### The Test-Optional Puzzle

Wouter Dessein Alex Frankel Navin Kartik

Columbia Business Chicago Booth Columbia

### Why do colleges go test-optional?

WASHINGTON POST, 2018. [S]tudies have found a strong link between [SAT and ACT] scores and economic background... Privileged students, with wider access to books, museums, tutors and other forms of cultural or academic enrichment, tend to get higher marks... Schools that drop testing requirements often say they are doing so in the name of wider access.

UNIVERSITY OF MICHIGAN, 2024: Our commitment today to a test-optional policy for undergraduate admissions demonstrates our focus on **providing access** to high-achieving students from all backgrounds.

ST JOHN'S UNIVERSITY, 2024: "Many students excel in the classroom, but may not perform as well in the high-pressure environment of standardized testing. For these students, being able to apply without test scores **removes a major barrier** to higher education and allows them to focus on what truly matters their accomplishments, strengths, and passions."

Alex Frankel (Booth)

The Test-Optional Puzzle

Why do colleges go test-optional?

- Suppose test scores...
  - provide some useful information about college performance, but
  - are "biased" in favor of certain types of students
- Intuitive tradeoff:

Requiring tests improves academic screening, but at cost of equity

• Economic theorist: Wait, what?

*Regardless of a decisionmaker's objective*, more information cannot lead to worse decisions.

- Colleges choose how to use test score info in admissions: how much weight, how to adjust for a student's background
- Use this information in a way that leads to better, not worse, decisions!

Why do colleges go test-optional?

*Regardless of a decisionmaker's objective*, more information cannot lead to worse decisions

This paper formalizes our confusion.

- What assumptions are (or are not) required for the above logic to imply that going test-optional a mistake?
- Discussion:
  - Are test-optional colleges making a mistake, or are colleges optimizing but our assumptions are not satisfied?
  - If colleges are correctly optimizing by going test-optional, are they doing it for the reasons they say they're doing it?

# Model

Student considering application to College

- 1. Testing regime: Mandatory, Optional, or Blind
- 2. College chooses admission policy
- 3. Student has characteristics x = (z, q)
  - z: features known to student
  - q: other features (underlying "quality" / "ability")
- 4. Student chooses application effort e (test prep)
- 5. Student obtains test score t, stochastic function of x and e
- 6. Student chooses whether to apply *a*; if test optional, whether to submit test score; and can send cheap talk message *m*
- 7. If Student applies, College observes t (if submitted), m, and a holistic signal h, which stochastically depends on x, e, m, t
- 8. Admission outcome o according to College's admission policy

# Model

• Students maximize expected utility

- ▶ If they apply, utility a function of *x*, *e*, *t*, *h*, *o*
- ► If they don't apply, utility some function of *x*, *e*, *t* 
  - $\rightarrow$  Effort costs can depend on college-unobservables
  - $\rightarrow$  Application costs can depend on college-unobservables

#### College payoffs

- If student doesn't apply: normalize to 0
- ▶ If student does apply: some function of *x*, *e*, *t*, *h*, *o*

Recall: student characteristics x, effort e, test score t, holistic signal h, admission outcome o

# Main Result

### Proposition

For any test-optional admission policy, there is a replicating test-mandatory policy. For any test-blind admission policy, there is a replicating test-optional policy.

Replicating: Same joint distribution of student characteristics x, effort e, test score t, application a, holistic signal h, admission outcome o

- College is exactly as well off under two replicating policies
- Fix an arbitrary test-optional admission policy
  - We know there is a (replicating) test-mandatory policy that makes college at least as well off
  - We'd generally expect some (non-replicating) test-mandatory policy to make College strictly better off — as long as test scores contain some relevant info

 $\rightarrow$  A test-mandatory College cannot benefit from going test optional

# Main Result

### Proposition

For any test-optional admission policy, there is a replicating test-mandatory policy.

Proof: Analogous to "revelation principle"

- Take any test-optional policy: Admission policy A for submitters, policy B non-submitters
- Consider going test-mandatory, while...
  - ▶ using policy A [considering *t*] for people who *would* have submitted
  - using policy B [ignoring t] for people who would not have submitted
- This policy replicates all student-incentives (effort, application): Any eq in the test-optional regime is now a test-mandatory eq
- How do we know who would have submitted? Ask them cheap talk

## How to break this result?

• Additional student costs:

Sitting for the test very costly (outside of pandemic?)

• Non-equilibrium behavior:

Students (who take test) refuse to apply if test-mandatory

- Signaling of college values / admission policy, if college can't commit
- Constraints on admission rules / Agency issues:
  College can't set any admission rule it wants, possibly because admission officers use their own rules
- Social pressure: "Society" (alumni, politicians, public) imposes costs on college if it observes test scores but "uses them wrong"

Companion paper explores the social pressure story —

- Social pressure can make colleges prefer to not see test scores Hiding scores: Less info for decisions, but face less judgment
- What factors make college more likely to go test-optional?
- Which students benefit from test-optional, and which are harmed?