Returns to Elite Higher Education in the Marriage Market: Evidence from Chile*

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Abstract

In this paper we estimate the marriage market returns to being admitted to a higher ranked (i.e. more "elite") university by exploiting unique features of the Chilean university admission system. This system centrally allocates applicants based on their university entrance test score, which allows us to identify causal effects by using a regression discontinuity approach. Moreover, the Chilean context provides us with the necessary data on the long run outcome 'partner quality'.

We find that being admitted to a higher ranked university has substantial returns in terms of partner quality for women, while estimates for men are about half the size and not significantly different from zero.

JEL-Classification: I23, I24, J12.

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1 Introduction

Economists have long been interested in understanding the individual and social implications of education. While the main focus of the existing literature has been on the estimation of labor market returns, far less attention has been dedicated to the marriage market, despite the fact that marriage market outcomes are likely to be just as important for individuals' wellbeing as are labor market outcomes. Even when focusing on financial returns, the effect of education on household income via finding a higher earning spouse might be large. The seminal work by Goldin (1997) suggests that, for American women who graduated between 1945 and 1960, nearly half of the return to college might have come in the form of a spouse with higher earnings (see also Goldin, Katz, and Kuziemko (2006)).

Another important aspect that only few papers in the literature consider is the role of university quality. In environments where the difference between elite schools at the top of the quality ranking and schools at the bottom are large, it might well be the case that the returns along the quality margin are larger than those in the quantity dimension.

This paper addresses both of these under-researched aspects of educational choices. That is, we estimate the marriage market returns that an individual experiences if she/he is admitted to a higher ranked university.

It is natural to assume that an individual's educational attainment (as measured not only by years of education, but also by the rank of the attended educational institution) significantly affects her/his success in the marriage market. By attending a higher ranked university an individual maximizes her/his direct contact with potential high quality partners at an age where many partnerships are formed. Furthermore, admission to a higher ranked university might enable an individual to access higher quality social networks via peers at university or colleagues at the workplace. Lastly, the fact that an individual has been admitted to a better university is likely to be interpreted by potential partners as an important signal of the candidate's quality, which increases this individual's attractiveness as a partner.

There is also ample anecdotal evidence which suggests that marriage market considerations play an important role in students' educational choices. For instance, top universities in the US explicitly advertise to prospective students the increased probability of finding a high-quality spouse that comes with the admission to their institutions.[1] Gregory Mankiw refers to Harvard University as "the nation's most elite dating service".[2] Finally, there is an increasing number of dating websites designed exclusively for the purpose to help students from top universities to find partners from top universities, such as "Ivy Date" (Ivy Leagues schools, MIT, Stanford, Oxford, Cambridge and LSE), "nChooseTwo" (Harvard, MIT and BU), "Date My School", "Date Harvard SQ", etc.[3]

[1] See the article "Tigers in love" by Hillary Parker, *Princeton Alumni Weekly*, February 3, 2010, and the post "In defense of 'sketchy' grad students", *The Unofficial Stanford Blog*, July 30, 2011.

[2] See the article "A Guide to Top-Down Dating" by Charles Wells, *The Harvard Crimson*, August 20, 2009.

[3] See the compilation of dating websites provided by *Flyby* of *The Harvard Crimson*, on May 2, 2011.

Marriage market returns have been put forward as one potential explanation for the female college enrollment puzzle (see Goldin (1997), Goldin (2006), Goldin, Katz, and Kuziemko (2006) and Bailey and Dynarski (2011)). In most high and middle-income countries, female university enrollment rates are at least at the level of the enrollment rates of males (in Chile about 50% of undergraduates are women). This is rather surprising in the light of the fact that labor force participation rates of women are always lower than those of men and often substantially lower (in Chile, the gap in labor force participation between college-educated men and women was 20 percentage points in 1990 and 14 percentage points in 2003). If a significant share of the female population attends university even though they are not compensated by some form of labor market returns, this strongly suggests that there must be other important forms of returns. Our results provide support for the idea that the marriage market is an important alternative source of returns that could help to rationalize female college enrollment decisions.

In order to identify the effect of admission to a higher ranked university on marriage market outcomes, we need to address two major challenges: the identification of causal effects and data availability. Credible identification of the causal effect of being admitted to a higher ranked university is challenging because the quality of universities strongly correlates with the quality of the students who attend them. In particular, individuals select into universities based on their (at least partially unobservable) characteristics, such as their ability or family background. Thus, better outcomes for individuals from higher quality schools can be due to (a) the fact that these individuals are of "higher quality" themselves (selection) or (b) because of a causal effect of going to a "higher quality" school. Data availability constitutes a second important problem, since information on individuals' college admission outcomes has to be combined with long-run data on marriage market outcomes. Moreover, the analysis regarding partner quality requires the availability of suitable quality measures for the partners.

To overcome these problems, we exploit the unique setting of the Chilean university system, which combines the following two important characteristics. First, it provides us with an exogenous source of variation in terms of who gains access to the higher ranked program/university. Chile is a country with a centralized authority that allocates students to universities (and degree programs) based solely on the basis of two factors: i) students' preferences over program-university combinations and ii) students' admission scores, which are a weighted average of their score in the national university entrance test and their high school grade.[4] In particular, each student is assigned to the program-university combination that is her most preferred one among those for which she is good enough (as measured by her admission score). This procedure therefore defines for each program-university combination a cutoff in terms of admission scores. By restricting attention to individuals with admission scores that are in close neighborhoods on either side of these thresholds, we are able to hold (almost) constant the individual quality dimension, while the treatment in terms of the quality of the education program to which individuals are admitted is different on the two sides of the threshold. Thus, the desired treatment effect can be obtained from the comparison of these individuals. In other words, we rely on a regression-discontinuity design

[4] Much like in many European countries and in contrast to the US, students have to apply for a specific degree program. The admission process is described in detail in Section 2.

to identify the causal effect of attending a higher ranked university-program.

The Chilean context is also unique in terms of data availability. For our purposes it is crucial to link information on individuals' admission scores and their allocation to universities/degree programs with data on their partners. Chilean institutions have provided us with the necessary data, such as data from the Marriage Registry (Ministry of Justice), which links data on university applicants to information on their spouses (see data description below).

Finally, the entry test gives us a quality measure not only for university applicants, but also for their partners, since a large fraction of students has a partner that has attended university too. Since the entry test is used as a signal in the labor market, it is taken not only by prospective university students but also by high school graduates who do not continue their studies. The university entrance test is a good summary statistic of several important quality dimensions that individuals might care about in a partner, such as the cognitive ability transmitted to children, the contribution in terms of household production (such as education of children) and household income, and the consumption value of a smart spouse. Since most individuals take the university entrance exam before being in a committed relationship, this measure offers the advantage of not being endogenous to the marriage decision. This feature distinguishes our variable from other potential quality measures like labor market earnings and related outcomes. A second reason to prefer entry test scores over labor market earnings as quality measure is the fact that the former does not suffer from a difference in the availability of data across gender as do labor market earnings. As in most other countries, also in Chile labor force participation rates of women are substantially lower than those of men (labor force participation of college educated Chilean women/men: 56% vs. 75% in 1990 and 62% vs. 76% in 2003 according to OECD statistics). Female and male participation rates in the university entry test instead are much more balanced (52% vs 48% in the years 2001 and 2002). This symmetry in the availability of data is necessary for a meaningful comparison of returns across gender.

While Chile provides an ideal context to address our questions of interest, we believe that the lessons that we learn from this context provide relevant insights also for other countries in which the university system exhibits a similar degree of vertical differentiation. This is not only the case in the US, but in many other countries such as Colombia, France, Mexico, Turkey, the UK and many others.[5]

The first and most central finding of our paper is that attending a higher ranked university-program has a sizable effect on partner quality for female students. Our estimates for men are generally about half the size compared to that of women and not significantly different from zero.

[5]The US and the UK are also similar to Chile in other important dimensions, like private expenditures on primary and secondary education and tuition costs. Tuition fees in Chile are among the highest in the world when adjusted for its per capita gross domestic product. Fees vary according to the course and the prestige of the institution, but start at about US$ 3,000 a year at a public regional university and are up to US$ 10,000 at leading private universities (while the Chilean Per Capita GDP is less than a third of the American Per Capita GDP, that is US$ 14,400 in Chile and US $ 48,000 in the US according to the OECD).

In terms of potential mechanisms leading to these results, we find that less than a quarter of the couples could have met by attending the same university. We show that the channel "university as a direct meeting place" is not the sole channel for our results. This suggests that the admission to a higher ranked program leads to a change in the quality of the entire social network of an individual (not only more able peers but also more able friends, colleagues on the job etc.), and/or makes individuals more attractive for potential partners by signaling the individual's quality.

Another important insight that we gain from the analysis of where couples (may) have met concerns the individuals' sophistication in their search for an appropriate partner. We find that individuals who just cleared the admission cutoff to a higher ranked program/university are 50% more likely to have a partner who went to the same university than those who failed to make the cutoff. Such a change in the provenience of the partner at the cutoff is clearly inconsistent with the idea that individuals just randomly match with members of their social network (including their program peers). It thus follows that in their search for a partner individuals must adopt more sophisticated strategies.

We also analyze how returns differ by socioeconomic background. Our results indicate that women from more privileged background (as measured by attendance of private high schools and parental education and occupation) experience marriage market returns that are 2-3 times as large as those for women from less privileged background. For men, returns are not significantly different from zero for either of the socioeconomic groups.

Understanding the effect of a university system on marriage market outcomes is not only relevant from an individual perspective (i.e. for understanding individuals' educational decisions), but also from a social point of view. Since most individuals live in partnerships, their wellbeing is determined not only by their own income but also by the resources provided by their partner. The level of inequality between households therefore depends on which households the marriage market produces. Our results suggest that the university system can affect (household) inequality in a society not only via individuals' earnings, but also by influencing who marries whom.

Related Literature

A large part of the literature on returns to education has focused on the estimation of labor market returns (for a survey on labor market returns, see e.g. Card (1999)). Moreover, the vast majority of the papers in this literature analyze the returns to years of schooling. On the other hand, the literature on returns to the quality of education is still rather slim, despite the fact that quality differences among schools and among universities can be enormous (see Hoxby (2009) for evidence on strong vertical differentiation in the US university system and Avery, Glickman, Hoxby, and Metrick (2013) who make use of college choices of high-achieving students to create a revealed preference ranking of American colleges and universities).

Notable exceptions in terms of estimating returns to university quality in the labor market and/or in terms of academic outcomes are Berg-Dale and Krueger (2002), Black and Smith (2004), Black and

Smith (2006), Card and Krueger (1992), Dale and Krueger (2011), Cohodes and Goodman (2013), Hoekstra (2009), Saavedra (2009) and Sekhri and Rubinstein (2010), where the latter four papers apply a regression-discontinuity approach similar to the one adopted in this paper.[6] There is also a number of recent papers using the same methodological approach to analyze the returns to going to a higher quality school on academic outcomes: Abdulkadiroglu, Angrist, and Pathak (forthcoming), Clark (2010), Duflo, Dupas, and Kremer (2011), Jackson (2010) and Pop-Eleches and Urquiola (2013).[7] The main distinguishing feature of our paper compared to the above mentioned papers is our focus on marriage market returns.

Even though in all societies the family is the most important social institution, our knowledge about how education impacts its' formation is still very limited (notable exceptions on marriage markets are Goldin (1997), Goldin (2006), Goldin, Katz, and Kuziemko (2006) and Page, Larsen, McCarthy, Moulton et al. (2012)). Goldin and Katz (2008) document career and family life cycles of three cohorts of Harvard graduates. There are a number of papers that estimate other non-monetary returns to years of schooling related to family formation. Most notably, Currie and Moretti (2003) and McCrary and Royer (2011) estimate the effect of years of schooling on child quality and fertility.

More recent papers on the relationship between educational choices and marriage market outcomes are Attanasio and Kaufmann (2012), Chiappori, Iyigun, and Weiss (2009), Chiappori, Salanie, and Weiss (2011), Lafortune (2012) and Oreopoulos and Salvanes (2011). Attanasio and Kaufmann (2012) and Lafortune (2012) show that marriage market considerations play a role in education decisions, but do not estimate returns to education in the marriage market. Oreopoulos and Salvanes (2011) estimate returns to years of schooling in terms of the probability to be married. Chiappori, Iyigun, and Weiss (2009) and Chiappori, Salanie, and Weiss (2011) adopt a structural approach to provide evidence on the marital college premium. Further papers on marriage and matching are Chiappori, Oreffice, and Quintana-Domeque (2013), Choo and Siow (2006) and Siow (2008). Angrist (2002) analyzes the effect of sex ratios on marriage prospects, labor force participation, and other social and economic variables. Behrman, Rosenzweig, and Taubman (1994) and Boulier and Rosenzweig (1984) analyze the relationship between endowments, human capital investments and mate choice. For an analysis of the role of caste, education and other attributes on arranged marriage, see Banerjee, Duflo, Ghatak, and Lafortune (2013). Bertrand (2013) analyzes the effect of career and family choices of college-educated women on their well-being.

With respect to this literature, the novel contribution of our paper is to provide first evidence on the causal effect of attending a higher ranked university on individuals' marriage market outcomes.

[6] Bertrand, Hanna, and Mullainathan (2010) apply a regression discontinuity design to study the effect of affirmative action in Indian higher education. Reyes, Rodriguez, and Urzua (2013) estimate labor market returns to postsecondary education in Chile using a schooling decision model with unobserved ability, observed test scores and labor market outcomes.

[7] Gould, Lavy, and Paserman (2004) make use of a natural experiment on Ethiopians in Israel to estimate the effect of the early schooling environment on the performance in high school.

2 Institutional Background

Higher Education System in Chile

Many countries feature university systems that exhibit large inequalities in the quality of their institutions, with highly selective "elite" institutions at the top of the quality distribution and less selective institutions at the bottom (see, for example, the US, UK, France, Mexico, Turkey etc). Chile is one such country.[8]

In Chile, the two universities that have been ranked at the top for the last decades are Universidad de Chile (UC) and Pontificia Universidad Catolica de Chile (PUC). Students at these two institutions perform –on average– two standard deviations higher on the university entrance test than students at the lowest ranked universities. Table 1 shows that in terms of the fraction of high performing students, the top two universities have more than 60% of students scoring higher than 700 points (out of 800) compared to second tier universities where less than 20% of students score above 700.[9] At the lowest ranked universities less than 1% of student score above 700. Similar differences are apparent when analyzing the fraction of students who score above 600 or when focusing on the average score of the students at the different universities (see Table 1).

Given these enormous quality differences (in terms of peer quality, but also in terms of teacher quality, prestige, expenditure per student etc), one would expect that the admission to a higher ranked institution has a large impact on students' long-run outcomes.

For the analysis of causal effects of the admission to a higher ranked institution, it is crucial to understand the allocation process of students to universities of different qualities. In Chile the admission to the public (and the traditional private) university system and the allocation of entering students to universities and degree programs within the system is decided in a centralized procedure. This centralized system is administered by DEMRE, a unit of the Universidad de Chile that acts in the name of all member universities of the Consejo de Rectores de las Universidades de Chile (CRUCH, Council of Rectors of the Chilean Universities). CRUCH represents not only all public universities but also a number of private universities (among them Pontificia Universidad Catolica de Chile and other catholic universities).

CRUCH universities, which are also called "traditional" universities, are more prestigious than non-member universities. According to the OECD/IRDB/World Bank report (2009) on "Tertiary Education in Chile": "Virtually all young people in Chile, given a free choice, would rank their preferences as follows: (1) CRUCH universities (2) private universities (3) professional and technical institutions. This ranking reflects institutions' relative prestige and perceived potential to boost future income, and also –a crucial factor for students from poorer families– the much better financial aid packages currently available at

[8] To provide some general background information on the education system in Chile: The percentage of 20-24 year olds who had at least completed secondary education rose from 52% in 1990 to 75% in 2006 (according to MINEDUC, the Chilean Ministry of Education). Among 18-24 year olds around 34% were in tertiary education in 2006 (16.3% in 1992) according to the OECD/IRDB/World Bank report (2009) on "Tertiary Education in Chile".

[9] The scale of the entrance test is between 0 and 800 points with an average of about 600 points for university applicants, who need to achieve at least 450 to be eligible to apply.

CRUCH universities."

The basic qualification for admission to the CRUCH universities is the school-leaving certificate. In addition, applicants have to sit an admission test, the so called Prueba de Selección Universitaria (henceforth, PSU), which is similar to the SAT Reasoning test in the US. The general PSU consists of a verbal and a mathematical part. Depending on the degree programs that students intend to apply to, they may also have to sit more subject specific tests. Even though it is not necessary for entry to technical and certain professional institutions, a large majority of school-leavers take the PSU test.

Admission to CRUCH institutions is confined to those school-leavers who achieve a PSU score above a certain threshold (450 points out of 800). Students who score above this minimum may apply through DEMRE for slots at CRUCH universities. In their applications they may list up to eight options in the order of their preference. Each option has to specify a degree program in a specific university. In this respect, the Chilean university system is organized like the European system, that is students apply for a specific degree program before they enter university. For later reference we point out that the allocation mechanism is such that submitting a non-truthful ranking of the eight options can only hurt but never benefit the applicant.

Once students have submitted their application, including the list of their eight choices, DEMRE proceeds to allocate students to the available slots, which have been announced beforehand. The allocation is based solely on students' submitted preference rankings and their admission scores, which are weighted averages between the PSU test score and the school-leaving grade (NEM, Notas de Enseñanza Media). Students are admitted to their most preferred degree program-university combination for which their score is high enough. Applicants who fail to make the cut for a specific degree program are waitlisted.

Marriage-Related Facts in Chile

According to the National Statistical Institute of Chile (Instituto Nacional de Estadisticas, INE) the average age at which women had their first child was around 23 in the relevant period, while the average age at which women got married for the first time was around 25-26.

Like many countries, Chile features a strong degree of assortative mating (see, e.g. Chadwick and Solon (2002), Olivetti and Paserman (2011) and Pencavel (1998) for evidence on educational assortative mating in the US, Lam and Schoeni (1993) for Brazil). For Chile, Figures 1 and 2 show that there is a strong positive correlation between individuals' test scores and their spouses' test scores (for women and men, respectively).

3 Data and Descriptive Statistics

3.1 Data Sources

To address our questions of interest, we use data from the following sources and for the following samples of individuals. First, we have access to administrative data on the full sample of PSU test takers in 2001 and 2002. We have information on individuals' scores on the university entrance test, their high school grade and information to which university-program individuals applied and were accepted or shortlisted. Furthermore, we have access to detailed information on individual and family background characteristics.

Our second data source is the Chilean marriage registry ("Servicio de Registro Civil e Identificación" of the Ministry of Justice), who merged our data on university applicants with information on outcomes of individuals' spouses (or on the partner with whom the individual has a child).

We conduct our analysis on the following sample of individuals. We start with the full sample of university applicants in 2001 and 2002, who have submitted a valid application (i.e. they have scored above 450 at the entrance test and have listed at least one valid choice in their preference listing of university-program combinations).

The majority of university applicants take the test for the first time during their last year of high school and start college directly after high school graduation (i.e. this applies to more than 80% of first-time test takers). The remainder take the test after some years of work experience. A non-negligible number of individuals retake the test once or even several times (for example, 22% of individuals who took the test in 2002 had already taken the test in 2001). Including retakers in our sample could cause the following problem. Our research strategy relies on comparing individuals who scored just high enough to be above the threshold for admission to a higher ranked program to those individuals who just missed the threshold (see detailed description in the following section). One of the key assumptions underlying this regression discontinuity design is that covariates behave smoothly around the cutoff. If rich individuals who just missed the threshold to their preferred university-program retake the test (possibly until they get into their preferred program), this would generate a discontinuity in the corresponding background variables at the cutoff, which would invalidate our approach.

This problem can be solved by taking individuals only the very first time they take the test. Unfortunately, we only have data on university admission starting in 2001, which does not allow us to determine who are the individuals who had already taken the test in the preceding years. For that reason, we only consider those individuals in our analysis who take the test during their last year of high school, to ensure that we only include first-time test takers.

In our restricted sample of individuals who apply for college while in high school, applicants are around 30 years old (in 2012 when we collected the information on their partners). Of course, not all individuals have entered a committed relationship at that age (i.e. are married or have children).[10] About

[10] As discussed in the previous section, in Chile the average age at which women haD their first child was 23 in the relevant

half of the female university applicants are in a stable partnership by the age of 30 (45%), while more than a third of the men are (34%). Unfortunately, we are not able to match all individuals who have a partner, that is some partners are not in our data set and we thus do not observe their quality. In particular, we have access to quality measures only for those individuals (”partners”) who have taken the admission test at some point between 1998 and 2007. Thus, if the spouse/partner of an individual has either never taken the test or has taken it sometime before (after) the year 1998 (2007), we do not have any information about his/her characteristics.

Of the women applying for college for the first time in 2001/02 who are (or have been) in a stable relationship until 2012, we can match around 50% of women to their partners (56% of men). Thus our final data set consists of the 23% of female applicants for whom we have information on their partner and of 19% of the male applicants.

Since the sample of individuals that we are able to match with their partners constitutes only a subset of the population of university applicants, the question arises whether the selection into our sample might bias our results. We will discuss this concern in detail in Section 5.2.

3.2 Descriptive Statistics

We present descriptive statistics on individual and family background characteristics for three different samples in Table 2: firstly, for the sample of university applicants (as discussed above) (see Columns (1) and (2)), secondly for the (sub)sample of those individuals who we can match with their partner or spouse (see Columns (3) and (4)) and thirdly for the (sub) sample of ”matched” individuals who are at the margin of admission to the preferred university-program (defined as being within a radius of 5 points of the threshold score, see Columns (5) and (6)).

Table 2 shows that individuals who we can match to their partners are from slightly more privileged backgrounds than individuals from the overall population. For example, matched individuals are 3-4 percentage points more likely to have attended a private high school, 2-4 percentage points more likely to have a college educated father or mother, and 2-3 percentage points more likely to have a father or mother in top occupations (compare Columns (3) and (1) for women and Columns (4) and (2) for men in Table 2).[11] Individuals who we can match score 9 points (or 1.5%) higher on the university entrance test. The average peer in their program scores about 7 points higher, while they list roughly the same number of university-programs on their application and are accepted at roughly the same preference number that

period, while the average age of first marriage of women was around 25-26 according to the National Institute of Statistics (Instituto Nacional de Estadisticas, INE) of Chile.

[11]The top two occupation categories include manager, senior administrative, large industrial, commercial or agricultural employer (over 50 employees), high bank executive, senior officer Armed Forces and Police, high Judicial Member and Diplomat (top category) and professional with five or more years of college (second category). The third category consists of –for example– specialized employee or civil servant, Armed Forces Officer and Police, professional or technician with less than five years of college and medium industrialist and merchant.

they listed. The fact that matched individuals constitute a slightly positively selected sample from the overall population can be explained by the fact that we only observe partners who themselves have taken the test. Thus, in the set of matched individuals we do not observe those who have a lower-quality partner and individuals with lower-quality partners are likely to be of lower quality themselves.

When restricting attention to those ”matched” individuals at the margin of admission (i.e. within 5 point-distance of cutoff), Table 2 shows that their characteristics are very similar to the ones of the full sample of ”matched” individuals (compare Columns (3) and (5) for women and (4) and (6) for men).

Two additional remarks concerning the patterns in Table 2 are in order. Compared to their partners, our ”main” individuals score higher in the PSU test because to be in our sample, individuals must have submitted a valid application and thus must have scored at least 450 points on the university entrance test (as discussed in Section 2). Partners may instead belong to the set of individuals who have taken the test but have performed too poorly to apply for college. An analogous point can be made to explain the difference between the variables ”peer quality” and ”high school quality”. While both measures are based on the performance in the PSU test, the variable ”peer quality” averages over scores of individuals admitted to the same program, who had high enough scores to pass the minimum threshold (450) and to get accepted into one of their choices. ”High school quality”, on the other hand, averages over PSU scores of individuals from the same high school who took the PSU test (but who did not necessarily score above the minimum threshold).

The second remark regarding Table 2 refers to the fact that individuals are on average accepted into their second choice. This implies that we have about twice as many ”usable” observations as individuals. For example, an individual who was accepted into her third choice (and is thus waitlisted for her first two choices) will appear in the sample three times: once to the right of the threshold for the university-program to which she was admitted and twice to the left of the thresholds for the two university-programs (which were her first two choices) to which she was waitlisted. Of course this implies that observations are not independent and we thus cluster standard errors at the individual-level in all specifications (see discussion of the empirical strategy in the following section).

4 Empirical Strategy

Identifying the causal effect of admission to a higher ranked university is challenging for the following reason: Individuals who get into higher ranked universities/programs differ from individuals going to lower quality universities/programs. In general, their cognitive ability is higher, they come from a more privileged social background etc. These characteristics in themselves lead these individuals to have –on average– better outcomes in terms of labor and marriage market performance. Thus, it is difficult to disentangle the causal effect of admission to a higher ranked university from the selection effect, i.e. the fact that individuals admitted to higher ranked universities are different to start with.

We address the challenge of estimating the causal effect of getting into a higher ranked university using a regression-discontinuity approach. We exploit the fact that Chilean students' ability to choose a university-major combination depends solely on their admission score, which is an average between the score on the national university entrance exam and the high school grade. After obtaining their score, students submit a preference ranking over up to eight university-major combinations they wish to enroll in. The allocation of students to university-programs is carried out via a nationally centralized process that honors higher scoring students' requests subject to pre-established slot constraints. This gives rise to cutoff scores which we set equal to the score of the student that fills the last slot in a given university-program.

The allocation process yields a large number of quasi-experiments: students with scores close to the cutoff score can be expected to be very similar, but they are treated differently depending on whether their score is just above or just below the cutoff score. The treatment effect can therefore be measured by comparing the outcomes of the individuals in the upper neighborhood of the threshold with the outcomes of individuals in the lower neighborhood of the threshold (see Hahn, Todd, and van der Klaauw (2001) and Imbens and Lemieux (2008) for overviews of the RD approach). Since around 730 university-programs are offered each year, the total number of cutoffs on which our analysis is based is 1465 (for the two years 2001/2002). To pool all cutoffs, we normalize the scores of applicants by the cutoff scores (i.e. the score of the last person accepted into a specific university-program). Normalized scores range between -260 and 270. Since scores are measured on a scale between 0 and 800 with two digits after the decimal point, the forcing variable is 'almost continuous'. As we see in Figure 3, indeed 100% of individuals with positive normalized scores (i.e. score above the cutoff) are admitted to the higher ranked program, while those with negative normalized scores are waitlisted.

The outcome of interest is the quality of an individual's partner. As measure for the quality of partners we use their performance in the university entry test. The score obtained in this test captures several important quality dimensions that individuals are likely to care about in a partner, such as cognitive ability which is transmitted to children, the contribution in terms of household production (such as education of children) and household income, and the consumption value of a smart spouse. Since the vast majority of individuals take the admission test before they enter a committed relationship, the performance in the test is not endogenous to marriage or fertility decisions.[12] This constitutes a major advantage of this variable with respect to other potential quality measures such as labor market earnings. Another convenient feature of our measure compared to labor market earnings is that its availability does not vary with gender, which allows us to make meaningful comparisons of the results across gender. Unlike participation rates in the labor market, participation rates in the university entrance test are similar for men and women. While according to OECD statistics throughout the period from 1990 to 2003 the former differed by 13 to 20 percentage points even for college educated individuals, in the early 2000s the difference in the latter was just about four percent (in favor of women).

[12]Less than 3% of university applicants are married or have children in 2001/02.

We estimate the following equation.

$$y_{ij} = \alpha_j + \beta \mathbb{1}_{\{s_{ij} \geq 0\}}(s_{ij}) + \delta s_{ij} + \gamma s_{ij} \mathbb{1}_{\{s_{ij} \geq 0\}}(s_{ij}) + u_{ij}. \tag{1}$$

Here y_{ij} indicates the quality of the spouse (as measured by the PSU score) of individual i who appears on the application list of university-program j. Since individuals can apply to multiple university-programs, a given individual i may appear multiple times, each time associated with a different j.[13] We therefore cluster standard errors at the individual level. s_{ij} is the admission score of individual i for university-program j, normalized by the cutoff admission score of program j. This variable assumes a negative value if and only if the individual's admission score falls short of the cutoff score for program j. $\mathbb{1}_{\{s_{ij} \geq 0\}}$ is an indicator function that assumes the value 1 if and only if s_{ij} is positive, i.e. exactly when individual i is admitted to program j.

The interpretation of the above equation is straightforward. An individual's admission score not only determines whether or not she is admitted to a program, but is also a measure for the individual's quality. Since in general higher quality individuals match with higher quality partners we should allow partner quality to depend directly on the individual's admission score (see Figures 1 and 2 and their discussion in the Section 2). In our equation we represent this dependence through the affine linear expression $\alpha_j + \delta s_{ij}$. The fact that the constant α_j is allowed to depend on the university-program index j, expresses the idea that average spousal quality might differ across programs. Since our data refer to two different cohorts of individuals who apply for university in two different years (2001 and 2002), in the estimation of the above equation we also include a year fixed effect.

Our hypothesis is that an individual's mating prospects change with the admission into a higher ranked program. Thus, we allow for the possibility that the spousal quality jumps at the admission threshold. In our equation we denote the size of this jump by β. In principle it is also possible that the functional dependence of partner quality on the individual's own quality changes at the threshold. In our equation this possibility is captured by the term $\gamma \mathbb{1}_{\{s_{ij} \geq 0\}}$. That is, γ measures the change in the slope of the relation between admission score and partner test score.

While in the main text of the paper we restrict our attention to the above discussed linear version of the model, in the online appendix we show that our findings remain continue to hold also under quadratic and cubic specifications of the model. Moreover, we also estimate marriage market returns nonparametrically. A detailed description of this approach is given below.

We estimate the effect of admission to a higher ranked university-program using observations in three different windows around the threshold. The radii of these windows are respectively, 25, 15 and 5 points on the scale of the admission score. For convenience we denote these windows by W25, W15 and W5, respectively. Since the normalized admission score ranges from about -260 to about +260, the smallest window (W5) comprises less than 2% of the entire scale. The three windows respectively contain 40%, 27% and 10% of all observations. To provide further evidence for the stability of our results, we also

[13] For example, an individual who is admitted to her third choice, will appear as waitlisted for her first and second choice.

estimate but only graphically display the coefficients (and confidence intervals) for a larger range of different bandwidths (all multiples of 5 up to 200).

To show that results do not depend on the exact specification of the estimated equation, we estimate the effect of admission to a higher ranked university-program also nonparametrically. In particular, for each university-program we make use of only the very last observation on either side of the cutoff. In this exercise we drop an observation if the observation itself or its counterpart on the other side of the cutoff do not belong to W5. Essentially, our method amounts to taking the difference in partner quality between the individual to the right and the individual to the left (given they are close enough to the cutoff) and averaging over the differences of all cutoffs.

5 Results

5.1 Main Results

The raw data. As discussed in the previous section, our strategy to identify the causal effect of being admitted to a higher ranked program on partner quality is to compare the outcomes of students just to the right and just to the left of the admission thresholds. Already a first look at the raw data suggests that there is a clear jump in the quality of the partners of female students. The left panel of Figure 4 shows that the PSU scores of the partners increase discontinuously at the (pooled) threshold(s) by more than ten points. This jump becomes even more pronounced if partner quality is normalized by the respective program means. In the right panel of Figure 4 we plot residuals after taking out program and year fixed effects.

In the case of male students, the picture that emerges from the raw data appears less clear. Figure 5 suggests that if there is any jump at all, then it is certainly smaller than the one that we observe in the case of female students.

Main regression results: The econometric analysis confirms the picture that emerges from Figures 4 and 5. Our findings are reported in Table 3, where the results are organized by gender and by the size of the window around the threshold on which the analysis is based. More specifically, the table shows the results for the three windows W25, W15 and W5 (see Columns (1),(2),(3) for women and columns (5),(6),(7) for men). For female students crossing the admission threshold implies an increase in partner quality of around 15 points (that is, 12-13 points in W25 and W15, and 19 points in the smallest window W5). The hypothesis that these returns are zero can be rejected at the 5% level in the two larger windows (W25 and W15) and at the 10% level in the smallest window. In the case of male students the estimated effect of the admission to the higher ranked program on partner quality is substantially smaller (about half the size of the effect of women) and not significantly different from zero.

To show that our results do not depend on the exact regression specification, we also show results from a non-parametric estimation. In particular, we compare the partner quality of the first individual on either side of the threshold (for each university-program). The results of this estimation confirm our results obtained with the linear model. Again we find that women who just made it above the threshold and were admitted to a higher ranked program have a partner whose quality is 14 points higher than the quality of the partners of women who just missed the threshold. For men on the other hand, returns are again not significantly different from zero.

A return of around 14-15 points on the PSU test corresponds to roughly 2.5% of the average PSU score among partners (which is about 560 points) and to about 15% of a standard deviation (of the PSU score distribution). Below we will discuss the magnitude of the effect in more detail together with the interpretation of our estimates.

Stability of estimates with respect to window size: While the exact size of the estimated jump in partner quality associated with the admission to the higher ranked program varies somewhat with the size of the sample as one would expect, the overall picture that emerges from our analysis is that the estimates are remarkably stable with respect to window size. From Table 3 we can see that with one exception the reported estimates of the marriage market returns of female students are within 2 points of each other (12 points in W25, 13.3 points in W15 and 14 points in the sample composed of only the first individuals on either side of the threshold). Only the estimate for the smallest one of the windows (W5) lies outside this narrow band.[14] Similar observations also apply to the estimated returns for male students. Figures 6 and 7 show that the stability of the estimates across windows is not the result of a convenient choice of the window sizes. In these figures, we plot the estimated effect for all window sizes that are multiples of five (up to 200) together with the corresponding 90%- and 95% confidence intervals.[15] We can see that the estimated effects are very similar throughout the entire spectrum of window sizes.

Magnitude and interpretation of the estimated marriage market returns: As mentioned earlier, the estimated marriage market returns for female students of about 15 points on the PSU scale, correspond to roughly 15% of a standard deviation of the PSU score distribution. In assessing these numbers it is important to keep in mind that they refer to the additional benefit (in terms of partner quality) that students obtain by being admitted to a certain program instead of having to settle for the next best alternative. That is, they constitute the return to an increase in the quality of education that comes with the admission into a higher ranked program. Thus, in order to put our findings in the right perspective, the jump in the quality of the partner has to be seen in relation to the quality increase in education that occurs at the admission threshold.

[14] Of course, it is not very surprising that the estimates become more volatile as the sample size shrinks.

[15] From the density plot in Figure 8 (Appendix B) we can see that only a very small fraction of the observations lies outside the ±200 window around the threshold.

How large are the quality differences between the programs to which the applicants above the threshold are admitted and the programs to which the applicants just below the cutoff are assigned? In some instances these differences are likely to be substantial. In particular, this will be the case when there are programs that clearly stand out with respect to all other programs in the field. Applicants who just fall short of making it into one of the top programs experience a large negative shock in terms of education quality with respect to the applicants who just managed to get into an elite program. But from this same example we can also see why in many cases the jump in educational quality that occurs at a cutoff must be small. Applicants who fail to make it into one elite program might still get into another one of the top programs. At the same time many applicants to the lower tier programs might not even try to apply for a top program (say, because they know that their chances are nil given their admission score). Consequently, for them the level of educational quality can vary only by as much as there is variation within the bottom programs.

These observations suggest that the average increase in program quality associated with the admission cutoffs cannot be too large. A look at the data confirms these considerations. Using the average PSU score of the admitted students as a measure for the quality of a program, we find that the difference between the best program (Medicine at Pontificia Universidad Catolica de Chile, average PSU score 779) and the worst program (Technician for the metallurgic industry at Universidad de Atacama, average PSU score 470) is more than 300 point on the scale of the PSU test. On the other hand, Table 4 shows that with the admission to a higher ranked program, the quality of the average (program-)peer of a student changes by about 23 PSU points (about a third of a standard deviation). Thus the average increase in the peer quality is only a small fraction of the difference between the average quality of students of the best and worst programs. Set against this background, marriage market returns for female students of about 15 points appear quite large.

To investigate further how marriage market returns vary with education quality, we divide the collection of program cutoffs into two subsets according to the size of the jump in education quality that is associated with each threshold. In this exercise we rely again on the average PSU score of the admitted students as a measure of a program's quality. More specifically, we proceed as follows. We first calculate for each program the average peer quality that the students who are on the program's waitlist, experience. We then compare this peer quality for the waitlisted students with the peer quality enjoyed by the admitted students and use the corresponding difference as criterion to divide the set of programs into two equally sized subsets: programs with peer quality differences ("jumps") above and below the median. Finally, we estimate marriage market returns by allowing the effect of admission to vary across these two types of programs.

The results of our analysis are reported in Table 5.[16] The table shows that for female students marriage market returns are substantially higher at thresholds where the peer quality jump is large than at

[16] In this and all following estimations which are based on splitting the sample, we only report results for the two smallest windows, W15 and W5, while we do not have enough power to use only one observation to the left and right of the threshold.

cutoffs with smaller peer-quality increases (22 points vis-a-vis 8.5 points in W15 and 33.8 points against 11.7 points in W5). The difference between the returns is significant in both windows. Thus larger differences in education quality are associated with larger marriage market returns, as expected. Consistent with all preceding steps of our analysis, we do not find significant effects for male students.

It is important to stress that the reason for using the average quality of students in a program as a measure for program quality is not that we believe that it is the only relevant aspect of a program's quality. Instead, the sense in which we use the (average) peer quality is that of a proxy for a more general notion of a program's quality (which includes prestige, teacher quality, expenditures per student etc). In adopting this view we follows earlier examples in the literature (see Abdulkadiroglu, Angrist, and Pathak (forthcoming) and Pop-Eleches and Urquiola (2013) in the context of school quality).

If being admitted to a higher ranked program only changed the peer quality that an individual experiences (and not other (quality) dimensions relevant for marriage market outcomes), then the marriage market returns to peer quality could be estimated using the admission as instrument for peer quality. Even though we do not believe that this condition is satisfied, it is still instructive to conduct such a 'pseudo' IV analysis, since it allows us to get an idea of how large marriage market returns are per unit of quality difference between programs.[17] We present the corresponding results in Table 6. They are largely consistent with our findings so far. In particular, we find substantial and statistically significant marriage market returns for female students (between 0.61 and 0.98 PSU points per additional PSU point of peer quality). The coefficients that we estimate for male students are not only smaller than those of female students, but also statistically indistinguishable from zero.

The female college enrollment puzzle: One of the most remarkable features of our results is the asymmetry of the marriage market returns across gender. While statistically we cannot reject the hypothesis that the returns of men and women are the same, it is still striking that in all our estimations, we consistently find that male applicants experience returns which are far smaller than those of their female counterparts (about 50% or less), and that returns for men are never significantly different from zero (this applies not only to the results of this section, but to all remaining ones as well).

This asymmetry attracts particular interest in the light of the fact that labor market returns alone are not able to explain the college enrollment decisions of women. As discussed in the introduction, in most OECD countries women make up more than 50% of the student population. At the same time, women's labor force participation rates are always lower than than of men (even when including part-time work). Goldin (1997), Goldin (2006), Goldin, Katz, and Kuziemko (2006) and Bailey and Dynarski (2011) discuss this female college enrollment puzzle for the US and argue that asymmetric marriage market returns are likely to be an important part of its' explanation. Our results are consistent with this view.

[17] That peer quality is likely not to be the only determinant of a student's outcomes that changes at the admission threshold has already been observed by Abdulkadiroglu, Angrist, and Pathak (forthcoming). See also their discussion on why the IV analysis may still be useful.

Admission versus enrollment: Another important remark regarding the interpretation of our estimates is that they refer to the *admission* to a higher ranked program and not the *enrollment* in those programs. The two effects differ for the following reasons. First, not all individuals who are admitted to a program eventually enroll in the program. For instance, they may decide against enrolling, because they have received new information about the available degree programs or about alternative choices (new job offer, admission to a prestigious foreign university etc). A second reason for why the effect of admission and enrollment may not coincide is that admission may have an independent direct effect on an individual's outcomes. Since the performance on the admission test and the outcome of the admission procedure are publicly observable, Chilean firms use them as signals for the quality of their job applicants. That is, some individuals take the admission test and submit an application with the main purpose of sending a direct signal to their potential employers. Similarly, the admission to a prestigious university might be taken as a quality signal for potential partners and thereby affect the individual's chances in the marriage market.

If the admission had no independent effect on an individual's (marriage and job market) outcomes, then the estimated effect of being admitted would be a lower bound for the underlying enrollment effect. In this case, the enrollment effect could be estimated by using admission as instrument for enrollment. We cannot implement such an estimation, since we do not have enrollment data for the years under consideration (centralized enrollment data are available only for later years). Still it is useful to get an intuition for the jump in enrollment that occurs at the admission threshold. We present the corresponding estimates for the year 2007, for which we have enrollment data. Table 14 shows that the admission to the higher ranked program implies an increase in the enrollment rate of about 50 percentage points. The corresponding numbers for the years 2001/2002 are likely to be substantially higher, since in 2007 the competition from newly founded private universities operating outside the traditional centralized admission system had already started to become noticeable, while it had been much less relevant in the early 2000s.

External validity: We conclude this section with a remark on the external validity of our findings. The use of the RD approach, which measures local effects at the threshold, naturally triggers the question to what extent the obtained results are informative beyond the neighborhood to which they apply.

Fortunately, in our context the RD analysis that we implement does not rely on a single cutoff. Instead it refers to a large number of thresholds (that is one threshold for each degree program in each of the two years), which affect essentially all types of individuals in the applicant pool. Therefore the effects that we measure represent an average of a large number of local effects that correspond to the entire spectrum of applicants (e.g. in terms of ability and family background).

A probably more relevant concern regarding the external validity of our findings is that in our context the range of the treatment intensity is restricted in the following sense. We estimate the effect of the admission into a given program vis a vis having to settle for a less preferred option. As we have already pointed out in the preceding paragraphs, the difference in the quality of education associated with these options can be sizable, but does not cover the entire range of education quality. Our results therefore do not tell us by how much the quality of the partner of an applicant would increase if instead of an admission into the worst possible program he was assigned a position in the very best program. On the other hand, such an experiment is probably not very policy relevant anyways.

Another constraint that we are facing, is that our results refer to individuals who are in a committed relationship (i.e. are married or have a child together) by age 30. In this context, one has to take into account that in Chile, individuals generally enter a committed relationship earlier than in most OECD countries (i.e. the age of first child for women is around 23 in Chile, while the OECD average is 28; the age of first marriage is 25-26 in Chile and around 30 on average in the OECD countries).[18]

5.2 Testing the Validity of the RD Design

In our context, the regression discontinuity approach is based on the assumption that the admission to a higher ranked degree program is the only determinant of an individual's marriage market success that changes in a *non-continuous* way at the admission cutoff. If other (relevant) variables changed discontinuously at the threshold, we could not argue that the jump in the partner quality that we observe can be ascribed to the admission to a higher ranked program. Fortunately, we can test the validity of the regression discontinuity design using individuals' baseline characteristics. If variation in the treatment near the threshold is approximately randomized (as assumed), then it follows that all predetermined characteristics should have the same distribution just above and just below the cutoff (see, e.g., Lee and Lemieux (2009)). In the following we show that this is indeed the case.

The sample on which our results are based is potentially subject to several differential selection forces that might lead to discontinuities in individuals' characteristics around the threshold. A general concern in this context is that the admission system might be subject to manipulation: some types of individuals might try to influence the process to make sure that they end up above the threshold. Obviously, this would imply that these types are overrepresented in the population above the cutoff.

Second, being above the admission threshold might have a differential impact on the marriage and fertility decisions of different types of individuals. Of course, if this was the case, then the composition of the set of individuals who have a partner would be different on the two sides of the admission cutoff. A third potential reason for discontinuities at the cutoff lies in the fact that we do not observe the PSU score for all partners (for details, see Section 3). If the PSU score is observed only for a subset of the entire partner population, then we have to consider the possibility that the observability of an individual's partner changes in a type-dependent way at the threshold.

To test whether the jump in partner quality can be causally ascribed to the admission into a higher ranked program itself (and not to some other variable that changes at the cutoff), we need to analyze

[18] See the OECD Family Database www.oecd.org/social/family/database.

whether there are discontinuities in the distribution of individual characteristics in the sample on which our main results are based (that is for individuals who have a partner for whom a PSU score is available). To strengthen our point further, we also provide evidence that covariates are balanced in the sample of all university applicants (i.e. there is no evidence of manipulation) and in the sample of applicants who have a partner (i.e. there is no differential selection into partnership to the right and left of the threshold). By doing so we can show that not only is there no evidence for discontinuities in the sample on which our results are based. Instead looking at the different stages separately also allows us to argue that the absence of jumps in the covariates is not simply the lucky result of opposing selection forces that compensate each other. For the sake of brevity, we discuss the results for the latter two samples briefly at the end of this section and present tables in Appendix B (made available online).

A first indicator for whether selection might be an issue is obtained by analyzing whether at the threshold there is jump in the probability that an individual has a partner and whether there is a jump in the probability that we can match an individual to his/her partner.

In a second step, we analyze directly if the composition of the (matched) individuals is the same on the two sides of the thresholds. In other words, we test whether the characteristics of the (matched) individuals in our sample are balanced on the two sides of the threshold. We use the following eleven predetermined background variables: having attended a private high school, high school quality as measured by the average PSU score of a school's graduates, having a father/mother with at least high school, having a father/mother with at least some college, having a father/mother whose occupation is in the top three occupation categories, having a father/mother who is a worker, and having a mother who is a housewife (see Section 3.2 for a detailed description of the variables).

To test whether there are discontinuities in the probability of having a partner (and of having a partner who can be matched) and whether there are discontinuities in the predetermined individual characteristics, we implement the same RD-specification as in the estimation of the main results (see discussion in Section 5.1 and compare Table 3). Moreover, we consider the samples contained in the windows of sizes 25, 15 and 5 points around the cutoff and report estimates based on only the first individual on either side of the cutoff (if within a window of +/- 5), as we do for the main results.

Our findings regarding the aggregate propensity to be in a partnership are reported in the first line of Table 7. As can be seen from the table, the estimated jumps in the probability of having a partner are small for all window sizes and none of them can statistically be distinguished from zero.[19] From the

[19]The result that individuals have the same probability to be in a partnership, no matter on which side of the admission cutoff they are, is rather natural and intuitive. A student who is admitted to the higher ranked program is more attractive for potential partners than someone just below the cutoff. Given the larger set of interested potential partners, the student above the threshold would take less time to find a spouse, if his own acceptance threshold for a partner was the same as the one of the student below the admission cutoff. Of course, that is unlikely to be the case. The possibility to choose from a better pool will reduce his willingness to accept proposals from lower quality individuals. The increase in the choosiness of the admitted student may well outweigh the effect of the expansion of the set of willing partners that he enjoys. That two sided search models often exhibit equilibria in which the expected time that individuals spend searching is constant in their type, is formally shown in Chade

second row of Table 7, we see that at the admission threshold there is no discontinuity in the probability of having a partner that can be matched (i.e. whose PSU score we can observe). Again, the coefficients for all windows are small and statistically not significant.

We now move on to testing whether predetermined individual characteristics have the same distribution on the two sides of the cutoff. Table 8 shows that also the composition of the set of matched individuals with respect to our observables is essentially the same across the admission threshold.

For women, only one out of the 44 estimates (11 variables $\times$ 4 samples) is statistically different from zero, while all other estimated coefficients are both small and statistically not significant. The only instance in which the coefficient is significant is the indicator of having a working class father in window 25. Of course for such a large number of estimates, it is to be expected that one can reject the null in a few cases. Thus the one significant estimate does not necessarily reflect a systematic bias. Even if it did, the fact that there is a higher share of female students with a blue collar father above the threshold is extremely unlikely to be driving our results. Females with a working class background do worse in the marriage market than females from a more privileged background (as we show in Section 5.3.2). Since women to the right of the threshold are thus –if anything– negatively selected, this would lead us to underestimate the effect of admission to a higher ranked program for women.

The picture that emerges from our analysis for male students is similar to the one for female students. There are only few estimates (4 out of 44) for which the null can be rejected.

As discussed above, we conduct the same balance test of covariates to the right and left of the cutoff for the sample of university applicants and the sample of individuals who have a partner. We show that there is no evidence of manipulation nor is there evidence of differential selection into partnership on the two sides of the cutoff (see Tables 17 and 18, respectively, in Appendix B (made available online)). In Appendix B, we also conduct a McCrary test to show that also the distribution of the assignment (or forcing) variable, the admission score, is continuous around the threshold and once again find no evidence of manipulation (see Figure 8).[20]

To conclude, the evidence of this section strongly supports the validity of the regression discontinuity design in this context. In addition to the results in this section, we also test the continuity assumption for every subgroup that we analyze and we never reject that covariates are balanced to the right and left of the threshold (see Appendix B).

(2001).

[20]Even though this test has become a standard tool to check for manipulation, we should point out that it has only limited bite in our specific context. The reason is that there is a fixed number of available slots for each degree program. Thus, getting one individual above the cutoff means that another one will have to be pushed down. Manipulations are therefore unlikely to manifest themselves in a discontinuity of the density at the cutoff. Instead the test for differential composition on either side of the cutoff is much more conclusive in our context and provides no evidence of manipulation.

5.3 Further Results

5.3.1 The University as Meeting Place

There are several different mechanisms by which the admission to a higher ranked university can affect the quality of one's partner. On the one hand, universities are meeting places for young adults during a time in which many partnerships are formed. The outcome of the admission process (i.e. on which side of the admission cutoff an applicant ends up) determines the set of class mates an individual will be exposed to. Thus, the admission directly changes a social group with which most students entertain close personal relationships and from which they might choose their partners. Of course, the admission outcome also has more indirect effects on individuals' social networks: not only an individual's set of "direct" peers varies with the admission outcome, but also their networks of friends ("friends of friends"). Probably equally important are the long run implications of the admission decision for an individual's labor market outcomes. If with the admission into a higher ranked university-program, individuals get access to different types of jobs, then this again implies exposure to different pools of potential partners. The changes in an individual's social network and thus in her pool of potential partners are complemented by an increase in an individual's 'attractiveness' in the eyes of potential partners. The admission to a higher ranked program carries information about an individual's ability, her (future) social network and her (future) economic prospectives, all features that are likely to play an important role in the choice of a partner.

In the following, we present some evidence on the importance of the first one of the above described channels through which the admission decision may determine an individual's partner quality. That is, we investigate for how many of our couples the program/university to which they have been admitted might have served as meeting place. Table 9 presents summary statistics on whether an individual and his/her partner went to the same high school or were admitted to the same university or even to the same program (within the same university). Of course, being admitted to the same high school/program/university does not imply that this has really been the meeting place for the couple. Especially in the case of large high schools/universities not everyone knows everyone else. Still though it allows us to get an idea for how many couples the 'direct meeting place' story might have been relevant.

Table 9 shows that about 13% of couples went to the same high school. Surprisingly, only 25% of couples were admitted to the same university. Moreover, one fifth of these 25% had already attended the same high school. Thus, for less than a quarter of couples the admission to the same university might have been relevant in terms of meeting place. The percentage of couples that have been admitted to the same degree program is only 6%.

These figures suggest that the changes in the set of peers implied by the admission outcome are unlikely to be the sole explanation for the marriage market returns that we find. To see this just consider the following back-of-the-envelope calculations. If the 6% of couples who have been admitted to the same program should fully account for the jump in partner quality of female students (14 PSU points), then they themselves would have to experience an increase in partner quality of roughly 233 ($\approx 14 \times (100/6)$) points on the PSU scale. Given that the quality of the average peer at the admission cutoff jumps by only one tenth of this amount (roughly 23 points) this seems highly unlikely. A similar picture arises if instead of the program level we consider the university level. The quality of the average university peer increases by about 10 PSU points at the admission threshold.[21] On the other hand, if the 25% of female applicants who find a partner within the same university should fully account for the increase in partner quality of 14 points, then their returns would have to be around 56 ($= 14 \times 4$) points, i.e. more than five times the increase in the average university peer quality.

The information about how many couples have been admitted to the same program/university also allows us to shed some light on the question of whether individuals actively pursue finding a high quality spouse. An individual who just made it into a higher ranked program faces a smarter set of peers (and thus potential partners) than an applicant who just failed to make the cutoff. If individuals aim to maximize the quality of their partner, we should therefore expect that individuals (just) below the cutoff are less willing to match with someone from their program/university than those who were admitted to a higher ranked program. We test this hypothesis in Table 10.

Table 10 shows that indeed an individual to the right of the cutoff is significantly more likely to have a partner who was admitted to the same university (or same program) than the individual who missed the cutoff to the higher ranked program. For women, the likelihood to have a parter in the same university increases by 10 percentage points if she gets into the higher ranked program. This effect is equivalent to a 50% increase in the likelihood to have a partner from the same university.[22] For men, the likelihood to have a partner from the same university increases by around 8 percentage points. In terms of being with a partner who has been admitted to the same degree program, the jumps are around 6-7 percentage points.

We conduct the same analysis also for the likelihood of having attended the same high school. In this case the assumption that individuals maximize the quality of their partners does not give us a clear prediction. Instead, there are (at least) two opposing effects, so that the sign of the overall effect is ambiguous. On the one hand, those not admitted to the higher ranked program might be more willing to keep their ”high school sweat heart” than the individual admitted to the higher ranked program. On the other hand, those who had met a high quality partner in high school, might not be able to keep that partner, if they fail to make it into the higher ranked program. In the light of these observations it is not surprising –but reassuring– that we do not find any difference in the likelihood to have a partner from the same high school.

[21] The fact that the quality of university peers increases by less than the quality of the program peer follows from the fact that many applicants who just failed to make it into a given program, were admitted into another program within the same university. Thus, even though these applicants did not make the cutoff for the higher ranked program, this had no implications for the quality of the university peers.

[22] This result is not driven by scale effects. That is, women admitted to a higher ranked university (or program) are not admitted to larger universities (or programs) in terms of number of admitted students (results from the authors upon request).

5.3.2 Heterogeneous Effects: Results by Socioeconomic Background

So far we have shown that the admission to a higher ranked university-program has an effect on the quality of an individual's partner. In the following we will analyze whether the magnitude of these marriage market returns differs for individuals from different social backgrounds. On the one hand, it is conceivable that the admission to a higher ranked university acts as a substitute for socioeconomic background, i.e. an individual from less privileged social background might be able to find a partner of high ability if and only if he/she is admitted to a higher ranked university, while an individual from a more privileged background might find a high ability partner independently of her admission outcome. On the other hand, it is possible that socioeconomic background and admission to a highly ranked university act as complements.

Before we present our evidence on how marriage market returns differ by individuals' social background, a remark on the interpretation of our results is in order. It is likely that members of different socioeconomic groups select into different programs. For instance, individuals from a more privileged background are likely to be overrepresented in the top programs of the top universities compared to individuals from a more modest background. Of course, in this case a differentiation of our analysis by socioeconomic background necessarily captures two effects at the same time: the effect of belonging to a different group and the effect of being subject to a different admission shock. The following discussion has to be read in terms of this joint effect.

We measure social background in terms of parental education and occupation. In addition we have information on what type of high school an individual attended, in particular whether or not the high school was private and whether it was of high quality or not. About one third of university applicants attend private high schools, while the rest attend public high schools or voucher schools (which are subsidized by the state). High school quality is measured in terms of the average performance of the high school graduates on the university entrance test and "top quality" is defined as attending a high school with above median performance (for a more detailed discussion of all individual and family background variables, see Section 3.2).

Tables 11 and 12 present our results regarding the question of how the effect of admission to a higher ranked university differs by social background (for women and men, respectively). The tables display coefficients on 'being above the cutoff' interacted with dummies for 'high' and 'low' socioeconomic background. In the regression we control linearly for individuals' own ability (allowing for different slopes on either side of the cutoff) and for program and year fixed effects and we include a dummy for being from a 'high' socioeconomic background. We have conducted the analysis for the samples of individuals that are within 15 and within 5 points of the normalized admission cutoff. For the sake of brevity we limit our discussion to the results corresponding to the W15-sample. Tables 15 and 16 which contain the results for the smaller window are instead relegated to the material for the online appendix (Appendix B). The results for the smaller window are similar to the ones we get in the larger window. The only relevant difference is dictated by the sample size and concerns the significance of the difference between the estimated coefficients for the different socioeconomic groups.

Our first finding is that for women from a more privileged socioeconomic background, partner quality is higher independently of whether or not they are admitted into the higher ranked program. For example, women who attended private (or high quality) high schools have a partner who scored 18-19 points higher on the PSU test than the partners of women who did not attend private/high-quality high schools (see Table 11). Similarly, women whose father or mother went to college have partners who scored 11-13 points higher.

In addition, also the returns to a higher ranked program in terms of partner quality are sizable and generally two to three times larger for women from more privileged socioeconomic background compared to those from less privileged background. For instance, women who attended private (or high quality) high schools experience returns of more than 20 points in terms of their partner's PSU score (significant at the 1% level). On the other hand, women who did not attend private (or high quality) high schools experience returns of only around 6-8 points (not significant). The difference between the returns of both groups are not only large in absolute terms but also statistically significant (at the 5% level). Similarly, women whose father (mother) went to college experience returns of 22 (17) points, which is more than three times (1.7 times) larger than the returns for women whose parents did not go to college. For the group with or without a father who attended college, the difference in returns is again significant (at the 1% level). Also the results for the socioeconomic indicators that refer the the parents' occupation point in the same direction but are not quite as strong.

Table 12 shows that also men from higher socioeconomic background have partners that are of substantially higher quality. For example, men who attended private (or high quality) high schools have partners who scored 25-35 points higher on the admission test compared to men who did not attend private/high quality high schools. Similarly, men whose father or mother went to college or work in top three occupations have a partner who scored 21-34 points higher. As for the returns to the admission to a higher ranked program instead, we cannot reject the hypothesis that they are zero for either of the socioeconomic groups.

As discussed in Section 5.2, we test the continuity assumption for each of the different subgroups and never reject the hypothesis that covariates behave smoothly around the threshold. We report the correspond results in Appendix B.

The relevance of these findings is underlined by the following two observations. First, our results imply that families from a more privileged background have a stronger incentive to invest into their daughters' preparation for university than families from a more modest background. At least in terms of marriage market returns such investments that increase a daughter's chances to get into a higher ranked program/university (e.g. expenditures for private high school and/or private tutoring) are more likely to pay off for the former than the latter. The fact that better off families have more to gain from getting their offspring into higher ranked programs has also social/distributional implications. The additional investment incentives that a vertically differentiated university system generates for more privileged families may well contribute to an amplification of a country's level of inequality.

Second, the results in this section, i.e. marriage market returns that are highest for female students from privileged social background, are very much in line with some hypotheses that have been put forward in the recent literature on university education and the female college enrollment puzzle in the US. In this literature it has been observed that the daughters of well off families have experienced the by far strongest increase in college enrollment when compared to men in general and women from lower socioeconomic strata (see Bailey and Dynarski (2011)). It has therefore been argued that these women must perceive some form of returns that are less pronounced for other socioeconomic groups. Our findings suggest that marriage market returns do exhibit such a distributional pattern and thus they are a valid candidate for an (at least partial) explanation of the specific patterns of female enrollment behavior.

6 Conclusion

In this paper we have estimated the returns to being admitted to a higher ranked university-program on marriage market outcomes. We thereby contribute to closing the gap that exists in the literature with respect to the effect of university quality on the quality of individuals' spouses/partners.

In particular, we are able to address the two main challenges that our research question poses, that is data availability of long run marriage outcomes and identification of causal effects, by exploiting unique features of the Chilean university admission system. Since the Chilean system centrally allocates students to degree programs/universities based solely on their admission score and their preference ranking over university-programs, this constitutes an ideal context for using a regression discontinuity approach. Secondly, we were able to gain access to the necessary long-run data, i.e. we were able to match former university applicants to their partners/spouses and to measure their "quality" using the centrally administered entry test.

We find that the admission to a higher ranked university has substantial returns in terms of partner quality for women. For men, on the other hand, estimated effects are about half the size of the effect of women and we cannot reject that their marriage market returns are zero.

In terms of mechanisms we show that, while part of our results might be explained by the direct effect of universities acting as meeting places, this is unlikely to be the only channel. In particular, less than a quarter of couples could have met by attending the same university. Instead other channels such as accessing a "higher quality" social network of fellow students from university upon admission to a higher ranked university, getting into different types of jobs with "higher quality" potential partners and becoming more attractive appear to be important as well.

Another insight that we gain from our analysis of where couples have met, is that individuals appear to adopt sophisticated strategies in their search of a high-quality partner. An individual who just cleared the threshold to being admitted to a higher ranked university (who thus faces a pool of relatively smarter potential partners) is substantially more likely to match with a partner from the same university than the individual who missed the cutoff (and faces a pool of less smart individuals).

Lastly, we analyze how returns vary with students' socioeconomic background and find that returns are sizable and significantly larger for women from more privileged background, while returns for men are not significantly different from zero for either of the socioeconomic groups.

While Chile provides an ideal context for analyzing the importance of marriage market returns, its' university system (and its' education system more generally) is very similar to the one found in many countries. In particular, a majority of countries feature education systems with large inequalities in the quality of their institutions (e.g. US, UK, France, Mexico, Turkey etc). Thus we believe that our analysis can provide valuable insights also for these countries.

One example consists of helping to shed light on the well-known female college enrollment puzzle. The asymmetry in marriage market returns we find across gender is consistent with explanations of the puzzle that have been put forward in the literature (see Goldin (1997), Goldin (2006), Goldin, Katz, and Kuziemko (2006) and Bailey and Dynarski (2011)).

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Appendix A

Figures

Figure 1: Correlation between the test scores of female students and their partners

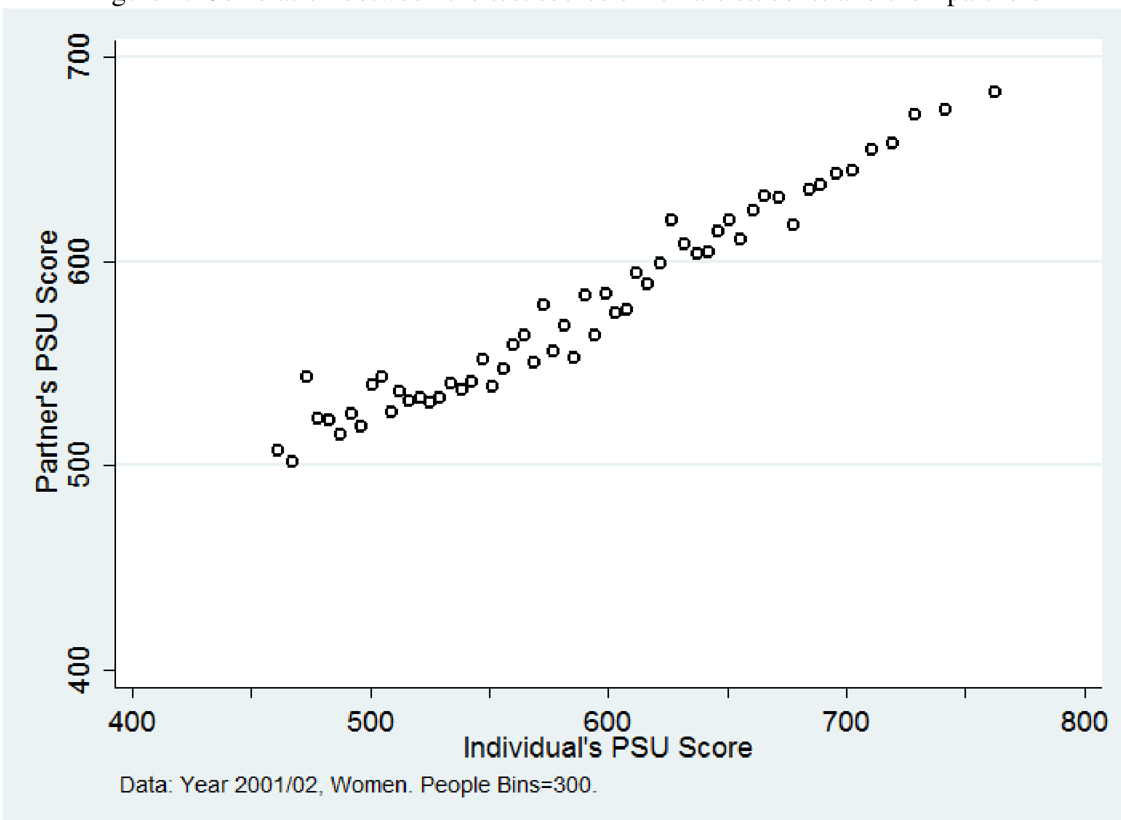


Figure 2: Correlation between the test scores of male students and their partners

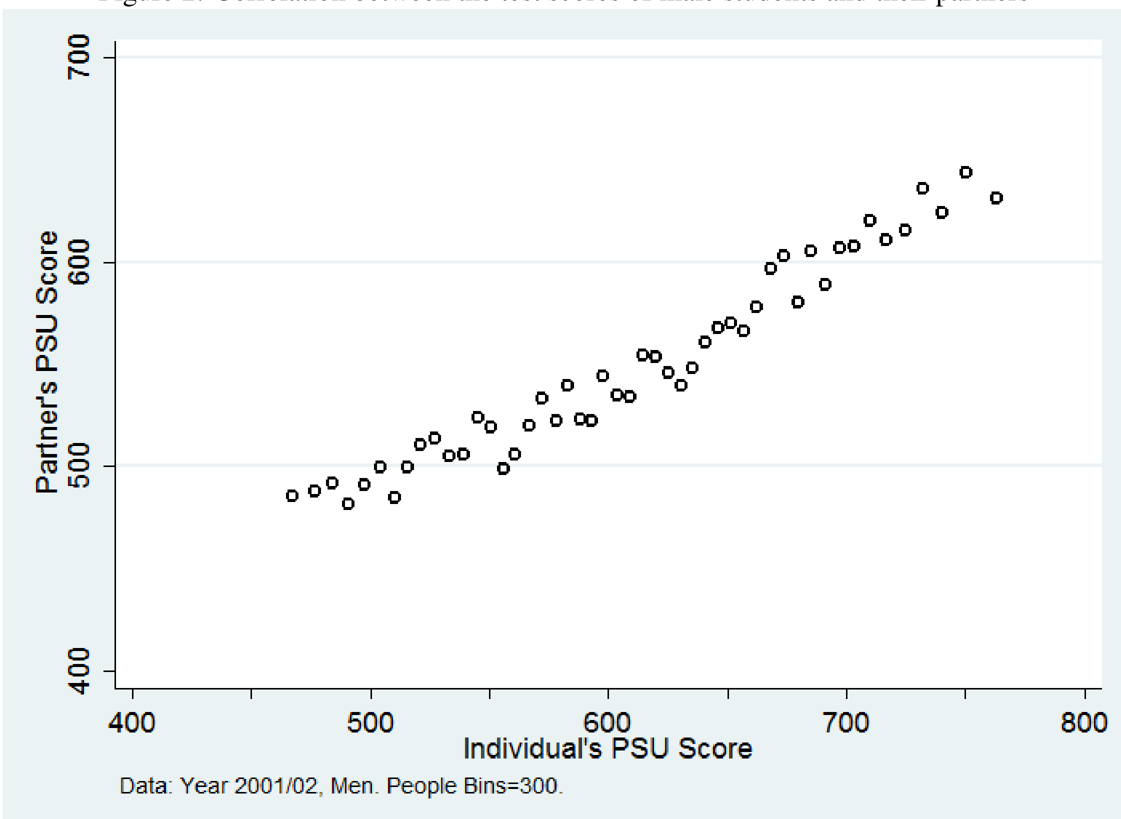


Figure 3: Students accepted and waitlisted to the right and left of the threshold

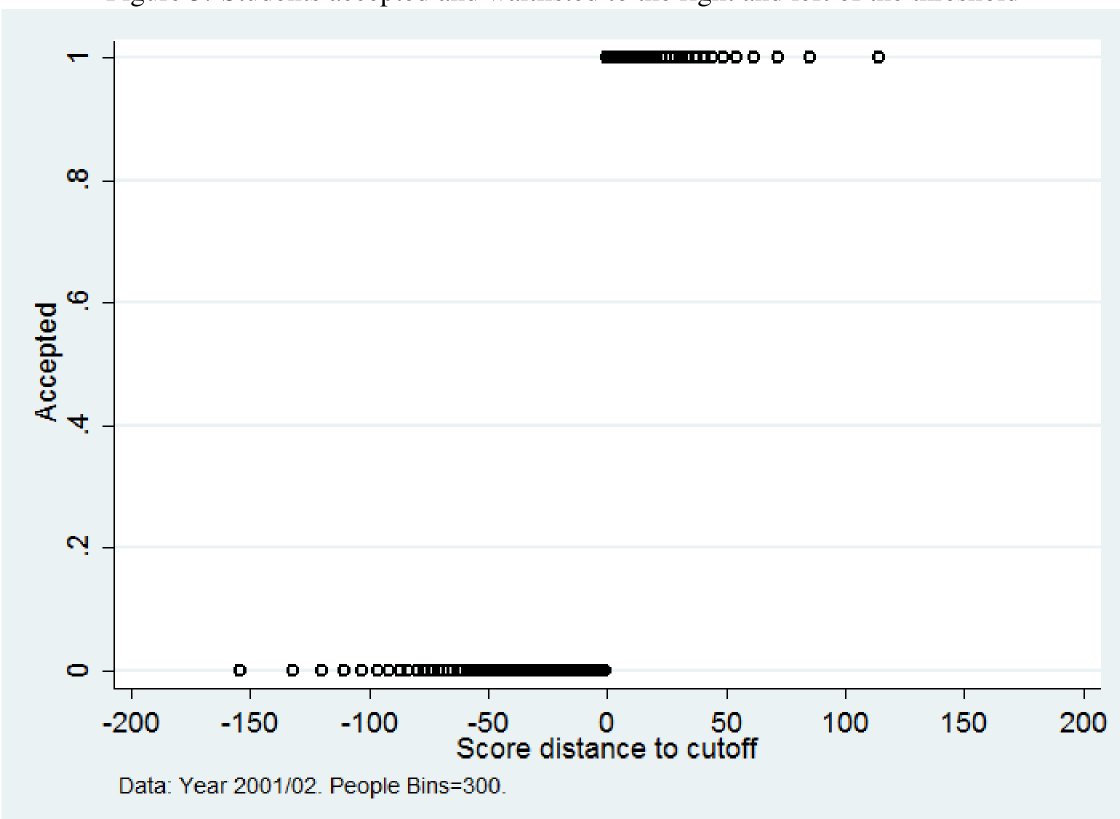


Figure 4: Effect of admission to a higher ranked university on female students' partner quality

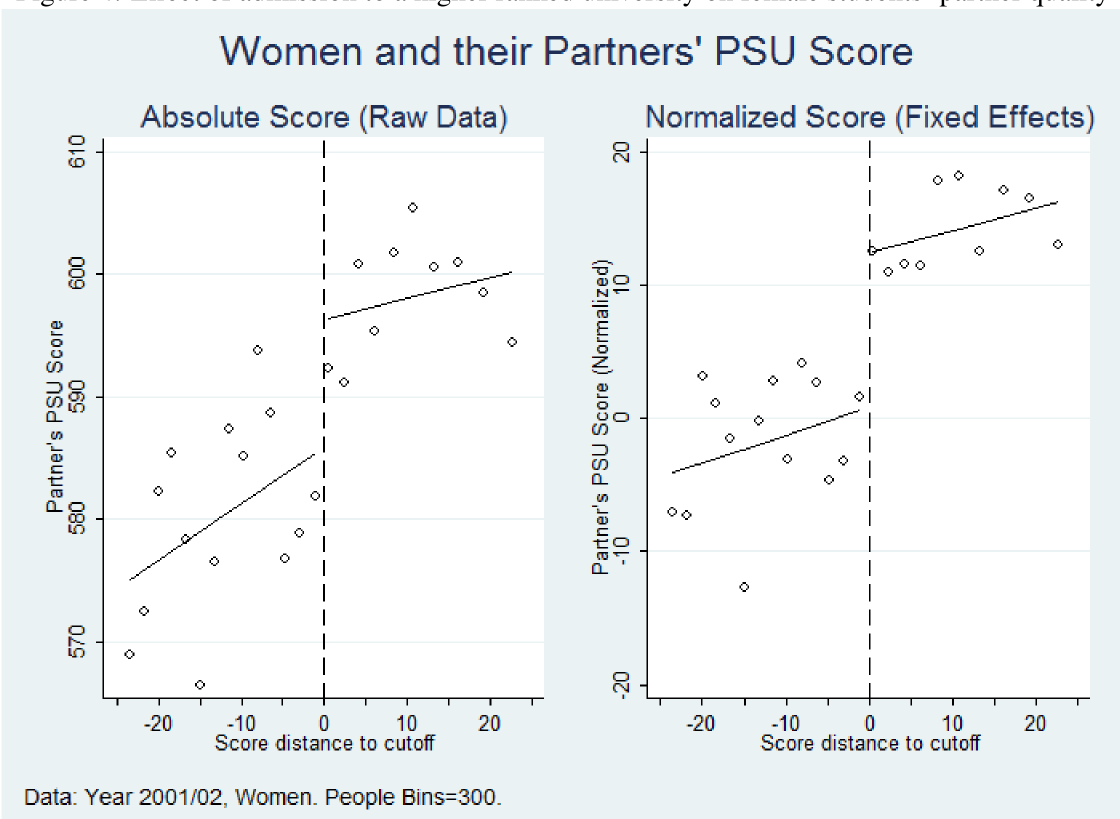


Figure 5: Effect of admission to a higher ranked university on male students' partner quality

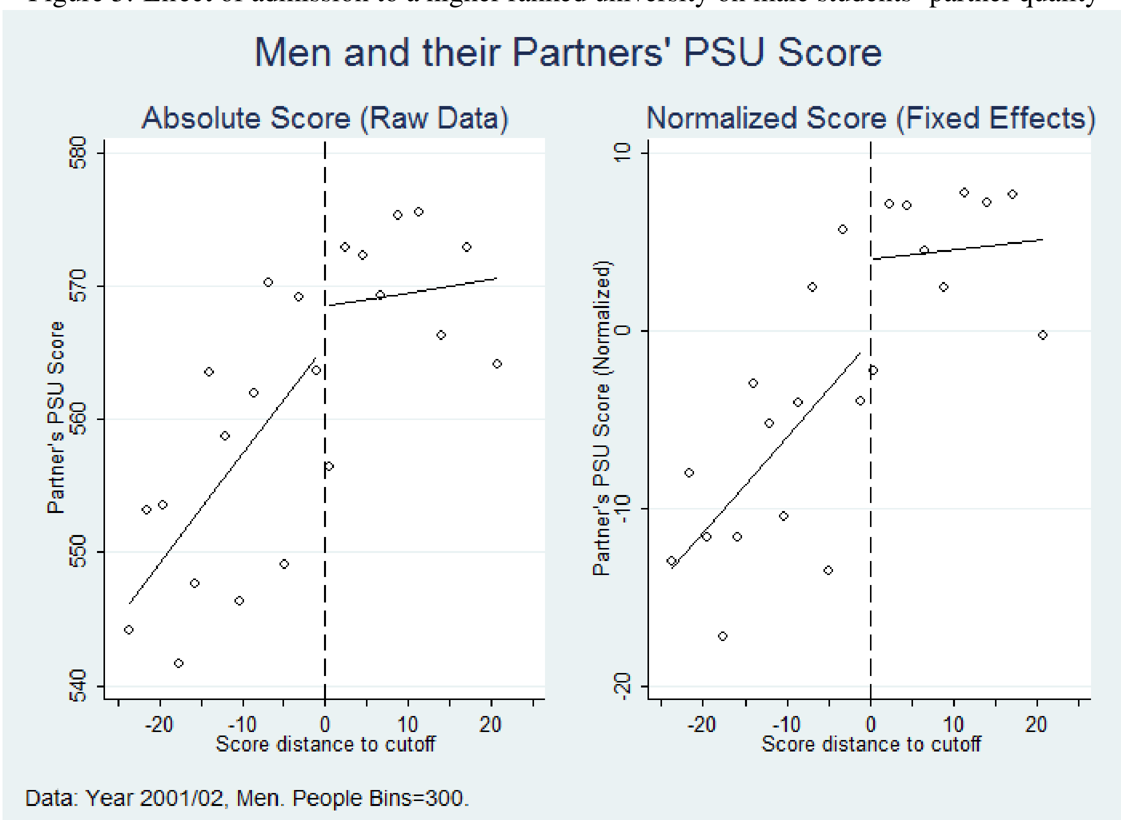


Figure 6: Effect of admission on female students' partner quality: By bandwidth

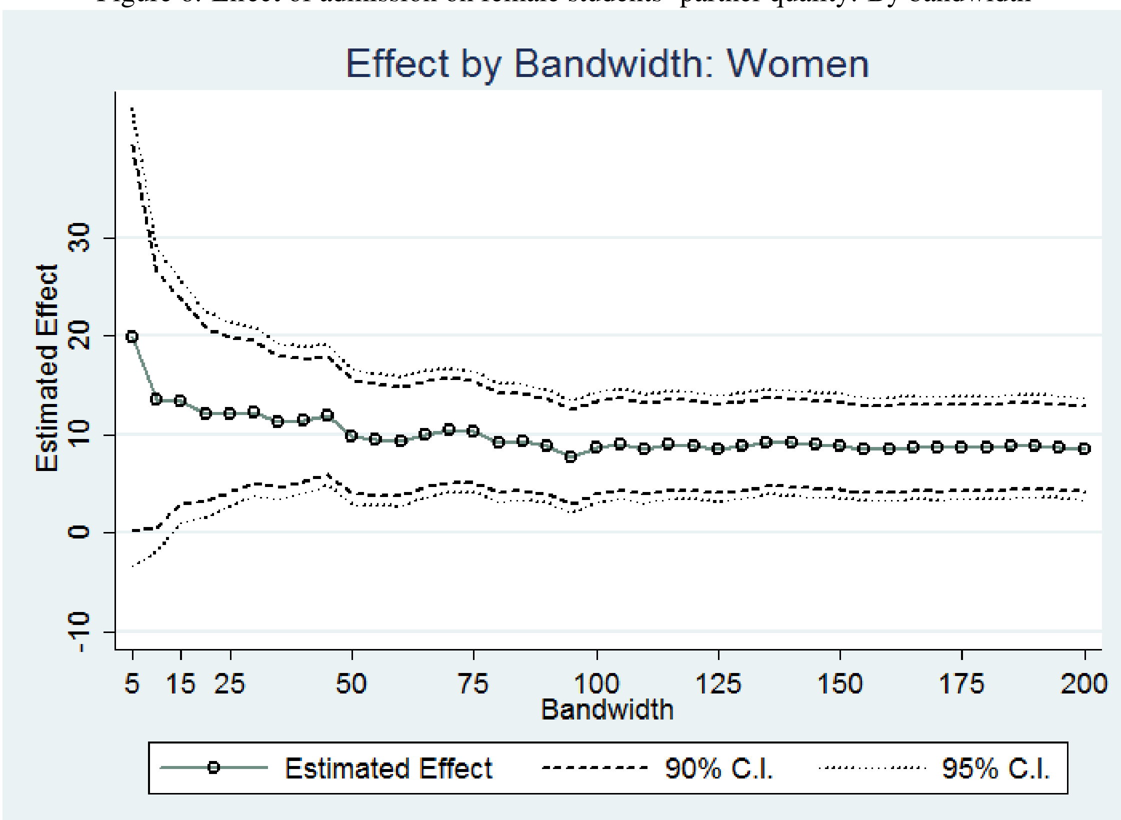
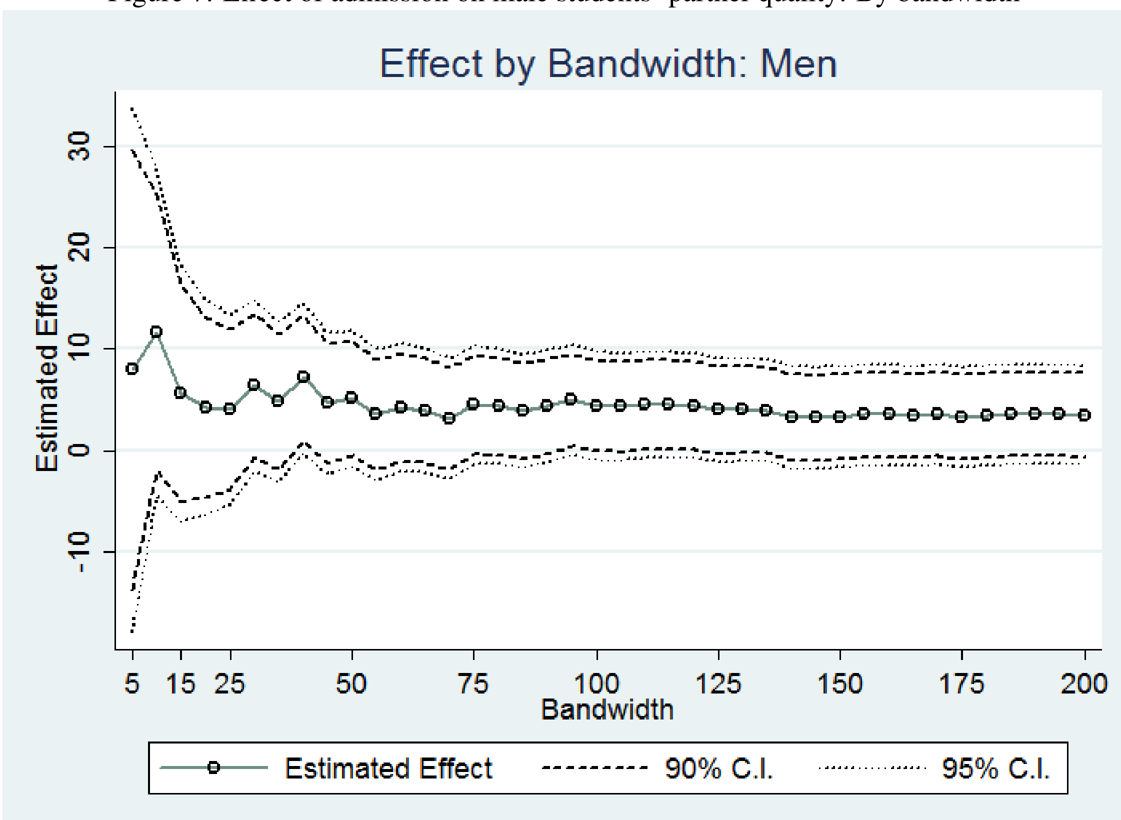


Figure 7: Effect of admission on male students' partner quality: By bandwidth



Tables

Table 1: Selectivity of Chilean Universities

Name of University	Frac of Students with PSU above 700	above 600	Average PSU of Students	Total Number of Students
Pontificia Univ. Catolica de Chile	0.693	0.996	718.92	6146
U de Chile	0.613	0.994	711.67	7116
U Tecnica Federico Santa Maria	0.222	0.637	634.18	4322
U de Concepcion	0.190	0.674	633.74	7251
Pontificia Univ. Catol. de Valparaiso	0.169	0.832	650.37	5713
U de Santiago de Chile	0.162	0.776	643.32	6518
U de Talca	0.160	0.734	638.49	1860
U de la Frontera	0.132	0.539	613.70	2863
U de Valparaiso	0.126	0.645	624.34	3856
U Austral de Chile	0.098	0.592	616.64	3271
U Catolica del Maule	0.081	0.589	615.61	1264
U de Antofagasta	0.077	0.290	567.67	2562
U Tecnologica Metropolitana	0.063	0.729	630.15	3072
U Metropol. de Ciencias de la Educ.	0.046	0.579	610.26	1483
U de la Bio-Bio	0.040	0.488	601.10	3127
U Catolica del Norte	0.038	0.390	588.16	3194
U Catol. de la Santisima Concepcion	0.038	0.319	581.88	2898
U de la Serena	0.033	0.366	581.68	3037
U de Playa Ancha	0.020	0.308	579.87	3014
U de Tarapaca	0.018	0.224	550.62	2339
U de Magallanes	0.017	0.219	553.65	989
U Catolica de Temuco	0.009	0.226	555.19	2478
U Arturo Prat	0.007	0.145	538.26	2663
U de los Lagos	0.006	0.151	542.86	1724
U de Atacama	0.006	0.153	539.92	1135

Data: 2001/2002. Universities are ranked according to the criterion ”fraction of students with PSU score above 700”. The range of the PSU score is 0 to 800. For university applications a score of at least 450 is required.

Table 2: Summary Statistics

	Full Sample		Matched Sample		Matched Indiv within Window 5 of Cutoff	
	Women	Men	Women	Men	Women	Men
Individual Characteristics						
Female	0.481		0.512		0.515	
	(0.500)		(0.500)		(0.500)	
High School Private	0.304	0.308	0.347	0.337	0.333	0.350
	(0.460)	(0.462)	(0.476)	(0.473)	(0.471)	(0.477)
High School Quality	534.8	541.0	544.1	548.6	543.1	554.3
	(71.29)	(77.71)	(71.77)	(78.66)	(71.29)	(78.55)
Father ≥ High School	0.505	0.515	0.551	0.533	0.551	0.551
	(0.500)	(0.500)	(0.497)	(0.499)	(0.498)	(0.498)
Father some College	0.419	0.432	0.463	0.459	0.453	0.476
	(0.493)	(0.495)	(0.499)	(0.498)	(0.498)	(0.500)
Mother ≥ High School	0.457	0.443	0.499	0.464	0.495	0.466
	(0.498)	(0.497)	(0.500)	(0.499)	(0.500)	(0.499)
Mother some College	0.342	0.342	0.381	0.363	0.375	0.344
	(0.474)	(0.474)	(0.486)	(0.481)	(0.484)	(0.475)
Father Occupation Top 3	0.526	0.535	0.555	0.557	0.556	0.566
	(0.499)	(0.499)	(0.497)	(0.497)	(0.497)	(0.496)
Father Worker	0.164	0.156	0.143	0.145	0.147	0.135
	(0.370)	(0.363)	(0.350)	(0.353)	(0.354)	(0.342)
Mother Occupation Top 3	0.282	0.278	0.302	0.279	0.303	0.278
	(0.450)	(0.448)	(0.459)	(0.449)	(0.460)	(0.448)
Mother Worker	0.0503	0.0473	0.0405	0.0462	0.0504	0.0508
	(0.219)	(0.212)	(0.197)	(0.210)	(0.219)	(0.220)
Mother Housewife	0.491	0.500	0.484	0.507	0.473	0.500
	(0.500)	(0.500)	(0.500)	(0.500)	(0.499)	(0.500)
University Admission						
PSU Score	595.4	616.4	605.0	625.6	607.7	626.4
	(82.63)	(84.70)	(84.07)	(86.88)	(79.89)	(82.70)
PSU Score Partner	n.a.	n.a.	586.9	558.4	587.4	563.2
			(114.5)	(110.1)	(114.0)	(110.5)
Peer Quality	625.7	635.7	633.1	642.8	635.2	643.2
	(66.53)	(67.55)	(68.61)	(70.39)	(70.11)	(70.58)
Accepted at Pref Num	2.073	1.958	2.051	1.919	2.571	2.525
	(1.409)	(1.346)	(1.403)	(1.314)	(1.509)	(1.471)
Preferences Listed	4.320	4.256	4.221	4.171	4.739	4.755
	(1.909)	(1.934)	(1.906)	(1.910)	(1.882)	(1.800)
N of Individuals	33529	36250	7136	6815	1549	1457

The table displays means and standard deviations in parentheses.

Table 3: Main Result: Effect of admission to a higher ranked university-program on partner quality

	WOMEN				MEN			
Outcome:	Windows			One observ	Windows			One observ
Partner Quality	W 25	W 15	W 5	left/right (W 5)	W 25	W 15	W 5	left/right (W 5)
Being Above the Cutoff	12.012**	13.367**	19.823*	14.080*	4.032	5.596	7.934	9.046
	(4.744)	(6.284)	(11.877)	(7.273)	(4.769)	(6.449)	(13.144)	(7.415)
Score Distance from Cutoff	0.128	-0.126	-3.352		0.628***	0.143	-1.239	
	(0.240)	(0.497)	(2.887)		(0.242)	(0.540)	(3.372)	
Score Dist from Cutoff × Being Above the Cutoff	0.076	0.405	3.414		-0.594*	0.209	2.791	
	(0.359)	(0.703)	(4.060)		(0.353)	(0.744)	(4.379)	
Prog and Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	7473	4760	1705	790	6979	4569	1620	714
R^2	0.293	0.337	0.489	0.492	0.315	0.351	0.466	0.500

Standard errors are clustered at the student level and displayed in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. "Being Above the Cutoff" is an indicator variable for whether an individual has been admitted to the higher ranked program. In other words, this individual's score is higher than the cutoff score (i.e. the "score distance from the cutoff" is positive). "W 25/15/5" indicates that only observations within a window around the cutoff (with radius 25/15/5) are used in the estimation. "One observation left/right (W 5)" indicates the use of the first matched female/male applicant on either side of the cutoff (if both are within a window of 5).

Table 4: Effect of admission to a higher ranked program on peer quality

	WOMEN		MEN	
Outcome: Peer Quality	W 15	W 5	W 15	W 5
Being Above the Cutoff	24.422***	22.236***	23.709***	24.245***
	(1.396)	(2.877)	(1.463)	(3.042)
Score Distance from Cutoff	0.633***	1.067	0.677***	0.389
	(0.153)	(0.913)	(0.151)	(0.932)
Score Dist from Cutoff ×	-0.659***	-1.038	-0.694***	-0.422
Being Above the Cutoff	(0.162)	(0.949)	(0.165)	(0.976)
Prog and Year FE	Yes	Yes	Yes	Yes
N of observations	4760	1705	4569	1620
R^2	0.953	0.969	0.948	0.961

This table displays coefficients based on the same regression specification as for the main result (see Table 3), while the dependent variable is peer quality. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Effect of admission on partner quality by size of peer quality jump

Outcome: Partner Quality	WOMEN		MEN	
	W 15	W 5	W 15	W 5
Effect on indiv in progs with				
Large Peer Quality Jumps	21.984***	33.884**	2.605	4.128
	(7.463)	(14.924)	(7.623)	(15.468)
Small Peer Quality Jumps	8.494	11.759	7.667	9.217
	(6.773)	(12.507)	(6.928)	(14.198)
Diff (p-val)	0.04	0.08	0.43	0.79
N of observations	4760	1705	4569	1620
R^2	0.337	0.490	0.346	0.463

This table displays coefficients on the dummy ”Being Above Cutoff” interacted with ”program with peer quality jump above/below the median”. All specifications control linearly for individuals’ own score (allowing for different slopes on either side of the cutoff) and contain program and year FE. Standard errors are clustered at the student level and displayed in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Instrumental variable regression instrumenting for peer quality

Outcome: Partner Quality	**WOMEN** W 15	W 5	**MEN** W 15	W 5
Peer Quality (Instrument:	0.610**	0.982*	0.315	0.578
Being Above Cutoff)	(0.270)	(0.538)	(0.276)	(0.502)
Score Distance to Cutoff	-0.628	-5.370	0.006	-1.190
	(0.716)	(3.772)	(0.727)	(3.424)
Score Dist to Cutoff ×	1.120	5.584	0.277	3.109
Being Above Cutoff	(0.815)	(4.400)	(0.817)	(4.004)
Prog and Year FE	Yes	Yes	Yes	Yes
N of observations	4760	1705	4569	1620
R^2	0.358	0.500	0.361	0.473

This table displays coefficients from a regression of partner quality on peer quality, where peer quality is instrumented for with the dummy "Being Above the Cutoff". An individual's own score is controlled for linearly (allowing for different slopes on either side of cutoff) and standard errors are clustered at the student level and displayed in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Differences in having a partner (who can be matched) on either side of the cutoff

	WOMEN				MEN			
	Windows			One obs	Windows			One obs
	W 25	W 15	W 5	left/right (W 5)	W 25	W 15	W 5	left/right (W 5)
Outcome Variable								
Any Partner	-0.003	0.008	0.006	-0.023	0.009	0.015	0.009	0.029
	(0.010)	(0.013)	(0.022)	(0.020)	(0.009)	(0.012)	(0.020)	(0.020)
Matched Partner	0.007	0.003	-0.006	-0.012	0.007	0.006	0.001	0.024
	(0.008)	(0.011)	(0.019)	(0.023)	(0.008)	(0.010)	(0.017)	(0.025)
N of observations	34996	22327	7962	2276	37596	24507	8861	2228
R^2	0.036	0.050	0.101	0.313	0.035	0.047	0.095	0.298

This table displays coefficients on the dummy "Being Above the Cutoff" using the same regression specification as for the main result (see Table 3) for the sample of university applicants, while the dependent variables are indicators for whether an individual has a partner and for whether the individual has a partner he/she could be matched to. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: Applicants with matched partners: Differences in observables on either side of cutoff

	WOMEN				MEN			
	Windows			One obs	Windows			One obs
	W 25	W 15	W 5	left/right (W 5)	W 25	W 15	W 5	left/right (W 5)
Outcome Variable								
High School Private	0.005	0.010	-0.004	0.041	0.001	-0.019	-0.013	0.013
	(0.019)	(0.025)	(0.050)	(0.028)	(0.020)	(0.026)	(0.052)	(0.032)
High School Quality	0.587	1.468	0.057	6.494	-1.594	-5.565	-4.127	-1.583
	(2.549)	(3.426)	(6.794)	(4.006)	(3.014)	(3.983)	(7.443)	(4.807)
Father ≥ HS	-0.008	0.024	0.002	0.029	0.013	0.018	0.044	0.017
	(0.022)	(0.029)	(0.060)	(0.034)	(0.022)	(0.029)	(0.056)	(0.036)
Father some College	-0.017	-0.005	-0.019	0.019	-0.032	-0.024	-0.056	-0.024
	(0.022)	(0.029)	(0.059)	(0.033)	(0.022)	(0.030)	(0.058)	(0.036)
Mother ≥ HS	-0.020	-0.017	-0.001	-0.015	-0.019	-0.022	-0.042	-0.034
	(0.022)	(0.028)	(0.057)	(0.032)	(0.022)	(0.029)	(0.058)	(0.035)
Mother some College	0.004	0.000	0.028	0.009	-0.038*	-0.025	-0.073	-0.018
	(0.021)	(0.028)	(0.056)	(0.031)	(0.022)	(0.029)	(0.057)	(0.033)
Father Occup Top 3	-0.014	0.009	0.043	-0.011	-0.055**	-0.065**	-0.056	-0.081**
	(0.022)	(0.029)	(0.058)	(0.035)	(0.022)	(0.030)	(0.056)	(0.035)
Father Worker	0.036**	0.014	0.007	-0.013	0.013	0.023	0.037	0.034
	(0.016)	(0.021)	(0.040)	(0.025)	(0.015)	(0.020)	(0.038)	(0.025)
Mother Occup Top 3	-0.005	-0.013	0.012	-0.014	-0.015	-0.005	-0.011	0.013
	(0.021)	(0.028)	(0.056)	(0.032)	(0.021)	(0.028)	(0.054)	(0.032)
Mother Worker	0.012	0.012	0.026	0.008	-0.003	-0.017	-0.006	-0.004
	(0.009)	(0.013)	(0.026)	(0.015)	(0.010)	(0.014)	(0.022)	(0.016)
Mother Housewife	0.009	0.040	-0.018	0.027	-0.010	-0.013	0.038	-0.017
	(0.023)	(0.031)	(0.062)	(0.035)	(0.024)	(0.032)	(0.062)	(0.036)
N of observations	7473	4760	1705	790	6979	4569	1620	714

This table displays coefficients on the dummy ”Being Above the Cutoff” using the same regression specification as for the main result (see Table 3) for the sample of applicants with a matched partner, while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Potential Meeting Place: Descriptive Evidence

	WOMEN	MEN
Indiv. and partner from same		
High School	0.130	0.137
	(0.336)	(0.344)
University	0.246	0.224
	(0.431)	(0.417)
(of which HS and Univ)	0.049	0.052
	(0.215)	(0.221)
University-Program	0.056	0.058
	(0.229)	(0.233)
N of observations	17455	15235

Table displays means and standard deviations in parentheses.

Table 10: Effect of admission to a higher ranked university on the probability of having a partner from the same high school/university/program

	WOMEN		MEN	
	W 15	W 5	W 15	W 5
Outcome: Partner from				
same High School	-0.012	0.007	0.020	0.017
	(0.024)	(0.051)	(0.022)	(0.038)
same University	0.093***	0.122**	0.090***	0.072
	(0.028)	(0.056)	(0.026)	(0.054)
same University-Program	0.074***	0.059*	0.058***	0.080**
	(0.016)	(0.036)	(0.017)	(0.032)
N of observations	4762	1707	4570	1621

This table displays coefficients based on the same regression specification as for the main result (see Table 3), while the dependent variables are ”having a partner from same high school, same university, same university-program”. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11: Effect of admission on female students' partner quality: By socioeconomic background (Window 15)

	Individual's Education		**Parental Education and Occupation**					
Indiv from	High School		College		Occup Top 3		Not Worker	
background d =	Private	Top Qual	Father	Mother	Father	Mother	Father	Mother
Effect of admission								
on indiv with $d = 1$	21.684***	20.636***	22.102***	17.355**	16.649**	12.717	14.586**	14.709**
	(7.445)	(7.006)	(7.002)	(7.209)	(6.867)	(7.859)	(6.420)	(6.345)
on indiv with $d = 0$	8.810	6.451	6.768	10.897	8.985	13.771**	7.313	-10.401
	(6.644)	(6.987)	(6.926)	(6.825)	(7.239)	(6.577)	(9.972)	(15.592)
Diff (p-val)	0.04	0.02	0.01	0.30	0.23	0.87	0.42	0.09
Coeff on $d = 1$	19.071***	17.571***	10.931**	13.209**	6.286	6.405	6.663	-3.537
	(6.153)	(5.935)	(5.451)	(5.730)	(5.412)	(5.871)	(8.025)	(11.780)
N	4760	4760	4760	4760	4760	4760	4760	4760
R^2	0.344	0.345	0.343	0.341	0.339	0.338	0.338	0.338

This table displays coefficients on the dummy "Being Above Cutoff" interacted with "Being an individual from background $d = 0, 1$" using observations within a window of 15 around the cutoff. All specifications control linearly for individuals' own score (allowing for different slopes on either side of the cutoff) and contain program and year FE. Standard errors are clustered at the student level and displayed in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 12: Effect of admission on male students' partner quality: By socioeconomic background (Window 15)

	Individual's Education		**Parental Education and Occupation**					
Indiv from	High School		College		Occup Top 3		Not Worker	
background d =	Private	Top Qual	Father	Mother	Father	Mother	Father	Mother
Effect of admission								
on indiv with d = 1	5.069	7.171	4.838	0.421	5.159	9.244	4.863	5.673
	(7.361)	(6.967)	(7.021)	(7.446)	(6.816)	(7.904)	(6.599)	(6.450)
on indiv with d = 0	6.921	6.177	7.477	9.749	9.964	4.301	13.522	-4.551
	(6.881)	(7.210)	(7.133)	(6.853)	(7.568)	(6.753)	(9.477)	(16.464)
Diff (p-val)	0.77	0.87	0.66	0.14	0.43	0.45	0.31	0.52
Coeff on d = 1	35.136***	25.166***	26.105***	34.821***	26.401***	21.197***	21.711***	19.608
	(6.196)	(6.015)	(5.602)	(5.767)	(5.661)	(5.953)	(7.487)	(12.459)
N	4569	4569	4569	4569	4569	4569	4569	4569
R^2	0.365	0.359	0.361	0.364	0.360	0.359	0.354	0.353

This table displays coefficients on the dummy "Being Above Cutoff" interacted with "Being an individual from background $d = 0, 1$" using observations within a window of 15 around the cutoff. All specifications control linearly for individuals' own score (allowing for different slopes on either side of the cutoff) and contain program and year FE. Standard errors are clustered at the student level and displayed in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix B

Main Result for Full Sample

Table 13: Effect of admission to a higher ranked university-program on partner quality

	WOMEN			MEN		
Outcome: Partner Quality	Linear	Quadr	Cubic	Linear	Quadr	Cubic
Being Above Cutoff	8.339***	9.521***	10.470***	3.932	3.816	4.820
	(2.632)	(3.240)	(3.892)	(2.461)	(3.110)	(3.807)
Score Distance to Cutoff	0.406***	0.321***	0.233	0.485***	0.421***	0.436**
	(0.045)	(0.087)	(0.150)	(0.047)	(0.098)	(0.177)
Being Above Cutoff ×	-0.002***	-0.001	0.000	-0.003***	-0.001	-0.003
Score Dist to Cutoff	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.002)
(Score Distance to Cutoff)^2		-0.000	-0.000		-0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Being Above Cutoff ×		0.000	0.000		-0.000	0.000
(Score Dist to Cutoff)^2		(0.000)	(0.000)		(0.000)	(0.000)
(Score Distance to Cutoff)^3			-0.000			0.000
			(0.000)			(0.000)
Being Above Cutoff ×			0.000			-0.000
(Score Dist to Cutoff)^3			(0.000)			(0.000)
Prog and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N of observables	17446	17446	17446	15232	15232	15232
R^2	0.230	0.230	0.230	0.252	0.252	0.252

Standard errors are clustered at the student level and displayed in parentheses. All specifications contain program and year FE. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Effect of Admission on Enrollment

Table 14: Effect of admission to a higher ranked university on enrollment

	UNIVERSITY APPLICANTS		
Outcome: Enrollment	W 25	W 15	W 5
Being Above the Cutoff	0.485***	0.458***	0.416***
	(0.005)	(0.007)	(0.011)
Score Distance from Cutoff	0.004***	0.008***	0.023***
	(0.000)	(0.000)	(0.002)
Score Dist from Cutoff ×	-0.004***	-0.007***	-0.025***
Being Above the Cutoff	(0.000)	(0.001)	(0.004)
Prog and Year FE	Yes	Yes	Yes
N	90211	57812	20640
R^2	0.408	0.380	0.333

Data: Full sample of university applicants in 2007 and their enrollment decision.
Standard errors are clustered at the student level and displayed in parenthesis.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Effects by Socioeconomic Background: Window 5

Table 15: Effect of admission on female students' partner quality: By socioeconomic background (Window 5)

	Individual Education		**Parental Education and Occupation**					
Indiv from	High School		College		Occup Top 3		Not Worker	
background d =	Private	Top Qual	Father	Mother	Father	Mother	Father	Mother
Effect of admission								
on indiv with $d = 1$	35.647**	22.794*	27.889**	28.680*	19.981	31.241**	18.488	21.463*
	(14.289)	(13.177)	(14.118)	(14.658)	(13.034)	(15.067)	(12.107)	(11.969)
on indiv with $d = 0$	13.042	16.031	15.093	14.143	18.647	14.580	29.257	-36.355
	(12.616)	(13.537)	(12.795)	(12.582)	(13.894)	(12.498)	(19.823)	(30.016)
Diff (p-val)	0.07	0.58	0.31	0.25	0.91	0.20	0.56	0.05
Coeff on $d = 1$	8.491	15.511	14.583	7.137	9.612	1.513	22.891	-31.895
	(10.639)	(10.467)	(9.766)	(10.200)	(9.672)	(10.158)	(14.899)	(21.705)
N of observations	1705	1705	1705	1705	1705	1705	1705	1705
R^2	0.494	0.492	0.494	0.492	0.490	0.491	0.491	0.491

This table displays coefficients on the dummy "Being Above Cutoff" interacted with "Being an individual from background $d = 0, 1$" using observations within a window of 5 around the cutoff. All specifications control linearly for individuals' own score (allowing for different slopes on either side of the cutoff) and contain program and year FE. Standard errors are clustered at the student level and displayed in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 16: Effect of admission on male students' partner quality: By socioeconomic background (Window 5)

	Individual Education		**Parental Education and Occupation**					
Indiv from	High School		College		Occup Top 3		Not Worker	
background d =	Private	Top Qual	Father	Mother	Father	Mother	Father	Mother
Effect of admission								
on indiv with $d = 1$	7.383	9.652	11.322	-2.650	6.969	14.457	7.522	8.299
	(14.653)	(13.841)	(14.080)	(14.467)	(13.497)	(15.648)	(13.440)	(13.201)
on indiv with $d = 0$	8.898	8.274	8.142	19.401	12.948	5.682	13.446	-7.884
	(14.512)	(15.285)	(15.060)	(14.391)	(16.831)	(14.045)	(22.330)	(39.913)
Diff (p-val)	0.91	0.92	0.80	0.11	0.67	0.53	0.78	0.68
Coeff on $d = 1$	28.809**	31.053**	32.445***	41.813***	24.581**	17.148	11.105	19.080
	(12.121)	(12.345)	(10.869)	(11.340)	(12.192)	(11.231)	(17.047)	(31.231)
N of observations	1620	1620	1620	1620	1620	1620	1620	1620
R^2	0.474	0.476	0.480	0.478	0.472	0.471	0.467	0.468

This table displays coefficients on the dummy "Being Above Cutoff" interacted with "Being an individual from background $d = 0, 1$" using observations within a window of 5 around the cutoff. All specifications control linearly for individuals' own score (allowing for different slopes on either side of the cutoff) and contain program and year FE. Standard errors are clustered at the student level and displayed in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Additions to the Validity Tests of the RD Design

Figure 8: McCrary Density Test

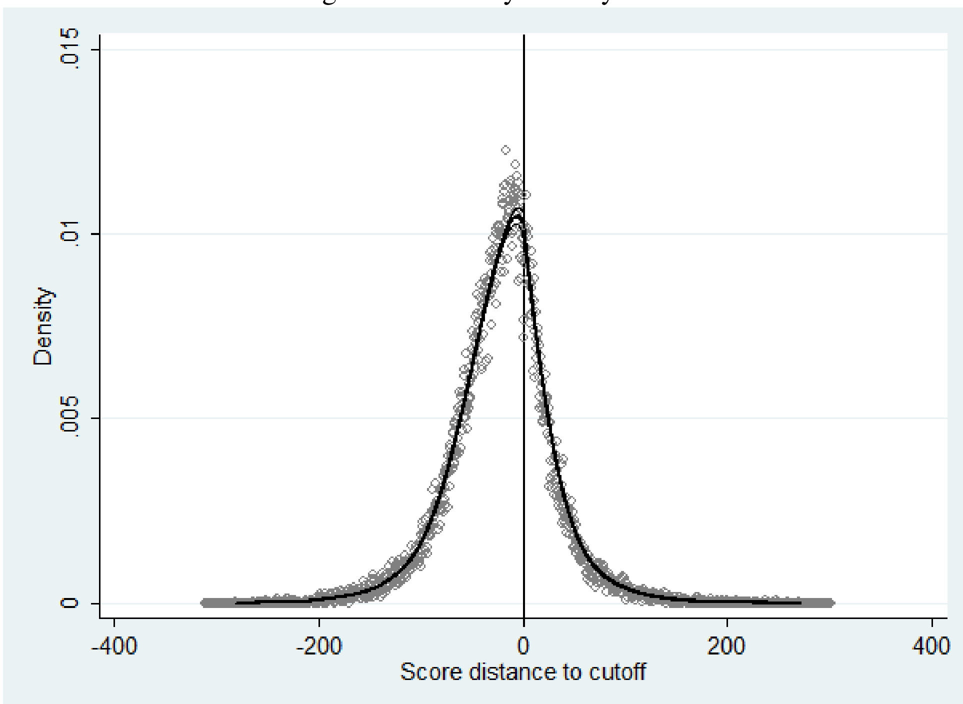


Table 17: Population of university applicants: Differences in observables on either side of cutoff

	WOMEN				MEN			
	Windows			One obs	Windows			One obs
	W 25	W 15	W 5	left/right (W 5)	W 25	W 15	W 5	left/right (W 5)
Outcome Variable								
High School Private	-0.011	-0.014	-0.014	0.041	0.001	-0.006	0.011	0.054
	(0.008)	(0.011)	(0.019)	(0.028)	(0.008)	(0.010)	(0.018)	(0.076)
High School Quality	-0.941	-0.054	2.250	0.219	-1.630	-1.402	1.051	8.148
	(1.200)	(1.530)	(2.668)	(8.057)	(1.269)	(1.616)	(2.803)	(12.165)
Father ≥ HS	-0.011	0.004	-0.003	0.029	-0.005	0.000	-0.018	-0.068
	(0.010)	(0.012)	(0.022)	(0.072)	(0.009)	(0.012)	(0.020)	(0.098)
Father some College	-0.011	-0.000	-0.031	-0.011	-0.011	-0.013	-0.018	-0.013
	(0.010)	(0.012)	(0.021)	(0.069)	(0.009)	(0.012)	(0.020)	(0.097)
Mother ≥ HS	-0.001	-0.016	-0.017	0.005	-0.011	-0.014	-0.012	-0.041
	(0.010)	(0.012)	(0.021)	(0.071)	(0.009)	(0.012)	(0.020)	(0.091)
Mother some College	-0.000	-0.015	-0.022	0.048	-0.016*	-0.016	-0.010	-0.042
	(0.009)	(0.012)	(0.021)	(0.061)	(0.009)	(0.011)	(0.020)	(0.083)
Father Occup Top 3	-0.013	-0.007	-0.023	0.096	-0.014	-0.018	-0.049**	-0.101
	(0.010)	(0.013)	(0.022)	(0.070)	(0.009)	(0.012)	(0.021)	(0.092)
Father Worker	0.016**	0.010	0.006	-0.032	-0.002	0.002	0.007	0.034
	(0.007)	(0.009)	(0.016)	(0.056)	(0.007)	(0.009)	(0.015)	(0.025)
Mother Occup Top 3	-0.007	-0.013	-0.008	0.017	-0.004	-0.007	-0.006	0.006
	(0.009)	(0.012)	(0.021)	(0.063)	(0.009)	(0.011)	(0.019)	(0.082)
Mother Worker	0.004	0.006	0.008	0.036	0.004	0.003	-0.000	0.019
	(0.004)	(0.006)	(0.010)	(0.035)	(0.004)	(0.005)	(0.009)	(0.038)
Mother Housewife	0.009	0.013	0.011	0.013	-0.005	-0.007	-0.017	0.070
	(0.010)	(0.013)	(0.023)	(0.074)	(0.010)	(0.012)	(0.021)	(0.097)
N of observations	34996	22327	7962	452	37596	24507	8861	394

This table displays coefficients on the dummy "Being Above the Cutoff" using the same regression specification as for the main result (see Table 3) for the sample of university applicants, while the dependent variables are the different individual and parental background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 18: Applicants who have a partner: Differences in observables on either side of the cutoff

	WOMEN				MEN			
	Windows			One obs	Windows			One obs
	W 25	W 15	W 5	left/right (W 5)	W 25	W 15	W 5	left/right (W 5)
Outcome Variable								
High School Private	-0.001	0.002	-0.007	0.059*	-0.002	-0.020	-0.009	0.021
	(0.012)	(0.016)	(0.028)	(0.035)	(0.013)	(0.018)	(0.032)	(0.038)
High School Quality	-0.759	-0.628	1.254	6.285	-1.757	-2.022	-1.732	0.318
	(1.841)	(2.402)	(4.345)	(4.903)	(2.230)	(2.902)	(5.103)	(5.779)
Father ≥ HS	-0.021	-0.004	-0.008	0.063	0.024	0.024	0.037	0.012
	(0.015)	(0.019)	(0.036)	(0.046)	(0.016)	(0.021)	(0.038)	(0.044)
Father some College	-0.024	-0.014	-0.023	0.057	0.000	0.001	-0.001	-0.017
	(0.015)	(0.019)	(0.035)	(0.043)	(0.016)	(0.021)	(0.037)	(0.045)
Mother ≥ HS	-0.010	-0.019	-0.004	0.019	-0.016	-0.028	-0.037	-0.038
	(0.014)	(0.019)	(0.035)	(0.042)	(0.016)	(0.020)	(0.038)	(0.044)
Mother some College	-0.002	-0.017	0.002	0.047	-0.026*	-0.036*	-0.064*	-0.040
	(0.014)	(0.018)	(0.033)	(0.039)	(0.015)	(0.020)	(0.036)	(0.042)
Father Occup Top 3	-0.011	0.008	-0.014	0.056	-0.019	-0.033	-0.051	-0.088**
	(0.015)	(0.020)	(0.037)	(0.045)	(0.017)	(0.022)	(0.039)	(0.043)
Father Worker	0.043***	0.032**	0.024	-0.010	-0.007	-0.003	0.001	0.034
	(0.012)	(0.015)	(0.028)	(0.035)	(0.013)	(0.016)	(0.029)	(0.029)
Mother Occup Top 3	-0.002	-0.008	-0.017	0.015	-0.000	-0.017	-0.024	-0.005
	(0.014)	(0.018)	(0.033)	(0.042)	(0.015)	(0.019)	(0.035)	(0.041)
Mother Worker	0.013*	0.012	0.020	-0.004	0.010	0.008	0.015	-0.023
	(0.008)	(0.010)	(0.019)	(0.023)	(0.007)	(0.010)	(0.017)	(0.018)
Mother Housewife	0.012	0.027	0.028	0.013	-0.017	-0.011	0.027	-0.011
	(0.016)	(0.021)	(0.038)	(0.048)	(0.017)	(0.023)	(0.041)	(0.046)
N of observations	15068	9527	3376	790	12708	8239	2942	714

This table displays coefficients on the dummy "Being Above the Cutoff" using the same regression specification as for the main result (see Table 3) for the sample of applicants who have a partner, while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Selection Test for Effect by Size of Peer Quality Jumps

Table 19: Selection test for effects by peer quality jumps (refers to Table 5): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Large Peer Qual Jumps	0.019	3.886	-0.004	0.041	-0.004	-0.020	0.008	-0.014	0.015	0.022	0.025
	(0.031)	(3.991)	(0.035)	(0.034)	(0.034)	(0.033)	(0.034)	(0.034)	(0.023)	(0.013)	(0.036)
Small Peer Qual Jumps	0.002	0.177	-0.005	0.014	0.002	-0.014	0.011	-0.013	0.010	0.006	0.045
	(0.026)	(3.763)	(0.032)	(0.032)	(0.029)	(0.031)	(0.032)	(0.030)	(0.024)	(0.014)	(0.034)
W 5											
Large Peer Qual Jumps	0.048	0.115	-0.026	0.012	0.049	0.016	0.074	0.014	-0.005	0.033	-0.028
	(0.065)	(7.985)	(0.072)	(0.074)	(0.069)	(0.069)	(0.071)	(0.070)	(0.049)	(0.030)	(0.076)
Small Peer Qual Jumps	-0.038	0.128	-0.019	-0.010	0.014	-0.013	0.023	0.005	0.018	0.023	-0.015
	(0.051)	(7.202)	(0.062)	(0.062)	(0.059)	(0.061)	(0.062)	(0.060)	(0.044)	(0.029)	(0.066)
MEN											
W 15											
Large Peer Qual Jumps	-0.004	-4.082	-0.026	0.016	-0.051	-0.018	-0.076**	-0.013	0.049**	-0.005	-0.029
	(0.032)	(4.629)	(0.035)	(0.034)	(0.035)	(0.035)	(0.035)	(0.034)	(0.023)	(0.015)	(0.038)
Small Peer Qual Jumps	-0.033	-6.846	-0.025	0.021	-0.009	-0.028	-0.058*	0.003	0.007	-0.023	-0.007
	(0.028)	(4.377)	(0.032)	(0.032)	(0.030)	(0.031)	(0.033)	(0.030)	(0.022)	(0.015)	(0.035)
W 5											
Large Peer Qual Jumps	-0.021	-3.672	-0.080	0.013	-0.107	-0.042	-0.122*	-0.027	0.079*	0.027	0.005
	(0.063)	(9.005)	(0.066)	(0.063)	(0.068)	(0.067)	(0.065)	(0.066)	(0.043)	(0.025)	(0.072)
Small Peer Qual Jumps	-0.007	-4.792	-0.028	0.078	-0.041	-0.035	-0.001	0.006	0.002	-0.030	0.054
	(0.056)	(8.103)	(0.066)	(0.063)	(0.063)	(0.064)	(0.063)	(0.060)	(0.044)	(0.027)	(0.068)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "program with peer quality jumps above/below median" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Selection Tests by Socioeconomic Background

Table 20: Selection test for effects by socioeconomic group, (1) Private High School (refers to Column 1 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv from priv HS	n.a.	0.497	-0.007	0.016	0.022	-0.031	-0.014	-0.007	0.012	0.005	0.040
	n.a.	(3.197)	(0.033)	(0.031)	(0.033)	(0.032)	(0.030)	(0.035)	(0.020)	(0.012)	(0.037)
Indiv not from priv HS	n.a.	0.890	-0.011	0.023	-0.015	-0.015	0.015	-0.018	0.018	0.017	0.041
	n.a.	(3.189)	(0.029)	(0.030)	(0.029)	(0.030)	(0.031)	(0.029)	(0.024)	(0.014)	(0.033)
W 5											
Indiv from priv HS	n.a.	-3.173	0.034	0.042	0.031	0.011	0.057	0.082	0.000	0.018	-0.013
	n.a.	(6.460)	(0.072)	(0.068)	(0.071)	(0.069)	(0.064)	(0.075)	(0.040)	(0.026)	(0.078)
Indiv not from priv HS	n.a.	1.909	-0.041	-0.014	0.029	-0.004	0.039	-0.017	0.008	0.029	-0.020
	n.a.	(6.268)	(0.058)	(0.060)	(0.055)	(0.058)	(0.060)	(0.056)	(0.044)	(0.029)	(0.064)
MEN											
W 15											
Indiv from priv HS	n.a.	-0.517	-0.019	0.037	-0.025	-0.008	-0.046	-0.009	0.014	-0.012	-0.020
	n.a.	(3.969)	(0.034)	(0.031)	(0.034)	(0.032)	(0.033)	(0.035)	(0.019)	(0.012)	(0.038)
Indiv not from priv HS	n.a.	-6.540^{*}	-0.017	0.018	-0.015	-0.021	-0.067^{**}	0.004	0.025	-0.022	-0.012
	n.a.	(3.971)	(0.030)	(0.030)	(0.029)	(0.030)	(0.031)	(0.028)	(0.023)	(0.016)	(0.034)
W 5											
Indiv from priv HS	n.a.	2.726	-0.086	0.051	-0.079	-0.001	-0.039	-0.019	0.008	0.002	-0.002
	n.a.	(7.682)	(0.066)	(0.058)	(0.068)	(0.064)	(0.062)	(0.069)	(0.038)	(0.023)	(0.076)
Indiv not from priv HS	n.a.	-7.230	-0.029	0.047	-0.062	-0.061	-0.061	-0.002	0.054	-0.013	0.062
	n.a.	(7.355)	(0.061)	(0.060)	(0.059)	(0.062)	(0.061)	(0.056)	(0.044)	(0.027)	(0.066)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having (or not having) attended private high school" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 21: Selection test for effects by socioeconomic group, (2) High school quality above/below median (refers to Column 2 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv from top quality HS	0.007	n.a.	-0.002	0.032	0.011	-0.025	0.016	-0.017	0.006	0.016	0.050
	(0.027)	n.a.	(0.032)	(0.032)	(0.031)	(0.031)	(0.031)	(0.032)	(0.021)	(0.012)	(0.034)
Indiv from bottom quality HS	0.005	n.a.	-0.014	0.011	-0.017	-0.014	-0.003	-0.011	0.027	0.009	0.030
	(0.022)	n.a.	(0.032)	(0.033)	(0.029)	(0.031)	(0.034)	(0.030)	(0.026)	(0.016)	(0.035)
W 5											
Indiv from top quality HS	0.011	n.a.	-0.009	0.026	0.044	-0.001	0.055	0.041	-0.005	0.030	-0.002
	(0.055)	n.a.	(0.067)	(0.067)	(0.065)	(0.064)	(0.063)	(0.065)	(0.041)	(0.027)	(0.070)
Indiv from bottom quality HS	-0.031	n.a.	-0.035	-0.029	0.007	-0.005	0.026	-0.021	0.022	0.021	-0.032
	(0.044)	n.a.	(0.061)	(0.063)	(0.057)	(0.060)	(0.066)	(0.060)	(0.048)	(0.033)	(0.068)
MEN											
W 15											
Indiv from top quality HS	0.021	n.a.	-0.013	0.041	-0.018	-0.009	-0.056*	-0.018	0.016	-0.009	-0.001
	(0.028)	n.a.	(0.032)	(0.031)	(0.031)	(0.031)	(0.032)	(0.031)	(0.020)	(0.013)	(0.035)
Indiv from bottom quality HS	-0.037	n.a.	-0.021	0.008	-0.014	-0.015	-0.065*	0.027	0.022	-0.033*	-0.038
	(0.025)	n.a.	(0.033)	(0.033)	(0.030)	(0.032)	(0.035)	(0.029)	(0.026)	(0.018)	(0.036)
W 5											
Indiv from top quality HS	0.013	n.a.	-0.048	0.087	-0.092	0.001	-0.035	-0.024	0.010	0.012	0.017
	(0.054)	n.a.	(0.062)	(0.058)	(0.062)	(0.062)	(0.060)	(0.061)	(0.037)	(0.022)	(0.068)
Indiv from bottom quality HS	-0.031	n.a.	-0.057	-0.009	-0.033	-0.092	-0.084	0.016	0.073	-0.036	0.064
	(0.053)	n.a.	(0.069)	(0.067)	(0.062)	(0.067)	(0.069)	(0.058)	(0.053)	(0.032)	(0.070)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having attended a high school with average PSU score of graduates above/below median" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 22: Selection test for effects by socioeconomic group, (3) Father with some/without college (refers to Column 3 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with father college	0.021	3.115	n.a.	0.026*	0.042	0.002	0.009	-0.004	0.012	0.004	0.051
	(0.028)	(3.788)	n.a.	(0.015)	(0.030)	(0.029)	(0.028)	(0.033)	(0.020)	(0.012)	(0.035)
Indiv w/o father college	0.005	0.455	n.a.	0.030	-0.029	-0.029	0.013	-0.018	0.014	0.018	0.030
	(0.025)	(3.621)	n.a.	(0.021)	(0.028)	(0.029)	(0.031)	(0.030)	(0.024)	(0.015)	(0.034)
W 5											
Indiv with father college	0.028	-2.039	n.a.	0.011	0.080	0.008	0.020	0.041	0.005	0.011	0.016
	(0.057)	(7.580)	n.a.	(0.036)	(0.063)	(0.060)	(0.058)	(0.069)	(0.041)	(0.027)	(0.072)
Indiv w/o father college	-0.017	2.388	n.a.	0.021	0.006	0.006	0.073	-0.002	0.002	0.034	-0.043
	(0.051)	(7.249)	n.a.	(0.043)	(0.054)	(0.058)	(0.059)	(0.058)	(0.045)	(0.031)	(0.067)
MEN											
W 15											
Indiv with father college	-0.003	-0.551	n.a.	0.026*	-0.012	-0.025	-0.053*	0.019	0.009	-0.020	-0.016
	(0.029)	(4.248)	n.a.	(0.015)	(0.030)	(0.030)	(0.028)	(0.032)	(0.019)	(0.012)	(0.036)
Indiv w/o father college	-0.022	-8.869**	n.a.	0.050**	-0.019	-0.002	-0.056*	-0.018	0.029	-0.018	-0.015
	(0.027)	(4.359)	n.a.	(0.020)	(0.027)	(0.030)	(0.031)	(0.028)	(0.024)	(0.017)	(0.035)
W 5											
Indiv with father college	-0.016	2.705	n.a.	0.086***	-0.076	-0.040	-0.004	0.016	-0.024	-0.011	0.024
	(0.056)	(8.069)	n.a.	(0.027)	(0.057)	(0.056)	(0.054)	(0.062)	(0.034)	(0.021)	(0.068)
Indiv w/o father college	0.020	-8.131	n.a.	0.094**	-0.020	0.001	-0.064	-0.018	0.087*	-0.009	0.045
	(0.056)	(8.410)	n.a.	(0.039)	(0.054)	(0.060)	(0.062)	(0.058)	(0.049)	(0.031)	(0.071)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having a father with some (or without) college" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 23: Selection test for effects by socioeconomic group, (4) Mother with some/without college (refers to Column 4 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with mother college	0.032	2.810	0.044	n.a.	0.030	-0.007	0.033	-0.024	-0.002	0.004	0.069**
	(0.029)	(3.837)	(0.031)	n.a.	(0.032)	(0.018)	(0.032)	(0.031)	(0.021)	(0.012)	(0.033)
Indiv w/o mother college	-0.003	0.626	0.012	n.a.	-0.027	-0.024	-0.006	-0.006	0.024	0.017	0.022
	(0.026)	(3.638)	(0.031)	n.a.	(0.029)	(0.022)	(0.032)	(0.024)	(0.024)	(0.015)	(0.031)
W 5											
Indiv with mother college	0.006	-2.301	0.062	n.a.	0.045	0.017	0.058	-0.020	-0.015	0.026	0.013
	(0.059)	(7.625)	(0.066)	n.a.	(0.068)	(0.038)	(0.066)	(0.066)	(0.042)	(0.028)	(0.069)
Indiv w/o mother college	-0.019	0.252	-0.046	n.a.	-0.073	-0.044	0.023	0.007	0.024	0.028	-0.017
	(0.052)	(7.281)	(0.060)	n.a.	(0.057)	(0.043)	(0.062)	(0.051)	(0.045)	(0.029)	(0.063)
WOMEN											
W 15											
Indiv with mother college	-0.007	-3.369	0.028	n.a.	-0.015	-0.003	-0.052*	0.012	0.018	-0.003	-0.024
	(0.031)	(4.394)	(0.030)	n.a.	(0.031)	(0.018)	(0.032)	(0.033)	(0.020)	(0.012)	(0.036)
Indiv w/o mother college	-0.015	-5.510	0.028	n.a.	-0.013	-0.003	-0.062*	0.005	0.022	-0.027*	-0.021
	(0.027)	(4.154)	(0.029)	n.a.	(0.029)	(0.022)	(0.032)	(0.024)	(0.023)	(0.016)	(0.032)
W 5											
Indiv with mother college	0.020	-3.828	0.062	n.a.	-0.042	0.030	0.002	0.001	-0.016	-0.005	0.005
	(0.061)	(8.455)	(0.053)	n.a.	(0.056)	(0.037)	(0.059)	(0.064)	(0.036)	(0.022)	(0.070)
Indiv w/o mother college	-0.003	-0.498	0.082	n.a.	-0.010	0.003	-0.062	0.042	0.062	-0.015	0.013
	(0.054)	(7.939)	(0.057)	n.a.	(0.057)	(0.046)	(0.062)	(0.047)	(0.045)	(0.027)	(0.064)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having a mother with some (or without) college" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 24: Selection test for effects by socioeconomic group, (5) Father in top 3 occupation or not (refers to Column 5 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with father top 3 occup	0.001	1.723	0.031	-0.008	0.028	-0.003	n.a.	0.012	0.007	0.009	0.026
	(0.027)	(3.635)	(0.030)	(0.030)	(0.030)	(0.030)	n.a.	(0.031)	(0.017)	(0.013)	(0.033)
Indiv w/o father top 3 occup	0.017	0.710	0.008	-0.011	-0.041	-0.041	n.a.	-0.049*	0.029	0.017	0.061*
	(0.026)	(3.890)	(0.032)	(0.029)	(0.030)	(0.032)	n.a.	(0.029)	(0.027)	(0.016)	(0.035)
W 5											
Indiv with father top 3 occup	-0.000	-2.468	-0.030	-0.052	0.026	-0.010	n.a.	0.051	-0.005	0.022	-0.043
	(0.055)	(7.122)	(0.060)	(0.061)	(0.061)	(0.060)	n.a.	(0.063)	(0.035)	(0.027)	(0.067)
Indiv w/o father top 3 occup	-0.033	1.147	0.005	-0.020	0.007	-0.015	n.a.	-0.058	0.050	0.032	0.030
	(0.052)	(8.049)	(0.064)	(0.058)	(0.061)	(0.065)	n.a.	(0.057)	(0.051)	(0.032)	(0.071)
MEN											
W 15											
Indiv with father top 3 occup	0.021	-2.105	0.051*	0.005	-0.001	0.012	n.a.	0.028	0.007	-0.021	-0.025
	(0.028)	(4.146)	(0.028)	(0.029)	(0.031)	(0.030)	n.a.	(0.031)	(0.017)	(0.013)	(0.034)
Indiv w/o father top 3 occup	-0.037	-7.034	0.038	0.003	-0.017	-0.024	n.a.	-0.008	0.000	-0.015	-0.027
	(0.029)	(4.691)	(0.031)	(0.030)	(0.030)	(0.032)	n.a.	(0.028)	(0.026)	(0.018)	(0.036)
W 5											
Indiv with father top 3 occup	0.012	-0.376	0.063	-0.019	-0.052	-0.012	n.a.	0.024	0.011	-0.009	0.010
	(0.055)	(7.920)	(0.055)	(0.058)	(0.061)	(0.060)	n.a.	(0.060)	(0.032)	(0.022)	(0.067)
Indiv w/o father top 3 occup	-0.018	-7.545	0.073	-0.053	-0.068	-0.046	n.a.	-0.032	0.040	-0.008	0.058
	(0.059)	(9.208)	(0.063)	(0.063)	(0.062)	(0.067)	n.a.	(0.057)	(0.051)	(0.033)	(0.072)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having (or not having) a father in a top 3 occupation" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 25: Selection test for effects by socioeconomic group, (6) Mother in top 3 occupation or not (refers to Column 6 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with mother in top 3 occup	0.019	1.480	0.000	-0.006	-0.007	-0.035	0.030	n.a.	-0.002	0.008	0.035
	(0.032)	(4.092)	(0.035)	(0.035)	(0.029)	(0.029)	(0.033)	n.a.	(0.022)	(0.011)	(0.023)
Indiv w/o mother in top 3 occup	0.009	1.772	0.038	-0.001	0.013	-0.002	0.004	n.a.	0.020	0.013	0.029
	(0.026)	(3.587)	(0.031)	(0.030)	(0.024)	(0.027)	(0.030)	n.a.	(0.023)	(0.014)	(0.027)
W 5											
Indiv with mother in top 3 occup	0.044	-3.587	0.011	0.006	-0.038	-0.037	0.088	n.a.	-0.032	0.018	-0.033
	(0.064)	(8.209)	(0.073)	(0.075)	(0.062)	(0.061)	(0.067)	n.a.	(0.042)	(0.027)	(0.049)
Indiv w/o mother in top 3 occup	-0.027	1.366	-0.005	-0.033	0.048	0.008	0.019	n.a.	0.026	0.030	0.002
	(0.051)	(7.154)	(0.062)	(0.061)	(0.052)	(0.057)	(0.061)	n.a.	(0.044)	(0.028)	(0.055)
MEN											
W 15											
Indiv with mother in top 3 occup	-0.007	-9.660**	0.041	0.005	-0.021	-0.019	-0.021	n.a.	0.024	-0.012	-0.014
	(0.034)	(4.826)	(0.034)	(0.036)	(0.031)	(0.030)	(0.033)	n.a.	(0.021)	(0.012)	(0.023)
Indiv w/o mother in top 3 occup	-0.023	-3.738	0.011	-0.035	-0.023	-0.021	-0.081***	n.a.	0.022	-0.020	-0.018
	(0.027)	(4.128)	(0.030)	(0.031)	(0.026)	(0.028)	(0.031)	n.a.	(0.022)	(0.015)	(0.027)
W 5											
Indiv with mother in top 3 occup	0.006	-10.725	0.033	-0.063	-0.090	-0.006	-0.001	n.a.	0.011	-0.001	0.018
	(0.067)	(9.333)	(0.065)	(0.071)	(0.060)	(0.059)	(0.064)	n.a.	(0.043)	(0.023)	(0.048)
Indiv w/o mother in top 3 occup	-0.017	-1.081	0.052	-0.049	-0.057	-0.049	-0.074	n.a.	0.047	-0.009	0.035
	(0.054)	(7.810)	(0.059)	(0.061)	(0.053)	(0.057)	(0.059)	n.a.	(0.041)	(0.025)	(0.053)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having (or not having) a mother in a top 3 occupation" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 26: Selection test for effects by socioeconomic group, (7) Father worker or not (refers to Column 7 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with father worker	0.030	2.954	0.013	0.002	-0.028	-0.045	0.019	-0.028	n.a.	0.004	0.050
	(0.031)	(5.419)	(0.035)	(0.041)	(0.038)	(0.041)	(0.029)	(0.037)	n.a.	(0.028)	(0.047)
Indiv with father not worker	0.010	1.712	-0.002	0.034	0.008	-0.008	0.017	-0.007	n.a.	0.013	0.035
	(0.025)	(3.428)	(0.029)	(0.029)	(0.028)	(0.029)	(0.028)	(0.029)	n.a.	(0.012)	(0.031)
W 5											
Indiv with father worker	0.030	18.351	0.075	0.075	0.067	0.050	0.019	-0.064	n.a.	-0.040	-0.026
	(0.063)	(11.679)	(0.076)	(0.086)	(0.082)	(0.086)	(0.065)	(0.076)	n.a.	(0.057)	(0.098)
Indiv with father not worker	-0.008	-2.547	-0.031	-0.007	0.024	-0.007	0.052	0.026	n.a.	0.035	-0.018
	(0.051)	(6.623)	(0.059)	(0.059)	(0.057)	(0.058)	(0.056)	(0.058)	n.a.	(0.026)	(0.063)
MEN											
W 15											
Indiv with father worker	-0.055*	-8.202	-0.057	-0.050	-0.030	-0.033	-0.038	0.008	n.a.	-0.000	-0.049
	(0.033)	(6.295)	(0.037)	(0.040)	(0.037)	(0.040)	(0.030)	(0.033)	n.a.	(0.030)	(0.048)
Indiv with father not worker	-0.008	-4.196	-0.010	0.039	-0.018	-0.013	-0.054*	-0.002	n.a.	-0.022*	-0.013
	(0.027)	(3.983)	(0.030)	(0.029)	(0.029)	(0.029)	(0.028)	(0.029)	n.a.	(0.013)	(0.032)
W 5											
Indiv with father worker	-0.038	-15.849	-0.142*	-0.083	-0.096	-0.076	0.023	0.029	n.a.	-0.070	0.124
	(0.069)	(12.955)	(0.081)	(0.087)	(0.077)	(0.086)	(0.065)	(0.076)	n.a.	(0.064)	(0.103)
Indiv with father not worker	-0.001	-1.097	-0.030	0.076	-0.062	-0.026	-0.042	-0.010	n.a.	-0.001	0.020
	(0.053)	(7.477)	(0.059)	(0.055)	(0.059)	(0.059)	(0.052)	(0.055)	n.a.	(0.021)	(0.063)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having a father who is a worker/not a worker" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 27: Selection test for effects by socioeconomic group, (8) Mother worker or not (refers to Column 8 of Tables 11 and 12, for women and men respectively): differences in observables on either side of the cutoff

Outcome:	High School		College		High School		Occup Top 3		Worker		Housewife
	Priv	Top Qual	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Mother
WOMEN											
W 15											
Indiv with mother worker	-0.031	13.050	-0.026	0.019	-0.064	-0.016	-0.030	-0.081^{**}	0.021	n.a.	0.014
	(0.047)	(8.067)	(0.062)	(0.064)	(0.048)	(0.054)	(0.081)	(0.041)	(0.073)	n.a.	(0.044)
Indiv with mother not worker	0.015	1.261	-0.001	0.029	0.007	-0.012	0.012	-0.006	0.012	n.a.	0.048
	(0.025)	(3.441)	(0.029)	(0.029)	(0.028)	(0.028)	(0.030)	(0.028)	(0.021)	n.a.	(0.030)
W 5											
Indiv with mother worker	-0.098	23.218	-0.164	-0.161	-0.019	0.090	-0.008	-0.117	-0.016	n.a.	0.002
	(0.089)	(15.829)	(0.134)	(0.135)	(0.110)	(0.120)	(0.157)	(0.092)	(0.146)	n.a.	(0.107)
Indiv with mother not worker	0.002	0.096	-0.009	0.015	0.036	0.007	0.047	0.023	0.002	n.a.	-0.004
	(0.050)	(6.758)	(0.060)	(0.060)	(0.056)	(0.057)	(0.059)	(0.056)	(0.040)	n.a.	(0.061)
MEN											
W 15											
Indiv with mother worker	-0.118^{**}	-16.902	-0.142^{**}	-0.115^{*}	-0.044	-0.064	-0.211^{**}	-0.043	0.144^{**}	n.a.	0.018
	(0.058)	(10.276)	(0.055)	(0.065)	(0.047)	(0.053)	(0.084)	(0.039)	(0.070)	n.a.	(0.044)
Indiv with mother not worker	-0.017	-5.767	-0.024	0.019	-0.028	-0.026	-0.060^{**}	-0.007	0.020	n.a.	-0.025
	(0.026)	(3.978)	(0.030)	(0.029)	(0.029)	(0.029)	(0.030)	(0.028)	(0.020)	n.a.	(0.031)
W 5											
Indiv with mother worker	-0.156	-18.488	-0.240^{*}	-0.136	-0.086	-0.132	-0.196	-0.055	0.142	n.a.	0.059
	(0.127)	(20.599)	(0.129)	(0.133)	(0.116)	(0.123)	(0.175)	(0.095)	(0.152)	n.a.	(0.104)
Indiv with mother not worker	-0.009	-3.944	-0.052	0.048	-0.074	-0.041	-0.053	-0.012	0.035	n.a.	0.034
	(0.052)	(7.455)	(0.058)	(0.055)	(0.057)	(0.057)	(0.056)	(0.055)	(0.038)	n.a.	(0.061)

This table displays coefficients on the dummy "Being Above the Cutoff" interacted with "having a mother who is a worker/not a worker" using the same regression specification as for the main result (see Table 3), while the dependent variables are individual and family background characteristics. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.