FROM ELITE EDUCATION TO PUBLIC LEADERSHIP: CAREER OUTCOMES IN STATE ADMINISTRATION

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Abstract

Elite university graduates are not only overrepresented in senior jobs at prominent companies but also among top positions within public administration. To assess whether this reflects causal effects of elite education or selection, I estimate the effect of enrolling in an elite university relative to a non-elite university on the likelihood of working in the public sector and attaining a top position. To do so, I combine rich administrative data on higher education applications with administrative records of all public servants in Chile, and implement a stacked fuzzy regression discontinuity design that exploits variation in the minimum admission scores across programs. Importantly, I use applicants' listed preferences of majors to narrow the comparison between individuals with similar preferences. The observed disproportionate share of elite graduates in top positions within public administration is a result of selection. Applicants who gain access to elite universities are equally likely to work in the public sector and, importantly, as likely to reach a top position in that sector as individuals attending non-elite institutions. This result does not vary when I compare elite relative to non-elite universities among the most prevalent majors in top positions. Nevertheless, for specific majors, elite universities increase the likelihood of reaching a leading position in the public sector for students from lower SES backgrounds. These results suggest that elite universities have the potential to facilitate social mobility and improve representation in key roles of greater responsibility and relevance within public administration.

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1 Introduction

In many countries, top public-sector positions are well-regarded paths to upward mobility and policy influence (Bai & Jia, 2016; Barrios Fernández et al., 2024; Dal Bó et al., 2009; Michelman et al., 2022). However, a disproportionate share of top public servants come from elite universities, which predominantly serve high-income families (Chetty et al., 2020). To the extent that elite universities have a causal effect on access to leadership positions in the public sector, they could be exacerbating income inequality and worsening representation in leadership roles. If this were true, changes in admissions policies could improve equality of opportunity and diversify top leadership positions.

Answering these questions is important because bureaucrats are responsible for implementing public policies on which the welfare of the population depends, and attracting the most qualified graduates to these positions remains a key challenge in developing countries (Best et al., 2023; Borjas, 2002; Fenizia, 2022; Martinez-Bravo, 2017; Tsai et al., 2015).

In this paper, I estimate the causal effect of enrolling in an elite university on the likelihood of working in public administration and attaining a high-ranking position. To do so, I use administrative information from Chile's centralized university application process. The characteristics of this system allow me to overcome the identification problems that arise from selection. Admission relies solely on standardized test scores, enabling a clear identification strategy, a regression discontinuity (RD) design, to estimate the causal effect of enrolling in an elite university. In particular, prospective students take a set of standardized tests and rank up to ten preferred major–institution combinations on a centralized platform.[1] Each year, the system generates an acceptance list and a waiting list of applicants for each major–institution combination. I exploit the fact that acceptance cutoff scores cannot be perfectly predicted, so marginally accepted applicants and those

[1]Unlike the U.S. case, Chilean students apply directly to a specific major within a specific institution.

at the top of the waiting list (conditional on their entry exam scores) are comparable. This feature allows the implementation of a fuzzy RD design in which acceptance to an elite university serves as an instrument for enrollment.

To implement this strategy, I define elite universities as the two most historically and consistently selective institutions in the country. I then stack the major–university-specific regression discontinuities to estimate the local average treatment effect (LATE) of enrollment in an elite university (instrumented by acceptance) relative to enrollment in a non-elite institution, on the likelihood of working in the public sector and holding a top position. A key advantage of the data is that I observe the complete ranking of major–institution options submitted by each applicant. This allows me to define the comparison group consistently across analyses, ensuring that estimates compare individuals with similar revealed preferences. Moreover, because applicants rank specific major–institution combinations, I can estimate effects within majors, yielding comparisons between elite and non-elite institutions that account for field of study and allow heterogeneity in effects across major groups.

I classify top positions in the public sector as managerial roles and high-ranking professional positions, which together represent roughly the top 5% of individuals in my sample of university applicants who later work in the public sector. To identify these positions, I use detailed administrative data on the universe of public servants employed under the executive branch of the Chilean government between 2018 and 2023. The dataset provides information on each worker's contract type, organizational role (government authority, managerial, professional, technical, administrative, or auxiliary), and grade in the standardized salary scale.[2] These features allow me to rank positions consistently by responsibility and organizational relevance.

Importantly, the descriptive evidence aligns with prior findings, and consistent with patterns observed elsewhere (Chetty et al., 2023), this sample also shows a disproportion-

[2]Analogous to the General Schedule of the U.S. Civil Service.

ate share of elite university graduates among high-ranking public sector roles. Between 2000 and 2017, less than 13% of students accepted into a university enrolled in an elite institution; however, this share nearly doubles among those who later held a top position in the public sector between 2018 and 2023.

I find that enrolling in an elite university, rather than a non-elite one, does not affect the overall likelihood of working in the public sector. The only exception is among Health majors, for whom elite enrollment reduces the probability of public sector employment by about 40% relative to comparable students in non-elite institutions. This result is consistent with the well-documented compression of wages in public sector labor markets (Borjas, 2002; Hoxby & Leigh, 2004).

In contrast, admission to an elite university has, on average, no effect on the probability of attaining a high-ranking position in state administration. This suggests that the disproportionate representation of elite university graduates in top public sector positions is a result of selection: elite universities admit higher-achieving students who would have reached those positions regardless.

Because elite universities in Chile typically offer a wider range of majors than non-elite institutions, effects may vary across fields. To examine this heterogeneity, I first identify the majors most prevalent among top public sector positions. I then re-estimate the stacked fuzzy RD design within these groups, comparing individuals who enrolled in the same set of majors at an elite university to similar applicants who enrolled in that same set of majors at a non-elite university.

For the most prevalent majors among top public sector roles, enrolling in an elite university has no detectable effect on the likelihood of attaining a high-ranking position relative to enrolling in the same set of majors at a non-elite university. However, for Health and public administration majors, the estimates reveal meaningful heterogeneity by socioeconomic background: among students from lower-SES backgrounds, elite enrollment increases the probability of reaching a top position in state administration.

These results are particularly relevant given the central role of the public sector in most economies. It is typically the largest employer in the labor market,[3] and a key driver of social development (Finan et al., 2017). Understanding how elite university graduates select into public employment, and the returns to elite credentials within this labor market, is therefore crucial for public administration's representation. Senior positions in the public sector confer influence over policy design and implementation. When hiring processes rely on transparent and merit-based criteria, elite higher education can expand access to these roles. In turn, this can promote a public administration that is more representative of the population it serves, a feature linked to improved quality and legitimacy of public service provision (Chattopadhyay & Duflo, 2004).

These findings relate to, and extend, a broader literature on elite education and labor market outcomes. Existing research has primarily examined the effects of attending elite universities on private sector labor market outcomes, particularly on measures of success such as attaining senior corporate positions or reaching the upper tail of the earnings distribution (Chetty et al., 2023; Zimmerman, 2019). In contrast, much less is known about whether elite institutions similarly shape the pipeline into senior roles in the public sector. This gap reflects two main empirical challenges that I address in this paper: the lack of plausibly exogenous variation in access to elite higher education, and the limited availability of comprehensive data linking public servants to their educational histories and labor market trajectories.

This paper makes three contributions to the literature. First, it expands research on the causal effects of attending elite universities on labor market outcomes, a literature that has predominantly focused on private sector contexts. Prior work documents positive effects on earnings for some settings (Anelli, 2020; Jia & Li, 2021; MacLeod et al., 2017), as well as null or mixed results in others (Dale & Krueger, 2002; Hoekstra, 2009;

[3] Roughly 15% of the total workforce in the U.S. (and more than 20% in Western Europe), of which over 61% of occupations require postsecondary education, compared to 35% in the private sector (BLS, May 2020).

Mountjoy & Hickman, 2021). In contrast, career progression in the public sector takes place within organizational and political structures that substantially differ from market-driven environments, and these institutional features are likely to shape the returns to elite education. This paper provides new evidence by examining the returns to elite university enrollment in the public sector.

Second, it contributes to the literature on elite education and leadership. While recent evidence shows that elite universities do not necessarily raise mean earnings, they do increase the likelihood of obtaining top positions in prominent firms and reaching the upper tail of the earnings distribution (Chetty et al., 2023; Zimmerman, 2019), with effects concentrated among certain groups such as men from high-SES backgrounds. This paper examines whether similar dynamics operate for public sector leadership. Using the Chilean civil service personnel classification and salary scale, I define and identify high-ranking positions in public administration and estimate how elite university enrollment affects entry into these roles.

Third, while quasi-experimental variation from admission cutoffs has been previously used to study the effect of elite institutions (Abdulkadiroğlu et al., 2014; Hoekstra, 2009; Zimmerman, 2019), in this paper, I take advantage of the richness of the applications' data to explicitly define the counterfactual groups in each of my RD analyses. This methodological advance has not been previously implemented by preceding literature on elite education, and it allows a more precise interpretation of the estimated causal effects.

The public sector faces well-documented barriers in attracting and retaining skilled workers (Borjas, 2002). Although public employment is subject to more rigid labor regulations, several resources have been shown to improve recruitment and management quality, including career advancement opportunities, wage increases, and greater transparency and competition in hiring processes (Ashraf et al., 2020; Dal Bó et al., 2013; Finan et al., 2017; Muñoz & Prem, 2024; Muralidharan & Singh, 2020). This paper contributes to this literature by examining how elite university enrollment affects the likelihood of entering public sector employment across different fields of study. This perspective highlights variation in the supply of potential public sector leaders. For instance, the results indicate that individuals who study Health majors at elite universities are, on average, substantially less likely to select into public sector careers, highlighting a particular challenge in attracting this group.

Finally, research on public sector labor markets has often been limited by the lack of comprehensive data covering the full scope of public administration. As a result, prior studies have typically focused on specific occupations, particular agencies, or local government settings (Dal Bó et al., 2013; Deserranno, 2019). This paper extends the scope of this literature by leveraging administrative records that cover all entities under the executive branch of the Chilean government, including both central agencies and municipal administrations.[4]

The rest of the paper proceeds as follows. Section 2 provides more information about the Chilean public sector and the higher education application system. Section 3 describes the data and estimation samples. Section 4 describes the research design and presents the RD design validation. Section 5 presents the main findings and the results for specific groups of majors. Section 6 concludes.

[4]With the exception of institutions within the legislative and judicial branches.

2 Study Context and Setting

2.1 The Chilean Public Sector

In this study, I use the information on public sector workers under the Chilean executive branch in all centralized and decentralized agencies of the 24 existing ministries from 2018 to 2023.

The Chilean public employment model is structured mainly based on the career system, although it has incorporated different elements to the model using more temporary contracts. This system has an ascending structure of positions and remuneration grades linked to the importance of the function performed. A salary scale determines the remuneration structure,[5] and other general and specific allowances complement the base salary.

Civil servants may have two types of contracts: *planta* (staff) and *contrata*, which respectively represent 22% and 55% of the personnel.[6] The former corresponds to the permanent positions assigned by law to each institution, and the latter are those that perform more transitory duties. In the last decades, there has been a steady decline in the proportion of staff officers and an increase in temporary positions.

Within staff positions, there are career officials and trusted servants. For the former group, entry is obtained through a public competition,[7] and they can't be fired arbitrarily, so they can only lose their job under specific legally established causes. On the other hand, trusted servants are staff that have the executive's exclusive confidence,[8] and are subject to the free appointment and removal by the President or of the corresponding authority.

[5]Although some functions and sectors have their own assignment of grades based on other remunerations scale.

[6]There is another type of contract, *honorarios*, which represent 10% of the personnel but are not considered public servants (DIPRES, 2023).

[7]Positions that become vacant are replaced through internal competitions or by promotion in which the staff members of the respective service can participate. When these vacancies are not assigned through the mentioned procedures, they are open to a general entry contest.

[8]Ministers, Undersecretaries, and Head Chiefs of Service.

Before the creation of the SADP (for *Sistema de Alta Dirección Pública*, or Public Senior Management System) in 2003, these positions were not under standardized selection procedures. Since the system came into force in 2004, discretion has been attenuated to appoint and remove some of these trusted positions whose functions are predominantly the execution of public policies and direct provision of services to the community. With the SADP implementation, these positions are appointed by the Senior Public Management Council[9] and are submitted to a public contest for periods of three years (renewable).

The contrata positions arose for the need to fulfill more transitory tasks. At first, these public positions had a maximum duration of one fiscal year, at most, and had to end on December 31st of each year. Since 2017, all public institutions must elaborate and apply transparent recruitment and selection procedures based on merit, suitability, inclusion, and equal opportunities. Finally, the law establishes a limited number of contrata officials that can be hired as staff members, which cannot exceed 20%.

Considering this employment structure, my first labor market outcome is defined as ever having been a public employee between January 2018 and May 2023. This indicator variable takes value 1 if the individual had a contrata or a planta contract in that period, and 0 otherwise.

On the other hand, to define the second labor outcome, "having a top position," it is key to consider that my analytical sample consists of individuals from the higher education application processes of 2000 onward. Therefore, a substantial proportion (90%) falls within the 25 to 45 age group in 2023. As higher-ranking positions are predominantly held by individuals with extensive experience, this demographic limitation restricts my capacity to observe part of the top positions in the analytical sample. Thus, I employ a *relative* measure of top position to address this constraint.

The public sector workforce comprises distinct roles categorized into five types: manager, professional, administrative, technician, and auxiliary. By considering the top posi-

[9]CADP, for *Consejo de Alta Dirección Pública*.

tions, the focus inherently falls on those with significant responsibilities and leadership roles, primarily managers and some professionals.

To refine this criterion, I used the public sector salary scale, encompassing 31 grades. I included only professionals at the top 8 positions in the salary scale, constituting the uppermost 15% of the professional hierarchy. The result is a top position definition that only includes managers and some high-rank professionals, which jointly represent 5% of public sector positions in the analytical sample. The measure is relative as it doesn't necessarily comprehend all the directive and high-ranking professionals in the public sector, but those who applied to the university from 2000 onward. Appendix Table A.1 highlights the categories considered as top positions among public servants.

2.2 The Higher Education Application System

This subsection provides an overview of Chile's higher education admission system. Understanding this framework is essential to analyze elite universities' effect on public-sector employment outcomes.

The CRUCH (for *Consejo de Rectores de las Universidades Chilenas*, or Rector's Council of Chilean Universities) is an organization that comprehends the country's traditional universities. It includes 30 institutions, considered the country's most prestigious and historically significant. Only these universities have the right to direct contributions from the state. All the CRUCH universities and six other large private institutions participate in the national centralized university admission system. Appendix Table A.2 lists all universities included.

Students willing to study in any of these 36 institution must take the PSU (for *Prueba de Selección Universitaria*, or University Selection Test), a standardized test that can only be taken at the end of each year. The only requirement to take this test is to complete high school, and most students take the PSU at the end of their 12th grade.

The PSU assesses the cognitive abilities and aptitudes of students in various academic disciplines. The exam includes compulsory tests in two main subjects: mathematics and Spanish. In addition, depending on the requirements of their preferred majors and institutions, prospective candidates can take two additional tests, natural sciences and history and social sciences. The PSU scores are measured on a scale of 150 to 850 points, with 450 points being the minimum score needed to apply to any major.

Each university-major combination uses specific and publicly known weights for the different PSU subject exams and the high school GPA. Therefore, the weighted score used to apply to any major is a composite of different PSU subject exams and the average high school GPA.

Each year, after receiving their PSU results, students apply through a simultaneous, centralized, and integer online system.[10] In this process, applicants list their preferred set of 10 university-major combinations, and seats are assigned using a deferred acceptance algorithm (Gale and Shapley, 1962), so applicants have incentives to rank their options according to their true preferences.

Students are only accepted to their highest-ranked major-institution combination listed, conditional on their specific weighted PSU score reaching that year's corresponding admission threshold. After acceptance, all the other less preferred institution-major combinations in the list are discarded.

Importantly, no other factors are considered in the admission process (e.g., statements of purpose), and applicants cannot predict the exact PSU's cutoff point of each institution-major because they correspond to the last accepted individual's averaged score, which varies yearly depending on the available slots and the applicants' demand.

The institution's and majors' levels of selectivity vary significantly. The two oldest universities *Universidad de Chile* (UCH) and *Pontificia Universidad Católica de Chile* (PUC) are also the most selective. All the majors' admission cutoffs in these two institutions are considerably higher than in other universities, and the average difference is more than a

[10]SUA, for *Sistema Único de Admisión*, or Single Admission System. This governing body ensures fairness and transparency in the selection process for all CRUCH universities.

standard deviation of PSU's score distribution. Therefore, the average PSU score of the typical accepted student in UCH or PUC is much higher relative to other applicants (see Table 1).

Both institutions share the first and second place among Chilean universities in international classifications.[11] Also, graduates of these two universities typically obtain better labor outcomes than their counterparts from less selective institutions. To illustrate, these two universities hold 95% of The National Prize[12] winners, and the two Chilean Nobel Laureates. Also, 70% of all presidents have earned degrees from one of these prestigious institutions. Between 1990 and 2016, two-thirds of government ministers, half the senators, and a third part of representatives were alumni of elite majors (UNDP, 2017). Similarly, 2% of students admitted to business-focused majors at these two universities account for 41% of directors and top managers in publicly traded corporations (Zimmerman, 2019).

For this large difference in selectivity and their graduates' outcomes, I define UCH and PUC as *elite* universities. Figure 1 shows the distribution of majors' average (through 2000 and 2017) admission cutoffs by type of institution, and Table 1 shows descriptive statistics of elite and non-elite universities. Importantly, on average, elite universities offer more majors, have more students, and accept a much larger proportion of students from private high schools and from the Metropolitan region (Santiago).

[11] QS World University Rankings, Times Higher Education World University Rankings, Academic Ranking of World Universities.

[12] The National Prize of Chile is the collective name given to a set of awards granted by the government of Chile. Categories include Literature, Natural Sciences, Social Sciences, and Arts, among others.

3 Data and Sample

I use administrative data from different sources to track individuals who applied to university, from high school to their post-college employment outcomes in the public sector. The data can be classified into two types. The first is information on the labor market outcomes of individuals hired by the public sector in Chile, and the second comprises detailed characteristics of college-admission test takers and their application and enrollment results.

3.1 Public Sector Data

The public sector data comprises all public servants in Chile from January 2018 to May 2023, spanning two governments from different political coalitions.[13] This is public information available since 2009 when the *Ley de Transparencia* (Transparence Law) came into effect. I restricted my sample to a nearer period because entries before 2018 are incomplete.

The dataset contains monthly registries of all individuals working in the public sector under the President's executive power (i.e., in any institution of the 24 existing ministries). The information considers only the civil personnel, excluding the personnel of the Armed Forces and Law Enforcement, as well as the personnel of public companies, deputies and senators of the National Congress, and members of the judiciary.

The information includes individuals' complete names, type of contract, earnings, institution, position type (i.e., government authority, managerial, professional, administrative, technical, or auxiliary), position on the salary scale, region, and more. Importantly, the dataset does not contain the individuals' national identification number, but I merged

[13]Sebastián Piñera's second government (March 2018 to March 2022) and Gabriel Boric's first year of government (March 2022 to May 2023).

it by name[14] using the 2016 Chilean electoral roll.[15]

Figure 2 shows the distribution of the annual average of the total number of public servants by ministry. It should be noted that the institutions of three ministries, Health, Education, and Interior, together employ 4 out of every 5 public servants. The large number of employees in the Ministry of the Interior is explained by all municipal workers. Although the municipalities are autonomous organizations, they are under the Ministry of the Interior. The large number of employees in Health and Education is because the state, as in many countries, is the largest provider of services in those markets.

Similarly, Figure 3 shows the annual average proportion of individuals with top positions within each ministry. Notably, despite the disproportionate number of public servants concentrated in the ministries of Health, Education, and Interior, the distribution of top positions' proportions is much more homogeneous. In fact, the larger ministries have, in general, a lower proportion of top positions.

The mean proportion of top positions by ministry is 22%, higher than the overall proportion of top positions in the analytical sample. The difference relies on the fact that the analytical sample only includes a subsample of individuals who applied to higher education from 2000 onward.

3.2 Applications Data

For the higher education information, I use administrative data from all yearly college application processes in Chile from 2000 onward. The anonymized information was provided for research purposes by the Ministry of Education (MINEDUC) and the Department of Evaluation, Measurement, and Educational Registration (DEMRE).

Each year, applicants rank a maximum of ten major-university combinations accord-

[14]Using first name, middle name, first surname, and second surname. The rate of successful matches is 93%.

[15]Chile's Electoral Service (SERVEL) makes public the electoral registry under the Law N°18.556. It contains the names, identification number, voting locations, and other information of all Chileans over 17 years of age and foreigners with the right to vote.

ing to their preferences. The data is at the application level, and it includes the ranked preference number (1 to 10) and applications' results (i.e., accepted, waitlisted, or rejected). The data also contains applicants' characteristics such as higher education entry exam scores, high school GPA, the school from which they graduated, gender, and date of birth. A survey completed by applicants at college entry exam's online registration provides other applicants' baseline characteristics, such as per capita family income and parents' occupation, among others. Additionally, individuals' enrollment status after admission is available for all majors and each application year.

3.3 Sample

To combine the applications dataset with the public sector labor outcomes, the MINEDUC anonymized the public sector information by removing names and replacing the individuals' national identification numbers with a student-unique code that allows the combination of different educational datasets in Chile, preventing individuals from being identified. I collapsed the anonymized public sector data to the public servant level, so the labor outcomes indicate whether the individual ever worked in the public sector or reached a top position between January 2018 and May 2023.

I defined the outcome *top position* using the categories established in public administration. The existing position types, and their corresponding share in 2022 (DIPRES, 2023), are manager (2.4%), professional (50.3%), technician (25.6%), administrative and auxiliary (21.8%). Another category included in the data is government authorities (e.g., ministers). They hold political positions that are not subject to standard hiring protocols; instead, they are appointed at the discretion of the President. For this difference, I do not classify government authorities as top positions. Nevertheless, their inclusion does not change the estimated results due to the limited number of individuals in this category.

Only managers and some professionals, which are the following two top categories by earnings and responsibilities, are considered top positions. Only professionals at the top 8 positions (out of 31) in the salary scale are considered top positions. This is the top 15% of professionals. Together, the proportion of applicants reaching a top position represents 5% of individuals in the public sector data. Importantly, the top position indicator variable is coded as zero for individuals not observed in the public sector.

Finally, I merged these outcomes to the 2000-2017 applications data using individuals' masked identification numbers. The result is a higher education applications-level sample, for admission processes between 2000 and 2017, including individuals' post-college public sector labor outcomes observed between 2018 and 2023. This limits my capacity to observe older individuals in the public sector, as the typical applicant in 2000 would have 42 years in 2023. Nevertheless, the largest proportion of public servants is between 35-44 years of age (32%), while 28% is under 35 (DIPRES, 2023).

Table 4 shows descriptive statistics of the analytical (merged) sample. There are roughly 1,400,000 applicants in all 18 higher education application processes—14% worked in the Chilean public sector between 2018 and 2023. The average number of applicants per year is around 80,000, and the mean number of major-university combinations ranked by applicants is roughly 5. Almost 70% of applicants are accepted into any institution, while less than 9% are admitted into an elite university (PUC or UCH).

While few differences exist among those who work in the public sector and those who don't, three stand out. Gender is balanced among applicants who don't work in the public sector, but more than two-thirds of those who do are women. Of those who work in the public sector, fewer graduated from private high schools and a larger proportion from public high schools, showing a baseline socioeconomic difference in favor of those who didn't work in the public sector,[16] corroborated by a higher per capita family income. Finally, applicants who work in the public sector graduated in less proportion from high schools in the Metropolitan Region (Santiago).

[16]Private schools in Chile cover less tan 10% the total enrollment. They have historically served individuals from wealthier families, so it is usually used as a good proxy of socioeconomic status (e.g., Zimmerman, 2019).

Individuals in top positions are much more likely to be accepted in any university than all other public sector workers. Importantly, the proportion of individuals in top positions accepted into an elite university is more than double compared to the rest of the applicants. This relationship is presented in Figure 4, which shows the large differences between institutions on their selectivity levels and the proportion of top positions their accepted individuals represent.

Additionally, while the proportion of female employees in top positions is balanced with males, it is 17 percentage points lower relative to all applicants in the public sector. Top positions also come, on average, from higher socioeconomic backgrounds.

As detailed in the next section, the empirical strategy I use to estimate the effect of enrolling in an elite university on public sector labor outcomes restricts the analytical sample for identification purposes. Specifically, this estimation sample comprises the subgroup of applicants accepted into an elite university major, but whose next preferred option listed where they would have been admitted is a non-elite university. Similarly, it includes applicants who were waitlisted in an elite university and were accepted in a less preferred option in a non-elite institution. The estimation sample also considers a smaller group of applicants to increase statistical power. Those who, conversely, were accepted or waitlisted in a non-elite university major, and their next preferred option for which their score meets the corresponding cutoff (i.e., would have been or were accepted respectively) is in an elite university. This estimation sample allows the comparison between individuals with similar preferences who enrolled in an elite university and those who were admitted into a non-elite university.

The first column in Table 2 shows descriptive statistics of the estimation sample, considering all majors offered. The sample includes more than 180,000 applicants, from which a third are accepted in an elite university (at the right of the centered cutoff), and the other two-thirds are accepted in a non-elite university (at the left of the centered cutoff). The proportion of individuals from private high schools and from the Metropolitan region doubles compared to the total of applicants, and around 1% have a top position in the public sector.

In the second part of my empirical analyses, I explore the most prevalent majors among top positions. Figure 5 shows the relationship between the major's selectivity and the proportion they represent among top positions. While there is significant variation, the plot shows a positive correlation between these two variables. Also, majors in elite universities, relative to non-elite majors, are distributed considerably to the top right part of the plot. As expected, they are more selective and have a relatively higher proportion among top positions. Similarly, Figure 6 shows the same plot, omitting majors with none of their accepted individuals among top positions, but highlighting four groups of majors (independently of university type) that have a higher representation in top positions.

The most prevalent groups of majors among top positions are law, business, and engineering, the denominated "business-oriented" majors, and also the most prevalent among top positions in the private sector (Zimmerman, 2019). The second group comprises health majors, excluding medicine.[17] I excluded medicine as this major is very different from the rest of health degrees, as it is by far the most selective major, and their graduates have much higher earnings. Importantly, results do not vary if I include medicine in health majors. The third largest presence in top positions is for architecture, sociology, and journalism, while public administration, a major specifically designed to manage the public sector, is in fourth place.

I estimate the effect of enrolling in an elite university relative to a non-elite university separately for each one of the four sets of majors. This implies the definition of four new estimation samples, using the same process followed for the overall estimates. The only difference is that the sample is further restricted to individuals accepted and waitlisted in any of the majors in each of the four specified groups. In these cases, applicants at the right of the centered cutoff are admitted into a major of one of the four selected sets

[17] Health majors include; nursing, physical therapy, dentistry, psychology, obstetrics, chemistry and pharmacy, occupational therapy, medical technology, and nutrition.

of majors in an elite university, while those at the left are accepted into a major from the same set, but in a non-elite university.

The last four columns in Table 2 show descriptive statistics for each of the major groups' estimation subsamples. There are large differences in gender and socioeconomic composition of applicants between the four groups of majors. Notably, top positions represent 1% of individuals in the law, business, and engineering sample and the architecture, sociology, and journalism sample. The group of majors with the lower rate of top positions is health (non-medicine), with 0.5%. The group with the largest proportion is the public administration major, with roughly 6%.

4 Research Design

4.1 Stacked Fuzzy RD

The goal of the research design is to estimate the LATE of enrolling in an elite university relative to a non-elite university, for those in the margin of admission, on the likelihood of working in the public sector and of reaching a high-rank position. The greatest challenge to causally estimate the effect of elite higher education on labor outcomes is overcoming the selection problem. Students decide which universities and majors to apply, and universities choose among their applicants. Consequently, the accepted and non-accepted applicants differ in observable and non-observable characteristics. These differences will also likely determine their post-college labor outcomes. Therefore, a simple comparison between the two groups will produce biased estimates of the elite higher education effect.

The Chilean higher education admission system offers a unique opportunity to address this challenge. By the end of each year, those willing to apply to the university must take standardized national exams, *Prueba de Selección Universitaria* (PSU).[18] The only requirement to take the tests is having graduated from high school. Math and Spanish subject exams are mandatory, while History and Sciences exams are optional. Applicants decide which tests they take according to the requirements of the majors they are willing to apply. The weights w^s assigned to the average high school GPA and each subject exam s, vary by major m, university u, and cohort c. Importantly, weights meet the conditions:

i. $\sum_s w^s_{muc} = 1 \,, \qquad \forall\, m, u, c.$

ii. $0 \leq w^s < 1 \,, \qquad \forall\, s =$ *Math, Spanish, History, Sciences, GPA*.

As a result, applicants have a specific weighted PSU score to apply for each major and institution of interest. Individual's i weighted PSU score to apply for major m, in

[18] Before 2004's application process, the exams were named Prueba de Aptitud Académica (PAA).

university u, in cohort c, is defined as:

$$PSU_{imuc} = \sum_s w^s_{muc} \cdot \mathit{score}^s_{ic} \, , \tag{1}$$

where score^s_{ic} is the average high school GPA[19] and the results in each PSU subject exam.

After receiving the PSU exam results, applicants rank their ten most preferred major and institution combinations in a centralized online platform. A deferred acceptance algorithm (Gale and Shapley, 1962) matches students and majors considering the ranked preferences. Applicants are admitted only into their most preferred major-institution combination listed, conditional on their weighted PSU score meeting the corresponding cutoff. All other less preferred options listed are discarded. Each year, this process generates an accepted and a waitlist of applicants for each major-institution combination. In a second round, after enrollment, seats that weren't taken make way for waiting lists to move and fill empty slots. Prospective students may retake the entry exams and apply in more than one year, so I only use information from individuals' first application process in my analyses.

Importantly, applicants can't precisely predict the minimum score needed to be admitted to each major. Cutoffs vary in every admission process depending on the available slots for each major in each institution and the corresponding applicants' demand. Consequently, conditional on students' weighted PSU score, falling just above or below a cutoff is considered random, allowing a local comparison at the cut-point neighborhood as observable and non-observable characteristics are balanced between the two groups. In this way, every year, the admission system generates thousands of discontinuities on the probability of acceptance into the corresponding majors.

This quasi-experimental variation on admission allows the implementation of multiple RDs, each corresponding to a specific major and institution combination, with the

[19] In Chile, GPA ranges from 1.0 to 7.0. For the higher education applications context, it is transformed to an equivalent PSU score.

weighted PSU scores as the running variables (Hastings et al., 2013). Apart from the mentioned discontinuity on the treatment assignment at the threshold, the RD identification relies on the assumption of continuity of potential outcomes at the cutoff. While this assumption is not directly testable, it has testable implications. To validate the RD design, I assess the plausibility of the potential outcomes continuity assumption by implementing the procedure in Cattaneo et al. (2018) to check for a discontinuity of the running variable's density, which would be a sign of manipulation of the running variable (e.g., increasing effort) to fall just above the threshold. A second testable implication of potential outcomes continuity is the balance of observable pre-treatment characteristics between individuals at each side of the threshold. To check this, I estimate the effect of admission on baseline variables. Statistically significant effects on pre-treatment outcomes are a sign of potential outcomes discontinuity.

The empirical strategy goal is to estimate the effect of elite universities on public sector labor outcomes. To do this, I implement a *stacked* RD approach following Pop-Eleches and Urquiola (2013), and Abdulkadiroğlu et al. (2014). Specifically, the empirical strategy pools the set of accepted and waitlisted individuals across all majors of the two most selective universities (PUC and UCH), centering the major-institution-specific cutoffs.

A new running variable is generated by subtracting the specific major cutoff from applicants' weighted PSU scores, and it represents the distance to the corresponding cutoff ($r_{imuc} = PSU_{imuc} - \mathit{cutoff}_{muc}$). The estimated equation is:

$$Y_{imuc} = f(r_{imuc}) + \beta A_{imuc} + \gamma_{muc} + \varepsilon_{imuc} \ , \quad (2)$$

where Y_{imuc} are the labor outcomes of individual i applying to major m, in university u, in application cohort c; $f(\cdot)$ is a smooth function and A_{imuc} is an indicator variable that takes value 1 if the student's weighted PSU score is higher or equal to the major-specific cutoff (i.e., $0 \leq r_{imuc}$), and therefore admitted to major m in an elite university u, and 0 otherwise. Importantly, this stacked specification includes major-institution-cohort fixed effects, γ_{muc}, as the level of exogenous variation allowing identification is at the major-specific RD level. The estimated parameter β in this stack represents a weighted average of major-university LATE of admission in an elite university on the corresponding outcome Y_{imuc}.

As mentioned, the treatment assignment in the RD design is as good as random conditional on observables. For this reason, the running variable is included in the estimation equation for identification purposes. Depending on the relationship between the outcome and the running variable, the function $f(\cdot)$ can be a polynomial of grade 1, or higher in case of a non-linear relationship. Also, an interaction of the polynomial with the indicator variable (A_{imuc}) can be included to allow for different slopes at each side of the cutoff. However, choosing an incorrect functional form leads to bias (Gelman and Imbens, 2019), so the literature has usually favored the use of non-parametric local linear regressions (Hahn et al., 2001). Therefore, all results presented are local polynomial RD estimates with optimal bandwidths and robust bias-corrected confidence intervals (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). Finally, while not considered in equation (2) for simplicity, other pre-treatment covariates are included in the specification to increase the estimates' precision.

In this stack, meeting the specific criteria set at the centered cutoff point results in admission to an elite university major. However, a significant challenge frequently faced by the empirical literature in similar settings is the capacity to define the comparison group properly. Applicants waitlisted in a major in an elite university might end up admitted into a non-elite university, or in a different major of an elite university, or none.

Following Aguirre et al. (2022), I explicitly define the treatment and comparison groups by restricting the sample of applications considered in my analyses. The richness of the data allows me to observe all preferences ranked by the applicants in each year's admission process. Using this information, I consider (*i*) individuals who were accepted in an elite university major, but whose next preferred option meeting the corresponding cutoff is in a non-elite university (i.e., would have been accepted in a non-elite university); and (*ii*) individuals who got waitlisted in an elite university major, but whose next preferred option meeting the corresponding cutoff was in a non-elite university (i.e., accepted in a non-elite university). In this setting, the first group of applicants is at the right of the centered cutoff for elite admission, while those from the second group are at the left.

The result is a defined comparison between applicants with similar preferences, but one group is marginally accepted in an elite university (and would have been accepted in a non-elite university otherwise), while their counterfactuals are marginally rejected from an elite university, and accepted in a non-elite university.

To increase statistical power, I also include a smaller group of (*iii*) individuals who were accepted in a non-elite university major, but whose next preferred option meeting the corresponding cutoff is in an elite university (i.e., would have been accepted in an elite university); and (*iv*) individuals who got waitlisted in a non-elite university major, but whose next preferred option meeting the corresponding cutoff was in an elite university (i.e., accepted in an elite university). For this smaller group, the running variable is inverted ($r_{imuc} = \mathit{cutoff}_{muc} - PSU_{imuc}$), so those accepted in a non-elite university are at the left of the centered cutoff and those accepted in an elite university are at the right. Importantly, results do not vary when I remove this group from the analyses.

Naturally, not all applicants enroll in the major and institution where they were accepted. Therefore, I instrument student enrollment with acceptance into the corresponding major to estimate the LATE of enrollment for the group of compliers[20] near the cutoff point using a fuzzy RD. This requires the instrumental variable (admission) to be exogenous, relevant, and monotonic. The exogeneity of the instrument is not testable, but the validity of the RD design supports it, as falling just above or below the threshold is random conditional on the running variable. The relevance (strength) of the instrument is

[20]Those who enroll if accepted.

directly tested by estimating the effect of admission on enrollment in an elite university in the first stage. The monotonicity assumption in this setting is expected to hold as the presence of defiers seems unlikely. Applicants can't enroll without being admitted, and the rate of enrollment is extremely high after admission.

The stacked fuzzy RD first- and second-stage estimation equations, respectively, are:

$$enroll_{imuc} = g(r_{imuc}) + \alpha A_{imuc} + \gamma_{muc} + \epsilon_{imuc}\,, \tag{3}$$

$$Y_{imuc} = h(r_{imuc}) + \delta \widehat{enroll}_{imuc} + \gamma_{muc} + \mu_{imuc}\,. \tag{4}$$

The variable $enroll_{imuc}$ indicates enrollment into major m in an elite university, and the parameter δ captures the LATE of enrollment in an elite university (vs. a non-elite university) for compliers near the centered cutoffs.

In my second set of analyses, I explore the effect of enrollment in an elite university for the set of majors with higher prevalence among top positions in the public sector: a) Law, business, and engineering; b) Health non-medicine; c) Architecture, sociology, and journalism; and d) Public administration. For that, in each case, I further restrict my estimation sample to those specific groups of majors. The comparison, therefore, is between individuals accepted in the same majors, but in an elite university relative to a non-elite university. Estimation subsamples for groups (*i*) to (*iv*) are redefined accordingly.

For all the fuzzy stacked RD models, I implement local polynomial RD estimators with robust bias-corrected confidence intervals and MSE-optimal bandwidth selector in Calonico et al. (2014b) and Calonico et al. (2020).

In stacked RD contexts, it is common to cluster the standard errors at the individual level because applicants can be in more than one of the multiple stacked RDs. In this setting, I only consider in my analyses individuals in groups (*i*) to (*iv*), which do not overlap. Then, as individuals appear only once in my sample, heteroskedasticity-robust nearest neighbor standard errors are presented for all local polynomial estimates (Calonico et al., 2014a; Calonico et al., 2014b).

4.2 RD Assumptions Validity

The identification assumption of the RD design to obtain unbiased estimates requires the expected value of the potential outcomes to be continuous on the running variable at the threshold. In other words, the potential outcomes' distribution should not jump at the cutoff point in the absence of the treatment. Implicitly, this assumption means that observable and non-observable characteristics that could determine the outcome (Y_{imuc}) are continuous on the running variable (r_{imuc}). In practice, the continuity assumption requires applicants near each side of the cutoff to be similar in variables affecting their future labor outcomes, like socioeconomic status and motivation. If these conditions are satisfied, the RD design will provide valid (comparable) treatment and control groups at each side of the threshold, as the treatment assignment is as good as random (conditional on observables) near the cutoff.

The assumption would be violated if, for example, applicants can sort themselves at the right of the cutoff to get admitted to an elite university. This invalidates the identification strategy, as treatment and control groups would not be comparable due to a selection problem. In other words, students should not be able to manipulate their test scores (e.g., increasing their effort) to fall just above the acceptance threshold, implying self-selection of the highly motivated applicants into the treatment group. Consequently, factors that could determine future earnings (as motivation) would not be continuous at the cutoff.

The assumption cannot be tested directly, but the standard is to check for two implications of the assumption violation. The first is looking for discontinuities of other predetermined observable characteristics and assessing the balance between the two groups at each side of the cutoff. The second approach examines the distribution density of applicants close to the cutoff point (McCrary, 2008). This selective sorting of applicants is unlikely to happen in the admission to higher education context because students do not know ex-ante the precise cutoffs (Hoekstra, 2009). Additionally, institutions usually set the acceptance threshold to achieve a target enrollment level and not for specific characteristics of students.

To verify the validity of this assumption, I run manipulation tests for the running variable using a local polynomial density estimation (Cattaneo et al., 2018). In the presence of manipulation, a higher density of applicants just at the right of the centered cutoff should be observed, reflecting the non-random sorting of applicants. Figure A.1 shows no accumulation of applicants just above the cutoff point, providing supporting evidence of no manipulation. Additionally, the formal test shows no statistical evidence of systematic manipulation of the running variable, as the null hypothesis of no manipulation can't be rejected (P-value = 0.59).

Further, I also examine applicants' baseline characteristics' continuity. For this purpose, I estimate equation (3) with applicants' characteristics as dependent variables. Figure A.2 shows the estimated coefficient ($\hat{\alpha}$) for each case. None of the estimated coefficients are statistically different from zero at 95% confidence. Despite this being a necessary but not sufficient condition, as is also needed balance of unobserved characteristics, these results support the validity of the continuity assumption in my analytical sample.

I further explored the effect of elite relative to non-elite universities on the probability of having a top position for a selected group of majors. This requires generating new stacked RD estimation samples for each of the four groups of majors. Therefore, I also ran balance tests for applicants' baseline characteristics and manipulation tests for each case.

Appendix Figure A.3 shows the distribution of applicants near the corresponding cutoffs. The respective four formal tests can't reject the null hypothesis of no manipulation at 10% significance, providing evidence of no manipulation of the running variable.
Similarly, Appendix Figure A.4 shows the estimated effects of admission to an elite university on ten applicants' baseline characteristics for each of the four major groups. From the 40 estimated coefficients, only two are statistically different from zero, a result that is

expected by chance at 95% confidence. Again, these results provide evidence in favor of the assumptions of the stacked RD design.

5 Results

5.1 Main Results

In this section, I present the overall findings of admission to an elite university irrespective of the major, starting with the impact on the likelihood of being employed in the public sector and then on attaining a top position. All the estimated results presented are the LATE for compliers (applicants who enroll in an elite university if admitted) near the corresponding cutoff.

5.1.1 First-Stage

Figure 7 depicts the change in the probability of enrolling in an elite university when applicants fall at the right of the centered cutoff (i.e., admitted into an elite university instead of a non-elite university). At the centered threshold, there is a significant increase in the likelihood of enrolling in an elite university. As shown in the first column of Appendix Table A.3, there is an increase of 61 percentage points in the likelihood of enrolling in an elite university, corroborating the relevance of the admission variable as an instrument for enrollment.

The slight increase in the probability of enrollment in an elite university just at the left of the centered cutoff is because not all accepted applicants enroll in the first stage of the application process, and the wait lists of the specific majors move individuals to the group of accepted students in the second round.

5.1.2 2nd-Stage: Work in Public Sector

The fuzzy RD second stage estimated results presented in the first column of the top panel in Table 3 show that enrolling in an elite university has a negative and statistically significant effect of 1.3 percentage points on the probability of working in the public sector. This effect represents a 9% decrease over the control compliers group's mean of 15%.

In the second and third columns of Table 3, I present separate estimates of the effect of enrolling in an elite university relative to a non-elite university for male and female applicants, respectively. The estimated effect for male applicants is close to zero and not statistically significant, while for female applicants, the effect is negative and much larger (2.5 percentage points), representing a decrease of 14% on the likelihood of working in the public sector.

These results suggest that the negative effect is mainly driven by females. Nevertheless, Panels B and C of Table 3 show estimated results excluding Health majors, which are predominantly (70%) female, and considering only Health majors, respectively. When health majors are excluded, the effect of enrolling in an elite university is close to zero and not statistically significant. On the other hand, when only Health majors are considered, the effect is large and statistically significant for both males and females. The effect of enrolling in a Health major in an elite university instead of a non-elite university reduces the likelihood of working in the public sector by 12 percentage points (41%). As the second and third columns of panel C of Table 3 show, the reduction in the probability of working in the public sector is larger for males (72%) than for females (35%).

Importantly, when I restrict my estimates or exclude from them other large groups of majors, like pedagogy, I do not find significant effects.

These findings show that individuals enrolled in Health majors at elite universities instead of non-elite universities are later less likely to pursue careers in the public sector, but this is not the case for non-Health majors.

One of the reasons explaining this negative effect for Health majors might be a wider distribution of salaries for them in the private sector. When the returns to education are large, the resulting wage distribution is wider as they respond in a larger proportion to the levels of qualification (Borjas, 2002). Irrespective of whether an elite university diploma serves as a signal of higher ability or a genuine surge in productivity, the outcome remains the same: graduates from more selective universities are rewarded with better wages (Hastings et al., 2013; Zimmerman, 2019).

The negative results on the probability of working in the public sector for Health majors also align with the documented wage compression in the public sector (Hoxby and Leigh, 2004; Mizala et al., 2011).

If true, financial motivations exist to avoid the public sector for Health majors from elite universities.

5.1.3 2nd-Stage: Top Position

I further explore the effect of enrolling in an elite university on the probability of attaining top positions in the public sector. Interestingly, the results in the first column of Table 5 show a small but non-significant effect, meaning that enrolling in an elite university does not significantly affect the probability of attaining top positions in public administration.

When I examine the effects of enrolling in an elite university on the likelihood of reaching a top position in pubic administration by gender, the results reported in columns two and three of Table 5 do not show important differences between male and female applicants, and again, the estimated coefficients are not statistically significant.

5.1.4 Refined Sample Analysis: Excluding Extremes in Selectivity Majors

In these analyses, the comparison between elite and non-elite universities is made regardless of the major. Elite universities, on average, offer a larger number of majors relative to less selective universities (see Table 1).

To narrow the comparison and check if the results are driven by extremely selective majors in elite universities or by very low selective majors in the control group, I reduced the estimation sample to majors with average entry exam cutoffs between 600 and 700 points. The decision to restrict the sample to those majors is based on what is observed in Figure 1, where the largest mass of overlapping majors is in the chosen range.

Appendix Table A.4 shows that results do not vary significantly for this overlapping set. The estimated results on the likelihood of working in the public sector and the null effect on attaining a top position are not driven by majors at the tails of the selectivity distribution.

5.2 Results by Major

In the second part of my analysis, I study the effects of elite universities on the probability of securing a top position, explicitly examining a selected group of majors. When considering all majors across elite and non-elite universities, there is a risk of overlooking unique major-related effects. Certain degrees are more adept at preparing individuals for high-ranking roles. To address this concern, I narrowed the scope by comparing outcomes within specific majors. This targeted approach enhances comparability by focusing on individuals accepted into the same majors, enabling a direct comparison between elite and less selective institutions.

The goal is to understand whether elite universities have an impact on reaching a top position among the most prevalent majors in those jobs. Accordingly, I identified four groups that stand out. The first group comprises law, business, and engineering, often referred to as "business-focused" majors (Zimmerman, 2019), which together represent 37% of the top positions in the sample. The second group consists of Health majors (excluding medicine), accounting for 10% of the top positions. Architecture, sociology, and journalism jointly accumulate 9% of the top positions, while the public administration major alone represents 7% of the top positions in the analytical sample (see Figure 6).

The stacked RD design sample in each of the four cases is generated in the same way as in the first analysis but for the specific majors studied. Thus, at the right of the corresponding centered cutoffs are individuals who were randomly accepted (conditional on their weighted PSU score) in the selected major in an elite university, while individuals at the left were conditionally randomly accepted to the same major in a non-elite university.

The discontinuity in the probability of enrolling into an elite university after admission is shown in Appendix Figure A.5 for all four groups of majors. The first-stage estimated results range between 50 to 85 points increase in the likelihood of enrollment in an elite university if admitted, validating the admission as an instrument for enrollment in all four cases.

Table A.5 presents the fuzzy RD second-stage estimates of the LATE of enrolling in an elite university for compliers, relative to a non-elite university among the four sets of selected majors. The overall estimated coefficients are not statistically significant, but differences in magnitude and sign appear between the four groups. Panel A shows a very small negative coefficient of 0.1 percentage points of enrollment in elite universities on the likelihood of having a top position among law, business, and engineering majors. Panels B and D show positive effects of 1.2 and 2.6 percentage points for Health and for public administration majors, respectively. On the other hand, enrolling in an elite university reduces the likelihood of attaining a top position in architecture, sociology, and journalism by 1.7 percentage points.

The second and third columns in Table A.5 show estimated effects for the subsamples of male and female individuals, respectively. The only statistically significant effect is for males in architecture, sociology, and journalism, showing a reduction of 8 percentage points in the probability of having a high-rank position. Notably, except for law, business, and engineering majors, the magnitude of the LATE of enrolling in an elite university on the probability of having a top position is relatively larger for males.

Finally, I estimate heterogeneous effects by SES on the likelihood of having a top position for the four groups of majors. I explore heterogeneity by SES because, in the private sector, networks made between individuals from affluent backgrounds work as drivers for attaining managerial positions in prominent firms (Zimmerman, 2019).

I use graduation from a private high school as a proxy of high SES as those institutions in Chile attend less than 10% of the wealthier students in the country.

While estimates are less precise, Panels A and C of Appendix Table A.6 show that, independently of the SES of the applicant, there is a negative but non-statistically significant effect on the likelihood of having a top position for the ”business-oriented” and architecture, sociology, and journalism majors.

On the other hand, panels B and D show that, in Health and public administration majors, applicants from higher (lower) SES who enroll in an elite university are less (more) likely to reach a top position in the public sector, compared to their counterparts in non-elite universities.

I also explored heterogeneous effects by geographical regions and age groups. The results are small and not statistically significant.

The results presented in this section show that enrolling in an elite university instead of a non-elite university affects the likelihood of working in the public sector only for Health majors. The effect represents a 41% reduction in the probability of working in the public sector for applicants enrolled in a Health major at one of the two most selective universities in the country.

On the other hand, enrolling in an elite university relative to a non-elite university does not affect the overall probability of reaching a high-rank position in the state administration. Therefore, the observed overrepresentation of elite university graduates among top positions in the public sector is a result of selection; elite universities enroll high-achieving applicants who end up in senior positions in the public sector anyway.

When comparing the effect of elite over non-elite universities within the most prevalent majors in top positions, the results show that in some majors, there is a negative effect on the likelihood of attaining a high-rank position for individuals who graduated from private high schools and a positive effect on those who graduated from non-private high schools. In contrast to what Zimmerman (2019) found on elite universities and managerial positions in prominent firms, elite universities are improving socioeconomic representation in state administration.

6 Conclusion

The overrepresentation of elite university graduates in leadership roles has been documented in many fields, such as politics and the corporate world. In this paper, I show that this phenomenon is also observed in the public sector, and I answer whether this is a causal effect of elite universities or a result of selection.

To study the impact of attending an elite university on public-sector labor outcomes, I use new administrative data on the universe of Chilean public-sector workers and information on higher education admissions processes in the country. I leverage a rigorous stacked fuzzy RD design and use applicants' ranked options to compare individuals with similar preferences to estimate the LATE of enrolling in an elite university relative to a non-elite university on the likelihood of working in the public sector and attaining a top position in the state administration.

I found that, on average, enrolling in an elite university does not affect the likelihood of working in the public sector for individuals at the margin of admission. The only group for which there is a significant effect is Health majors, who reduce their likelihood of working in the public sector by 41% relative to their counterfactuals from non-elite universities. This is relevant considering that the Ministry of Health hires around 35% of all public servants (see Figure 2).

In the second part of my analysis, I found that, on average, enrolling in an elite university does not affect the likelihood of attaining a high-ranking position in the public sector. The result does not vary when I identify the most prevalent majors among top positions and compare, within those majors, the effect of enrolling in an elite university compared to a no-elite university. These findings imply that the disproportionate share of elite university graduates in top positions of the state administration is a result of selection. Elite universities enroll high-achieving applicants who will end up in public-sector top positions anyway.

Importantly, as elite universities have shown to be an opportunity for high SES individuals to generate networks and make connections that later improve their labor outcomes in prominent firms (Zimmerman, 2019), I further explore heterogeneous effects by SES. When I estimate the effect of enrolling in an elite university on the likelihood of reaching a top position separately for applicants who graduated from private high schools and for those who graduated from non-private high schools, I find a negative and statistically significant effect for applicants enrolled in Health majors and in public administration from high SES. The effect is also statistically significant but positive for applicants in the same majors but from non-private high schools.

These results show that, despite elite universities enrolling a disproportionate share of applicants from affluent families, they have the potential to improve public sector top positions' representation by reducing the presence of high SES students and increasing those who graduated from non-private high schools. These results contrast to those found by Zimmerman (2019) among prominent firms in Chile, where only for male individuals from private high schools, there is an increase in the likelihood of having a managerial position or reaching the top 1% of the income distribution.

A potential explanation for the observed results could be the disparity in access to networks and connections between applicants from different SES backgrounds. Individuals from non-private high schools may face barriers in establishing influential connections during their university years, particularly in elite institutions where such networks are often pivotal for advancement in the private sector. Consequently, these individuals may choose career paths in the public sector, where the selection criteria are more transparent and reliant on merit rather than school connections. In this sense, the public sector might offer a more accessible route to influential positions for those lacking the privileged networks prevalent in the industry.

Although the study provides a thorough analysis, there are a few limitations to keep in mind. In part, the sample's age range limited the opportunity to study older individuals in the public sector's top positions. This suggests the potential for future research to delve into the career paths of more senior professionals, exploring their unique patterns of mobility and success within the public sector.

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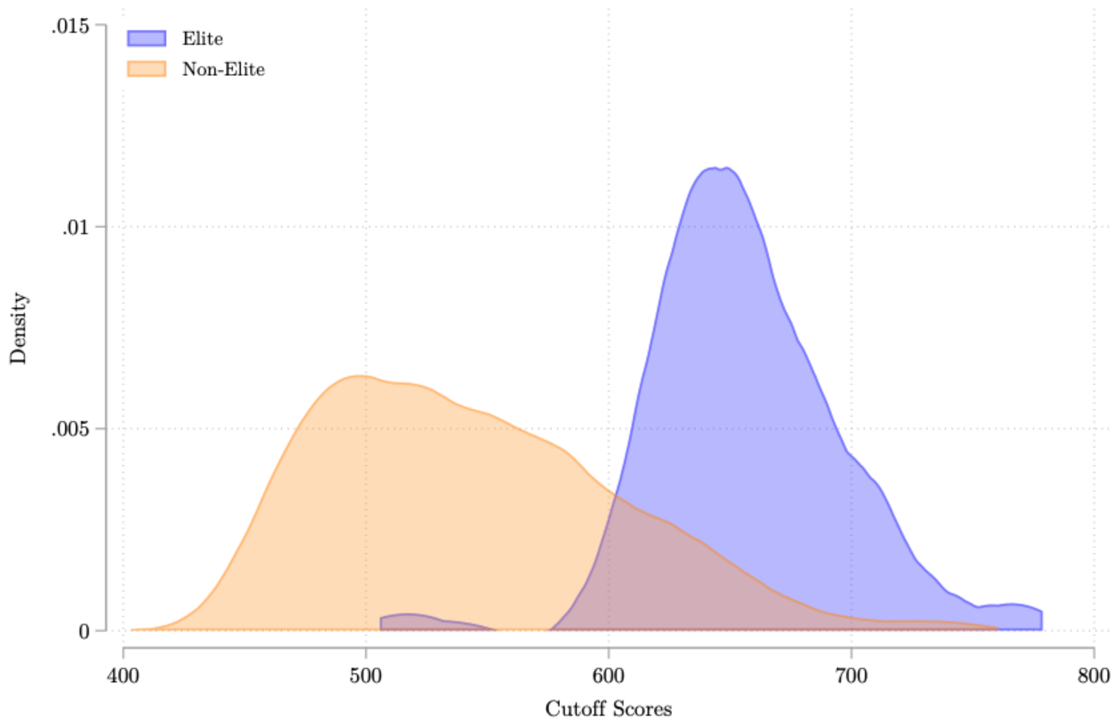
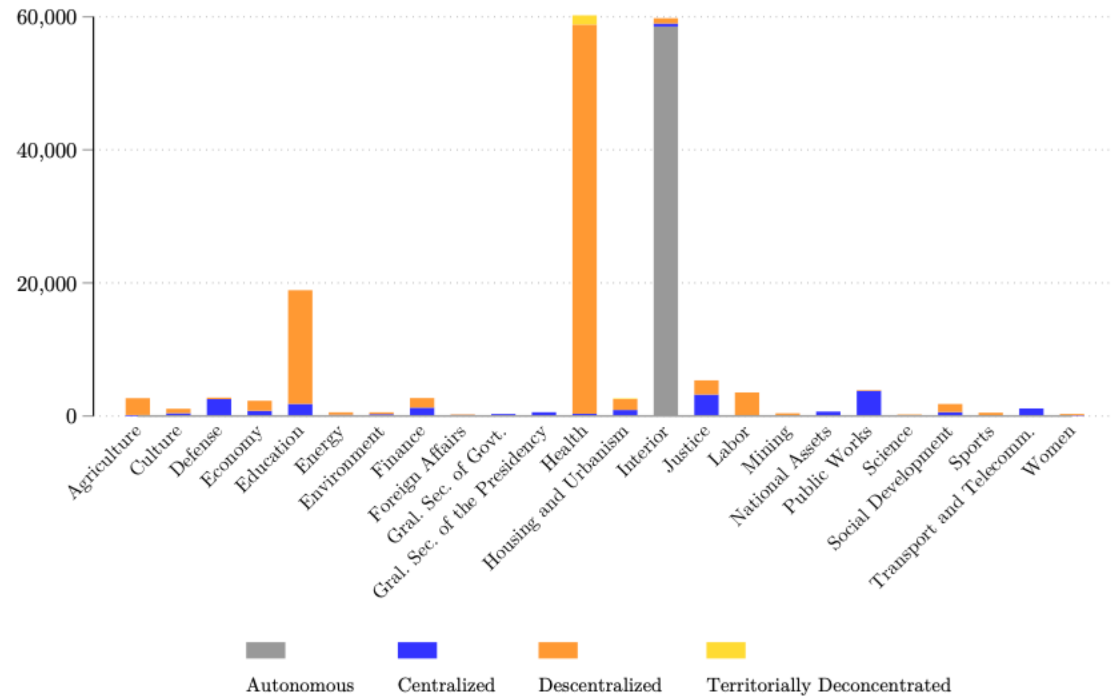
Figures

Figure 1: Distribution of Majors' Cutoffs by University Type



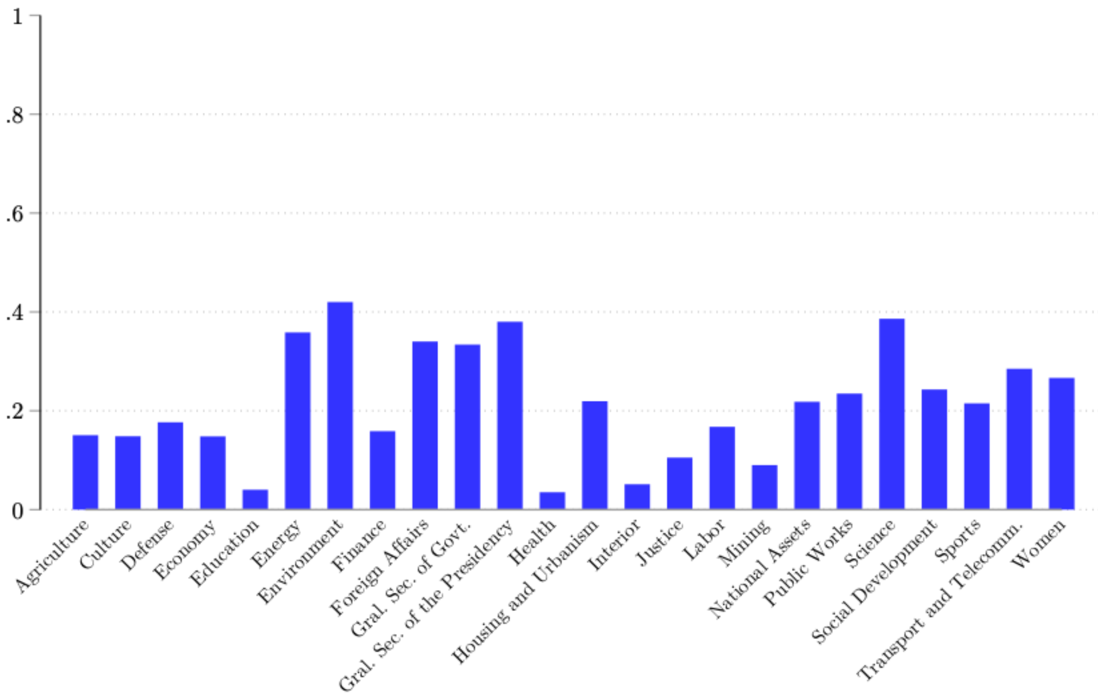
Notes: Average (2000-2017) admission cutoff for each major. Elite universities are the two most selective institutions in the country (UCH and PUC).

Figure 2: Public Servants by Ministry



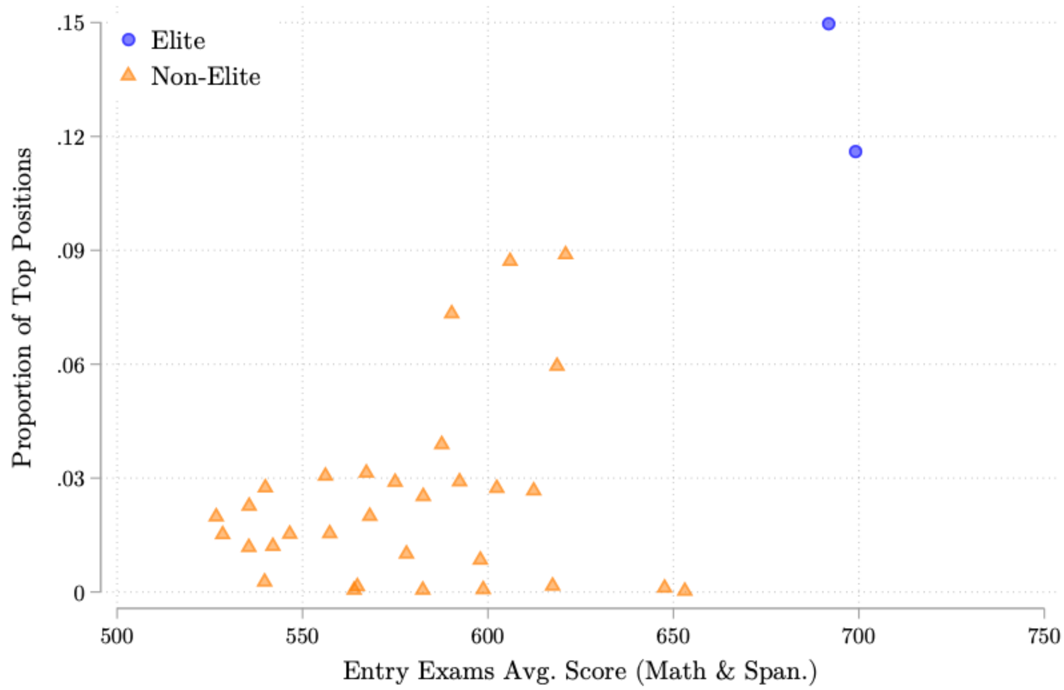
Notes: Average (2018-2022) number of public servants per ministry. Year 2023 not included as only observed until May. Public servants comprehend planta (staff) and contrata (temporary) contracts.

Figure 3: Proportion of Top Positions by Ministry



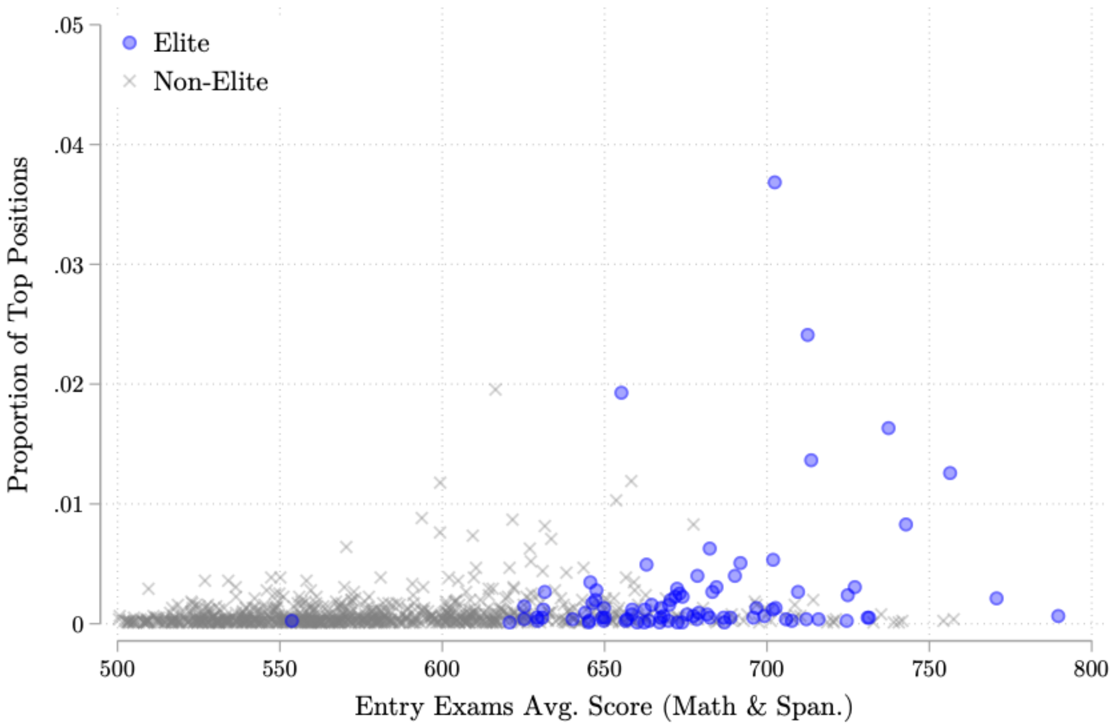
Notes: Average (2018-2022) proportion of top positions per ministry. Year 2023 not included as only observed until May. The top positions are defined as all directive positions, and the professionals at the top 8 places, out of 31, in the salary scale (i.e., top 15% of professionals).

Figure 4: University' Selectivity and Proportion of Top Positions
Elite and Non-Elite



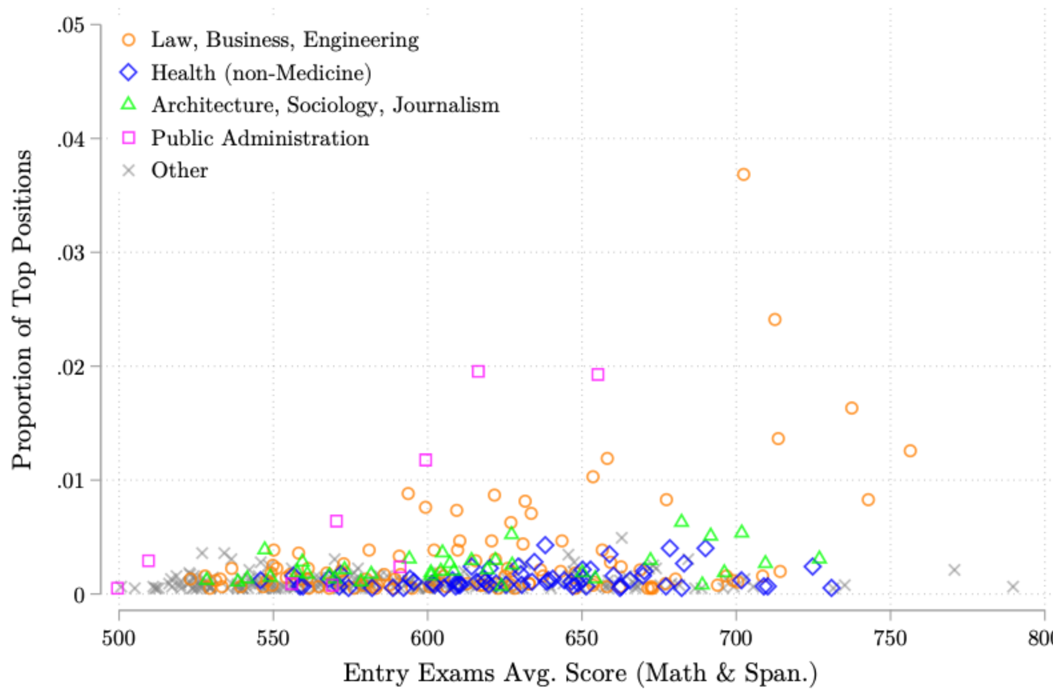
Notes: Sample of all accepted individuals between 2000 and 2017 admission processes. Data collapsed at the year average per institution. Elite universities are the two most selective institutions in the country (UCH and PUC). Each mark represents the average entry exam score of the accepted applicants in each university between 2000 and 2017, and the share of top positions accepted in that university over the total number of top positions among accepted individuals. The top positions are defined as all directive positions, and the professionals at the top 8 places, out of 31, in the salary scale (i.e., top 15% of professionals).

Figure 5: Majors' Selectivity and Proportion of Top Positions
Elite and Non-Elite



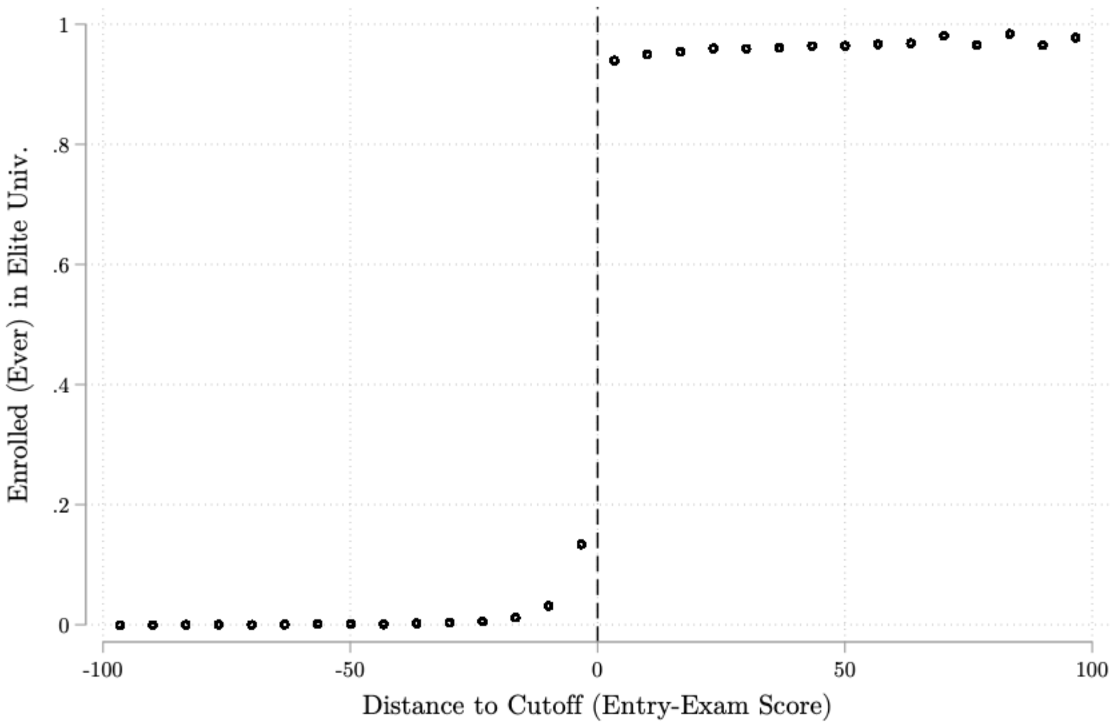
Notes: Sample of all accepted individuals between 2000 and 2017 admission processes. Data collapsed at the year average per major-institution. Elite universities are the two most selective institutions in the country (UCH and PUC). Each mark represents the average entry exam score of the accepted applicants in each major between 2000 and 2017, and the share of top positions accepted in that major over the total number of top positions among accepted individuals. The top positions are defined as all directive positions, and the professionals at the top 8 places, out of 31, in the salary scale (i.e., top 15% of professionals).

Figure 6: Majors' Selectivity and Proportion of Top Positions
Groups of Majors



Notes: Sample of all accepted individuals between 2000 and 2017 admission processes. Data collapsed at the year average per major-institution. Each mark represents the average entry exam score of the accepted applicants in each major between 2000 and 2017, and the share of top positions accepted in that major over the total number of top positions among accepted individuals. The top positions are defined as all directive positions, and the professionals at the top 8 places, out of 31, in the salary scale (i.e., top 15% of professionals). Omitted majors with a proportion among top positions ≤ 0.0005 (0.05%).

Figure 7: Admission on Enrollment



Notes: Estimation sample of all majors in an elite university relative to a non-elite university. Applications processes from 2000 to 2017. At the right of the centered threshold are applicants (*i*) accepted into the corresponding group of majors in an elite university that would have been accepted in the same major in a non-elite university otherwise, and (*ii*) applicants waitlisted into the corresponding group of majors in a non-elite university but were accepted in the same major in an elite university. At the left, (*iii*) applicants who were waitlisted into the corresponding group of majors in an elite university but were accepted in the same major in a non-elite university, and (*iv*) applicants accepted into the corresponding group of majors in a non-elite university that would have been accepted into the same major in an elite university otherwise.

Tables

Table 1: Universities' Characteristics by Type

	Elite Universities (N = 2)	Non-Elite Universities (N = 34)
Public university	0.50	0.47
N majors offered	44	36
N students accepted (year avg.)	3,407	1,861
Proportion total students accepted	0.065	0.032
Proportion students enrolled after acceptance	0.88	0.70
Major cutoff score	660.5	551.8
Proportion accepted students female	0.56	0.54
Proportion accepted students from private HS	0.56	0.18
Proportion accepted students from voucher HS	0.25	0.52
Proportion accepted students from public HS	0.18	0.30
Age of accepted student	18.7	19.0
Proportion accepted students from Metrop. region	0.78	0.33
N preferences listed in application by accepted student	4.5	5.1
Per capita family income (2018 CLP)	286,024	163,373

Notes: Elite universities are the two most selective institutions in the country (UCH and PUC). Data from 2000 to 2017 applications collapsed at the institution level.

Table 2: Estimation Subsamples

	All Majors	Law, Business, Engineering	Health (non-Medicine)	Architecture, Sociology, Journalism	Public Admin.
Proportion accepted in elite univ.	0.32	0.34	0.22	0.37	0.37
Proportion accepted in non-elite univ.	0.68	0.66	0.78	0.63	0.63
Female	0.52	0.35	0.75	0.57	0.53
Private HS	0.39	0.52	0.31	0.44	0.13
Metrop. Region (Santiago)	0.70	0.69	0.68	0.66	0.73
Top position	0.009	0.010	0.005	0.013	0.059
N applicants	183,806	60,695	25,790	11,040	2,547

Notes: Each column corresponds to the subsample used to estimate the effect of enrolling in an elite relative to a non-elite university for the set of majors in each column title. Only considered applicants (*i*) accepted into the corresponding group of majors in an elite university that would have been accepted in the same major in a non-elite university otherwise, and (*ii*) applicants waitlisted into the corresponding group of majors in a non-elite university but were accepted in the same major in an elite university. Also, (*iii*) applicants who were waitlisted into the corresponding group of majors in an elite university but were accepted in the same major in a non-elite university, and (*iv*) applicants accepted into the corresponding group of majors in a non-elite university that would have been accepted into the same major in an elite university otherwise.

Table 3: Stacked Fuzzy RD Second-Stage Estimates
Outcome: Works in the Public Sector

	Sample		
	Overall	Male	Female
Panel A: All Majors			
Enroll	-0.013**	-0.004	-0.025**
	(0.006)	(0.008)	(0.010)
Control Compliers Mean	0.146	0.118	0.178
Bandwidth $(-/+)$	34.5	30.1	27.9
N Effective	78,133	35,949	32,742
Panel B: Excluding Health Majors			
Enroll	-0.002	-0.002	-0.003
	(0.007)	(0.008)	(0.012)
Control Compliers Mean	0.081	0.065	0.099
Bandwidth $(-/+)$	27.3	23.6	24.8
N Effective	52,255	25,412	21,981
Panel C: Only Health Majors			
Enroll	-0.121***	-0.207**	-0.108**
	(0.036)	(0.087)	(0.042)
Control Compliers Mean	0.294	0.285	0.307
Bandwidth $(-/+)$	19.1	11.8	19.0
N Effective	7,122	1,284	5,063

Notes: Estimation sample of all majors in an elite university relative to a non-elite university. The enroll variable is instrumented in a first stage with acceptance, and the reported coefficient is the estimated $\hat{\delta}$ parameter of equation (4) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). All models include major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor SEs in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 4: Analytical Sample

	All Applicants		
	Not in Public Sector	Public Sector	Top Positions
Panel A: Applicants' characteristics			
N options ranked in application	4.8	5.0	4.9
Accepted in any university	0.69	0.68	0.79
Accepted in elite university	0.09	0.08	0.21
Female	0.50	0.67	0.49
Age	32.2	33.5	37.5
Graduated HS in Metrop. region	0.38	0.27	0.42
From private HS	0.19	0.14	0.27
From voucher HS	0.51	0.50	0.42
From public HS	0.29	0.36	0.30
Per capita family income (2018 CLP)	169,808	150,771	216,413
Panel B: Positions' characteristics			
Monthly avg. earnings (2018 CLP)	–	1,253,747	2,527,635
In Metrop. region	–	0.30	0.59
N Applicants	1,188,791	190,374	9,452

Notes: All individuals who applied to the university between 2000 and 2017, matched with public sector labor outcomes from 2018 to 2023. Only considered the first application process of each individual. The top positions are defined as all directive positions, and the professionals at the top 8 places, out of 31, in the salary scale (i.e., top 15% of professionals).

Table 5: Stacked Fuzzy RD Second-Stage Estimates
Outcome: Top Position

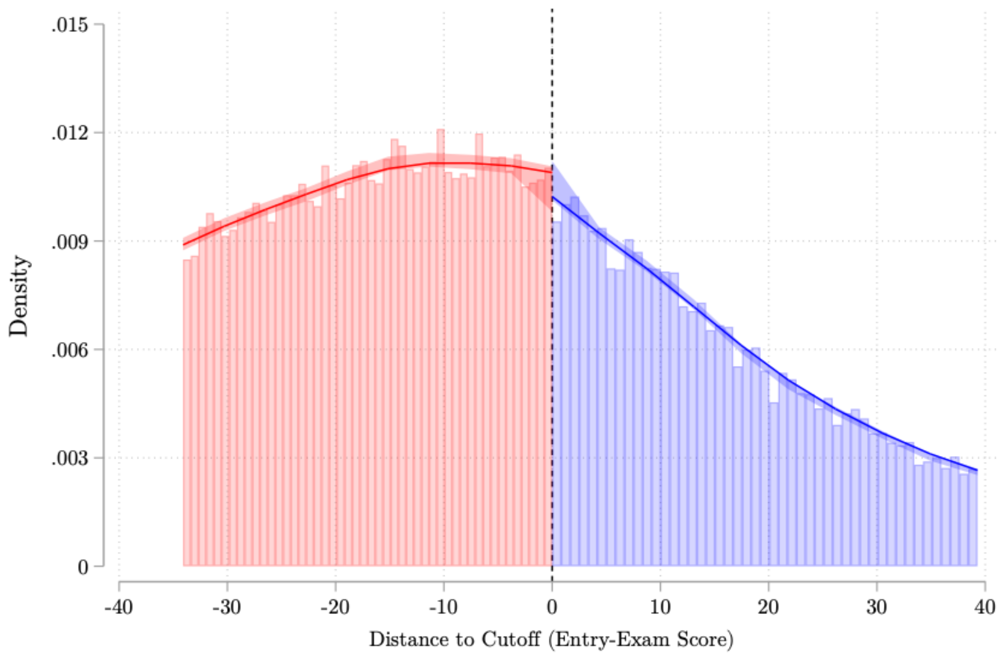
	Sample		
	Overall	Male	Female
Enroll	-0.002	-0.002	-0.002
	(0.003)	(0.004)	(0.005)
Control Compliers Mean	0.014	0.014	0.016
Bandwidth $(-/+)$	21.7	21.8	15.4
N Effective	54,524	27,930	19,925

Notes: Estimation sample of all majors in an elite university relative to a non-elite university. The enroll variable is instrumented in a first stage with acceptance, and the reported coefficient is the estimated $\hat{\delta}$ parameter of equation (4) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). All models include major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor SEs in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

APPENDIX

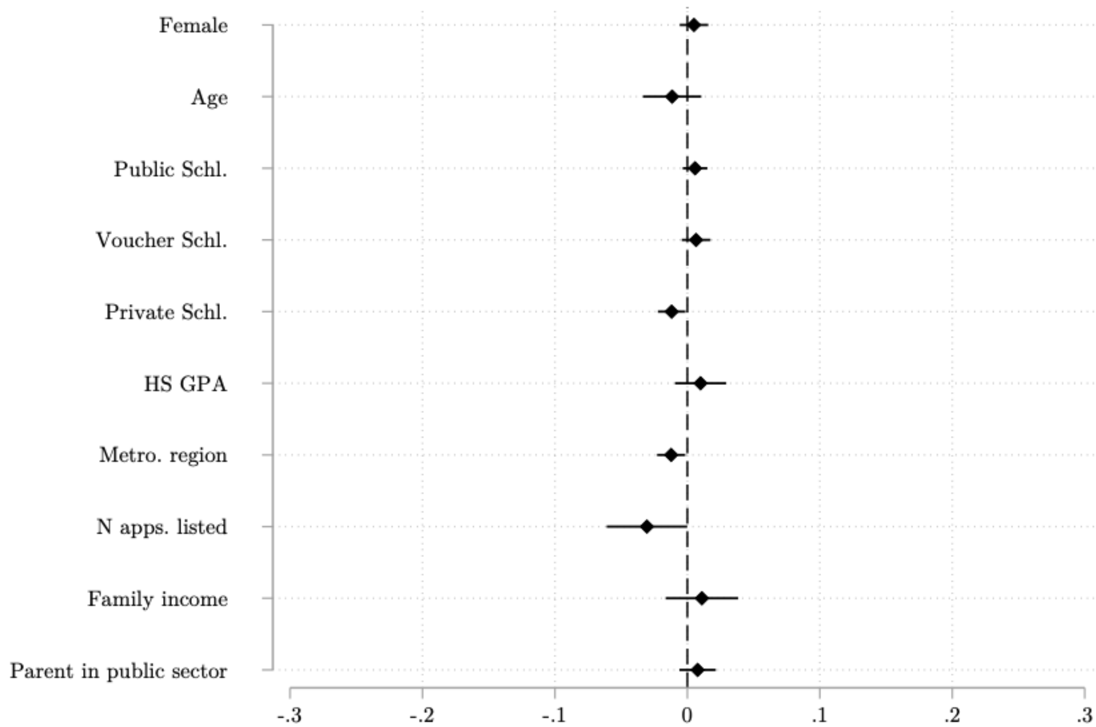
Figures

Figure A.1: Manipulation Test



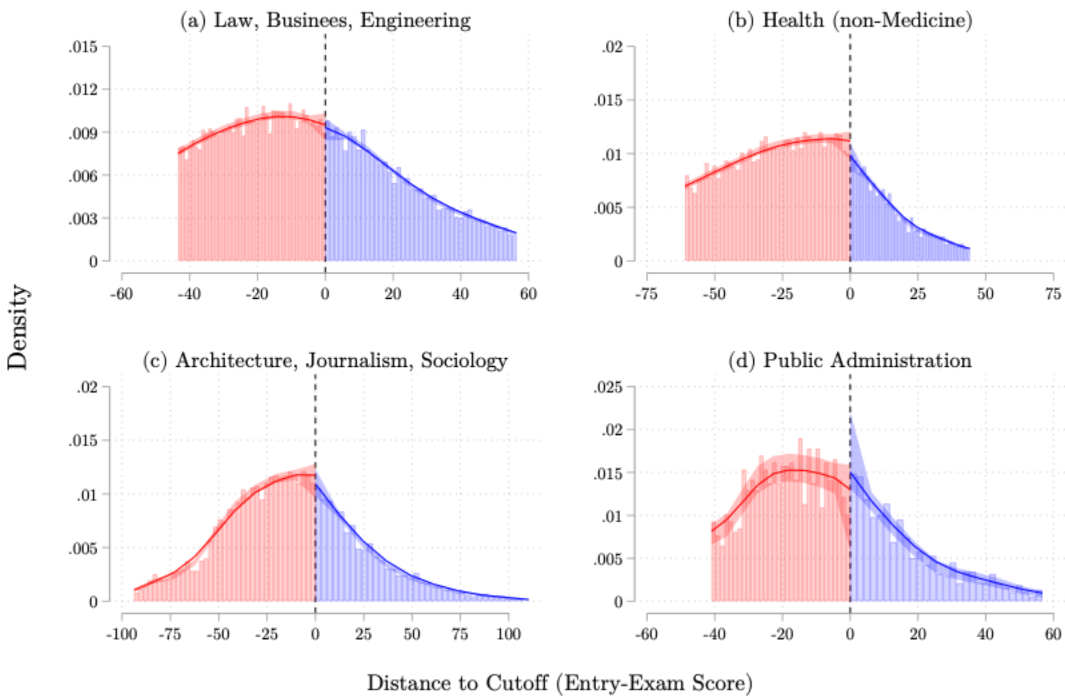
Notes: Manipulation test using local polynomial density estimation (Cattaneo et al., 2018). Estimation sample of all majors in an elite university relative to a non-elite university. Applications processes from 2000 to 2017. In blue, applicants accepted into any major in an elite university (and would have been accepted or were waitlisted in the same major in a non-elite university). In red, applicants who were accepted into any major in a non-elite university (and were waitlisted or would have been accepted into the same major in an elite university). The formal test doesn't reject the null hypothesis of no manipulation (P-value = 0.59).

Figure A.2: Continuity Covariates Test



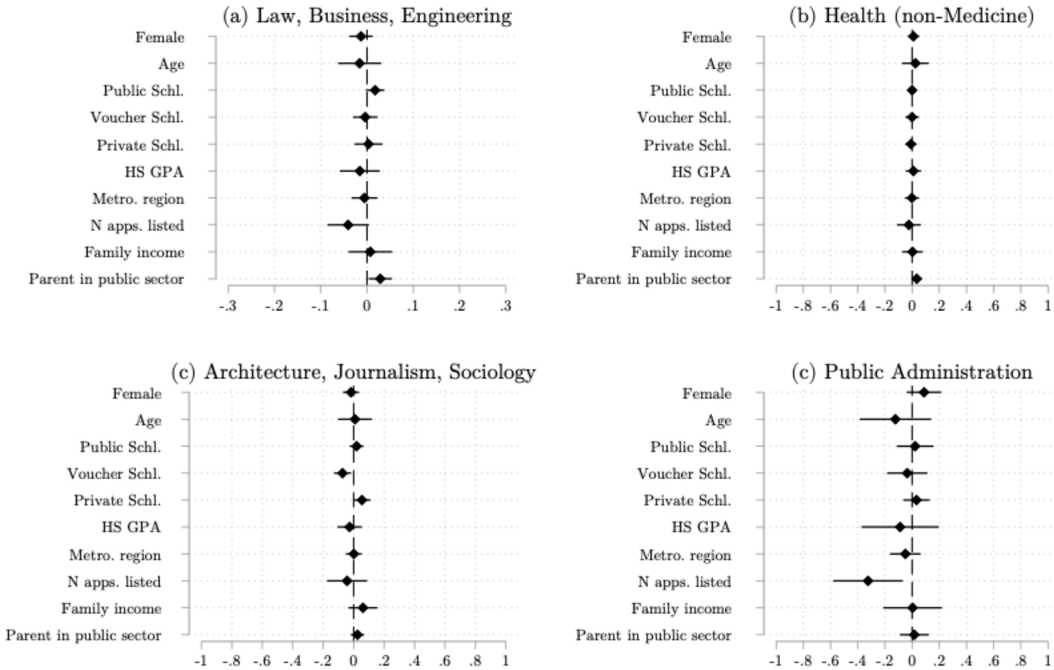
Notes: Estimation sample of all majors in an elite university relative to a non-elite university. Applications processes from 2000 to 2017. Each point represents the estimated coefficient on admission ($\hat{\alpha}$) from equation (3) using the covariates in the vertical axis as outcomes. The linear RD models allow for different slopes at each side of the centered threshold and include major-institution-year fixed effects. Bandwidths determined by MSE-optimal selector (Calonico et al., 2014a; Calonico et al., 2014b). Horizontal lines represent 95% confidence intervals with heteroskedasticity-robust standard errors. Non-discrete variables (age, HS GPA, and number of applications listed) are standardized by application-process year.

Figure A.3: Manipulation Test by Majors



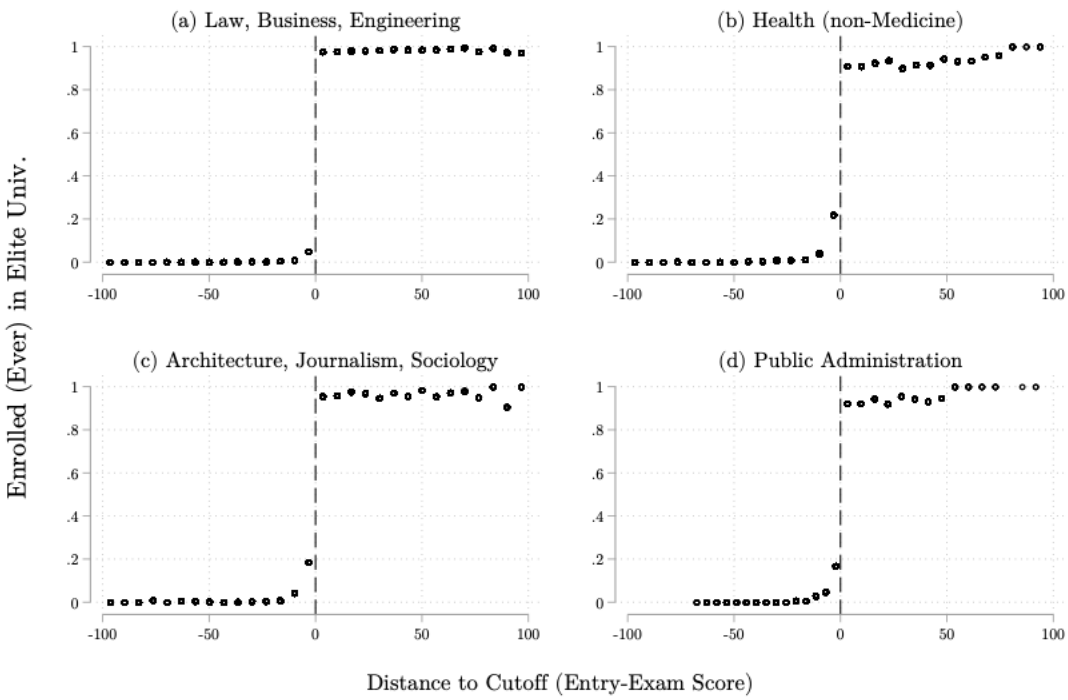
Notes: Manipulation tests using local polynomial density estimation (Cattaneo et al., 2018). Application processes from 2000 to 2017. In blue, (*i*) applicants accepted into the corresponding group of majors in an elite university that would have been accepted in the same major in a non-elite university otherwise, and (*ii*) applicants waitlisted into the corresponding group of majors in a non-elite university but were accepted in the same major in an elite university. In red, (*iii*) applicants who were waitlisted into the corresponding group of majors in an elite university but were accepted in the same major in a non-elite university, and (*iv*) applicants accepted into the corresponding group of majors in a non-elite university that would have been accepted into the same major in an elite university otherwise. The formal tests do not reject the null hypotheses of no manipulation at 90% confidence (P-value (a) = 0.73; P-value (b) = 0.28; P-value (c) = 0.89; P-value (d) = 0.06).

Figure A.4: Continuity Test by Majors



Notes: Estimation sample of each set of majors in an elite university relative to a non-elite university. Applications processes from 2000 to 2017. Each point estimate represents the estimated coefficient on admission ($\hat{\alpha}$) from equation (3) using the covariates in the vertical axis as outcomes. The linear RD models allow for different slopes at each side of the centered threshold and include major-institution-year fixed effects. Bandwidths determined by MSE-optimal selector (Calonico et al., 2014a; Calonico et al., 2014b). Horizontal lines represent 95% confidence intervals with heteroskedasticity-robust standard errors. Non-discrete variables (age, HS GPA, and number of applications listed) are standardized by application-process year.

Figure A.5: Admission on Enrollment by Majors



Notes: Estimation sample of each set of majors in an elite university relative to a non-elite university. Applications processes from 2000 to 2017. At the right of the centered threshold are applicants accepted into the corresponding group of majors in an elite university that would have been accepted in the same major in a non-elite university otherwise, and (*ii*) applicants waitlisted into the corresponding group of majors in a non-elite university but were accepted in the same major in an elite university. At the left, applicants who were waitlisted into the corresponding group of majors in an elite university but were accepted in the same major in a non-elite university, and (*iv*) applicants accepted into the corresponding group of majors in a non-elite university that would have been accepted into the same major in an elite university otherwise.

Tables

Table A.1: Top Positions

Salary Scale	Govt. Authorities	Managers	Professionals	Technicians Administrative Auxiliaries
A	8,424,014			
B	7,805,805			
C	7,217,956			
1-A	3,364,759			
1-B	3,445,450			
1-C	3,389,548	***3,458,714***		
2	3,334,590	***3,334,085***		
3	3,179,344	***3,178,335***		
4	3,032,770	***3,031,251***	***2,982,523***	
5	2,655,506	***2,693,437***	***2,568,712***	
6		***2,461,138***	***2,417,531***	
7		***2,232,668***	***2,207,538***	
8		***2,031,271***	***2,011,540***	
9		***1,846,890***	1,847,864	879,621
10		***1,694,189***	1,695,059	832,244
11		***1,556,775***	1,557,538	785,374
12		***1,430,593***	1,431,243	748,362
13			1,300,149	708,331
14			1,192,893	668,721
15			1,094,685	634,628
16			1,004,665	593,750
17			922,263	564,093
18			832,543	539,716
19			761,821	517,885
20			696,221	486,324
21			638,289	460,290
22			587,189	419,867
23			541,325	385,959
24				357,576
25				337,964
26				316,149
27				295,077
28				280,584
29				266,479
30				253,720
31				241,722

Notes: The values summarize the remunerations received by officials governed by the Single Salary Scale. Highlighted cells indicate the positions considered top in the public sector—specifically, all managerial positions and the top-ranked professionals.

Table A.2: Universities

Institution Name	Public/Private	Traditional/Non-Traditional	Elite/Non-Elite	Metrop. Region/Other
Universidad de Chile	Public	Traditional (CRUCH)	Elite	Metrop. Region
Pontificia Universidad Católica de Chile	Private	Traditional (CRUCH)	Elite	Metrop. Region
Pontificia Universidad Católica de Valparaíso	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Austral de Chile	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Alberto Hurtado	Private	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad de los Andes	Private	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad de Antofagasta	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Aysén	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidd del Bío-Bío	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Católica del Maule	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Católica del Norte	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Católica de la Santísima Concepción	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Católica de Temuco	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Atacama	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Concepción	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Diego Portales	Private	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad de la Frontera	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de los Lagos	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de la Serena	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Magallanes	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Metropolitana de Ciencias de la Educación	Public	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad Arturo Prat	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de O'Higgins	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Playa Ancha	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Santiago	Public	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad de Tarapacá	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Talca	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Tecnológica Metropolitana	Public	Traditional (CRUCH)	Non-Elite	Metrop. Region
Universidad Técnica Federico Santa María	Private	Traditional (CRUCH)	Non-Elite	Other Region
Universidad de Valparaíso	Public	Traditional (CRUCH)	Non-Elite	Other Region
Universidad Adolfo Ibáñez	Private	Non-Traditional	Non-Elite	Metrop. Region
Universidad Católica Silva Henríquez	Private	Non-Traditional	Non-Elite	Metrop. Region
Universidad del Desarrollo	Private	Non-Traditional	Non-Elite	Metrop. Region
Universidad Finis Terrae	Private	Non-Traditional	Non-Elite	Metrop. Region
Universidad Mayor	Private	Non-Traditional	Non-Elite	Metrop. Region
Universidad Andrés Bello	Private	Non-Traditional	Non-Elite	Metrop. Region

Notes: The table includes all 36 universities considered in the sample. The geographical location is based on their main offices, as many institutions have campuses in more than one region in the country.

Table A.3: Stacked Fuzzy RD First-Stage Estimates

		Estimation Subsample			
	All Majors	Law, Business, Engineering	Health (non-Medicine)	Architecture, Sociology, Journalism	Public Admin.
Acceptance	0.614***	0.849***	0.498***	0.547***	0.609***
	(0.011)	(0.011)	(0.028)	(0.035)	(0.075)
Control Group Mean	0.151	0.033	0.197	0.148	0.097
Bandwidth ($-/+$)	5.5	10.7	7.9	9.8	10.5
N Effective	15,429	8,721	2,855	1,673	530

Notes: The estimation sample is restricted to the set of majors at the corresponding column's header. The reported coefficient corresponds to the parameter $\hat{\alpha}$ in equation (3) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). The model includes major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A.4: Stacked Fuzzy RD Second-Stage Estimates. Overlapping Majors [600-700]

	Sample		
	Overall	Male	Female
Outcome: Public Sector			
Enroll	-0.021**	-0.008	-0.021*
	(0.010)	(0.012)	(0.011)
Control Group Mean	0.143	0.109	0.171
Bandwidth $(-/+)$	18.9	23.5	28.6
N Effective	30,807	16,376	23,535
Outcome: Top Position			
Enroll	-0.006	-0.004	-0.005
	(0.004)	(0.005)	(0.005)
Control Group Mean	0.018	0.02	0.018
Bandwidth $(-/+)$	20.3	33.2	19.2
N Effective	32,783	21,090	17,129

Notes: Estimation sample of all majors in an elite university relative to a non-elite university and only majors with cutoffs between 600 and 700 points. The enroll variable is instrumented in a first stage with acceptance, and the reported coefficient is the estimated $\hat{\delta}$ parameter of equation (4) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). All models include major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table A.5: Stacked Fuzzy RD Second-Stage Estimates by Majors
Outcome: Top Position

	Sample		
	Overall	Male	Female
Panel A: Law, Business, Engineering			
Enroll	-0.001	-0.000	-0.005
	(0.006)	(0.006)	(0.010)
Control Compliers Mean	0.017	0.015	0.021
Bandwidth $(-/+)$	17.4	18.4	25.3
N Effective	13,948	10,138	6,083
Panel B: Health (non-Medicine)			
Enroll	0.012*	0.013	0.001
	(0.007)	(0.014)	(0.008)
Control Compliers Mean	0.010	0.001	0.011
Bandwidth $(-/+)$	16.1	10.8	19.8
N Effective	5,423	954	4,784
Panel C: Architecture, Sociology, Journalism			
Enroll	-0.017	-0.081*	-0.005
	(0.019)	(0.042)	(0.021)
Control Compliers Mean	0.023	0.028	0.020
Bandwidth $(-/+)$	17.5	14.4	19.4
N Effective	2,877	1,040	1,767
Panel D: Public Administration			
Enroll	0.026	0.098	0.004
	(0.049)	(0.093)	(0.052)
Control Compliers Mean	0.094	0.095	0.091
Bandwidth $(-/+)$	27.1	21.1	22.7
N Effective	1,238	478	565

Notes: Estimation sample of all majors in an elite university relative to a non-elite university. The enroll variable is instrumented in a first stage with acceptance, and the reported coefficient is the estimated $\hat{\delta}$ parameter of equation (4) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). All models include major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A.6: Stacked Fuzzy RD Second-Stage Estimates by SES
Outcome: Top Position

	Non-Private HS	Private HS
Panel A: Law, Business, Engineering		
Enroll	-0.008	-0.001
	(0.011)	(0.005)
Control Compliers Mean	0.023	0.012
Bandwidth ($-/+$)	13.6	29.3
N Effective	4,919	12,124
Panel B: Health (non-Medicine)		
Enroll	0.024**	-0.016*
	(0.010)	(0.009)
Control Compliers Mean	0.014	0.001
Bandwidth ($-/+$)	15.6	13.4
N Effective	3,512	1,538
Panel C: Architecture, Sociology, Journalism		
Enroll	-0.014	-0.048
	(0.024)	(0.034)
Control Compliers Mean	0.026	0.016
Bandwidth ($-/+$)	17.4	14.2
N Effective	1,569	1,082
Panel D: Public Administration		
Enroll	0.144**	-0.101
	(0.072)	(0.159)
Control Compliers Mean	0.101	0.100
Bandwidth ($-/+$)	14.5	16.0
N Effective	623	116

Notes: The estimation sample is restricted to the group at the corresponding column's header. The enroll variable is instrumented in a first stage with acceptance, and the reported coefficient is the estimated $\hat{\delta}$ parameter of equation (4) using local polynomial RD estimation with robust bias-corrected confidence intervals using local linear regression with triangular kernel function and MSE-optimal bandwidth selector (Calonico et al., 2014a; Calonico et al., 2014b; Calonico et al., 2020). All models include major-university-year fixed effects and baseline covariates controlling for HS GPA, the number of applications listed, gender, age, type of high school, region, and if any parent worked in the public sector. Heteroskedasticity-robust nearest neighbor standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.