

# Affirmative action, college access and major-choice: Redistribution and potential for social mobility

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## Motivation

- Socioeconomic inequality in college access documented worldwide.
- Most post-secondary earnings differences explained by field of study.
- Several policies aim to increase attendance of minorities/marginalized groups.
- Targeted policies to increase women in STEM/Econ majors and racial minorities in fields such as Econ.

## This Research

I evaluate the channels through which affirmative action affects both access to college and selective majors, in contexts with joint application to college and major.

Admissions mechanism design:  
A *Boston Mechanism* variant  
⇒ Incentives for strategic behavior.

## Context

- UFES is the public university in the state, selective and most preferred option;
- Applicants apply to only one major;
- Entrance exams are two-stage. First-stage is based exclusively on test scores, and only about 40% of applicants pass this stage.

## The Affirmative Action Policy

- Low-income applicants from public schools ⇒ lower scores on entrance exams and underrepresented in competitive majors.
- The policy implemented in 2008 reserves 40% of seats *per major* to low-income applicants from public schools.
- The quota is applied only to the second-stage.



## Empirical Strategy

### • Direct Effect: Redistribution

I compare individuals accepted or rejected because of the policy and classify them in two groups 'pushed in' and 'pushed out'. Transparent admissions mechanism based solely on test scores. Results net of indirect effects of the policy on major-choice.

### • Indirect Effect: Major-choice

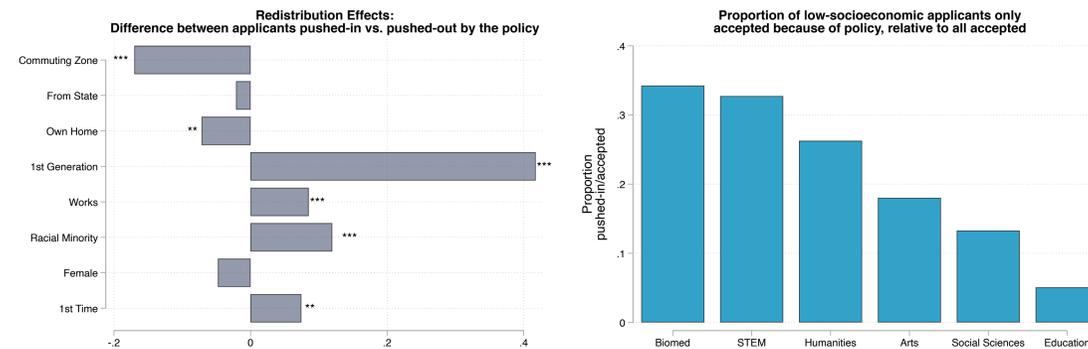
I explore exogenous variation in acceptance probabilities induced by the affirmative action policy comparing LIPS and non-LIPS applicants before and after the policy. Identifies the effects of the policy on the socioeconomic gap (LIPS vs. non-LIPS) in applications and acceptance, the main parameter of policy interest.

LIPS: Low-income Public School.

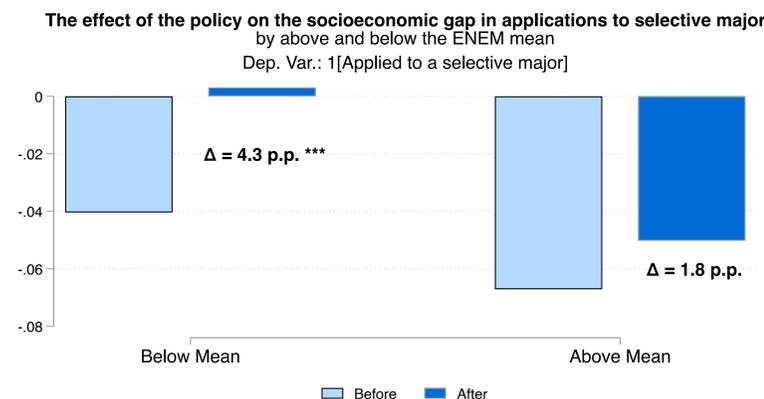
## Main Results

**The policy redistributed college seats to applicants of lower-socioeconomic backgrounds, especially among high-return fields**

Effects large for 1st generation, racial minorities, from outside commuting zone, especially; In fields like Biomed and STEM, about a third of the cohort was accepted only because of the policy. ⇒ **Potential for social mobility**

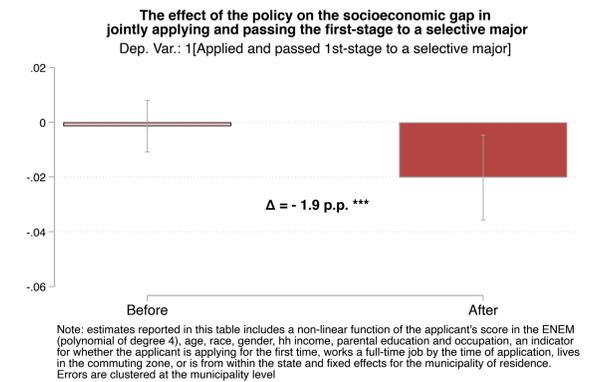


**The policy also reduced the socioeconomic gap in applications to selective majors by 60%. Most of the effects concentrated among applicants with low chances of acceptance to selective majors.**



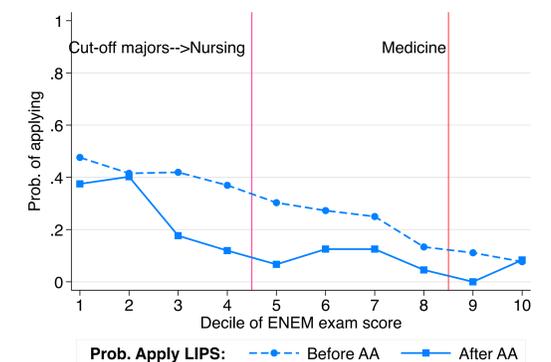
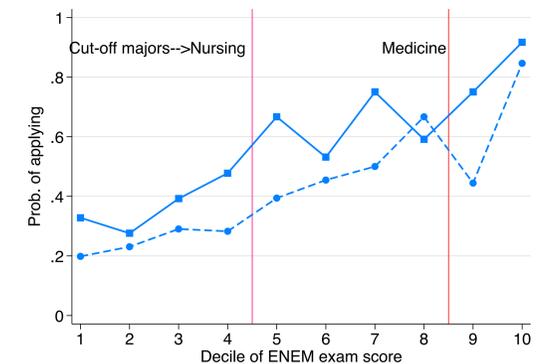
Note: estimates reported in this table includes a non-linear function of the applicant's score in the ENEM (polynomial of degree 4), age, race, gender, hh income, parental education and occupation, an indicator for whether the applicant is applying for the first time, works a full-time job by the time of application, lives in the commuting zone, or is from within the state and fixed effects for the municipality of residence. Errors are clustered at the municipality level

As a result of the change in major-choice and because there is no affirmative action in the 1st stage exam, the **socioeconomic gap in the probability of applying to a selective major and passing the first-stage** worsens after the policy.



This change in behavior, coupled with the one-major-choice admissions mechanism with no 1st stage quota: ⇒ **Strategic mistakes**

**Example using two substitute majors:** targeted applicants become more likely to apply to Medicine and less likely to apply to Nursing, but changes are concentrated below Medicine's cut-off and above Nursing's.



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