

Gendered Choices in Gender-Blind University Admissions*

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March 7, 2026

Abstract

We study whether gender-blind admissions equalize enrollment at high-return universities. In China’s centralized system, where admission depends solely on national exam scores, we observe complete application records of 7,500 students. Women apply to equally competitive universities with equal or greater strategic sophistication, yet choose less elite, less geographically distant, and less STEM-focused universities, reducing expected salaries by 4.1–5.4%. Linking survey measures of parental pressure to application choices, we document two interconnected channels: parents hold more gender-stereotyped expectations for daughters, and daughters are more responsive to parental pressure than sons. Gender differences in confidence, competitiveness, and expected returns cannot explain the gap.

JEL classification: D91, J16, I23

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1 Introduction

Gender-blind admissions have emerged as a promising institutional design to allocate students to universities based on ability alone. On the demand side, blindness prevents evaluators from discriminating based on gender (Goldin and Rouse, 2000; Åslund and Skans, 2012; Behaghel et al., 2012; Krause et al., 2012; Johnson and Kirk, 2020). On the supply side, it encourages applications from women who might otherwise refrain due to anticipated discrimination (Fisk and Overton, 2019; Avery et al., 2024; Exley et al., 2024; Boring et al., 2025). Yet equal admission to high-return universities is still not guaranteed, since it depends on the choices applicants make. Do systematic differences in application behavior set equally qualified men and women on divergent earnings trajectories—even absent any form of discrimination?

In this paper, we study supply-side choices in higher education under a centralized, gender-blind admissions system where students submit ranked lists of universities. We address three questions. First, do equally qualified men and women make similar choices? Previous studies document that women often sort into options offering proximity to home, flexibility, and work-life balance but typically providing lower pay and fewer promotion opportunities (Niederle and Vesterlund, 2011; Goldin, 2014; Blau and Kahn, 2017; Wiswall and Zafar, 2018; Le Barbanchon et al., 2021; Cook et al., 2021; Fluchtmann et al., 2024). These differences might be driven by anticipated discrimination, which a gender-blind system could eliminate. Second, if choices differ, do the differences translate into earnings gaps? This is not necessarily the case, since men and women can sort into different but equally rewarding universities. Third, what drives any differences? They could stem from beliefs, such as confidence or perceived returns; preferences, such as competitiveness, risk attitudes, or tastes for proximity; or external constraints, such as parental pressure. Understanding the root causes is essential for policy: if women simply prefer different universities, intervention may not be warranted; if beliefs are inaccurate, information provision could help; if external constraints push women away from high-return universities, removing them could improve both equity and efficiency in the allocation of talent.

China’s centralized university admissions system provides an ideal setting to study these supply-side differences. Students take a national standardized exam (Gaokao), learn their exact ranking, and then submit rank-order lists of preferred universities. A deferred acceptance algorithm assigns students based solely on exam ranking (Chen and Kesten, 2017). Three features of this setting are central to our analysis. First, the mechanism is gender-blind by design: universities cannot observe applicant gender, and students understand that ranking is the sole determinant of priority. This eliminates both actual and anticipated discrimination, allowing us to ask whether gender gaps in choices persist even when the demand side is blind. Second, universities vary substantially in labor market returns, allowing us to quantify whether

any differences in choices translate into earnings gaps. Third, because students know their exact ranking before applying, equally ranked men and women face identical choice sets and admission probabilities. This transparency rules out several mechanisms commonly invoked to explain gender differences—such as differential beliefs about admission chances or unobserved ability differences—and sharpens the search for what does drive any remaining gaps.

To document gender differences in application choices, quantify their earnings consequences, and investigate the underlying causes, we link several data sources: (1) individual-level administrative data covering approximately 7,500 students from one county in Henan Province between 2018 and 2024, including exact Gaokao rankings, complete rank-order lists of up to 24 universities per student, admission outcomes, and demographic characteristics; (2) university-level data including elite status (membership in “Project 211”), specialization (STEM-focused, education-focused, or other), geographic distance from the study county, historical admission cutoffs, and average graduate earnings at one and five years after graduation; (3) linked survey data from a subsample of roughly 1,700 students, measuring beliefs such as confidence and perceived returns to education; preferences such as competitiveness, risk attitudes, and tastes for different university characteristics; and external constraints such as perceived parental preferences.

We first examine whether the gender-blind deferred-acceptance mechanism levels the playing field by eliminating strategic differences in constructing rank-order lists (Pathak and Sönmez, 2008). Since the length of the rank-order list is constrained in China’s Parallel Matching (Chen and Kesten, 2017), truthful preference revelation is not optimal (Haeringer and Klijn, 2009), and students must strategically decide which universities to include. Theory predicts that more risk-averse individuals should construct more conservative portfolios, including more “match” or “safety” schools (Chade and Smith, 2006; Klijn et al., 2013; Hernandez-Chanto, 2020). Since many studies find that women exhibit greater risk aversion than men (Croson and Gneezy, 2009), we might expect women to make more conservative choices. To test this, we calculate score margins—the difference between each student’s score and each university’s historical cutoff—to assess admission likelihood across their portfolios. We find no evidence that women take less risk than men in constructing their portfolios.

We next examine how students rank universities. A well-documented behavioral pattern is that students rank more achievable options ahead of more preferred but riskier ones, or drop those riskier options altogether. This behavior has been identified both in laboratory experiments and in the field (Chen and Sönmez, 2006; Calsamiglia et al., 2010; Rees-Jones and Skowronek, 2018; Hakimov and Kübler, 2021; Rees-Jones and Shorrer, 2023; Shorrer and Sóvágó, 2023) and has been attributed to expectations-based loss aversion (Dreyfuss et al., 2022; Meisner and Von Wangenheim, 2023) or report-dependent utility (Meisner, 2023). In

the Chinese context where rank-order lists are constrained, ranking a less competitive university above a more competitive one—based on historical cutoffs—is likely to be suboptimal because it wastes valuable slots. Women are slightly less likely to make this mistake, though the difference is minimal. Taken together, the gender-blind mechanism levels the playing field strategically: men and women exhibit similar risk-taking and similar sophistication.

Despite employing similar application strategies, men and women target strikingly different universities. We focus on three university characteristics that prior research links to labor market returns and that exhibit traditional gender patterns: elite status, STEM specialization, and geographic distance from home. First, women with identical qualifications are 7% less likely than men to apply to elite universities, even though such institutions yield substantial earnings premiums (Jia and Li, 2021). Second, women are 32% less likely to apply to STEM-focused universities, instead favoring education-focused institutions that specialize in teacher training. Third, women choose universities significantly closer to home, echoing patterns documented in labor markets where women accept lower wages in exchange for shorter commutes (Le Barbanchon et al., 2021). Combined with our finding that men and women take similar risks in portfolio construction, the results indicate that equally qualified men and women sort into equally competitive yet fundamentally different institutions.

These application patterns translate directly into admission outcomes, with women admitted to less elite, less STEM-focused, and closer-to-home universities than equally qualified men. To quantify the economic consequences, we link universities to salary data capturing average graduate earnings. While we do not observe students' actual future wages, these university-level averages represent the information available to students during their decision-making and provide a benchmark for expected returns. We find that universities to which women are admitted are associated with 4.1% lower expected salaries one year after graduation compared to those of equally qualified men. This gap widens to 5.4% at five years, consistent with evidence that gender wage gaps expand over the life cycle (Blau and Kahn, 2017). To understand how much of this gap stems from gendered sorting, we conduct a mediation analysis controlling for elite status, STEM versus education specialization, and geographic distance. These university characteristics explain approximately 68% of the expected earnings gap at one year and 55% at five years. Gendered sorting at the point of university application thus may set men and women on divergent earnings trajectories well before labor market entry.

The gendered patterns in university choices, which contribute to an expected gender pay gap, could simply reflect different preferences between men and women. It is crucial to understand whether external influences, in particular parental pressure, also shape these choices. We introduce a direct approach to measuring parental pressure. Our survey presented each student with eight universities tailored to their score range, varying systematically in elite status,

specialization, and distance from home. For each university, we elicited both the student's own willingness to attend and their perception of parental willingness to support their application. This allows us to construct a within-student measure of parental pressure—the gap between perceived parental and own willingness. We classify each student-university pair by this difference and examine whether university characteristics predict these categories differently for sons and daughters. Parents exert gendered pressure along two dimensions: they are significantly more likely to discourage daughters from both distant and elite universities than sons. However, once distance is controlled for, the elite pressure gap disappears, indicating that it is the preference for proximity that leads parents to sacrifice elite status for daughters more than for sons. For specialization, parental pressure is gender-neutral, with both sons and daughters being pushed toward education-focused universities.

The differences in parental pressure can only explain gendered choices if daughters are actually influenced by that pressure. Crucially, we can link our pressure measure directly to application behavior: for each of the eight universities presented to them, we observe whether the student actually included it in their rank-order list. Whether parents push for or against a university significantly affects daughters' inclusion decisions but has no detectable effect on sons'. The greater responsiveness means that even gender-neutral pressure for education-focused universities generates a larger impact on daughters' choices, while gendered pressure against distant and elite universities is amplified because daughters respond more strongly. Two interconnected patterns thus emerge: parents hold more gender-stereotyped expectations for daughters, and daughters are more responsive to parental pressure. The combination of the two patterns can qualitatively account for the direction of the gender gaps across all three dimensions. Our data also allow us to examine alternative explanations including competitiveness, beliefs about returns to different university types, and confidence, but we find no evidence that these mechanisms explain the observed gender gaps.

This study contributes to the growing literature on gender-blind procedures. Early work documented that gender-blindness reduces discrimination on the demand side (Goldin and Rouse, 2000; Åslund and Skans, 2012; Behaghel et al., 2012; Krause et al., 2012; Johnson and Kirk, 2020). More recent studies examine how gender-blindness affects the supply side by reducing anticipated discrimination (Fisk and Overton, 2019; Exley et al., 2024) and encouraging women to apply to opportunities they might otherwise avoid (Avery et al., 2024; Boring et al., 2025). We approach this literature from a different angle: rather than asking whether gender-blindness changes behavior, we ask whether it can truly level the playing field. Our findings suggest it cannot. Even when the mechanism is transparently gender-blind, equally qualified men and women make systematically different choices, targeting universities that are equally competitive but differ substantially in characteristics that predict future earnings. Beyond gender-blind

procedures, our findings contribute to the broader literature on gender differences in supply-side choices (Goldin, 2014; Card et al., 2016; Blau and Kahn, 2017; Wiswall and Zafar, 2018; Le Barbanchon et al., 2021; Hakimov et al., 2023; Charpin et al., 2024; Fluchtmann et al., 2024; Haegele, 2024; Adams et al., 2025), documenting how the combination of gendered parental pressure and differential influence generates supply-side gender gaps even absent anticipated discrimination.

Our analysis of students' rank-order lists and stated preferences contributes to the literature on preference revelation and strategic behavior in matching markets. The dominant approach infers preferences from observed choices, typically assuming truthful reporting or stability (Agarwal and Somaini, 2020), though systematic deviations from these assumptions are well documented (Fack et al., 2019; Hassidim et al., 2021; Artemov et al., 2023; Shorrer and Sóvágó, 2023). A smaller set of studies complements administrative data with surveys to directly elicit preferences and beliefs (Rees-Jones, 2018; Chen and Pereyra, 2019; Kapor et al., 2020), enabling identification of mistakes. We contribute to this literature in two ways. First, we ask whether gender-blind deferred acceptance puts women at a strategic disadvantage. We find that women are not more conservative in portfolio construction and are slightly more likely to avoid sub-optimal ranking strategies, suggesting that gender-blind mechanism design successfully levels the strategic playing field. Second, we document a tension that has received little attention in the matching literature: parents and children may hold divergent preferences, and rank-order lists may reflect a combination of their preferences.

We also speak to the literature on gender differences in educational choices. Previous studies have documented persistent gender gaps in educational paths (Carrell et al., 2010; Zafar, 2013; Buser et al., 2014; Wiswall and Zafar, 2015; Reuben et al., 2017; Delavande and Zafar, 2019; Porter and Serra, 2020; Hakimov et al., 2023), identifying factors such as competitiveness (Niederle and Vesterlund, 2011; Buser et al., 2014), confidence (Hakimov et al., 2023), beliefs about returns (Wiswall and Zafar, 2015; Reuben et al., 2017), preferences for job attributes (Zafar, 2013), and mobility (Mattern and Wyatt, 2009; Birnbaum et al., 2024; Boelmann, 2024; Borker, 2021). We advance this literature in three ways. First, whereas existing studies typically focus on one potential mechanism in isolation, we address multiple dimensions of university choice—preferences, risk attitudes, competitiveness, confidence, beliefs about returns, and parental influence—allowing us to assess their relative importance within a unified framework. Second, by studying a fully gender-blind context where anticipated discrimination is eliminated, we can isolate pure supply-side differences in a way that previous studies of decentralized admissions cannot. Third, by directly measuring parental pressure and linking it to actual application decisions, we offer a new perspective on parents' role in generating gender differences in educational choices.

Lastly, our findings on parental influence complement the recent experimental literature on parents’ role in educational choices. Müller (2023) shows that making students’ educational aspirations visible to their parents (and students knowing this) aligns these plans with their socioeconomic background and shifts preferences toward higher-earning majors. Carlana and Corno (2024) find that thinking about one’s parents increases gender-stereotypical subject choices, though making choices visible to parents has no effect, unlike in Müller (2023). Tungodden and Willén (2023) demonstrate that parents choose less competitive options for daughters than sons in a real-effort task and that these choices correlate with children’s track choices. These experimental studies provide valuable causal evidence, but they proxy parental influence through exposure manipulations—varying whether parents observe or are involved in the decision—rather than measuring parental pressure directly. Our approach differs in that we directly elicit both students’ own preferences and perceived parental preferences for the same set of universities, allowing us to construct a within-student measure of parental pressure that varies across universities. This within-individual variation enables us to examine how the direction of pressure—for or against specific universities—shifts actual application decisions, while controlling for individual-level factors that could drive both pressure and choices. Moreover, we study a highly consequential actual decision, namely university choice, unlike existing work that focuses on the parents’ role for students’ plans or activities in school.

The remainder of the paper is organized as follows. Section 2 describes the institutional setting, including the Gaokao admissions mechanism and the university characteristics we study. Section 3 presents our data sources and empirical strategy. Section 4 examines whether equally qualified men and women make different university choices, comparing their application strategies and the types of universities they target. Section 5 quantifies the economic consequences of these gendered choices. Section 6 investigates the underlying mechanisms. Section 7 discusses the broader implications and concludes.

2 Background

The Chinese university admission process is designed to ensure fairness and transparency in allocating students to universities. The Gaokao, also referred to as the university entrance exam, is the sole determinant of whether a student is admitted to a university. This standardized test is administered annually in June to all students in a province simultaneously. In Henan, the province we study, the two-day exam consists of four subject tests: Chinese, mathematics, English, and natural or social sciences. Two high-school academic tracks are available: STEM and non-STEM, with students in each track taking the natural science and social science exams, respectively.

Application. After the Gaokao results are released, students have two weeks to submit their rank-order lists (ROLs)—ordered lists of preferred universities and majors—through the application system. The number of universities that students can include in their ROLs is restricted and depends on their Gaokao performance. In China, universities are officially categorized into three tiers of descending prestige: tier-1, tier-2, and vocational schools.

In Henan province, students’ application eligibility is determined by their Gaokao score relative to tier-specific cutoffs. Between 2018 and 2022, students scoring above the tier-1 cutoff could list up to six tier-1 universities, nine tier-2 universities, and six vocational schools. Those scoring between the tier-1 and tier-2 cutoffs could list nine tier-2 universities and six vocational schools, while those scoring only above the vocational school cutoff were restricted to six vocational schools. In 2023 and 2024, these limits were uniformly increased to 12 choices per tier.

When including a university in their ROL, students can select up to five majors at that university. In addition, they can choose to “accept any major” (*fu cong tiao ji*), meaning that if they are not admitted to any of their chosen majors, they may be reassigned to another major by the university. This option requires students to accept the reassignment without prior knowledge of the assigned major.¹ STEM-track and non-STEM-track students have different major options: STEM-track students can only select STEM majors, and vice versa for non-STEM-track students.

Admission process. In China, the process for matching students to universities is carried out by a centralized platform. The mechanism employed is the parallel mechanism, which uses the student-proposing deferred acceptance (SP-DA) algorithm for each tier. The inputs are student preferences, university priorities (determined solely by Gaokao scores), and university quotas, denoted by q . The process works as follows:

Round 1: The first round concerns tier-1 universities and students whose Gaokao score exceeds the tier-1 cutoff. In Step 1, students apply to their first choice in their tier-1 choice band. Each university s tentatively accepts at most q_s of the highest-ranking applicants by Gaokao score and rejects all others.

Step 2: Students rejected in Step 1 apply to their second choice in the tier-1 band. Each university s pools new applicants with those tentatively accepted in Step 1, ranks all by Gaokao score, tentatively accepts at most q_s , and rejects the rest.

Step 3 and onwards: Students rejected in step n apply to their next choice. The algorithm

¹There are severe consequences for not selecting the “accept any major” option. Students admitted to a university but rejected by all five majors will not be considered for admission by any other listed university in the same tier. They will instead be assigned to the next tier, where only their choices in that tier will be considered. As a result, more than 80% of students in our sample chose “accept any major” for all listed universities.

terminates when all students who qualify for tier-1 universities are either accepted or have been rejected by all choices in their tier-1 band.

Round 2: This round concerns tier-2 universities, students scoring between the tier-1 and tier-2 cutoffs, and students scoring above the tier-1 cutoff who remained unassigned in Round 1. The procedure is identical to Round 1, except that choices are drawn from students' tier-2 bands.

Round 3: This round concerns vocational schools and follows the same procedure. Students who remain unassigned after this round will not be admitted to any university and must retake the Gaokao the following year to be considered again for college admission.

Gender-blind admission. One distinctive feature of the Chinese system is that admissions are fully centralized, leaving universities with no autonomy in selecting applicants. The process is entirely automatic: the algorithm admits the highest-scoring applicants until each university reaches its quota, and universities cannot intervene. There are no interviews, aptitude tests, or university-specific selection criteria. Universities receive no demographic information about applicants, and even if such information were available, they would have no means to act on it. This complete absence of discretion makes discrimination structurally impossible rather than merely prohibited. Moreover, the system's gender-blindness is transparent to students, who understand that their Gaokao score is the sole determinant of admission.

Elite universities. In China, elite universities are prestigious institutions officially recognized by the government. "Project 211," initiated in 1995, is a national program that originally designated the top 100 universities for the 21st century and has since expanded to include 124 universities during our study period (2018–2024). Universities in this project receive additional funding and resources from the government to support their development and research. In this paper, we define these 124 Project 211 institutions as elite universities. Of the 1,251 universities in our sample, elite universities make up approximately 10%.

The elite status of these universities is widely recognized by students and parents, and admission is associated with significant labor market returns. According to Jia and Li (2021), attending an elite university in China leads to a 28–45% increase in monthly earnings compared to narrowly missing the admission cutoff. Consequently, competition for admission is intense: only 3–14% of applicants to elite universities are admitted in a typical year, with the exact rate depending on the applicant's home province.

The vast majority of elite universities are tier-1 institutions, meaning they are exclusively accessible to students scoring above the tier-1 cutoff. Three exceptions exist where elite universities offer programs open to students scoring between the tier-1 and tier-2 cutoffs. Some elite universities exclusively offer either STEM or non-STEM programs, restricting access based on the student's high-school track. Among the 124 elite universities, 21 are accessible only to

STEM-track students and six only to non-STEM-track students.

Despite roughly gender-balanced admissions to nonvocational universities overall (49% female between 2018 and 2024), women were significantly underrepresented at elite universities during this period. Based on data from 115 elite universities that published their gender ratios at least three times between 2018 and 2024, women accounted for only 45% of students admitted to these institutions. This underrepresentation was even more pronounced among the most prestigious universities: in the “Project 985” group—a subset of 39 universities within the broader elite category—women accounted for just 38% of admitted students.

University specialization. In China, universities are officially categorized by specialization according to the Ministry of Education classification system. This classification reflects a university’s primary academic focus, determined by the distribution of majors offered. For instance, science and engineering universities primarily offer STEM majors, while education-focused universities (known as “normal universities”) specialize in teacher training programs. We obtain specialization data from China Education Online (<https://www.eol.cn>), which provides comprehensive classification for all tier-1 and tier-2 universities in our sample. Among the 1,251 universities in our analysis, the most common specializations are science and engineering (31%), comprehensive (24%), education (16%), and finance/economics (9%). In our main analysis, we focus on the distinction between STEM-focused and education-focused universities, as these categories differ substantially in both gender composition and expected earnings.

Geographical proximity. University admissions in China is organized at the national level, allowing students to apply to far-away universities. However, recent research has documented that women exhibit a preference for proximity to home in job search and university choice across multiple countries.² In our setting, proximity preferences are unlikely to reflect direct costs of attending a distant university: China’s extensive high-speed rail network offers fares approximately one-fourth of those in other countries, making travel affordable across income groups (World Bank, 2019), and students typically return home only during major holidays such as winter break. Instead, university location has lasting consequences because most graduates remain in the province where they studied (Huang et al., 2022). Parents may therefore prefer daughters to attend nearby universities not to reduce immediate travel costs but to keep them close for future old-age care (Xie and Zhu, 2009; Zeng et al., 2016).

²For job search, see Fluchtmann et al. (2024) for Denmark, Le Barbanchon et al. (2021) for France, and Bütikofer et al. (2024) for Sweden. For school choice, see Borker (2021) for India, Boelmann (2024) for Germany, and Mattern and Wyatt (2009), Birnbaum et al. (2024), and Toutkoushian et al. (2024) for the US.

3 Data and empirical strategy

Administrative data on application records. We constructed an administrative dataset of 7,484 high-school students from a county in Henan Province encompassing all cohorts who took the university entrance exam between 2018 and 2024. Our sample county is broadly representative of counties in China along key economic and demographic dimensions. GDP per capita, average years of education, and age structure all fall close to the national and Henan province means (see Table A1). The only dimension where the county deviates noticeably from the national average is the gender ratio: at 99.68 males per 100 females, it is lower than the national average of 105.97, though close to the Henan province average of 100.82. This more gender-balanced population suggests the county may exhibit lower son preference or less discrimination against women than other parts of the country, making it a conservative setting for studying gender gaps in educational choices.

The core of this dataset consists of students’ complete rank-order lists (ROLs), their Gaokao scores and rankings, and their final admission outcomes. We also have demographic information including gender, age, high-school track (STEM versus non-STEM), residence status, poverty status, and whether students were first-time Gaokao takers.

Our analysis focuses on the 7,484 students who scored above the tier-2 cutoff. Students scoring below the tier-2 cutoff but above the vocational school cutoff can only apply to vocational schools, while those below the vocational school cutoff cannot submit a rank-order list at all. We exclude vocational-school-eligible students from our main analysis because key variables are unavailable for these institutions. Elite status is defined only for tier-1 and tier-2 universities, as all elite universities fall within these tiers. Specialization and salary data likewise cover only tier-1 and tier-2 universities. Without these measures, we cannot examine whether men and women differ in their choices of elite or STEM-focused universities, nor quantify the earnings implications of their choices.³ After removing invalid observations, our final sample consists of 83,701 university-choice observations.

University-level data. To analyze the characteristics of universities chosen by students, we matched each university in students’ ROLs to official Ministry of Education records. This allowed us to code each university’s elite status (“Project 211” membership), specialization (STEM-focused, education-focused, comprehensive, finance/economics, or other), and location. We calculated the geographic distance from students’ home county to each university using the Baidu Maps API.

³For the one dimension we can study across all tiers—geographic proximity—the results for vocational-school-eligible students are consistent with our main findings. These students account for only about 6% of all students who qualify to submit a rank-order list.

To assess the economic consequences of university choices, we obtained data on average graduate earnings from the China Salary Survey Organization.⁴ The dataset covers 900 tier-1 and tier-2 universities, approximately 72% of universities in our sample. We use salary data from 2018 for the 2017 cohort (one year after graduation) and the 2013 cohort (five years after graduation), providing both short-term and medium-term earnings benchmarks for each university.

We also collected historical admission data to calculate score margins for each university on students' ROLs. Using admission cutoff scores from 2017 to 2023 and the number of slots allocated to Henan Province by each university, we compute the difference between each student's score and the university's historical cutoff as a measure of admission likelihood.

Survey data. We complement the application records and university-level datasets with three surveys conducted between 2022 and 2024, summarized in Table 1. A pilot survey was conducted in 2021 to test the design, but we do not use data from this pilot in our analysis. For the main surveys, we partnered with high schools in the county, where teachers distributed survey links through established communication channels. Students completed the survey online, with compensation of 30 CNY (\$4.2) for approximately 30 minutes of participation, plus bonus payments for incentivized questions. This compensation substantially exceeds Henan Province's minimum wage. To maximize response rates, we sent multiple reminders to students who had not yet completed the survey. The average response rate across the three waves was approximately 50%.

In each wave, students completed the survey after receiving their Gaokao scores but before learning their admission outcomes. We chose this timing for two reasons. First, students submit their ROLs shortly after receiving scores, so surveying them during this period captures their preferences at the moment of decision-making. Second, knowledge of admission outcomes could influence reported preferences and beliefs; administering the survey beforehand ensures responses are consistent with application choices.

The surveys were designed to understand the mechanisms behind gender differences in university choices. Apart from eliciting risk and competitiveness preferences as well as various beliefs, we presented students with eight universities tailored to their ranking range. We grouped students by high-school track (STEM and non-STEM) and Gaokao ranking. Within each group, all students evaluated the same set of eight universities, selected according to two criteria: first, the universities vary systematically along three key dimensions—elite status,

⁴The platform aggregates salary information from multiple sources, including corporate HR departments, recruitment agencies, and individual submissions from over one million registered members. All submissions undergo a dual-layer verification process that screens for logical consistency and filters outliers deviating substantially from market benchmarks. See www.xinchou.cn for details.

specialization, and distance from home; second, they were among the most popular choices in previous years' applications. This design serves three purposes. First, it ensures relevance by showing only universities that students could realistically attend given their scores; for instance, a student meeting only the tier-2 cutoff would not see tier-1 universities. Second, presenting the same universities to all students within a group ensures comparability between male and female respondents. Third, selecting popular universities increases the likelihood that students included them in their actual ROLs. On average, students included 1.5 of the 8 survey universities in their rank-order lists, and 93% of students included at least one.

For each of these eight universities, we collected two types of information. First, we elicited preferences by asking students to rate their own willingness to attend and their perception of parental willingness on a 0–10 scale. The gap between these two ratings provides a within-student measure of parental pressure for each university. Because we also observe which of the eight universities students actually included in their ROLs, we can test whether parents exert gender-differentiated pressure and whether daughters respond more strongly to that pressure in their actual application choices. Second, we measured beliefs: (i) perceived average graduate salaries and own expected salary if attending, with accuracy incentivized through bonus payments for estimates within 100 CNY of true values; (ii) expected class ranking; (iii) perceived probability of admission; and (iv) anticipated discrimination.

Table 1: Survey summary

	Year (1)	Valid responses (2)	Admin sample (3)	Response rate (4)	Information collected (5)
Wave 1	2022	662	957	69.1%	Risk preferences, university vs. major trade-off, understanding of matching rules, ranking strategy
Wave 2	2023	438	1111	39.4%	Risk preferences, competitiveness, 8-university module: parental pressure, beliefs (salaries, ranking, admission prob.)
Wave 3	2024	568	1044	54.4%	Risk preferences, competitiveness, 8-university module: parental pressure, beliefs (salaries, ranking, admission prob.)
Total		1668	3112	53.6%	

Notes: This table provides an overview of the three surveys conducted between 2022 and 2024, including the number of valid responses and the information collected. The administrative sample of 3,112 students represents the cohorts participating in the Gaokao between 2022 and 2024, which is a subset of the 7,484 students in our full dataset spanning from 2018 to 2024. The response rate is calculated as the ratio of valid responses to the administrative sample for each wave.

The surveys were implemented in three waves (see the last column of Table 1). Wave 1 (2022) examined students' understanding of the matching mechanism and their trade-offs between university quality and major choice. Waves 2 (2023) and 3 (2024) expanded the survey to include the eight-university module along with measures of competitiveness and beliefs. Together, the surveys provide insights into application strategies and evidence on how preferences and beliefs shape university choices.

Summary statistics. Table 2 presents summary statistics for the students in our sample and their application choices. The sample is gender-balanced, with approximately 50% male and female students. Both genders were more likely to choose the STEM track in high school, but men did so more often. Of the entire sample, 12.1% were repeat exam takers, with male students overrepresented in this group. The slight age difference between male and female students is explained by this difference in retaking rates. Fewer than 10% of students had official poverty status, with equal proportions across genders. Female and male students did not differ in average Gaokao percentile rankings.

We collected 1,668 valid survey responses across three waves (2022, 2023, and 2024) from the 3,112 students in our administrative dataset for these cohorts, yielding an average response rate of approximately 50% (see Table 1). The survey respondents and the entire administrative sample are similar along most dimensions, including high-school track, local residency status, and Gaokao percentile rank (Appendix Table A2). However, survey respondents differ in two respects: they are less likely to be repeat exam takers (1.2% versus 6.5%) and more likely to have poverty status (9.2% versus 7.4%). The age difference follows mechanically from the lower share of repeat takers.⁵ Importantly, these selection patterns are similar for male and female respondents, indicating no gender-specific selection into the survey (columns (3), (6), and (9) of Appendix Table A2). This matters because our analysis focuses on gender differences rather than population averages. To verify that compositional differences do not affect our conclusions, we confirm that our main results from the administrative data are robust to excluding repeat exam takers, students with poverty status, or both.

⁵These patterns are intuitive: repeat exam takers, who have already graduated, are harder to reach through school-based recruitment, while students with poverty status may be more motivated by the participation fee.

Table 2: Summary statistics: Students and application choices

	Total (1)	Male (2)	Female (3)	Difference (2)–(3)
Panel (a): Individual characteristics				
STEM track	0.813 (0.390)	0.926 (0.261)	0.697 (0.460)	0.230*** (0.009)
Repeat exam taker	0.121 (0.327)	0.138 (0.345)	0.104 (0.305)	0.035*** (0.008)
Local residence	0.971 (0.167)	0.973 (0.163)	0.970 (0.171)	0.003 (0.004)
Age	18.278 (0.761)	18.340 (0.769)	18.214 (0.746)	0.126*** (0.018)
Poverty status	0.085 (0.279)	0.084 (0.278)	0.087 (0.281)	−0.002 (0.006)
Percentile ranking	0.225 (0.159)	0.223 (0.160)	0.227 (0.159)	−0.004 (0.004)
Observations	7,484	3,787	3,697	
Panel (b): Application choices				
Share elite	0.162 (0.369)	0.203 (0.402)	0.120 (0.325)	0.083*** (0.003)
Share in-province	0.438 (0.496)	0.388 (0.487)	0.490 (0.500)	−0.103*** (0.003)
Average distance (km)	676.67 (489.48)	716.91 (505.00)	634.35 (468.91)	82.56*** (3.37)
Share STEM-focused	0.384 (0.486)	0.475 (0.499)	0.288 (0.453)	0.186*** (0.003)
Share education-focused	0.172 (0.378)	0.108 (0.310)	0.240 (0.427)	−0.132*** (0.003)
Observations	83,701	42,903	40,798	

Notes: This table reports summary statistics for students in our sample and their application choices. Panel (a) shows student characteristics; Panel (b) shows university choices. Column (1) reports overall sample statistics; Columns (2) and (3) report means and standard deviations by gender; Column (4) reports differences between male and female students. STEM track indicates students who chose the STEM track in high school. Repeat exam taker indicates students who took the entrance exam more than once. Local residence indicates students with local residency permits. Poverty status indicates students with official poverty status. Percentile ranking is the student’s Gaokao rank. Share elite is the share of universities on the ROL classified as elite. Share in-province is the share located within Henan Province. Average distance is the distance in kilometers between the sample county and each university. Share STEM-focused is the share of universities specializing in science, technology, or engineering. Share education-focused is the share specializing in teacher training (“normal universities”). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

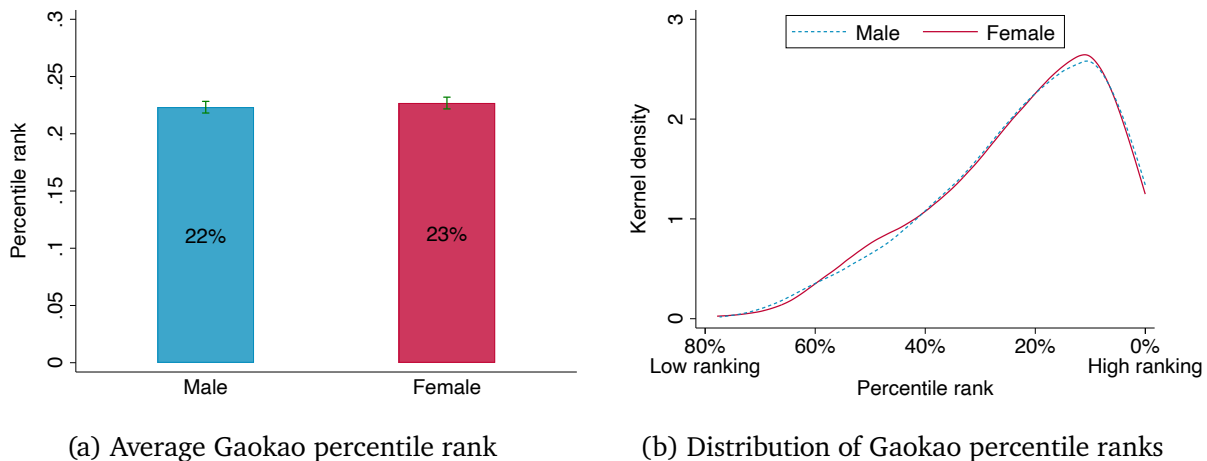
4 Gender differences in university choices and admissions

In this section, we examine whether equally qualified men and women make different university choices in China’s gender-blind admission system. Our analysis proceeds in three parts.

First, we examine whether men and women differ in *how* they apply—specifically, their risk-taking and strategic sophistication in constructing rank-order lists. Second, we investigate *where* they apply, focusing on three dimensions: elite status, STEM specialization, and geographic distance. Third, we analyze admission outcomes to assess whether different application patterns translate into meaningful differences in enrollment.

We begin by verifying that male and female students in our sample have comparable academic qualifications, a prerequisite for attributing any differences in choices to gender rather than ability. Figure 1 Panel (a) shows that average Gaokao percentile ranks are virtually identical: 22nd percentile for men and 23rd percentile for women (t -test: $p = 0.323$). Panel (b) confirms that this similarity extends beyond the mean: the entire distribution of Gaokao scores overlaps substantially, with no evidence of systematic differences in academic performance (Kolmogorov-Smirnov test: $p = 0.470$). A variance ratio test similarly shows no significant difference in score dispersion (F -test: $p = 0.923$).

Figure 1: Gender differences in Gaokao performance



Notes: This figure reports gender differences in Gaokao performance. Panel (a) shows average Gaokao percentile ranks for male and female students. Panel (b) shows the distribution of percentile ranks by gender, truncated at the 80th percentile because our analysis includes only students scoring above the tier-2 cutoff.

4.1 Application strategies

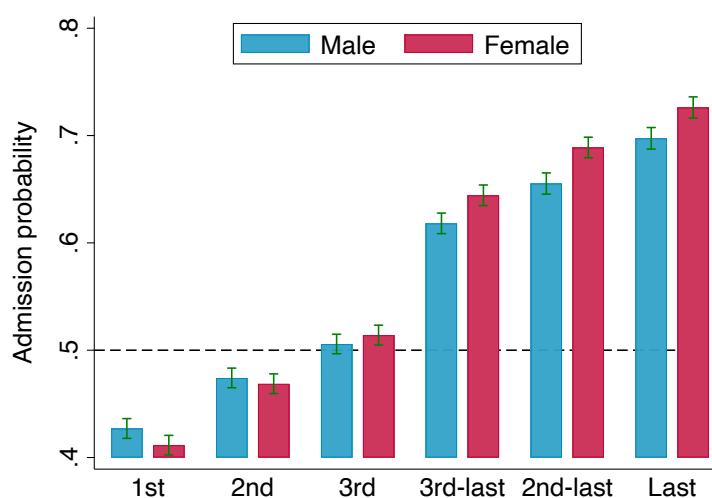
Given that the groups of men and women enter the application process with equal qualifications, we first ask whether they differ in how they construct their rank-order lists. We examine two dimensions of application strategies. First, risk-taking: do women construct more conservative portfolios by applying to universities with higher admission probabilities? Second, strategic sophistication: do students understand how to optimally order their choices and do men and

women have different understandings?

Measuring risk-taking in university choices. To quantify how much risk students take when constructing their rank-order lists, we assess each university choice in terms of admission difficulty relative to the student’s Gaokao score. Because exam difficulty and cohort composition fluctuate across years, we first standardize all scores to 2018 equivalents to ensure comparability across cohorts. Our primary measure is the *admission probability*, estimated by comparing a student’s standardized score to the distribution of a university’s historical admission cutoffs under a normal distribution assumption. Intuitively, a university whose cutoff has been consistently below a student’s score yields a high admission probability, while one whose cutoff frequently exceeds the student’s score yields a low probability. The methodology is detailed in Appendix B.1.

We begin with the first choice on the rank-order list. In our sample, 32.9% of admitted students get into their first choice, making it the most consequential decision for admission outcomes. We find no gender differences in risk-taking for the first choice. Male students face an average 41.5% chance of admission to their first choice, compared to 39.3% for female students. This difference is statistically significant ($p < 0.01$) but runs counter to the prediction that women are more risk-averse: female students target slightly *more* ambitious first choices than their male counterparts. Appendix Figure B3 shows that the full distributions, not just the means, are nearly identical across genders.

Figure 2: Gender differences in risk-taking by position on the rank-order list



Notes: The figure reports average admission probabilities for the first three and last three choices on students’ rank-order lists by gender. Admission probability is estimated by comparing a student’s standardized Gaokao score to the distribution of a university’s historical admission cutoffs under a normal distribution assumption (see Appendix B.1). Error bars represent 95% confidence intervals.

We extend the analysis to the first three and last three choices on the rank-order list. The

first three choices collectively account for over 70% of admissions. We also examine the last three choices to test whether there are gender differences in safety schools. Figure 2 presents admission probabilities across these six positions by gender. On average, both genders construct their lists in decreasing order of competitiveness: they target ambitious universities at the top (admission probabilities around 40–50%) and progressively safer options toward the bottom (probabilities above 70%). Male and female students face nearly identical admission probabilities across all six positions. If anything, women are slightly more risk-taking in the first three choices, targeting universities with lower admission probabilities, and slightly more conservative in the last three. However, the magnitudes are small: differences range from 0.5 to 2.2 percentage points for the top three choices and 3.7 to 4.7 percentage points for the bottom three. Moreover, the last three choices matter little for enrollment, accounting for only 3.4% of admissions. The probability measure also allows us to assess overall portfolio risk by computing each student’s probability of an off-tier match—being qualified for tier-1 (or tier-2) universities but admitted to a lower tier or no university at all. We derive this as $\Pr(\text{off-tier}) = \prod (1 - p_j)$, where p_j is the estimated admission probability for university j on the student’s ROL.⁶ The mean off-tier probability shows no significant gender difference, at 7.8% for both men and women. The overall pattern suggests that men and women adopt similar risk profiles when constructing their rank-order lists.

As a model-free alternative to measure risk-taking, we also compute the *score margin*—the difference between a student’s standardized Gaokao score and the university’s average admission cutoff over the previous three years. A negative margin indicates a “reach” school; a positive margin indicates relative safety. This measure requires no distributional assumptions and confirms the same pattern: men and women target universities with nearly identical score margins across all positions on the rank-order list. Our results are robust to using alternative windows (one year or five years) to compute the score margin. Detailed results are reported in Appendix B.3.

Strategic sophistication in ranking choices. We now turn to strategic sophistication in ordering universities on the rank-order list. Under China’s parallel mechanism—a deferred acceptance mechanism with a restricted number of choices—students may optimally skip reach universities, but among those universities they include, ranking them by true preferences weakly dominates any other ordering (Chen and Kesten, 2017). Survey evidence from other matching markets documents that strategic mistakes are common. Even in strategy-proof environments, violations of truthful ordering are prevalent (Hakimov and Kübler, 2021), possibly due to misunderstanding mechanism incentives (Hassidim et al., 2017; Rees-Jones, 2018).

⁶Since students submit their ROLs after knowing their Gaokao ranking, admission to different universities can be treated as independent events.

In our survey, we directly ask students how they rank universities on their ROL: by preference (most preferred to least preferred), by admission probability (most likely to least likely), or by other criteria. While the majority (57%) report ordering by preference, 32% report ordering by admission probability—placing universities with higher admission chances above those with lower chances, regardless of their true preferences. While it is of course possible that students prefer less competitive universities to more competitive ones, ranking a less competitive university above a more competitive one is a mistake. To see why, consider a student who lists university A (less competitive) above university A^+ (more competitive). If her score exceeds A 's cutoff, she is admitted to A without A^+ ever being considered. If her score falls below A 's cutoff, it falls below the cutoff of A^+ with high probability as well, and she is not admitted to it either. In both cases, listing A^+ below A serves no purpose. We examine whether students follow this optimal “stepwise decrease” rule: each successive university on the list should have a lower historical admission cutoff than the preceding one. This measure does not require observing true preferences, since violating the rule is dominated regardless of which universities students prefer.

The dominance argument relies on the assumption that the relative ordering of university cutoffs remains stable across years. While realized cutoffs fluctuate due to variation in applicant behavior, the ranking of universities by selectivity is highly persistent: if university A^+ had a higher cutoff than university A in each of the last three years, it has a higher cutoff in the current year with 91% probability. We adopt two definitions of violations. The first uses the three-year average cutoff: a choice pair $(t, t + 1)$ violates stepwise decrease if choice t has a lower average cutoff than choice $t + 1$. The second is more conservative, requiring choice t to have a lower cutoff than choice $t + 1$ in *each* of the past three years—under this definition, a student has no reason to believe she could be admitted to choice $t + 1$ but not to choice t in the current year.

Table 3 reports compliance rates for both measures under both definitions. We find no evidence that women are less strategically sophisticated than men—if anything, the opposite. Under the conservative definition (Panel b), 77.5% of women's consecutive choice pairs satisfy stepwise decrease, compared to 76.3% for men ($p < 0.01$). Our second measure, “partial decrease,” compares only the first and last choices to capture whether students understand the basic principle of ordering from most to least selective. Female students again outperform males: 90.4% of women's ROLs exhibit partial decrease compared to 88.4% of men's ($p < 0.01$). Results are similar under the three-year average definition (Panel a).

While the table reports choice-pair-level compliance rates, we can also examine where on the list violations occur. Overall, 76.2% of students have at least one violation somewhere on their rank-order list, with no significant gender difference (76.6% for men versus 75.8% for women, $p = 0.375$). However, most violations occur in positions that rarely determine admission

Table 3: Strategic sophistication

	Female (1)	Male (2)	Difference (3)
Panel (a): Three-year average cutoff			
Stepwise decrease	0.590 (0.169)	0.574 (0.166)	0.016*** (0.004)
Partial decrease	0.821 (0.383)	0.774 (0.418)	0.047*** (0.009)
Panel (b): Cutoff in each of the last three years			
Stepwise decrease	0.775 (0.167)	0.763 (0.173)	0.011*** (0.004)
Partial decrease	0.904 (0.295)	0.884 (0.321)	0.020*** (0.007)

Notes: This table reports the share of choice pairs following decrease strategies. For each pair $(t, t + 1)$ on a student's ROL, stepwise decrease equals 1 if choice t has a higher historical admission cutoff than choice $t + 1$. Partial decrease equals 1 if the first choice has a higher cutoff than the last choice, where the unit of observation is a student. Panel (a) uses three-year average cutoffs with all scores standardized to 2018 equivalents. Panel (b) applies a more conservative criterion: a pair $(t, t + 1)$ violates the decrease rule only if choice t has a lower cutoff than choice $t + 1$ in all three years. Standard deviations in parentheses for columns (1)–(2); standard errors in parentheses for column (3). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

outcomes. Focusing on the first three choices, which account for over 70% of admissions, women are significantly *less* likely to make strategic errors: 34.5% of women violate stepwise decrease at least once in their first three choices, compared to 38.4% of men ($p = 0.001$). Together, these results demonstrate that women display equal or greater strategic sophistication in ROL construction.

4.2 Preferences for university characteristics

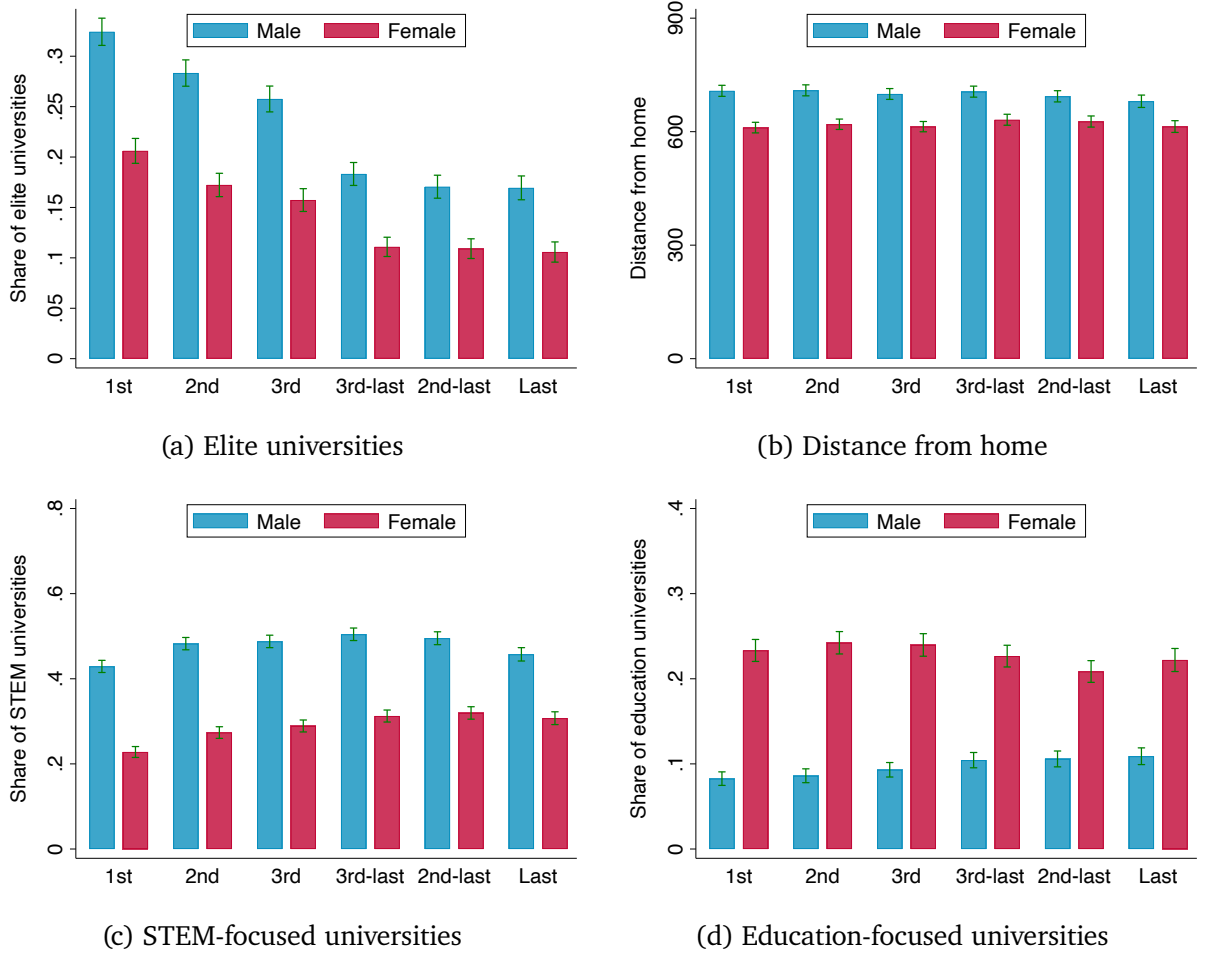
Men and women are equally qualified, take similar risks in ROL construction, and rank universities with similar strategic sophistication. Does this mean they apply to universities with similar characteristics? The answer is no. We observe strong gendered patterns along the three dimensions considered: elite status, geographic distance, and specialization.

Figure 3 shows the share of different university types on students' ROLs. First, elite universities account for 20% of male students' choices but only 12% of female students' choices ($p < 0.001$). Given the well-documented earnings premium associated with elite universities

(Jia and Li, 2021), this gap alone could generate meaningful differences in labor market outcomes. Gender differences extend to geographical location. Female students apply to universities significantly closer to home: the average distance is 717 kilometers for male students versus 634 kilometers for female students ($p < 0.001$). This geographical constraint narrows the set of universities women effectively choose from, potentially forcing tradeoffs between proximity and quality. The pattern for university specialization mirrors occupational segregation. STEM-focused universities comprise 48% of male students' ROLs compared to 29% for female students ($p < 0.001$). This gap is largely offset by education-focused universities, which comprise 24% of female students' choices compared to only 11% for male students. This difference in specialization has implications for future earning trajectories given the substantial wage gap between these career paths. Importantly, these gender differences persist across all positions on the ROL. Whether we examine the most consequential first choice, intermediate choices (second and third), or safety choices (last three positions), we find significant gender gaps along all three dimensions. This consistency indicates that gender differences in university choices are not driven by strategic considerations at particular positions but rather reflect systematic differences in how men and women evaluate university characteristics.

The gender gaps exist at both the extensive and intensive margins. At the extensive margin, 34% of male students apply to at least one elite university compared to 24% of female students ($p < 0.001$). Similarly, 89% of men apply to at least one out-of-province university versus 84% of women ($p < 0.001$), and 96% of men include at least one STEM-focused university versus 88% of women ($p < 0.001$). At the intensive margin, conditional on applying to these university types, men allocate a greater share of their ROL slots to them. Among students who apply to at least one elite university, men dedicate 54% of their choices to elite institutions versus 45% for women ($p < 0.001$). The pattern is similar for out-of-province universities (65% versus 57%, $p < 0.001$) and STEM-focused universities (49% versus 32%, $p < 0.001$).

Figure 3: Gender differences in university applications



Notes: This figure reports gender differences in university applications for the first three and last three choices on students' rank-order lists. Panel (a) shows the share of elite universities on students' ROLs. Panel (b) shows the average distance from home in kilometers. Panel (c) shows the share of STEM-focused universities. Panel (d) shows the share of education-focused universities. All panels display results separately for male and female students across choice positions. Error bars represent 95% confidence intervals.

Gender differences in university choices among equally qualified students. While the descriptive statistics reveal substantial gender gaps in university choices, these differences could reflect variation in student characteristics beyond gender. To isolate the effect of gender on university choices among equally qualified students, we estimate the following regression:

$$Y_{ikt} = \beta_1 \text{Female}_i + \theta X_i + \gamma_k + \delta_t + \epsilon_{ikt}, \quad (1)$$

where Y_{ikt} represents one of three outcomes for student i 's k th choice in year t : (1) an indicator for elite university, (2) standardized distance from home, or (3) an indicator for STEM-focused university. We standardize distance by subtracting the mean and dividing by the standard de-

variation within each year to account for year-specific variation in the geographic distribution of available slots. The indicator Female_i equals 1 for female students, and β_1 captures the gender difference in choices after controlling for other characteristics.

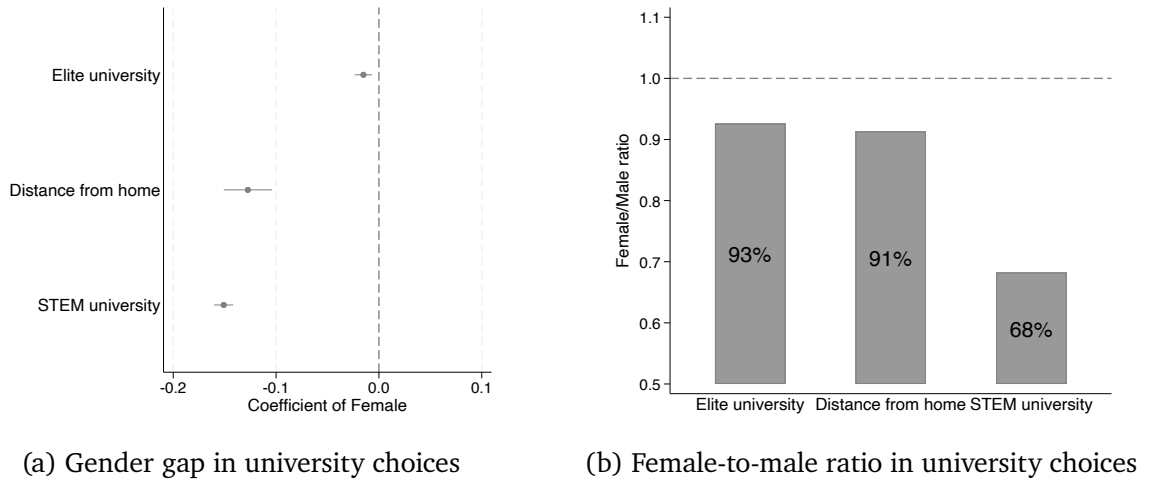
Choice-order fixed effects γ_k absorb systematic patterns in how students construct their ROLs (e.g., placing reach schools first). Year fixed effects δ_t account for cohort-specific shocks such as changes in the popularity of certain university types or admission policies. The vector X_i includes individual-level characteristics that might correlate with both gender and university preferences: Gaokao percentile rank (entered as fixed effects, with one indicator per percentile), high-school track (STEM or non-STEM), age, residence status, poverty status, and repeat exam-taker status. Standard errors are clustered at the individual level to account for correlation across choices within a student's ROL.

The Gaokao percentile rank controls deserve emphasis. Rather than assuming a linear relationship between ranking and university choices, we include indicator variables for each percentile, effectively comparing male and female students with identical rankings. This flexible specification is important because, as shown in Appendix Figure B6, the probability of applying to elite universities remains flat among lower-ranked students and increases sharply only among the highest-ranked students. We also control for high-school track because students compete only with others in the same track for university admission. Track choice is made in the second year of high school and cannot be altered at the time of university application.

Figure 4 presents regression results with full controls. Panel (a) shows that female students are significantly less likely to choose elite universities, apply to distant universities, and select STEM-focused universities compared to male students. To aid interpretation, Panel (b) translates these coefficients into female-to-male ratios. Women with identical qualifications and backgrounds are 93% as likely as men to apply to elite universities, apply to universities 9% closer to home, and are only 68% as likely to apply to STEM-focused universities. The gender gaps remain virtually unchanged with or without demographic controls (see Appendix Table B2), suggesting that the differences reflect genuine gender gaps in choices rather than compositional differences in background characteristics.

Because we test for gender differences along three dimensions—elite university, distance, and STEM—using the same sample, the family-wise error rate may exceed the nominal level. Since the three outcomes are correlated within students, we apply the Westfall and Young (1993) resampling method (1,000 bootstrap replications) to correct for multiple hypothesis testing, which accounts for this correlation when adjusting p -values. We also report the more conservative Holm–Bonferroni correction, which does not exploit the correlation structure. Appendix Table B5, Panel (a) shows that all three gender gaps remain significant at $p < 0.001$ under both corrections.

Figure 4: Gender differences in university applications among equally qualified students



Notes: Panel (a) shows coefficient estimates for female students from equation 1, with 95% confidence intervals. The dependent variables are indicators for elite university (first bar), standardized distance from home (second bar), and STEM-focused university (third bar). All specifications include Gaokao percentile rank fixed effects, high-school track, choice-order fixed effects, year fixed effects, and individual characteristics (age, residence status, poverty status, and repeat exam-taker status). Panel (b) shows the female-to-male ratio in application rates, calculated as the predicted probability for women divided by the predicted probability for men at the mean of all covariates. Full regression results are reported in Appendix Table B2.

4.3 Admission outcomes

While our findings demonstrate substantial gender gaps in university applications, one might argue that these gaps could be driven by choices inconsequential for admission outcomes. To address this concern, we examine whether differences in application choices lead to gaps in actual admissions.

Characteristics of admitted universities. The gendered application patterns documented above translate directly into admission outcomes across all three dimensions. Women with identical qualifications are significantly less likely to be admitted to elite universities (1.1 percentage points lower, representing a 92% female-to-male ratio given the 14% male baseline). Women are also admitted to universities significantly closer to home, with an average distance 0.10 standard deviations (approximately 48 kilometers) shorter than men's. The gap is even more pronounced for STEM-focused universities, where women show a 17.8 percentage point lower admission rate—only 63% of the male rate. These substantial differences, detailed in Appendix Table B3, demonstrate that application choices have real consequences for where students ultimately enroll.

Admission difficulty of admitted universities. Despite these substantial differences in university characteristics, men and women of the same qualification are admitted to universities

with virtually identical admission cutoffs (see Appendix Table B4). Average cutoff scores differ by less than 1 point using either the three-year average or the most recent year—differences that are neither economically nor statistically significant. This equivalence in admission difficulty, combined with our finding that men and women employ similar application strategies, indicates that the non-elite, non-STEM, and geographically proximate universities chosen by women are equally competitive. The high demand for these universities likely reflects province-wide preference patterns, where women across Henan collectively compete for similar types of institutions.

As with the application-level results, we correct for multiple hypothesis testing across the three admission outcomes. Appendix Table B5, Panel (b) shows that the gender gaps in distance and STEM admissions remain highly significant ($p < 0.001$) under both the Bonferroni–Holm and Westfall–Young corrections. The elite-university coefficient—the smallest of the six effects—yields an adjusted p -value of 0.024, remaining significant at the 5% level. No qualitative conclusion changes after these adjustments.

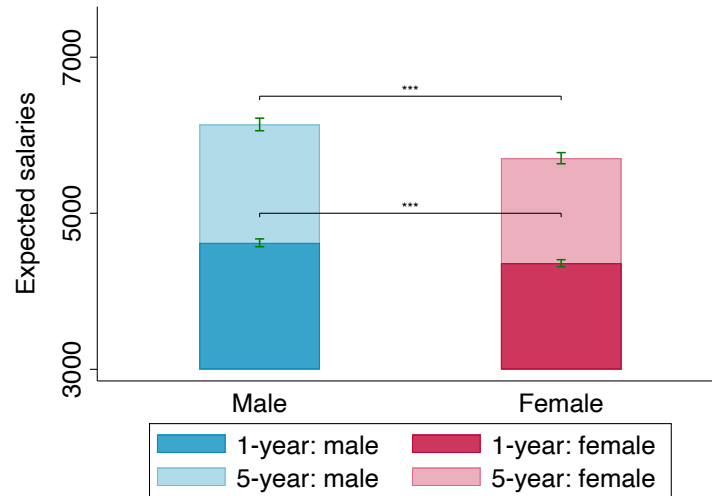
5 Economic consequences of gendered university choices

The previous sections documented that men and women employ similar application strategies and are admitted to universities with virtually identical cutoffs. Despite equal selectivity, the universities chosen differ substantially: men favor elite, STEM-focused, and distant institutions, while women prefer non-elite, non-STEM, and nearby universities. Do these different university types offer different salary prospects despite equal selectivity? If so, gendered university choices may constitute an important early source of gender wage gaps, setting men and women on divergent career trajectories from the point of university entry.

To quantify the economic consequences of these choices, we analyze expected earnings associated with different universities. Our salary data captures university-level averages—what past graduates from each institution earn—rather than individual earnings. Specifically, we use two measures: “1 year” captures the average salary of 2017 graduates measured in 2018, representing immediate post-graduation earnings, and “5 years” captures the 2013 cohort’s average salary in 2018, representing medium-term career trajectories. While this approach cannot capture within-university gender wage gaps, it provides a valuable benchmark for understanding the economic trade-offs in university selection. These averages likely represent the information available to students during decision-making—through university websites, rankings, and informal networks—making them particularly relevant for understanding how choices translate into expected outcomes.

Figure 5 presents evidence on the economic consequences of gendered university admis-

Figure 5: Gender differences in expected salaries



Notes: This figure reports expected salaries for graduates from universities to which students were admitted. Expected salaries are measured as average monthly salaries of graduates from each university. Dark bars represent salaries one year after graduation; light bars represent salaries five years after graduation. Brackets with asterisks indicate statistical significance of gender differences: *** $p < 0.01$.

sions. Universities to which men are admitted offer higher expected salaries than those to which women are admitted. The average monthly salary one year after graduation is 4,496 yuan (approximately \$626) for men’s admitted universities compared to 4,313 yuan (approximately \$601) for women’s—a 4.1% difference ($p < 0.01$), or a 95.9% female-to-male ratio. This gap widens to 5.4% at five years (5,941 yuan versus 5,621 yuan, $p < 0.01$). While both genders experience salary growth over this period, faster growth among universities admitting men (32.2% versus 30.3%) results in an expanding gap—a pattern consistent with literature documenting widening gender wage gaps over the career lifecycle (Blau and Kahn, 2017). Critically, this divergence emerges without any workplace discrimination or unequal career advancement opportunities. The widening gap stems entirely from characteristics of the universities themselves, suggesting that gendered wage trajectories are partially determined at the point of university selection. This finding aligns with evidence that men place greater weight on earnings growth potential when making educational choices (Wiswall and Zafar, 2018) and implies that addressing workplace inequality alone may be insufficient to close gender wage gaps if men and women are already sorted into institutions with different earnings trajectories.

To understand how gendered university choices translate into economic disparities, we decompose the gender gap in expected salaries into components attributable to elite status, STEM, and geographical proximity. First, we establish the baseline gender gap by examining the relationship between gender and the expected salaries of admitted universities, controlling for students’ qualifications and demographics:

$$\text{Salary}_{ij} = \alpha_0 + \alpha_1 \text{Female}_i + \theta X_i + \epsilon_{ij}$$

where Salary_{ij} is the expected salary associated with university j to which student i was admitted. The coefficient α_1 captures the raw gender gap in expected earnings based on university placement. To test how much of this gap is mediated through gendered patterns in university characteristics, we then estimate:

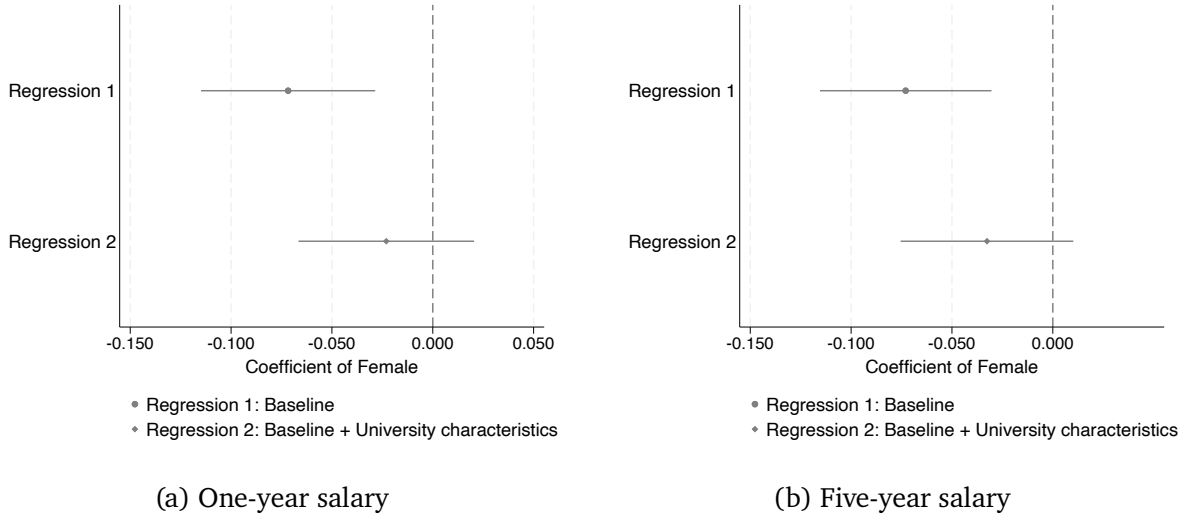
$$\text{Salary}_{ij} = \beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Elite}_j + \beta_3 \text{STEM}_j + \beta_4 \text{Edu}_j + \beta_5 \text{AveDistance}_i + \theta X_i + \epsilon_{ij}$$

where Elite_j indicates whether the admitted university has elite status, STEM_j and Edu_j indicate STEM-focused and education-focused universities respectively, and AveDistance_i measures the average distance of universities on student i 's ROL, capturing willingness to attend geographically distant universities. Average distance better captures the economic constraint imposed by geographic preferences than the admitted university's distance, as it represents the opportunity set students consider. As we demonstrate formally in Appendix C.1, geographic constraints affect earnings by limiting access to high-paying opportunities located far from home. The change in β_1 relative to α_1 measures how much of the gender gap can be explained by differences along these three dimensions. Following the causal mediation framework reviewed by Huber (2019), the difference between β_1 and α_1 can be interpreted as the natural indirect effect when there are no treatment-mediator interactions in the outcome equation. This condition holds in our setting because expected salaries are university-level averages that do not vary by student gender. The coefficients β_2 , β_3 , β_4 , and β_5 quantify the salary premiums associated with elite status, STEM specialization, education specialization and geographic mobility, respectively.

Figure 6 presents the mediation results. When comparing men and women with identical qualifications (Regression 1), a substantial gender gap in expected salaries emerges. When we account for differences in university characteristics (Regression 2), the gender gap reduces by more than half. The mediation analysis reveals that gendered patterns in university choices explain approximately 68% of the expected earnings gap at one year and 55% at five years. The residual could reflect additional factors such as men systematically targeting universities with higher salary growth potential within each category of elite status and specialization, but investigating these mechanisms is beyond the scope of this paper.

Each dimension of university characteristics contributes independently to salary expectations, even after controlling for the others (see Appendix Table C1 for detailed results). Elite universities command substantial and persistent wage premiums, reflecting the lasting value of prestigious credentials. STEM specialization also offers significant returns, likely reflecting strong labor market demand for technical skills. By contrast, education-focused universities

Figure 6: Gender gap in expected salaries



Notes: This figure reports regression coefficients from the mediation analysis of the gender gap in expected salaries. Panel (a) shows results for one-year post-graduation salaries; Panel (b) shows five-year salaries. Each panel presents two specifications: Regression 1 estimates the baseline gender gap without university characteristics; Regression 2 adds controls for elite status, specialization, and average distance on ROL. Coefficients represent effects on standardized monthly salary. All specifications include Gaokao percentile rank fixed effects, year fixed effects, and demographic controls (age, residence status, poverty status, repeat exam-taker status). Error bars represent 95% confidence intervals based on standard errors clustered at the student level. Full results are reported in Appendix Table C1.

are associated with substantial salary penalties in the short-run, reflecting comparatively lower earnings in teaching careers. Importantly, elite status and STEM specialization each predict higher salaries even controlling for the other, indicating distinct sources of economic advantage rather than overlapping categories. The positive association between geographic mobility and expected salaries likely reflects economic trade-offs between proximity and earnings potential: students willing to attend distant universities have access to a broader set of high-paying opportunities. This correlation need not imply that distant universities pay more because of their location; rather, as we demonstrate in Appendix C.1, geographic constraints limit access to the full distribution of economic opportunities.

6 What explains the gender differences in university choices?

The gendered patterns documented so far raise an important question: do the observed differences reflect gender differences in preferences alone, or do parental expectations also play a role? Our survey presented students with eight universities varying in elite status, specialization, and distance from home, eliciting both students' own willingness to attend and their

perception of their parents' willingness to support their application. By comparing these two ratings for each student-university pair, we classify parental influence into three categories: *Pressure for* (parent rates university higher than student), *Agree* (similar ratings), and *Pressure against* (parent rates university lower than student). We first examine whether university characteristics correlate with these three possible forms of parental influence differently for sons and daughters, and then test whether daughters are more influenced by parental pressure in their actual application choices.

6.1 Students' stated preferences and perceived parental preferences

For each of the eight universities, we asked two questions: (1) "How willing are you to attend this university if you are admitted?" and (2) "How willing do you think your parents are to support your attendance of this university if you are admitted?" Both used a 0–10 scale where 0 indicates "not willing at all" and 10 indicates "extremely willing."

Eliciting both measures for the same set of universities allows us to construct a within-student measure of parental influence. We define parental pressure as the *difference* between parent and student ratings for the same university. For each student-university pair (i, j) , we compute:

$$\text{Pressure Gap}_{ij} = \text{Parental Willingness}_{ij} - \text{Own Willingness}_{ij}.$$

This difference nets out both individual response tendencies and shared evaluations of university quality, isolating the direction and magnitude of parental pressure. We classify each pair into three categories: *Pressure for* when the gap exceeds one point ($\text{Pressure Gap}_{ij} > 1$), indicating that parents favor a university more than the student does; *Agree* when ratings are within one point difference ($|\text{Pressure Gap}_{ij}| \leq 1$); and *Pressure against* when the gap is below negative one ($\text{Pressure Gap}_{ij} < -1$), indicating that parents are less favorable than the student.

Table 4 reports the frequencies of these categories by university characteristics and student gender. Several patterns stand out. First, students overwhelmingly perceive their parents as agreeing with their own evaluations: over 80% of student-university pairs fall into the *Agree* category. However, *Pressure for* is roughly three times as common as *Pressure against*, suggesting that parents tend to rate universities more favorably than students on average.⁷ Second, the gender differences concentrate in the *Pressure against* category. Daughters face significantly more parental pressure against elite universities (6.4% vs. 3.9%, $p < 0.05$) and distant universities (8.8% vs. 4.8%, $p < 0.01$), while sons and daughters experience similar rates of *Pressure for*

⁷This asymmetry likely reflects differing valuations of the outside option: parents may prefer their child to attend a university, while students are more selective, possibly considering re-taking the Gaokao.

Table 4: Parental pressure by university characteristics

	Men			Women		
	(1) <i>Pressure for</i>	(2) <i>Agree</i>	(3) <i>Pressure against</i>	(4) <i>Pressure for</i>	(5) <i>Agree</i>	(6) <i>Pressure against</i>
Overall	13.6	82.4	4.1	13.7	81.5	4.8
<i>By elite status</i>						
Elite	13.3	82.8	3.9	13.3	80.3	6.4**
Non-elite	13.8	82.0	4.2	13.9	82.1	4.0
<i>By distance</i>						
Far	12.6	82.6	4.8	10.6	80.6	8.8***
Close	14.1	82.2	3.7	14.9	81.9	3.2
<i>By specialization</i>						
STEM	12.2	83.3	4.5	12.3	83.7	3.9
Education	19.9	77.6	2.5	20.4	77.7	1.9

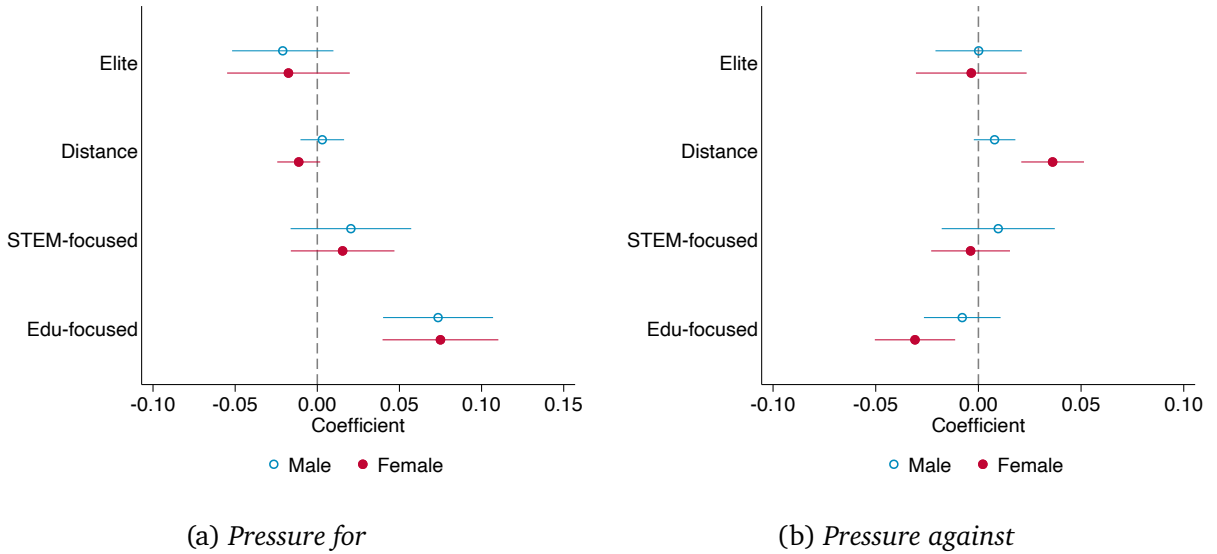
Notes: This table reports parental pressure by university characteristics. Parental pressure classifies each student-university pair into three categories based on $\text{Pressure Gap}_{ij} = \text{Parental Willingness}_{ij} - \text{Own Willingness}_{ij}$: *Pressure for* ($\text{Gap} > 1$), *Agree* ($|\text{Gap}| \leq 1$), and *Pressure against* ($\text{Gap} < -1$). Cell entries are percentages within each gender-subgroup cell, summing to 100 across the three categories. Far = above-median distance; Close = at or below median. We test the male-female difference in *Pressure for* (column (1) vs. (4)) and *Pressure against* (column (3) vs. (6)); stars on female columns indicate significance of the corresponding difference, clustered at the student level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

these universities. This pattern—parents being more comfortable discouraging daughters from certain options than sons, or at least being perceived as such by daughters—is consistent with the idea of paternalistic discrimination (Buchmann et al., 2023), but it can also be due to selfish motives, such as having a daughter who lives nearby. Third, no gender differences emerge for STEM or education schools, but education-focused universities generate notably higher rates of *Pressure for* (around 20% for both genders, compared to the overall average of roughly 14%) and lower rates of *Pressure against*, consistent with a general parental preference for a teaching career.

However, these raw shares do not control for other university dimensions. For example, the higher pressure against elite universities for daughters could partly reflect a stronger push against distant universities, which creates a tradeoff between distant elite universities and nearby non-elite universities (see Appendix C.1 for details). To isolate the independent contribution of each dimension, we ask which university characteristics lead parents to pressure *for* a university rather than agree with their child, and which lead parents to pressure *against* rather than agree. We estimate two linear probability models, one for each comparison. In the first, the dependent variable equals one if the student-university pair is classified as *Pressure*

for and zero if Agree; in the second, it equals one if classified as *Pressure against* and zero if Agree. University characteristics—elite status, distance, and specialization indicators—enter as regressors, and all specifications include individual fixed effects to absorb heterogeneity in baseline response tendencies. Figure 7 reports the results: Panel (a) displays coefficients from the *Pressure for* regression and Panel (b) from the *Pressure against* regression, estimated separately for sons and daughters.

Figure 7: How university characteristics predict parental pressure



Notes: This figure reports coefficients from linear regressions of university characteristics on the probability of being classified as pressure for (Panel a) or pressure against (Panel b), estimated separately for male and female students. The dependent variable equals one if the student-university pair is classified as pressure for (Panel a) or pressure against (Panel b), and zero if agree. Pressure categories are based on $\text{Pressure Gap}_{ij} = \text{Parental Willingness}_{ij} - \text{Own Willingness}_{ij}$: pressure for ($\text{Gap} > 1$), agree ($|\text{Gap}| \leq 1$), and pressure against ($\text{Gap} < -1$). The model includes four university characteristics as regressors: elite status (indicator), standardized distance from home (continuous), and indicators for STEM-focused and education-focused specialization, with comprehensive as the reference category. All specifications include individual fixed effects. Error bars represent 95% confidence intervals based on standard errors clustered at the student level. Full regression results are reported in Appendix Table D1.

The gendered pattern along the distance dimension survives after controlling for other university characteristics. For daughters, a one standard deviation increase in distance marginally reduces the probability of *Pressure for* by 1.1 percentage points ($p = 0.091$) and significantly increases the probability of *Pressure against* by 3.6 percentage points ($p < 0.001$). For sons, both effects are close to zero and statistically insignificant. Notably, with distance treated as a continuous variable and other dimensions held constant, a suggestive pattern emerges in Panel (a): parents push daughters toward nearby universities, not just away from distant ones. The gendered pressure against elite universities documented in Table 4, however, disappears once

we control for distance and specialization. This is largely driven by the correlation between elite status and distance: progressively adding controls shows that the gender gap disappears once distance is included, while specialization has little effect (Appendix Figure D1).⁸ Parents do not appear to have a distaste for elite universities for their daughters; rather, pressure against elite universities is generated when elite status conflicts with proximity. The specialization results are consistent with the raw patterns. Education-focused universities generate strong parental pressure for both sons and daughters, with coefficients of 7.4 and 7.5 percentage points respectively ($p < 0.001$), and for daughters significantly reduce the probability of *Pressure against* in Panel (b) (−3.1 percentage points, $p = 0.002$). The similar magnitudes across genders confirm that parental preference for education universities reflects a general preference rather than a gendered one. For STEM universities, parental pressure is similar across genders ($p = 0.726$).

We conduct three sets of robustness checks. First, we re-estimate the model using a multinomial logit specification, which jointly estimates the probabilities of all three categories but does not accommodate individual fixed effects. Results are qualitatively identical (Appendix Figure D5). Second, we vary the classification threshold for parental pressure, using gaps of zero and two points instead of one. A threshold of zero classifies any divergence as pressure, while a threshold of two restricts attention to larger disagreements. Third, we address a potential concern that the general tendency for parents to rate universities more favorably than students—documented in Table 4—could inflate the *Pressure for* category uniformly across all universities, making it harder to detect differential pressure along specific dimensions. To address this, we demean both own and parental willingness at the individual level before computing the pressure gap, so that the reclassified categories capture only relative parental pressure across universities within a student. Under all three alternative specifications, the results are consistent with our baseline: distance remains the dimension along which parental pressure is most gendered, and education universities continue to generate strong parental pressure for both sons and daughters. These results are reported in Appendix D.1.

6.2 From preferences to choices: Testing differential responsiveness

The previous analysis shows that parents exert gender-specific pressure regarding distant and elite universities, and gender-neutral pressure for education-focused universities. These patterns can explain the gendered choices documented earlier only if daughters are actually influenced by parental pressure. If daughters are more responsive to parental pressure than

⁸In our eight-university module, elite and distance are negatively correlated: elite universities tend to be farther away. This is not a mechanical artifact of our design but reflects that only elite distant universities consistently appear in students' applications—non-elite distant universities are rarely applied to.

sons, then even gender-neutral pressure on education-focused universities could generate a gendered pattern in inclusion decisions. The question is therefore whether parental pressure has a larger impact on daughters than on sons.

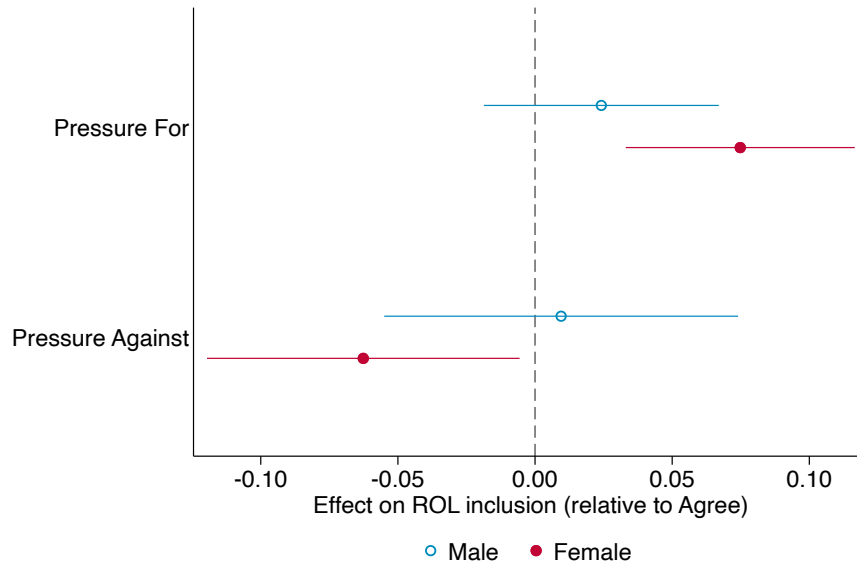
We test this using the eight universities from the survey module, for which we observe both whether the student included each university in their actual rank-order list and the parental pressure measure for that university. Overall, students include 12.8% (men) and 15.9% (women) of these universities in their rank-order lists—a high rate given that students choose from over 1,000 universities, reflecting our design of selecting popular universities within each ranking group.⁹ Inclusion rates vary across pressure categories: for women, the rate is 18.3% with *Pressure for* but only 11.1% with *Pressure against*; for men, the corresponding rates are 11.4% and 13.7%, showing little response to the direction of pressure. We estimate a linear probability model where the dependent variable is whether student i included university j in their rank-order list, and the key explanatory variables are indicators for *Pressure for* and *Pressure against*, with *Agree* as the reference category. We control for own willingness toward university j to address the concern that parental pressure may be correlated with the student's own valuation; the coefficients on the pressure indicators thus capture the effect of parental pressure on inclusion decisions, holding the student's own preference fixed. We regress separately for men and women to test for differential responsiveness. Individual fixed effects absorb baseline differences in how many universities students include.

Figure 8 reports the baseline results. Women respond positively to *Pressure for*: being in the *Pressure for* category increases the probability of including a university by 7.5 percentage points ($p < 0.001$). For men, the effect is in the same direction but smaller and not statistically significant (2.4 percentage points, $p = 0.269$). The gender difference in responsiveness to *Pressure for* is 5.1 percentage points, significant at 10% level ($p = 0.097$). For *Pressure against*, women significantly reduce their probability of inclusion by 6.3 percentage points ($p = 0.032$); men show no response, and if anything in the opposite direction (1.0 percentage points, $p = 0.773$). The gender difference is not significant at conventional levels ($p = 0.101$).

However, comparing the effect of *Pressure for* and *Pressure against*—the overall sensitivity to the direction of parental pressure—yields a significant gender difference of 12.3 percentage points ($p = 0.019$). The swing from *Pressure against* to *Pressure for* shifts women's inclusion

⁹The higher inclusion rate of women likely reflects more concentrated choices: among all distinct universities that appear on women's rank-order lists, the most frequent 5% account for 37.9% of their listings versus 31.1% for men, and just 9.1% of these frequent universities cover 50% of women's listings versus 12.1% for men. Because our eight-university module draws from frequently listed universities in each score range, these universities are more likely to appear on women's rank-order lists. One potential explanation for this concentration is that women's choices are more influenced by parental preferences, and parents tend to converge on similar popular universities.

Figure 8: Differential responsiveness to parental pressure



Notes: This figure reports coefficients from a linear probability model where the dependent variable is whether student i included university j in their rank-order list by gender. The key explanatory variables are indicators for pressure for and pressure against, with agree as the reference category. Pressure categories are based on $\text{Pressure Gap}_{ij} = \text{Parental Willingness}_{ij} - \text{Own Willingness}_{ij}$: pressure for ($\text{Gap} > 1$), agree ($|\text{Gap}| \leq 1$), and pressure against ($\text{Gap} < -1$). “For vs. Agree” reports the effect of pressure for relative to agree; “Against vs. Agree” reports the effect of pressure against relative to agree. All specifications control for individual fixed effects and own willingness toward university j . Error bars represent 95% confidence intervals based on standard errors clustered at the student level. Full regression results are reported in Appendix Table D2.

probability by 13.7 percentage points ($p < 0.001$), equivalent to 87% of the baseline inclusion rate (15.9%). For men, the same swing is essentially zero (1.5 percentage points, $p = 0.701$). Whether parents push for or against a university matters significantly more for daughters’ inclusion decisions than for sons’.

These results have direct implications for understanding the gendered choice patterns documented earlier. Because women are more responsive to parental pressure, the gender-neutral parental pressure for education-focused universities translates into a larger impact on daughters’ choices than on sons’, contributing to women’s higher inclusion of education-focused universities and correspondingly lower inclusion of STEM-focused universities. At the same time, the greater responsiveness amplifies the effect of the already gendered pressure: not only do daughters face more parental pressure against distant and, as a result, elite universities, but they also respond more strongly to that pressure. The combination of gendered pressure on some dimensions and differential responsiveness can qualitatively account for the direction of the gender gaps across all three dimensions—distance, elite status, and specialization. We do not attempt to quantify how much of the overall gender gap is attributable to parental pressure, as

our survey-based measure is available only for the eight-university module and covers a subset of the full sample. These two interconnected channels—gendered parental pressure and differential responsiveness—nonetheless identify a concrete mechanism through which parental influence can generate gendered choices even within a gender-blind admissions system.

We conduct two robustness checks. First, we address the concern that parental influence may only affect unrealistic choices—universities with near-zero admission probability—in which case it would have little practical consequence. We weight inclusion decisions by admission probability, using both objective probabilities (estimated as described in Appendix B.1) and subjective probabilities (from the survey). If parental pressure only shifts choices among reach universities, weighting by admission probability should attenuate the effects. Instead, the results are similar or even stronger under both weighting schemes (Appendix Figure D7 and Figure D6), suggesting that parental influence operates on realistic choices as well. Second, we verify robustness to alternative definitions of parental pressure—thresholds of zero and two points, and the demeaned specification. Results are consistent across all specifications (Appendix D.1).

6.3 Alternative explanations

While our analysis has identified parental pressure as a potential mechanism driving gendered university choices, several alternative explanations merit consideration. Using administrative and survey data, we systematically examine each of them below. None can account for the gendered patterns in university choices. Detailed analyses are presented in Appendix D.3.

Preferences for majors. One possible explanation for the gender gap in elite university applications is that women face a stronger trade-off between university prestige and their preferred major, as the Chinese admission system assigns majors based on Gaokao rankings within each university. However, we find that women are actually more likely than men to choose the “Accept any major” option, which allows the university to assign them to a major outside their five stated preferences. This holds for both first choices (95% versus 93%) and all choices on the ROL (85% versus 82%), indicating stronger preference for university quality over specific majors. Survey evidence using hypothetical choices between higher-quality universities with random majors and lower-quality universities with preferred majors confirms this pattern.

Competitiveness. Another possibility is that women avoid elite and STEM universities due to their competitive environments. However, following the experimental design of Niederle and Vesterlund (2007), we find no gender difference in competitiveness after controlling for risk attitudes and confidence, consistent with previous findings in China (Zhang, 2019).

Returns to university characteristics. The gendered pattern could also reflect informa-

tion asymmetries regarding returns to elite versus non-elite, distant versus nearby, and STEM-focused versus education-focused universities. To test this, we elicited students' perceived salaries of graduates from each of the eight universities, with monetary incentives for accuracy. Regressing perceived salaries on elite status, distance, and STEM specialization while controlling for individual fixed effects, we find no gender differences in perceived returns along any dimension. To address the concern that women may perceive their own returns to elite or STEM universities as low even if they believe average returns are high, we also elicited perceived salaries for themselves after graduating from each university. We again find no gender differences in perceived own returns.

Beliefs about performance at university. If women are less confident about their performance at elite, distant, or STEM universities, this could explain their lower application rates. We elicited students' beliefs about their class ranking at each of the eight universities. We find no gender differences along any of the three dimensions.

Beliefs about admission probability. While men and women with the same Gaokao score face identical admission probabilities, their beliefs could differ. If women systematically underestimate their chances of admission to elite, distant, and STEM universities, this could account for the observed patterns. Using beliefs about admission chances for each of the eight universities, we find no gender differences in how the three dimensions affect perceived admission probability.

7 Discussion and conclusions

We document substantial gender gaps in university choices within China's gender-blind admissions system. Although the system is gender-blind, women are significantly less likely than men to apply to elite, STEM-focused, and distant universities, while being more likely to apply to education-focused universities. Importantly, this does not reflect strategic differences: men and women exhibit similar risk-taking in constructing their rank-order lists and similar sophistication in ordering their choices. The universities they are admitted to have virtually identical admission cutoffs but differ substantially in elite status, distance, and specialization. Turning to economic consequences, women are expected to earn 4.1% less than equally qualified men one year after graduation and 5.4% less five years after graduation. Mediation analysis shows that gendered patterns in university choices explain most of this expected earnings gap.

We investigate whether parental influence contributes to the gender gaps in university choices. Combining administrative and survey data, we construct a novel measure of parental pressure by comparing students' own willingness to attend each university with their perceived parental willingness to support this. We find that parents exert gendered pressure along the

distance and elite dimensions—discouraging daughters more than sons from attending distant and elite universities—while pressure on specialization is gender-neutral. Crucially, daughters are significantly more responsive to parental pressure than sons: whether parents push for or against a university significantly affects daughters’ application decisions but has no detectable effect on sons’. This differential responsiveness means that even gender-neutral parental pressure, such as the strong push toward education-focused universities, generates a larger impact on daughters’ choices. Our data also allow us to examine alternative explanations including preferences for majors, competitiveness, beliefs about returns to different university types, confidence about performance, and beliefs about admission probability, but we find no evidence that these mechanisms explain the observed gender gaps.

We study university choices in one region of China with a gender-blind admissions system, but the key mechanisms—gendered parental expectations and gendered parental influence—likely extend beyond this specific context. First, cross-cultural evidence shows that parents hold different expectations for sons and daughters in many domains. In educational choices, parents in Norway choose more competitive environments for sons than daughters (Tungodden and Willén, 2023), and in Switzerland, parents recommend male-dominated occupations to sons while giving gender-neutral advice to daughters (Wolter and Zöllner, 2025). Part of this may be for economic reasons: daughters are more likely than sons to become caregivers for elderly parents (Grigoryeva, 2017; Maestas et al., 2024). Second, our finding that women’s choices align more closely with perceived parental preferences is consistent with broader patterns documented in the literature. We cannot determine from our data whether this reflects greater compliance by daughters or whether parents enforce their expectations more firmly on daughters—but either mechanism would produce the patterns we observe. On the compliance side, women show greater responsiveness to social norms across many domains (Alm et al., 2009; Dulleck et al., 2016; Galasso et al., 2020). Social role theory attributes this to communal expectations: women are expected to be other-regarding (Eagly, 1987). On the enforcement side, evidence from workplace settings shows that people are more likely to ask women to perform low-return tasks because they expect women to say yes (Babcock et al., 2017). Applied to our context, parents may impose their preferences more strongly on daughters precisely because they expect daughters to comply. Either mechanism, or their combination, would make our findings broadly applicable.

It is crucial to note that we measure students’ *perceptions* of their parents’ preferences and their role in application behavior. Whether these perceptions are accurate remains an open question, but the perceived preferences matter more for decisions than parents’ actual preferences. Recent studies on misperceptions of social norms suggest that people often underestimate others’ support for women’s rights, and correcting these misperceptions can advance

gender equality (Bursztyn et al., 2020; Bursztyn and Yang, 2022; Bursztyn et al., 2023). Understanding whether students accurately perceive their parents’ preferences is an important avenue for future research.

Our results highlight the limitations of gender-blind institutional design in achieving equal outcomes. While the Chinese university admissions system eliminates discrimination in evaluation, it does not operate in a vacuum. Even in this meritocratic setting, social influence shapes men’s and women’s choices, leading to unequal outcomes with long-term economic consequences.

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