Does having a cadre parent pay? Evidence from the first job offers of Chinese college graduates ☆

Hongbin Li, Lingsheng Meng, Xinzheng Shi, Binzhen Wu *

Department of Economics, School of Economics and Management, Tsinghua University, Beijing 100084, China

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ABSTRACT

We estimate the wage premium associated with having a cadre parent in China using a recent survey of college graduates carried out by the authors. The wage premium of having a cadre parent is 15%, and this premium cannot be explained by other observables such as college entrance exam scores, quality of colleges and majors, a full set of college human capital attributes, and job characteristics. These results suggest that the remaining premium could be the true wage premium of having a cadre parent.

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1. Introduction

Political status is found to have a positive value for personal or business income in both developed and developing countries (Agrawal and Knoeber, 2001; Faccio, 2006; Fisman, 2001; Johnson and Mitten, 2003; Khwaja and Mian, 2005). In the context of China, social scientists show that members of the Chinese Communist Party (CCP) or cadres could use their political status to seek rents during the economic transition (Liu, 2003; Morduch and Sicular, 2000; Nee, 1996; Walder, 1996).[1]

We focus on Chinese cadres in this paper. Cadres control key resources or have decision power over the distribution of these resources, and thus they could benefit from their power. Firms and individuals are willing to provide (or bribe) cadres and their family members with monetary and non-monetary benefits in exchange for access to these resources (Liu, 2003; Morduch and Sicular, 2000; Nee, 1996; Walder, 1996). One important form of these benefits can be the provision of education and job opportunities to the children of cadres (Li and Walder, 2001; Walder and Hu, 2009; Walder et al., 2000; Zhou et al., 1998).

In another strand of literature, social scientists focus on the inter-generational immobility of socioeconomic status or the persistence of economic outcomes (Black and Devereux, 2010). Some study how parents' education, income, or occupations affect children's education and their earnings (Behrman and Rosenzweig, 2002; Black et al., 2005; Case et al., 2002; Chen and Li, 2009; Lam and Schoeni, 1993; Plug, 2004; Shea, 2000).[2] Others (mostly in sociology and political

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* Corresponding author. Tel.: +86 10 62772371.
  E-mail address: wubzh@sem.tsinghua.edu.cn (B. Wu).

[1] In the context of economic transition, it is postulated that the incentives facing rank-and-file officials and bureaucrats can play an important role in the transition process and its ultimate success or failure (Che and Qian, 1998; Frye and Shleifer, 1997; Li, 1996). Earlier studies find that CCP membership or cadre status has a positive value for businesses or personal incomes in China. However, using a sample of identical twins, Li et al. (2007) show that labor income associated with political status is due to unobserved abilities.

[2] For example, Lam and Schoeni (1993) find that omitted family background variables are important for explaining high estimated returns to schooling in Brazil. More precisely, returns to schooling fall by about one-third when parental schooling is added to wage equations.

science) investigate the relationship between parents' political position and their children's social and political outcomes.[3] However, little is known about how the political status (connections) of parents affects the labor market performance of their children.[4]

In this paper, we attempt to link the above two strands of the literature and examine how the political status of parents affects the labor income of the next generation by exploring a rich dataset of college graduates derived from the Chinese College Student Survey (CCSS) that we recently conducted in China. In particular, we examine whether having at least one cadre parent increases the wage of the first job offer for fresh college graduates from urban areas. After the dramatic expansion of college enrollment, an increasing number of young Chinese are being admitted into colleges (a rise by 500% from 1.1 million freshmen in 1998 to 6.6 million in 2010). Therefore, intergenerational mobility is currently less reflected in the number of years of schooling or by having a college degree, but is more likely to be reflected in earnings. Even with the same years of schooling, college graduates from families of higher socioeconomic status may have higher earnings than those of lower socioeconomic status.

Our empirical analysis shows that having a cadre parent has an effect on the initial wage of urban college graduates. The starting wage of college graduates with cadre parents is 15% higher than that of other college graduates. This premium cannot be explained by other observable attributes of families such as parental income, education and party membership.

Although we do not have a natural experiment that assigns cadre parents randomly to students, we can address potential biases by taking advantage of a rich set of control variables that are potential determinants of wages. Most importantly, we can use College Entrance Exam (CEE) scores as measures of the ability or IQ of students. Passing the CEE is the goal of all senior high school students, and they work very hard to attain high scores. Therefore, CEE scores are essentially good measures of the ability or IQ of students. Regression results show that controlling for CEE scores does not alter our estimate of the effect of having a cadre parent on wage, suggesting that ability bias cannot explain the observed cadre premium.

The benefit of having cadre parents can start as early as childhood. Students with cadre parents can go to first-class kindergartens, primary schools, and secondary schools. Cadre parents may help their children get into better colleges.[5] Cadre parents may also help their children directly in the job market by obtaining valuable information about job openings, and use their power to trade for good jobs for their children (Bian, 1994; Walder and Hu, 2009).

The rich data set also allows us to examine the potential channels through which parental political status affects wages. We find that the quality of university and majors and other human capital attributes acquired in college cannot explain any of the cadre parent wage premiums for fresh college graduates. The remaining cadre premium is as high as 14% after we control for all potential determinants of wages, suggesting that having a cadre parent itself may have a payoff, probably through the parent's connections (direct or indirect) with employers or better access to job information. We also find that the cadre premium is the same for males and females. Finally, the results are robust to various sensitivity tests.

Our paper has a few caveats. First, although we have a rich set of information, having a cadre parent may imply some favorable human capital attributes for the job market. These attributes are observable to employers but not to researchers. Second, we observe only the first job offers of fresh college graduates. The wage premium is likely to change over time.

The rents associated with cadre status have important implications for income distribution. In China, economic inequality has continued to rise and is very high by international standards (Khan and Riskin, 2008; Ravallion and Chen, 2007). According to the estimate by Gustafsson et al. (2008), the Gini coefficient was as high as 0.45–0.47 in 2002. Some believe that unequal access to opportunities and resources, in part related to political status and connections, have played a role in this trend (Morduch and Sicular, 2002). The empirical literature on political status and income in China focuses on the income or benefits enjoyed by politicians themselves (Li et al., 2007; Morduch and Sicular, 2000). An important but under-studied question is whether and how these benefits and advantages can cause long-term inequities that are passed down from older to younger generations in a partially reformed economy like China. In today's China, because of the general mistrust, anger, and hatred caused by the perceived differential treatment of the children of cadres, people are more willing to interpret the cadre premium as causal if they cannot find good explanations for it.

The remainder of this paper proceeds as follows. The following section provides background information on China's higher education and job market for college graduates. Section 3 describes the data. Section 4 lays out a simple empirical framework. Section 5 reports the empirical results. Section 6 concludes the paper.

2. Institutional background

China had 2305 registered higher-education institutions with around 6.4 million first-time enrollments in 2009 (China Statistical Yearbook 2010). These institutions have a clear hierarchy. At the top of the pyramid are 112 elite colleges in the 211 Program (including 39 colleges covered by the 985 Program).[6] The government invests much more in these privileged universities than in other tertiary institutions. Only students whose CEE scores are at the very top of the score distribution in each province can get into these universities.

Next to the elite colleges are the remaining four-year universities that award bachelor degrees. These universities also differ substantially in terms of their reputation and financial resources (Huang, 2005; Li, 2004). At the bottom of the pyramid are two-year or three-year vocational colleges (VCs). VCs are similar to community colleges in the US, awarding sub-baccalaureate or associate degrees. In 2009, China had 1215 vocational colleges with 3.3 million enrollments (China Statistical Yearbook 2010). Admission to VCs is also based on CEE scores. All VCs are locally administered and financed by the local government, with short-cycle programs that are closely linked to local industry and business needs.

2.1. China's CEE and college admission

The college admission system of China, which matches students with colleges and majors, consists of two stages. The first stage is a national standard exam called the CEE or *gaokao* in Mandarin. The

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[3] Zhou et al. (1998) find a strong positive link between parents' cadre positions and children's educational attainment. Li and Walder (2001), Walder and Hu (2009), Walder et al. (2000) find that fathers' political positions affect party recruitment, educational attainment, and children's elite social status.

[4] Ioannides and Loury (2004) provide a detailed review of how networks affect job market outcomes. Bian (1994, 1997) have highlighted that *guanxi*, or interpersonal relationships, play an essential role in the job mobility of state workers.

[5] See anecdotes reported in BBC news at http://news.bbc.co.uk/2/hi/asia-pacific/1525159.stm.

[6] In the 1990s, the Chinese government put forward a proposal to "enhance 100 colleges in the 21st century," which was later called the 211 Program. Although the proposal indicates only 100 colleges, in practice, 112 are covered by this program in 2010. Colleges covered by the Program have longer histories and offer high-quality education; more importantly, they also receive more financial support from the government. See Li (2004), http://en.wikipedia.org/wiki/Higher_education_in_China, and http://en.wikipedia.org/wiki/Project_211 for reference. On May 4, 1998, during the Peking University Centenary Celebration, then-president Jiang Zemin proposed that China needed to build world-class universities. Subsequently, the Chinese government launched a program to increase financial support for elite colleges. This program is referred to as the 985 Program. All colleges covered by the 985 Program must also be covered by the 211 Program. See http://en.wikipedia.org/wiki/Project_985.

second stage is a matching mechanism that begins immediately after the exam results are released.[7]

One essential feature of the system is that the total score in the CEE is the main criterion for college admission and the only criterion for the majority of students.[8] CEE scores can determine students' fate, and thus they work very hard in their three years in senior high school to improve their exam-taking skills. Students begin preparing for the CEE as early as primary school or junior high school. Passing the CEE is the only goal of students, and they work hard to achieve high scores.[9] Therefore, CEE scores are a good measure of students' ability or IQ. In Chinese society, CEE scores are well-accepted measures of intelligence.

Another distinct feature of the Chinese secondary education system is that high school students have to decide whether to focus on the arts or the sciences for the rest of their education. Both arts and science students take Chinese, English, and political science; arts students take geography, history, and basic mathematics; and science students take physics, chemistry, biology, and advanced mathematics. The CEE also has two sets of exams respectively.

Although students with higher scores have higher chances of being admitted by a college, admissions officers also match students with colleges based on the students' reported preferences. Colleges are usually categorized into four tiers based on the type and status of the colleges. Those belonging to a higher tier are afforded a higher priority in admitting students.[10] Students need to list their choices of colleges in each tier and majors in each college in order of preference in their application form. Students have 4–6 choices of universities in each college tier. The deadline for submitting the preference form varies by province and time, and could occur prior to the exam, after the exam but prior to the release of scores, or after the scores are released.

The admissions procedure in most provinces is similar to the Boston Mechanism: each college only considers those students who list the college as their first choice in the first round. If quotas remain after the first round, only then will the college consider students who list the college as their second choice. Given the shortage of high-quality institutions, the chance is small for students to be admitted by their second-choice college if they fail to be accepted by their first-choice college. Therefore, even students with very high CEE scores can miss their first-choice universities and fail to be admitted by any college.

Given the admissions procedure, students with the same score may end up in very different universities because filling out the application forms is a very strategic task. Risk aversion, information about colleges, connections to colleges, and tuition fees of each college could all affect students' admission to a certain college.

The college graduates we sampled in 2010 were admitted to colleges in 2006. In 2006, about 56% of the 18-year old cohort took the college entrance exams, and the acceptance rate (among exam takers) was 75% (authors' calculation based on the China Statistical Yearbook, 2010).

2.2. The job market

The formal job search process begins in students' senior year.[11] First, students seek information about job openings, mainly from job recruiting fairs on and off campus (91% of students), the Internet (58% of students), and acquaintances (33% of students). They then send resumes to potential employers, get invited for interviews (which could consist of several rounds), and may receive offers after the interviews. Students can negotiate with potential employers over the terms and conditions of employment. Normally, students have received offers and made their decisions by May, which is before they graduate in June or July. Our survey was conducted at the end of May, when most students have made decisions.

After deciding to hire a student, most companies send an offer letter that provides detailed job information, including the wage and basic compensation package. In our data, over 90% of students who had job offers knew the wage and other contents of the compensation package, such as social security, health insurance, and housing subsidy. The wage usually refers to the gross wage or wage before individual income tax. It includes payroll taxes paid by the employee but not by the employer. Although the offer letter may also mention the bonus terms, the amount is uncertain as these benefits hinge on the employee's performance. Thus, the monthly wage is unlikely to include a bonus, which is usually paid at the end of the year, based on annual performance.

3. Data

Our data are derived from the pretest of the Chinese College Students Survey (CCSS) by the China Data Center of Tsinghua University, conducted in May and June 2010.[12] The pretest sample includes 19 colleges selected from the final sample of 100, which is randomly drawn from China's 2305 colleges. The sampling method used is stratified random sampling, with locations (Beijing, Shanghai, Tianjin, Northeastern China, Eastern China, Central China, and Western China)[13] and type of college (Tier 1–7 colleges) as stratifying variables. The 19 colleges covered in the pretest include 10 elite colleges or colleges covered by the 211 Program.[14] They are located in 11 provinces, covering all major geographical areas in China. To draw statistical inferences, we weigh all our statistical analyses by reassigning our sampled colleges into eight categories according to two variables: elite colleges (in the 211 program) and regions (Northeast, East, West, and Central).[15] The weight of each college is the number of that category of college in the population represented by the number of the same category in our sample.[16]

In each college, approximately 300 students are randomly selected from the graduating class. A total of 6059 students from the graduating classes are selected: 3167 from elite colleges and 2892 from other

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[7] Davey et al. (2007) provide a detailed description of the CEE system.

[8] Applicants to some specialist programs are screened by additional criteria, such as some art departments (e.g., audition), military and police schools (political screening and physical exam), and some sports programs (tryout). There are policies that allow certain groups of students to enter a university with lower scores, including ethnic minority groups, sports-people, children of army personnel, and disabled applicants. It is also possible for students to be recommended to universities, but the number of students entering through this route is very small (Davey et al., 2007).

[9] See a report in the New York Times at www.nytimes.com/2009/06/13/world/asia/13exam.html.

[10] The first tier includes army and police academies; the second tier includes the elite universities; the third tier includes most of China's remaining universities that provide bachelor degree programs; and the fourth tier includes vocational colleges (Davey et al., 2007).

[11] Selection at college completion is not a major issue as more than 97% of college students graduate. See http://english.peopledaily.com.cn/202936/7623669.html.

[12] Our survey only collected information from college students, which means that we cannot examine how parental political status affects the probability of attending colleges. In the sense that cadre parents may help their children get into colleges, our study may under-estimate the wage premium.

[13] In the sampling process, we separate these three metropolises (Beijing, Shanghai, and Tianjin) from the rest of China because they have extremely large concentrations of colleges, especially top universities.

[14] We intentionally oversample elite colleges to pretest our survey instruments and organizations.

[15] We put colleges from the three metropolises (Beijing, Shanghai, and Tianjin) into the East to make sure we have at least one college in each of the eight categories. In terms of both geography and economic activities, the three cities should belong to the East.

[16] We define eight categories of colleges by two variables: elite college (those belonging to the 211 Program) and regions (Northeast, East, West, and Central). For example, the weight for a non-elite college in East China is the number of non-elite colleges in the area in the population divided by the number of non-elite colleges in the same area in our sample.

colleges. Among the nine non-elite colleges, six are public colleges (2201 students), two are private colleges (415 students), and one is a vocational college (276 students). We drop the only vocational college in our analysis, as we only have one such college in the sample, and the students in vocational colleges may differ from those in other colleges.

We designed the questionnaire collaboratively with experts in other disciplines, such as sociology and education. The questionnaire includes not only questions on individual characteristics and family background, but also questions regarding CEE scores, college activities, and student placement after graduation.

The survey work in each college was managed by one to three college administrators in charge of teaching or student activities. We intensively trained the survey administrators in Beijing for several days. The students were asked to complete the questionnaires, after which the questionnaire forms were placed into coded envelopes to guarantee anonymity. The submitted questionnaires were then collected by the survey administrators in the college. The survey was conducted with considerable care, with our survey team closely monitoring the survey in each college and the data entry process.

Cadres in our paper refer to those holding civil service positions in the government, and those holding bureaucratic positions in pseudo-government organizations such as state-owned enterprises (SOE) and public organizations (*shi ye dan wei*, such as hospitals, universities, and utility companies).[17] They do not include those working in the private sector or village officials in rural areas. The definition is similar to that in Walder (2002) and Zhou (2000), but is different from the definition in Morduch and Sicular (2000), who define cadres as village officials. To be classified as a student from a cadre family, at least one parent of the student must be a cadre.

Our definition of cadre means that they are very unlikely to be from rural areas. In fact, only the township-level cadres might be rural, as all cadres at county level or above are urban. Thus, we drop rural students from our empirical analysis. As a result, our final sample includes 2312 urban students enrolled in universities.[18] These sample restrictions are not crucial to our main conclusion.

Table 1 reports the summary statistics for this sample. About 31% have at least one cadre parent. Panel A shows that the initial wage offer is 2233 yuan on average, but the offer to students with a cadre parent is 15.1% higher than that to other students (2476 vs. 2151). The difference in log wage is significant at the 5% level. Although this simple *t*-test is revealing, we resort to multiple regressions in the succeeding sections to examine whether the difference remains after we control for other covariates in the wage equation.

Students with a cadre parent also differ from other students in terms of personal and family characteristics (Panel B of Table 1). Cadre families have better family backgrounds than do students from non-cadre families: parents are more likely to be communist party members (85.3% vs. 36.0%), parents are more likely to be college graduates (58.9% vs. 19.2%), they have higher family incomes (74,560 vs. 53,146 RMB), and they have a smaller family size. However, students with cadre parents perform the same as other students in terms of the CEE scores, with none of the scores showing significant difference between the two groups, suggesting that the two groups do not differ in terms of ability.

Panel D reports the human capital and experiences accumulated during college, including English test scores, technical certificates,

work experience in college, membership in the Chinese Communist Party (CCP), and leadership in student unions. Compared with students from non-cadre families, those from cadre families have significantly better English scores, but they are less likely to have worked in college.

4. Empirical model

In this section, we set up a simple econometric model to describe our identification strategy. Suppose earnings are determined by the following equation:

$$\ln W = \alpha + \beta P + \gamma X + \varepsilon, \tag{1}$$

where W refers to earnings, P is an indicator for having a cadre parent, and X represents other covariates affecting earnings. ε is the error term, and coefficient β is the impact of parental political connection on earnings. Ordinary least squares estimate is a consistent estimate of β if and only if P is independent of the error term ε. However, the independence condition may not hold for several reasons.

First, cadres may have other attributes that could increase earnings of their children. Therefore, in addition to the parental political measure, controlling for other parental characteristics, such as education and earnings, is necessary.

Second, the children of cadres may have higher innate ability, which may have a positive effect on earnings. The simplest way of dealing with this problem is to include a measure of "ability" in Eq. (1). Following the literature,[19] we use test scores (the CEE scores in our case) as a measure of ability. If CEE scores are accepted as a relevant measure of ability, or something very similar, the inclusion of such a variable will reduce the "ability bias." Even more helpful is that we can observe CEE scores in different subjects, including mathematics, Chinese, English, and science/art composite tests, which could possibly account for student heterogeneity in the different types of abilities that affect earnings.

Third, the children of cadres may have been admitted to colleges and majors that are more selective or helpful in the accumulation of marketable skills in college. The richness of our data enables us to control for student heterogeneity along these dimensions. Although these variables are not strictly exogenous, it is interesting to see how their inclusion affects the estimated coefficients.

Finally, we are unable to observe all student- and family-specific characteristics that affect earnings. Although the relatively broad scope and high quality of our background measures should reduce the susceptibility of our estimates to omitted variables, we cannot completely rule out the possibility of omitted variable bias.

5. Are the children of cadres paid more?

By estimating the wage equation as specified in Eq. (1), we examine in this section whether the initial wages of urban college graduates with at least one cadre parent are higher. The dependent variable is log wage. We do not include years of schooling as a regressor because the whole sample is composed of college graduates. All regressions are weighted, with the weight defined above. We report standard errors that are robust to heteroskedasticity and clustering at the school level.

5.1. Basic results

The regressions reported in Table 2 show that cadres' children tend to be offered higher wages for their first job after graduating from college. In column 1, we report a regression with the following

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[17] In the questionnaire, we asked the students to report the bureaucratic rank and the type of work unit of both parents.

[18] To be consistent with the sample used in the regressions, we have excluded the observations that have missing information on family income and CEE scores. We do not find any systematic difference in the proportion of missing information on these two variables between students with a cadre parent and other students. For family income, 8.4% of students with a cadre parent have no information on family income, while the number is 8.3% for other students. The numbers are 6.6% and 6.4% respectively for CEE scores.

[19] Prior studies on the return to education use high school test scores (Brewer et al., 1999; Long, 2008), IQ test scores (Blackburn and Neumark, 1992; Griliches, 1977), AFQT scores (Griliches and Mason, 1972; Leigh and Gill, 1997; Monks, 2000), SAT scores (Long, 2008), ASVAB scores (Black and Smith, 2006), and other similar aptitude test scores as a proxy for unobserved ability.

Table 1
Summary statistics for graduating college students from urban China.

Variable list	Observation	Whole sample	Cadre parent	Non-cadre parent	Weighted difference (3)–(4)
	(1)	(2)	(3)	(4)	(5)
Cadre parent (at least one parent is a cadre)	2312	0.306			
Panel A: Job market					
Wage (RMB)	965	2233	2476	2151	342.5*
Log (wage)	965	7.577	7.662	7.549	0.153**
Having wage information	2312	0.417	0.343	0.450	−0.088**
Searching for jobs	2299	0.628	0.546	0.664	−0.101***
Failure rate among job searchers	1420	0.309	0.362	0.290	0.035
Going to domestic graduate school	2282	0.604	0.530	0.637	−0.060
Going abroad	2282	0.260	0.283	0.250	0.035
Panel B: Individual characteristics and family background					
Male	2312	0.519	0.519	0.519	0.020
Age	2312	23	23	23	−0.154**
Minority	2312	0.072	0.099	0.060	0.013
Parental income (RMB)	2312	59,704	74,560	53,146	25,056***
At least one parent has college degree	2312	0.314	0.589	0.192	0.427***
At least one parent is communist party member	2312	0.511	0.853	0.360	0.494***
Number of siblings	2312	0.468	0.292	0.546	−0.250***
Family size	2311	3.488	3.325	3.560	−0.229***
Panel C: College entrance exams					
Science (vs. social sciences/arts)	2312	0.732	0.722	0.737	−0.067*
Total score	2312	0.062	0.135	0.030	0.027
Math score	2091	0.009	0.063	−0.014	−0.032
Chinese score	2102	0.115	0.160	0.095	0.019
English score	2098	0.106	0.189	0.069	0.107
Composite score	2076	−0.008	−0.011	−0.006	−0.053
Panel D: College human capital attributes					
College GPA	2312	0.423	0.404	0.432	−0.043
College English Test score	1911	4.638	4.737	4.596	0.124***
Have technical certificate	1619	0.731	0.260	0.235	0.060
Worked in college	1619	0.243	0.623	0.679	−0.078**
Leader of student union	2295	0.662	0.716	0.660	−0.003
Party membership	2312	0.677	0.383	0.352	−0.031

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. The weighted difference represents the population.

independent variables: a gender dummy, age, a minority dummy, and a dummy indicating that one of the parents is a cadre. The cadre dummy is significant at the 1% level, and the point estimate of the coefficient implies that the children of cadres have a wage premium of 15.1% relative to the children of non-cadres. This is equivalent to a return of approximately two years of schooling, as estimated by Zhang et al. (2005). Males do not have a pay advantage relative to females.

It may be that having a cadre parent has a positive effect on the pay of college students because cadre families have other attributes that could help their children. In column 2, we include log parental income, a dummy indicating at least one parent having a college degree, parental party membership, the number of siblings, and a full set of dummies indicating the home province of a student. None of the added family variables are significant.[20] More importantly, adding these variables does not change qualitatively our estimated wage premium of having a cadre parent.

There could be a potential gender difference in the cadre premium. In the third column of Table 2, we add an interaction term between cadre parent and gender of the student. The results show no significant difference in the effect between male and female students, suggesting no gender difference in the cadre premium.

The wage premium could be realized either by differences in job characteristics or by having higher wages for the same job.

Differentiating the two channels will help us better interpret the wage premium. Furthermore, there could also be a tradeoff between different job characteristics. For example, some jobs may be less secure or have worse benefits even though they pay higher wages. Students from cadre families may have different preferences for job characteristics from other students. Finally, some of the wage differences could be due to differences in the cost of living in different cities or regions.

To partially address these concerns, we control for job characteristics by including a large set of dummy variables. In particular, we control for job location (province dummies), industry (18 groups), and firms' ownership type (government, state owned enterprises, public organizations, foreign owned enterprises, private firms, collectively owned enterprises and others). The results reported in column 4 of Table 2 show that conditional on these job characteristics, the cadre premium remains the same as that in column 2 when we do not control for job characteristics. One caveat here is that job characteristics are endogenous.

5.2. Can ability explain the wage premium?

Our estimate of the cadre effect could be biased if cadres have a higher innate ability that is genetically transmitted to their children. Prior studies find that cadres in China are generally more able than other people (Li and Zhou, 2005; Li et al., 2006, 2007, 2008). Lacking a natural experiment, the best approach to deal with this issue is to find a good measure of ability to include in the regressions. As we describe in Section 2, CEE scores are a rather good measure of ability.

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[20] One possible explanation for an insignificant party membership variable could lie in the fact that more than 51% of urban college students have at least one parent as a party member, suggesting that parental party membership might not be a big deal.

Table 2
OLS regressions examining the effect of having a cadre parent on the wage of the first job of fresh college graduates from urban China.

	Dependent variables: Log (wage)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cadre parent	0.151***	0.145***	0.091*	0.143**	0.139***	0.194***	0.154***	0.137***
	(0.019)	(0.024)	(0.045)	(0.053)	(0.023)	(0.053)	(0.027)	(0.031)
Male	0.113	0.107	0.081	0.048	0.125*	0.131**	0.114**	0.190***
	(0.071)	(0.068)	(0.088)	(0.064)	(0.060)	(0.055)	(0.054)	(0.028)
Age	0.046*	0.053*	0.052*	0.051*	0.052*	0.051*	0.049**	0.052***
	(0.024)	(0.029)	(0.029)	(0.025)	(0.026)	(0.027)	(0.019)	(0.014)
Minority	0.012	−0.020	−0.031	0.006	−0.017	−0.028	−0.021	−0.009
	(0.034)	(0.018)	(0.026)	(0.033)	(0.015)	(0.020)	(0.036)	(0.066)
Log parental income		−0.054	−0.054	−0.088	−0.056	−0.074	−0.095	−0.056
		(0.092)	(0.093)	(0.096)	(0.095)	(0.100)	(0.111)	(0.090)
Parent has college degree		0.014	0.014	0.026	0.012	0.012	0.006	0.010
		(0.012)	(0.012)	(0.017)	(0.014)	(0.015)	(0.015)	(0.016)
Parent is Party member		−0.076	−0.075	−0.082	−0.078	−0.080	−0.058	−0.052
		(0.086)	(0.085)	(0.094)	(0.089)	(0.089)	(0.091)	(0.084)
Number of siblings		0.028	0.026	0.044	0.030	0.029	0.043	0.037
		(0.076)	(0.078)	(0.067)	(0.076)	(0.075)	(0.083)	(0.087)
Cadre parent * Male			0.115					
			(0.124)					
Science					−0.085	−0.090	−0.154	−0.136
					(0.108)	(0.108)	(0.132)	(0.097)
CEE total score					−0.022	−0.068	−0.075	−0.093
					(0.071)	(0.100)	(0.091)	(0.091)
Cadre parent * CEE score						0.181		
						(0.132)		
College GPA								0.191**
								(0.070)
College English test score								0.091***
								(0.023)
Has technical certificate								0.113***
								(0.031)
Worked in college								0.004
								(0.142)
Leader of student union								0.137
								(0.095)
Party member								0.013
								(0.040)
Province dummies		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Job characteristics				Yes				
College dummies							Yes	Yes
Major dummies							Yes	Yes
Observations	965	965	965	965	965	965	965	965
R-squared	0.027	0.066	0.067	0.217	0.069	0.076	0.114	0.163

Note: Robust standard errors in parentheses, allowing cluster at school level; * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions are weighted so that the results represent the population.

We examine how much of the cadre premium can be explained by the performance of students in the CEE. Using column 2 as our baseline model, we add two additional independent variables, the science dummy,[21] and the CEE total scores[22] in column 5. The results show that neither the specialization in science nor CEE total scores affect the initial pay of a college graduate. More importantly, the addition of these new score variables does not markedly change the coefficient of the cadre dummy, suggesting that the estimated return to having a cadre parent is unlikely to be due to unobserved ability or intelligence. Although not reported, we also estimate a specification that substitutes students' total CEE scores with their mathematics, Chinese, or English scores. Again, the coefficient of the score for each subject is insignificant and the estimated return to having a cadre parent does not change markedly.

One concern is that the effect of CEE scores may vary with parents' cadre status. If students with a cadre parent attend better-quality high schools, then their CEE scores are likely to accurately measure their abilities. In contrast, the CEE scores of students without a cadre parent are likely to under-estimate their abilities. To address this concern, we add an interaction term of cadre parent*CEE in Column 6. The coefficient on the interaction term is insignificant, suggesting no differential effects of the CEE scores for students with and without a cadre parent.

5.3. Are the children of cadres in better colleges and majors?

The children of cadres may have an advantage in the job market because they have studied in better colleges and majors that enjoy wage premiums. As we describe in Section 2, if students from cadre families have an informational advantage on colleges and majors, have good connections, take more risks in filling out their college and major preference forms, and are less sensitive about costs, then they are more likely to be accepted by better colleges and majors.

The estimates of the wage equation confirm that the wage premium associated with having a cadre parent is not due to their entering better colleges or majors. In column 7 we add the college dummies and major dummies to control for college and major fixed-effects. The coefficient

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[21] In results not reported, we find that the children of cadres are more likely to choose arts/social sciences than sciences. The results may reflect that children of cadres are more confident that they will have good chances of success in the future (or if not, have more financial support from their families), and so they feel they can afford to take greater risks and study non-science subjects.

[22] All scores are normalized using the mean and standard deviation of the scores of students taking the same type of examination in the same province using the following formula: (individual score − mean score)/standard deviation. About three-quarters of the students are taking science subjects.

on the cadre dummy remains significant and the magnitude hardly changes, suggesting that the wage premium cannot be explained by college and major quality.

5.4. Do the children of cadres acquire more skills in college?

The children of cadres may have acquired more human capital in college, with corresponding payoffs in the job market. These human capital attributes are multidimensional, including students' college GPA, College English Tests scores, technical certificates, CCP membership, student union leadership, or part-time work experience (internship).[23] A priori, we do not know which of these human capital attributes matter for wage and which are associated with having a cadre parent.

We include these variables that could measure human capital acquired in college in the wage equation. In the last column of Table 2, we include measures of academic performance – GPA and English test scores – and all human capital attributes together. College GPA, English test scores, and technical certificate have a positive effect on initial wage, whereas work experience, party membership, and student union leadership do not affect wage. More importantly, controlling for these variables does not markedly change the effect of a cadre parent on wage, suggesting that the human capital acquired in college cannot explain the effect of having a cadre parent on the initial wages of college graduates.[24]

5.5. Selection on wage information

Missing wage information may pose a selection issue. In fact, only 63% of the students searched for jobs, and even among job searchers, successful searchers (with wage information) could differ from unsuccessful searchers (without wage information). Missing wage information will cause a selection bias if the parental cadre status affects the probability of observing wages.

We first employ a Logit model to examine whether the probability of having no wage information varies with parental cadre status. The result (column 1 of Table 3) shows that having cadre parents does not affect the probability of having no wage information. We further employ a multinomial Logit model to examine the potential reasons for missing wage information: 1) non-searchers (did not search for jobs); 2) unsuccessful job searchers (searched for jobs but did not get offers); and 3) missing information (job search or wage information missing). The base group is those for whom we have wage information. Results (columns 2–4 of Table 3) show that students with cadre parents do not differ significantly from other students in terms of the log odds ratios between these potential reasons. These results show that even if the selection problem exists, it should not be a serious concern.

6. Conclusions

In this paper, we estimate the wage premium associated with having a cadre parent in China by drawing on data from the Chinese College Student Survey conducted in 2010. We find that the cadre premium is as large as 14.5% after controlling for other family attributes. By taking advantage of our very detailed survey, we show that ability measured by CEE scores, quality of college or major, or even college activities, cannot explain the cadre parent wage premium. Moreover, the wage premium of a cadre parent largely remains even if we control for job characteristics including job location, industry, and firms' ownership

Table 3
Logit regressions examining potential reasons for not observing wage information.

Dependent variables	No wage information	Did not search	Searched but no offer	Not reported
Model	Logit	Multinomial Logit		
	(1)	(2)	(3)	(4)
Cadre parent	−0.044	−0.248	−0.249	0.037
	(0.055)	(0.315)	(0.358)	(0.170)
Log parental income	0.010***	0.076***	0.048	−0.028
	(0.002)	(0.026)	(0.037)	(0.043)
Parent has college degree	0.100***	0.815***	0.247*	−0.423
	(0.031)	(0.280)	(0.127)	(0.304)
	0.069***	0.434**	0.156	0.612**
	(0.025)	(0.173)	(0.130)	(0.286)
Number of siblings	−0.020	−0.140	−0.125	0.385**
	(0.036)	(0.168)	(0.177)	(0.172)
Male	−0.016	0.003	−0.002	−1.366***
	(0.033)	(0.186)	(0.181)	(0.199)
Age	−0.004	−0.036	0.064	−0.353**
	(0.008)	(0.053)	(0.061)	(0.170)
Minority	0.035	0.147	0.358	−1.412
	(0.050)	(0.153)	(0.284)	(1.233)
Science	−0.049**	−0.291**	−0.318***	0.557
	(0.025)	(0.146)	(0.088)	(0.340)
CEE total score	−0.027	−0.160	−0.123	−0.071
	(0.029)	(0.167)	(0.142)	(0.196)
College GPA	0.068**	0.806***	−0.061	−0.426**
	(0.032)	(0.183)	(0.198)	(0.187)
College English Test score	0.009	−0.022	0.085	0.199
	(0.011)	(0.208)	(0.081)	(0.183)
Has technical certificate	−0.099***	−0.195	−0.474**	−1.567***
	(0.026)	(0.176)	(0.211)	(0.134)
Worked in college	−0.176***	−1.195***	−0.504***	−0.673**
	(0.026)	(0.132)	(0.173)	(0.332)
Leader of student union	−0.036	−0.413***	0.023	0.038
	(0.032)	(0.154)	(0.221)	(0.162)
Party member	−0.012	−0.259	0.029	0.371
	(0.033)	(0.166)	(0.203)	(0.270)
Observations	2312	2312	2312	2312
Pseudo R^2	0.1213	0.1714		

Note: Robust standard errors in parentheses, allowing cluster at school level; * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include home province dummies and college and major dummies. All regressions are weighted so that the results represent the population. The coefficients in column (1) are marginal effects. Only 6% of students having no wage information are due to other reasons.

type. Our analysis does not allow us to directly test for causality, but after including a wide range of control variables and carrying out multiple robustness checks, we believe that causality is a distinct possibility.

The results have some equity implications even if the remaining premium is due partially to unobserved ability or human capital. Recently, there has been a lot of discussion in the media and cyberspace regarding various social and economic privileges enjoyed by the children of cadres in China, which have aroused anger and hatred among "netters." Given that our results show that none of the observables can explain the wage premium, most people likely fail to find a better explanation than that the children's parents are cadres. In modern-day China, there is little doubt that most Chinese people are willing to interpret the cadre premium as causal.

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[23] College English Tests are national standardized English tests for all Chinese college students. Technical certificates are certificates for computer skills, accounting, drafting, auditing, and other professional skills. Leaders of student unions are those who have ever held a position in a student organization, such as a student union, the Youth League, a social organization, or club.

[24] A remark to be made here is that most of the R^2 values in the regressions are quite low, which means that the variables in the equations explain only a small portion of the variation in the initial wages of college graduates.

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