that R_x, the signal about student leadership experience, has three levels. R_x^0, R_x^1, and R_x^2 respectively refers to no student leadership experience, class monitor experience, student-union minister experience, and $R_x^2 > R_x^1 > R_x^0$. For any Z_y (where Z could be R or V), according to Theories 1 and 2, conditioned on Z_y, we can deduce the difference in job accessibility between any two levels of signal R_x;$D(R_x^s, R_x^t \mid Z_y)$, where $s \neq t$ could be 0, 1, and 2. $D = 0$ if there is no difference in job accessibility, and $D = 1$ if there is a difference in job accessibility.

A. If x and y are the completely complementarities:

$$D\left(R_x^s, R_x^t \mid Z_y\right) = D\left(min\left(R_x^s, Z_y\right), min\left(R_x^t, Z_y\right)\right)$$

Four types of results are as follows.
C1: If $R_x^2 > Z_y > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.
C2: If $R_x^2 > R_x^1 > Z_y > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.
C3: If $R_x^2 > R_x^1 > R_x^0 > Z_y$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 0$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.
C4: If $Z_y > R_x^2 > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.

B. If x and y are the completely substitutes:

$$D\left(R_x^s, R_x^t \mid Z_y\right) = D\left(max\left(R_x^s, Z_y\right), max\left(R_x^t, Z_y\right)\right)$$

Four types of results are as follows.
S1: If $R_x^2 > Z_y > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.
S2: If $R_x^2 > R_x^1 > Z_y > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.
S3: If $R_x^2 > R_x^1 > R_x^0 > Z_y$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.
S4: If $Z_y > R_x^2 > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 0$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.

According to the results shown in Table 2, there is no difference in job accessibility between any two levels of student leadership experience, that is, $D(R_x^0, R_x^1) = 0$, $D(R_x^0, R_x^2) = 0$, and $D(R_x^1, R_x^2) = 0$. Based on the results shown in Table 2, there are some changes in the results of C1, C4, S2, and S3 shown as follows.
C1: If $R_x^2 > Z_y > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 1$.
C4: If $Z_y > R_x^2 > R_x^1 > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 0$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.
S2: If $R_x^2 > R_x^1 > Z_y > R_x^0$, then $D(R_x^0, R_x^1 \mid Z_y) = 1$, $D(R_x^0, R_x^2 \mid Z_y) = 1$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.
S3: If $R_x^2 > R_x^1 > R_x^0 > Z_y$, then $D(R_x^0, R_x^1 \mid Z_y) = 0$, $D(R_x^0, R_x^2 \mid Z_y) = 0$, and $D(R_x^1, R_x^2 \mid Z_y) = 0$.

Appendix 2. The Basic Layout of Resume Template

Name			
Gender		Photo	
Phone		Email	
Birthday			
Job Intention			
Expected Salary		Location (cities)	
Function / Position		Industry	
Type of Work			
Internship Experience			
2016/07–2016/08		Position	
Company		Department	
Job Description and Achievement			
2017/07–2017/09		Position	
Company		Department	
Job Content			
Education			
2015/09–2019/06	University	Major	Academic-Degree

(*continued on next page*)

(*continued*)

Name		
Gender		Photo
Phone		Email
School Performance		
Honor		
2016/7	Scholarship/Honor	
2017/8	Scholarship/Honor	
2018/5	Scholarship/Honor	
In-School Job		
2016/7–2017/6	Class Monitor / Student Union Minister	
Job Description and Achievement		
Occupational Skills		
Skills/Language		
Matlab/Stata		Degree: Excellent/Good/Average
English in listening, speaking, reading, writing, etc.		Degree: Excellent/Good/Average
Certificates		
2016/10		Putonghua Grade Certificate
2016/12		CET 6
2017/11		Securities Qualification Certificate

Appendix 3. Description of information type in resume

Information Type	Description
Type of Work	Full time job or part time job.
Honor	Whether an individual has received honor, e.g., excellent volunteers.
Scholarship	Whether an individual has received scholarship, including international, national, provincial, and university scholarships.
Internship Experience	Whether an individual has internship experience, including experience in companies, governments, or organizations with the same specialties as samples.
In-School Job	Whether an individual has practical experience, mainly refers to student leadership experience, and also including student activities, association activities, volunteering, and other social activities.
CET-4	Whether an individual has passed CET-4, with the score above 425.
CET-6	Whether an individual has passed CET-6, with the score above 425.
Computer Skills	Whether an individual is skilled to use computer programming language and statistical software, including C language, Java, R language, Phython, Matlab, SQL, SPSS, Stata, ASPEN PLUS, and so on.
Professional Certificate	Whether an individual has any professional certificate related to his/her major, including accounting qualification certificate, bank qualification certificate, security practice qualification certificate, and so on.
Higher Professional Certificate	Whether an individual has higher professional certificate related to his/her own specialties, such as CFA, FRM, certified public accountant, certified tax agent, and so on.

Notes. – CET denotes College English Test.

Appendix 4. Description of student leadership experience

In-School Job.

2016/9–2017/6 Vice Class Monitor

Job Description and Achievement.

1. Assist the monitor to manage the internal affairs of the class, especially in recording attendance and maintaining order in the class.

2. Organize a series of activities with specific topics, such as caring for the elderly, to help students develop the virtue and wisdom.

3. Organize class party to promote the communication and unity within the class.

In-School Job.

2016/10–2017/7 Minister in Learning Department of School Student Union

Job Description and Achievement.

1. Organize academic lectures with school characteristics and the exchange of learning experience.

2. Organize secretaries of learning department to survey and solve the difficulties and problems encountered by the students in the study, timely and routinely.

3. Assist the relevant departments to promote the construction of good learning atmosphere and actively participate in teaching evaluation activities.

4. Actively collect the students' requirements and opinions on the teaching and education of the school, and provide feedback to the Academic Affairs Office in a timely manner.

Appendix 5. Tables

Table A1
Leadership Experience and Callback by Gender: OLS Estimation.

	(1)	(2)	(3)	(4)
	Whole		Male	Female
Panel A. Whole Sample				
leader	0.003	−0.000	0.005	0.000
	(0.007)	(0.013)	(0.004)	(0.014)
leader_male		0.005		
		(0.013)		
Observations	2169	2169	1122	1047
Panel B. None vs. *Monitor*				
leader	−0.008	−0.011	−0.005	−0.011
	(0.010)	(0.019)	(0.006)	(0.020)
leader_male		0.006		
		(0.020)		
Observations	1446	1446	748	698
Panel C. None vs. *Minister*				
leader	0.006	−0.000	0.011	−0.000
	(0.013)	(0.026)	(0.009)	(0.028)
leader_male		0.005		
		(0.014)		
Observations	1446	1446	748	698
Panel D. Monitor vs. *Minister*				
leader	0.014**	0.011	0.016	0.011
	(0.006)	(0.008)	(0.010)	(0.009)
leader_male		0.005		
		(0.012)		
Observations	1446	1446	748	698

Notes: Leader (0 if non-leader, 1 if monitor, and 2 if minister of the student union) is an order variable, and male (1 if male, 0 otherwise) is a dummy. Leader_male is the interaction term between leader and male. In Panel C, leader (0 if non-leader, 1 if minister of the student union) is reset to a dummy. All regressions are OLS estimations and control for personal characteristics (male, education level, internship firm level, internship job type, scholarship level, school quality, and major dummy), company features (industry dummies, city dummies, city level, listed status, and staff size), and vacancy features (required education, required experience, lower-bound salary, upper-bound salary, median salary, fluctuation of salary, bonus, job level, job type dummies including sales, research, clerk, and service). Robust standard errors are in parentheses, clustered at the delivery-group level are in parentheses. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

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