Gender Differences in Prioritizing Rewarding Tasks and Labor Market Outcomes

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Motivation

- Women are underrepresented in high profile jobs

- Potential role of non-cognitive skills in explaining the persistent gender gaps in high-profile jobs:
    - **Competitive behavior** (Gneezy et al., 2003; Niederle and Vesterlund, 2007; Jurajda and Münich, 2011; Ors et al., 2013; Morin, 2015; Iriberri and Rey-Biel, 2019)
    - **Risk aversion** (Baldiga, 2014; Pekkarinen, 2015; Iriberri and Rey-Biel, 2021)
    - **Probability of accepting low-promotability tasks** (Babcock et al., 2017a,b)
    - **Strategic behavior in high versus low-stake contexts** (Azmat et al., 2016; Cai et al., 2019; Schlosser et al., 2019)

- Can gender gaps in exam performance explain gender gaps in labor market outcomes?
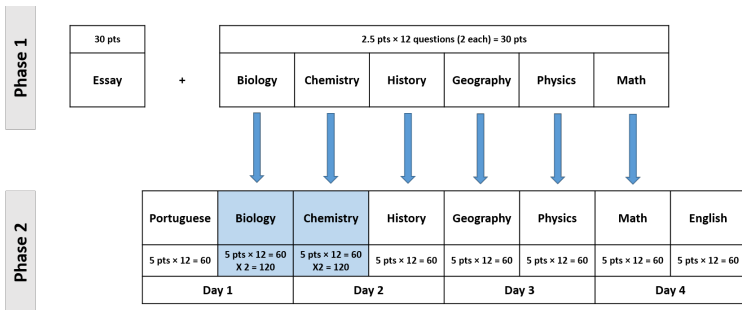
This Paper

- Do men and women react differently to task-rewards?
  - We use admission exam data from a selective Brazilian university, UNICAMP.
  - We verify how the female-male performance gap differs in parts of the exam that count relatively more towards the exam final score.

- If yes, what are the potential mechanisms?

- If yes, are there significant consequences in terms of labor market outcomes?

The Setup: UNICAMP Admission Exam

- UNICAMP is a research-intensive, tuition-free and prestigious public university in the state of Sao Paulo, Brazil.

- Very competitive admission exam: $\approx 10\%$ acceptance rate.

- As in the majority of OECD countries, UNICAMP has "college-major-specific admission rules" (i.e., applicants must select a major when they register for admission exam).

- Same exam/questions for all applicants in Phases 1 and 2 (regardless of major).

- In P_1, all subjects have the same weight.

- In P_2, **priority** subjects (up to two per major) have a weight of 2, while non-priority subjects have a weight of 1.

UNICAMP Admission Exam

- Example for Medicine applicants:

Phase 1	30 pts		2.5 pts × 12 questions (2 each) = 30 pts					
	Essay	+	Biology	Chemistry	History	Geography	Physics	Math

Phase 2	Portuguese	Biology	Chemistry	History	Geography	Physics	Math	English
	5 pts × 12 = 60	5 pts × 12 = 60 X 2 = 120	5 pts × 12 = 60 X2 = 120	5 pts × 12 = 60	5 pts × 12 = 60	5 pts × 12 = 60	5 pts × 12 = 60	5 pts × 12 = 60
	Day 1		Day 2		Day 3		Day 4	

- Do females and males react similarly to these priority subjects?

Data

For 2001-2004 (i.e., pre-affirmative action policy):

- Administrative data from UNICAMP's admission office (COMVEST);

- Phase 1 and Phase 2 individual grades (six subject-specific grades per phase), major choices, and ENEM;

- For each subject-applicant, grades on each of the questions

- Restrictions:
  - Focus on applicants who made it to Phase 2;
  - Applied to a major not requiring an aptitude test;
  - Did not take the exam as a practice test;
  - No missing important information (e.g., gender, ENEM);
  - Exclude Portuguese and English in main regressions.

- Labour market outcomes: 2002-2018 RAIS.

Descriptive Statistics

Main Empirical Challenge

- Female/male average performances can differ across subjects.

- Gender differences in major selection $\rightarrow$ Gender differences priority-subject choice
    - Applicants' major choice correlate with their ability (overall and subject-specific).
    - Candidates select their major based on their relative overall performance gain or their comparative advantages.

Empirical Strategy

An applicant i's performance on a specific subject s, y_i^s, is:

$$y_i^s = \rho^s + \pi_i + \gamma_i^s + \mathbb{P}_i^s \phi_i + \mathbb{P}_i^s \omega_i^s + \varepsilon_i^s, \qquad (1)$$
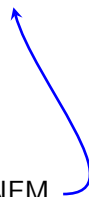
- ρ^s: overall level of difficulty of subject s.
- π_i: applicant's general academic ability.
- γ_i^s: applicant's ability specific for subject s.
- $\mathbb{P}_i^s$: (individual-subject-specific) priority dummy.
- ϕ_i: applicant's overall (average) performance change when a subject is a priority.
- ω_i^s: applicant's subject-specific additional performance change (over and above ϕ_i) when s is a priority.
- ε_i^s: random performance shock.

Empirical Strategy

Our empirical model suggests the following regression equation:

$$y_i^s = \beta_1 + \mathbb{F}_i\beta_2 + \mathbb{P}_i^s\beta_{3,s} + \mathbb{P}_i^s\mathbb{F}_i\beta_{4,s} + u_i^s, \qquad (2)$$

$$u_i^s \equiv \rho^s + \widetilde{\pi}_i^g + \gamma^{s,g} + \underbrace{\widetilde{\gamma}_i^{s,g} + \mathbb{P}_i^s[\widetilde{\phi}_i^g + \widetilde{\omega}_i^{s,g}]}_{} + \varepsilon_i^s. \qquad (3)$$

- Subject FE
- ENEM/Individual FE
- Subject-gender FE
- Subject-specific Phase 1 scores and ENEM

Do men and women react differently to increased exam rewards?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Phase 2 normalized subject-specific scores							
Female	-0.197***	-0.085***					
	(0.006)	(0.008)					
Priority	0.479***	0.578***	0.543***	0.543***	0.579***	0.514***	0.530***
	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)
Female $\times$ Priority	0.000	-0.049***	-0.063***	-0.065***	-0.057***	-0.056***	-0.054***
	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
ENEM	0.543***	0.541***					
	(0.003)	(0.003)					
$\bar{R}^2$	0.350	0.360	0.590	0.593	0.594	0.621	0.621
Number of observations	253,650	253,650	253,650	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM $\times$ Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM $\times$ Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores $\times$ Priority	No	No	No	No	No	No	Yes

Portuguese   Improvement   Raw   Admission (lower bound)   Admission (upper bound)

Potential Mechanisms Ruled Out by Exam Structure

The exam structure rules out a few potential mechanisms:

- Males not caring about low-reward questions;

- Applicants' reaction to low-reward-question performance;

- Changes in the competition level (or pool of competitors).

Potential Mechanisms Not Supported by Our Data

We show that our results do NOT seem to be driven by:

- Gender-specific selection into priority subjects; Phase 1 scores

- Performance on difficult questions; Difficulty

- Mental fatigue; Early/Late

- Lack of information or knowledge about the exam; First time
  Prep   Campinas   School type   Parental education

Potential Mechanisms Not Ruled Out by Our Data

Suggestive evidence that our results are driven by gender
differences in:

- Confidence   Omissions/Zeros   Stereotypes

- Exam strategy   Coefficient of variation   IRT residuals

Can our Findings Explain Some of the Gender Wage Gap?

- We build a measure that captures performance in priority relative to non-priority subjects for each individual.

- First, we estimate our main specification, excluding the 'Female $\times$ Priority' interaction, and obtain the residuals.

- For each individual, we take the difference between the average residuals in priority subjects and non-priority subjects.

- We normalize this difference such that its mean is zero and its standard deviation is one.

Can our Findings Explain Some of the Gender Wage Gap?

Log (Annual Wages) 7 to 12 Years After Admission exam

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Average annual wages (7-12 years after admission exam)								
Female	-0.263***	-0.262***	-0.191***	-0.190***	-0.113***	-0.113***	-0.088***	-0.088***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Relative priority performance		0.016***		0.016***		0.022***		0.023***
		(0.004)		(0.004)		(0.004)		(0.004)
Norm. ENEM scores			0.162***	0.161***			0.098***	0.098***
			(0.004)	(0.004)			(0.005)	(0.005)
Number of observations	34,313	34,313	34,313	34,313	34,313	34,313	34,313	34,313
Mean dependent variable	10.208	10.208	10.208	10.208	10.208	10.208	10.208	10.208
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes
Panel B: Maximum annual wages (7-12 years after admission exam)								
Female	-0.263***	-0.262***	-0.189***	-0.188***	-0.120***	-0.121***	-0.096***	-0.097***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Relative priority performance		0.015***		0.014***		0.021***		0.021***
		(0.004)		(0.004)		(0.004)		(0.004)
Norm. ENEM scores			0.164***	0.164***			0.093***	0.093***
			(0.004)	(0.004)			(0.005)	(0.005)
Number of observations	34,313	34,313	34,313	34,313	34,313	34,313	34,313	34,313
Mean dependent variable	10.514	10.514	10.514	10.514	10.514	10.514	10.514	10.514
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes

Women   Men   Avg./Max 6-9   Avg./Max 6-14

Can our Findings Explain Some of the Gender Wage Gap?

Labor Market Participation 7 to 12 Years After Admission Exam

	7		8		9		10		11		12	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variable: LFP 7 to 12 years after admission exam												
Female	0.008	0.007	0.008	0.008	-0.001	-0.001	0.001	0.001	-0.005	-0.005	-0.007	-0.007
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Norm. ENEM scores	-0.006*	-0.006*	-0.009***	-0.009***	-0.012***	-0.012***	-0.015***	-0.015***	-0.013***	-0.013***	-0.012***	-0.012***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Relative priority performance		0.003		0.002		0.003		0.001		-0.001		-0.003
		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)
Number of observations	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Mean dependent variable	0.606	0.606	0.636	0.636	0.659	0.659	0.674	0.674	0.679	0.679	0.675	0.675
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Can our Findings Explain Some of the Gender Wage Gap?

Quantile Regressions: Log (Annual Wages) 7 to 12 Years After Admission Exam

	10		25		50		75		90	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Dependent variable: Average wages 7 to 12 years after admission exam

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Female=1	-0.010	-0.010	-0.068***	-0.069***	-0.092***	-0.093***	-0.097***	-0.097***	-0.128***	-0.129***
	(0.028)	(0.028)	(0.016)	(0.016)	(0.011)	(0.011)	(0.009)	(0.009)	(0.011)	(0.011)
Norm. ENEM scores	0.122***	0.123***	0.122***	0.122***	0.101***	0.101***	0.079***	0.079***	0.080***	0.080***
	(0.015)	(0.015)	(0.009)	(0.009)	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)
Relative priority performance		0.026**		0.035***		0.023***		0.015***		0.017***
		(0.012)		(0.007)		(0.005)		(0.004)		(0.005)
Number of observations	34,313	34,313	34,313	34,313	34,313	34,313	34,313	34,313	34,313	34,313
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Conclusion

- Women decrease their performance relative to men in higher-reward questions.
    - Larger for higher-ability applicants.

- We find gender differences in exam strategy
    - Different strategies when uncertain about the answer.
    - Omission pattern emerges in 'male-typed' subjects.
    - Women tend to equalize their effort more equally across and within exam subjects.

- Applicants who perform better on priority subjects earn more at the formal labor market.

- Our findings cast some doubt on whether gender differences in prioritizing rewarding tasks in an exam environment can explain much of the gender wage gap.

References

Major	Port.	Bio.	Chem.	Hist.	Geo.	Math.	Phys.	Cutoff	Prop.Female	Prop. Applied
Medicine Unicamp		✓	✓					617	0.539	0.079
Medicine Famerp		✓	✓					603	0.551	0.044
Computer Engineering						✓	✓	584	0.100	0.062
Electrical Engineering						✓	✓	584	0.121	0.049
Control and Automation Engineering (Eve.)						✓	✓	577	0.083	0.032
Computer Science (Eve.)						✓	✓	575	0.123	0.030
Economics				✓		✓		574	0.388	0.047
Electrical Engineering (Eve.)						✓	✓	571	0.075	0.014
Social Communication (Media Studies)				✓		✓		565	0.560	0.005
Pharmacy		✓	✓					560	0.769	0.007
Economics (Eve.)				✓		✓		557	0.334	0.021
Chemical Engineering			✓			✓		557	0.445	0.037
Biological Sciences		✓						554	0.614	0.030
Food Engineering						✓	✓	551	0.759	0.042
Mechanical Engineering						✓	✓	544	0.075	0.054
Chemical Engineering (Eve.)			✓			✓		538	0.364	0.010
Food Engineering (Eve.)						✓	✓	514	0.717	0.012
History	✓			✓				514	0.524	0.017
Social Sciences	✓			✓				509	0.558	0.021
Language Studies (TB)	✓			✓				499	0.770	0.010
Civil Engineering						✓	✓	494	0.262	0.025
Chemistry Technology (Eve.)			✓					491	0.474	0.009
Biological Sciences (T) (Eve.)		✓						490	0.645	0.024
Chemistry			✓					488	0.585	0.024
Social Sciences (Eve.)	✓			✓				487	0.488	0.012
Physics (Eve.)						✓	✓	468	0.152	0.007
Physics, Math, Applied Math and Comp						✓	✓	466	0.298	0.037
Geology and Geography					✓			463	0.405	0.009
Linguistics	✓			✓				451	0.717	0.004
Philosophy	✓							450	0.393	0.006
Geography (Eve.)					✓			449	0.338	0.007
Language Studies (T) (Eve.)	✓			✓				449	0.743	0.007
Chemistry and Physics (T) (Eve.)			✓				✓	438	0.337	0.004
Dentistry		✓						438	0.695	0.034
Pedagogy (T)	✓			✓				423	0.958	0.010
Phonology	✓	✓						418	0.959	0.006
Information Technology (Eve.)						✓		415	0.228	0.010
Pedagogy (T) (Eve.)	✓			✓				415	0.929	0.009
Agricultural Engineering						✓	✓	407	0.313	0.016
Physical Education		✓		✓				407	0.497	0.013
Telecommunications Technology						✓		403	0.210	0.003
Nursing Unicamp		✓						402	0.946	0.012
Physical Education (Eve.)		✓		✓				398	0.385	0.012
Mathematics (T) (Eve.)						✓	✓	391	0.439	0.009
Statistics						✓	✓	377	0.505	0.018
Nursing Famerp		✓						370	0.938	0.015
Information Technology						✓		360	0.277	0.008
Environmental Sanitation Technology (Eve.)						✓		329	0.595	0.017
Construction Technology (Eve.)						✓		325	0.435	0.008
Environmental Sanitation Technology						✓		310	0.660	0.002
Overall								533	0.429	1.000

References

	Full sample	Female	Male	Difference
Female	0.43			
	(0.49)			
Age	19.18	19.18	19.18	-0.00
	(1.62)	(1.56)	(1.67)	
Norm. ENEM scores	0.00	-0.25	0.19	-0.43***
	(1.00)	(1.04)	(0.93)	
# of priority subjects	1.79	1.71	1.85	-0.14***
	(0.41)	(0.45)	(0.36)	
Major cutoff	518.51	503.59	529.73	-26.15***
	(78.23)	(82.90)	(72.53)	
Biology is a priority subject	0.28	0.40	0.18	0.22***
	(0.45)	(0.49)	(0.39)	
Chemistry is a priority subject	0.23	0.28	0.19	0.10***
	(0.42)	(0.45)	(0.39)	
Geography is a priority subject	0.02	0.01	0.02	-0.00***
	(0.13)	(0.12)	(0.13)	
History is a priority subject	0.18	0.22	0.14	0.08***
	(0.38)	(0.41)	(0.35)	
Mathematics is a priority subject	0.58	0.40	0.72	-0.32***
	(0.49)	(0.49)	(0.45)	
Physics is a priority subject	0.41	0.24	0.54	-0.31***
	(0.49)	(0.43)	(0.50)	
Portuguese is a priority subject	0.10	0.16	0.05	0.10***
	(0.30)	(0.36)	(0.23)	
Normalized P1 scores (average)	0.00	-0.09	0.07	-0.17***
	(0.63)	(0.66)	(0.59)	
Normalized P2 scores (average)	0.00	-0.12	0.09	-0.22***
	(0.78)	(0.80)	(0.76)	
Normalized P2 scores (weighted average)	0.07	-0.06	0.16	-0.22***
	(0.79)	(0.81)	(0.77)	
P2 score standard deviation	7.27	7.14	7.36	-0.22***
	(2.50)	(2.46)	(2.53)	
P2 score coefficient of variation	0.32	0.34	0.31	0.03***
	(0.17)	(0.18)	(0.16)	
Avg annual wages - 7 to 12 years after exam	34,880	29,779	38,573	-8,793***
	(23,247)	(19,620)	(24,911)	
Max annual wages - 7 to 12 years after exam	48,063	41,021	53,162	-12,141***
	(34,180)	(28,708)	(36,819)	
Match rate - RAIS 7 to 12 years after exam	0.81	0.79	0.83	-0.03***
	(0.39)	(0.40)	(0.38)	
Within-applicant stand.dev - Norm. P2 scores	0.62	0.60	0.64	
Within-applicant stand.dev - Norm. P1 scores	0.78	0.78	0.78	
# Applicants	42,275	18,151	24,124	

Including Portuguese Subject

We consider the normalized essay score as the normalized Phase 1 Portuguese score.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Phase 2 normalized subject-specific scores							
Female	-0.107***	-0.074***					
	(0.006)	(0.008)					
Priority	0.496***	0.568***	0.548***	0.546***	0.579***	0.514***	0.527***
	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Female × Priority	-0.065***	-0.069***	-0.066***	-0.070***	-0.064***	-0.062***	-0.060***
	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)
ENEM	0.536***	0.535***					
	(0.003)	(0.003)					
$\bar{R}^2$	0.327	0.344	0.566	0.569	0.569	0.595	0.595
Number of observations	295,925	295,925	295,925	295,925	295,925	295,925	295,925
Number of applicants	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Back

Alternative Dependent Variable: Phase 2 - Phase 1 Scores

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Normalized Phase 2 scores - Phase 1 scores						
Female	-0.036***	0.027***				
	(0.005)	(0.009)				
Priority	0.180***	0.221***	0.219***	0.232***	0.248***	0.434***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)
Female × Priority	-0.025***	-0.056***	-0.055***	-0.055***	-0.051***	-0.053***
	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
ENEM	0.158***	0.157***				
	(0.002)	(0.002)				
$\bar{R}^2$	0.034	0.035	0.087	0.092	0.093	0.213
Number of observations	253,650	253,650	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes
Phase 1 scores	No	No	No	No	No	No
Phase 1 scores × Priority	No	No	No	No	No	Yes

Raw Phase 2 Scores

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Phase 2 subject-specific raw scores							
Female	-2.074***	-0.761***					
	(0.055)	(0.083)					
Priority	4.933***	6.158***	5.689***	5.569***	6.004***	5.288***	5.428***
	(0.051)	(0.059)	(0.055)	(0.054)	(0.061)	(0.058)	(0.067)
Female × Priority	-0.439***	-0.787***	-0.916***	-0.911***	-0.835***	-0.787***	-0.750***
	(0.076)	(0.081)	(0.076)	(0.075)	(0.075)	(0.071)	(0.071)
ENEM	0.431***	0.429***					
	(0.002)	(0.002)					
Mean dependent variable	25.45						
Stand dev dependent variable	10.61						
$\bar{R}^2$	0.336	0.370	0.553	0.580	0.581	0.607	0.607
Number of observations	253,650	253,650	253,650	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Year FE	Yes	Yes	No	No	No	No	No
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Admission Rates with Actual and Adjusted scores (Lower)

Back

● Female   □ Adjusted female   ▲ Male   ◇ Adjusted male
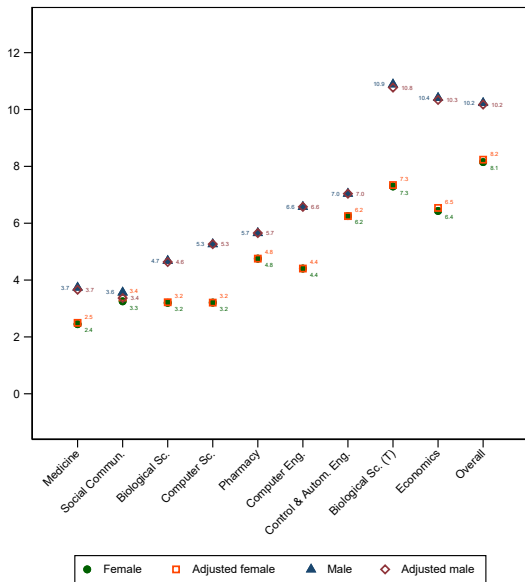
Admission Rates with Actual and Adjusted scores (Upper)
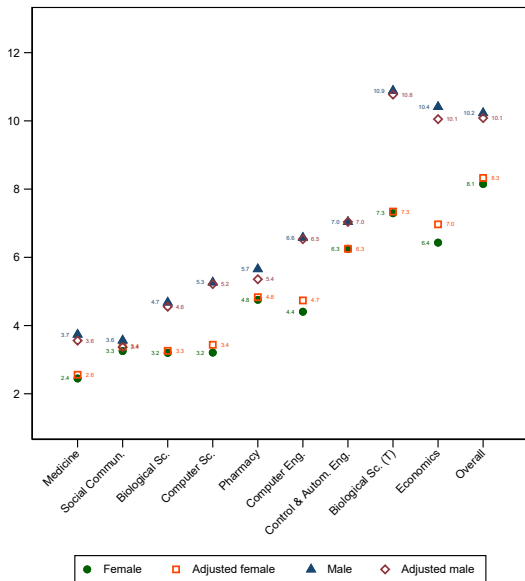
Women have similar P1 performance in priority subjects

	(1)	(2)	(3)	(4)	(5)

Dependent variable: Phase 1 normalized subject-specific scores

	(1)	(2)	(3)	(4)	(5)
Female	-0.160***	-0.112***			
	(0.005)	(0.009)			
Future priority	0.299***	0.357***	0.324***	0.311***	0.332***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)
Female $\times$ Future priority	0.025***	0.007	-0.009	-0.009	-0.006
	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
ENEM	0.385***	0.384***			
	(0.003)	(0.003)			
$\bar{R}^2$	0.173	0.177	0.294	0.298	0.299
Number of observations	253,650	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes
ENEM $\times$ Subject FE	No	No	No	Yes	Yes
ENEM $\times$ Future Priority	No	No	No	No	Yes

Back

Women outperform men in difficult questions from priority subjects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Questions' raw scores (Phase 2)							
Female	-0.159***	-0.049***					
	(0.006)	(0.007)					
Priority	0.589***	0.690***	0.653***	0.643***	0.658***	0.605***	0.611***
	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Female × Priority	-0.130***	-0.159***	-0.167***	-0.163***	-0.156***	-0.155***	-0.154***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Female × Priority × Difficult question	0.182***	0.182***	0.182***	0.182***	0.182***	0.182***	0.182***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Priority × Difficult question	-0.358***	-0.358***	-0.358***	-0.358***	-0.358***	-0.358***	-0.358***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Difficult question	-1.149***	-1.149***	-1.149***	-1.149***	-1.149***	-1.149***	-1.149***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Female × Difficult question	-0.038***	-0.038***	-0.038***	-0.038***	-0.038***	-0.038***	-0.038***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ENEM	0.445***	0.443***					
	(0.003)	(0.003)					
Mean dependent variable	2.12						
Std.dev dependent variable	1.65						
# observations	3,043,800	3,043,800	3,043,800	3,043,800	3,043,800	3,043,800	3,043,800
# applicants	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Order FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Performance on earlier and late questions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Average score first 4 questions - Average score last 4 questions							
Female	0.135***	-0.059***					
	(0.006)	(0.011)					
Priority	0.814***	0.014**	0.019**	0.029***	0.043***	0.034***	0.025**
	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.010)
Female × Priority	-0.665***	-0.037***	-0.045***	-0.029***	-0.029***	-0.027**	-0.024**
	(0.014)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
ENEM	0.043***	0.054***					
	(0.002)	(0.002)					
Mean dependent variable	0.52						
Std.dev dependent variable	1.30						
$\bar{R}^2$	0.050	0.334	0.342	0.351	0.351	0.353	0.353
Number of observations	253,650	253,650	253,650	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Only UNICAMP × Other admission processes

	Only UNICAMP							Other admission processes						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Phase 2 normalized subject-specific scores														
Female	-0.215***	-0.088**						-0.196***	-0.084***					
	(0.025)	(0.034)						(0.006)	(0.008)					
Priority	0.460***	0.632***	0.593***	0.598***	0.642***	0.555***	0.571***	0.479***	0.574***	0.540***	0.540***	0.577***	0.513***	0.529***
	(0.020)	(0.024)	(0.023)	(0.023)	(0.027)	(0.025)	(0.028)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)
Female × Priority	0.046	-0.022	-0.031	-0.040	-0.028	-0.032	-0.031	-0.003	-0.051***	-0.066***	-0.066***	-0.059***	-0.057***	-0.056***
	(0.029)	(0.031)	(0.031)	(0.031)	(0.031)	(0.029)	(0.029)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
ENEM	0.412***	0.409***						0.547***	0.545***					
	(0.011)	(0.011)						(0.003)	(0.003)					
$\bar{R}^2$	0.327	0.351	0.612	0.614	0.615	0.649	0.649	0.346	0.356	0.582	0.585	0.586	0.613	0.613
Number of observations	14,172	14,172	14,172	14,172	14,172	14,172	14,172	239,064	239,064	239,064	239,064	239,064	239,064	239,064
Number of applicants	2,362	2,362	2,362	2,362	2,362	2,362	2,362	39,844	39,844	39,844	39,844	39,844	39,844	39,844
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

First-time vs. not first-time takers

	First time UNICAMP							Not first time						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Phase 2 normalized subject-specific scores														
Female	-0.210***	-0.108***						-0.191***	-0.075***					
	(0.010)	(0.014)						(0.007)	(0.010)					
Priority	0.461***	0.569***	0.533***	0.530***	0.566***	0.511***	0.517***	0.488***	0.583***	0.548***	0.550***	0.588***	0.519***	0.539***
	(0.008)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.011)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)
Female × Priority	-0.023**	-0.065***	-0.061***	-0.063***	-0.055***	-0.056***	-0.053***	0.007	-0.046***	-0.069***	-0.070***	-0.063***	-0.061***	-0.060***
	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.012)	(0.013)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
ENEM	0.557***	0.555***						0.535***	0.534***					
	(0.005)	(0.005)						(0.004)	(0.004)					
$\bar{R}^2$	0.368	0.376	0.607	0.610	0.611	0.634	0.634	0.340	0.351	0.581	0.585	0.585	0.614	0.614
Number of observations	77,778	77,778	77,778	77,778	77,778	77,778	77,778	174,078	174,078	174,078	174,078	174,078	174,078	174,078
Number of applicants	12,963	12,963	12,963	12,963	12,963	12,963	12,963	29,013	29,013	29,013	29,013	29,013	29,013	29,013
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

Preparatory vs. non-preparatory course

	Preparatory course							No prep course						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Phase 2 normalized subject-specific scores														
Female	-0.198***	-0.076***						-0.199***	-0.111***					
	(0.007)	(0.009)						(0.011)	(0.015)					
Priority	0.488***	0.583***	0.549***	0.551***	0.589***	0.522***	0.539***	0.460***	0.569***	0.529***	0.528***	0.560***	0.500***	0.512***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.008)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.012)
Female × Priority	0.008	-0.043***	-0.065***	-0.065***	-0.058***	-0.058***	-0.057***	-0.024**	-0.072***	-0.070***	-0.074***	-0.068***	-0.061***	-0.060***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.012)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
ENEM	0.539***	0.537***						0.549***	0.547***					
	(0.004)	(0.004)						(0.006)	(0.006)					
R^2	0.345	0.357	0.581	0.584	0.585	0.613	0.613	0.357	0.364	0.610	0.613	0.613	0.637	0.637
Number of observations	177,852	177,852	177,852	177,852	177,852	177,852	177,852	74,154	74,154	74,154	74,154	74,154	74,154	74,154
Number of applicants	29,642	29,642	29,642	29,642	29,642	29,642	29,642	12,359	12,359	12,359	12,359	12,359	12,359	12,359
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

Campinas metropolitan region vs. Other cities

	Campinas metropolitan region							Other cities						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Phase 2 normalized subject-specific scores														
Female	-0.185***	-0.061***						-0.190***	-0.075***					
	(0.012)	(0.017)						(0.007)	(0.009)					
Priority	0.402***	0.588***	0.551***	0.553***	0.590***	0.526***	0.546***	0.497***	0.568***	0.535***	0.536***	0.572***	0.507***	0.522***
	(0.010)	(0.012)	(0.011)	(0.011)	(0.013)	(0.012)	(0.014)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)
Female × Priority	0.057***	-0.054***	-0.056***	-0.063***	-0.060***	-0.061***	-0.059***	-0.016**	-0.049***	-0.066***	-0.066***	-0.057***	-0.056***	-0.054***
	(0.014)	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)	(0.014)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
ENEM	0.486***	0.484***						0.542***	0.541***					
	(0.006)	(0.006)						(0.004)	(0.004)					
R^2	0.341	0.370	0.614	0.617	0.618	0.647	0.647	0.333	0.340	0.571	0.573	0.574	0.601	0.601
Number of observations	51,174	51,174	51,174	51,174	51,174	51,174	51,174	185,610	185,610	185,610	185,610	185,610	185,610	185,610
Number of applicants	8,529	8,529	8,529	8,529	8,529	8,529	8,529	30,935	30,935	30,935	30,935	30,935	30,935	30,935
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

Public vs. Private Schools

	Public school							Private school						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Phase 2 normalized subject-specific scores														
Female	-0.253***	-0.129***						-0.179***	-0.069***					
	(0.011)	(0.015)						(0.006)	(0.009)					
Priority	0.467***	0.666***	0.622***	0.619***	0.669***	0.583***	0.597***	0.481***	0.547***	0.517***	0.520***	0.550***	0.493***	0.509***
	(0.009)	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)	(0.013)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)
Female × Priority	0.002	-0.085***	-0.072***	-0.078***	-0.070***	-0.067***	-0.066***	-0.007	-0.045***	-0.062***	-0.062***	-0.054***	-0.054***	-0.052***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
ENEM	0.475***	0.471***						0.549***	0.548***					
	(0.005)	(0.005)						(0.004)	(0.004)					
R^2	0.342	0.373	0.591	0.596	0.596	0.629	0.629	0.334	0.340	0.573	0.575	0.575	0.600	0.601
Number of observations	64,176	64,176	64,176	64,176	64,176	64,176	64,176	188,976	188,976	188,976	188,976	188,976	188,976	188,976
Number of applicants	10,696	10,696	10,696	10,696	10,696	10,696	10,696	31,496	31,496	31,496	31,496	31,496	31,496	31,496
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

15 / 30

Parents have higher education degree

	At least one parent has higher education degree							No parent has higher education degree						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

Dependent variable: Phase 2 normalized subject-specific scores

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Female	-0.172***	-0.060***						-0.232***	-0.117***					
	(0.007)	(0.010)						(0.009)	(0.013)					
Priority	0.491***	0.550***	0.519***	0.520***	0.551***	0.492***	0.506***	0.451***	0.622***	0.582***	0.583***	0.628***	0.551***	0.568***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)	(0.010)
Female × Priority	-0.017**	-0.045***	-0.060***	-0.060***	-0.052***	-0.052***	-0.050***	0.026**	-0.068***	-0.073***	-0.078***	-0.070***	-0.067***	-0.067***
	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)	(0.011)
ENEM	0.549***	0.548***						0.504***	0.502***					
	(0.004)	(0.004)						(0.005)	(0.005)					
R^2	0.325	0.331	0.568	0.570	0.570	0.596	0.596	0.351	0.373	0.598	0.601	0.602	0.632	0.632
Number of observations	162,456	162,456	162,456	162,456	162,456	162,456	162,456	88,704	88,704	88,704	88,704	88,704	88,704	88,704
Number of applicants	27,076	27,076	27,076	27,076	27,076	27,076	27,076	14,784	14,784	14,784	14,784	14,784	14,784	14,784
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Back

Do Gender Stereotypes Help Explain the Response Pattern?

Back

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: # omitted questions in Phase 2 per subject							
Female	0.120***	0.043**					
	(0.016)	(0.018)					
Priority	-0.493***	-0.177***	0.234***	0.176***	0.094***	0.111***	0.114***
	(0.014)	(0.015)	(0.020)	(0.020)	(0.022)	(0.022)	(0.023)
Female × Priority	-0.118***	-0.041*	-0.014	-0.026	-0.024	-0.015	-0.012
	(0.019)	(0.023)	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)
Female × Priority × Chemistry	0.038	0.103**	0.031	0.062	0.041	0.027	0.022
	(0.028)	(0.041)	(0.040)	(0.040)	(0.040)	(0.040)	(0.040)
Female × Priority × Geography	0.031	0.076	0.351**	0.288	0.273	0.276	0.272
	(0.046)	(0.051)	(0.179)	(0.178)	(0.180)	(0.178)	(0.177)
Female × Priority × History	-0.011	-0.018	-0.051	0.040	0.037	0.028	0.027
	(0.026)	(0.037)	(0.064)	(0.063)	(0.063)	(0.063)	(0.063)
Female × Priority × Mathematics	-0.099***	0.232***	0.166***	0.169***	0.161***	0.156***	0.152**
	(0.037)	(0.066)	(0.061)	(0.060)	(0.060)	(0.060)	(0.060)
Female × Priority × Physics	0.131***	0.263***	0.164***	0.131**	0.119**	0.094*	0.093*
	(0.041)	(0.062)	(0.057)	(0.057)	(0.057)	(0.056)	(0.056)
Priority × Chemistry	0.192***	-0.389***	-0.395***	-0.320***	-0.323***	-0.334***	-0.332***
	(0.022)	(0.029)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)
Priority × Geography	-0.326***	-0.183***	-1.533***	-1.272***	-1.179***	-1.145***	-1.142***
	(0.036)	(0.038)	(0.117)	(0.116)	(0.117)	(0.115)	(0.114)
Priority × History	-0.119***	-0.107***	-1.019***	-0.932***	-0.880***	-0.839***	-0.836***
	(0.019)	(0.023)	(0.045)	(0.044)	(0.045)	(0.044)	(0.044)
Priority × Mathematics	0.086***	-0.546***	-1.006***	-0.984***	-0.964***	-0.945***	-0.937***
	(0.022)	(0.048)	(0.045)	(0.044)	(0.044)	(0.043)	(0.043)
Priority × Physics	0.590***	-0.662***	-0.986***	-0.912***	-0.890***	-0.837***	-0.833***
	(0.021)	(0.040)	(0.039)	(0.038)	(0.038)	(0.037)	(0.037)
ENEM	-0.316***	-0.318***					
	(0.009)	(0.009)					
Mean dependent variable	0.76						
Std.dev dependent variable	1.54						
$\bar{R}^2$	0.064	0.156	0.479	0.500	0.501	0.509	0.510
Number of observations	120,270	120,270	120,270	120,270	120,270	120,270	120,270
Number of applicants	20,045	20,045	20,045	20,045	20,045	20,045	20,045
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Potential Mechanisms: Response pattern

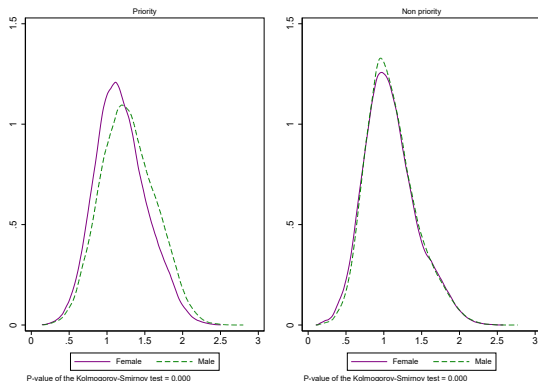|	Omissions	Zero scores	Zero + Omissions
	(1)	(2)	(3)
Priority	-0.517***	-0.547***	-1.064***
	(0.017)	(0.020)	(0.023)
Female × Priority	0.096***	-0.043**	0.054**
	(0.018)	(0.021)	(0.024)
Mean dependent variable	0.76	2.09	2.85
Std.dev dependent variable	1.54	2.10	2.74
$\bar{R}^2$	0.504	0.539	0.655
Number of observations	120,270	120,270	120,270
Number of applicants	20,045	20,045	20,045
Subject FE	Yes	Yes	Yes
Subject-gender FE	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes
ENEM × Subject FE	Yes	Yes	Yes
ENEM × Priority	Yes	Yes	Yes
Phase 1 scores	Yes	Yes	Yes
Phase 1 scores × Priority	Yes	Yes	Yes

IRT Back

Normalized Phase 2 Scores, Omissions = Predicted IRT Score

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Phase 2 normalized subject-specific scores							
Female	-0.245***	-0.117***					
	(0.008)	(0.011)					
Priority	0.450***	0.528***	0.501***	0.497***	0.537***	0.482***	0.489***
	(0.006)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.009)
Female × Priority	-0.022**	-0.049***	-0.058***	-0.061***	-0.052***	-0.050***	-0.049***
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)
ENEM	0.582***	0.580***					
	(0.004)	(0.004)					
$\bar{R}^2$	0.388	0.397	0.579	0.585	0.585	0.611	0.612
Number of observations	120,270	120,270	120,270	120,270	120,270	120,270	120,270
Number of applicants	20,045	20,045	20,045	20,045	20,045	20,045	20,045
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes

Back

Women allocate effort more equally across subjects: P_2

	(1)	(2)	(3)
Dependent variable: Phase 2 score coefficient of variation			
Female	0.031***	-0.005***	-0.006***
	(0.002)	(0.001)	(0.001)
Norm. ENEM scores		-0.083***	-0.077***
		(0.001)	(0.001)
Female $\times$ Norm. ENEM scores			-0.014***
			(0.002)
Mean of dependent variable	0.33		
Std.dev. dependent variable	0.16		
Number of applicants	42,275	42,275	42,275
Exam year FE	Yes	Yes	Yes

Back

Women also exhibit lower performance variation within subjects than men in priority subjects.

Standard Deviation of Question's IRT Residuals (Score - Predicted Score)

Can our Findings Explain Some of the Gender Wage Gap?

Labor Market Participation 7 to 12 Years After Admission Exam

	7		8		9		10		11		12	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variable: LFP 7 to 12 years after admission exam												
Female	0.008	0.007	0.008	0.008	-0.001	-0.001	0.001	0.001	-0.005	-0.005	-0.007	-0.007
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Norm. ENEM scores	-0.006*	-0.006*	-0.009***	-0.009***	-0.012***	-0.012***	-0.015***	-0.015***	-0.013***	-0.013***	-0.012***	-0.012***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Relative priority performance		0.003		0.002		0.003		0.001		-0.001		-0.003
		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)
Number of observations	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275	42,275
Mean dependent variable	0.606	0.606	0.636	0.636	0.659	0.659	0.674	0.674	0.679	0.679	0.675	0.675
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Back

Can our Findings Explain Wages for Women?

Log (Annual Wages) 7 to 12 Years After Admission Exam

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Average annual wages (7-12 years after admission exam)						
Relative priority performance	0.006		0.007	0.017***		0.016**
	(0.007)		(0.007)	(0.007)		(0.006)
Norm. ENEM scores		0.168***	0.168***		0.103***	0.103***
		(0.006)	(0.006)		(0.007)	(0.007)
Number of observations	14,410	14,410	14,410	14,410	14,410	14,410
Mean dependent variable	10.055	10.055	10.055	10.055	10.055	10.055
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	Yes	Yes	Yes

Back

	(1)	(2)	(3)	(4)	(5)	(6)
Panel B: Maximum annual wages (7-12 years after admission exam)						
Relative priority performance	0.002		0.003	0.014**		0.013*
	(0.007)		(0.007)	(0.007)		(0.007)
Norm. ENEM scores		0.172***	0.172***		0.097***	0.097***
		(0.006)	(0.006)		(0.007)	(0.007)
Number of observations	14,410	14,410	14,410	14,410	14,410	14,410
Mean dependent variable	10.362	10.362	10.362	10.362	10.362	10.362
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	Yes	Yes	Yes

Can our Findings Explain Wages for Men?

Log (Annual Wages) 7 to 12 Years After Admission Exam

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Average annual wages (7-12 years after admission exam)						
Relative priority performance	0.023***		0.021***	0.026***		0.028***
	(0.005)		(0.005)	(0.005)		(0.005)
Norm. ENEM scores		0.156***	0.155***		0.093***	0.094***
		(0.006)	(0.006)		(0.007)	(0.007)
Number of observations	19,903	19,903	19,903	19,903	19,903	19,903
Mean dependent variable	10.319	10.319	10.319	10.319	10.319	10.319
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	Yes	Yes	Yes

Back

	(1)	(2)	(3)	(4)	(5)	(6)
Panel B: Maximum annual wages (7-12 years after admission exam)						
Relative priority performance	0.022***		0.020***	0.026***		0.027***
	(0.005)		(0.005)	(0.005)		(0.005)
Norm. ENEM scores		0.157***	0.156***		0.088***	0.089***
		(0.006)	(0.006)		(0.007)	(0.007)
Number of observations	19,903	19,903	19,903	19,903	19,903	19,903
Mean dependent variable	10.625	10.625	10.625	10.625	10.625	10.625
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	Yes	Yes	Yes

Can our Findings Explain Some of the Gender Wage Gap?

Log (Annual Wages) 6 to 9 Years After Admission Exam

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Average annual wages (6-9 years after admission exam)								
Female	-0.270***	-0.269***	-0.200***	-0.199***	-0.108***	-0.109***	-0.082***	-0.083***
	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Relative priority performance		0.022***		0.020***		0.024***		0.025***
		(0.004)		(0.004)		(0.004)		(0.004)
Norm. ENEM scores			0.150***	0.150***			0.103***	0.103***
			(0.005)	(0.005)			(0.005)	(0.005)
Number of observations	31,830	31,830	31,830	31,830	31,830	31,830	31,830	31,830
Mean dependent variable	9.964	9.964	9.964	9.964	9.964	9.964	9.964	9.964
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes
Panel B: Maximum annual wages (6-9 years after admission exam)								
Female	-0.276***	-0.275***	-0.207***	-0.206***	-0.117***	-0.118***	-0.091***	-0.092***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)
Relative priority performance		0.024***		0.023***		0.025***		0.026***
		(0.005)		(0.005)		(0.005)		(0.004)
Norm. ENEM scores			0.148***	0.147***			0.101***	0.101***
			(0.005)	(0.005)			(0.006)	(0.006)
Number of observations	31,830	31,830	31,830	31,830	31,830	31,830	31,830	31,830
Mean dependent variable	10.224	10.224	10.224	10.224	10.224	10.224	10.224	10.224
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes

Back

Can our Findings Explain Some of the Gender Wage Gap?

Log (Annual Wages) 6 to 14 Years After Admission Exam

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Average annual wages (6-14 years after admission exam)								
Female	-0.262***	-0.262***	-0.188***	-0.187***	-0.120***	-0.121***	-0.095***	-0.095***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Relative priority performance		0.013***		0.012***		0.021***		0.021***
		(0.004)		(0.004)		(0.004)		(0.004)
Norm. ENEM scores			0.169***	0.168***			0.099***	0.099***
			(0.004)	(0.004)			(0.005)	(0.005)
Number of observations	35,676	35,676	35,676	35,676	35,676	35,676	35,676	35,676
Mean dependent variable	10.241	10.241	10.241	10.241	10.241	10.241	10.241	10.241
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes
Panel B: Maximum annual wages (6-14 years after admission exam)								
Female	-0.266***	-0.266***	-0.191***	-0.190***	-0.130***	-0.131***	-0.106***	-0.106***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Relative priority performance		0.012***		0.011***		0.020***		0.020***
		(0.004)		(0.004)		(0.004)		(0.004)
Norm. ENEM scores			0.171***	0.171***			0.096***	0.096***
			(0.004)	(0.004)			(0.005)	(0.005)
Number of observations	35,676	35,676	35,676	35,676	35,676	35,676	35,676	35,676
Mean dependent variable	10.616	10.616	10.616	10.616	10.616	10.616	10.616	10.616
Exam year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major FE	No	No	No	No	Yes	Yes	Yes	Yes

Back

Similar impact of comparative advantage for men and women

	(1)	(2)	(3)	(4)
Dependent variable: Priority subject dummy				
P1 normalized subject-specific scores	0.075***	0.064***	0.077***	0.071***
	(0.001)	(0.001)	(0.001)	(0.001)
Female $\times$ P1 normalized scores	-0.003*	0.009***	0.011***	0.013***
	(0.002)	(0.001)	(0.002)	(0.002)
Female	-0.030***	0.219***		
	(0.001)	(0.004)		
Norm. ENEM scores	-0.005***	-0.003***		
	(0.001)	(0.000)		
Number of observations	253,650	253,650	253,650	253,650
Number of applicants	42,275	42,275	42,275	42,275
Subject FE	No	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes

Exclude Medicine Career

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Phase 2 normalized subject-specific scores							
Female	-0.226***	-0.122***					
	(0.006)	(0.008)					
Priority	0.495***	0.665***	0.628***	0.626***	0.648***	0.581***	0.584***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)
Female $\times$ Priority	-0.020***	-0.105***	-0.091***	-0.094***	-0.091***	-0.092***	-0.091***
	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
ENEM	0.476***	0.473***					
	(0.003)	(0.003)					
$\bar{R}^2$	0.308	0.323	0.546	0.549	0.550	0.582	0.582
Number of observations	222,336	222,336	222,336	222,336	222,336	222,336	222,336
Number of applicants	37,056	37,056	37,056	37,056	37,056	37,056	37,056
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes
ENEM $\times$ Subject FE	No	No	No	Yes	Yes	Yes	Yes
ENEM $\times$ Priority	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes
Phase 1 scores $\times$ Priority	No	No	No	No	No	No	Yes

Own-gender parent has a higher education degree

	Own-gender parent has higher education degree							Own-gender parent does not have higher education degree						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable:														
Female	-0.166***	-0.058***						-0.211***	-0.091***					
	(0.008)	(0.011)						(0.008)	(0.011)					
Priority	0.497***	0.547***	0.519***	0.519***	0.550***	0.494***	0.506***	0.453***	0.608***	0.567***	0.568***	0.609***	0.523***	0.523***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.008)	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)	(0.008)	(0.008)	(0.008)
Female × Priority	-0.025***	-0.042***	-0.062***	-0.061***	-0.053***	-0.055***	-0.053***	0.027***	-0.064***	-0.069***	-0.073***	-0.066***	-0.066***	-0.066***
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)
ENEM	0.556***	0.555***						0.515***	0.512***					
	(0.005)	(0.005)						(0.004)	(0.004)					
$\bar{R}^2$	0.322	0.328	0.565	0.567	0.568	0.593	0.594	0.350	0.367	0.594	0.598	0.598	0.627	0.627
Number of observations	128,544	128,544	128,544	128,544	128,544	128,544	128,544	122,616	122,616	122,616	122,616	122,616	122,616	122,616
Number of applicants	21,424	21,424	21,424	21,424	21,424	21,424	21,424	20,436	20,436	20,436	20,436	20,436	20,436	20,436
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

Number of priority subjects (per applicant)

	Two priority subjects							One priority subject						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

Dependent variable: Phase 2 normalized subject-specific scores

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Female	-0.195***	-0.085***						-0.120***	0.029					
	(0.007)	(0.009)						(0.011)	(0.019)					
Priority	0.471***	0.552***	0.532***	0.535***	0.579***	0.516***	0.532***	0.397***	0.473***	0.473***	0.465***	0.476***	0.408***	0.410***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.012)	(0.012)	(0.012)	(0.013)	(0.015)	(0.014)	(0.016)
Female × Priority	-0.005	-0.014*	-0.041***	-0.042***	-0.032***	-0.035***	-0.033***	0.068***	-0.062***	-0.062***	-0.061***	-0.063***	-0.050***	-0.050***
	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
norm_enem_w_g	0.556***	0.555***						0.466***	0.466***					
	(0.004)	(0.004)						(0.006)	(0.006)					
R^2	0.321	0.329	0.569	0.572	0.573	0.599	0.600	0.324	0.347	0.578	0.582	0.582	0.616	0.616
Number of observations	199,656	199,656	199,656	199,656	199,656	199,656	199,656	53,994	53,994	53,994	53,994	53,994	53,994	53,994
Number of applicants	33,276	33,276	33,276	33,276	33,276	33,276	33,276	8,999	8,999	8,999	8,999	8,999	8,999	8,999
Subject FE	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Subject-gender FE	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Individual FE	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
ENEM × Subject FE	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
ENEM × Priority	No	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes
Phase 1 scores	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Phase 1 scores × Priority	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes

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